Cultural Influences on

Responses to Stressful Events



Ho Wing (Lawrence) Yu

Department of Experimental Psychology and Christ Church

University of Oxford

Thesis submitted for the Degree of Doctor of Philosophy

Trinity Term 2023

Abstract

Ho Wing (Lawrence) Yu

A thesis submitted for the degree of Doctor of Philosophy, Trinity Term 2023,

Christ Church

Culture pervasively influences how we think, feel, behave, and perceive life experiences. Traumatic/stressful events are universal, but people in one culture tend to recover naturally while some in another culture may develop psychopathological symptoms. This thesis was aimed at identifying culture-specific cognitive/behavioural processes that are associated with post-traumatic/stress outcomes.

The introduction (Chapter 1) and literature review (Chapter 2) provided a justification for the selection of the three cultural groups (British, Hongkongese and Taiwanese) in this research. We first compared the three cultures in terms of the cultural characteristics, trauma/stress exposures, and post-traumatic/stress outcomes (Chapter 3). Next, we examined whether there were cultural differences in cognitive/behavioural processes (that are thought to contribute to post-traumatic/stress outcomes) by self-report measures (Chapter 4) and objective measures (Chapter 5). Finally, we investigated whether post-traumatic stress outcomes were predicted by the three categories of cognitive/behavioural processes, namely self-concept and appraisals (Chapter 6), cognitive processing styles and autobiographical memory (Chapter 7), and coping strategies (Chapter 8).

Two sets of studies were presented; Study 1 (N = 128) was conducted with Oxford students aged 18-35, while Study 2 (N = 420) was conducted with the local students in the United Kingdom (representing an individualistic culture), Taiwan (representing a collectivistic culture) and Hong Kong (representing a mixed culture). Each study consists of a cross-sectional comparison (i.e., Studies 1A and 2A) and a follow-up study (i.e., Studies 1B

and 2B). We used self-report questionnaires, computerised tasks and standardised laboratory tasks.

The results showed that the British group scored significantly lower in the level of trauma-related psychopathology (including PTSD symptoms, anxiety, and depression) and post-traumatic growth than the Taiwanese and Hongkongese groups (in Chapter 3); the British group significantly differed from the other two groups in self-concept (e.g., higher self-esteem), appraisals (e.g., fewer negative thoughts about the self), cognitive processing styles (e.g., higher likelihood of data-driven processing), memory (e.g., a higher level of autobiographical memory specificity), coping strategies (e.g., a lower level of self-concealment) (in Chapters 4 and 5). These cognitive/behavioural processes significantly predicted post-traumatic outcomes, which can be negative (psychopathology) or positive (post-traumatic growth).

This exploratory research was the first to cover a wide range of factors linked to psychological well-being, suggesting that these culture-specific cognitive/behavioural processes can explain the variation of symptoms across countries/regions. Although the present findings were derived from university samples, they shed light on the cultural sensitivity of assessment tools (research implication) and culturally-informed cognitive behavioural therapy (clinical implication).

Acknowledgments

I would like to give my deepest gratitude to my primary supervisor, Professor Anke Ehlers for her advice, inspiration, and enlightenment throughout my D.Phil. journey. Without Professor Ehlers's continuous support, it would have been impossible to complete cross-cultural, longitudinal research like this. It has been my pleasure and privilege to be part of the Oxford Centre for Anxiety Disorders and Trauma (OxCADAT) team.

Many thanks go to my secondary supervisor, Professor Lucy Bowes, for her invested time and attention during the supervision of this thesis. I also appreciate the assistance of Professor Lin Yaw-Sheng (from the National Taiwan University) and Dr Tom Joseph Barry (from the University of Hong Kong), and their research teams in data collection.

I would also like to thank Christ Church, the University of Oxford, Wellcome Trust, the Great Britain-China Education Trust, Eurofins Scientific Foundation, the Government of Hong Kong Special Administrative Region (HKSAR), the British Council IELTS, the International Student Identity Card (ISIC) Association, and StudyPortal for sponsoring my studies in the United Kingdom, Taiwan, and Hong Kong, and empowering me to achieve my professional goals.

Last but not least, I am extremely grateful to my family, partner, friends, and the participants in this research for their unwavering encouragement and support.

List of Abbreviations

AHS	Analysis-Holism Scale
AMS	Autobiographical Memory Specificity
AMT	Autobiographical Memory Test
ANOVA	Analysis of Variance
ANCOVA	Analysis of Covariance
CaRFAX	Capture and Rumination, Functional Avoidance, and Executive Control
CBT	Cognitive Behaviour Therapy
CES-SF	Centrality of Event Scale-Short Form
CES-D-SF	Center for Epidemiologic Studies Depression Scale Short Form
DDPS	Data-Driven Processing Scale
DSM-5	Diagnostic and Statistical Manual of Mental Disorder, 5th Edition
HC	Horizontal Collectivism
HI	Horizontal Individualism
IAT	Implicit Association Test
IES-R	Impact of Event Scale-Revised
INDCOL	Individualism and Collectivism Scale
LEC	Life Events Checklist
LSRPS	Lack of Self-Referent Processing Scale
MANOVA	Multivariate Analysis of Variance
MANCOVA	Multivariate Analysis of Covariance
MTST	Modified Twenty Statement Test
MRT	Mean Reaction Time
PCSAM	Public and Communal Self Appraisals Measure
PMT	Perceptual Matching Task
PSI-II	Revised Personality Style Inventory
PTCI	Post-Traumatic Cognition Inventory
PTE	Potentially Traumatic Event
PTGI-SF	Post-Traumatic Growth Inventory-Short Form
PTGI-X	Post-Traumatic Growth Inventory-Expanded
PTSD	Post-Traumatic Stress Disorder
rAMS	Reduced Autobiographical Memory Specificity
RIQ	Responses to Intrusions
RSES	Rosenberg Self-Esteem Scale
SDMT	Self-Defining Memory Task
SDQ	State Dissociation Questionnaire
SPE	Self-Prioritisation Effect
STAI-T	State-Trait Anxiety Inventory-Trait Version
TALE	Thinking About Life Experience Scale
TDQ-SF	Trait Dissociation Questionnaire Short Form
TF-CBT	Trauma-Focused Cognitive Behavioural Therapy
TST	Twenty Statement Test
VC	Vertical Collectivism
VI	Vertical Individualism
d'	Signal-Detection Sensitivity Score (in the Perceptual Matching Task)
D Measure	Difference in Response Latencies between Target Blocks (in the Implicit Association Test)

Table of Contents

Chapter 1 Introduction and Overview **1**

1.1 Overview 1

1.2 Mechanisms of Responses to Stressful Events 2

1.3 Current Cross-Cultural Research 6

1.4 Research on Stress Responses in a Cross-Cultural Context 8

Chapter 2 Background and Literature Review **12**

2.1 Culture 12

2.1.1 Individualism versus Collectivism 12

2.1.3 Comparison between Cultural Groups 14

2.1.4 In-Depth Analyses of the Cultural Groups 15

2.1.5 Triple Cultural Comparison 18

2.2 Traumatic/Stressful Events and Psychopathology 19

2.2.1 Types and Prevalence of Traumatic/Stressful Events 20

2.2.2 Post-Traumatic/Stress Outcomes 21

2.3 Self-Concept 22

2.3.1 Self-Esteem 23

2.3.2 Self-Construal 24

2.3.3 Personal Styles 26

2.4 Appraisals 26

2.4.1 Holistic versus Analytic Thinking 27

2.4.2 Post-Traumatic Cognition 27

2.5 Cognitive Processing Styles 28

2.6 Autobiographical Memory 29

2.6.1 Event Centrality 30

2.6.2 Functions of Autobiographical Memory 31

2.6.3 Self-Defining Memory 33

2.6.4 Autobiographical Memory Specificity 34

2.7 Coping Strategies 35

2.7.1 Self-Concealment 35
2.7.2 Responses to Intrusions 36
2.7.3 Coping Styles 37
2.7.4 Trait Dissociation 38
2.8 Emerging Adulthood 38
2.9 Conclusion 39
Chapter 3 General Methodology and Descriptive Results 41
3.1 Overview 41
3.2 General Principles of Analyses 42
3.3 Risk and Benefit of Participating in this Research 43
3.4 Study 1: Study of British, Taiwanese, and Hong Kong Emerging Adults Currently Living in the United Kingdom 44
3.4.1 Participant Recruitment 44
3.4.2 Inclusion and Exclusion Criteria 45
3.4.3 Procedure 45
3.4.4 Research Question and Hypotheses 46
3.4.5 Study 1A: Cross-Sectional Study 47
3.4.6 Study 1B: Longitudinal Study 58
3.4.7 Study 1: Results 62
3.5 Study 2: Study of British, Hong Kongese, and Taiwanese Emerging Adults in their Home Regions 78
3.5.1 Participant Recruitment 79
3.5.2 Inclusion and Exclusion Criteria 80
3.5.3 Procedure 80
3.5.4 Research Questions and Hypotheses 81
3.5.5 Study 2A: Cross-Sectional Study 83
3.5.6 Study 2B: Longitudinal Study 93
3.5.7 Study 2: Results 98
3.6 Discussion 124

3.6.1 Cultural Differences in Culture Measures 124
3.6.2 Cultural Differences in Exposure to Traumatic/Stressful Events 125
3.6.3 Cultural Differences in Post-Traumatic/Stress Outcomes 126
3.7 Summary 127
Chapter 4 Cultural Differences in Self-Report Measures 129
4.1 Overview 129
4.1.1 Cultural Differences in Self-Concept and Appraisals 129
4.1.2 Cultural Differences in Cognitive Processing Styles and Autobiographical Memory 131
4.1.3 Cultural Differences in Coping Strategies 133
4.2 Research Question and Hypotheses 134
4.3 Methods 136
4.3.1 Measures 136
4.3.2 Statistical Analyses 146
4.4 Results 147
4.4.1 Cultural Differences in Self-Concept and Appraisals 147
4.4.2 Cultural Differences in Cognitive Processing Styles and Autobiographical Memory 150
4.4.3 Cultural Differences in Coping Strategies 152
4.5 Discussion 177
4.5.1 Cultural Differences in Self-Concept 177
4.5.2 Cultural Differences in Appraisals 178
4.5.3 Cultural Differences in Cognitive Processing Styles 180
4.5.4 Cultural Differences in Memory Centrality, Qualities, and Functions 181
4.5.5 Cultural Differences in Coping Strategies 183
Chapter 5 Cultural Differences in Objective Measures 187
5.1 Overview 187
5.2 Perceptual Matching Task (PMT) 189
5.2.1 Introduction 189
5.2.2 Hypotheses 190

5.2.3 Task 191
5.2.4 Statistical Analyses 192
5.2.5 Results 194
5.2.6 Discussion 197
5.3 Implicit Association Test (IAT) 198
5.3.1 Introduction 198
5.3.2 Hypotheses 199
5.3.3 Task 199
5.3.4 Statistical Analyses 201
5.3.5 Results 203
5.3.6 Discussion 207
5.4 Twenty Statement Test (TST) 208
5.4.1 Introduction 208
5.4.2 Hypotheses 209
5.4.3 Task 210
5.4.4 Statistical Analyses 212
5.4.5 Results 213
5.4.6 Discussion 221
5.5 Autobiographical Memory Test (AMT) 224
5.5.1 Introduction 224
5.5.2 Hypotheses 224
5.5.3 Task 225
5.5.4 Statistical Analyses 227
5.5.5 Results 227
5.5.6 Discussion 233
5.6 Self-Defining Memory Task (SDMT) 237
5.6.1 Introduction 237
5.6.2 Hypotheses 238
5.6.3 Task 239
5.6.4 Statistical Analyses 241

5.6.5 Results 242
5.6.6 Discussion 262
5.7 General Discussion 267
Chapter 6 Association of Self-Concept and Appraisals with Post-Traumatic/Stress Outcomes 269
6.1 Overview 269
6.1.1 Personal Styles and Post-Traumatic/Stress Outcomes 269
6.1.2 Self-Esteem and Post-Traumatic/Stress Outcomes 270
6.1.3 Thinking Styles and Post-Traumatic/Stress Outcomes 270
6.1.4 Trauma/Stress Appraisals and Post-Traumatic/Stress Outcomes 271
6.1.5 Self-Prioritisation Effect (SPE) and Post-Traumatic/Stress Outcomes 272
6.1.6 Implicit Self-Concept and Post-Traumatic/Stress Outcomes 273
6.1.7 Self-Description and Post-Traumatic/ Stress Outcomes 273
6.2 Research Question and Hypotheses 274
6.3 Methods 281
6.3.1 Measures 281
6.3.2 Statistical Analyses 284
6.4 Results 286
6.4.1 Personal Styles and Post-Traumatic/Stress Outcomes 286
6.4.2 Self-Esteem and Post-Traumatic/Stress Outcomes 287
6.4.3 Thinking Styles and Post-Traumatic/Stress Outcomes 288
6.4.4 Public and Communal Self-Appraisals Measure (PCSAM) and Post-Traumatic/Stress Outcomes 290
6.4.5 Post-Traumatic Cognition Inventory (PTCI) and Post-Traumatic/Stress Outcomes 291
6.4.6 Self-Prioritisation Effect (SPE) and Post-Traumatic/Stress Outcomes 292
6.4.7 *D* Measure (Implicit Association Test) and Post-Traumatic/Stress Outcomes 293
6.4.8 Self-Descriptions and Post-Traumatic/Stress Outcomes 294
6.5 Discussion 302
6.5.1. Personal Styles and Post-Traumatic/Stress Outcomes 302
6.5.2. Self-Esteem and Post-Traumatic/Stress Outcomes 302

6.5.3 Thinking Styles and Post-Traumatic/Stress Outcomes 303
6.5.4 Public and Communal Self-Appraisals Measure (PCSAM) and Post-Traumatic/Stress Outcomes 305
6.5.5 Revised Post-Traumatic Cognition Inventory (PTCI2) and Post-Traumatic/Stress Outcomes 306
6.5.6 Self-Prioritisation Effect (Perceptual Matching Task) and Post-Traumatic/Stress Outcomes 308
6.5.7 *D* Measure (Implicit Association Test) and Post-Traumatic/Stress Outcomes 308
6.5.8 Self-Descriptions (Modified Twenty Statement Test) and Post-Traumatic/Stress Outcomes 309

Chapter 7 Association of Cognitive Processing Styles and Autobiographical Memory with Post-Traumatic/Stress Outcomes 310

7.1 Overview 310
7.1.1 Cognitive Processing Styles and Post-Traumatic/Stress Outcomes 310
7.1.2 Centrality of Events and Post-Traumatic/Stress Outcomes 311
7.1.3 Memory Qualities and Post-Traumatic/Stress Outcomes 311
7.1.4 Memory Functions and Post-Traumatic/Stress Outcomes 312
7.1.5 Autobiographical Memory Specificity and Post-Traumatic/Stress Outcomes 313
7.1.6 Self-Defining Memory Features and Post-Traumatic/Stress Outcomes 313
7.2 Research Question and Hypotheses 314
7.3 Methods 326
7.3.1 Measures 326
7.3.2 Statistical Analyses 329
7.4 Results 330
7.4.1 Cognitive Processing Styles 330
7.4.2 Event Centrality 331
7.4.3 Memory Qualities 332
7.4.4 Memory Functions 333
7.4.5 Autobiographical Memory Specificity (AMS) 334
7.4.6 Features of Self-Defining Memories 335

7.5 Discussion 350
7.5.1 Cognitive Processing Styles and Post-Traumatic/Stress Outcomes 350
7.5.2 Event Centrality and Post-Traumatic/Stress Outcomes 350
7.5.3 Memory Qualities and Post-Traumatic/Stress Outcomes 351
7.5.4 Memory Functions and Post-Traumatic/Stress Outcomes 352
7.5.5 Autobiographical Memory Specificity (AMS) and Post-Traumatic/Stress Outcomes 353
7.5.6 Features of the Self-Defining Memories and Post-Traumatic/Stress Outcomes 354
Chapter 8 Associations of Coping Strategies with Post-Traumatic/Stress Outcomes 357
8.1 Overview 357
8.1.1 Self-Concealment and Post-Traumatic/Stress Outcomes 357
8.1.2 Responses to Intrusions and Post-Traumatic/Stress Outcomes 358
8.1.3 Coping Styles and Post-Traumatic/Stress Outcomes 359
8.1.4 Trait Dissociation and Post-Traumatic/Stress Outcomes 359
8.2 Research Question and Hypotheses 360
8.3 Methods 363
8.3.1 Measures 363
8.3.2 Statistical Analyses 366
8.4 Results 367
8.4.1 Self-Concealment and Post-Traumatic/Stress Outcomes 367
8.4.2 Responses to Intrusions and Post-Traumatic/Stress Outcomes 368
8.4.3 Coping Styles and Post-Traumatic/Stress Outcomes 369
8.4.4 Trait Dissociation and Post-Traumatic/Stress Outcomes 372
8.5 Discussion 377
8.5.1 Self-Concealment and Post-Traumatic/Stress Outcomes 377
8.5.2 Responses to Intrusions and Post-Traumatic/Stress Outcomes 378
8.5.3 Coping Styles and Post-Traumatic/Stress Outcomes 379
8.5.4 Trait Dissociation and Post-Traumatic/Stress Outcomes 382
Chapter 9 General Discussion 384
9.1 Review of Results 384

9.1.1 Cultural Differences in Appraisals, Memory and Coping Strategies 384
9.1.2 Appraisals and Post-Traumatic/Stress Outcomes in the Cross-Cultural Context 385
9.1.3 Autobiographical Memory Specificity and Post-Traumatic/Stress Outcomes in the Cross-Cultural Context 386
9.1.4 Coping Strategies and Post-Traumatic/Stress Outcomes in the Cross-Cultural Context 387
9.2 Strengths 388
9.3 Limitations 389
9.4 Future Directions 391
9.5 Implications of the Research 394
References 397
Appendices 472
Appendix A: Ethics Approval Letters 472
Appendix B: Promotion Materials 482
Appendix C: Participant Information Sheet 491
Appendix D: Consent Form 498
Appendix E: Study Procedure 509
Appendix F: Demographic Questionnaire 513
Appendix G: (Modified) Life Events Scale 525
Appendix H: Self-Concepts and Appraisals Questionnaires 547
Appendix I: Cognitive Processing Styles and Autobiographical Memory Questionnaires 566
Appendix J: Coping Strategies Questionnaires 583
Appendix K: Post-Traumatic/Stress Outcomes Questionnaires 596
Appendix L: Implicit Association Test (IAT) 607
Appendix M: Experimental structure of the Modified Twenty Statements Test 639
Appendix N: Zero-Order Correlations 640

Chapter 1

Introduction and Overview

1.1 Overview

Stressful events, including those that are life-threatening, may happen to anyone in the course of life. In response to stress, some people develop psychological disorders, among which one of the most prevalent is post-traumatic stress disorder (PTSD) (e.g., Hoge, Riviere, Wilk, Herrell, & Weathers, 2014). PTSD is characterised by re-experiencing symptoms (e.g., nightmares or involuntary memories of the trauma) and results in high distress and impaired functioning (American Psychiatric Association, 2013). Other symptoms such as depression or anxiety can also be triggered by stressful events (Harkness, Bruce & Lumley, 2006; McLaughlin et al., 2012). Despite the universal prevalence of these symptoms, there is limited evidence on whether the psychological processes underlying their development are similar across cultures.

One of the well-established cultural differences is individualism versus collectivism, which is used to reflect 'the degree to which people in a society are integrated into groups' (Hofstede, 2011, p. 11). Individualists tend to conceptualise the self as a relatively individual entity with emphases on independence, achievement, and freedom while collectivists tend to define the self by social relationships with emphases on interdependence, harmony, and cooperation (e.g., Hofstede & McCrae, 2004; Markus & Kitayama, 1991; Triandis, 1988, 1989). The individualism vs collectivism difference has recently been shown to influence people's self-concept (e.g., Jobson & O'Kearney, 2008), trauma appraisals (e.g., Jobson & O'Kearney, 2009), memories of trauma (e.g., Jobson & O'Kearney, 2006) and coping with traumatic stress (e.g., Buse, Bernacchio, & Burker, 2013). All of these may, in turn, play a role in the psychological outcomes after trauma/stress, which could be negative, such as the development of PTSD, anxiety, and depressive symptoms, or positive, such as stress-related

growth. However, most of the current models in psychopathology (e.g., Ehlers & Clark, 2000) are derived from Western research and their cross-cultural applicability remains unknown (e.g., Hinton & Lewis-Fernández, 2011). Therefore, this thesis aims to fill this research gap by assessing cultural influences on how people respond to stressful events.

A better understanding of cultural influences on stress responses may help further enhance the efficacy and efficiency of psychological treatments for people who experience traumatic or stressful events. This thesis focuses on identifying key cognitive and behavioural processes that are susceptible to cultural influences and linked to psychopathology and could be targeted in therapies. The thesis examines (1) whether there are cultural influences on cognitive/behavioural processes in response to stressful events, and (2) whether these cognitive/behavioural processes are uniformly or differentially associated with the development of psychopathological symptoms across cultures. These two research questions require studies that examine stress responses in a cross-cultural context and are informed by previous investigations of (1) key cognitive and behavioural processes in stress responses and (2) the contribution of cross-cultural research to psychology as a scientific study of people under stress.

1.2 Mechanisms of Responses to Stressful Events

What psychological processes are the key to the development of psychopathology after stress? The term ‘stress responses’ refers to physiological and psychological reactions that occur when encountering stressful or even life-threatening events (Cannon, 1939). While Selye (1956) defined stress responses as morphological changes in the body without a specific determinant, most researchers have agreed with Mason (1968) that these responses are specific to how individuals perceive stressful events. Stress responses emerge when an event is interpreted as being novel, unpredictable, uncontrollable or when one is threatened by social evaluation (e.g., Dickerson & Kemeny, 2004; Mason, 1968). These responses have

also been discussed as expressions of the allocation of bodily energy needed for survival, and thus known as fight-or-flight responses, which are driven by the sympathetic nervous system (e.g., Lupien, Maheu, Tu, Fiocco, & Schramek, 2007). Yet, fight and flight are not the only responses to stressful events; there is a third response, an immobilising defensive mechanism, for example, freezing and dissociation. According to Porges's (2001) polyvagal theory, when feeling threatened, people attempt to use fight-or-flight responses for survival. However, when people fail to restore the sense of safety, they tend to engage in immobilising defensive strategies, such as dissociation, through the parasympathetic nervous system. In this case, they may feel tired, dizzy, or nauseous. This polyvagal theory (Porges, 2001) has offered an alternative understanding of stress responses, especially as related to traumas and PTSD.

Stressful events could be life-threatening and thus traumatic. A traumatic experience may cause PTSD. The relationship between a trauma and PTSD is believed to depend on one's perception of the traumatic experience and subsequent responses. According to Ehlers and Clark's (2000) cognitive model, PTSD develops when the trauma is processed in a way that leads to a sense of serious, current threat. This sense of threat results from (1) negative appraisals of the trauma and/or its sequelae and (2) a disturbance of the autobiographical memory of the trauma. The problem is maintained by (3) maladaptive coping strategies that prevent changes in the negative appraisals and the trauma memory. Ehlers and Clark's (2000) cognitive model has thus identified three key psychological processes: (1) appraisals, (2) memory, and (3) coping strategies as the explanation for the main clinical features of PTSD and as treatment targets (see Figure 1.1).

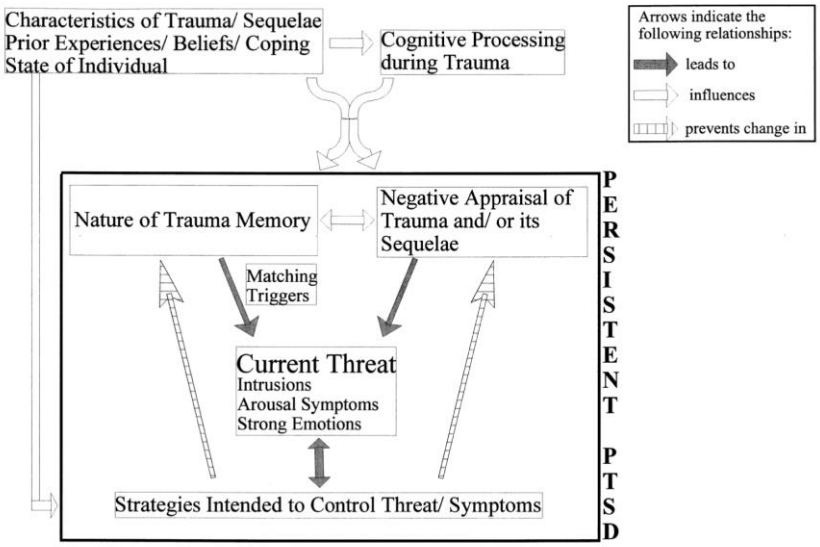


Figure 1.1 Ehlers and Clark's (2000) cognitive model of post-traumatic stress disorder

Stressful events can also lead to anxiety disorders. According to Beck's schema theory of anxiety (Beck, 1976; Beck, Emery, & Greenberg, 1986), anxiety occurs when a situation is perceived as a source of danger in a way that leads to a vicious circle. Compared to those who are non-anxious, anxious individuals are more prone to appraising situations as dangerous. Individuals with anxiety tend to possess dysfunctional schemas about how threatening the situations are and how difficult it is to cope with them. Once these schemas are activated by a critical incident (e.g., a stressful event), their excessively negative appraisals of the situations will make them experience negative automatic thoughts on physical, social, or psychological catastrophes directly or indirectly related to themselves. These automatic thoughts, assumptions, and beliefs are maintained by cognitive biases in processing associated with the schemas of dangerous situations. To reduce the sense of danger, they typically engage in safety behaviour or avoidance that prevents changes in their maladaptive belief and intensifies anxiety symptoms. These automatic thoughts, anxiety symptoms, cognitive bias, and behaviour responses form a newly learned experience that reinforces their dysfunctional schemas about 'dangerous' situations. Thus, Beck's schema

theory (1976) has also highlighted the roles of negative appraisals, memory, and coping strategies in contributing to anxiety (see Figure 1.2).

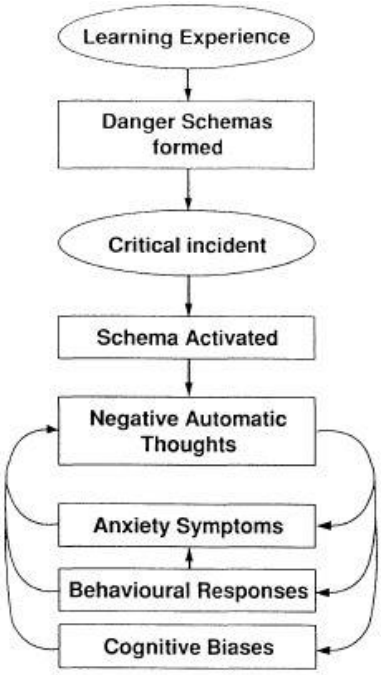


Figure 1.2 Beck's schema theory of anxiety (Beck, 1976; Beck et al., 1986)

Stressful events can also lead to depression. Compared to those who are non-depressed, individuals with depression were more likely to believe they might have experienced a trauma but could not actually remember it (McNally, Perlman, Ristuccia, & Clancy, 2006). This inability to recall specific autobiographical memories is termed reduced autobiographical memory specificity (rAMS; for a review, see Williams et al., 2007). One of the most integrative models to explain the rAMS is the CaRFAX model (Williams, 2006) (see Figure 1.3), with (1) Capture and rumination (CaR), (2) functional avoidance (FA) and (3) executive control dysfunction (X). These three processes may each have adverse effects on cognition and behaviour (e.g., impaired problem-solving), both independently or through their effect on autobiographical memory (Williams, 2006). These cognitive and behavioural processes include, but are not limited to, memory, which warrants further investigation across cultures.

Figure 1.3 Williams's (2006) CarFAX model.

In this thesis, appraisals, memory, and coping strategies, suggested by the above researchers, will be the focus of our investigation.

1.3 Current Cross-Cultural Research

Cross-cultural research refers to comparative studies that examine the scope of human behaviour or attitudes with data from different cultural groups (Annamoradnejad, Fazli, Habibi, & Tavokoli, 2019). This form of scientific method is used to address problems about 'the incidence, distributions, causes of cultural variation and complex problems across a wide domain, usually worldwide' (Olatundun, 2009, p. 82). It is widely applicable in social sciences, ranging from sociology and political science to economics and psychology. Social scientists strive for a theory applicable to the whole of humanity; particularly, psychologists seek to identify general mechanisms of human thoughts, feelings, and behaviour to the population worldwide but are also interested in individual differences.

Psychology is concerned with the scientific study of the human mind and behaviour, which are both influenced by the culture people live in. To acknowledge this fact, cross-cultural psychology has arisen to study the relationship among cultures, cognitions, and behaviour. A growing body of evidence has shown that human behaviour is a product of the dynamic interaction between people and their environment (e.g., Kitayama & Cohen, 2007; Sternberg, 2014). Many basic psychological processes, for instance, sensation (e.g., Levitan et al., 2014), perception (e.g., Nisbett & Miyamoto, 2005), and neuronal functioning (e.g., McCauley & Henrich, 2006), have been found to vary across cultures. Despite the cultural differences, the vast majority of psychology studies are derived from 'WEIRD' people (i.e., from 'Western', 'Educated', 'Industrialised', 'Rich', and 'Democratic' societies) (Henrich, Heines, & Norenzayan, 2010), which constitute only around 15% of the global population (Population Reference Bureau, 2022). This over-representation of 'WEIRD' people in

research appears to contradict the objective of psychology of understanding people worldwide.

The value of cross-cultural research is to help understand the variations of human cognitions and behaviour in people worldwide. Cross-cultural research has been assumed to mainly aim to identify cultural differences, but it also (1) concerns cultural similarities and (2) goes beyond only identification (e.g., Wang, 2016). Cross-cultural research thus appertains to both cultural differences and similarities. In cross-cultural psychology, significant differences suggest that a psychological process is influenced by culture while non-significant findings may suggest that a psychological process is closely linked to biological mechanisms (e.g., brain functions) or shared cultural factors. Observations of both cultural differences and similarities have contributed to the view that people's mind and behaviour is a result of the interaction between biological and socio-cultural factors (for a review, see Sasaki & Kim, 2017). Furthermore, cross-cultural research does not only aim to identify but also to explain and predict cultural differences or similarities. To date, cross-cultural research has developed psychology into a sophisticated field of study with comprehensive theories and methodologies, such as cultural neuroscience (e.g., Chiao, Cheon, Pornpattananangkul, Mrazek, & Blizinsky, 2013) and the integration of an ecological perspective (e.g., Talhelm et al., 2014). The development of these theories and methodologies (for a review, see Kitayama & Cohen, 2007) has enabled researchers to further explain and predict cultural differences and similarities. A series of studies on autobiographical memory exemplifies the contribution of cross-cultural research. Wang and Conway (2004) found that when being asked for 20 memories, American adults recalled more information about their own roles and emotions while Chinese adults recalled more information about social interactions and significant others in their memories. Wang, Shao, and Li (2010) explained this finding by two culturally-prioritised self-goals that guide the memory retrieval process.

Autonomous self-goals prioritised by Westerners tend to guide the memory search for the uniqueness of individuals whereas relational self-goals prioritised by Asians tend to guide the memory search for significant others and the groups they belong to. Based on these studies, Wang and Ross (2005) manipulated self-goals by asking participants to define themselves as unique individuals with ten personal qualities (i.e., primed with an autonomous-self goal) or as part of social groups with ten memberships (i.e., primed with a relational-self goal) in an experiment, and, in line with the predictions, Americans who were primed with relational self-goals recalled more socially oriented memory content than Asians who were primed with autonomous self-goals. As this line of research has shown, cross-cultural research, on the one hand, identifies cultural differences and similarities, and on the other hand, examines the mechanisms of cultural values and practices that result in cultural diversity and universality in people worldwide.

1.4 Research on Stress Responses in a Cross-Cultural Context

Appraisals, memory, and coping strategies as key psychological processes underlying stress responses (e.g., Beck, 1976; Beck et al., 1986; Ehlers & Clark, 2000; Williams, 2016) could be pervasively influenced by the culture with which people identify. Stress is a highly subjective experience that depends on individuals' situations and their ability to cope with them. Stress responses, due to their culture-specific patterns (e.g., Bernardi, Engelbrecht, & Jobson, 2019), should be examined in a cross-cultural context. Previous literature regarding stress and culture was focused on, specifically, stress coping (e.g., Lazarus & Folkman, 1984; Tweed, White, & Lehman, 2004); those on stress responses in general have been sparse. Studies of stress responses, if studied in a cross-cultural context, may generate important findings with research and clinical implications.

From a research perspective, this research line could enhance the cross-cultural applicability of existing psychopathology models. Stressful events happen to people

regardless of where they are from; yet, research has been focused on the 'WEIRD' population (Henrich et al., 2010). However, there have been cultural differences in stress response patterns. For example, compared to Westerners, East Asians tend to consider a greater amount of contextual information before making a final attribution (e.g., Choi, Dalal, Kim-Prieto, & Park, 2003; O'Connor & Shimizu, 2002; Schaubroeck, Lam, & Xie, 2000) and thus not to commit the fundamental attribution error (e.g., Choi & Nisbett, 1998; Morris & Peng, 1994). Past cultural comparisons were typically represented by Japanese and Americans (e.g., Bergiel, Bergiel, & Upson, 2012; Matsumoto, Kudoh, Scherer, & Wallbott, 1988). In the past decade, increasing research attention has been drawn to the Asian population (e.g., Jobson, 2009b; Jobson, Cheraghi, & Moradi, 2016) (For details, see Chapter 2). However, limited studies have yet been done on Chinese societies, which take up about 20% of the world population (Population Reference Bureau, 2022). Also, compared to American, there appears to be less research on other ethnic groups in the 'Western world', such as British. It may be beneficial to compare diverse cultural groups in samples to increase the external validity of the results.

From a clinical perspective, cross-cultural research on stress responses may help inform treatments that are customised to the culture a patient identifies with. Cognitive-behavioural therapy (CBT) is one of the most commonly used treatment approaches for trauma- and stressor-related disorders, including but not limited to PTSD. The target of CBT is to use the interaction among thoughts, feelings, and behaviour to change negative beliefs about the self, others and future (Beck & Beck, 2011) that lead to emotional distress. More specifically, this group of evidence-based treatments is aimed at challenging irrational thoughts, changing unhelpful behaviour, improving emotional regulation, and developing functional coping strategies. Hence, the success of CBT depends on cognitive and behavioural processes, both of which are susceptible to cultural influences. This thesis

investigates whether appraisals and memory (cognitive processes) and coping strategies (cognitive and behavioural processes) that are thought to be associated with mental health problems vary across different cultural groups. If cultural differences are taken into account, the efficacy of treatments (e.g., trauma-focused CBT) that target these cognitive and behavioural processes could possibly be further enhanced.

This thesis consists of nine chapters, starting from Chapter 1: *Introduction and Overview*. Chapter 2: *Background and Literature Review* illustrates the main concepts and research questions to be addressed, and reviews the relevant literature about the topics above. Chapter 3: *General Methodology and Descriptive Results* describes the participant characteristics, study design, materials, and statistical analysis methods in two studies: (1) Study of British, Taiwanese, and Hongkongese emerging adults currently living in the United Kingdom, and (2) Study of British, Taiwanese, and Hongkongese emerging adults in their home countries/ regions. Chapter 4: *Cultural Differences in Self-Report Measures* focuses on the cultural variations in the key cognitive and behavioural variables reported by participants themselves in questionnaires. Chapter 5: *Cultural Differences in Objective Measures* focuses on those cultural variations reflected in computerised tasks and standardised laboratory tasks administered by experimenters. Chapter 6: *Associations of Self-Concept and Appraisals with Post-Traumatic/Stress Outcomes* examines cultural differences in measures of self-concept and appraisals as well as their (temporal) relationship with psychopathology and post-traumatic growth. Chapter 7: *Associations of Cognitive Processing Styles and Autobiographical Memory with Post-Traumatic/Stress Outcomes* examines cultural differences in measures of cognitive processing styles and autobiographical memory as well as their (temporal) relationship with psychopathology and post-traumatic growth. Chapter 8: *Associations of Coping Strategies with Post-Traumatic/Stress Outcomes* examines cultural differences in measures of coping strategies as well as their (temporal) relationship with

psychopathology and post-traumatic growth. Chapter 9: *General Discussion* summarises the overall findings and implications of the research and indicates how they could enhance our understanding of stress responses and psychopathology in a cross-cultural context.

Chapter 2

Background and Literature Review

2.1 Culture

Culture is defined as 'the collective programming of the mind which distinguishes the members of one category of people from another' (Hofstede, 2011, p. 1). This 'programming' shapes how people think, feel, behave, and more specifically, how they perceive their life events (e.g., Vitell, Nwachukwu, & Barnes, 1993). Most people have multiple identities and thus belong to more than one cultural group (Spencer-Oatey & Franklin, 2012). Among various cultural groups, a country (or a region) is a common grouping category in cross-cultural psychology. There is a clear distinction between cultural psychology and cross-cultural psychology; the former is to conduct an in-depth analysis of phenomena within a specific culture while the latter is to compare different cultures (Van De Vijver, 2009). This thesis aims to contribute to the literature of cross-cultural psychology.

2.1.1 Individualism versus Collectivism

'Individualism versus collectivism' is one of the six major cultural dimensions proposed by Hofstede (2011). Among all, individualism versus collectivism has been commonly adopted in cross-cultural research due to its greater influence on social behaviour (compared to other cultural dimensions) (Singelis, Triandis, Bhawuk, & Gelfand, 1995). Individualism is a cultural orientation that prioritises personal goals, autonomy, and achievement (Hofstede, 1980). Under individualism, people are encouraged to express their own preferences, make independent decisions, and pursue personal success (e.g., Hui & Triandis, 1986). Collectivism, in contrast, is another cultural orientation that emphasises group cohesion, cooperation, and harmony (Hofstede, 1980). In collectivistic cultures, people are expected to prioritise the interest of their social group (such as family, community, or nation) over their individual needs and desires (e.g., Hui & Triandis, 1986). Examples of

individualistic cultures include the United States and the United Kingdom while those of collectivistic cultures include Taiwan and Indonesia (e.g., Fiske, Markus, Kitayama, & Nisbett, 1998; Smith & Bond, 1999).

'Individualism versus collectivism' can be characterised in vertical and horizontal aspects respectively if interacting with another cultural dimension, power distance (Basabe & Ros, 2005). According to Hofstede (1985), power distance is defined as 'the extent to which the members of a society accept that power in institutions and organizations is distributed unequally' (p. 347). People from low power-distance cultures value equality and treat everyone as equal while those from high power-distance cultures emphasise hierarchy and treat others differently according to their own standards, including racial, power, and wealth factors (Triandis & Gelfand, 1998). With horizontal and vertical aspects (power distance), individualism versus collectivism has been further theorised into a fourfold typology (Triandis & Gelfand, 1998): (1) vertical collectivism, which 'includes perceiving the self as a part (or an aspect) of a collective and accepting inequalities within the collective', (2) horizontal collectivism, which 'includes perceiving the self as a part of a collective, but seeing all members of the collective as the same; thus equality is stressed', (3) vertical individualism, which 'includes the conception of an autonomous individual and emphasis on inequality', and (4) horizontal individualism, which 'includes the conception of an autonomous individual and emphasis on equality' (Singelis et al., 1995, p. 240). The horizontal and vertical aspects of either individualism or collectivism are different from each other. For example, competition is associated with vertical individualism rather than horizontal individualism (Oyserman, Coon & Kemmelmeier, 2002). These four constructs were captured by the present research with a scale, Individualism and Collectivism Scale (INDCOL; Singelis et al., 1995).

2.1.3 Comparison between Cultural Groups

The sampling of the present research is derived from theoretical and empirical findings in the field of cross-cultural psychology. Cultural differences have been shown to be distinct, especially between Westerners and East Asians. Traditionally, the United States and Western European countries/regions have been referred to as individualistic cultures while East Asian countries have been categorised as collectivistic cultures. In this research, we selected a British sample to represent the Western individualistic culture, a Taiwanese sample to represent the Eastern collectivistic culture, and a Hongkongese sample to represent a mixed culture that has been exposed to influences from both individualistic and collectivistic cultures. Although Hong Kong and Taiwan are Chinese-majority societies with shared ethnic characteristics, their historical background and subsequent socio-economic development have made them different from each other. On the other hand, the unique tie between Hong Kong and the United Kingdom is worthy of investigation as the British colonial administration brought a clash to Chinese traditional culture in Hong Kong. As most of the previous findings regarding psychological processes are based on Western samples, we treated the British group as a reference category, compared to the Taiwanese group as its counterpart and to the Hongkongese group as a benchmark in between.

The identification of the cultures as individualistic, collectivistic, and a mix of both was based on the database of Hofstede (1984). The higher the score of Individualism/Collectivism, the more individualistic the country (or the region). The scores of this dimension in the United Kingdom, Hong Kong, and Taiwan are 89, 25, and 17 respectively (Hofstede, 1984). These scores showed that among the three, the United Kingdom is the most individualistic while Taiwan is the most collectivistic; Hong Kong is a culture between the two regions and tends to be more collectivistic. On the other hand, horizontal and vertical aspects can be interpreted as low and high power distance

respectively. According to Hofstede (1984), the scores of power distance are 35 in the United Kingdom, 68 in Hong Kong, and 58 in Taiwan. To understand the underlying causes of the scores, we investigated the specific cultural context of each country/region.

2.1.4 In-Depth Analyses of the Cultural Groups

The United Kingdom, compared to the other two regions, is more horizontally individualistic. British people are educated from an early age to think for themselves and find out their unique purpose in life (Song & Waters, 2015). Their route to happiness is through individual freedom, self-expression, and personal fulfillment (Inglehart & Oyserman, 2004). There has been a drastic increase in the demand for autonomy in both the workplace and society since the 1970s (Robinson, Schofield, Sutcliffe-Braithwaite, & Thomlinson, 2017). British people are relatively self-reliant and tend to pursue personal interests at work, which is directly related to dispositional attribution styles (Ryan & Connell, 1989). These work ethics may result in a higher priority on work over family. In this case, British people become less willing to form a family and give birth. For instance, the fertility rate of British women below 40 years old has decreased since 2012 (Office for National Statistics, 2023). For couples who married in 1996, over 40 % of marriages ended in divorce while the cohabitation rate has increased from 20.6% in 2011 to 24.3% in 2021 (Office for National Statistics, 2022). These figures showed that the British culture deprioritises commitment to a relationship with duties. In British culture, the concepts of childbearing and filial piety in return may not be as deeply rooted as in Chinese culture. Due to the British government's housing policy, it became common for British young people to live independently of their families (Quilgars, Johnsen, Pleace, Beecham, & Bonin, 2011). This facilitates a relatively independent lifestyle in the United Kingdom. On the other side, the British people believe that inequalities among people should be minimised. Since the post-war period, British people have started to strive for equity for everyone, and thus the class system started to

deteriorate (Robinson et al., 2017). In their belief, personal effort can contribute to success in work and thus change their personal status (Arslan, 2001). Interestingly, the index of power distance was lower among the higher class than the working class in the U.K (e.g., Hofstede, 1984). This finding seems incongruent with the historical British class system, but it reveals the inherent tensions in British culture. One possible explanation is that the social class where one was born is important in British culture, but it does not necessarily limit how far one can reach in life (e.g., Van de Werfhorst, Sullivan, & Cheung, 2003). This sense of 'fair play' leads to a faith that everyone should be treated as equal to a certain extent. Hence, the horizontal individualistic culture has become evident in the United Kingdom.

The Taiwanese culture, among the three, is the most vertically collectivistic (e.g., Chiou, 2001). This cultural characteristic is manifest in a long-term commitment to the 'member' group, such as a family. For instance, family enterprises were once the rule of Taiwan in the 19th century (e.g., Douw, Huang & Ip, 2013). Although Taiwan is no longer dominated by family enterprises, the work culture is influenced by kinship and blood relationships due to the traditional values of familism. The differentiation of 'in-group' and 'out-group' members facilitates social interaction and solidarity (Chen, 2001). Hence, having stronger 'guanxi' (personal connections) is more beneficial in the workplace. For example, those 'zhixi' (immediate family members) of the ruling class are considered to gain power more quickly than others as they are more trustworthy and reliable than those who are still 'in-group' but without kinship (e.g., Luo, 2000). Confucianism has also been believed to contribute to vertical collectivism in Taiwan. In Confucian ideology, a society is an extension of the self, family, and community, like a series of concentric circles (e.g., Tu, 1998; Tucker, 1993). In this ecosystem, a family is the basic unit of society, and thus the relationship between family members becomes a determinant of social relationships (Yao, 2000). The more harmonious the family, the more peaceful the society. Hence, people from collectivistic

cultures tend to possess interdependent self-construal. Such strong interdependent relationships are unequal under the influence of Confucianism (Barnes, 2001). In a family or an organisation, there is a hierarchy with status-based relationships (Ip, 2009). The seniority (e.g., rulers, fathers, and husbands) of such a hierarchical relationship can demand compliance from its counterparts (e.g., commoners, children, and wives) while taking care of them. When each class is obligated to its own roles and duties, society will become stable (Baumann, Winzar, & Viengkham, 2019). This hierarchy has made Taiwanese culture vertically collectivistic.

The characteristics of both individualism and collectivism have co-existed in Hong Kong. Given that Hong Kong was once a colony of the United Kingdom and returned to China, it has been influenced by East Asian and Western cultures. On the one hand, under the influence of Chinese culture, Hongkongese treasure 'in-group' relationships as being accepted means that one has good connections (guanxi) with others so that others are willing to do one a favour, returning or giving face (mianzi). This attitude leads them to be more friendly to those who are 'in-group' but more hostile to those who are 'out-group' (Yeung & Tung, 1996). When one has 'face', one will gain glory for the group they are representing; when they lose 'face', they will put shame on the group (Hu, 1944). Also, there is much emphasis on the importance of family education, where filial piety is an expression of gratitude in return for love and care from parents since they were born (Chan, Chun, & Lee, 2012). These interdependent relationships illustrate the collectivistic characteristics of the Hongkongese culture. On the other hand, Hong Kong is developing to be more individualistic due to Western capitalism where 'social relationships are institutionalised' and 'changing patrilineal networks of small firms that connect near and distant kin, and frequently friends into production-and-supply networks' (Biggart & Hamilton, 1992, p. 485). This kind of relational network became the dominant form of institutions in Hong Kong (Lowe, 1998).

Also, although the traditional Chinese culture favours the extended family type, nuclear families have become more common in Hong Kong since the 1970s (Chi & Chow, 1997). According to the Census and Statistics Department, Hong Kong Special Administrative Region (2022), there has been a drastic decline in the crude fertility rate from 13.5% in 2011 to 5.0% in 2021. Such a drastic decrease in the birth rate may be due to high living costs (Yi & Zhang, 2010), but could also suggest that personal choices and freedom were highly valued. For example, more Asians may choose to delay childbearing to pursue education, career opportunities, and individual goals (Jones, 2007). This may be a sign that Hong Kong is turning to be more individualistic.

2.1.5 Triple Cultural Comparison

In this research, we compared the cultures in the United Kingdom, Taiwan, and Hong Kong. This triple cultural comparison (with the British group as a reference category) can contribute to the literature on cultural differences between East Asians and Westerners from the perspective of mental health. Despite this, cultural dimensions (including individualism versus collectivism) are meaningful only with comparison. For example, the score of individualism in Hong Kong is lower than in the United Kingdom but higher than in Taiwan (Hofstede, 1984). Individualism versus collectivism is not a dichotomous categorisation but a relative concept.

Two culture measures were used to check the baseline differences in the three countries/regions before main analyses. On the one hand, we used the Individualism and Collectivism Scale (INDCOL; Singelis et al., 1995) to assess the level of vertical/horizontal individualism-collectivism. Despite Hofstede's (1984) score, the culture of the three countries/regions may have changed over time. Under the influences of globalisation, there may have been increasing similarities than differences between cultures. For example, in terms of 'the autonomy-relatedness model' (Kagitcibasi, 2003), there have been changes in

the Taiwanese culture, where the young generation values both independent and interdependent attributes (Liao, Bluck, Alea, & Cheng, 2016). This argument was supported by the survey conducted by Lee, Beckert and Goodrich (2010), where 42% of Taiwanese adolescents embraced both individualistic and collectivistic cultural values while only 27.75% and 30.25% only held the values of individualism and collectivism respectively. On the other hand, we used the Self-Construal Scale (Singelis, 1994) to measure the levels of independence and interdependence in individuals even within one culture. Culture does not necessarily mean that everyone in a culture is programmed in the same way; differences among the values of individuals in a culture may be bigger than those between cultures. Hence, individual differences within a culture are also of interest. Therefore, these two measures served as a manipulation check of culture, which is the focus of this thesis.

2.2 Traumatic/Stressful Events and Psychopathology

Stress is often highlighted as one of the most common causes of psychopathology. There are four distinct sources of stress (also known as stressors), namely cataclysmic events, stressful life events, daily hassles, and ambient stressors (Evans & Cohen, 1987). Among these stressors, stress is usually accompanied by a stressful event that can be traumatic or non-traumatic. Exposure to stressful events has been a strong indicator of the development of psychological disorders (e.g., Cameron, Palm, & Follette, 2010; Furniss, Beyer, & Müller, 2009). Post-traumatic stress disorder (PTSD) has been one of the most prevalent psychological disorders caused by stressful, and often traumatic events. The first criterion of the PTSD diagnosis is the exposure to a traumatic event, which 'involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others' (American Psychiatric Association, 2013, p. 467). These events usually induce negative and long-term distress in individuals, often influencing their daily functioning.

2.2.1 Types and Prevalence of Traumatic/Stressful Events

Traumatic events have been divided into different types in clinical research. One of the well-established lists of traumatic events was developed by the World Health Organisation. According to Kessler and his colleagues (2014), there are 29 types of traumatic experience, which can be further sorted into 6 categories, namely (1) 'exposure to organised violence' (e.g., kidnapped), (2) 'participated in organised violence' (e.g., combat experience), (3) 'interpersonal violence' (e.g., witnessed physical fights at home as a child), (4) 'sexual-relationship violence' (e.g., beaten by spouse/partner), (5) other life-threatening traumatic events (e.g., life-threatening illness), and (6) network traumatic experiences (e.g. unexpected death of loved ones). This list of traumatic events seems exhaustive but does not cover stressful events that are 'potentially' traumatic. Therefore, we adopted and later modified the Life Events Checklist (Gray, Litz, Hsu, Lombardo, 2004; Weathers et al., 2013), which is a measure of exposure to potentially traumatic events (PTEs).

Traumatic/stressful events have been experienced by most of the global population. Across all countries, 70.4% of respondents had reported experiencing at least one lifetime traumatic experience (Benjet et al., 2016). On average, there were 321.5 exposure frequencies per 100 respondents across countries (Benjet et al., 2016). The most encountered PTEs were accidents or injuries (36.3%), unexpected death of a loved one (31.4%), and witnessing death, a dead body or someone seriously injured (23.7%), while the least common was collective violence (9.4%) (Benjet et al., 2016). However, the prevalence of the PTEs has differed across countries/regions. For example, in Benjet and his team's (2016) survey, although the interquartile range of the data across the globe regarding the percentage of people exposed to at least one lifetime traumatic event was 60.7-76.2%, the percentages across nations varied to a relatively large extent. The percentage range of people who have experienced at least one lifetime traumatic stress varied from 28.6% in Bulgaria to 84.6% in

Ukraine (Benjet et al., 2016). In this research, we compared the prevalence of traumatic and stressful events in the three countries/regions (i.e., the United Kingdom, Hong Kong, and Taiwan) (see Chapter 3).

2.2.2 Post-Traumatic/Stress Outcomes

The outcomes after exposure to traumatic/stressful events can be negative (e.g., psychopathology) or positive (e.g., post-traumatic growth). Trauma-related psychopathology, such as PTSD, anxiety, and depression, has been well-documented in trauma survivors (for details, see Chapter 1). Research has shown that trauma exposure can increase the risk of these psychopathological symptoms (e.g., Kessler et al., 2005). These symptoms include intrusive re-experiencing of the traumatic event, avoidance of trauma-related stimuli, negative alternations in mood and cognition, and hyper-arousal (American Psychiatric Association, 2013). However, it is noteworthy that not all individuals who experience traumatic/stressful events develop psychopathological symptoms. On the contrary, the concept of post-traumatic growth has emerged, highlighting the potential for positive psychological changes. Post-traumatic growth, according to Tedeschi and Calhoun (2004), refers to positive psychological transformation after traumatic exposure, such as increased personal strength, enhanced relationships, and a better sense of purpose in life. Although trauma-related psychopathology and post-traumatic growth may co-exist, they represent distinct outcomes with different underlying mechanisms. Hence, understanding cognitive/behavioural processes that contribute to these negative and/or positive outcomes is crucial for developing trauma-focused prevention or intervention measures.

Post-traumatic/stress outcomes may vary across features of the population. Some researchers have aggregated the occurrence rate of PTSD, the exposure to traumatic and stressful events, and the vulnerability of the population to such events. Dückers, Alisic, and Brewin (2016) found that lifetime PTSD was positively correlated with trauma exposure and

negatively correlated with vulnerability (such as social and educational disadvantage). On the other hand, the higher rates of PTSD in developed countries, such as the United States, compared with other countries were not well understood (Stein, McQuaid, Pedrelli, Lenox, & McCahill, 2000). Koenen and his colleagues (2017) attributed these variations to the socio-economic status of the countries as the lifetime prevalence of PTSD in upper-middle-income countries (2.3%) was more than in lower-middle-income countries (2.1%). However, there were exceptions in countries with higher socio-economic status. For example, the lifetime PTSD prevalence in Australia was as low as 1% (Creamer, Burgess, & McFarlane, 2001). Also, PTSD positively predicted anxiety and depression, but not vice versa (e.g., Mertin & Mohr, 2001). Longitudinal research (e.g., Ginzburg, Ein-Dor, & Solomon, 2010) found that there was a higher comorbidity rate of PTSD, anxiety, and depression (26.7-30.1%) than rates of PTSD, either alone (9.3-11.1%) or comorbid with anxiety (2.9-4.5%) or depression (1.2-4.5%). Since this triple comorbidity was more associated with impaired functioning than PTSD alone or double comorbidity, we included PTSD symptoms, anxiety, and depression as the outcomes of our research. Post-traumatic growth, compared to trauma-related psychopathology, is hard to measure and quantify, and thus relatively under-explored in the previous literature. In this research, we started the analyses by comparing the post-traumatic/stress outcomes between the three cultures (see Chapter 3).

2.3 Self-Concept

Self-concept is a multi-dimensional description of one's self-adequacy (Shavelson, Hubner, & Stanton, 1976). It is a broad term used to illustrate an individual's belief, including one's attributes of who and what one is (Baumeister, 1997). The term, 'self-concept', has commonly been used almost interchangeably with other terms, such as self, self-identity, and personality (e.g., DeVos, Marsella, & Hsu, 1985). Previous literature has concluded that self-concepts (1) can vary across cultures (e.g., Kluckhohn & Murray, 1961);

(2) are both subjective and objective (e.g., Johnson, 1985); (3) enable individuals to understand themselves through internal thoughts and external behaviour (e.g., Gergen, 1971); (4) are characterised by both personal and collective aspects in every individual (e.g., McCombs, 1985). As self-concept is a broad and complex concept, the following sections illustrate some of the most widely used frameworks, and components related to self-concept. In earlier research, Rogers (1959) suggested that self-concept can be divided into three different components (i.e., self-esteem, self-image, and ideal self), among which self-esteem has been directly linked with the development and expression of psychopathology (Crocker & Park, 2004).

2.3.1 Self-Esteem

Self-esteem is a subjective aspect of the self-concept. According to Purkey (1988), self-concept generally refers to 'the totality of a complex, organised, dynamic system of learned beliefs, attitudes, and opinions that each person holds to be true about his or her personal existence' (p. 2). Of the self-concept, self-esteem is an evaluative component (Campbell, 1990), involving one's sense of self-worth and self-respect, (e.g., García, J. A., y Olmos, Matheu, & Carreño, 2019; Gnambs & Schroeders, 2020). Self-esteem is related to self-concept in that 'people who have good self-esteem have a clearly differentiated self-concept…When people know themselves they can maximise outcomes because they know what they can and cannot do' (Franken, 1994, p. 439). Self-esteem has been positively correlated with psychological well-being (e.g., Paradise & Kernis, 2002) and negatively correlated with PTSD symptoms (e.g., Soler, Paretilla, Kirchner, & Forns, 2012), anxiety (e.g., Sowislo & Orth, 2013), and depression (e.g., Steiger, Allemand, Robins, & Fend, 2014). Regardless of culture, individuals tend to hold positive self-esteem (Schmitt & Allik, 2005), which is reflected in a high self-esteem score in the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965).

2.3.2 Self-Construal

Self-construal theory provides a framework for understanding the formation and expression of self-concept. Self-construal refers to how individuals perceive and define the self in relation to others (Markus & Kitayama, 1991; for a review, see Cross, Hardin, & Gercek-Swing, 2011). According to self-construal theory (Markus & Kitayama,1991), one's self-concept is influenced by their cultural context and can be categorised into two broad dimensions, independent and interdependent self-construal. Independent self-construal emphasises individualism, autonomy, and uniqueness, so the self is defined in terms of personal characteristics and achievements (e.g., Fiske, Kitayama, Markus, & Nisbett, 1998). In contrast, interdependent self-construal prioritises collectivism, harmony, and relationship, so the self is defined in relation to others and social roles (e.g., Fiske et al., 1998). Although both independent and interdependent self-construal exist in all cultures, each culture may emphasise a particular part of the concepts and thus differentially shape people's cognition and behaviour (Markus & Kitayama, 1991, 1994).

These two types of self-construal have been used to distinguish Western and Eastern cultures (Markus & Kitayama, 2010). Independent self-construal is predominant in Western individualistic cultures, where the self is a unique entity, based on its individual attributes and aimed to promote self-centred goals (e.g., Jobson et al., 2019). Interdependent self-construal is featured in Eastern collectivistic cultures, where the self is an interconnected entity, based on its social context and aimed to fit into the group it belongs to (e.g., Jobson et al., 2019). The distinction between two forms of self-construal is thought to originate from two functional modes of the self (Markus & Kitayama, 2010), where the self is sometimes oriented towards personal interest but sometimes guided by social concern. The two sets of patterns are referred to as 'self-schemas' (see Figure 2.1). These self-schemas operate bidirectionally as they guide behaviour which in turn, produces a certain sense of self that

reinforces the self-construal. As shown in Figure 2.1, in the independent self-schema, the self is separate from others while in the interdependent self-schema, the self is interconnected with significant other (e.g., family and close friends) (Markus & Kitayama, 1991; Heine, 2008). Through self-schemas, the self-construal theory can be operationalised via the Self-Construal Scale (in Chapter 3) and the Perceptual Matching Task (in Chapter 5).

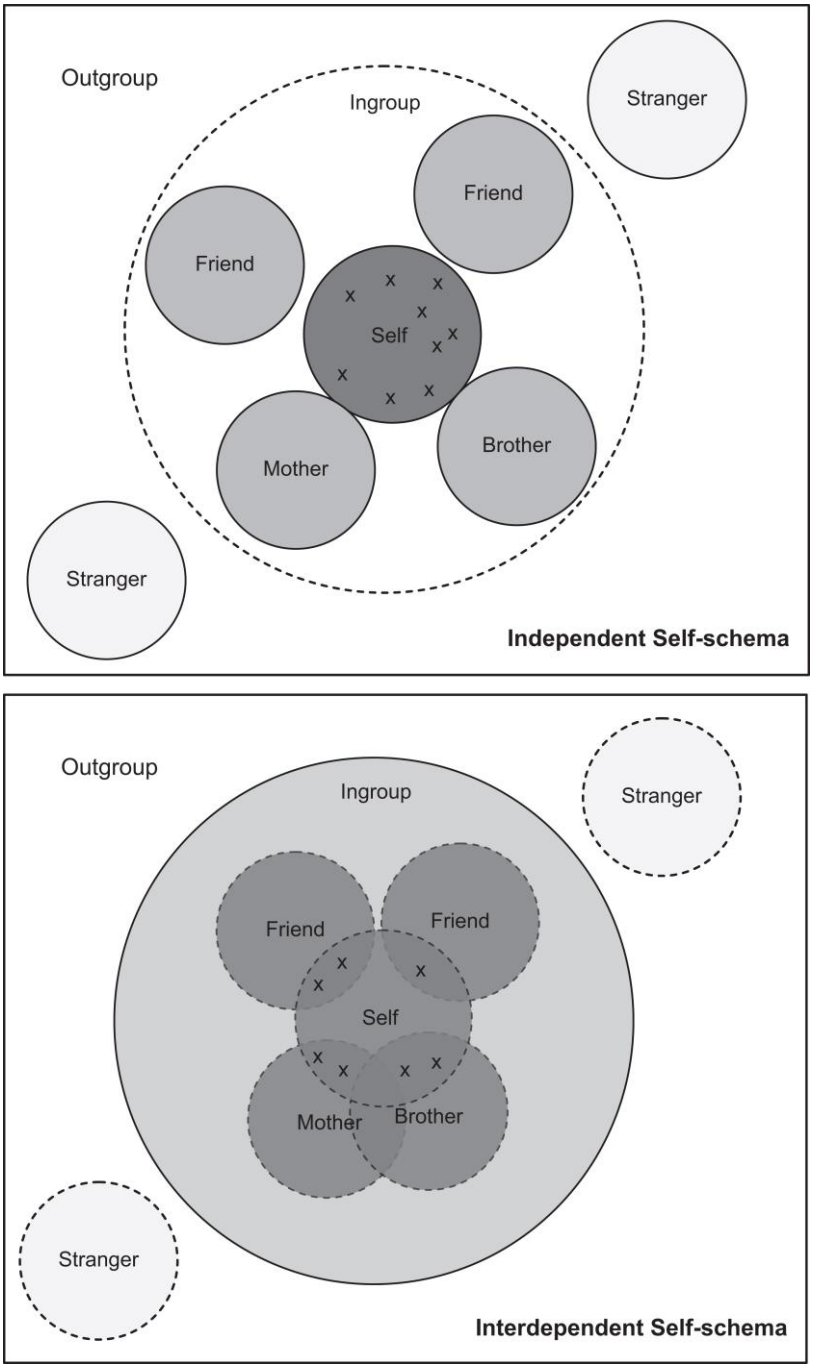


Figure 2.1 Independent and interdependent self-schemas. Figure adapted from Markus and Kitayama (1991) and Heine (2008).

2.3.3 Personal Styles

Personal styles (sociotropy versus autonomy) reflect individual differences in how individuals perceive themselves and thus shape their self-concept. Sociotropy, defined as 'investment in positive interchange with others' (Beck, 1983, p. 272), is characterised by dependence on social approval for gratification. This emphasis on interpersonal relationships can shape their self-concept as being socially connected, likable, and accepted by others. In contrast, autonomy, defined as 'investment in preserving and increasing (one's) independence, mobility, and personal rights' (Beck, 1983, p. 272), is characterised by a desire to achieve personal goals by directing one's own activities. This emphasis on autonomous achievement can shape their self-concept as being competent, independent, and self-sufficient. 'Sociotropy' and 'autonomy' have been coined as 'dominant other' and 'dominant goal' orientations (Arieti & Bemporad, 1980), 'dependency' and 'self-criticism' (Blatt, D'Afflitti, & Quinlan, 1976), 'anxious attachment' and 'compulsive self-reliance' (Bowlby, 1977). Despite some differences in these concepts, the two sets of rigid personality styles have consistently represented excessive concerns about interpersonal relationships (sociotropy) and autonomous achievement (autonomy) respectively. Both rigid personal styles were found to increase vulnerability to psychopathology (for a review, see Blatt & Zuroff, 1992).

2.4 Appraisals

Appraisals refer to a series of interpretations and evaluations of events (Mesquita, 2001). The way to form appraisals is influenced by the central values and beliefs in a culture (Mesquita & Ellsworth, 2001; Oláh, 1995). The individualistic-collectivistic orientation has been one of the most influential among all cultural orientations (Kim, 1994). More independent self-construal is constructed in individualistic cultures while more interdependent self-construal is constructed in collectivistic cultures (Kapoor, Hughes,

Baldwin, & Blue, 2003). Collectivists tend to perceive interpersonal stressors (e.g., conflicts with others) as a crucial process of building an interpersonal relationship, so they do not aim to settle the stress (e.g., Zomer, 2012). Due to interdependent self-construal, collectivists tend to avoid ruining their relationships with others (e.g., Lonner, 2007). In contrast, individualists may consider interpersonal stressors as a challenge rather than a threat due to independent self-construal. An emphasis on self-reliance and independence leads individualists to view the happening of the stressors positively and thus embrace them as a chance to enhance themselves (e.g., Chun, Moos, & Cronkite, 2006). This variation in appraisals marks the differences in thinking styles and cognitions after traumatic/stressful events.

2.4.1 Holistic versus Analytic Thinking

Holistic and analytic thinking are two distinct thinking styles individuals use to make appraisals of events. Holistic thinking refers to a tendency to perceive and understand the world in a more integrated and contextual manner, focusing on the broader picture and relationships between various components (Choi, Koo, & Choi, 2007). Analytic thinking involves a more focused and detailed approach, emphasising the analysis of individual elements and their specific attributes (Choi et al., 2007). These thinking styles have been highly associated with the process of appraisals (e.g., Choi & Nisbett, 1998; Morris, & Peng, 1994). In the context of trauma appraisals, holistic thinkers consider not only the traumatic event itself but also the emotional, social, and cultural context where it occurred. In contrast, analytic thinkers tend to dissect a traumatic event into its constituent elements, including the sequences of events, causal relationships, and factual aspects. These two thinking styles shape one's appraisals of the event itself and its consequences, thus resulting in different coping strategies.

2.4.2 Post-Traumatic Cognition

Post-traumatic cognition refers to one's thoughts, beliefs, and interpretations about oneself, others, and the world after traumatic exposure (Davis et al., 2016). These cognitive processes often involve one's negative appraisals, which can contribute to trauma-related psychopathology (Foa, Ehlers, Clark, Tolin, & Orsillo, 1999). For example, individuals may have self-blaming thoughts, believing that they are responsible for the traumatic event and/or its consequences. They may also develop negative appraisals of others, perceiving them as untrustworthy and even hostile. Furthermore, some of them perceive the world as overly dangerous and unpredictable. These post-traumatic cognitions can perpetuate feelings of guilt, shame, fear, and a sense of threat, which in turn, negatively impact one's psychological well-being. Appraisals involve the assessment of the significance of the events and the evaluation of one's resources and ability to cope with them (Monroe & Kelley, 1995). Therefore, appraisals are regarded as the first step of coping as it determines cognitive and behavioural responses, either adaptive or maladaptive (Carver, Scheier & Weintraub, 1989). Research has established the key role of negative appraisals of traumatic events in the development and maintenance of trauma-related psychopathology (e.g., Bryant, 2003; Ehlers & Clark, 2000).

The Post-traumatic Cognition Inventory (PTCI; Foa et al., 1999) was developed to assess negative appraisals of the trauma and its consequences. Although the PTCI is a well-established measure, it may not apply to the Asian population due to cultural differences in how the self is evaluated (Engelbrecht & Jobson, 2014). In view of this, Engelbrecht and Jobson (2014) designed the Public and Communal Self-Appraisals Measure (PCSAM) to assess interdependent, public, and communal appraisals, which are emphasised in collectivistic cultures. In this research, we adopted both the PTCI and the PCSAM to identify culture-specific appraisals for post-traumatic/stress outcomes.

2.5 Cognitive Processing Styles

Previous literature on cognitive processing styles during trauma (state dissociation, data-driven processing, and lack of self-referent processing) predicts the severity of subsequent PTSD symptoms. State dissociation refers to a temporary disruption in the integration of thoughts, feelings, and memories during traumatic/stressful events (Hagenaars & Krans, 2011). It is characterised by a detachment from one's immediate surroundings, a sense of unreality, and a numbing of emotional responses. Data-driven processing involves an excessive focus on sensory impressions, rather than a conceptual understanding of the events (Ehlers & Clark, 2000). This involuntary processing style may lead to fragmented memories, which fail to form a cohesive narrative of the experience. Lack of self-referent processing refers to a diminished awareness of the self and reduced integration of traumatic/stressful events into one's self-concept (Laposa & Rector, 2012). This can result in a sense of detachment and difficulty in the elaboration of contextual information related to the events. Research has shown that these cognitive processing styles have negative implications for the development of PTSD and other trauma-related disorders (Brewin, Gregory, Lipton, & Burgess, 2010; Ehlers & Clark, 2000).

2.6 Autobiographical Memory

Autobiographical memory basically consists of episodes recollected from an individual's life. According to Conway and Pleydell-Pearce (2000), autobiographical memory is constructed within a self-memory system (SMS), which is a conceptual model composed of two main elements, (1) the autobiographical knowledge base and (2) the working self. In this memory system, autobiographical events are usually incorporated into the autobiographical knowledge base that is organised by themes and lifetime periods. The working self is often referred to as just the 'self', which is a set of active personal goals and self-images organised together to modify cognition and the resulting behaviour so an individual can operate effectively in response to life events. The relationship between the self

and the autobiographical knowledge base is reciprocal; while the self here can control access to the autobiographical knowledge base, the autobiographical knowledge base constrains the goals and self-images of the self.

Autobiographical memory is proposed to be hierarchical by nature (Conway & Pleydell-Pearce, 2000). In the autobiographical knowledge base, autobiographical memory is organised in a way with conceptual themes (e.g., work and relationship) at the top, followed by lifetime periods and general events, and finally event-specific knowledge (Conway & Rubin, 2019). The memories could be retrieved in either of the two pathways, (1) the generative retrieval pathway where one intentionally recalls a memory of a specific event, or (2) the direct retrieval pathway where a specific event is triggered by external cues involuntarily (e.g., Conway & Pleydell-Pearce, 2000; Haque & Conway, 2001). If one is trying to retrieve a specific memory through the generative retrieval pathway, one must go through each level of the hierarchy in a top-down manner (Conway & Pleydell-Pearce, 2000).

The second retrieval path, where memories are involuntarily triggered, often applies to traumatic experiences. Traumas often produce strong and vivid memories that are associated with intense emotions and physiological arousal (e.g., Van der Kolk, 1998). These trauma memories are encoded in a fragmented and disorganised manner and thus easily triggered by various cues or reminders in the immediate environment (Zoellner & Bittenger, 2004). The retrieval of trauma memories can be involuntary and intrusive, leading individuals to re-experience the emotional and sensory aspects of the traumatic event. Reliving the traumatic event as if it were happening again can result in heightened distress and emotional reactivity (e.g., Holmes, Grey, & Young, 2005).

2.6.1 Event Centrality

The concept of event centrality has been extensively explored in the studies of autobiographical memory. Event centrality, measured by the Centrality of Event Scale (CES;

Berntsen & Rubin, 2006), refers to the extent to which one views a particular event in one's autobiographical memory as central to one's personal identity, a turning point of their life, and a reference point for everyday situations. Central events are typically emotionally charged, personally meaningful, and have a profound impact on one's identity and self-concept (e.g., Rasmussen, & Berntsen, 2009). Event centrality influences the level of accessibility to autobiographical memory where central events are more readily recalled (Fitzgerald, Berntsen, & Broadbridge, 2016). During a lifetime, individuals encounter both positive and negative events. Positive events include dating, graduation from university, and marriage, while negative events include breakups, job loss, and death of significant others. Either or all of these events may be central to one's cultural life script, which is a culturally shared expectation of the transitional stages of a prototypical life (Berntsen & Rubin, 2004). Therefore, in this research, we asked participants to recall both positive and negative autobiographical memories, which are potentially central to one's life course.

2.6.2 Functions of Autobiographical Memory

The literature on autobiographical memory has highlighted its various functions, including self-continuity, social bonding, and directing behaviour (e.g., Bluck & Alea, 2011). The use of autobiographical memory for self-continuity has attracted research attention as it is strongly associated with self-concept, especially in the context of trauma. Self-continuity refers to the ability to perceive oneself as extending temporally backwards into the past and forwards into the future (Chandler, 1994). This ability serves to maintain a sense of integrity in one's identity and guide one's actions accordingly throughout his/her life course (Erikson, 1953). A hallmark of PTSD symptoms is that patients often have difficulty retrieving a complete memory of the traumatic event (Ehlers & Clark, 2000). Everyday events are usually elaborated and incorporated into an autobiographical knowledge base organised by themes and personal time periods (Conway & Pledell-Pearce, 1997). This kind of elaboration

enhances the higher-order meaning-based retrieval but inhibits retrieval directly triggered by any stimuli that can be related to the original traumatic event (Ehlers & Clark, 2000). These traumatic events are discontinuities interrupting the smooth flow of individual lives (Ornstein, 2013). Traumatic memory is poorly elaborated and inadequately integrated into its context, particularly in terms of time and place (Siegel, 1995). Experiencing trauma usually triggers individuals to re-conceptualise themselves in different domains (e.g. social, marital, financial, and intellectual). In normal situations, how individuals view themselves in terms of who they are now relative to who they were and who they can be in the future constitutes the flow of the individuals' lives (e.g., Sadeh & Karniol, 2012). However, for PTSD patients, the absence of memory context breaks this flow and engenders a feeling of 'here and now' when they are re-experiencing the traumatic memory (Ehlers & Clark, 2000). In order to reduce the persistence of PTSD, the elaboration and contextualization of trauma memory into the autobiographical memory base were promoted to reweave one's self-continuity (Liao & Bluck, 2022). Researchers (e.g., Foa, Molnar, & Cashman, 1995) discovered that patients' level of improvement in CBT was positively related to the extent to which the trauma narrative was organised and cohered to enhance self-continuity.

The prevalence of the use of autobiographical memory for self-continuity varies across cultures. A recent study suggested that Taiwanese individuals used autobiographical memory more frequently than Americans to maintain self-continuity (Liao et al., 2016). Research has also suggested that self-continuity plays an important role in delineating one's self-identity. The goals to develop both autonomous and interrelated senses of self have been commonly found in emerging adults across different countries (Yeh, Bedford, & Yang, 2009). For instance, Liao et al. (2016) suggested that emerging adults in Taiwan strive to hold both interdependent and independent views of self. When a society does not provide sufficient support for individuals to obtain these goals, researchers found that cognitive

resources, especially autobiographical memories, are used to fulfill the goals (Markowitsch, & Staniloiu, 2011). This was seen in Taiwanese society as it provided few resources for Taiwanese to develop a continuous, biographical self-identity, and emerging adults thus find it hard to develop a continuous, individualised life story (Yeh, Liu, Huang, & Yang, 2007). According to Neisser's (1997) proposition, memories are retrieved for contextual demands to fulfill one's developmental need for independence. In particular, self-continuity is essential to developing an independent self with a unique continuous unfolding life story (Habermas & Bluck, 2000). In Liao et al.'s (2016) study mentioned above, a group of Americans was compared to a group of Taiwanese individuals because researchers believed that the United States was responsible for lots of changes brought about by the 'industrialization' and 'westernisation' in the Taiwanese society in the 1950s (Hui-Chun, Yu, & Miller, 2003). Much research attention has been directed towards the population in East Asia as a whole, yet cultural differences among individual Asian societies, such as Hong Kong, were underestimated. Similar to Taiwan, the sociocultural context with both interdependent and independent attributes can be seen in Hong Kong, a society constantly being influenced by the Chinese and British cultures. Therefore, a group of British emerging adults will be an ideal comparison group to their Hong Kong counterparts in studying the use of autobiographical memory.

2.6.3 Self-Defining Memory

Self-defining memories (SDMs) refer to those vivid, affectively intense, repetitively recalled memories that are linked to other similar ones and focused on an enduring concern or unresolved conflict of one's personality (Singer & Blagov, 2004). Compared to general autobiographical memories, self-defining memories are associated with one's self-concept (McAdams, 1989a, 1989b; Singer & Moffit, 1992). As in PTSD, the current threat is commonly perceived towards the 'self' (Ehlers & Clark, 2000), the specificity of 'self-

defining memories' might be more directly linked to the outcomes after stressful events than the specificity of other autobiographical memories. Therefore, we included the Self-Defining Memory Task (SDMT; Moffitt & Singer, 1994) to assess not only its specificity but also meaning, affect, content, and detailedness (e.g., Blagov & Singer, 2004).

2.6.4 Autobiographical Memory Specificity

Autobiographical memories, according to the level of specificity, are divided into specific memories and non-specific memories (Conway & Pleydell-Pearce, 2000). Specific memories are defined as those memories of an event that (1) could be identified by its date and time and (2) have a brief duration of less than 24 hours (Singer & Blagov, 2000). Non-specific memories include (1) categoric memories (events that repeat over time in life, for example, 'going to school by bus') and (2) extended memories (events that involve a life episode of more than 24 hours, for example, 'a graduation trip to Taiwan') (Conway & Pleydell-Pearce, 2000). Autobiographical memory specificity (AMS) refers to one's ability to retrieve specific memories (e.g., Kyung, Yanes-Lukin, & Roberts, 2016). Substantial research has demonstrated that those with trauma exposure show rAMS compared to those without trauma (e.g., Hauer, Wessel, Geraerts, Merckelbach, & Dalgleish, 2008). rAMS has been found to predict more post-traumatic stress symptoms in previous longitudinal studies (e.g., Kleim & Ehlers, 2008).

Cultural differences in autobiographical memory specificity may influence the vulnerability to developing PTSD symptoms after stress. Extensive research has found that those from collectivistic cultures tend to have rAMS compared with those from individualistic cultures. This has been presumed to be because of, in collectivistic cultures, less emphasis on the independent self and thus fewer demands to recall the specific details of autobiographical memories used to differentiate the self from others than in individualistic cultures (e.g., Wang & Conway, 2004). Although no interaction between culture and level of

trauma exposure was found in previous studies (e.g., Humphries & Jobson, 2012), this may be explained by the varied level of importance, vividness and 'self-defining' qualities of the memory narratives collected. Therefore, the present research aimed to request self-defining memories from participants and then to examine their specificity and other memory narrative characteristics (e.g., meaning, affect, content, and detailedness). It was hypothesised that participants with a high level of stress exposure in collectivistic cultures would demonstrate more reduced self-defining AMS than their counterparts in individualistic cultures.

2.7 Coping Strategies

Coping is defined as constantly changing cognitive and behavioural efforts in response to specific internal and external demands that are appraised as exceeding an individual's resources (Lazarus, & Folkman, 1984). In response to traumatic/stressful events, coping strategies have been found to moderate one's perceived stresses (e.g., demands being made on them or threats to their well-being) (e.g., Greer, Ricks, & Baylor, 2015). According to Lazarus and Folkman (1984), the stress response involves three processes, namely primary appraisals (i.e., perceiving a threat to oneself), secondary appraisals (i.e., thinking of a potential response to the threat), and coping (i.e., executing the response to the threat). Coping can thus be regarded as a buffer between stress and distress (e.g., Selye, 1974) as well as between perfectionism and distress (e.g., Dunn, Whelton & Sharpe, 2006). When individuals perceive that they cannot adequately cope with stress, distress might arise.

2.7.1 Self-Concealment

Self-concealment refers to selectively hiding distress and negative personal information from others (Larson, Chastain, Hoyt, & Ayzenberg, 2015). Individuals tend not to disclose information that is perceived as having negative impacts on their self-image (Schlenker, 1980). When individuals suppress and internalise their emotions, it is easier for them to experience emotion dysregulation (Larson et al., 2015). Their unwillingness to seek

help from significant others and professionals leads to the persistence of stress and heightened anxiety (Cepeda-Benito & Short, 1998). Meanwhile, it is more likely for those individuals to turn to a behavioural-avoidance approach (e.g., Ryan & McGuire, 2016). Self-concealment may contribute to psychopathological symptoms as it maintains the sense of current threat towards the self. When the traumatic/stressful experiences are not fully elaborated by sharing with others, the coping responses tend to be emotion-focused. Hence, self-concealment prevents individuals from sharing emotions and contextual information about stressful events and thus increases the likelihood of developing symptoms (e.g., Folkman & Lazarus, 1986).

The tendency to self-conceal may vary across cultures. Collectivists believe that expression of emotions may bring negative consequences to social relationships (Rusk, Tamir, & Rothbaum, 2011). Some of the consequences include concern about upsetting others and creating interpersonal conflicts (Wei, Su, Carrera, Lin, & Yi, 2013). Hence, in collectivistic cultures like Taiwan, self-concealment is common as the suppression of emotions is strongly associated with harmonious relationships (Wei et al., 2013). In contrast, people from individualistic cultures (such as the United States) tend to express their emotions in the pursuit of personal benefits in relieving the stress (Constantine, Okazaki, & Utsey, 2004; Rusk et al., 2011). In rare cases, individualists may still conceal their emotions to protect their privacy rather than the people in their close groups (Hoover & Nash, 2016; Markus & Kitayama, 1991).

2.7.2 Responses to Intrusions

'Intrusions' refer to the re-experiencing symptoms, for example, intrusive thoughts, nightmares, feelings, and imagery related to traumatic/stressful events (Christianson & Marren, 2012). Due to fragmentation, traumatic/stressful memories are easily triggered by internal or external cues (Ehlers et al., 2004). Once triggered, these intrusive memories

contain sensory information that arouses negative emotions associated with the traumatic/stressful experiences and leads to emotional distress (e.g., Meiser-Stedman, Dalgleish, Yule, & Smith, 2012; Williams & Moulds, 2007). In the context of trauma, the presence of intrusive memories predicts the occurrence of PTSD (Ehlers & Clark, 2000). When there is an intrusion, some individuals may engage in cognitive/behavioural strategies such as thought suppression, rumination, and emotional numbing in response to the flashback (e.g., Ehring, Ehlers, & Glucksman, 2008; Reynolds & Brewin, 1998). Thought suppression refers to the efforts to suppress negative thoughts, which may induce the rebound of intrusions (e.g., Wegner, Schneider, Carter, & White, 1987). Rumination is defined as 'a type of perseverative cognition which involves repeated and unproductive dwelling on a particular theme' (Moulds, Bisby, Wild, & Bryant, 2020, p. 1). Emotional numbing refers to an inability to feel emotions of any type and is characterised by a loss of interest in activities, detachment from others, and restricted affect (Feeny, Zoellner, Fitzgibbons, & Foa, 2000). These strategies may allow individuals to temporarily avoid the stressors but do not help them overcome emotional difficulties in the long term. These responses to intrusions are poor post-traumatic adjustments (e.g., Bryant, 1996) and could prevent individuals from employing helpful coping strategies. This would contribute to the maintenance of intrusive symptoms. Previous studies found that East Asians and Westerners have similar patterns of voluntarily accessing autobiographical memories (e.g., Mihailova & Jobson, 2020). However, the question of whether there are cultural differences in the intrusive memories is yet to be fully addressed.

2.7.3 Coping Styles

A coping style is defined as 'a coherent set of behavioural and physiological stress responses which is consistent over time, and which is characteristic to a certain group of individuals' (Koolhaas et al., 1999, p. 925). Carver and his colleagues (1989) developed the

COPE inventory (with 15 sub-scales) to measure a wide range of coping responses; later, Carver (1997) designed an abbreviated version, Brief COPE (with 14 sub-scales). Some researchers further divided these sub-scales into two categories, 'adaptive' and 'maladaptive' (e.g., Seiffge-Krenke, 2005), or three categories, 'problem-focused', 'emotion-focused' and 'avoidance-focused' (e.g., Endler & Parker, 1990). However, we did not combine any sub-scales into categories or into an 'overall' coping index as there is no particular way of generating a dominant coping style for an individual. Instead, based on previous findings on each sub-scale (for a review, see Litman, 2006), we focused on some of the coping styles to investigate their relations to culture and post-traumatic/stress outcomes.

2.7.4 Trait Dissociation

Trait dissociation is regarded as a coping strategy that disconnects individuals' senses of self from past experiences, leading to feelings of derealisation and depersonalisation (Felmingham et al., 2008; Soffer-Dudek & Shahar, 2011). Different from state dissociation, trait dissociation refers to a general tendency of dissociation, which is like a personality trait in an individual (Lewis-Fernández, Martínez-Taboas, Sar, Patel, & Boatin, 2007). In response to traumatic/stressful events, trait dissociation allows individuals to detach from the most distressing moment consciously and thus to have temporary relief from the stressors (Aleman, Agrawal, Morgan, & David, 2006; Soffer-Dudek & Shahar, 2011). However, the relief does not persist for long. Trait dissociation results in high distress for individuals in the long term and thus predicts the onset of symptoms (Meffert et al., 2008). In response to trauma, dissociative experiences are strongly associated with the onset and intensity of post-traumatic stress disorder (Wilson & Tang, 2007).

2.8 Emerging Adulthood

Traumatic/stressful events may increase the risk of psychopathology, most of which emerges from the prime-time window in a transition period between adolescence to

adulthood (e.g., Hofstra, Van Der Ende, & Verhulst, 2001). Hence, the identification of this transition period is key to the prevention of psychopathology (Beesdo, Knappe, & Pine, 2009). But there have been various terms for the transition period, for example, 'young adulthood' (e.g., Bluck & Alea, 2008; Cheng, Lou, Gao, Emerson, & Zabin, 2012), 'late adolescence' (e.g., Smetana, Campione-Barr, & Metzger, 2006) and 'emerging adulthood' (e.g., Arnett, 2007; Harter, 2012). Even the defining age range itself varied across the previous studies, for example, ages 15-24 (Cheng et al., 2012) and ages 18-25 (Smetana et al., 2006). Almost none of the above studies provided a strong theoretical background for the definition of the transition period.

Emerging adulthood (Arnett, 2000) is one of the few new but well-defined conceptions of 'development for the period from the late teens through the twenties, with a focus on ages 18-25' (p. 469). According to Erikson's (1994) stage of psychosocial development theory, 'adolescence' refers to the age of 13-19, followed by 'young adulthood', lasting from age 20 to about 40 when 'middle adulthood' begins. However, this paradigm may no longer apply to the normative pattern of the 21st century. Most 'adults' tend to pursue tertiary education or frequently change their jobs in the early- or mid-20s while getting married and settling in a stable full-time job in the late 20s (Arnett, 2007). Therefore, this is a distinct transitional phase where an individual often explores his/ her possibilities in work, love, and worldview, all of which involve the formation of self-concept (e.g., Erikson, 1994; Kuyken & Howell, 2006; Rindfuss, 1991). In the main study (i.e., Study 2), we recruited emerging adults (aged 18-25) from the United Kingdom, Taiwan, and Hong Kong.

2.9 Conclusion

Traumatic/stressful events are common in the population worldwide. However, the type of exposure and the prevalence rate of trauma-related psychopathology have varied

across countries/regions. Hence, one objective of the present research was to check any cultural differences in trauma exposure and post-traumatic/stress outcomes (see Chapter 3).

Chapter 3

General Methodology and Descriptive Results

3.1 Overview

Individualism versus collectivism has been considered one of the main cultural differences between the West and the East. While the United States and Japan were contrasted as two exemplars at the extreme ends of this dimension, other cultures have been relatively less explored. On one end of the spectrum, collectivistic cultures are usually identified in Asian societies, mostly with Chinese populations (e.g., mainland China and Malaysia). Among these, Taiwan has been regarded as a prototype of Chinese culture (e.g., Tseng, Lu & Gandek, 2003), scoring high in collectivism (Hofstede & Hofstede, 2004). On the other end of the spectrum, the United Kingdom is one of the regions that score high in individualism following the United States (Hofstede & Hofstede, 2004). Hong Kong, as one of the Chinese societies and a former British colony, has been a mixed culture. In this research, these three regions were selected to investigate culture-specific responses to stressful events by cross-cultural comparison.

The present research, according to Hofstede (1984, 2001), has identified (1) the United Kingdom as an individualistic culture and (2) Taiwan as a collectivistic culture, together with (3) Hong Kong, which has been exposed to both individualistic and collectivistic cultures (e.g., Hong, Ip, Chiu, Morris, Menon, 2001). We used a convenience sampling approach, recruited university students to collect data efficiently and studied a wide range of stress-related symptoms in the sample ranging from asymptomatic to high symptoms. We recruited two sets of university samples, and for each sample, conducted a cross-sectional study and a longitudinal study. The first sample was recruited in Oxford with British, Taiwanese, and Hongkongese students whereas the second sample consisted of local compatriots in the United Kingdom, Hong Kong, and Taiwan. This resulted in 4 sub-studies

that are presented in the thesis, including (1) Study 1A: a cross-sectional study of British, Taiwanese and Hongkongese emerging adults currently living in the United Kingdom; (2) Study 1B: a longitudinal study of Study 1A participants; (3) Study 2A: a cross-sectional study of British, Taiwanese and Hongkongese emerging adults in their home regions; and (4) Study 2B: a longitudinal study of Study 2A participants.

The first objective of this research was to compare the three cultural groups (British, Hongkongese, and Taiwanese) in terms of exposure to traumatic/stressful events and post-traumatic/stress outcomes (i.e., psychopathology and post-traumatic growth) both at baseline (T1) and in the follow-up (T2) (see Chapter 3).

Second, we checked whether there were cultural differences in the following three categories of cognitive/behavioural processes, namely (1) self-concept and appraisals, (2) cognitive processing styles and autobiographical memory, and (3) coping strategies after exposure to traumatic/stressful events (see Chapters 4 and 5).

Third, the present research was aimed at investigating the relationship between the cognitive/behavioural processes at baseline (T1) and post-traumatic/stress outcomes at T1 or at T2 (see Chapters 6, 7, and 8). Given the more representative sample of the local culture, we tested the above relationship only in Study 2.

Finally, we sought to examine the (potentially) moderating role of culture in the relationship between the cognitive/behavioural processes and post-traumatic/stress outcomes in Study 2 (see Chapters 6, 7, and 8).

3.2 General Principles of Analyses

This research consisted of exploratory studies to identify cognitive/behavioural processes that are worthy of further investigation. Given that different outcomes (PTSD symptoms, anxiety, depression, and post-traumatic growth) may show different patterns of results, I reported them without Bonferroni correction. To address the problem of alpha

inflation, I hypothesised the relationships between the cognitive/behavioural processes and post-traumatic/stress outcomes based on previous literature. Moreover, only the cognitive/behavioural processes that showed cultural differences (in Chapters 4 and 5) were hypothesised as predictors for post-traumatic/stress outcomes (in Chapters 6, 7, and 8).

In Chapters 4 and 5, we included not only culture but also gender as independent variables for group comparison. The reason to include gender was that women tend to report more psychopathological symptoms than men (e.g., Nolen-Hoeksema, 2012), and have a higher prevalence rate of PTSD in many, but not all studies (e.g., Holbrook, Hoyt, Stein, & Sieber, 2002; Stein, Walker, & Forde, 2000). Given that culture is the focus of the thesis and entails many hypotheses, we decided not to focus on hypotheses concerning gender. However, the main effects of both culture and gender as well as their interactions are reported throughout the paper.

For statistical analyses, group comparisons were done by the MANOVA, and individual variables were only interpreted if the MANOVA showed a significant main effect or interaction (in Chapters 4 and 5). On the other hand, if a concept is measured by multiple dependent variables, I used a hierarchical approach to data analyses (in Chapters 6, 7, and 8). In the tables (see Appendices), I still reported univariate effects but univariate findings were not interpreted if the overall effect was not significant.

3.3 Risk and Benefit of Participating in this Research

This research involved answering some standardised questionnaires about memories for positive and negative events. As the participants were not asked to provide details of the events, we did not expect any of the questionnaires to induce distress. However, participants were informed that they could discontinue the study at any time without having to give a reason and that this would not in any way affect their university course. In the very unlikely case that a participant became very distressed, we would follow the Approved Procedure:

IDREC_04_Version 2.1; Studies Involving Administration of Clinical Interviews and Questionnaires in case of an unexpected reaction. For the testing, the confidentiality of the conversation between the participant and the researcher was guaranteed by arranging a quiet space.

We hope that, by carrying out this research, we can gain a better understanding of the cultural influences on stress responses. This, in turn, may help develop culturally-informed psychological treatments for people who suffer from stress.

3.4 Study 1: Study of British, Taiwanese, and Hong Kong Emerging Adults Currently Living in the United Kingdom

The present study was conducted in Oxford, the United Kingdom. We recruited a university sample potentially with a wide range of stress-related symptoms. The site of data collection was the Oxford Centre for Anxiety Disorders and Trauma (OxCADAT) (led by Professor Anke Ehlers and Professor David Clark), University of Oxford. The ethics approval was obtained from the Medical Science Interdivisional Research Ethics Committee (IDREC) of the University of Oxford (Reference Number: R52325/RE001 & R52325/RE002) (see Appendix A1). Study 1A was a cross-sectional study and Study 1B was a 7-month longitudinal study.

3.4.1 Participant Recruitment

Study 1A was run from October 2017 to April 2018 at the University of Oxford. Participant recruitment was done by posters on notice boards of the Junior Common Rooms (JCRs) and the Middle Common Rooms (MCRs) of the Oxford colleges/halls, as well as advertisements on the department website and Daily Info (see Appendices B1, B2, and B3). Interested students were asked to contact the researcher by email. After making contact, they received further information about the study and then were invited to participate at a designated time slot if they were interested. During the recruitment period of 21st September

2017 to 13th April 2018, a total of 171 students indicated their interest in the study by email or phone. Of these potential participants, only 135 could be reached via email. Later, 6 were excluded from the study due to culture- and age-based exclusion criteria, and 1 dropped out for personal reasons. The 128 participants, upon the completion of the study, received GBP 15 for their participation.

Study 1B, as a longitudinal study, includes the baseline assessment and a follow-up assessment (7 months later). The 128 participants (from Study 1A) were invited to participate in the follow-up assessment online from May 2018 to November 2018, and all of them gave their written consent. Finally, 6 potential participants could not be contacted via email and therefore, 122 participants completed the study. The follow-up rate of Study 1B was 95.31%.

3.4.2 Inclusion and Exclusion Criteria

To be included in this study, participants had to meet the following criteria:

(a) Aged between 18-35;

(b) White British and had resided in the United Kingdom for at least 8 years; OR
Ethnically Chinese and had resided in Hong Kong for at least 8 years; OR
Ethnically Chinese and had resided in Taiwan for at least 8 years.

Participants were excluded from the study if any of the following criteria applied:

(a) For White British, anyone who could not understand, read, or speak English.

(b) For Hongkongese and Taiwanese, anyone who could not understand, read, or speak Chinese.

3.4.3 Procedure

Study 1 consisted of a baseline assessment where participants completed self-report measures and objective measures (including standardised laboratory tasks and computerised tasks), as well as a follow-up assessment (7 months later).

At the baseline assessment, participants read the participant information sheet (see Appendix C1) and were given the opportunity to ask questions. If they agreed to participate, they signed the consent form (see Appendix D1). After giving written consent, participants were asked to provide some basic demographic information. Next, they finished a computerised task and a set of self-report questionnaires (in Qualtrics) about how they saw themselves. Then, they completed another two standardised laboratory tasks (in Qualtrics) and questionnaires about how they interacted with other people and remembered events from their life and how they felt in general. The participants did not need to describe details of their life events. It took approximately 2 hours with two 5-minute breaks in between. The procedure of the baseline assessment can be seen in Appendix E1.

In the follow-up assessment, participants who agreed to be contacted again were asked to complete online questionnaires (in Qualtrics) 7 months after the baseline. These questionnaires took about 30 minutes to complete.

3.4.4 Research Question and Hypotheses

One objective of this chapter was to compare the British, Hongkongese, and Taiwanese participants in Oxford (Study 1) in terms of trauma/stress exposure and post-traumatic/stress outcomes. The hypotheses are listed below.

- There will be cultural differences in the trauma/stress exposure (***Hypothesis 1***).
    - Hongkongese and Taiwanese participants will report more traumatic events at baseline than British participants (***Hypothesis 1.1***).
    - Hongkongese and Taiwanese participants will report more stressful events in the follow-up than British participants (***Hypothesis 1.2***).
    - Hongkongese and Taiwanese participants will report more traumatic events in the follow-up than British participants (***Hypothesis 1.3***).

    - Hongkongese and Taiwanese participants will report a higher level of perceived severity of the most distressing events in the follow up than British participants (***Hypothesis 1.4***).
- There will be cultural differences in PTSD symptoms (***Hypothesis 2***).
    - Hongkongese and Taiwanese participants will report more PTSD symptoms at baseline than British participants (***Hypothesis 2.1***).
    - Hongkongese and Taiwanese participants will report more PTSD symptoms in the follow-up than British participants (***Hypothesis 2.2***).
- There will be cultural differences in anxiety symptoms (***Hypothesis 3)***.
    - Hongkongese and Taiwanese participants will report more anxiety symptoms at baseline than British participants (***Hypothesis 3.1***).
    - Hongkongese and Taiwanese participants will report more anxiety symptoms in the follow-up than British participants (***Hypothesis 3.2***).
- There will be cultural differences in depressive symptoms (***Hypothesis 4***).
    - Hongkongese and Taiwanese participants will report more depressive symptoms at baseline than British participants (***Hypothesis 4.1***).
    - Hongkongese and Taiwanese participants will report more depressive symptoms in the follow-up than British participants (***Hypothesis 4.2***).
- There will be cultural differences in post-traumatic growth (***Hypothesis 5***).
    - British will report more post-traumatic growth at baseline than Hongkongese and Taiwanese participants (***Hypothesis 5.1***).
    - British participants will report more post-traumatic growth in the follow-up than Hongkongese and Taiwanese participants (***Hypothesis 5.2***).

3.4.5 Study 1A: Cross-Sectional Study

Method

Participants

A total of 128 participants currently living in the United Kingdom were recruited for Study 1A. The sample of this study included 48 White British (24 males and 24 females), 48 Hongkongese (24 males and 24 females), and 32 Taiwanese (16 males and 16 females). The mean age was 21.21 (*SD* = 2.92) for British participants, 22.73 (*SD* = 2.80) for Hongkongese participants, and 25.91 (*SD* = 3.78) for Taiwanese participants. The demographic information of Study 1A participants in different cultures is depicted in Table 3.1.

Table 3.1 Participant Characteristics of Study 1A Sample ($N = 128$)

Variable	Total ($N = 128$)		British ($n = 48$)		Hongkongese ($n = 48$)		Taiwanese ($n = 32$)		Analysis* χ^2(df); p; V
	N	%	*n*	%	*n*	%	*n*	%	
Gender									-
Male	64	50.0	24	50.0	24	50.0	16	50.0	
Female	64	50.0	24	50.0	24	50.0	16	50.0	
Field of study									**22.62 (6); <.001*;**
Arts/ humanities	17	13.3	8	16.7	3	6.3	6	18.8	**.297**
Mathematics/ Physics/ Chemistry/ life sciences	34	26.6	11	22.9	18	37.5	5	15.6	
Social sciences/ Psychology/ Economics	29	22.7	19[a]	39.6	6[b]	12.5	4[b]	12.5	
Others	48	37.5	10[b]	20.8	21[a]	43.8	17[a]	53.1	
Highest education level achieved									**22.47 (4); <.001*;**
A Level/Senior high school	49	38.3	29[a]	60.4	16[b]	33.3	4[b]	12.5	**.296**
Undergraduate Degree	43	33.6	9[b]	18.8	21[a]	43.8	13[a,b]	40.6	
Postgraduate Degree	36	28.1	10[b]	18.8	11[a,b]	22.9	15[a]	46.9	
Average Family Income per Month (After Tax)									20.83 (12), .053; .285
£ < 1,000	3	2.3	2	4.2	1	2.1	0	0	
£ 1,000-1,999	15	11.7	8	16.7	0	0	7	21.9	
£ 2,000-2,999	23	18.0	9	18.8	6	12.5	8	25.0	
£ 3,000-4,999	21	16.4	7	14.6	9	18.8	5	15.6	
£ 5,000-7,999	22	17.2	5	10.4	13	27.1	4	12.5	
£ > 8,000	20	15.6	10	20.8	8	16.7	2	6.3	
Prefer not to say	24	18.8	7	14.6	11	22.9	6	18.8	
(Median Family Income)[1]			*(2,367)*		*(2,584)*		*(1,838)*		
									F (df); *p*; η^2
Age *M* (*SD*)	23.33 (3.44)		22.21 (2.92)[b]		22.73 (2.80)[b]		25.91 (3.78)[a]		**14.96 (2,125); <.001*; .193**

Note:
[1] Average annual disposable income per household in the United Kingdom/ Hong Kong/ Taiwan in 2018, extracted from Statista: https://www.statista.com/outlook/co/macroeconomic-indicators/disposable-income/

Measures

This chapter was set to obtain descriptive results of trauma/stress exposure and post-traumatic/stress outcomes. Hence, we introduced the measures of trauma/stress exposure, psychopathology, and post-traumatic growth in detail. For detailed descriptions of other measures, please refer to the 'Measures' section of Chapter 4 (for self-report measures) and Chapter 5 (for objective measures).

I. Self-Report Questionnaires (in Qualtrics)

The internal reliability (Cronbach's alpha) of each scale used in Study 1A is reported in Table 3.2.

A. Participants' Demographic Information

1) Demographic Questionnaire

Participants were asked to provide demographic information, including age, gender, cultural identity, field of study, current education level, and average monthly household income (after tax).

B. Exposure to Traumatic Events

2) Life Events Checklist (LEC; Gray et al., 2004)

The LEC is a measure of exposure to 17 types of potential traumatic events (PTE) (e.g., 'Fire or explosion') known to cause PTSD or other posttraumatic difficulties. For each PTE, participants rated their experience on a 5-point nominal scale (1 = *happened to me*, 2 = *witnessed it*, 3 = *learned about it*, 4 = *not sure*, and 5 = *does not apply*). The Chinese version of the LEC (Wu, Tang, & Leung, 2011) was used in the Hongkongese and Taiwanese samples.

C. Self-Concept and Appraisals

3) Revised Personal Style Inventory (PSI-II; Robins et al., 1994)

4) Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)

5) Analysis-Holism Scale (AHS; Choi et al., 2007)

6) Public and Communal Self Appraisals Measure (PCSAM; Engelbrecht & Jobson, 2014)

7) Post-Traumatic Cognitions Inventory (PTCI; Foa et al., 1999)

D. Cognitive Processing Styles and Autobiographical Memory

8) State Dissociation Questionnaire (SDQ; Murray, Ehlers, & Mayou, 2002)

9) Data-Driven Processing Scale (DDPS; Halligan, Clark, & Ehlers, 2002; Halligan, Michael, Clark, & Ehlers, 2003)

10) Lack of Self-Referent Processing Scale (LSRPS; Halligan et al., 2002; Halligan et al., 2003)

11) Centrality of Event Scale-Short Form (CES-SF; Berntsen & Rubin, 2006)

12) Memory Questionnaire for the Positive/ Stressful Event (Halligan et al., 2003)

13) Thinking about Life Experience Scale (TALE; Bluck & Alea, 2011)

E. Coping Strategies

14) Self-Concealment Scale (Larson & Chastain, 1990)

15) Response to Intrusions Questionnaire (RIQ; Clohessy & Ehlers, 1999; Steil & Ehlers, 2000; Murray et al., 2002)

16) Brief COPE (Carver, 1997)

17) Trait Dissociation Questionnaire Short Form (TDQ-SF; Murray et al., 2002)

F. Post-Traumatic/Stress Outcomes

18) Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997)

The IES-R is a 22-item scale (rated on a 5-point scale from 0 = *not at all* to 4 = *extremely*) to assess how much people were distressed or bothered by the difficulties resulting from a stressful life event during the past 7 days. The total score ranges from 0 to 88, indicating whether respondents have the symptoms and even a diagnosis of PTSD. In this test, scores that exceed 24 can be meaningful: scores 24-32 suggest partial PTSD or at least some of the PTSD symptoms (Asukai et al., 2002); scores 33-38 suggest a probable diagnosis of PTSD (Creamer, Bell, & Falilla, 2003); scores 39 and above suggest a diagnosis of PTSD (to suppress their immune system's functioning) (Kawamura, Yoshiharu, & Nozomu, 2001). Each of the PTSD symptoms can be measured by the sub-scale scores, namely (1) intrusion (e.g., 'Any reminder brought back feelings about it.'), (2) avoidance (e.g., 'I felt as if it hadn't happened or wasn't real.'), and (3) hyper-arousal (e.g., 'I feel irritable and angry.'). The Chinese version of the IES-R (CIES-R; Wu & Chan, 2003) was used in the Hongkongese and Taiwanese samples.

19) State-Trait Anxiety Inventory (Trait) (Form Y) (STAI-T; Spielberger, 1983)

The STAI-T is a 20-item scale to measure trait anxiety (i.e., a general, stable anxiety condition related to one's personality). Each item (e.g., 'I feel nervous and restless') was rated on a 4-point scale ranging from 1 = *almost never* to 4 = *almost always*). The possible range of the total score is from 20 to 80. In Studies 1A and 1B, this scale was used to assess how people generally felt in their lifetime and in the past 7 months respectively. Based on the cut-off scores of the STAI-T (Form Y) (Spielberger, 1983), a low score (i.e., scores 37 and below) indicates a low level of or even no anxiety; a medium score (i.e., scores 38-44) indicates a moderate level of anxiety; and a high score (i.e., scores 45 and above) indicates a high level of anxiety.

The Chinese version of the STAI-T (Ma et al., 2013) was used in the Hongkongese and Taiwanese samples.

20) Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF; Cole, Rabin, Smith, & Kaufman, 2004)

The CES-D-SF is a short-form 10-item inventory to assess the severity of depressive symptoms with a time frame of the past week. Each item (e.g., 'I was bothered by things that usually don't bother me.') was rated on a 4-point scale ranging from 0 = *Rarely or none of the time (less than 1 day)*, 1 = *Some or a little of the time (1-2 days)*, 2 = *Occasionally or a moderate amount of time (3-4 days)* to 3 = *most or all of the time (5-7 days)*. The total score ranges from 0 to 30 and a cut-off score of 10 or higher indicates the presence of significant depressive symptoms (Andresen, Malmgren, Carter, & Patrick, 1994). The Chinese version of the CES-D-SF (Cheung & Bagley, 1998) was used in the Hongkongese and Taiwanese samples.

21) Post-Traumatic Growth Inventory Short Form (PTGI-SF; Cann et al., 2010)

The PTGI-SF is a short-form 10-item inventory to measure the perceived positive change after the stressful event with 5 sub-scales: (1) relating to others (e.g. 'I have a greater sense of closeness with others.'), (2) new possibilities (e.g., 'I am able to do better things with my life.'), (3) personal strength (e.g., 'I know better that I can handle difficulties'), (4) spiritual change (e.g., 'I have a better understanding of spiritual matters.'), and (5) appreciation of life (e.g., 'I changed my priorities about what is important in life.'). Each item was rated on a 6-point scale (from 0 = *I did not experience this change as a result of my crisis* to 5 = *I experienced this change to a very great degree as a result of my crisis*). The Chinese version of the PTGI-SF (Ho, Chan, & Ho, 2004) was used in the Hongkongese and Taiwanese samples.

Table 3.2 Internal consistency (Cronbach's alpha) of scales used in Study 1A

Scale	No. of the items	Cronbach's α (Overall) (*n*=128)	Cronbach's α (English) (*n*=48)	Cronbach's α (Chinese) (*n*=80)
Revised Personal Style Inventory				
Sociotropy	24	.85	.89	.81
Concern about what others think	7	.76	.78	.74
Dependency	7	.69	.77	.64
Pleasing others	10	.78	.85	.71
Autonomy	24	.83	.81	.83
Perfect	4	.61	.67	.56
Need control	8	.71	.63	.77
Defend separation	12	.81	.83	.76
Rosenberg Self-Esteem Scale				
Total	10	.86	.88	.84
Self-Concealment Scale				
Total	10	.83	.87	.81
Analysis-Holism Scale				
Causality	6	.64	.63	.60
Attitude toward contradictions	5	.63	.69	.62
Perception of change	6	.65	.51	.70
Locus of attention	6	.73	.70	.75
(Positive Event)				
Centrality of Events Scale - Short Form				
Total	7	.92	.93	.91
Memory Questionnaire				
Disorganisation	4	.86	.85	.86
Disjointedness	4	.56	.36	.68
Flashback	5	.69	.69	.69
Thinking About Life Experience				
Self-continuity	5	.82	.86	.78
Social bonding	5	.80	.85	.75
Directing behaviour	5	.79	.79	.78
(Stressful Event)				
Centrality of Events Scale (Short Form)				
Total	7	.89	.87	.90
Memory Questionnaire				
Disorganisation	4	.91	.92	.91
Disjointedness	4	.71	.66	.75
Flashback	5	.82	.84	.81
Thinking About Life Experiences				
Self-continuity	5	.82	.82	.78
Social bonding	5	.85	.91	.78
Directing behaviour	5	.83	.88	.75
State Dissociation Questionnaire				
Total	9	.88	.86	.89
Data-Driven Processing Scale				
Total	8	.94	.91	.96
Lack of Self-Referent Processing Scale				
Total	8	.84	.81	.86
Public and Communal Self-Appraisal Measure				
Challenge to beliefs and belonging	5	.86	.78	.89
Communal aspects of self	5	.62	.52	.67
Public roles and identity	4	.83	.78	.85
Post-Traumatic Cognitive Inventory 2				
Negative thoughts about the self	16	.93	.91	.93
Self-blame	5	.80	.84	.76
Overgeneralised danger	5	.80	.83	.80
Preoccupy with unfairness	5	.84	.77	.85

Impact of Events Scale - Revised				
Total	22	.93	.92	.93
Intrusion	8	.89	.89	.88
Avoidance	8	.86	.85	.85
Hyper-arousal	6	.79	.75	.81
State-Trait Anxiety Inventory -Trait Version				
Total	20	.91	.94	.88
Center for Epidemiologic Studies Depression Scale Short Form				
Total	10	.83	.82	.84
Response to Intrusions Questionnaire				
Thought Suppression	6	.91	.91	.91
Rumination	8	.87	.89	.86
Numbing	5	.72	.68	.75
Post-Traumatic Growth Inventory -Short Form				
Total	10	.85	.85	.85
Relating to others	2	.59	.51	.63
New possibilities	2	.63	.74	.52
Personal strength	2	.82	.86	.80
Spiritual change	2	.49	.66	.31
Appreciation of life	2	.62	.68	.56
Brief COPE				
Acceptance	2	.76	.74	.74
Using emotional support	2	.84	.85	.78
Humor	2	.72	.79	.65
Positive reframing	2	.81	.89	.70
Religion	2	.70	.74	.67
Active coping	2	.78	.75	.68
Planning	2	.83	.82	.68
Use instrumental support	2	.88	.88	.85
Denial	2	.70	.49	.70
Self-distraction	2	.72	.83	.55
Substance use	2	.92	.98	.88
Behavioural disengagement	2	.73	.64	.71
Self-blame	2	.68	.85	.38
Venting	2	.73	.49	.73
Trait Dissociation Questionnaire -Short Form				
Total	15	.89	.86	.91

II. Objective Measures

A. Self-Concept

1) Implicit Association Task (adapted from IAT; Greenwald, McGhee, & Schwartz, 1998)

2) Modified Twenty Statements Test (Hong et al., 2001; adapted from Kuhn & McPartland, 1954)

B. Autobiographical Memory

3) Self-Defining Memory Task (Moffitt & Singer, 1994)

Apparatus

A DELL Latitude E5530 (Window 7 Intel Core i5) laptop with a 15.6-inch screen was used in the site of data collection in Oxford at baseline.

Statistical Analyses

In this chapter, we focused on cultural comparison of (1) exposure to traumatic/stressful events and (2) post-traumatic/stress outcomes.

We first conducted chi-square tests of independence to compare cultural differences in whether they encountered traumatic/stressful events. Also, we performed a one-way analysis of covariance (One-way ANOVA) to compare the effect of culture (a between-subject factor with 3 levels: British, Hongkongese, and Taiwanese) in the number of lifetime traumatic events at baseline.

Next, we categorised all participants into 4 groups of PTSD symptoms, 3 groups of anxiety, and 2 groups of depression, according to the cut-off score criteria for IES-R (Asukai et al., 2002; Creamer et al., 2003; Kawamura et al., 2001), STAI-T (Spielberger, 1983) and CES-D-SF (Andresen et al., 1994) respectively. We then conducted chi-square tests to check whether cultural differences existed in the severity of psychopathology.

Finally, two-way analyses of covariance (2-way ANCOVAs) were performed to examine the effects of culture and gender (a between-subject factor with 2 levels: male and female) on the total score of each psychopathology (PTSD symptoms, anxiety, and depression) and of post-traumatic growth. In this analysis, participants' ages and exposures to traumatic events in their lifetime were controlled as covariates. Particularly, two-way multivariate analysis of covariance (2-way MANCOVAs) were also conducted to test the effects of culture and gender on the PTSD symptoms (intrusion, avoidance, and hyper-arousal) and post-traumatic growth (relating to others, new possibilities, personal strength, spiritual change, and appreciation of life). If the above analyses found significant overall effect(s) of culture and/or gender on the outcome variables, Bonferroni post-hoc tests were run to compare the differences between the specific levels of culture (British, Hongkongese and Taiwanese) and/or gender (male and female).

3.4.6 Study 1B: Longitudinal Study

Study 1B, as a longitudinal study, involved a follow-up assessment of Study 1A sample 7 months later. This study sought to establish a (temporal) relationship between cognitive/behavioural processes and post-traumatic/stress outcomes. Such a directional relationship may suggest cognitive/behavioural processes to be considered in psychological treatments against PTSD and other trauma-related psychopathology in Asian cultures (e.g., trauma-focused cognitive behavioural therapy; TF-CBT).

Methods

Participants

Of the 128 participants of Study 1A, 122 (i.e., 95.31%) took part in the follow-up assessment online (Study 1B). This included 45 White British (22 males and 23 females), 46 Hongkongese (23 males and 23 females), and 31 Taiwanese (16 males and 15 females). The participants received GBP 5 after completing the online assessment. The demographic information of Study 1B participants in different cultures is depicted in Table 3.3.

Table 3.3 Participant Characteristics of Study 1B Sample ($N = 122$)

Variable	Total ($N = 122$)		British ($n = 45$)		Hongkongese ($n = 46$)		Taiwanese ($n = 31$)		Analysis* χ^2(df); p; V
	N	%	*n*	%	*n*	%	*n*	%	
Gender									0.05 (2); .973; .021
Male	61	50.0	22	48.9	23	50.0	16	51.6	
Female	61	50.0	23	51.1	23	50.0	15	48.4	
Field of study									**28.72 (6); <.001*; .343**
Arts/ humanities	15	12.3	8[a]	17.8	1[b]	2.2	6[a]	19.4	
Mathematics/ Physics/ Chemistry/ life sciences	34	27.9	11	24.4	18	39.1	5	16.1	
Social sciences/ Psychology/ Economics	29	23.8	19[a]	42.2	6[b]	13.0	4b	12.9	
Others	44	36.1	7[b]	15.6	21[a]	45.7	16[a]	51.6	
Highest education level achieved									**25.24 (4); <.001*; .322**
A Level/Senior high school	26	21.3	20[a]	44.4	5[b]	10.9	1[b]	3.2	
Undergraduate Degree	38	31.1	13	28.9	14	30.4	11	35.5	
Postgraduate Degree	58	47.5	12[b]	26.7	27[a]	58.7	19[a]	61.3	
Average Family Income per Month (After Tax)									**24.58 (12); .017*; .317**
£ < 1,000	2	1.6	2	4.4	0	0	0	0	
£ 1,000-1,999	14	11.5	7[a]	15.6	0[b]	0	7[a]	22.6	
£ 2,000-2,999	23	18.9	9	20.0	6	13.0	8	25.8	
£ 3,000-4,999	19	15.6	5	11.1	9	19.6	5	16.1	
£ 5,000-7,999	22	18.0	5	11.1	13	28.3	4	12.9	
£ > 8,000	19	15.6	10	22.2	8	17.4	1	3.2	
Prefer not to say	23	18.9	7	15.6	10	21.7	6	19.4	
(Median Family Income)[1]			*(2,367)*		*(2,584)*		*(1,838)*		
									F (df); *p*; η^2
Age *M* (*SD*)	23.39 (3.44)		22.22 (2.98)[b]		22.65 (2.74)[b]		26.16 (3.55)[a]		**17.42 (2,119); <.001*; .226**

Note:
[1] Average annual disposable income per household in the United Kingdom/ Hong Kong/ Taiwan in 2018, extracted from Statista: https://www.statista.com/outlook/co/macroeconomic-indicators/disposable-income/

Measures

For most of the following measures, detailed descriptions are provided in the 'Measures' sections of Chapters 4 and 5. The internal reliability (Cronbach's alpha) of each scale used in the follow-up assessment (of Study 1B) is reported in Table 3.4.

A. Participant's Demographic Information

   1) Demographic Questionnaire

B. Exposure to Traumatic/Stressful Events

   2) Modified Life Events Checklist (MLEC; Modified from Gray et al., 2004)

      The modified version consisted of 18 traumatic events and 21 non-traumatic stressful events. For traumatic events, we added an item, 'sudden accidental death', to the original 17-item checklist. Also, we included a total of 21 stressful but non-traumatic events, such as 'relationship breakup', 'serious argument with significant others (parents, partner, and friends)', 'financial problems', 'failed exam', 'stressful exam preparation', 'lost job' and 'failed to get job wanted'. Participants were also asked to rate how distressing they found the stressful events on a scale from 0 *Not at all* to 100 *Extremely distressing*.

C. Post-Traumatic/Stress Outcomes

   3) Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997)

   4) State-Trait Anxiety Inventory (Trait) (Form Y) (STAI-T; Spielberger, 1983)

   5) Center for Epidemiologic Studies Depression Scale-Short Form (CES-D-SF; Cole et al., 2004)

   6) Post-Traumatic Growth Inventory Short Form (PTGI-SF; Cann et al., 2010)

Table 3.4 Internal consistency (Cronbach's alpha) of scales used in the follow-up assessment of Study 1B)

Scale	No. of the items	Cronbach's α (Overall) (*n*=122)	Cronbach's α (English) (*n*=45)	Cronbach's α (Chinese) (*n*=77)
Impact of Events Scale - Revised				
Total	22	.94	.91	.96
Intrusion	8	.92	.87	.93
Avoidance	8	.86	.84	.88
Hyper-arousal	6	.83	.71	.86
State-Trait Anxiety Inventory -Trait Version				
Total	20	.94	.95	.94
Center for Epidemiologic Studies Depression Scale Short Form				
Total	10	.85	.80	.88
Response to Intrusions Questionnaire				
Thought Suppression	6	.87	.86	.88
Rumination	8	.90	.88	.90
Numbing	5	.76	.76	.75
Post-Traumatic Growth Inventory -Short Form				
Total	10	.91	.81	.93
Relating to others	2	.71	.64	.71
New possibilities	2	.82	.75	.80
Personal strength	2	.87	.81	.89
Spiritual change	2	.63	.88	.56
Appreciation of life	2	.72	.57	.80
Brief COPE				
Acceptance	2	.66	.60	.67
Using emotional support	2	.77	.74	.81
Humor	2	.76	.72	.83
Positive reframing	2	.67	.59	.85
Religion	2	.67	.65	.72
Active coping	2	.68	.63	.77
Planning	2	.81	.81	.78
Use instrumental support	2	.91	.92	.82
Denial	2	.77	.81	.70
Self-distraction	2	.78	.81	.62
Substance use	2	.91	.90	.95
Behavioural disengagement	2	.74	.75	.75
Self-blame	2	.85	.86	.76
Venting	2	.62	.70	.53
Trait Dissociation Questionnaire -Short Form				
Total	15	.91	.85	.93

Statistical Analyses

The statistical analyses of Study 1A were applied to Study 1B except that we performed One-way ANOVAs to compare the effect of culture on the number of lifetime traumatic and stressful events, as well as the perceived severity (from 0 to 100) of the most distressing event in the 7 months (follow-up period).

In this case, the covariates of the MANCOVA on post-traumatic/stress outcomes included not only participants' ages and exposures to traumatic events in their lifetime (at baseline) but also their exposures to traumatic events and stressful events and perceived severity of the most distressing events in the 7 months.

3.4.7 Study 1: Results

Exposure to Stressful/Traumatic Events

The detailed results of exposure to different stressful/traumatic events of each cultural group in Study 1A (baseline) and Study 1B (follow-up) are reported in Tables 3.5, 3.6, 3.7, and 3.8.

Overall, the chi-square tests of independence found that the relationship between culture and exposure to only a few types of traumatic (Study 1A: 23.53%; Study 1B: 27.78%) and stressful events (Study 1B: 9.52%) were significant.

At baseline (T1), we found expected cultural differences in the number of traumatic events, $F(2,127) = 3.19$, $p = .044$, $\eta^2 = .049$. Taiwanese participants reported significantly more traumatic events ($M_{Adj} = 10.41$, $SE = 1.31$) than their Hongkongese counterparts ($M_{Adj} = 6.94$, $SE = 0.68$, $p = .040$).

In the follow-up (T2), contrary to our hypotheses, there were no cultural differences in the number of trauma, stressful events, or perceived severity of the most distressing event.

Table 3.5 Proportions of participants from different cultures reporting types of lifetime traumatic events in Study 1A – baseline (responses to stressors before the baseline)

	Total (N = 128)		British (n = 48)		Hongkongese (n = 48)		Taiwanese (n = 32)		Analysis* χ^2(df); p; V
	n	%	*n*	%	*n*	%	*n*	%	
Traumatic Events									
Natural disaster	63	49.2	17[b]	35.4	19[b]	39.6	27[a]	84.4	**21.27 (2); <.001*; .408**
Fire/ explosion	48	37.5	19	39.6	13	27.1	16	50.0	4.44 (2); .108; .186
Transportation accident	83	64.8	28	58.3	29	60.4	26	81.3	5.08 (2); .079; .199
Other accidents	64	50.0	21	43.8	23	47.9	20	62.5	2.83 (2); .243; .149
Exposure to toxic substance	26	20.3	8	16.7	10	20.8	8	25.0	0.84 (2); .658; .081
Physical assault	70	54.7	29	60.4	22	45.8	19	59.4	2.44 (2); .296; .138
Assault with weapon	35	27.3	15	31.3	10	20.8	10	31.3	1.64 (2); .441; .113
Sexual assault	47	36.7	25[a]	52.1	13[b]	27.1	9[a,b]	28.1	**7.81 (2); .020*; .247**
Other unwanted/ uncomfortable sexual experience	51	39.8	33[a]	68.8	8[b]	16.7	10[b]	31.3	**28.48 (2); <.001*; .472**
Combat	28	21.9	15	31.3	8	16.7	5	15.6	3.96 (2); .138; .176
Captivity	20	15.6	9	18.8	5	10.4	6	18.8	1.58 (2); .454; .111
Life-threatening illness/ injury	82	64.1	33	68.8	28	58.3	21	65.6	1.18 (2); .555; .096
Severe human suffering	63	49.2	22	45.8	24	50.0	17	53.1	0.43 (2); .808; .058
Violent death	43	33.6	18	37.5	13	27.1	12	37.5	1.46 (2); .482; .107
Accidental death	70	54.7	20	41.7	29	60.4	21	65.6	5.47 (2); .065; .207
Serious injury, harm or death caused to someone else	10	7.8	5[a,b]	10.4	0[b]	1.4	5[a]	15.6	**0.24 (2); .027*; .238**
Other stressful event	65	50.8	24	50.0	23	47.9	18	56.3	0.55 (2); .759; .066

Note: Statistics for the above variables derive from a chi-square test unless otherwise specified. * $p < .05$.
The superscripts (i.e., a, b, c) are the same for groups with no significant difference found but different for groups with a significant difference found.

Table 3.6 Proportions of participants from different cultures reporting types of stressful and traumatic events in Study 1B - follow-up (responses to stressors between T1 and T2)

	Total (N =122)		British (n = 45)		Hongkongese (n = 46)		Taiwanese (n = 31)		Analysis* χ^2(df); p; V
	N	%	*n*	%	*n*	%	*n*	%	
Stressful Events (Non-traumatic)									
Break-up of relationship	24	19.7	5	11.1	13	28.3	6	19.4	4.24 (2); .120; .186
Major argument with partner	36	29.5	11	24.4	19	41.3	6	19.4	5.17 (2); .075; .206
Romantic rejection	19	15.6	13[a]	28.9	5[a,b]	10.9	1[b]	3.2	**10.44 (2); .005*; .292**
Problems with pregnancy/childbirth	0	0	0	0	0	0	0	0	N/A
Parents separating	2	1.6	1	2.2	0	0	1	3.2	1.35 (2); .510; .105
Major argument with family/ friends	24	19.7	11	24.4	7	15.2	6	19.4	1.23 (2); .541; .100
Betrayal by someone important to you	14	11.5	6	13.3	4	8.7	4	12.9	0.57 (2); .754; .068
Being excluded from something important to you	14	11.5	8	17.8	4	8.7	2	6.5	2.88 (2); .237; .154
Embarrassing situation	38	31.1	12	26.7	14	30.4	12	38.7	1.26 (2); .533; .102
Negative experience at work/ school	38	31.1	12	26.7	17	37.0	9	29.0	1.21 (2); .546; .100
Exams	54	44.3	20	44.4	25	54.3	9	29.0	4.81 (2); .090; .199
Successful applications/ interviews for job/ further application	53	43.4	18	40.0	21	45.7	14	45.2	0.35 (2); .841; .053
Rejected Application	40	32.8	13	28.9	16	34.8	11	35.5	0.50 (2); .780; .064
Losing something important to you	30	24.6	12	26.7	14	30.4	4	12.9	3.24 (2); .198; .163
Serious problem with living situation	23	18.9	5	11.1	10	21.7	8	25.8	2.99 (2); .224; .157
Financial problems	27	22.1	12	26.7	7	15.2	8	25.8	2.06 (2); .358; .130
Scary situation when traveling	18	14.8	11[a]	24.4	2[b]	4.3	5[a,b]	16.1	**7.37 (2); .025*; .246**
Dangerous encounter with animals	2	1.6	1	2.2	0	0	1	3.2	1.35 (2); .510; .105
Non-violent crime	7	5.7	3	6.7	2	4.3	2	6.5	0.27 (2); .876; .047
Serious but not life-threatening illness	8	6.6	2	4.4	2	4.3	4	12.9	2.73 (2); .255; .150
Injury	10	8.2	3	6.7	5	10.9	2	6.5	0.70 (2); .704; .076
	Total (N = 122)		British (n = 45)		Hongkongese (n = 46)		Taiwanese (n = 31)		χ^2(df); p; V
	N	%	*n*	%	*n*	%	*n*	%	
Traumatic Events									
Natural disaster	9	7.4	2[a,b]	4.4	1[b]	2.2	6[a]	19.4	**8.90 (2); .012*; .270**
Fire/ explosion	4	3.3	3	6.7	0	0	1	3.2	3.19 (2); .203; .162
Transportation accident	12	9.8	2[b]	4.4	3[a,b]	6.5	7[a]	22.6	**7.72 (2); .021*; .252**
Other accidents	5	4.1	1	2.2	2	4.3	2	6.5	0.85 (2); .655; .083
Exposure to toxic substance	4	3.3	0	0	3	6.5	1	3.2	3.05 (2); .217; .158
Physical assault	11	9.0	5	11.1	4	8.7	2	6.5	0.50 (2); .781; .064

Assault with weapon	1	0.8	0	0	1	2.2	0	0	1.67 (2); .435; .117
Sexual assault	6	4.9	5	11.1	1	2.2	0	0	**6.04 (2); .049*; .222**
Other unwanted/ uncomfortable sexual experience	11	9.0	9[a]	20.0	2[a,b]	4.3	0[b]	0	**10.91 (2); .004*; .299**
Combat	0	0	0	0	0	0	0	0	N/A
Captivity	0	0	0	0	0	0	0	0	N/A
Life-threatening illness/ injury	21	17.2	5	11.1	11	23.9	5	16.1	2.65 (2); .266; .147
Severe human suffering	8	6.6	4	8.9	1	2.2	3	9.7	2.33 (2); .311; .138
Violent death	2	1.6	1	2.2	1	2.2	0	0	0.69 (2); .707; .075
Accidental death	11	9.0	1[b]	2.2	4[a,b]	8.7	6[a]	19.4	**6.58 (2); .037*; .232**
Death of someone close	14	11.5	3	6.7	5	10.9	6	19.4	2.94 (2); .230; .155
Serious injury, harm or death caused to someone else	0	0	0	0	0	0	0	0	N/A
Other stressful event	11	9.0	4	8.9	3	6.5	4	12.9	0.92 (2); .631; .087

Note: Statistics for the above variables derive from a chi-square test unless otherwise specified. * $p < .05$.
The superscripts (i.e., a, b, c) are the same for groups with no significant difference found but different for groups with a significant difference found.

Table 3.7 Proportions of types of lifetime traumatic events reported by participants from different cultures in Study 1A – baseline (responses to stressors before the baseline)

Scale	Total (1081)[1]		British (415)[1]		Hongkongese (333)[1]		Taiwanese (333)[1]		
	n	%	*n*	%	*n*	%	*n*	%	
Traumatic Events									
Natural disaster	92	8.5	23	5.5	24	7.2	45	13.5	
Fire/ explosion	56	5.2	21	5.1	15	4.5	20	6.0	
Transportation accident	106	9.8	34	8.2	36	10.8	36	10.8	
Other accidents	74	6.8	24	5.8	23	6.9	27	8.1	
Exposure to toxic substance	32	3.0	8	1.9	15	4.5	9	2.7	
Physical assault	94	8.7	41	9.9	27	8.1	26	7.8	
Assault with weapon	38	3.5	17	4.1	10	3.0	11	3.3	
Sexual assault	51	4.7	26	6.3	14	4.2	11	3.3	
Other unwanted/ uncomfortable sexual experience	64	5.9	43	10.4	9	2.7	12	3.6	
Combat	29	2.7	16	3.9	8	2.4	5	1.5	
Captivity	20	1.9	9	2.2	5	1.5	6	1.8	
Life-threatening illness/ injury	101	9.3	41	9.9	33	9.9	27	8.1	
Severe human suffering	80	7.4	25	6.0	34	10.2	21	6.3	
Violent death	48	4.4	21	5.1	13	3.9	14	4.2	
Accidental death	86	8.0	24	5.8	34	10.2	28	8.4	
Serious injury, harm or death caused to someone else	11	1.0	5	1.2	0	0.0	6	1.8	
Other stressful event	99	9.2	37	8.9	33	9.9	29	8.7	
	M (SD)		*M (SD)*		*M (SD)*		*M (SD)*		*F* (df1,df2); *p*; η^2
Number of traumatic events	8.45 (6.16)		8.65 (6.26) [a]		6.94 (4.71) [b]		10.41 (7.40) [a]		**3.19 (2,125); .044*; .049**

Note:
[1] Total number of traumatic events experienced in the designated group

Table 3.8 Proportions of types of stressful and traumatic events reported by participants from different cultures in Study 1B - follow-up (responses to stressors between T1 and T2)

Scale	Total (481)[1]		British (179)[1]		Hongkongese (187)[1]		Taiwanese (115)[1]	
	N	%	*n*	%	*n*	%	*n*	%
Stressful Events (Non-traumatic)								
Break-up of relationship	24	5.0	5	2.8	13	7.0	6	5.2
Major argument with partner	36	7.5	11	6.1	19	10.2	6	5.2
Romantic rejection	19	4.0	13	7.3	5	2.7	1	0.9
Problems with pregnancy/childbirth	0	0	0	0.0	0	0	0	0
Parents separating	2	0.4	1	0.6	0	0	1	0.9
Major argument with family/ friends	24	5.0	11	6.1	7	3.7	6	5.2
Betrayal by someone important to you	14	2.9	6	3.4	4	2.1	4	3.5
Being excluded from something important to you	14	2.9	8	4.5	4	2.1	2	1.7
Embarrassing situation	38	7.9	12	6.7	14	7.5	12	10.4
Negative experience at work/ school	38	7.9	12	6.7	17	9.1	9	7.8
Exams	54	11.2	20	11.2	25	13.4	9	7.8
Successful applications/ interviews for job/ further application	53	11.0	18	10.1	21	11.2	14	12.2
Rejected Application	40	8.3	13	7.3	16	8.6	11	9.6
Losing something important to you	30	6.2	12	6.7	14	7.5	4	3.5
Serious problem with living situation	23	4.8	5	2.8	10	5.3	8	7.0
Financial problems	27	5.6	12	6.7	7	3.7	8	7.0
Scary situation when traveling	18	3.7	11	6.1	2	1.1	5	4.3
Dangerous encounter with animals	2	0.4	1	0.6	0	0	1	0.9
Non-violent crime	7	1.5	3	1.7	2	1.1	2	1.7
Serious but not life-threatening illness	8	1.7	2	1.1	2	1.1	4	3.5
Injury	10	2.1	3	1.7	5	2.7	2	1.7
	Total (148)[2]		British (45)[2]		Hongkongese (45)[2]		Taiwanese (58)[2]	
	N	%	*n*	%	*n*	%	*n*	%
Traumatic Events								
Natural disaster	14	9.5	2	4.4	1	2.2	11	19.0
Fire/ explosion	4	2.7	3	6.7	0	0	1	1.7
Transportation accident	14	9.5	2	4.4	4	8.9	8	13.8
Other accidents	6	4.1	1	2.2	2	4.4	3	5.2
Exposure to toxic substance	4	2.7	0	0	3	6.7	1	1.7
Physical assault	13	8.8	5	11.1	4	8.9	4	6.9

Assault with weapon	1	0.7	0	0	1	2.2	0	0	
Sexual assault	7	4.7	5	11.1	2	4.4	0	0	
Other unwanted/ uncomfortable sexual experience	11	7.4	9	20.0	2	4.4	0	0	
Combat	0	0	0	0	0	0	0	0	
Captivity	0	0	0	0	0	0	0	0	
Life-threatening illness/ injury	23	15.5	5	11.1	11	24.4	7	12.1	
Severe human suffering	8	5.4	4	8.9	1	2.2	3	5.2	
Violent death	2	1.4	1	2.2	1	2.2	0	0	
Accidental death	12	8.1	1	2.2	4	8.9	7	12.1	
Death of someone close	14	9.5	3	6.7	5	11.1	6	10.3	
Serious injury, harm or death caused to someone else	0	0	0	0	0	0	0	0	
Other stressful event	15	10.1	4	8.9	4	8.9	7	12.1	
	M (SD)		*M (SD)*		*M (SD)*		*M (SD)*		*F* (df1,df2); *p*; η^2
Number of stressful events	3.83 (2.99)		3.87 (3.06)		3.91 (2.71)		3.63 (3.38)		0.08 (2,118); .919; .001
Number of traumatic events	1.37 (2.28)		1.11 (1.23)		1.13 (1.90)		2.13 (3.57)		2.28 (2,118); .107; .037
Perceived severity[3, 4]	68.90 (24.97)		62.27 (26.83)		72.83 (22.82)		72.83 (23.91)		2.60 (2,118); .079; .042

Note:
[1] Total number of the stressful (but non-traumatic) events experienced in the designated group
[2] Total number of the traumatic events experienced in the designated group
[3] Perceived severity of the most distressing event for each participant (ranging from 0 to 100)
[4] Calculated based on the number of participants with stressful events/ trauma (Total: 121; British: 45; Hongkongese: 46; Taiwanese: 30)

Post-Traumatic/Stress Outcomes

The descriptive results and statistics of post-traumatic/stress outcomes of each cultural group in Studies 1A and 1B are reported in Table 3.9 and 3.10 respectively.

The chi-square of independence found cultural differences in the percentage of participants with significant symptoms of anxiety at baseline (T1) and in the follow-up (T2). The percentage of British participants reporting a higher level of anxiety symptoms was smaller than the other two cultural groups.

The 2-way ANCOVAs yielded the significant main effects of culture on PTSD symptoms and anxiety at only T1. In these two psychopathology variables, British participants scored significantly lower than Hongkongese and Taiwanese participants. The analyses also found cultural differences in post-traumatic growth at both T1 and T2, where Taiwanese participants scored the highest in most of the sub-scales.

There was a significant main effect of gender on anxiety and depression at both T1 and T2, with females reporting greater anxiety. The interaction between culture and gender was non-significant in all of the outcome variables.

PTSD Symptoms

The percentage of participants with PTSD severity did not differ by culture, Study 1A: $\chi^2(6, N = 128) = 6.08$, $p = .414$, V = .154; Study 1B: $\chi^2(6, N = 120) = 8.61$, $p = .197$, V = .189. According to the IES-R cut-off scores (Weiss & Marmar, 1997), around 60-70% of the participants across studies reported a low level of PTSD symptoms or even no symptoms.

The main effect of culture on the level of PTSD symptoms was significant in the ANCOVA (adjusting for age, number of lifetime traumas), $F(2,114) = 3.80$, $p = .025$, $\eta^2 = .062$. The British group ($M_{Adj} = 12.78$, $SE = 2.11$) reported a significantly lower level of PTSD symptoms than the Taiwanese group ($M_{Adj} = 22.25$, $SE = 2.77$, $p = .030$). Neither

British nor Taiwanese participants were significantly different from Hongkongese participants (M_{Adj} = 20.72, SE = 1.46, p = .159) on PTSD symptoms. The main effect of gender $F(1,114) = 2.95$, $p = .089$, $\eta^2 = .025$, and the interaction, $F(2,114) = 0.31$, $p = .738$, $\eta^2 = .005$, were non-significant.

In Study 2B, the main effect of culture on the level of PTSD symptoms was non-significant, $F(2,109) = 0.80$, $p = .453$, $\eta^2 = .014$. The main effect of gender, $F(1,109) = 0.06$, $p = .805$, $\eta^2 = .001$, and the interaction, $F(2,109) = 0.74$, $p = .478$, $\eta^2 = .013$, were also non-significant.

Anxiety Symptoms

The percentage of participants with anxiety levels differed by culture, Study 1A: $\chi^2(4, N = 128) = 17.29$, $p = .002$, V = .260; Study 1B: $\chi^2(4, N = 120) = 21.83$, $p < .001$, V = .302. In the group with a high level of anxiety (Spielberger, 1983), there was a significantly lower percentage of British participants (Study 1A: 45.83%; Study 1B: 40.00%) compared to Hongkongese (Study 1A: 72.92%; Study 1B: 68.89%) and Taiwanese participants (Study 1B: 76.67%).

The main effect of culture on anxiety was significant, $F(2,114) = 3.93$, $p = .022$, $\eta^2 = .065$, with a significantly lower level of anxiety symptoms reported in British participants (M_{Adj} = 44.37, SE = 1.35) compared to Hongkongese (M_{Adj} = 49.77, SE = 1.34, p = .015). Neither British nor Hongkongese participants did not differ from Taiwanese participants in anxiety symptoms. However, this significant finding did not hold at T2.

The main effect of gender on anxiety was also significant at both T1 and T2, Study 1A: $F(1,114) = 4.26$, $p = .041$, $\eta^2 = .036$; Study 1B: $F(1,109) = 7.99$, $p = .006$, $\eta^2 = .068$, with a significantly higher level of anxiety symptoms reported in female participants (Study

1A: M_{Adj} = 49.21, *SE* = 1.18; Study 1B: M_{Adj} = 50.21, *SE* = 1.26) than in male participants (Study 1A: M_{Adj} = 45.47, *SE* = 1.22, *p* = .034; Study 1B: M_{Adj} = 44.94, *SE* = 1.30).

The interaction was non-significant, Study 1A: $F(2,114) = 1.11$, $p = .332$, $\eta^2 = .019$; Study 1B: $F(2,109) = 0.58$, $p = .562$, $\eta^2 = .011$.

Depressive Symptoms

The percentage of participants with depression levels did not differ by culture, Study 2A: $\chi^2(2, N = 128) = 0.85$, $p = .655$, V = .081; Study 2B: $\chi^2(2, N = 120) = 2.44$, $p = .885$, V = .045. According to the CES-D-SF cut-off scores (Cole et al., 2004), less than half of all participants (Study 1A: 47.66%; Study 1B: 35.00%) were categorised into the group with significant depressive symptoms (i.e., scores ≥ 10) in the past week of the time they completed the study.

There was a main effect of gender on anxiety, Study 1A: $F(2,114) = 4.26$, $p = .041$, $\eta^2 = .036$; Study 1B: $F(2,109) = 7.99$, $p = .006$, $\eta^2 = .068$, with a significantly higher level of depressive symptoms reported in female participants (Study 1A: M_{Adj} = 10.54, *SE* = 0.69; Study 1B: M_{Adj} = 9.44, *SE* = 0.67) compared to male participants (Study 1A: M_{Adj} = 8.48, *SE* = 0.71, *p* = .045; Study 1B: M_{Adj} = 7.42, *SE* = 0.68, *p* = .042).

The main effect of culture, Study 1A: $F(2,114) = 3.02$, $p = .053$, $\eta^2 = .050$; Study 1B: $F(2,109) = 0.15$, $p = .863$, $\eta^2 = .003$, or interaction, Study 1A: $F(2,114) = 2.89$, $p = .060$, $\eta^2 = .048$; Study 1B: $F(2,109) = 0.82$, $p = .442$, $\eta^2 = .015$, were non-significant.

Post-Traumatic Growth

The MANCOVA found that the main effect of culture was significant, Study 1A: $F(10,222) = 6.42$, $p < .001$, $\eta^2 = .224$; Study 1B: $F(10,212) = 2.98$, $p = .002$, $\eta^2 = .123$. There was no significant effect of gender, or interaction on post-traumatic growth.

The subsequent ANCOVA found cultural differences in new possibilities, Study 1A: $F(2,114) = 4.50$, $p = .013$, $\eta^2 = .073$; Study 1B: $F(2,109) = 11.59$, $p < .001$, $\eta^2 = .175$, and spiritual and existential change, Study 1A: $F(2,114) = 16.93$, $p < .001$, $\eta^2 = .229$; Study 1B: $F(2,109) = 8.53$, $p < .001$, $\eta^2 = .135$. The British group was less likely to perceive new possibilities (Study 1A: $M_{Adj} = 1.94$, $SE = 0.19$; Study 1B: $M_{Adj} = 0.92$, $SE = 0.21$) and spiritual and existential change (Study 1A: $M_{Adj} = 0.81$, $SE = 0.17$; Study 1B: $M_{Adj} = 0.63$, $SE = 0.18$) after the stressful events than the Hongkongese (new possibilities - Study 1A: $M_{Adj} = 2.66$, $SE = 0.19$, $p = .023$; Study 1B: $M_{Adj} = 1.80$, $SE = 0.20$, $p = .009$) and Taiwanese groups (new possibilities - Study 1B: $M_{Adj} = 2.66$, $SE = 0.28$, $p < .001$; spiritual and existential change - Study 1A: $M_{Adj} = 2.14$, $SE = 0.22$, $p < .001$; Study 1B: $M_{Adj} = 1.97$, $SE = 0.25$, $p < .001$).

In Study 1B, there was also a significant main effect of culture on another two sub-scales at T2, relating to others, $F(2,109) = 7.11$, $p = .001$, $\eta^2 = .115$, and personal strength, $F(2,109) = 5.50$, $p = .005$, $\eta^2 = .092$. The Taiwanese group tended to experience a higher level of changes in terms of relating to others ($M_{Adj} = 2.60$, $SE = 0.28$) and personal strength ($M_{Adj} = 2.72$, $SE = 0.29$) compared to the British (relating to others - $M_{Adj} = 1.20$, $SE = 0.21$, $p < .001$; personal strength - $M_{Adj} = 1.50$, $SE = 0.21$, $p = .005$) and Hongkongese groups (relating to others - $M_{Adj} = 1.54$, $SE = 0.20$, $p = .012$; personal strength - $M_{Adj} = 1.70$, $SE = 0.21$, $p = .019$).

Table 3.9 Total Scores and Group Differences in Psychopathology by Culture in Study 1A – Baseline (Responses to Stressors before the Baseline) and Study 1B – Follow-up (Responses to Stressors between T1 and T2)

Scale	Total		British		Hongkongese		Taiwanese		Analysis*
	n	%	*n*	%	*n*	%	*n*	%	
(Study 1A - Baseline)	(*N* = 128)		(*n* = 48)		(*n* = 48)		(*n* = 32)		χ^2(df); *p*; V
Impact of Events Scale – Revised (IES-R)[1]									6.08 (6); .414; .154
Scores 0-23	88	68.75	35	72.92	35	72.92	18	56.25	
Scores 24-32 [2]	16	12.50	5	10.42	5	10.42	6	18.75	
Scores 33-38 [2]	12	9.38	6	12.50	3	6.25	3	9.38	
Scores ≥ 39 [2]	12	9.38	2	4.17	5	10.42	5	15.63	
State-Trait Anxiety Inventory – Trait version (STAI-T)[3]									**17.29 (4); .002*; .260**
Scores 20-37 [4]	19	14.84	15[a]	31.25	2[b]	4.17	2[b]	6.25	
Scores 38-44 [4]	31	24.22	11[a]	22.92	11[a]	22.92	9[a]	28.13	
Scores ≥ 45 [4]	78	60.94	22[b]	45.83	35[a]	72.92	21[a,b]	65.63	
Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)[5]									0.85 (2); .655; .081
Scores 0-9	67	52.34	24	50.00	24	50.00	19	59.38	
Scores ≥ 10 [6]	61	47.66	24	50.00	24	50.00	13	40.63	
(Study 1B – Follow-up)	(*N* = 120)		(*n* = 45)		(*n* = 45)		(*n* = 30)		χ^2(df); *p*; V
Impact of Events Scale – Revised (IES-R)[1]									8.61 (6); .197; .189
Scores 0-23	72	60.00	28	62.22	27	60.00	17	56.67	
Scores 24-32 [2]	20	16.67	11	24.44	7	15.56	2	6.67	
Scores 33-38 [2]	9	7.50	3	6.67	3	6.67	3	10.00	
Scores ≥ 39 [2]	19	15.83	3	6.67	8	17.78	8	26.67	
State-Trait Anxiety Inventory – Trait version (STAI-T)[3]									**21.83 (4); <.001*; .302**
Scores 20-37 [4]	23	19.17	18[a]	40.00	3[b]	6.67	2[b]	6.67	
Scores 38-44 [4]	25	20.83	9[a]	20.00	11[a]	24.44	5[a]	16.67	
Scores ≥ 45 [4]	72	60.00	18[b]	40.00	31[a]	68.89	23[a]	76.67	
Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)[5]									2.44 (2); .885; .045
Scores 0-9	78	65.00	30	66.67	28	62.22	20	66.67	
Scores ≥ 10 [6]	42	35.00	15	33.33	17	37.78	10	33.33	

Note:
[1] IES-R total score: ranging from 0 to 88

[2] IES-R total scores 24-32: partial PTSD or at least some PTSD symptoms (Asukai et al., 2002); scores 33-38: a probable diagnosis of PTSD (Creamer et al., 2003); scores ≥ 39: a diagnosis of PTSD (Kawamura et al., 2001)
[3] STAI-T total score: ranging from 20 to 80
[4] STAI-T total scores 20-37: a low level of or even no anxiety; scores 38-44: a moderate level of anxiety;
scores ≥ 45: a high level of anxiety (Spielberger, 1983)
[5] CES-D-SF total score: ranging from 0 to 30
[6] CES-D-SF score ≥ 10: presence of significant depressive symptoms (Andresen et al., 1994)

Table 3.10 Mean Scores (SD) and Group Differences in Psychopathology and Post-Traumatic Growth by Culture and Gender in Study 1A – Baseline (Responses to Stressors before the Baseline) and Study 1B – Follow-up (Responses to Stressors between T1 and T2)

Scale		Total	British	Hongkongese	Taiwanese	Main Effect Culture	Main Effect Gender	Interaction Culture x Gender
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df1,df2); *p*; η^2	*F* (df1,df2); *p*; η^2	*F* (df1,df2); *p*; η^2
IES-R Total								
Study 1A	Total	17.31 (14.62)	12.89 (13.75) [b]	18.96 (14.94) [a,b]	21.29 (14.14) [a]	**3.80 (2,114); .025*; .062**	2.95 (1,114); .089; .025	0.31 (2,114); .738; .005
	Male	14.92 (13.73)	9.45 (12.11)	17.74 (13.99)	18.38 (13.90)			
	Female	19.70 (15.19)	16.17 (14.67)	20.17 (16.05)	24.40 (14.20)			
Study 1B	Total	19.83 (16.00)	15.89 (13.65)	21.04 (16.96)	23.93 (16.94)	0.80 (2,109); .453; .014	0.06 (1,109); .805; .001	0.74 (2,109); .478; .013
	Male	19.25 (15.58)	16.14 (12.85)	21.59 (17.06)	20.31 (17.11)			
	Female	20.42 (16.51)	15.65 (14.66)	20.52 (17.24)	28.07 (16.35)			
MANCOVA (Sub-Scales)								
Study 1A						1.59 (6,226); .152; .040	1.51 (3,112); .215; .039	1.33 (6,226); .246; .034
Study 1B						1.45 (6,216); .199; .039	0.47 (3,107); .704; .013	0.30 (6,216); .939; .008
Intrusion[1]								
Study 1A	Total	0.82 (0.78)	0.60 (0.77)	0.85 (0.70)	1.10 (0.81)	3.25 (2,114); .042*; .054	1.90 (1,114); .171; .016	0.09 (2,114); .914; .002
	Male	0.73 (0.75)	0.47 (0.70)	0.78 (0.72)	1.00 (0.79)			
	Female	0.92 (0.79)	0.73 (0.83)	0.92 (0.70)	1.20 (0.85)			
Study 1B	Total	1.03 (0.88)	0.76 (0.74)	1.07 (0.86)	1.36 (0.99)	1.85 (2,109); .162; .033	0.39 (1,109); .535; .004	0.60 (2,109); .553; .011
	Male	0.98 (0.84)	0.76 (0.62)	1.07 (0.89)	1.16 (1.00)			
	Female	1.08 (0.92)	0.76 (0.86)	1.08 (0.85)	1.60 (0.97)			
Avoidance[1]								
Study 1A	Total	1.02 (0.85)	0.78 (0.79)	1.15 (0.93)	1.18 (0.75)	3.54 (2,114); .032*; .058	1.67 (1,114); .199; .014	0.93 (2,114); .397; .016
	Male	0.90 (0.83)	0.53 (0.63)	1.14 (0.91)	1.09 (0.83)			
	Female	1.14 (0.86)	1.02 (0.87)	1.17 (0.97)	1.27 (0.68)			
Study 1B	Total	0.95 (0.79)	0.88 (0.82)	1.04 (0.85)	0.93 (0.64)	0.15 (2,109); .862; .003	0.22 (1,109); .644; .002	0.42 (2,109); .661; .008
	Male	0.97 (0.83)	0.94 (0.89)	1.10 (0.86)	0.82 (0.70)			
	Female	0.94 (0.75)	0.83 (0.75)	0.97 (0.85)	1.04 (0.56)			
Hyper-arousal[1]								
Study 1A	Total	0.43 (0.59)	0.31 (0.55)	0.48 (0.63)	0.52 (0.59)	1.79 (2,114); .171; .030	**4.54 (1,114); .035*; .038**	0.92 (2,114); .403; .016
	Male	0.31 (0.49)	0.25 (0.44)	0.40 (0.57)	0.28 (0.46)			
	Female	0.54 (0.66)	0.36 (0.64)	0.57 (0.69)	0.77 (0.63)			

Study 1B	Total	0.67 (0.73)	0.46 (0.54)	0.69 (0.73)	0.94 (0.89)	2.26 (2,109);	0.35 (1,109);	0.81 (2,109);
	Male	0.62 (0.70)	0.43 (0.50)	0.70 (0.67)	0.75 (0.93)	.109; .040	.558; .003	.448; .015
	Female	0.72 (0.76)	0.49 (0.59)	0.68 (0.80)	1.15 (0.82)			
STAI-T Total								
Study 1A	Total	47.09 (9.44)	44.13 (11.49) [b]	49.37 (7.23) [a]	48.00 (8.07) [a,b]	**3.93 (2,114);**	**4.26 (1,114);**	1.11 (2,114);
	Male	45.62 (8.78)	43.27 (11.15)	48.65 (6.13)	44.50 (7.44)	**.022*; .065**	**.041*; .036**	.332; .019
	Female	48.56 (9.91)	44.96 (11.99)	50.09 (8.27)	51.73 (7.17)			
Study 1B	Total	47.56 (11.17)	43.51 (12.26)	50.09 (9.72)	49.83 (10.00)	2.23 (2,109);	**7.99 (1,109);**	0.58 (2,109);
	Male	45.20 (10.50)	41.86 (11.75)	48.00 (8.55)	45.94 (10.46)	.112; .039	**.006*; .068**	.562; .011
	Female	49.92 (11.41)	45.09 (12.79)	52.09 (10.51)	54.29 (7.53)			
CES-D-SF Total								
Study 1A	Total	9.49 (5.64)	8.62 (5.19)	10.89 (5.98)	8.68 (5.50)	3.02 (2,114);	**4.10 (1,114);**	2.89 (2,114);
	Male	8.61 (5.87)	7.82 (5.29)	11.17 (6.53)	6.00 (4.20)	.053; .050	**.045*; .035**	.060; .048
	Female	10.38 (5.30)	9.39 (5.09)	10.61 (5.50)	11.53 (5.40)			
Study 1B	Total	8.47 (5.48)	7.93 (4.75)	8.84 (5.92)	8.70 (5.91)	0.15 (2,109);	**4.25 (1,109);**	0.82 (2,109);
	Male	7.42 (5.24)	7.59 (4.70)	7.68 (5.10)	6.81 (6.35)	.863; .003	**.042*; .038**	.442; .015
	Female	9.52 (5.54)	8.26 (4.89)	9.96 (6.52)	10.86 (4.69)			
Post-Traumatic Growth Inventory – Short Form (PTGI-SF) Total[2]								
Study 1A	Total	2.35 (0.99)	2.08 (1.00)	2.50 (0.98)	2.52 (0.92)	2.16 (2,114);	**5.38 (1,114);**	0.58 (2,114);
	Male	2.18 (0.88)	2.03 (0.68)	2.26 (0.91)	2.28 (1.09)	.119; .037	**.022*; .045**	.563; .010
	Female	2.52 (1.06)	2.13 (1.24)	2.73 (1.01)	2.78 (0.64)			
Study 1B	Total	1.68 (1.16)	1.13 (0.88) [b]	1.73 (1.19) [b]	2.42 (1.08) [a]	**10.11 (2,109);**	3.77 (1,109);	0.40 (2,109);
	Male	1.82 (1.14)	1.16 (0.93)	1.90 (0.96)	2.61 (1.13)	**<.001*; .156**	.055; .033	.669; .007
	Female	1.54 (1.17)	1.10 (0.86)	1.57 (1.37)	2.19 (1.01)			
MANCOVA (Sub-Scales)								
Study 1A						**6.42 (10,222);**	2.15 (5,110);	0.53 (10,222);
						<.001*; .224	.065; .089	.868; .023
Study 1B						**2.98 (10,212);**	0.95 (5,105);	0.80 (10,212);
						.002*; .123	.449; .043	.626; .036
Relating to Others[3]								
Study 1A	Total	2.11 (1.30)	2.01 (1.33)	2.03 (1.27)	2.37 (1.29)	0.55 (2,114);	2.26 (1,114);	0.13 (2,114);
	Male	1.92 (1.21)	1.80 (1.17)	1.78 (0.95)	2.28 (1.55)	.580; .010	.135; .019	.876; .002
	Female	2.30 (1.36)	2.22 (1.46)	2.28 (1.51)	2.47 (0.99)			
Study 1B	Total	1.68 (1.41)	1.24 (1.31) [b]	1.66 (1.31) [b]	2.38 (1.45) [a]	**7.11 (2,109);**	3.51 (1,109);	0.36 (2,109);
	Male	1.81 (1.44)	1.3 (1.39)	1.73 (1.12)	2.63 (1.59)	**.001*; .115**	.064; .031	.700; .007
	Female	1.56 (1.37)	1.2 (1.25)	1.59 (1.49)	2.11 (1.27)			
New Possibilities[3]								

Study 1A	Total	2.39 (1.33)	1.89 (1.34) [b]	2.60 (1.27) [a]	2.82 (1.19)	**4.50 (2,114);**	1.81 (1,114);	0.49 (2,114);
	Male	2.28 (1.15)	1.91 (0.81)	2.43 (1.21)	2.56 (1.36)	**.013*; .073**	.181; .016	.613; .009
	Female	2.51 (1.49)	1.87 (1.72)	2.76 (1.34)	3.10 (0.93)			
Study 1B	Total	1.69 (1.50)	0.88 (1.25) [b]	1.87 (1.42) [a]	2.65 (1.32) [a]	**11.59 (2,109);**	2.2 (1,109);	0.87 (2,109);
	Male	1.83 (1.43)	0.86 (1.14)	1.98 (1.13)	2.97 (1.27)	**<.001*; .175**	.141; .02	.422; .016
	Female	1.55 (1.57)	0.89 (1.37)	1.76 (1.68)	2.29 (1.33)			
Personal Strength[3]								
Study 1A	Total	2.95 (1.35)	2.92 (1.44)	3.14 (1.32)	2.71 (1.25)	1.31 (2,114);	**5.24 (1,114);**	0.37 (2,114);
	Male	2.71 (1.28)	2.77 (1.22)	2.91 (1.27)	2.34 (1.39)	.273; .023	**.024*; .044**	.691; .006
	Female	3.19 (1.38)	3.07 (1.63)	3.37 (1.36)	3.10 (0.99)			
Study 1B	Total	1.87 (1.47)	1.41 (1.36)	1.81 (1.49)	2.67 (1.33)	**5.50 (2,109);**	1.20 (1,109);	1.00 (2,109);
	Male	1.98 (1.51)	1.32 (1.35)	2.11 (1.44)	2.72 (1.52)	**.005*; .092**	.276; .011	.373; .018
	Female	1.77 (1.44)	1.50 (1.39)	1.52 (1.50)	2.61 (1.15)			
Spiritual & Existential Change[3]								
Study 1A	Total	1.60 (1.29)	0.80 (1.20) [b]	2.01 (1.17) [a]	2.16 (1.02) [a]	**16.93 (2,114);**	0.94 (1,114);	0.87 (2,114);
	Male	1.51 (1.20)	0.89 (1.06)	1.80 (1.16)	1.94 (1.15)	**<.001*; .229**	.335; .008	.420; .015
	Female	1.70 (1.39)	0.72 (1.34)	2.22 (1.18)	2.40 (0.83)			
Study 1B	Total	1.19 (1.27)	0.59 (1.21) [b]	1.27 (1.14) [b]	1.97 (1.11) [a]	**8.53 (2,109);**	1.55 (1,109);	0.13 (2,109);
	Male	1.31 (1.33)	0.68 (1.39)	1.34 (1.03)	2.13 (1.20)	**<.001*; .135**	.215; .014	.876; .002
	Female	1.07 (1.21)	0.50 (1.03)	1.20 (1.25)	1.79 (1.01)			
Appreciation of Life[3]								
Study 1A	Total	2.68 (1.23)	2.77 (1.39)	2.70 (1.21)	2.53 (1.02)	2.56 (2,114);	**7.76 (1,114);**	1.09 (2,114);
	Male	2.48 (1.25)	2.77 (1.16)	2.35 (1.35)	2.25 (1.22)	.081; .043	**.006*; .064**	.340; .019
	Female	2.89 (1.18)	2.76 (1.60)	3.04 (0.96)	2.83 (0.67)			
Study 1B	Total	1.95 (1.40)	1.53 (1.32)	2.07 (1.49)	2.42 (1.26)	2.48 (2,109);	3.82 (1,109);	0.18 (2,109);
	Male	2.17 (1.41)	1.66 (1.41)	2.34 (1.35)	2.63 (1.37)	.088; .044	.053; .034	.835; .003
	Female	1.74 (1.37)	1.41 (1.24)	1.80 (1.59)	2.18 (1.12)			

Note: Statistics for the above variables derive from ANCOVA unless otherwise specified. * $p < .05$.

The superscripts (i.e., a, b, c) are the same for groups with no significant difference found but different for groups with a significant difference found.

[1] IES-R sub-scales (mean scores): ranging from 0 to 4

[2] PTGI-SF total mean score: ranging from 0 to 5

[3] PTGI-SF sub-scales (mean scores): ranging from 0 to 5

3.5 Study 2: Study of British, Hong Kongese, and Taiwanese Emerging Adults in their Home Regions

The results of Study 1 informed the research design and power analysis of Study 2. Given the inapparent cultural differences in Study 1, we decided to make changes to Study 2's research design, namely participants, measures, and procedures. First, we changed to use local participants from the U.K., Hong Kong, and Taiwan. The latter two groups recruited locally can be expected to be more representative of their respective cultures than those recruited in the U.K. Second, we included new or revised measures. For example, we added the Individualism and Collectivism Scale (INDCOL) and the Self-Construal Scale, to check whether the cultural characteristics in Hofstede's (1984, 2001) theory still applied to the three regions. We also changed to use the Modified Life Events Checklist, which was consistent with DSM-5. Finally, we shortened the interval between T1 and T2 from 7 months to 6 months for a high follow-up rate. For power analyses, we set 0.95 power, 0.05 alpha level, and 0.8 effect size. The total number of predictors in the two main analyses, MANCOVA and hierarchical regression model, was around 130 while the number of tested predictors in each analysis was 10 at maximum. In this case, we needed at least 130 participants in each cultural group (i.e., 390 participants in total). To allow a better buffer, we decided to recruit a total of 420 participants (140 for each cultural group) in Study 2. Following the hypotheses of Study 1, we extended the investigation to the local emerging adults from the United Kingdom, Hong Kong and Taiwan. Given a 'pure' sample in the respective region, we expected the Study 2 results would better support our research hypotheses. Similar to Study 1, we recruited university students potentially with a wide range of symptoms in Study 2.

Study 2 was a collaborative project between three laboratories in the United Kingdom, Hong Kong, and Taiwan: (1) Oxford Centre for Anxiety Disorders and Trauma (OxCADAT) (led by Professor Anke Ehlers and Professor David Clark), University of

Oxford; (2) Experimental Psychopathology Laboratory (led by Dr Tom Barry), University of Hong Kong (HKU); and (3) Clinical Psychology Laboratory (led by Professor Lin Yaw-Sheng), National Taiwan University (NTU). Ethics approval was obtained from the Medical Science Interdivisional Research Ethics Committee (IDREC) of the University of Oxford (Reference Number: R52325/RE003, R52325/RE004, R52325/RE005, & R52325/RE006) (see Appendix A2), the Human Research Ethics Committee (HREC) of the University of Hong Kong (Reference Number: EA1803063) (see Appendix A3) and the Research Ethics Committee of the National Taiwan University (Reference Number: 201812ES010) (see Appendix A4).

3.5.1 Participant Recruitment

Study 2A was run from February 2019 to December 2019 at the University of Oxford, the University of Hong Kong, and National Taiwan University. A total of 140 participants (70 males and 70 females) per site were recruited. With the respective ethics approvals, the recruitment officially started in January 2019 in Oxford, Hong Kong, and Taiwan. The study was advertised through emails to departments, student societies, and colleges/ halls, as well as posters on notice boards and adverts in Daily Info (see Appendices B4, B5, B6, B7, B8, and B9). In order to comply with the Data Protection Act, an advertisement email was sent by the departments, colleges, or societies on behalf of the researcher. Participants received GBP 15 or an equivalent amount of non-U.K. currency in line with the local rate: HKD 150 (Hong Kong) and TWD 300 (Taiwan) for their participation. Interested students were asked to complete a registration form via a hyperlink (in email) or a QR code (in the poster), and provide demographic information (e.g., name, gender, and contact details) for communication and assignment to experimental conditions. The potential participants then received further information about the study and were invited to the research session if they were interested in participating.

Study 2B was a longitudinal study, which used data from the baseline assessment and a follow-up assessment 6 months later. The follow-up assessment was conducted online from August 2019 to June 2020. All participants from Study 2A were invited to participate in the follow-up assessment, and all of them gave their written consent. Participants received GBP 5 or an equivalent amount of non-UK currency based on the local rate: HKD 50 (Hong Kong) and TWD 75 (Taiwan) for their participation. Out of the potential participants, 5 dropped out, 23 could not be contacted via email or by telephone, 7 withdrew their participation in the middle of the study, and therefore, 385 participants completed Study 2B. The follow-up rate of Study 2B was 91.7%.

3.5.2 Inclusion and Exclusion Criteria

The criteria for Study 2 participants were identical to those for Study 1 (for details, see 3.3.2.) except that the target age range was further limited to 18-25.

3.5.3 Procedure

Study 2, similar to Study 1, consisted of a baseline assessment where participants completed questionnaires, computerised tasks, standardised laboratory tasks, and a follow-up assessment (6 months later).

At the baseline, participants read the participant information sheet (see Appendix C2) and were allowed to ask any questions. If participants decided to participate in the research session and the follow-up assessment (optional), they gave written consent on the consent form (see Appendices D2, D3, and D4). Next, they were instructed to complete questionnaires and standardised laboratory tasks. They then finished two computerised tasks and a set of self-report questionnaires (in Qualtrics) about how they saw themselves. Finally, they completed another three standardised laboratory tasks (in Qualtrics), one of which involved audio-recordings to be transcribed and coded without any personal identifiers) and questionnaires about how they interacted with other people and remembered events from

their life and how they felt in general. The participants did not need to describe the details of their life events. It took approximately 2 hours with two 5-minute breaks in between. The procedure of the baseline assessment can be seen in Appendix E2.

In the follow-up assessment, participants who agreed to be contacted again were asked to complete online questionnaires (in Qualtrics) 6 months after the research session. These questionnaires took about 20-30 minutes to complete.

3.5.4 Research Questions and Hypotheses

Another objective of this chapter was to compare the local compatriots in the United kingdom, Hong Kong, and Taiwan (Study 2) in terms of trauma/stress exposure and post-traumatic/stress outcomes. The hypotheses are listed below.

- There will be cultural differences in horizontal and vertical individualism and collectivism (***Hypothesis 6***).
    - British participants will score higher in horizontal individualism (H-I) than Hongkongese and Taiwanese participants (***Hypothesis 6.1***).
    - Hongkongese participants will score higher in vertical individualism (V-I) than British and Taiwanese participants (***Hypothesis 6.2***).
    - Taiwanese participants will score higher in vertical collectivism (V-C) than British and Hongkongese participants (***Hypothesis 6.3***).
- There will be cultural differences in self-construal (***Hypothesis 7***).
    - British participants will score higher in independent self-construal than Hongkongese and Taiwanese participants (***Hypothesis 7.1***).
    - Hongkongese and Taiwanese participants will score higher in interdependent self-construal than British participants (***Hypothesis 7.2***).
- There will be cultural differences in trauma/stress exposure (***Hypothesis 8***).

- Hongkongese and Taiwanese participants will report more stressful events at baseline than British participants (***Hypothesis 8.1***).
- Hongkongese and Taiwanese participants will report more traumatic events at baseline than British participants (***Hypothesis 8.2***).
- Hongkongese and Taiwanese participants will report a higher level of perceived severity of the most distressing events at baseline than British participants (***Hypothesis 8.3***)
- Hongkongese and Taiwanese participants will report more stressful events in the follow-up than British participants (***Hypothesis 8.4***).
- Hongkongese and Taiwanese participants will report more traumatic events in the follow-up than British participants (***Hypothesis 8.5***).
- Hongkongese and Taiwanese participants will report a higher level of perceived severity of the most distressing events in the follow up than British participants (***Hypothesis 8.6***).

- There will be cultural differences in PTSD symptoms (***Hypothesis 9***).
  - British participants will report more PTSD symptoms at baseline than Hongkongese and Taiwanese participants (***Hypothesis 9.1***).
  - British participants will report more PTSD symptoms in the follow-up than Hongkongese and Taiwanese participants (***Hypothesis 9.2***).
- There will be cultural differences in anxiety symptoms (***Hypothesis 10)***.
  - British participants will report more anxiety symptoms at baseline than Hongkongese and Taiwanese participants (***Hypothesis 10.1***).
  - British participants will report more anxiety symptoms in the follow-up than Hongkongese and Taiwanese participants (***Hypothesis 10.2***).
- There will be cultural differences in depressive symptoms (***Hypothesis 11***).

- British participants will report more depressive symptoms at baseline than Hongkongese and Taiwanese participants (***Hypothesis 11.1***).
- British participants will report more depressive symptoms in the follow-up than Hongkongese and Taiwanese participants (***Hypothesis 11.2***).

- There will be cultural differences in post-traumatic growth (***Hypothesis 12***).
  - Hongkongese and Taiwanese will report more post-traumatic growth at baseline than British participants (***Hypothesis 12.1***).
  - Hongkongese and Taiwanese participants will report more post-traumatic growth in the follow-up than British participants (***Hypothesis 12.2***).

3.5.5 Study 2A: Cross-Sectional Study

Study 2A was aimed at investigating cultural differences in the cognitive/behavioural processes (some of which had received preliminary support from Study 1A) related to psychopathology and post-traumatic growth. Cultural variations in individualism-collectivism were examined by comparing British, Hongkongese, and Taiwanese samples. While Hofstede's (1984, 2001) theory has been widely used, the data was collected at least 40 years ago, and might no longer be applicable. Moreover, a country (or region) dimension was measured as a whole and individuals have personalities that fit more or less with their cultural expectations. As culture and personality are dynamic and changes over time, we included two additional measures, the Individualism and Collectivism Scale (INDCOL) and the Self-Construal Scale, in Study 2A.

Methods

Participants

A total of 420 participants currently living in their home regions (i.e., United Kingdom, Hong Kong, and Taiwan) were recruited for Study 2A. The sample of this study included 140 British, 140 Hongkongese, and 140 Taiwanese. In each group, gender was

exactly balanced (Male: Female = 1:1). The most common subject studies was Social Sciences in the British (37.1%) and Taiwanese (30.7%) samples, whereas it was Sciences for the Hongkongese sample (23.6%). Across groups, participants' ages ranged from 18 to 25 years (the same as the inclusion criteria). A majority (81.0%) of the participants had achieved A-level education or equivalent and the rest (19.0%) had achieved a Bachelor's degree or above. More British participants (30.0%) reported a very high monthly family income (≥ £8,000 per month) than their Hongkongese (8.6%) and Taiwanese counterparts (0.0%). The demographic information of Study 2A participants in different cultures is depicted in Table 3.11.

Table 3.11 Participant characteristics of Study 2A sample ($N = 420$)

Variable	Total ($N = 420$)		British ($n = 140$)		HK ($n = 140$)		Taiwanese ($n = 140$)		Analysis* χ^2(df); p; V
	n	%	n	%	n	%	n	%	
Gender									-
Male	210	50.0	70	50.0	70	50.0	70	50.0	
Female	210	50.0	70	50.0	70	50.0	70	50.0	
Study Field									**47.24 (14); <.001*; .237**
Arts	71	16.9	35[a]	25.0	13[b]	9.3	23[a,b]	16.4	
Business	21	5.0	2	1.4	10	7.1	9	6.4	
Engineering	46	11.0	11	7.9	17	12.1	18	12.9	
Law	14	3.3	3	2.1	4	2.9	7	5.0	
Medicine	47	11.2	13	9.3	17	12.1	17	12.1	
Science	67	15.7	21[a,b]	15.0	33[a]	23.6	13[b]	9.3	
Social Science	123	29.5	52[a]	37.1	28[b]	20.0	43[a,b]	30.7	
Other	31	7.4	3[b]	2.1	18[a]	12.9	10[a,b]	7.1	
Education[1]									1.98 (2); .372; .069
A Level	340	81.0	116	82.9	116	82.9	108	77.1	
Bachelor or Above	80	19.0	24	17.1	24	17.1	32	22.9	
Family Income[2]									**80.08 (12); <.001*; .309**
< £1,000	17	4.0	1	0.7	8	5.7	8	5.7	
£1,000-1,999	44	10.5	10	7.1	13	9.3	21	15.0	
£2,000-2,999	68	16.2	14[b]	10.0	25[a,b]	17.9	29[a]	20.7	
£3,000-4,999	102	24.3	24[b]	17.1	32[a,b]	22.9	46[a]	32.9	
£5,000-£7,999	63	15.0	27	19.3	20	14.3	16	11.4	
≥ £8,000	54	12.9	42[a]	30.0	12[b]	8.6	0[c]	0	
Not Specified	72	17.1	22	15.7	30	21.4	20	14.3	
(Median Family Income)[3]			*(2,450)*		*(2,747)*		*(1,916)*		
	M (SD)		*M (SD)*		*M (SD)*		*M (SD)*		*F* (df1,df2); *p*; η^2
Age	20.81 (1.77)		20.34 (1.82) [b]		20.99 (1.55) [a]		21.10 (1.83) [a]		**7.86 (2,417); <.001*; .036**

Note: Statistics for age derive from ANOVA; Statistics for study field, education, and the family income derived from chi-square tests.

[1] Highest educational level achieved

[2] Estimated monthly family income level or equivalent to Hong Kong dollars (HK$) and New Taiwan dollar (NT$) (after being adjusted to exchange rate and local living costs): 1. < £1,000 equivalent to < HK$10,000 / < NT$30,000; 2. £1,000-1,999 equivalent to HK$10,000-19,999 / NT$30,000-59,999; 3. £2,000-2,999 equivalent to HK$20,000-29,999 / NT$60,000-89,999; 4. £3,000-4,999 equivalent to HK$30,000-49,999 / NT$90,000-149,999; 5. £5,000-7,999 equivalent to HK$50,000-79,999 / NT$150,000-239,999; 6. ≥ £8,000 equivalent to ≥ HK$80,000 / ≥ NT$240,000

[3] Average annual disposable income per household in the United Kingdom/ Hong Kong/ Taiwan in 2019, extracted from Statista: https://www.statista.com/outlook/co/macroeconomic-indicators/disposable-income/

Measures

I. Self-Report Questionnaires (in Qualtrics)

The internal reliability (Cronbach's alpha) of each scale used in Study 2A is shown in Table 3.12. In this chapter, we only reported the descriptive results of culture measures (only available in Study 2A), together with those of trauma/stress exposure and post-traumatic/stress outcomes. For detailed descriptions of other measures under Sections C to G, please refer to the 'Measures' section of Study 1A.

A. Participant's Demographic Information

1) Demographic Questionnaire

Participants were asked to report their age, gender, field of study, the highest education level achieved, and average family income per month.

B. Exposure to Traumatic/Stressful Events

2) Modified Life Events Checklist for DSM-5 (MLEC-5; adapted from Life Events Checklist for DSM-5; Weathers et al., 2013)

The Modified Life Events Checklist included two parts: (1) non-traumatic stressful events and (2) traumatic events. The part for non-traumatic stress events, based on Study 1, was developed to be a list of 18 events (e.g., 'serious but not life-threatening illness' and 'injury'). The part of traumatic events, after being derived from the LEC-5, and including one additional item (i.e., 'Death of someone close to you') from Gray et al. (2004), became a list of 20 potential life-threatening events (LTEs). For the LTEs, participants were asked to report whether each of the LTEs (1) 'it happened to you personally', (2) 'you witnessed it happen to someone else', (3) 'you learned about it happening to someone close to me' and/or (4) 'you were exposed to it as part of your job (for example,

paramedic, police, military, or other first responders)'. Participants were also asked to rate in terms of how distressed they were in each stressful/traumatic event on a scale from 0 *Not at all* to 100 *Extremely distressing*.

C. Culture Measures

3) Individualism and Collectivism Scale (INDCOL; Singelis et al., 1995)

The INDCOL is a 32-item scale developed to measure the level of vertical/ horizontal individualism-collectivism, including four sub-scales: (1) vertical collectivism (V-C), (e.g., 'I would do what would please my family, even if I detested that activity.'), (2) horizontal collectivism (H-C) (e.g., 'My happiness depends very much on the happiness of those around me.'), (3) vertical individualism (V-I) (e.g., 'Winning is everything.'), and (4) horizontal individualism (H-I) (e.g., 'I prefer to be direct and forthright when discussing with people.'). Each item was rated on a 7-point scale, ranging from 1 = *strongly disagree* to 7 = *strongly agree*. The Chinese version of the INDCOL (Renzhi, Shuqiao, Abela, Leibovitch, & Mingfan, 2013) was used in the Hongkongese and Taiwanese samples.

4) Self-Construal Scale (Singelis, 1994)

This scale was designed to measure the levels of independence and interdependence in self-construal with 30 items rated on a 7-point Likert scale (from 1 = *strongly disagree* to 7 = *strongly agree*). The scale is composed of 15 items to assess the independent self-construal (e.g., 'I enjoy being unique and different from others in many respects.') and 15 items to assess the interdependent self-construal (e.g., 'Even when I strongly disagree with group members, I avoid an argument.'). The Chinese version of the Self-Construal Scale (Hardin, Leong, & Bhagwat, 2004).) was used in the Hongkongese and Taiwanese samples.

D. Self-Concept and Appraisals

5) Revised Personal Style Inventory (PSI-II; Robins et al., 1994)

6) Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)

7) Analysis-Holism Scale (AHS; Choi et al., 2007)

E. Cognitive Processing Styles and Autobiographical Memory

8) State Dissociation Questionnaire (SDQ; Murray et al., 2002)

9) Data-Driven Processing Scale (DDPS; Halligan et al., 2002; Halligan et al., 2003)

10) Lack of Self-Referent Processing Scale (LSRPS; Halligan et al., 2002; Halligan et al., 2003)

11) Centrality of Event Scale-Short Form (CES-SF; Berntsen & Rubin, 2006)

12) Memory Questionnaire for Stressful/Positive Events (Halligan et al., 2003)

13) Thinking about Life Experience Scale (TALE; Bluck & Alea, 2011)

F. Coping Strategies

14) Self-Concealment Scale (Larson & Chastain, 1990)

15) Response to Intrusions Questionnaire (RIQ; Clohessy & Ehlers, 1999; Steil & Ehlers, 2000; Murray et al., 2002)

16) COPE Inventory (Carver et al., 1989)

17) Trait Dissociation Questionnaire Short Form (TDQ-SF; Murray et al., 2002)

G. Post-Traumatic/Stress Outcomes

18) Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997)

19) State-Trait Anxiety Inventory (Trait) (Form Y) (STAI-T; Spielberger, 1983)

In Studies 2A and 2B, we used this scale to assess how the participants generally felt in their lifetime and in the past 6 months respectively.

20) Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF; Cole et al., 2004)

21) Post-Traumatic Growth Inventory-Expanded (PTGI-X; Tedeschi, Cann, Taku, Senol-Durak, & Calhoun, 2017)

This inventory, developed from Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1995; 1996), provided a broader assessment of spiritual-existential experiences after exposure to stressful/ traumatic events. Different from 10-item PTGI-SF (used in Study 1), PTGI-X consisted of 25 items which represent 5 sub-scales: (1) Relating to others (e.g., 'I more clearly see that I can count on people in times of trouble.'), (2) New possibilities (e.g., 'I developed new interests.'), (3) Personal Strength (e.g., 'I have a greater feeling of self-reliance'), (4) Spiritual and existential change (e.g., 'I have a stronger religious faith'), and (5) Appreciation of life (e.g., 'I have greater clarity about life's meaning'). Each item was rated on a 6-point scale (from 0 = *I did not experience this change as a result of my crisis* to 5 = *I experienced this change to a very great degree as a result of my crisis*). The Chinese version of the PTGI-X (Su, 2018) was used in the Hongkongese and Taiwanese samples.

II. Objective Measures

A. Self-Concept

1) Perceptual Matching Task (Sui, He, & Humphreys, 2012)
2) Modified Implicit Association Task (adapted from IAT; Greenwald et al., 1998)

3) Modified Twenty Statements Test (Hong et al., 2001; adapted from Kuhn & McPartland, 1954)

B. Autobiographical Memory

4) Autobiographical Memory Test (Williams & Broadbent, 1986)

5) Modified Self-Defining Memory Task (adapted from SDMT; Moffitt & Singer, 1994)

Table 3.12 Internal consistency (Cronbach's alpha) of scales used in Study 2A

Scale	No. of the items	Cronbach's α (Overall) (*N*=420)	Cronbach's α (English) (*n*=140)	Cronbach's α (Chinese) (*n*=280)
Individualism and Collectivism Scale				
Individualism	16	.72	.68	.75
Horizontal individualism	8	.58	.56	.63
Vertical individualism	8	.70	.64	.74
Collectivism	16	.70	.64	.76
Horizontal collectivism	8	.71	.71	.71
Vertical collectivism	8	.58	.39	.62
Self-construal Scale				
Independence	15	.78	.81	.77
Interdependence	15	.79	.79	.79
Revised Personal Style Inventory				
Sociotropy	24	.87	.88	.87
Concern about what others think	7	.78	.79	.78
Dependency	7	.65	.72	.62
Pleasing others	10	.80	.82	.77
Autonomy	24	.83	.82	.83
Perfect	4	.66	.62	.67
Need control	8	.71	.71	.67
Defend separation	12	.78	.77	.78
Rosenberg Self-Esteem Scale				
Total	10	.87	.88	.86
Self-Concealment Scale				
Total	10	.84	.82	.85
Analysis-Holism Scale				
Causality	6	.76	.72	.72
Attitude toward contradictions	6	.63	.75	.59
Perception of change	6	.71	.62	.75
Locus of attention	6	.69	.68	.70
(Positive Event)				
Centrality of Events Scale - Short Form				
Total	7	.88	.86	.89
Memory Questionnaire				
Disorganisation	4	.90	.90	.89
Disjointedness	4	.67	.62	.71
Flashback	5	.67	.66	.69
Thinking About Life Experience				
Self-continuity	5	.83	.80	.82
Social bonding	5	.81	.82	.82
Directing behaviour	5	.82	.84	.79
(Stressful Event)				
Centrality of Events Scale - Short Form				
Total	7	.90	.91	.90
Memory Questionnaire				
Disorganisation	4	.92	.95	.89
Disjointedness	4	.74	.72	.76
Flashback	5	.87	.86	.88
Thinking About Life Experiences				
Self continuity	5	.73	.69	.69
Social bonding	5	.71	.70	.59
Directing behaviour	5	.70	.70	.68
State Dissociation Questionnaire				
Total	9	.89	.90	.88
Data-Driven Processing Scale				
Total	8	.89	.89	.91
Lack of Self-Referent Processing Scale				

Total	8	.87	.86	.88
Public and Communal Self-Appraisal Measure				
Challenge to beliefs and belonging	5	.88	.83	.90
Communal aspects of self	5	.66	.50	.73
Public roles and identity	4	.89	.90	.88
Post-Traumatic Cognitive Inventory 2				
Negative thoughts about the self	16	.94	.93	.94
Self-blame	5	.85	.90	.82
Overgeneralised danger	5	.81	.80	.81
Preoccupy with unfairness	5	.87	.84	.87
Impact of Events Scale - Revised				
Total	22	.95	.94	.96
Intrusion	8	.92	.90	.92
Avoidance	8	.89	.87	.90
Hyper-arousal	6	.87	.83	.88
State-Trait Anxiety Inventory - Trait version				
Total	20	.91	.93	.89
Center for Epidemiologic Studies Depression Scale Short Form				
Total	10	.83	.79	.83
Response to Intrusion Questionnaire				
Thought suppression	6	.90	.89	.91
Rumination	8	.86	.84	.87
Numbing	5	.78	.73	.80
Post-Traumatic Growth Inventory - Expanded				
Total	25	.95	.95	.95
Relating to others	7	.90	.90	.90
New possibilities	5	.86	.88	.85
Personal strength	4	.83	.86	.81
Spiritual change	6	.86	.88	.83
Appreciation of life	3	.74	.80	.71
COPE Inventory				
Positive reinterpretation and growth	4	.76	.78	.73
Denial	4	.76	.74	.76
Religious coping	4	.95	.98	.93
Use of emotional social support	4	.88	.92	.85
Acceptance	4	.77	.77	.78
Use of instrumental social support	4	.83	.81	.83
Active coping	4	.75	.76	.75
Restraint	4	.74	.74	.74
Suppression of competing activities	4	.76	.68	.79
Planning	4	.80	.85	.78
Mental disengagement	4	.57	.51	.60
Focus on and venting of emotions	4	.78	.85	.74
Humour	4	.92	.93	.92
Behavioural disengagement	4	.75	.70	.76
Substance use	4	.95	.96	.94
Trait Dissociation Questionnaire – Short Form				
Total	15	.94	.91	.95

Apparatus

A total of three DELL Inspiron 13 5000 laptops (Intel Core i7 8th Generation) with a 13.3-inch screen were applied to the sites of data collection in the United Kingdom, Hong Kong, and Taiwan at baseline.

Statistical Analyses

We first conducted a one-way MANOVA to test whether the three cultural groups varied in horizontal/vertical individualism and collectivism, as well as independent and interdependent self-construal.

Also, Study 2A was similar to Study 1A in that the 2-way ANCOVAs and MANCOVAs were performed to examine the effects of culture and gender on psychopathology and post-traumatic growth. In this analysis, age, the number of stressful events in a lifetime, the number of traumas in a lifetime, and the perceived severity of the most distressing events were controlled as covariates.

3.5.6 Study 2B: Longitudinal Study

The study aimed to investigate whether the cultural differences observed in Study 1A would impact participants' responses after exposure to stressful events during the 6 months. The follow-up assessment was conducted online (in Qualtrics) and included measures of exposure to traumatic/stressful events and post-traumatic/stress outcomes (e.g., PTSD symptoms).

Methods

Participants

Out of 420 participants from Study 2A, 385 (i.e., 91.7%) took part in the follow-up assessment (Study 2B). This included 119 British (59 males and 60 females), 135 Hongkongese (66 males and 69 females) and 131 Taiwanese (68 males and 63 females). In each group, gender was roughly balanced (M:F ≈ 1:1). In study fields, most of the British

(37.8%) and Taiwanese (30.7%) were studying or had studied Social Sciences while most of Hongkongese (29.0%) were studying or had studied Sciences. Across groups, participants' age ranged from 18 to 25 years (the same as the inclusion criteria). A majority (81.8%) of the participants had achieved A-level education or equivalent and the rest (18.2%) had achieved Bachelor's degree or above. More British participants (30.3%) reported a very high monthly family income (≥ £8,000) than their Hongkongese (8.9%) and Taiwanese counterparts (0.0%). The demographic information of Study 2B participants in different cultures is depicted in Table 3.13.

Table 3.13 Participant characteristics of Study 2B sample ($N = 385$)

Variable	Total ($N = 385$)		British ($n = 119$)		Hongkongese ($n = 135$)		Taiwanese ($n = 131$)		Analysis* χ^2(df); p; V
	n	%	n	%	n	%	n	%	
Gender									0.26 (2); .877; .026
Male	193	50.1	59	49.6	66	48.9	68	51.9	
Female	192	49.9	60	50.4	69	51.1	63	48.1	
Study Field									**44.40 (14); <.001*; .240**
Arts	62	16.1	27^{a}	22.7	13^{b}	9.6	$22^{a,b}$	16.8	
Business	21	5.5	2	1.7	10	7.4	9	6.9	
Engineering	44	11.4	11	9.2	15	11.1	18	13.7	
Law	14	3.6	3	2.5	4	3.0	7	5.3	
Medicine	45	11.7	12	10.1	17	12.6	16	12.2	
Science	62	16.1	$17^{a,b}$	14.3	33^{a}	24.4	12^{b}	9.2	
Social Science	108	28.1	45^{a}	37.8	25^{b}	18.5	$38^{a,b}$	29.0	
Other	29	7.5	2^{b}	1.7	18^{a}	13.3	$9^{a,b}$	6.9	
Education[1]									2.61 (2); .272; .082
A Level	315	81.8	102	85.7	111	82.2	102	77.9	
Bachelor or Above	70	18.2	17	14.3	24	17.8	29	22.1	
Family Income[2]									**77.46 (12); <.001*; .317**
< £1,000	15	3.9	0^{b}	0	8^{a}	5.9	7^{a}	5.3	
£1,000-1,999	41	10.6	7^{b}	5.9	$13^{a,b}$	9.6	21^{a}	16.0	
£2,000-2,999	63	16.4	11^{b}	9.2	$25^{a,b}$	18.5	27^{a}	20.6	
£3,000-4,999	92	23.9	21^{b}	17.6	$29^{a,b}$	21.5	42^{a}	32.1	
£5,000-£7,999	59	15.3	24	20.2	19	14.1	16	12.2	
≥ £8,000	48	12.5	36^{a}	30.3	12^{b}	8.9	0^{c}	0.0	
Not Specified	67	17.4	20	16.8	29	21.5	18	13.7	
(Median Family Income)[3]			*(2,567)*		*(2,560)*		*(2,075)*		
	M (SD)		*M (SD)*		*M (SD)*		*M (SD)*		*F* (df1, df2); p; η^2
Age	20.77 (1.74)		20.24 (1.74) ^{b}		20.99 (1.52) ^{a}		21.02 (1.85) ^{a}		**8.22 (2,382); <.001*; .041**

Note: Statistics for age derive from ANOVA; Statistics for study field, education and family income derived from chi-square tests.

[1] Highest educational level achieved

[2] Estimated monthly family income level or equivalent to Hong Kong dollars (HK$) and New Taiwan dollar (NT$) (after being adjusted to exchange rate and local living costs): 1. < £1,000 equivalent to < HK$10,000 / < NT$30,000; 2. £1,000-1,999 equivalent to HK$10,000-19,999 / NT$30,000-59,999; 3. £2,000-2,999 equivalent to HK$20,000-29,999 / NT$60,000-89,999; 4. £3,000-4,999 equivalent to HK$30,000-49,999 / NT$90,000-149,999; 5. £5,000-7,999 equivalent to HK$50,000-79,999 / NT$150,000-239,999; 6. ≥ £8,000 equivalent to ≥ HK$80,000 / ≥ NT$240,000

[3] Average annual disposable income per household in the United Kingdom/ Hong Kong/ Taiwan in 2020, extracted from Statista: https://www.statista.com/outlook/co/macroeconomic-indicators/disposable-income/

Measures

For a detailed description of the following measures, please refer to the section of 'Measures' in Study 2A. The internal reliability (Cronbach's alpha) of each scale used in the follow-up questionnaires (of Study 2B) is reported in Table 3.14.

A. Participant's Demographic Information

    1) Demographic Questionnaire

B. Exposure to Traumatic/Stressful Events

    2) Modified Life Events Checklist (MLEC-5; adapted from Life Events Checklist for DSM-5; Weathers et al., 2013)

C. Post-Traumatic/Stress Outcomes

    3) Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997)

    4) State-Trait Anxiety Inventory (Trait) (Form Y) (STAI-T; Spielberger, 1983)

    5) Center for Epidemiologic Studies Depression Scale-Short Form (CES-D-SF; Cole et al., 2004)

    6) Post-Traumatic Growth Inventory-Expanded (PTGI-X; Tedeschi et al., 2017)

Table 3.14 Internal consistency (Cronbach's alpha) of scales used in Study 2B

Scale	No. of the items	Cronbach's α (Overall) (*N*=385)	Cronbach's α (English) (*n*=119)	Cronbach's α (Chinese) (*n*=266)
Impact of Events Scale - Revised				
Total	22	.96	.93	.96
Intrusion	8	.92	.89	.93
Avoidance	8	.89	.85	.90
Hyper-arousal	6	.87	.81	.89
State-Trait Anxiety Inventory - Trait version				
Total	20	.93	.94	.92
Center for Epidemiologic Studies Depression Scale Short Form				
Total	10	.85	.81	.86
Response to Intrusion Questionnaire				
Thought suppression	6	.89	.88	.90
Rumination	8	.89	.86	.90
Numbing	5	.78	.77	.79
Post-Traumatic Growth Inventory - Expanded				
Total	25	.96	.94	.96
Relating to others	7	.90	.87	.91
New possibilities	5	.87	.82	.90
Personal strength	4	.85	.86	.85
Spiritual change	6	.89	.87	.88
Appreciation of life	3	.76	.76	.75
COPE Inventory				
Positive reinterpretation and growth	4	.82	.81	.82
Denial	4	.79	.78	.79
Religious coping	4	.94	.97	.93
Use of emotional social support	4	.88	.90	.87
Acceptance	4	.81	.85	.79
Use of instrumental social support	4	.87	.83	.88
Active coping	4	.80	.83	.77
Restraint	4	.81	.80	.79
Suppression of competing activities	4	.82	.74	.82
Planning	4	.85	.89	.81
Mental disengagement	4	.64	.67	.64
Focus on and venting of emotions	4	.83	.85	.80
Humour	4	.92	.94	.91
Behavioural disengagement	4	.82	.78	.80
Substance use	4	.95	.95	.95
Trait Dissociation Questionnaire – Short Form				
Total	15	.93	.92	.94

Statistical Analyses

The statistical analyses of Study 2A were applied to Study 2B except that the covariates included participants' ages and exposures to traumatic events and stressful events as well as perceived severity of the most distressing events but only in their lifetime (at baseline) but in the 6 months (follow-up period).

3.5.7 Study 2: Results

Culture Measures

As expected, there were significant cultural differences in horizontal/vertical individualism and collectivism, $F(8,830) = 15.71$, $p < .001$, $\eta^2 = .132$, as well as self-construal, $F(4,834) = 2.89$, $p = .022$, $\eta^2 = .014$. However, the results of the specific group comparison were not consistent with our hypotheses. The British group scored significantly higher in horizontal collectivism (H-C) ($M_{Adj} = 5.13$, $SE = 0.07$) but lower in vertical individualism (V-I) ($M_{Adj} = 4.08$, $SE = 0.07$) and vertical collectivism (V-C) ($M_{Adj} = 3.83$, $SE = 0.06$) than the Hongkongese (H-C: $M_{Adj} = 4.67$, $SE = 0.07$, $p < .001$; V-I: $M_{Adj} = 4.53$, $SE = 0.07$, $p < .001$; V-C: $M_{Adj} = 4.35$, $SE = 0.06$, $p < .001$) and Taiwanese groups (H-C: $M_{Adj} = 4.71$, $SE = 0.07$, $p < .001$; V-I: $M_{Adj} = 4.54$, $SE = 0.07$, $p < .001$; V-C: $M_{Adj} = 4.39$, $SE = 0.06$, $p < .001$). On the other hand, Taiwanese participants ($M_{Adj} = 4.80$, $SE = 0.06$) scored higher in interdependent self-construal than their British counterparts ($M_{Adj} = 4.59$, $SE = 0.06$, $p = .026$) but there was no expected difference in independent self-construal, $F(2,417) = 2.27$, $p = .104$, $\eta^2 = .011$. There were no significant differences between the Hongkongese and Taiwanese groups on any cultural dimension. For the detailed results of culture measures, please see Table 3.15.

Table 3.15 Mean Scores (SD) and Group Differences in Culture Measures by Culture in Study 2

Scale	Total *M (SD)*	British *M (SD)*	Hongkongese *M (SD)*	Taiwanese *M (SD)*	Analysis* *F* (df1,df2); *p*; η^2
Individualism and Collectivism Scale (INDCOL)					
MANCOVA (Sub-Scales)					**15.71 (8,830); <.001*; .132**
Horizontal Individualism (H-I)	5.01 (0.70)	4.99 (0.76)	5.07 (0.60)	4.96 (0.72)	0.96 (2,417); .384; .005
Vertical Individualism (V-I)	4.38 (0.85)	4.08 (0.88) [b]	4.53 (0.80) [a]	4.54 (0.78) [a]	**14.06 (2,417); <.001*;.063**
Horizontal Collectivism (H-C)	4.83 (0.80)	5.13 (0.88) [a]	4.66 (0.70) [b]	4.71 (0.72) [b]	**15.79 (2,417); <.001*; .070**
Vertical Collectivism (V-C)	4.19 (0.74)	3.83 (0.68) [b]	4.34 (0.70) [a]	4.39 (0.71) [a]	**27.35 (2,417); <.001*; .116**
Self-Construal Scale					
MANCOVA (Sub-Scales)					**2.89 (4,834); .022*; .014**
Independent Self-Construal	4.62 (0.70)	4.54 (0.78)	4.72 (0.59)	4.61 (0.72)	2.27 (2,417); .104; .011
Interdependent Self-Construal	4.68 (0.67)	4.58 (0.72) [b]	4.67 (0.66) [a,b]	4.79 (0.62) [a]	**3.50 (2,417); .031*; .016**

Exposure to Stressful/Traumatic Events

The detailed results of exposure to different stressful/traumatic events of each cultural group in Study 2A (baseline) and Study 2B (follow-up) are reported in Tables 3.16, 3.17, 3.18, and 3.19.

Overall, the chi-square tests of independence found that the relationship between culture and exposure to half or even most types of traumatic (Study 2A: 72.22%; Study 2B: 50.00%) and stressful events (Study 2A: 70.00%; Study 2B: 50.0%) were significant.

As hypothesised, we found significant cultural differences in the number of traumatic events at baseline (T1), $F(2,417) = 15.42$, $p < .001$, $\eta^2 = .069$, and in the follow-up (T2), $F(2,382) = 3.23$, $p = .041$, $\eta^2 = .017$. At T1, the Hongkongese group reported significantly fewer traumatic events ($M_{Adj} = 7.18$, $SE = 0.46$) compared to the British ($M_{Adj} = 9.39$, $SE = 0.46$, $p = .002$) and Taiwanese groups ($M_{Adj} = 10.79$, $SE = 0.46$, $p < .001$). At T2, the Hongkongese group reported significantly more traumatic events ($M_{Adj} = 4.43$, $SE = 0.44$) than the British group ($M_{Adj} = 2.81$, $SE = 0.47$, $p = .035$).

Partly consistent with our hypothesis, there was a cultural difference in the number of stressful events in the follow-up (T2), $F(2,382) = 6.69$, $p = .001$, $\eta^2 = .034$, but not at baseline (T1), $F(2,417) = 1.51$, $p = .221$, $\eta^2 = .007$. At T2, the British group reported significantly fewer stressful events ($M_{Adj} = 3.87$, $SE = 0.36$) than the Hongkongese ($M_{Adj} = 5.46$, $SE = 0.33$, $p = .004$) and Taiwanese groups ($M_{Adj} = 5.42$, $SE = 0.34$, $p = .005$).

There were cultural differences in the perceived severity of the most distressing event at baseline (T1), $F(2,417) = 3.48$, $p = .032$, $\eta^2 = .016$, and in the follow-up (T2), $F(2,366) = 13.49$, $p < .001$, $\eta^2 = .069$. The Hongkongese group reported a significantly lower level of perceived severity for their most distressing events ($M_{Adj} = 91.73$, $SE = 0.80$) compared to the Taiwanese group ($M_{Adj} = 94.48$, $SE = 0.80$, $p = .045$). At T2, the British group reported a

lowest level of perceived severity for their most distressing events (M_{Adj} = 70.59, SE = 1.79) compared to the Hongkongese (M_{Adj} = 81.98, SE = 1.67, p <.001) and Taiwanese (M_{Adj} = 81.47, SE = 1.69, p <.001) groups.

Table 3.16 Proportions of participants from different cultures reporting types of lifetime stressful and traumatic events in Study 2A – baseline (responses to stressors before the baseline)

	Total (N = 420)		British (n = 140)		Hongkongese (n = 140)		Taiwanese (n = 140)		Analysis* χ^2(df); p; V
	n	%	*n*	%		%	*n*	%	
Stressful Events (Non-traumatic)									
Break-up of relationship	240	57.1	95[a]	67.9	62[b]	44.3	83[a]	59.3	**16.28 (2); <.001*; .197**
Major argument with partner	169	40.2	58	41.4	54	38.6	57	40.7	0.26 (2); .879; .025
Romantic rejection	175	41.7	86[a]	61.4	40[b]	28.6	49[b]	35.0	**34.93 (2); <.001*; .288**
Problems with pregnancy/childbirth	8	1.9	5	3.6	2	1.4	1	0.7	3.31 (2); .191; .089
Parents separating	67	16.0	27	19.3	19	13.6	21	15.0	1.85 (2); .397; .066
Major argument with family/ friends	321	76.4	100	71.4	106	75.7	115	82.1	4.52 (2); .104; .104
Betrayal by someone important to you	189	45.0	62	44.3	55	39.3	72	51.4	4.21 (2); .122; .100
Being excluded from something important to you	284	67.6	88[b]	62.9	89[a,b]	63.6	107[a]	76.4	**7.46 (2); .024*; .133**
Negative experience at work/ school	326	77.6	98[b]	70.0	108[a,b]	77.1	120[a]	85.7	**9.98 (2); .007*; .154**
Exams	373	88.8	112[b]	80.0	132[a]	94.3	129[a]	92.1	**16.72 (2); <.001*; .200**
Successful applications/ interviews for job/ further application	353	84.0	99[b]	70.7	131[a]	93.6	123[a]	87.9	**29.55 (2); <.001*; .265**
Serious problem with living situation	228	54.3	27[c]	19.3	115[a]	82.1	86[b]	61.4	**115.77 (2); <.001*; .525**
Losing something important to you	300	71.4	79[b]	56.4	112[a]	80.0	109[a]	77.9	**23.31 (2); <.001*; .236**
Scary situation when traveling	107	25.5	64[a]	45.7	23[b]	16.4	20[b]	14.3	**45.47 92); <.001*; .329**
Dangerous encounter with animals	136	32.4	28	20.0	55	39.3	53	37.9	**14.77 (2); <.001*; .188**
Non-violent crime	171	40.7	40[b]	28.6	68[a]	48.6	63[a]	45.0	**13.20 (2); .001*; .177**
Financial problems	104	24.8	46[a]	32.9	26[b]	18.6	32[a,b]	22.9	**8.08 (2); .018*; .139**
Embarrassing situation	193	46.0	120[a]	85.7	31[b]	22.1	42[b]	30.0	**135.42 (2); <.001*; .568**
Serious but not life-threatening illness	135	32.1	34[b]	24.3	42[a,b]	30.0	59[a]	42.1	**10.68 (2); .005*; .159**
Injury	245	58.3	76	54.3	78	55.7	91	65.0	3.90 (2); .142; .096
	Total		British		Hongkongese		Taiwanese		

	(*N* = 420)		(*n* = 140)		(*n* = 140)		(*n* = 140)		χ^2(df); *p*; V
	n	%	*n*	%	*n*	%	*n*	%	
Traumatic Events									
Natural disaster	189	45.0	29[c]	20.7	63[b]	45.0	97[a]	69.3	**66.72 (2); <.001*; .399**
Fire/ explosion	143	34.0	44[b]	31.4	34[b]	24.3	65[a]	46.4	**15.93 (2); <.001*; .195**
Transportation accident	280	66.7	86[b]	61.4	73[b]	52.1	121[a]	86.4	**39.62 (2); <.001*; .307**
Other accidents	185	44.0	68[a]	48.6	41[b]	29.3	76[a]	54.3	**19.50 (2); .001*; .215**
Exposure to toxic substance	75	17.9	18	12.9	28	20.0	29	20.7	3.60 (2); .165; .093
Physical assault	211	50.2	95[a]	67.9	56[b]	40.0	60[b]	42.9	**26.31 (2); <.001*; .250**
Assault with weapon	80	19.0	44[a]	31.4	20[b]	14.3	16[b]	11.4	**21.25 (2); <.001*; .225**
Sexual assault	111	26.4	78[a]	55.7	7[c]	5.0	26[b]	18.6	**99.26 (2); <.001*; .486**
Other unwanted/ uncomfortable sexual experience	138	32.9	97[a]	69.3	16[b]	11.4	25[b]	17.9	**127.63 (2); <.001*; .551**
Combat	45	10.7	25[a]	17.9	9[b]	6.4	11[b]	7.9	**11.35 (2); .003*; .164**
Captivity	19	4.5	7	5.0	5	3.6	7	5.0	0.44 (2); .802; .032
Life-threatening illness/ injury	341	81.2	119[a]	85.0	101[b]	72.1	121[a]	86.4	**1.35 (2); .003*; .164**
Severe human suffering	220	52.4	51[b]	36.4	75[a]	53.6	94[a]	67.1	**26.59 (2); <.001*; .252**
Violent death	93	22.1	48[a]	34.3	21[b]	15.0	24[b]	17.1	**18.15 (2); <.001*; .208**
Accidental death	157	37.4	35[b]	25.0	47[b]	33.6	75[a]	53.6	**25.71 (2); <.001*; .247**
Death of someone close	280	66.7	91	65.0	89	63.6	100	71.4	2.21 (2); .332; .072
Serious injury, harm or death caused to someone else	17	4.0	9	6.4	2	1.4	6	4.3	4.54 (2); .103; .104
Other stressful event	2	0.5	1	0.7	0	0.0	1	0.7	1.01 (2); .605; .049

Note: Statistics for the above variables derive from a chi-square test unless otherwise specified. * $p < .05$.
The superscripts (i.e., a, b, c) are the same for groups with no significant difference found but different for groups with a significant difference found.

Table 3.17 Proportions of participants from different cultures reporting types of stressful and traumatic events in Study 2B - follow-up (responses to stressors between T1 and T2)

	Total (N = 385)		British (n = 119)		Hongkongese (n = 135)		Taiwanese (n = 131)		Analysis* χ^2(df); p; V
	N	%	*n*	%	*n*	%	*n*	%	
Stressful Events (Non-traumatic)									
Break-up of relationship	75	19.5	21	17.6	31	23.0	23	17.6	1.61 (2); .448; .065
Major argument with partner	87	22.6	21	17.6	38	28.1	28	21.4	4.16 (2); .125; .104
Romantic rejection	67	17.4	25	21.0	21	15.6	21	16.0	1.57 (2); .456; .064
Problems with pregnancy/childbirth	8	2.1	5	4.2	3	2.2	0	0.0	5.43 (2); .066; .119
Parents separating	15	3.9	4	3.4	6	4.4	5	3.8	0.20 (2); .904; .023
Major argument with family/ friends	143	37.1	31[b]	26.1	52[a,b]	38.5	60[a]	45.8	**10.59 (2); .005*; .166**
Betrayal by someone important to you	75	19.5	17	14.3	27	20.0	31	23.7	3.53 (2); .171; .096
Being excluded from something important to you	123	31.9	28[b]	23.5	45[a,b]	33.3	50[a]	38.2	**6.33 (2); .042*; .128**
Negative experience at work/ school	185	48.1	43[b]	36.1	68[a,b]	50.4	74[a]	56.5	**10.80 (2); .005*; .167**
Exams	241	62.6	74	62.2	86	63.7	81	61.8	0.11 (2); .946; .017
Successful applications/ interviews for job/ further application	221	57.4	41[b]	34.5	90[a]	66.7	90[a]	68.7	**37.21 (2); <.001*; .311**
Serious problem with living situation	136	35.3	10[b]	8.4	73[a]	54.1	53[a]	40.5	**61.03 (2); <.001*; .395**
Losing something important to you	129	33.5	25[b]	21.0	59[a]	43.7	45[a,b]	34.4	**14.69 (2); <.001*; .195**
Scary situation when traveling	41	10.6	16	13.4	14	10.4	11	8.4	1.69 (2); .430; .066
Dangerous encounter with animals	72	18.7	4[b]	3.4	38[a]	28.1	30[a]	22.9	**27.86 (2); <.001*; .269**
Non-violent crime	58	15.1	11	9.2	22	16.3	25	19.1	4.97 (2); .084; .114
Financial problems	31	8.1	16	13.4	8	5.9	7	5.3	6.80 (2); .033; .133
Embarrassing situation	74	19.2	46[a]	38.7	12[b]	8.9	16[b]	12.2	**42.37 (2); <.001*; .332**
Serious but not life-threatening illness	52	13.5	9[b]	7.6	17[a,b]	12.6	26[a]	19.8	**8.20 (2); .017*; .146**
Injury	75	19.5	14[b]	11.8	27 [a,b]	20.0	34 [a]	26.0	**8.04 (2); .018*; .145**
	Total (N = 385)		British (n = 119)		Hongkongese (n = 135)		Taiwanese (n = 131)		χ^2(df); p; V
	N	%	*n*	%	*n*	%	*n*	%	
Traumatic Events									

Natural disaster	73	19.0	8[b]	6.7	32[a]	23.7	33[a]	25.2	**16.88 (2); <.001*; .209**
Fire/ explosion	64	16.6	8[b]	6.7	27[a]	20.0	29[a]	22.1	**12.40 (2); .002*; .179**
Transportation accident	106	27.5	27	22.7	38	28.1	41	31.3	2.36 (2); .308; .078
Other accidents	49	12.7	16	13.4	15	11.1	18	13.7	0.49 (2); .781; .036
Exposure to toxic substance	42	10.9	7[b]	5.9	22[a]	16.3	13[a,b]	9.9	**7.26 (2); .027*; .137**
Physical assault	95	24.7	24[a]	20.2	55[b]	40.7	16[a]	12.2	**30.99 (2); <.001*; .284**
Assault with weapon	54	14.0	10[a]	8.4	39[b]	28.9	5[a]	3.8	**39.17 (2); <.001*; .319**
Sexual assault	47	12.2	19	16.0	17	12.6	11	8.4	3.36 (2); .186; .093
Other unwanted/ uncomfortable sexual experience	48	12.5	25[a]	21.0	12[b]	8.9	11[b]	8.4	**11.53 (2); .003*; .173**
Combat	13	3.4	0[b]	0.0	11[a]	8.1	2[b]	1.5	**14.95 (2); <.001*; .197**
Captivity	23	6.0	2[b]	1.7	17[a]	12.6	4[b]	3.1	**16.42 (2); <.001*; .207**
Life-threatening illness/ injury	142	36.9	42	35.3	53	39.3	47	35.9	0.51 (2); .774; .037
Severe human suffering	99	25.7	20[b]	16.8	46[a]	34.1	33[a,b]	25.2	**9.90 (2); .007*; .160**
Violent death	41	10.6	8	6.7	19	14.1	14	10.7	3.59 (2); .166; .097
Accidental death	50	13.0	10	8.4	24	17.8	16	12.2	5.02 (2); .081; .114
Death of someone close	75	19.5	23	19.3	22	16.3	30	22.9	1.85 (2); .396; .069
Serious injury, harm or death caused to someone else	3	0.8	2	1.7	0	0.0	1	0.8	2.31 (2); .315; .077
Other stressful event	23	6.0	10	8.4	8	5.9	5	3.8	2.34 (2); .311; .078

Note: Statistics for the above variables derive from a chi-square test unless otherwise specified. * $p < .05$.
The superscripts (i.e., a, b, c) are the same for groups with no significant difference found but different for groups with a significant difference found.

Table 3.18 Proportions of types of lifetime stressful and traumatic events reported by participants from different cultures in Study 2A – baseline (responses to stressors before the baseline)

Scale	Total (4,124)[1]		British (1,344)[1]		Hongkongese (1,348)[1]		Taiwanese (1,432)[1]	
	n	%	*n*	%	*n*	%	*n*	%
Stressful Events (Non-traumatic)								
Break-up of relationship	240	5.8	95	7.1	62	4.6	83	5.8
Major argument with partner	169	4.1	58	4.3	54	4.0	57	4.0
Romantic rejection	175	4.2	86	6.4	40	3.0	49	3.4
Problems with pregnancy/childbirth	8	0.2	5	0.4	2	0.1	1	0.1
Parents separating	67	1.6	27	2.0	19	1.4	21	1.5
Major argument with family/ friends	321	7.8	100	7.4	106	7.9	115	8.0
Betrayal by someone important to you	189	4.6	62	4.6	55	4.1	72	5.0
Being excluded from something important to you	284	6.9	88	6.5	89	6.6	107	7.5
Negative experience at work/ school	326	7.9	98	7.3	108	8.0	120	8.4
Exams	373	9.0	112	8.3	132	9.8	129	9.0
Successful applications/ interviews for job/ further application	353	8.6	99	7.4	131	9.7	123	8.6
Serious problem with living situation	228	5.5	27	2.0	115	8.5	86	6.0
Losing something important to you	300	7.3	79	5.9	112	8.3	109	7.6
Scary situation when traveling	107	2.6	64	4.8	23	1.7	20	1.4
Dangerous encounter with animals	136	3.3	28	2.1	55	4.1	53	3.7
Non-violent crime	171	4.1	40	3.0	68	5.0	63	4.4
Financial problems	104	2.5	46	3.4	26	1.9	32	2.2
Embarrassing situation	193	4.7	120	8.9	31	2.3	42	2.9
Serious but not life-threatening illness	135	3.3	34	2.5	42	3.1	59	4.1
Injury	245	5.9	76	5.7	78	5.8	91	6.4
	Total (3831)[2]		British (1315)[2]		Hongkongese (1005)[2]		Taiwanese (1511)[2]	
	n	%	*n*	%	*n*	%	*n*	%
Traumatic Events								
Natural disaster	339	8.8	33	2.5	100	10.0	206	13.6
Fire/ explosion	168	4.4	56	4.3	38	3.8	74	4.9
Transportation accident	472	12.3	127	9.7	106	10.5	239	15.8
Other accidents	279	7.3	96	7.3	64	6.4	119	7.9
Exposure to toxic substance	112	2.9	23	1.7	43	4.3	46	3.0
Physical assault	367	9.6	161	12.2	96	9.6	110	7.3

Assault with weapon	107	2.8	58	4.4	28	2.8	21	1.4	
Sexual assault	134	3.5	97	7.4	7	0.7	30	2.0	
Other unwanted/ uncomfortable sexual experience	224	5.8	175	13.3	18	1.8	31	2.1	
Combat	50	1.3	27	2.1	9	0.9	14	0.9	
Captivity	21	0.5	7	0.5	5	0.5	9	0.6	
Life-threatening illness/ injury	605	15.8	197	15.0	180	17.9	228	15.1	
Severe human suffering	344	9.0	63	4.8	133	13.2	148	9.8	
Violent death	110	2.9	55	4.2	25	2.5	30	2.0	
Accidental death	198	5.2	38	2.9	62	6.2	98	6.5	
Death of someone close	280	7.3	91	6.9	89	8.9	100	6.6	
Serious injury, harm or death caused to someone else	17	0.4	9	0.7	2	0.2	6	0.4	
Other stressful event	4	0.1	2	0.2	0	0.0	2	0.1	

	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df1,df2); *p*; η^2
Number of stressful events	9.82 (3.42)	9.60 (3.71)	9.63 (3.31)	10.23 (3.20)	1.51 (2,417); .221; .007
Number of traumatic events	9.12 (5.68)	9.39 (5.68) [a]	7.18 (5.21) [b]	10.79 (5.57) [a]	**15.42 (2,417); <.001*; .069**
Perceived severity[3,4]	92.78 (9.46)	92.14 (10.18) [b]	91.73 (11.05) [b]	94.48 (6.31) [a]	**3.47 (2,417); .032*; .016**

Note:
[1] Total number of the stressful (but non-traumatic) events experienced in the designated group
[2] Total number of the traumatic events experienced in the designated group
[3] Perceived severity of the most distressing event for each participant (ranging from 0 to 100)
[4] Calculated based on the number of participants with stressful events/ trauma (Total: 420; British: 140; Hongkongese: 140; Taiwanese: 140)

Table 3.19 Proportions of types of stressful and traumatic events reported by participants from different cultures in Study 2B - follow-up (responses to stressors between T1 and T2)

Scale	Total (1,908)[1]		British (461)[1]		Hongkongese (737)[1]		Taiwanese (710)[1]	
	N	%	*n*	%	*n*	%	*n*	%
Stressful Events (Non-traumatic)								
Break-up of relationship	75	3.9	21	4.6	31	4.2	23	3.2
Major argument with partner	87	4.6	21	4.6	38	5.2	28	3.9
Romantic rejection	67	3.5	25	5.4	21	2.8	21	3.0
Problems with pregnancy/childbirth	8	0.4	5	1.1	3	0.4	0	0.0
Parents separating	15	0.8	4	0.9	6	0.8	5	0.7
Major argument with family/ friends	143	7.5	31	6.7	52	7.1	60	8.5
Betrayal by someone important to you	75	3.9	17	3.7	27	3.7	31	4.4
Being excluded from something important to you	123	6.4	28	6.1	45	6.1	50	7.0
Negative experience at work/ school	185	9.7	43	9.3	68	9.2	74	10.4
Exams	241	12.6	74	16.1	86	11.7	81	11.4
Successful applications/ interviews for job/ further application	221	11.6	41	8.9	90	12.2	90	12.7
Serious problem with living situation	136	7.1	10	2.2	73	9.9	53	7.5
Losing something important to you	129	6.8	25	5.4	59	8.0	45	6.3
Scary situation when traveling	41	2.1	16	3.5	14	1.9	11	1.5
Dangerous encounter with animals	72	3.8	4	0.9	38	5.2	30	4.2
Non-violent crime	58	3.0	11	2.4	22	3.0	25	3.5
Financial problems	31	1.6	16	3.5	8	1.1	7	1.0
Embarrassing situation	74	3.9	46	10.0	12	1.6	16	2.3
Serious but not life-threatening illness	52	2.7	9	2.0	17	2.3	26	3.7
Injury	75	3.9	14	3.0	27	3.7	34	4.8
	Total (1403)[2]		British (334)[2]		Hongkongese (598)[2]		Taiwanese (471)[2]	
	N	%	*n*	%	*n*	%	*n*	%
Traumatic Events								
Natural disaster	103	7.3	10	3.0	37	6.2	56	11.9
Fire/ explosion	80	5.7	13	3.9	31	5.2	36	7.6
Transportation accident	143	10.2	29	8.7	47	7.9	67	14.2
Other accidents	63	4.5	20	6.0	19	3.2	24	5.1
Exposure to toxic substance	68	4.8	9	2.7	36	6.0	23	4.9
Physical assault	122	8.7	30	9.0	67	11.2	25	5.3

Assault with weapon	65	4.6	10	3.0	47	7.9	8	1.7	
Sexual assault	57	4.1	24	7.2	20	3.3	13	2.8	
Other unwanted/ uncomfortable sexual experience	64	4.6	36	10.8	16	2.7	12	2.5	
Combat	18	1.3	0	0.0	14	2.3	4	0.8	
Captivity	26	1.9	2	0.6	19	3.2	5	1.1	
Life-threatening illness/ injury	212	15.1	53	15.9	84	14.0	75	15.9	
Severe human suffering	142	10.1	28	8.4	66	11.0	48	10.2	
Violent death	48	3.4	9	2.7	22	3.7	17	3.6	
Accidental death	60	4.3	12	3.6	28	4.7	20	4.2	
Death of someone close	75	5.3	23	6.9	22	3.7	30	6.4	
Serious injury, harm or death caused to someone else	3	0.2	2	0.6	0	0.0	1	0.2	
Other stressful event	54	3.8	24	7.2	23	3.8	7	1.5	

	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df1,df2); *p*; η^2
Number of stressful events	4.96 (3.94)	3.87 (3.56) [b]	5.46 (4.07) [a]	5.42 (3.97) [a]	**6.69 (2,382); .001*; .034**
Number of traumatic events	3.64 (5.12)	2.81 (3.94) [b]	4.43 (5.65) [a]	3.60 (5.39) [a,b]	**3.23 (2,382); .041*; 017**
Perceived severity[3, 4]	78.31 (19.62)	70.59 (21.20) [b]	81.98 (17.37) [a]	81.46 (18.47) [a]	**13.49 (2,382); <.001*; .069**

Note:
[1] Total number of the stressful (but non-traumatic) events experienced in the designated group
[2] Total number of the traumatic events experienced in the designated group
[3] Perceived severity of the most distressing event for each participant (ranging from 0 to 100)
[4] Calculated based on the number of participants with stressful events/ trauma (Total: 369; British: 113; Hongkongese: 129; Taiwanese: 127)

Post-Traumatic/Stress Outcomes

The chi-square of independence found cultural differences in the percentage of participants with significant symptoms of PTSD, anxiety, and depression at baseline (T1) and in the follow-up (T2). The percentage of British participants reporting a higher level of psychopathology was smaller than the other two cultural groups.

The 2-way ANCOVA yielded the significant main effects of culture on most of the variables of psychopathology and post-traumatic growth at both T1 and T2. In these outcome variables, British participants reported significantly lower scores than Hongkongese and Taiwanese participants. There was a significant main effect of gender on anxiety and depression, with females reporting greater anxiety. The interaction between culture and gender was non-significant in all of the outcome variables.

The descriptive results and statistics of post-traumatic/stress outcomes of each cultural group in Studies 2A and 2B are reported in Tables 3.20 and 3.21.

PTSD Symptoms

The percentage of participants with PTSD severity differed by culture, Study 2A: $\chi^2(6, N = 420) = 14.40$, $p = .025$, V = .131; Study 2B: $\chi^2(6, N = 385) = 18.01$, $p = .006$, V = .153. According to the IES-R cut-off scores (Weiss & Marmar, 1997), around 50-70% of the participants across studies had a low level of PTSD symptoms or even no symptoms. Specifically, a significantly higher percentage of Hongkongese (Study 2A: 21.43%; Study 2B: 24.44%) than British participants (Study 2A: 10.00%; Study 2B: 12.61%) scored in the clinical range of PTSD symptoms (Kawamura et al., 2001).

The main effect of culture on the level of PTSD symptoms was significant in the MANCOVA (adjusting for age, number of lifetime stressful events, number of lifetime traumas, and perceived severity of the most distressing event), $F(2,410) = 3.38$, $p = .035$, η^2

= .016. British participants (M_{Adj} = 16.72, *SE* = 1.44) reported a significantly lower level of PTSD symptom than did Hongkongese (M_{Adj} = 21.79, *SE* = 1.46, *p* = .044). Neither British nor Hongkongese participants was significantly different from Taiwanese participants (M_{Adj} = 20.72, *SE* = 1.46, *p* = .159) on PTSD symptoms. Specifically, there was a main effect of culture on the avoidance sub-scale , $F(2,410) = 3.57$, $p = .029$, $\eta^2 = .017$, with a higher level of avoidance symptoms reported by Taiwanese participants (M_{Adj} = 1.23, *SE* = 0.08) than by British participants (M_{Adj} = 0.95, *SE* = 0.08, *p* = .039). Neither of them significantly differed from Hongkongese participants (M_{Adj} = 1.18, *SE* = 0.08) in avoidance symptoms, *p*'s ≥ .05 (double check). There was also a main effect of culture on the hyper-arousal sub-scale, $F(2,410) = 3.09$, $p = .047$, $\eta^2 = .015$, with a higher level of hyper-arousal symptoms reported in Hongkongese participants (M_{Adj} = 0.68, *SE* = 0.07) than in British participants (M_{Adj} = 0.45, *SE* = 0.07, *p* = .042). Neither of them significantly differed from Taiwanese participants (M_{Adj} = 0.58, *SE* = 0.07) on hyper-arousal symptoms. The main effect of gender $F(1,410) = 0.24$, $p = .626$, $\eta^2 = .001$, and the interaction, $F(2,410) = 0.68$, $p = .506$, $\eta^2 = .003$, were non-significant.

In Study 2B, the main effect of culture on the level of PTSD symptoms was non-significant, $F(2,359) = 0.16$, $p = .851$, $\eta^2 = .001$. The main effect of gender, $F(1,359) = 1.72$, $p = .191$, $\eta^2 = .005$, and the interaction, $F(2,359) = 0.25$, $p = .777$, $\eta^2 = .001$, were also non-significant.

Anxiety Symptoms

The percentage of participants with anxiety levels differed by culture, Study 2A: $\chi^2(4, N = 420) = 49.75$, $p < .001$, V = .243; Study 2B: $\chi^2(4, N = 385) = 66.45$, $p < .001$, V = .294. There were significantly higher percentage of Hongkongese (Study 2A: 77.14%; Study 2B: 80.74%) and Taiwanese (Study 2A: 75.71%; Study 2B: 75.57%) than British participants

(Study 2A: 48.57%; Study 2B: 42.86%) scoring in a high level of anxiety (Spielberger, 1983).

The main effect of culture was significant in the MANCOVA, Study 2A: $F(2,410) = 20.22$, $p < .001$, $\eta^2 = .090$; Study 2B: $F(2,359) = 15.42$, $p < .001$, $\eta^2 = .079$, with a significantly lower level of anxiety symptoms reported in British participants (Study 2A: $M_{Adj} = 44.71$, $SE = 0.77$; Study 2B: $M_{Adj} = 45.02$, $SE = 0.90$) compared to Hongkongese (Study 2A: $M_{Adj} = 50.63$, $SE = 0.78$, $p < .001$; Study 2B: $M_{Adj} = 51.12$, $SE = 0.82$, $p < .001$) and Taiwanese (Study 2A: $M_{Adj} = 50.88$, $SE = 0.78$, $p < .001$; Study 2B: $M_{Adj} = 51.12$, $SE = 0.82$, $p < .001$). Hongkongese and Taiwanese participants did not differ from each other on anxiety symptoms, $p = 1.00$.

The main effect of gender was also significant, Study 2A: $F(2, 410) = 13.15$, $p < .001$, $\eta^2 = .031$; Study 2B: $F(2,359) = 7.03$, $p = .008$, $\eta^2 = .019$, with a significantly higher level of anxiety symptoms reported in female participants (Study 2A: $M_{Adj} = 47.12$, $SE = 0.63$; Study 2B: $M_{Adj} = 47.78$, $SE = 0.69$) than in male participants (Study 2A: $M_{Adj} = 50.37$, $SE = 0.63$, $p < .001$; Study 2B: $M_{Adj} = 50.39$, $SE = 0.68$, $p = .008$).

The interaction was non-significant, Study 2A: $F(2,410) = .072$, $p = .930$, $\eta^2 = .000$; Study 2B: $F(2,410) = 1.86$, $p = .157$, $\eta^2 = .010$.

Depressive Symptoms

The percentage of participants with depression levels differed by culture, Study 2A: $\chi^2(2, N = 420) = 15.29$, $p < .001$, V = .191; Study 2B: $\chi^2(2, N = 385) = 19.49$, $p < .001$, V = .225. According to the CES-D-SF cut-off scores (Cole et al., 2004), around half of all participants (Study 2A: 45.48%; Study 2B: 50.65%) were categorised into the group with significant depressive symptoms (i.e., scores ≥ 10) in the past week of the time they completed the study. In this group, there were significantly higher percentages of

Hongkongese (Study 2A: 53.57%; Study 2B: 61.48%) and Taiwanese participants (Study 2A: 50.71%; Study 2B: 54.20%) than British participants (Study 2A: 32.14%; Study 2B: 34.45%).

The main effect of culture was significant, Study 2A: $F(2,410) = 13.40$, $p < .001$, $\eta^2 = .061$; Study 2B: $F(2,359) = 5.97$, $p = .003$, $\eta^2 = .032$, with a significantly lower level of depressive symptoms reported in British participants (Study 2A: $M_{Adj} = 7.74$, $SE = 0.47$; Study 2B: $M_{Adj} = 9.14$, $SE = 0.54$) than in Hongkongese participants (Study 2A: $M_{Adj} = 10.96$, $SE = 0.48$, $p < .001$; Study 2B: $M_{Adj} = 11.71$, $SE = 0.49$, $p = .002$) and Taiwanese (Study 2A: $M_{Adj} = 10.47$, $SE = 0.47$, $p < .001$; Study 2B: $M_{Adj} = 10.90$, $SE = 0.50$, $p = .060$). Hongkongese and Taiwanese participants did not differ from each other on depressive symptoms, Study 2A: $p = 1.00$; Study 2B: $p = .738$.

The main effect of gender, Study 2A: $F(1,411) = 0.40$, $p = .528$, $\eta^2 = .001$; Study 2B: $F(1,359) = 0.41$, $p = .522$, $\eta^2 = .001$, and interaction, Study 2A: $F(2,411) = 0.23$, $p = .793$, $\eta^2 = .001$; Study 2B: $F(2,359) = 2.881$, $p = .057$, $\eta^2 = .016$, were non-significant.

Post-Traumatic Growth

The main effect of culture was significant, Study 2A: $F(2,410) = 6.92$, $p = .001$, $\eta^2 = .032$; Study 2B: $F(2,359) = 4.08$, $p = .018$, $\eta^2 = .022$. In Study 2A, British participants ($M_{Adj} = 1.84$, $SE = 0.09$) reported a significantly lower level of posttraumatic growth than Hongkongese participants ($M_{Adj} = 2.29$, $SE = 0.09$, $p = .001$). Neither of them significantly differed from Taiwanese participants ($M_{Adj} = 2.08$, $SE = 0.09$). In Study 2B, British participants ($M_{Adj} = 1.48$, $SE = 0.10$) reported a significantly lower level of posttraumatic growth than Hongkongese participants ($M_{Adj} = 1.84$, $SE = 0.09$, $p = .018$). Neither of them significantly differed from Taiwanese participants ($M_{Adj} = 1.76$, $SE = 0.09$).

Specifically, in Study 2A, culture significantly differed in the sub-scales of new possibilities, $F(2,410) = 7.63$, $p = .001$, $\eta^2 = .036$, and spiritual and existential change, $F(2,410) = 31.10$, $p < .001$, $\eta^2 = .132$, but not in the sub-scales of relating to others, $F(2,410) = 1.16$, $p = .315$, $\eta^2 = .006$, personal strength, $F(2,410) = 0.49$, $p = .612$, $\eta^2 = .002$. and appreciation of life, $F(2,410) = 1.23$, $p = .292$, $\eta^2 = .006$. British participants ($M_{Adj} = 1.69$, $SE = 0.11$) reported a significantly lower level of new possibilities than did Hongkongese ($M_{Adj} = 2.28$, $SE = 0.11$, $p < .001$) but not than Taiwanese ($M_{Adj} = 2.00$, $SE = 0.11$, $p = .129$). Hongkongese and Taiwanese did not differ from each other on the level of new possibilities ($p = .129$). Also, British participants ($M_{Adj} = 1.05$, $SE = 0.10$) reported a significantly lower level of spiritual and existential change than did Hongkongese ($M_{Adj} = 2.07$, $SE = 0.10$, $p < .001$) and Taiwanese ($M_{Adj} = 1.85$, $SE = 0.10$, $p < .001$). Hongkongese and Taiwanese did not differ from each other on the level of spiritual and existential change ($p = .30$).

In Study 2B, culture significantly differed in the sub-scale of spiritual and existential change, $F(2,359) = 15.94$, $p < .001$, $\eta^2 = .082$, but not in the sub-scales of relating to others, $F(2,359) = 1.43$, $p = .241$, $\eta^2 = .008$, new possibilities, $F(2,359) = 2.83$, $p = .060$, $\eta^2 = .016$, personal strength, $F(2,359) = 2.05$, $p = .130$, $\eta^2 = .011$, and appreciation of life, $F(2,359) = 0.90$, $p = .407$, $\eta^2 = .005$. British participants ($M_{Adj} = 0.75$, $SE = 0.10$) reported a significantly lower level of spiritual and existential change than did Hongkongese ($M_{Adj} = 1.42$, $SE = 0.09$, $p < .001$) and Taiwanese ($M_{Adj} = 1.45$, $SE = 0.09$, $p < .001$). Hongkongese and Taiwanese did not differ from each other on the level of spiritual and existential change ($p = 1.00$).

The main effect of gender, Study 2A: $F(1,410) = 0.01$, $p = .916$, $\eta^2 = .000$; Study 2B: $F(1,359) = 0.63$, $p = .428$, $\eta^2 = .002$, and interaction, Study 2A: $F(2,410) = 1.14$, $p = .320$, $\eta^2 = .006$; Study 2B: $F(2,359) = 1.07$, $p = .346$, $\eta^2 = .006$, on the level of post-traumatic growth were non-significant.

Table 3.20 Total Scores and Group Differences in Psychopathology by Culture in Study 2A – Baseline (Responses to Stressors before the Baseline) and Study 2B – Follow-up (Responses to Stressors between T1 and T2)

Scale	Total		British		Hongkongese		Taiwanese		Analysis*
	n	%	*n*	%	n	%	*n*	%	
(Study 2A - Baseline)	(*N* = 420)		(*n* = 140)		(*n* = 140)		(*n* = 140)		χ^2(df); *p*; V
Impact of Events Scale – Revised (IES-R)[1]									**14.40 (6); .025*; .131**
Scores 0-23	276	65.71	96[a]	68.57	96[a]	68.57	84[a]	60.00	
Scores 24-32 [2]	45	10.71	20[a]	14.29	9[a]	6.43	16[a]	11.43	
Scores 33-38 [2]	27	6.43	10[a]	7.14	5[a]	3.57	12[a]	8.57	
Scores ≥ 39 [2]	72	17.14	14[b]	10.00	30[a]	21.43	28[a,b]	20.00	
State-Trait Anxiety Inventory – Trait version (STAI-T)[3]									**49.75 (4); <.001*; .243**
Scores 20-37 [4]	54	12.86	39[a]	27.86	5[b]	3.57	10[b]	7.14	
Scores 38-44 [4]	84	20.00	33[a]	23.57	27[a]	19.29	24[a]	17.14	
Scores ≥ 45 [4]	282	67.14	68[b]	48.57	108[a]	77.14	106[a]	75.71	
Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)[5]									**15.29 (2); <.001*; .191**
Scores 0-9	229	54.52	95[a]	67.86	65[b]	46.43	69[b]	49.29	
Scores ≥ 10 [6]	191	45.48	45[b]	32.14	75[a]	53.57	71[a]	50.71	
(Study 2B – Follow-up)	(*N* = 385)		(*n* = 119)		(*n* = 135)		(*n* = 131)		χ^2(df); *p*; V
Impact of Events Scale – Revised (IES-R)[1]									**18.01 (6); .006*; .153**
Scores 0-23	229	59.48	81[a]	68.07	78[a]	57.78	70[a]	53.44	
Scores 24-32 [2]	56	14.55	20[a]	16.81	19[a]	14.07	17[a]	12.98	
Scores 33-38 [2]	23	5.97	3[b]	2.52	5[b]	3.70	15[a]	11.45	
Scores ≥ 39 [2]	77	20.00	15[b]	12.61	33[a]	24.44	29[a,b]	22.14	
State-Trait Anxiety Inventory – Trait version (STAI-T)[3]									**66.45 (4); <.001*; .294**
Scores 20-37 [4]	59	15.32	43[a]	36.13	5[b]	3.70	11[b]	8.40	
Scores 38-44 [4]	67	17.40	25[a]	21.01	21[a]	15.56	21[a]	16.03	
Scores ≥ 45 [4]	259	67.27	51[b]	42.86	10[a]	80.74	99[a]	75.57	
Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)[5]									**19.49 (2); <.001*; .225**
Scores 0-9	190	49.35	78[a]	65.55	52[b]	38.52	60[b]	45.80	
Scores ≥ 10 [6]	195	50.65	41[b]	34.45	83[a]	61.48	71[a]	54.20	

Note:
[1] IES-R total score: ranging from 0 to 88
[2] IES-R total scores 24-32: partial PTSD or at least some PTSD symptoms (Asukai et al., 2002); scores 33-38: a probable diagnosis of PTSD (Creamer et al., 2003); scores ≥ 39: a diagnosis of PTSD (Kawamura et al., 2001)
[3] STAI-T total score: ranging from 20 to 80
[4] STAI-T total scores 20-37: a low level of or even no anxiety; scores 38-44: a moderate level of anxiety; scores ≥ 45: a high level of anxiety (Spielberger, 1983)
[5] CES-D-SF total score: ranging from 0 to 30
[6] CES-D-SF score ≥ 10: presence of significant depressive symptoms (Andresen et al., 1994)

Table 3.21 Mean Scores (SD) and Group Differences in Psychopathology and Post-Traumatic Growth by Culture and Gender in Study 2A – Baseline (Responses to Stressors before the Baseline) and Study 2B – Follow-up (Responses to Stressors between T1 and T2)

Scale		Total	British	Hongkongese	Taiwanese	Main Effect Culture	Main Effect Gender	Interaction Culture x Gender
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df1,df2); *p*; η^2	*F* (df1,df2); *p*; η^2	*F* (df1,df2); *p*; η^2
IES-R								
(Total Score)								
Study 2A	Total	19.74 (17.79)	16.48 (15.64) [b]	20.71 (19.39) [a]	22.04 (17.77)	**3.38 (2,410);**	0.24 (1,410);	0.68 (2,410);
	Male	19.95 (18.83)	15.64 (15.29)	20.04 (21.05)	24.17 (18.98)	**.035*; .016**	.626; .001	.506; .003
	Female	19.53 (16.72)	17.31 (16.06)	21.37 (17.71)	19.90 (16.33)			
Study 2B	Total	22.21 (17.93)	18.34 (15.00)	23.69 (19.44)	24.15 (18.33)	0.02 (2,356);	1.53 (1,356);	0.27 (2,356);
	Male	23.33 (18.18)	17.39 (14.14)	24.53 (19.63)	27.11 (18.74)	.979; 0	.217; .004	.764; .002
	Female	21.13 (17.67)	19.20 (15.81)	22.91 (19.38)	21.05 (17.52)			
MANCOVA (Sub-Scales)								
Study 2A						2.07 (6,818);	0.12 (3,408);	1.16 (6,818);
						.055; .015	.948; .001	.324; .008
Study 2B						0.92 (6,710);	1.37 (3,354);	0.50 (6,710);
						.478; 0.008	.253; 0.011	.806; 0.004
Intrusion[1]								
Study 2A	Total	0.92 (0.89)	0.79 (0.84)	0.98 (0.97)	0.99 (0.86)	2.61 (2,410);	0.21 (1,410);	1.37 (2,410);
	Male	0.93 (0.95)	0.74 (0.82)	0.92 (1.03)	1.12 (0.95)	.075; .013	.648; .001	.254; .007
	Female	0.91 (0.84)	0.83 (0.86)	1.05 (0.90)	0.86 (0.73)			
Study 2B	Total	1.13 (0.93)	0.94 (0.83)	1.18 (0.97)	1.24 (0.95)	0.08 (2,356);	0.62 (1,356);	0.34 (2,356);
	Male	1.17 (0.94)	0.86 (0.75)	1.21 (0.97)	1.37 (1.00)	.921; 0	.431; .002	.708; .002
	Female	1.10 (0.92)	1.02 (0.89)	1.15 (0.98)	1.11 (0.89)			
Avoidance[1]								
Study 2A	Total	1.12 (0.95)	0.95 (0.91)	1.12 (0.94)	1.29 (0.97)	3.57 (2,410);	0.11 (1,410);	0.61 (2,410);
	Male	1.12 (0.98)	0.90 (0.87)	1.08 (0.99)	1.39 (1.01)	.029*; .017	.736; 0	.541; .003
	Female	1.12 (0.92)	1.01 (0.94)	1.16 (0.90)	1.19 (0.92)			
Study 2B	Total	1.08 (0.88)	0.93 (0.77)	1.12 (0.90)	1.17 (0.93)	0.09 (2,356);	0.99 (1,356);	0.30 (2,356);
	Male	1.12 (0.84)	0.87 (0.67)	1.16 (0.87)	1.28 (0.90)	.914; .001	.319; .003	.740; .002
	Female	1.04 (0.91)	0.99 (0.86)	1.07 (0.93)	1.04 (0.95)			
Hyper-arousal[1]								
Study 2A	Total	0.57 (0.78)	0.43 (0.65)	0.64 (0.88)	0.64 (0.78)	**3.09 (2,410);**	0.36 (1,410);	0.03 (2,410);
	Male	0.59 (0.83)	0.42 (0.65)	0.67 (0.95)	0.69 (0.84)	**.047*; .015**	.552; .001	.975; 0

	Female	0.55 (0.73)	0.43 (0.64)	0.62 (0.81)	0.59 (0.72)			
Study 2B	Total	0.76 (0.84)	0.55 (0.69)	0.89 (0.95)	0.81 (0.81)	0.58 (2,356);	3.02 (1,356);	0.25 (2,356);
	Male	0.84 (0.89)	0.59 (0.72)	0.92 (1.00)	0.98 (0.87)	.558; .003	.083; .008	.776; .001
	Female	0.68 (0.78)	0.52 (0.66)	0.85 (0.91)	0.64 (0.69)			
STAI-T Total								
Study 2A	Total	48.74 (9.71)	44.55 (10.98) [b]	50.51 (7.74) [a]	51.16 (8.79) [a]	**20.22 (2,410);**	**13.15 (1,410);**	0.07 (2,410);
	Male	47.05 (9.88)	42.49 (10.90)	48.90 (7.35)	49.76 (9.52)	**<.001*; .090**	**<.001*; .031**	.930; 0
	Female	50.43 (9.26)	46.61 (10.73)	52.13 (7.83)	52.56 (7.80)			
Study 2B	Total	49.30 (10.76)	43.33 (11.30) [b]	52.02 (8.54) [a]	51.87 (10.23) [a]	**15.46 (2,356);**	**7.56 (1,356);**	2.18 (2,356);
	Male	47.98 (10.71)	40.59 (10.21)	50.00 (8.65)	52.20 (9.84)	**<.001*; .080**	**.006*; .021**	.115; .012
	Female	50.57 (10.69)	45.83 (11.75)	53.88 (8.05)	51.52 (10.69)			
CES-D-SF Total								
Study 2A	Total	9.72 (5.76)	7.72 (4.87) [b]	10.69 (5.56) [a]	10.75 (6.27) [a]	**13.39 (2,410);**	0.40 (1,410);	0.23 (2,410);
	Male	9.50 (5.67)	7.66 (4.66)	10.36 (5.12)	10.47 (6.64)	**<.001*; .061**	.528; .001	.793; .001
	Female	9.95 (5.85)	7.79 (5.11)	11.03 (5.98)	11.03 (5.90)			
Study 2B	Total	10.67 (6.11)	8.29 (5.02) [b]	12.15 (6.08) [a]	11.28 (6.44)	**6.19 (2,356);**	0.41 (1,356);	2.98 (2,356);
	Male	10.48 (6.01)	7.19 (4.40)	11.50 (5.78)	12.23 (6.34)	**.002*; .034**	.521; .001	.052; .016
	Female	10.85 (6.22)	9.31 (5.35)	12.75 (6.32)	10.27 (6.44)			
Post-Traumatic Growth Inventory – Extended (PTGI-X) Total[2]								
Study 2A	Total	2.07 (1.07)	1.79 (1.08) [b]	2.24 (1.08) [a]	2.18 (1.00)	**6.72 (2,410);**	0.01 (1,410);	1.14 (2,410);
	Male	2.07 (1.08)	1.66 (1.05)	2.28 (1.11)	2.27 (0.98)	**.001*; .032**	.916; 0	.320; .006
	Female	2.07 (1.06)	1.93 (1.11)	2.20 (1.05)	2.09 (1.01)			
Study 2B	Total	1.70 (1.06)	1.33 (0.90) [b]	1.84 (1.12) [a]	1.88 (1.04) [a]	**4.27 (2,356);**	0.57 (1,356);	1.11 (2,356);
	Male	1.76 (1.09)	1.33 (0.95)	1.98 (1.18)	1.90 (1.03)	**.015*; .023**	.452; .002	.330; .006
	Female	1.64 (1.02)	1.32 (0.87)	1.71 (1.05)	1.86 (1.06)			
MANCOVA (Sub-Scales)								
Study 2A						**10.92 (10,814);**	**3.25 (5,406);**	1.47 (10,814);
						<.001*; .118	**.007*; .038**	.148; .018
Study 2B						**6.48 (10,706);**	1.67b (5,352);	0.70 (10,706);
						<.001*; .084	.140; .023	.730; .010
Relating to Others[3]								
Study 2A	Total	2.11 (1.20)	2.01 (1.26)	2.18 (1.23)	2.12 (1.12)	1.16 (2,410);	0.53 (1,410);	2.53 (2,410);
	Male	2.07 (1.22)	1.77 (1.22)	2.27 (1.29)	2.17 (1.10)	.315; .006	.467; .001	.081; .012
	Female	2.14 (1.19)	2.26 (1.25)	2.10 (1.17)	2.07 (1.15)			
Study 2B	Total	1.84 (1.18)	1.59 (1.09)	1.89 (1.25)	2.01 (1.16)	1.2 (2,356);	0.86 (1,356);	0.33 (2,356);
	Male	1.90 (1.16)	1.60 (1.00)	1.99 (1.27)	2.08 (1.14)	.303; .007	.353; .002	.718; .002
	Female	1.78 (1.20)	1.59 (1.18)	1.8 (1.23)	1.94 (1.19)			

New Possibilities[3]								
Study 2A	Total	1.99 (1.28)	1.65 (1.35) [b]	2.23 (1.20) [a]	2.09 (1.22)	**7.63 (2,410);**	0.71 (1,410);	0.98 (2,410);
	Male	2.06 (1.30)	1.59 (1.30)	2.31 (1.19)	2.29 (1.29)	**<.001*; .036**	.401; .002	.377; .005
	Female	1.92 (1.26)	1.71 (1.41)	2.15 (1.20)	1.90 (1.12)			
Study 2B	Total	1.69 (1.24)	1.29 (1.12)	1.85 (1.24)	1.89 (1.28)	2.91 (2,356);	0.85 (1,356);	1.51 (2,356);
	Male	1.79 (1.30)	1.36 (1.25)	2.06 (1.29)	1.88 (1.29)	.056; 0.016	.358; 0.002	0.223; .008
	Female	1.61 (1.18)	1.23 (0.99)	1.66 (1.17)	1.90 (1.28)			
Personal Strength[3]								
Study 2A	Total	2.41 (1.26)	2.31 (1.41)	2.46 (1.13)	2.46 (1.24)	0.49 (2,410);	2.26 (1,410);	2.22 (2,410);
	Male	2.33 (1.24)	2.03 (1.39)	2.45 (1.13)	2.51 (1.15)	.612; .002	.134; .005	.110; .011
	Female	2.49 (1.29)	2.59 (1.38)	2.46 (1.14)	2.40 (1.33)			
Study 2B	Total	1.97 (1.24)	1.70 (1.27)	2 (1.23)	2.17 (1.19)	1.92 (2,356);	0.56 (1,356);	1.55 (2,356);
	Male	1.94 (1.26)	1.61 (1.31)	2.1 (1.27)	2.07 (1.16)	.149; .011	.454; .002	.214; .009
	Female	1.99 (1.23)	1.79 (1.23)	1.91 (1.19)	2.28 (1.22)			
Spiritual & Existential Change[3]								
Study 2A	Total	1.66 (1.21)	1.03 (1.16) [b]	2.01 (1.16) [a]	1.93 (1.07) [a]	**31.1 (2,410);**	1.15 (1,410);	0.05 (2,410);
	Male	1.72 (1.20)	1.08 (1.12)	2.04 (1.18)	2.02 (1.05)	**<.001*; .132**	.284; .003	.952; 0
	Female	1.60 (1.23)	0.97 (1.21)	1.99 (1.14)	1.83 (1.09)			
Study 2B	Total	1.22 (1.14)	0.62 (0.84) [b]	1.50 (1.19) [a]	1.48 (1.11) [a]	**16.73 (2,356);**	1.42 (1,356);	0.86 (2,356);
	Male	1.32 (1.17)	0.71 (0.94)	1.64 (1.2)	1.53 (1.13)	**<.001*; .086**	.234; .004	.424; .005
	Female	1.13 (1.10)	0.53 (0.75)	1.36 (1.18)	1.43 (1.10)			
Appreciation of Life[3]								
Study 2A	Total	2.51 (1.25)	2.36 (1.34)	2.57 (1.19)	2.59 (1.22)	1.23 (2,410);	0.20 (1,410);	0.59 (2,410);
	Male	2.47 (1.18)	2.21 (1.28)	2.55 (1.11)	2.66 (1.11)	.292; .006	.651; 0	.556; .003
	Female	2.54 (1.32)	2.52 (1.39)	2.58 (1.27)	2.51 (1.32)			
Study 2B	Total	1.94 (1.25)	1.68 (1.21)	2.16 (1.28)	1.96 (1.21)	1.46 (2,356);	0.30 (1,356);	1.00 (2,356);
	Male	1.99 (1.27)	1.58 (1.22)	2.30 (1.31)	2.03 (1.21)	.235; .008	.586; .001	.368; .006
	Female	1.90 (1.23)	1.77 (1.20)	2.03 (1.25)	1.89 (1.23)			

Note: Statistics for the above variables derive from ANCOVA unless otherwise specified. * $p < .05$.

The superscripts (i.e., a, b, c) are the same for groups with no significant difference found but different for groups with a significant difference found.

[1] IES-R sub-scales (mean scores): ranging from 0 to 4

[2] PTGI-X total mean score: ranging from 0 to 5

[3] PTGI-X sub-scales (mean scores): ranging from 0 to 5

For a summary of all Chapter 3 results, please see Table 3.22.

Table 3.22 Results of Culture Measures, Trauma/Stress Exposure, and Post-Traumatic/Stress Outcomes in an Overview

Hypotheses	Results	Notes
Study 1 (conducted in Oxford, United Kingdom)		
(H1) Cultural Differences in Trauma/Stress Exposure		
(H1.1) Cultural differences in the number of traumatic events at T1 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT British & Taiwanese > Hongkongese*
(H1.2) Cultural differences in the number of stressful events at T2 *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H1.3) Cultural differences in the number of traumatic events at T2 *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H1.4) Cultural differences in the perceived severity of the most distressing events at T2 *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H2) Cultural Differences in PTSD Symptoms		
(H2.1) Cultural differences in PTSD symptoms at T1 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT Taiwanese > British only*
(H2.2) Cultural differences in PTSD symptoms at T2 *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H3) Cultural Differences in Anxiety Symptoms		
(H3.1) Cultural differences in anxiety symptoms at T1 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT Hongkongese > British only*
(H3.2) Cultural differences in anxiety symptoms at T2 *Hongkongese & Taiwanese > British*	**No** cultural difference	

(H4) Cultural Differences in Depressive Symptoms		
(H4.1) Cultural differences in depressive symptoms at T1 *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H4.2) Cultural differences in depressive symptoms at T2 *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H5) Cultural Differences in Post-Traumatic Growth		
(H5.1) Cultural differences in post-traumatic growth at T1 *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H5.2) Cultural differences in post-traumatic growth at T2 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT Taiwanese > British & Hongkongese*
Study 2 (conducted in the United Kingdom, Hong Kong, and Taiwan)		
(H6) Cultural Differences in Horizontal and Vertical Individualism and Collectivism		
(H6.1) Cultural differences in horizontal individualism *British > Hongkongese & Taiwanese*	**No** cultural difference	*BUT* Cultural differences in horizontal collectivism: *British > Hongkongese & Taiwanese*
(H6.2) Cultural differences in vertical individualism *Hongkongese > British & Taiwanese*	**Yes**, a significant effect	*BUT Hongkongese & Taiwanese > British*
(H6.3) Cultural differences in vertical collectivism *Taiwanese > British & Hongkongese*	**Yes**, a significant effect	*BUT Hongkongese & Taiwanese > British*
(H7) Cultural Differences in Self-Construal		
(H7.1) Cultural differences in independent self-construal *British > Hongkongese & Taiwanese*	**No** cultural difference	
(H7.2) Cultural differences in interdependent self-construal	**Yes**, a significant effect	*BUT Taiwanese > British only*

Hongkongese & Taiwanese > British		
(H8) Cultural Differences in Trauma/Stress exposure		
(H8.1) Cultural differences in the number of stressful events at T1 *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H8.2) Cultural differences in the number of traumatic events at T1 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT British & Taiwanese > Hongkongese*
(H8.3) Cultural differences in the perceived severity of the most distressing events at T1 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT Taiwanese > British & Hongkongese*
(H8.4) Cultural differences in the number of stressful events at T2 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	
(H8.5) Cultural differences in the number of traumatic events at T2 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT Hongkongese > British only*
(H8.6) Cultural differences in the perceived severity of the most distressing events at T2 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	
(H9) Cultural Differences in PTSD Symptoms		
(H9.1) Cultural differences in post-traumatic growth at T1 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT Hongkongese > British only*
(H9.2) Cultural differences in post-traumatic growth at T2 *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H10) Cultural Differences in Anxiety Symptoms		
(H10.1) Cultural differences in anxiety symptoms at T1 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	

(H10.2) Cultural differences in anxiety symptoms at T2 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	
(H11) Cultural Differences in Depressive Symptoms		
(H11.1) Cultural differences in depressive symptoms at T1 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	
(H11.2) Cultural differences in depressive symptoms at T2 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT Hongkongese > British only*
(H12) Cultural Differences in Post-Traumatic Growth		
(H12.1) Cultural differences in post-traumatic growth at T1 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT Hongkongese > British only*
(H12.2) Cultural differences in post-traumatic growth at T2 *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	

3.6 Discussion

3.6.1 Cultural Differences in Culture Measures

In this Chapter, we introduced the two measures, INDCOL and Self-Construal Scale, to re-assess the characteristics of the three cultural groups. Contrary to our hypothesis, the British group did not differ in horizontal individualism (H-I) from the Hongkongese and Taiwanese groups. Instead, it scored significantly higher in horizontal collectivism (H-C) than the other two groups. This finding suggested that although the horizontal aspect remained as expected, the British culture tended to be collectivistic but not individualistic. According to Triandis & Gelfand (1998), in the H-I culture, people are not interested in becoming distinguished to acquire status but strive to be distinct from others (e.g., 'I want to do my own thing.'); in the H-C culture, people tend to view themselves as being equal to others, and additionally, emphasise the common goal with others. A possible reason for the British group to be horizontally collectivistic was the uncertainty in the geopolitical landscape. Especially after Brexit in 2016, people may be more reliant on each other and prioritise the collective goals of society for their long-term interests (e.g., Riotte, 2022).

Both Hongkongese and Taiwanese participants scored higher in vertical individualism (V-I) and vertical collectivism (V-C) than their British counterparts. This finding showed non-significant differences between the former two cultural groups in the INDCOL. But, it supported the vertical aspects of East Asian societies, where inequalities were accepted within the collective or among individuals (e.g., Singelis et al., 1995). On the other hand, it was consistent with the previous literature (e.g., Liao et al., 2015) that emerging adults of these two regions, who were exposed to traditional Chinese culture and Western culture (due to the historical colonial history), identified with both individualistic and collectivistic cultural values (e.g., Lee et al., 2010). This may lead to a complex identity that falls

somewhere in between the individualism-collectivism spectrum that the INDCOL cannot fully capture.

3.6.2 Cultural Differences in Exposure to Traumatic/Stressful Events

Not surprisingly, the types of traumatic/stressful events did not differ as much in Study 1 as in Study 2. In Study 1, all participants, regardless of which culture they were originally from, were based in Oxford. Hence, their trauma/stress exposures (e.g., exams and negative experiences at work/school) were similar, especially in the 7-month follow-up period. In contrast, in Study 2, the participants were recruited in the United Kingdom, Hong Kong, and Taiwan, and thus may experience different types of stressors, some of which were specific to the local contexts. For instance, the Taiwanese group experienced more natural disasters (compared to the other two groups) as only Taiwan was located in the seismic belt where earthquakes (as a main category of natural disasters) happened in their lifetime. The British group reported more unwanted/uncomfortable sexual experiences than the other two groups. This could be attributed to two culture-related factors. First, early sexual behaviour was common in the U.K. (e.g., Hawes, Wellings, & Stephenson, 2010), and therefore, we could foresee more stressors related to sex in British emerging adults than in their East Asian counterparts. The other explanation concerns the under-reporting of sexual harassment or assault in East Asian societies due to social stigma. In this case, the use of self-report measures may reduce the observed prevalence rate of such incidents in the Hongkongese and Taiwanese groups. Additionally and noteworthily, the Hongkongese group reported the least traumas in Study 2A but the most traumas in Study 2B. It was due to an increasing number of Hongkongese participants who reported exposure to toxic substance, physical assault, and assault with weapon. These kinds of exposure may be related to the social movement in Hong Kong from mid-2019 to mid-2020 (where Study 2B follow-up assessment took place).

Cultural differences in the variables of trauma/stress exposure (in the follow-up), which were non-significant in Study 1, turned out to be significant in Study 2. One explanation is that a larger, more representative sample of Study 2 (N = 420) than Study 1 (N = 140) allowed a stronger statistical power to detect group differences. Given the observed group differences, we controlled the variables of trauma/stress exposures as covariates in the prediction of post-traumatic/stress outcomes by cognitive/behavioural processes (in Chapters 6, 7, and 8).

Some of the variables of trauma/stress exposure (e.g., the number of stressful events and the perceived severity of the most distressing events) were absent in Study 1A. Therefore, it was difficult to directly compare the stress baseline of participants in Study 1 and Study 2. Although stressful events are not life-threatening and thus non-traumatic, some of them may also cause severe stress in everyday life. With the scale of perceived severity (from 0-100), in future research, we suggested the inclusion of stressful events in the Life Events Checklist (LEC).

3.6.3 Cultural Differences in Post-Traumatic/Stress Outcomes

In the current research, all participants were recruited from university. In line with the intention to include a wide range of symptoms, there was a considerable percentage of participants who scored within the clinical range for PTSD (Study 1A: 9.38%; Study 1B: 15.83%; Study 2A: 17.14%; Study 2B: 20.00%), anxiety (Study 1A: 60.94%; Study 1B: 65.63%; Study 2A: 67.14%; Study 2B: 67.27%), and depression (Study 1A: 47.66%; Study 1B: 35.00%; Study 2A: 45.48%; Study 2B: 50.65%). This pattern of results was more pronounced in Study 2 (from 2019-2020) than in Study 1 (from 2017-2018). This may be because of the COVID-related stress that negatively impacted psychological well-being (e.g., Shevlin et al., 2020). This possible explanation was supported by researchers (e.g., Lakhan, Agrawal, & Sharma, 2020; Zhang, Pan, Cai, & Pan, 2021) that during COVID, the

prevalence rates of PTSD, anxiety, and depression in the population worldwide increased to 15%, 35%, and 20% respectively.

The sharp upward trend of psychopathology in the Hongkongese group was consistent with other studies. The data of Studies 1A, 1B, 2A, and 2B, to a certain extent, represented the change in the psychopathology scores from 2017 to 2020 (although the samples were not identical). For example, the percentage of participants with scores suggesting a diagnosis of PTSD (Kawamura et al., 2001) increased from 10.42% (Study 1A) and 17.78%, (Study 1B) to 21.43% (Study 2A) and 24.44% (Study 2B). This echoed the previous findings from Ni and his colleagues (2020) that the prevalence rate of PTSD in Hong Kong rocketed from 12.8 in 2017 to 37.4% in 2020. This similar pattern could also be observed in the data on anxiety and depression and supported by previous literature (e.g., Hou et al., 2022).

Our results regarding gender differences were consistent with past research (e.g., McLean, Asnaani, Litz, & Hofmann, 2011), indicating a higher level of psychopathology (e.g., anxiety and depression) reported in female than in male participants. On the other hand, the significant effect of gender on post-traumatic growth supported previous findings that women reported a higher level of growth after trauma/stress than men (e.g., Jin, Xu, & Liu, 2014; Sharp, Redfearn, Timmons, Balfe, & Patterson, 2018).

3.7 Summary

Overall, we found that British participants differed from their Hongkongese and Taiwanese counterparts in terms of cultural dimensions, trauma/stress exposure, and post-traumatic/stress outcomes. Such notable group differences in those variables became pronounced in the local compatriots from the respective regions (in Study 2).

To explain the above cultural differences in the outcome variables, we hope to identify cognitive/behavioural processes, which, on one hand, were specific to particular cultures (found in Chapters 4 and 5) and contributed to post-traumatic/stress outcomes (found

in Chapters 6, 7, and 8). Based on Ehlers and Clark's (2000) cognitive model of PTSD, we tested the three categories of cognitive/behavioural processes, namely (1) self-concept and appraisals, (2) cognitive processing styles and autobiographical memory, and (3) coping strategies.

Chapter 4

Cultural Differences in Self-Report Measures

4.1 Overview

In the recent 70 years, a growing body of research has highlighted the key role of culture in shaping the human mind and behaviour (e.g., Apfelbaum, Philips, & Richeson, 2014; Hong et al., 2000; Markus & Kitayama, 1991). Culture has emerged and evolved in response to the environment and it, in turn, guides people's beliefs, thoughts, and actions (e.g., Kitayama, Conway, Pietromonaco, Park, & Plaut, 2010). People worldwide have been exposed to different environments whether at a macro level such as political, economic, and social conditions, or a micro level such as family and school education. Therefore, culture is believed to be a complex construct that varies across individuals. However, despite the substantial variability in cultural influences on people's beliefs and behaviour, theorists like Hofstede and Bond (1984) started a productive line of research into cultural differences by categorising different cultures according to the dimension of individualism versus collectivism. This dimension is essential to understanding cultural differences in psychological processes (for a review, see Oyserman, Coon, & Kemmelmeier, 2002), among which appraisals, memory and coping variables are the focus of this thesis.

4.1.1 Cultural Differences in Self-Concept and Appraisals

Culture has been shown to influence how one perceives oneself and one's life events (e.g., Mesquita & Walker, 2003). One such influence originates from cultural differences in people's self-concept, or specifically, their perception of the 'self' (Markus & Kitayama, 2010). According to Engelbrecht and Jobson (2014, p. 2), the 'self' in Western cultures is perceived as 'a unique, independent and autonomous individual' with internal attributes (e.g., abilities and personality traits). In contrast, the 'self' in Asian cultures, is conceptualised as

‘an interdependent entity attending to and fitting in with one’s others and the surrounding social context’ with external attributes (e.g., duties and social roles) (Engelbrecht & Jobson, 2014, p. 2). Hence, individualists strive to stand out from a group by prioritising the private aspects of the self while collectivists hope to fit into a group they identify with by promoting the public aspects of the self (Markus & Kitayama, 2010). These culturally-varied concerns, when predicting psychopathology, are often interpreted as two personality dimensions, concerns either about interpersonal relationships (i.e., ‘sociotropy’) or autonomous achievement (‘autonomy’) (Robins et al., 1994). Also, self-esteem, as a judgment or evaluation of the self, has shown cultural differences and has been linked to psychopathology (e.g., Farruggia, Chen, Greenberger, Dmitrieva, & Macek, 2004). Chinese participants have been found to score lower in self-esteem than their Western counterparts (e.g., Stigler, Smith, & Mao, 1985; McDaniel & Soong, 1983; Turner & Mo, 1984; Chiu, 1992). These cultural differences in self-concept contribute to culturally-varied appraisals of everyday events and even stressful ones (Mesquita & Walker, 2003).

Culture alone, or indirectly through self-concept, has been found to influence people’s appraisals of their life events. Based on the individualism-collectivism dimension, researchers have sought to examine cultural differences in the way people think. Research has demonstrated that East Asians tend to view the whole universe as integral while Westerners tend to assume that everything in the world is independent of each other (e.g., Munro, 1985; Needham, 1962). On the basis of a theoretical model of analytic-holistic thinking style (Nisbett, Peng, Choi, & Norenzayan, 2001), Choi and his colleagues (2007) proposed a scale of cultural thinking style, Analysis-Holism scale (AHS), regarding life events in general. According to Choi et al. (2007), individuals with higher scores on the AHS are more likely to (1) explain causal relationships in terms of the interaction between actors and their surrounding environment (instead of the dispositions of the actors), (2) engage in a

cyclic (instead of linear) perception of future events, (3) prefer dialectical (instead of formal) logic when encountering with contradictory propositions, and (4) pay attention to the whole (instead of parts). Koreans (as members of the collectivistic culture) were found to score higher in the AHS than Americans (as members of the individualistic culture) (Choi et al., 2007). Cognitive appraisals have been shown to play a key role in the psychological outcome following traumatic or extremely stressful events. The Post-Traumatic Cognitions Inventory (PTCI; Foa et al., 1999) is a commonly used self-report questionnaire to assess negative trauma-specific cognitive appraisals. However, Engelbrecht and Jobson (2014) argued that the PTCI tapped more into the individualistic type of appraisals than the collectivistic type. They found that the PTCI, in terms of traumatic-specific appraisals, significantly predicted PTSD symptoms only for the British group but not for the Asian group (Engelbrecht & Jobson, 2014). Therefore, the PTCI may not apply to trauma survivors in Asian cultures as much as those in Western cultures due to a lack of culturally similar negative appraisals about the self and world. Engelbrecht and Jobson (2014) developed the Public and Communal Self Appraisals Measure (PCSAM), which covers interdependent, public, and communal aspects of trauma-associated appraisals. In view of the above, the present research included both the PTCI and the PCSAM to take into account cultural differences in appraisals of everyday and traumatic experiences.

4.1.2 Cultural Differences in Cognitive Processing Styles and Autobiographical Memory

There may be cultural differences in peri-traumatic cognitive processing. Three key cognitive processing styles during trauma linked to psychopathology, according to Ehlers and Clark (2000), are state dissociation, data-driven processing, and lack of self-referent processing. State dissociation is defined as the dissociative experience during the trauma, de-realization, de-personalization, detachment, altered sense of time, and reduction of awareness

in surroundings (Murray et al., 2002). Data-driven processing, as opposed to conceptual processing, involves processing sensory impressions and perceptual characteristics rather than the meaning of the event with its context (Halligan et al., 2002). Lack of self-referent processing refers to the inability to process experiences with respect to oneself and relate them to other autobiographical memories (Halligan et al., 2003). All of these share a problem of processing information during the trauma 'out of the context'. According to the theory of analytic-holistic thinking (for a review, see Choi et al., 2007), East Asians tend to be oriented towards the relationship between an object and its environment while Westerners focus more on the object itself than on the field it belongs to (e.g., Masuda & Nisbett, 2001). Therefore, East Asians are more context-dependent than Westerners when a life event is encountered (Witkin, Dky, Faterson, Goodenough, & Karp, 1974). Given the analytic thinking style, it can be hypothesised that Westerners tend to engage in the above cognitive processing styles (data-driven processing, dissociation, lack of self-referent processing) during trauma to a greater extent than East Asians.

The nature of memories may also show cultural differences. Several features of autobiographical memories of stressful events may contribute to stress responses.

Centrality. Berntsen and Rubin (2006) suggested that the degree to which a personal memory is seen as central to one's identity and life story and is vivid and highly accessible. A 'central' memory about a traumatic or stressful event is harmful to one's mental health (Berntsen, Willert, & Rubin, 2003). On the one hand, it is widely assumed that people tend to view themselves positively or to self-enhance (e.g., Maslow, 1943; Taylor & Brown, 1988). On the other hand, some studies showed that East Asians, compared to Westerners, tend to hold a realistic view of the self as a result of increased self-criticism (Chang & Asakawa, 2003; Heine, 2001) or decreased/absent self-enhancement (Heine & Hamamura, 2007). East

Asians may be less likely to perceive their most positive event as a central memory when compared to Westerners.

Memory qualities. A part of an autobiographical memory that is disorganised and disjointed from other autobiographic memories is hard to be intentionally recalled and easily triggered by perceptual cues to pop into the mind (e.g., flashback) (Ehlers & Clark, 2000). It can be hypothesised that these memory qualities may be more common in Westerners as they are more inclined to process the sensory stimuli of an object independently of the background than East Asians (Gutchess, Welsh, Boduroglu, & Park, 2006).

Use of autobiographical memory recall. Memory can serve multiple functions, including self-continuity, social bonding, and guiding behaviour. East Asians were found to use memory more frequently than Westerners to maintain self-continuity although both groups used memory to serve these three functions (e.g., Liao et al., 2016). The greater use of memory for self-continuity could be attributed as a way to compensate for the lower clarity of self-concept in collectivistic cultures (Bluck & Alea, 2008).

4.1.3 Cultural Differences in Coping Strategies

Cultural differences have been clearly demonstrated in coping responses to stress. Some are more commonly used in collectivistic cultures than in individualistic cultures. This includes self-concealment, which is seen as a 'culturally consistent feature of interdependence that serves to maintain interpersonal harmony' (Constantine et al., 2004, p. 237). Rumination is another common response to stress in East Asians after stress due to their self-critical or pessimistic orientation (Chang, 1996b). Some other unhelpful coping strategies such as thought suppression and numbing are more frequently found in Westerners due to their appraisals of a higher level of perceived control (e.g., Mesquita & Markus, 2004; Scherer, 1997) and analytical thinking style (e.g., Needham, 1962) respectively. In terms of coping styles, people from individualistic cultures have also been found to use more self-

serving attribution (e.g., Kashima & Triandis, 1986), less problem avoidance (Chang, 1996a), more active control coping (Yeh, Arora, & Wu, 2006) and less emotional suppression coping (Tsai, Nguyen, Weiss, Ngo, & Lau, 2017) than their counterparts from collectivistic cultures. Trait dissociation as a general disposition to dissociative experience can be regarded as a coping strategy. Similar to state dissociation, trait dissociation may be more common in Westerners as they are less field-dependent than East Asians (Witkin et al., 1974).

4.2 Research Question and Hypotheses

The objective of this chapter was to examine differences between British, Hongkongese and Taiwanese participants (Studies 1 and 2) in the three categories of variables: (1) self-concept and appraisals, (2) cognitive processing styles and memories, and (3) coping strategies. For each of these, the hypotheses are listed below.

- There will be cultural differences in the variables of self-concept (i.e., personal styles and self-esteem) and appraisals (i.e., analytic-holistic thinking and post-traumatic cognitions) (***Hypothesis 1***).
    - Taiwanese participants will score higher in sociotropy than Hongkongese and British participants (***Hypothesis 1.1***).
    - British participants will score higher in autonomy than Hongkongese and Taiwanese participants (***Hypothesis 1.2***).
    - British participants will report a higher level of self-esteem than Hongkongese and Taiwanese participants (***Hypothesis 1.3***).
    - Hongkongese and Taiwanese participants, compared to British participants, will score higher in causality, attitude towards contradictions, perception of change, and locus of attention. Higher scores in these four dimensions represent a greater tendency to exhibit a holistic thinking style rather than an analytic thinking style (***Hypothesis 1.4***).

- Taiwanese and Hongkongese participants will score higher in Public and Communal Self Appraisals Measure (PCSAM) after stressful events than their British counterparts (***Hypothesis 1.5***).
- British participants will score higher in Post-Traumatic Cognition Inventory (PTCI) after stressful events than their Hongkongese and Taiwanese counterparts (***Hypothesis 1.6***).

- There will be cultural differences in the variables of cognitive processing styles (i.e., state dissociation, data-driven processing, and lack of self-referent processing) and memories (i.e., memory centrality, qualities, and functions) (***Hypothesis 2***).
  - British participants will report a higher level of state dissociation during a stressful event than Hongkongese and British participants (***Hypothesis 2.1***).
  - British participants will report a higher level of data-driven processing during the stressful event than Hongkongese and British participants (***Hypothesis 2.2***).
  - British participants will report a higher level of lack of self-referent processing than Hongkongese and Taiwanese participants (***Hypothesis 2.3***).
  - British participants will report a higher level of centrality in their most positive events than Taiwanese and Hongkongese participants (***Hypothesis 2.4)***.
  - British participants will report higher levels of disorganization, disjointedness and flashback quality in the memories of their most stressful events than Hongkongese and Taiwanese participants (***Hypothesis 2.5***).
  - Taiwanese participants will report greater use of memory for the function of self-continuity than Hongkongese and British participants (***Hypothesis 2.6***).
- There will be cultural differences in the variables of coping strategies (i.e., self-concealment, response to intrusions, coping styles, and trait dissociation) (***Hypothesis 3***).

- Hongkongese and Taiwanese participants will be more likely to have self-concealment than British participants (***Hypothesis 3.1***).
- British participants will report greater use of thought suppression and numbing in response to their distressing events than Hongkongese and Taiwanese participants (***Hypothesis 3.2***).
- Hongkongese and Taiwanese participants will report greater use of rumination in response to their distressing events than British participants (***Hypothesis 3.3***).
- British participants will report greater use of problem-focused coping than Hongkongese and Taiwanese participants (***Hypothesis 3.4***).
- Taiwanese participants will report greater use of emotion-focused coping than Hongkongese and British participants (***Hypothesis 3.5***).
- British participants will report a higher level of trait dissociation than Hongkongese and Taiwanese participants (***Hypothesis 3.6***).

4.3 Methods

4.3.1 Measures

Study 1A

The internal reliability (Cronbach's alpha) of each scale used in Study 1A is reported in Table 3.2.

A. Self-Concept

7) Revised Personal Style Inventory (PSI-II; Robins et al., 1994)

The PSI-II comprises 48 items scored on a 6-point scale (from 1 = strongly disagree to 6 = strongly agree) to measure two types of personality characteristics that represent excessive concerns about either interpersonal relationship ('sociotropy') or autonomous achievement ('autonomy'), which have been linked to a higher risk of psychopathology (e.g., Blatt & Zuroff, 1992; Nietzel & Harris, 1990) . 'Sociotropy'

consists of three sub-scales: (1) concern about what others think (e.g., 'I am very sensitive to criticism by others.'), (2) dependency (e.g., 'I find it difficult to be separated from people I love.'), and (3) pleasing others (e.g., 'I try to please other people too much.') while 'autonomy' consists of three sub-scales: (1) perfectionism/self-criticism (e.g., 'It bothers me when I feel that I am only average and ordinary.'), (2) need for control (e.g., 'I am easily bothered by other people making demands of me.'), and (3) defensive separation (e.g., 'I tend to keep other people at a distance.'). The PSI-II was forward and backward translated from English to traditional Chinese by two bilingual Hongkongese and two bilingual Taiwanese.

8) Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)

The RSES assesses self-esteem with 10 items (e.g., 'On the whole, I am satisfied with myself.') rated on a 4-point scale (from 1 = *strongly agree* to 4 = *strongly disagree*). The Chinese version of the RSES (Farruggia, Chen, Greenberger, Dmitrieva, & Macek, 2004) was used in the Hongkongese and Taiwanese samples.

B. Appraisals

9) Analysis-Holism Scale (AHS; Choi et al., 2007)

The AHS is a 24-item scale assessing four domains of analytic versus holistic thinking: (1) causality (interactionism versus dispositionism) (e.g., 'Nothing is unrelated'): individuals with a high score in 'causality' tend to assume that everything is interconnected forming complex causalities (Nisbett, 2003); (2) perception of change (cyclic versus linear) (e.g., 'Current situations can change at any time.'): those with a high score in 'perception of change' tend to view phenomena as dynamic and constantly changing (Ji, Nisbett, & Su, 2001; Peng & Nisbett, 1999); (3) attitude towards contradictions (naïve dialecticism versus formal logic) (e.g., 'It is more desirable to take the middle ground than go to extremes.'): those with a high score in

'attitude towards contradictions' tend to pursue a middle ground between two opposing forces (Nisbett, Peng, Choi, & Norenzayan, 2001); (4) locus of attention (field versus parts) (e.g., 'The whole is greater than the sum of its parts.'): those with a high score in 'locus of attention' tend to attend to the stimuli as a whole rather than its parts (Nisbett & Miyamoto, 2005). In other words, individuals with higher scores in the AHS displayed a more holistic pattern of thinking (Choi et al., 2007). Each item was rated on a scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. The Chinese version of the AHS (Ren, Lu, & Tuerdi, 2014) was used in the Hongkongese and Taiwanese samples.

10) Public and Communal Self Appraisals Measure (PCSAM; Engelbrecht & Jobson, 2014)

The PCSAM assesses public and communal aspects of trauma-related appraisals after a stressful event with 14 items rated on a 7-point scale from 1 = *totally disagree* to 7 = *totally agree*. These items constitute 3 sub-scales: (1) challenge to beliefs and belonging (e.g., 'Since the event I feel let down by fate/my beliefs/God/my faith.'), (2) challenge to communal aspects of self (e.g., 'Since the event people have become a priority.') and (3) challenge to public roles and identity (e.g., 'Since the event I have lost my social role/identity.') The PCSAM was forward and backward translated from English to traditional Chinese by two bilingual Hongkongese and two bilingual Taiwanese.

11) Revised Post-Traumatic Cognitions Inventory (PTCI2; Ehlers, Clark & Foa, unpublished)

The PTCI2 is a 34-item measure of trauma-related thoughts and beliefs after stressful events adapted from the original PTCI (Foa et al., 1999). For most research questions, 4 sub-scales are recommended: (1) negative thoughts about the self (e.g.,

'My reactions since the event mean that I am going crazy.'), (2) self-blame (e.g., 'If people knew what happened they would look down on me.'), (3) overgeneralised danger (e.g., 'I have to be on guard all the time.'), and (4) preoccupation with unfairness (e.g., 'I want to punish the people who did this to me.'). Each item was rated on a 7-point scale from 1 = *totally disagree* to 7 = *totally agree*. The Chinese version of the PTCI2 (Su & Chen, 2008) was used in the Hongkongese and Taiwanese samples.

C. Cognitive Processing Styles

12) State Dissociation Questionnaire (SDQ; Murray et al., 2002)

The SDQ is a 7-item measure of dissociative experiences (e.g., derealisation, depersonalisation, detachment, altered sense of time, and emotional numbing) during a traumatic/stressful event. Items (e.g., 'During the traumatic event, I felt dazed, unable to take in what was happening.') were rated on a 5-point scale ranging from 0 = *not at all* to 4 = *very strongly*. The SDQ was forward and backward translated from English to traditional Chinese by two bilingual Hongkongese and two bilingual Taiwanese psychologists.

13) Data-Driven Processing Scale (DDPS; Halligan et al., 2002; Halligan et al., 2003)

This is a 9-item scale measuring the extent to which the individual engaged in surface-level and perceptual processing during a stressful event. The items (e.g., 'I couldn't really take it all in.') were rated on a 5-point scale (from 0 = *not at all* to 4 = *very strongly*). The DDPS was forward and backward translated from English to traditional Chinese by two bilingual Hongkongese and two bilingual Taiwanese.

14) Lack of Self-Referent Processing Scale (LSRPS; Halligan, et al.; Halligan et al., 2003)

This is an 8-item scale assessing the extent to which individuals processed a stressful event as happening to themselves and incorporated the event into the autobiographical memory knowledge base. The items (e.g., 'It felt as if the event was happening to someone else.') were rated on a 5-point scale (from 0 = *not at all* to 4 = *very strongly*). The LSRPS was forward and backward translated from English to traditional Chinese by two bilingual Hongkongese and two bilingual Taiwanese.

D. Memory

15) Centrality of Event Scale-Short Form (CES-SF; Berntsen & Rubin, 2006)

The CES-SF (for Positive/-Distressing Events) is a short-form 7-item scale to measure the extent to which the most positive event/ the most distressing event is central to personal identity, life story, and everyday inferences. Each item (e.g., 'The event was a turning point in my life.') was rated on a 5-point scale from 1 = *totally disagree* to 5 = *totally agree* regarding the particular event. The two versions of the CES-SF are identical except for appropriate reference to positive and stressful events. With the most positive and stressful events identified by CES-SF, the participants were then instructed to rate various aspects of memories for these two events respectively using the Memory Questionnaire for the Positive/ Stressful Event (mentioned in the point 12). Moreover, the participants were asked to complete the following questionnaires (except the Trait Dissociation Questionnaire, the Trait version of the State-Trait Anxiety Inventory, and the Center for Epidemiologic Studies Depression Scale-Short Form) with reference to this most stressful event (also known as 'the stressful event' in those scales).

16) Memory Questionnaire for the Most Positive/Distressing Event (Halligan et al., 2003)

The Memory Questionnaire assesses the memory qualities of the most positive event/ the most distressing from the participants with 14 items. It consists of 3 sub-scales: (1) 4 items about 'disorganization' (e.g., 'I felt that my memory for the event is incomplete') rated on a 5-point scale from 0 = *not at all* to 4 = *very strongly*; (2) 4 items about 'disjointedness' (e.g., 'I remembered different parts of the event like separate experiences') rated on a 5-point scale from 0 = *not at all* to 4 = *very strongly*; and (3) 5 items about 'flashback quality' (e.g., 'To what extent were you reliving your experience from the event?') rated from 0 (*not at all*) to 100 (*very strongly*). Apart from these 13 items, participants answered how often unintentional memories of stressful event pop into their mind by choosing from multiple options: 'never', 'once', 'twice', 'every other day', 'once a day', 'several times a day' and 'many times a day'. The two versions of the Memory Questionnaire are identical except for appropriate adaptation to positive and stressful events. The questionnaire was forward and backward translated from English to traditional Chinese by two bilingual Hongkongese and two bilingual Taiwanese.

17) Thinking About Life Experiences (TALE; Bluck & Alea, 2011) Scale

The TALE (-Positive/-Stressful Events) is a 15-item measure of the three theoretical functions of using positive/stressful autobiographical memories in general: (1) self-continuity (e.g., 'When I want to feel that I am the same person that I was before.'), (2) social bonding (e.g., 'When I want to develop more intimacy in a relationship.') and (3) directing behaviour (e.g., 'When I want to try to learn from my past mistakes.'). Each sub-scale consists of 5 items with a 5-point scale (from 1= *Almost never* to 5= *Very frequently*). The Chinese version of the TALE (Liao et al., 2016) was used in the Hongkongese and Taiwanese samples.

E. Coping Strategies

18) Self-Concealment Scale (Larson & Chastain, 1990)

The scale is a 10-item inventory assessing the tendency to withhold personal information and worry about the negative consequence of self-disclosure. Items such as 'I have negative thoughts about myself that I never share with anyone' were rated on a 5-item scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The Chinese version of the scale (Wang, 2002) was used in the Hongkongese and Taiwanese samples.

19) Response to Intrusions Questionnaire (RIQ; Clohessy & Ehlers, 1999; Steil & Ehlers, 2000; Murray et al., 2002)

The RIQ measures responses to intrusive memories of the stressful event with 19 items rated on a 4-point scale (from 0 *never* to 3 *always*). It comprises 3 scales: (1) thought suppression (e.g., 'I try to push them out of my mind.'), (2) rumination (e.g., 'I think about how life would have been different if the event had not occurred.'), and (3) numbing (e.g., 'I detach myself from the memories.'). The RIQ was forward and backward translated from English to traditional Chinese by two bilingual Hongkongese and two bilingual Taiwanese.

20) Brief COPE (Carver, 1997)

The Brief COPE is an abbreviated version of the COPE inventory, with 28 items to measure how the individual copes with the stressful event. It represents 15 sub-scales: (1) active coping (e.g., 'I've been taking action to try to make the situation better.'), (2) planning (e.g., 'I've been thinking hard about what steps to take.'), (3) positive reframing (e.g., 'I've been looking for something good in what is happening.'), (4) acceptance (e.g., 'I've been learning to live with it.'), (5) humor (e.g., 'I've been making jokes about it.'), (6) religion (e.g., 'I've been praying or meditating.'), (7) use emotional support (e.g., 'I've been getting emotional support

from others.'), (8) use instrumental support (e.g., 'I've been getting help and advice from other people.'), (9) self-distraction (e.g., 'I've been turning to work or other activities to take my mind off things.'), (10) denial (e.g., 'I've been saying to myself 'this isn't real'.), (11) venting (e.g., I've been expressing my negative feelings.'), (12) substance use (e.g., 'I've been using alcohol or other drugs to help me get through it.'), (13) behavioural disengagement (e.g., 'I've been giving up the attempt to cope.'), and (14) self-blame (e.g., I've been criticising myself.'). Each item was rated from 0 = *I haven't been doing this at all* to 3 = *I've been doing this a lot*. The Chinese version of the Brief COPE (Tang, Chan, Ng, & Yip, 2016) was used in the Hongkongese and Taiwanese samples.

21) Trait Dissociation Questionnaire-Short Form (TDQ-SF; Murray et al., 2002)

The TDQ-SF is a 15-item scale of the general tendency to have dissociative experiences (i.e., trait dissociation). Items (e.g., 'I felt emotionally numb.') were rated on a 5-point scale ranging from 0 = *not at all* to 4 = *very strongly*. The TDQ-SF was forward and backward translated from English to traditional Chinese by two bilingual Hongkongese and two bilingual Taiwanese.

Study 1B

The coping scales (Responses to Intrusions Questionnaire, Brief COPE, and Trait Dissociation Questionnaire – Short Form) were given again at follow-up. Participants were asked to indicate which coping strategies they had used to cope with stressors that occurred between the initial assessment and follow-up. For a detailed description of the following measures, please refer to the section of Study 1A. The internal reliability (Cronbach's alpha) of each scale used in the follow-up questionnaires (of Study 1B) is reported in Table 3.4.

Study 2A

Measures were the same as in Study 1A, with the exception that the full COPE inventory was used to measure coping styles rather than the Brief COPE. The internal reliability (Cronbach's alpha) of each scale used in Study 2A is shown in Table 3.12.

A. Self-Concept (see Study 1A for descriptions)

7) Revised Personal Style Inventory (PSI-II; Robins et al., 1994)

8) Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)

B. Appraisals (see Study 1A for descriptions)

9) Analysis-Holism Scale (AHS; Choi et al., 2007)

10) Public and Communal Self Appraisals Measure (PCSAM; Engelbrecht & Jobson, 2014)

11) Revised Post-Traumatic Cognitions Inventory (PTCI2; Ehlers, Clark & Foa, unpublished)

C. Cognitive Processing Styles (see Study 1A for descriptions)

12) State Dissociation Questionnaire (SDQ; Murray et al., 2002)

13) Data-Driven Processing Scale (DDPS; Halligan et al., 2002; Halligan et al., 2003)

14) Lack of Self-Referent Processing Scale (LSRPS; Halligan et al., 2002; Halligan et al., 2003)

D. Memory (see Study 1A for descriptions)

15) Centrality of Event Scale-Short Form (CES-SF; Berntsen & Rubin, 2006)

16) Memory Questionnaire for Stressful/Positive Events (Halligan et al., 2003)

17) Thinking About Life Experiences (TALE; Bluck & Alea, 2011) Scale

E. Coping Strategies (see Study 1A for descriptions of items 20, 21, and 23)

18) Self-Concealment Scale (Larson & Chastain, 1990)

19) Response to Intrusions Questionnaire (RIQ; Clohessy & Ehlers, 1999; Steil & Ehlers, 2000; Murray et al., 2002)

20) COPE Inventory (Carver et al., 1989)

The COPE Inventory was developed to measure a wide range of coping responses. The items were used in two formats: a dispositional version in the baseline (i.e., Study 2A) where participants were asked how they usually coped with stress; and a time-limited version in the follow-up assessment (i.e., Study 2B) where participants were asked how they had been coping with stress since they finished the baseline study. In Study 2A, participants were asked to indicate what they generally do and feel when experiencing stressful events. This inventory includes 15 sub-scales: (1) active coping (e.g., 'I concentrate my efforts on doing something about it.'), (2) planning (e.g., 'I make a plan of action.'), (3) positive reinterpretation and growth (e.g., 'I try to grow as a person as a result of the experience'), (4) acceptance (e.g., 'I get used to the idea that it happened.'), (5) humour (e.g., 'I laugh about the situation.'), (6) religious coping (e.g., 'I put my trust in God'), (7) use of emotional social support (e.g., 'I discuss my feelings with someone.'), (8) use of instrumental social support (e.g., 'I try to get advice from someone about what to do.'), (9) mental disengagement (e.g., 'I turn to work or other substitute activities to take my mind off things'), (10) denial (e.g., 'I refuse to believe that it has happened'), (11) focus on and venting of emotions (e.g., 'I get upset and let my emotions out.'), (12) substance use (e.g., 'I use alcohol or drugs to make myself feel better.'), (13) behavioural disengagement (e.g., 'I admit to myself that I can't deal with it, and quit trying.'), (14) restraint (e.g., 'I restrain myself from doing anything too quickly.'), and (15) suppression of competing activities (e.g., 'I keep myself from getting distracted by other thoughts or activities.'). Each item was rated on a 4-point scale (from 1 = *I*

usually don't do this at all to 4 = *I usually do this a lot*). The Chinese version of the COPE Inventory (Hsu, 2003; Hsu, Chen, Wang, & Sun, 2008) was used in the Hongkongese and Taiwanese samples.

21) Trait Dissociation Questionnaire-Short Form (TDQ-SF; Murray et al., 2002)

Study 2B

The coping scales (Responses to Intrusions Questionnaire, COPE Inventory, and Trait Dissociation Questionnaire – Short Form) were given again at follow-up. Participants were asked to indicate which coping styles they had used to cope with stressors that occurred between the initial assessment and follow-up. The internal reliability (Cronbach's alpha) of each scale used in the follow-up questionnaires (of Study 2B) is shown in Table 3.14.

4.3.2 Statistical Analyses

A two-way analysis of covariance (2-way ANCOVA) was performed to examine the effects of culture (i.e., a between-subject factor with 3 levels: British, Hongkongese, and Taiwanese) and gender (i.e., a between-subject factor with 2 levels: male and female) on each unidimensional scale (e.g., Rosenberg Self-Esteem Scale). Participants' age and the characteristics of their exposure to traumatic/stressful events were controlled as covariates. For each of the multidimensional scales (e.g., Revised Personal Style Inventory), a two-way multivariate analysis of covariance (2-way MANCOVA) with culture and gender (rather than multiple ANCOVAs) was conducted to control for issues of alpha inflation. Effects of culture and/or gender were only interpreted if the MANCOVA showed a significant result. If the analyses found significant overall effect(s) of culture on the outcome variables, Bonferroni post-hoc tests were run to compare the differences between the specific levels of culture (i.e., British, Hongkongese, and Taiwanese). At baseline (T1), the characteristics of their traumatic/ stress exposure referred to the number of stressful events, the number of traumas in a lifetime, and the perceived severity of the most distressing events (from 0 to 100) in a

lifetime. In the follow-up (T2), we controlled the above variables not only at baseline but also during the follow-up period. The only exception is Study 1A (i.e., the baseline of the Oxford Study) where we only collected the data for the number of traumatic events.

4.4 Results

4.4.1 Cultural Differences in Self-Concept and Appraisals

The overall results showed that (1) sociotropy and self-esteem showed both cultural and gender differences in Study 2; (2) the Analysis-Holism Scale showed both cultural and gender differences across studies; (3) the Public and Communal Self Appraisals Measure (PCSAM) showed significant cultural differences in only Study 2 while the Revised Post-Traumatic Cognitions Inventory (PTCI2) showed the cultural differences in both studies.

For the detailed statistics, please see Table 4.1.

Revised Personal Styles Inventory (PSI-II) and Rosenberg Self-Esteem Scale (RSES)

In Study 2, there were significant cultural differences in sociotropy, $F(2,410) = 5.84$, $p = .003$, $\eta^2 = .028$ and self-esteem, $F(2,410) = 8.87$, $p < .001$, $\eta^2 = .041$. British participants ($M_{Adj} = 2.93$, $SE = 0.04$) reported a higher level of self-esteem than Taiwanese participants ($M_{Adj} = 2.73$, $SE = 0.04$, $p = .003$) and Hongkongese participants ($M_{Adj} = 2.70$, $SE = 0.04$, $p < .001$). British participants also reported a higher level of sociotropy ($M_{Adj} = 4.21$, $SE = 0.05$) than Hongkongese participants ($M_{Adj} = 3.40$, $SE = 0.05$, $p = .002$).

Study 2 also showed gender differences in sociotropy, $F(1,410) = 16.53$, $p < .001$, $\eta^2 = .039$ and self-esteem, $F(1,410) = 9.01$, $p = .003$, $\eta^2 = .021$. Female participants reported a higher level of sociotropy ($M_{Adj} = 4.22$, $SE = 0.04$) and a lower level of self-esteem ($M_{Adj} = 2.72$, $SE = 0.03$) than male participants ($M_{Adj} = 3.99$, $SE = 0.04$, $p < .001$; $M_{Adj} = 2.86$, $SE = 0.03$, $p = .003$).

Analysis-Holism Scale (AHS)

The higher the AHS score, the higher the tendency to exhibit the holistic thinking style (as opposed to the analytic thinking style). The MANCOVA found significant cultural differences on this scale in both studies: Study 1A, $F(8,236) = 3.02$, $p = .003$, $\eta^2 = .093$; Study 2A, $F(8,816) = 17.14$, $p < .001$, $\eta^2 = .144$. Subsequent univariate tests found significant main effects of culture on *perception of change* and *causality* in both studies, and on *attitude towards contradictions* only in Study 2 (For statistics, see Table 4.1). Also, British participants (Study 1A: $M_{Adj} = 5.04$, $SE = 0.11$, $p = .010$; Study 2A: $M_{Adj} = 4.86$, $SE = 0.69$) were more likely to view a phenomenon as dynamic than Taiwanese (Study 1A: $M_{Adj} = 4.47$, $SE = 0.15$, $p = .010$) and Hongkongese participants (Study 2A: $M_{Adj} = 4.46$, $SE = 0.69$, $p < .001$). Also, British participants (Study 1A: $M_{Adj} = 5.02$ $SE = 0.11$; Study 2A: $M_{Adj} = 4.97$, $SE = 0.62$) were less likely to explain causal relationship by interactions between an actor and his/her surrounding environment than Taiwanese (Study 1A: $M_{Adj} = 5.56$, $SE = 0.14$, $p = .010$; Study 2A: $M_{Adj} = 5.81$, $SE = 0.06$, $p < .001$) and Hongkongese participants (Study 1A: $M_{Adj} = 5.41$, $SE = 0.11$, $p = .024$; Study 2A: $M_{Adj} = 5.54$, $SE = 0.06$, $p < .001$). In Study 2A, British participants ($M_{Adj} = 4.69$, $SE = 0.73$) were less likely to reach a compromise on controversial issues than their Taiwanese counterparts ($M_{Adj} = 4.95$, $SE = 0.74$, $p = .047$).

The MANCOVA for both studies also found significant effects of gender on analytic vs. holistic thinking, Study 1A, $F(4,117) = 4.79$, $p = .001$, $\eta^2 = .141$; Study 2A, $F(4,407) = 5.63$, $p < .001$, $\eta^2 = .052$. Subsequent analyses on the sub-scales found significant differences for *perception of change* in both studies and *causality* and *attitude towards contradictions* in both studies Female participants (Study 1A: $M_{Adj} = 4.96$, $SE = 0.97$; Study 2A: $M_{Adj} = 4.84$, $SE = 0.56$) were more likely to take a dynamic view of the world than their male counterparts in both studies (Study 1A: $M_{Adj} = 4.55$, $SE = 0.10$, $p = .005$; Study 2A: $M_{Adj} = 4.63$, $SE = 0.56$, $p = .010$). In Study 1A, male participants ($M_{Adj} = 5.25$, $SE = 0.11$) tended to pay more attention to the relationship between objects and the field where those objects belong to

compared to female participants (M_{Adj} = 4.82, SE = 0.11, p = .007). In Study 2A, female participants were more likely to assume complex causality (M_{Adj} = 5.55, SE = 0.05) and pursue a compromised middle ground (M_{Adj} = 4.88, SE = 0.06) when it came to contradiction than male participants (M_{Adj} = 5.33, SE = 0.05, p = .002; M_{Adj} = 4.68, SE = 0.06, p = .023).

Public and Communal Self Appraisals Measure (PCSAM) and Revised Post-Traumatic Cognitions Inventory (PTCI2)

A significant effect of culture on the PTCI2 scales was found in both studies, Study 1A: F(8,236) = 2.31, p = .021, η^2 = .073; Study 2A: F(8,816) = 6.60, p <.001, η^2 = .061, while an effect of culture on the PSCAM scales was only found in Study 2A, F(6,818) = 11.74, p <.001, η^2 = .079. Noteworthily, the means suggested that on average participants disagreed with the statements in both scales but differed in the strength of disagreement. Subsequent univariate tests found significant main effects of culture on all sub-scales of the PTCI2 (i.e., negative thoughts about the self, self-blame, and preoccupation with unfairness) in both studies, and all sub-scales of the PCSAM (i.e., challenge to beliefs and belonging, challenge to communal aspects of self, and challenge to public roles and identity) only in Study 2 (For statistics, see Table 4.1). According to the PTCI2, in both studies, British participants reported stronger disagreement with negative appraisals about themselves (Study 1A: M_{Adj} = 2.02, SE = 0.16; Study 2A: M_{Adj} = 2.11, SE = 0.10), self-blame (Study 1A: M_{Adj} = 2.12, SE = 0.18; Study 2A: M_{Adj} = 2.22, SE = 0.12), and preoccupation with unfairness (Study 1A: M_{Adj} = 1.84, SE = 0.18; Study 2A: M_{Adj} = 2.48, SE = 0.11) than Hongkongese (Study 1A: M_{Adj} = 2.80, SE = 0.16, p = .001; Study 2A: M_{Adj} = 3.01, SE = 0.10, p < .001; Study 1A: M_{Adj} = 2.92, SE = 0.18, p = .004; Study 2A: M_{Adj} = 3.12, SE = 0.12, p < .001; Study 1A: M_{Adj} = 1.84, SE = 0.18, p = .011; Study 2A: M_{Adj} = 2.84, SE = 0.11, p < .001). In Study 2, cultural differences were also observed between the British and Taiwanese participants. British participants reported a significantly lower level of negative thoughts about themselves (M_{Adj}

= 2.11, *SE* = 0.10) and self-blame (M_{Adj} = 2.22, *SE* = 0.12) compared to their Taiwanese counterparts (M_{Adj} = 2.73, *SE* = 0.10, $p < .001$; (M_{Adj} = 2.86, *SE* = 0.12, $p < .001$). On the PCSAM, British participants (M_{Adj} = 2.20, *SE* = 0.12) endorsed a lower tendency to have disintegration from their social roles than their Hongkongese (M_{Adj} = 2.73, *SE* = 0.12, p = .006) and Taiwanese counterparts (M_{Adj} = 2.77, *SE* = 0.12, p = .003). Also, British participants were more likely to encounter challenges to their communal aspect of self (M_{Adj} = 3.88, *SE* = 0.09) than Taiwanese participants (M_{Adj} = 3.34, *SE* = 0.09, $p < .001$) but less likely to encounter challenges to beliefs and belonging (M_{Adj} = 2.39, *SE* = 0.12) than Hongkongese participants (M_{Adj} = 3.06, *SE* = 0.12, $p < .001$) after the traumatic/stressful events.

There was no effect of gender on participants' scores in the PTCI2 and the PCSAM.

4.4.2 Cultural Differences in Cognitive Processing Styles and Autobiographical Memory

The analyses found that (1) the effect of culture on cognitive processing styles except for state dissociation was significant across studies; (2) the centrality of events showed both cultural and gender differences in Study 2; (3) there were no cultural or gender differences for memory qualities; (4) most of the memory function scales showed cultural differences with regard to positive and stressful events in Study 2.

For the detailed statistics, please see Table 4.2.

State Dissociation Questionnaire (SDQ), Data-Driven Processing Scale (DDPS), and Lack of Self-Referent Processing Scale (LSRPS)

There were significant cultural differences in data-driven processing, Study 1A, $F(2,120) = 5.92$, $p = .004$, $\eta^2 = .090$; Study 2A, $F(2,410) = 3.06$, $p = .048$, $\eta^2 = .015$, and lack of self-referent processing, Study 1A, $F(2,120) = 4.87$, $p = .009$, $\eta^2 = .075$; Study 2A, $F(2,410) = 5.19$, $p = .006$, $\eta^2 = .025$, but not state dissociation. British participants reported a

higher level of data-driven (Study 1A: M_{Adj} = 1.97, SE = 0.15) and of lack of self-referent processing styles (Study 1A: M_{Adj} = 1.49, SE = 0.13; Study 2A: M_{Adj} = 1.56, SE = 0.08) than did Taiwanese participants (data-driven processing - Study 1A: M_{Adj} = 1.13, SE = 0.19, p = .003; lack of self-referent processing - Study 1A: M_{Adj} = 0.86, SE = 0.16, p = .012; Study 2A: M_{Adj} = 1.20, SE = 0.08, p = .004) when experiencing their most distressing events.

The interaction effect of culture and gender was just significant (p = .044) in data-driven processing in Study 1. British males (M_{Adj} = 2.13, SE = 0.20) reported a significantly higher level of data-driven processing style than other groups, but this effect was not replicated in Study 2.

Centrality of Event Scale-Short Form (CES-SF)

The centrality of positive events (but not stressful events) in Study 2 showed significant effects of culture, $F(2,410) = 6.64$, p = .001, η^2 = .031, and gender, $F(2,410)$ = 5.49, p = .020, η^2 = .013. Taiwanese participants (M_{Adj} = 4.13, SE = 0.07) were more likely to rate their most positive events as more central to their identity and life stories than their British counterparts (M_{Adj} = 3.79, SE = 0.07, $p < .001$). Male participants (M_{Adj} = 4.04, SE = 0.05) rated their most positive events as more central to their life compared to female participants (M_{Adj} = 3.86, SE = 0.05, p = .020). There were no cultural or gender differences for negative events.

Memory Questionnaire

There were no effects of culture or gender on the Memory Questionnaires assessing qualities of memory recall.

Thinking About Life Experiences (TALE) Scale

Whether memory functions showed cultural differences depends on the valence of events (For statistics, see Table 4.2). In Study 2, there were cultural differences in functions of self-continuity and directing behaviour no matter whether the memory was positive or

negative. British participants were less likely to think of positive (M_{Adj} = 2.81, SE = 0.07) or negative events (M_{Adj} = 2.73, SE = 0.06) for self-continuity than their Hongkongese (positive: M_{Adj} = 3.32, SE = 0.07, p < .001; negative: M_{Adj} = 3.36, SE = 0.06, p < .001) and Taiwanese counterparts (positive: M_{Adj} = 3.40, SE = 0.07, p < .001; negative: M_{Adj} = 3.39, SE = 0.06, p < .001). A similar pattern was also found in the function of guiding behaviour. British participants tended not to think of positive (M_{Adj} = 3.13, SE = 0.07) or negative events (M_{Adj} = 2.99, SE = 0.06) to guide their behaviour compared to Hongkongese (positive: M_{Adj} = 3.53, SE = 0.07, p < .001; negative: M_{Adj} = 3.33, SE = 0.06, p = .004) and Taiwanese participants (positive: M_{Adj} = 3.50, SE = 0.07, p < .001; negative: M_{Adj} = 3.31, SE = 0.06, p < .001). However, the function of social bonding was found with a cultural effect when it came to negative memory. British participants (M_{Adj} = 2.66, SE = 0.06) recalled negative events less frequently than Hongkongese (M_{Adj} = 3.32, SE = 0.06, p < .001) and Taiwanese (M_{Adj} = 3.36, SE = 0.06, p < .001) participants for the purpose of social bonding while Taiwanese did so significantly more frequently than Hongkongese participants. Such cultural differences in the function of social bonding were not observed when people think back or talked about positive events.

4.4.3 Cultural Differences in Coping Strategies

The present research found that (1) the main effects of culture and gender on self-concealment were significant only in Study 2; (2) there was a main effect of culture on response to intrusions and trait association only in Study 2; (3) coping styles showed both cultural and gender differences across studies; (4) there were interactions between culture and gender in trait dissociation in Study 1 and coping styles in Study 2.

For the detailed statistics, please see Tables 4.3 and 4.4.

Self-Concealment Scale

In Study 2, self-concealment showed significant a cultural difference, $F(2,410) = 4.75$, $p = .009$, $\eta^2 = .023$, and a gender difference, $F(1,410) = 4.03$, $p = .045$, $\eta^2 = .010$. British participants ($M_{Adj} = 2.95$, $SE = 0.10$) reported a higher score than their Hongkongese ($M_{Adj} = 3.21$, $SE = 0.10$, $p = .015$) and Taiwanese counterparts ($M_{Adj} = 3.18$, $SE = 0.10$, $p = .045$). Also, female participants ($M_{Adj} = 3.04$, $SE = 0.05$) were less likely to actively conceal perceived distressing information from others compared to male participants ($M_{Adj} = 3.19$, $SE = 0.05$, $p = .045$).

Response to Intrusions Questionnaire

In Study 2, there were significant cultural differences in response to intrusions, $F(6,818) = 5.60$, $p < .001$, $\eta^2 = .039$. Subsequent univariate tests found significant effects of culture on thought suppression, $F(2,410) = 4.13$, $p = .017$, $\eta^2 = .020$, and numbing, $F(2,410) = 7.00$, $p = .001$, $\eta^2 = .033$. In response to intrusions, British participants tended to engage in thought suppression ($M_{Adj} = 1.27$, $SE = 0.07$) and numbing ($M_{Adj} = 0.69$, $SE = 0.05$) compared to their Taiwanese counterparts ($M_{Adj} = 1.01$, $SE = 0.07$, $p = .022$; $M_{Adj} = 0.44$, $SE = 0.05$, $p < .001$).

Brief COPE/ COPE Inventory

MANCOVA found coping styles with significant cultural differences, Study 1A, $F(28,216) = 4.19$, $p < .001$, $\eta^2 = .352$; Study 2A, $F(30,794) = 6.60$, $p < .001$, $\eta^2 = .200$, and gender differences, Study 1A, $F(14,107) = 2.03$, $p = .022$, $\eta^2 = .210$; Study 2A, $F(15,396) = 4.43$, $p < .001$, $\eta^2 = .144$. In both studies, subsequent univariate tests found, on the one hand, cultural differences in active coping, acceptance, use of emotional support, positive framing, self-distraction, denial, and behavioural disengagement, and on the other hand, a gender difference in venting of emotions (For statistics, see Tables 4.3 and 4.4). Compared to Hongkongese participants, British participants were more likely to respond to stressful events with humor and use of emotional support but less likely to respond with active coping,

positive reframing, religious coping, denial and behavioural disengagement. Compared to Taiwanese participants, British participants were more likely to engage in substance use, but less likely to use the strategy of positive reframing. Compared to Hongkongese participants, Taiwanese participants tend to engage more frequently in acceptance but less frequently in religious coping, denial and substance use in response to stressful events. Also, female participants (Study 1A: M_{Adj} = 2.50, SE = 0.10; Study 2A: M_{Adj} = 2.38, SE = 0.05) reported to have vented out emotions more frequently than their male counterparts (Study 1A: M_{Adj} = 2.14, SE = 0.11, p = .017; Study 2A: M_{Adj} = 2.12, SE = 0.05, p <.001) did when they experienced stressful events.

Trait Dissociation Questionnaire – Short Form (TDQ-SF)

In Study 2, there were cultural differences in trait dissociation, F(2,410) = 3.62, p = .028, η^2 = .017. British participants (M_{Adj} = 0.71, SE = 0.07) reported a significantly lower score than did Hongkongese participants (M_{Adj} = 0.95, SE = 0.07, p = .003).

The interaction between culture and gender was significant on trait dissociation in Study 1, F(6,818) = 5.60, p <.001, η^2 = .039, and on coping styles in Study 2, F(30,794) = 1.57, p = .027, η^2 = .056. In Study 2, subsequent univariate tests found significant interactions in the use of emotional support, the use of instrumental support, denial, and venting (For statistics, see Tables 4.3 and 4.4). Interestingly, British males scored lower in venting of emotions while British females scored higher in the use of instrumental support and use of emotional support. Also, Hong Kong male participants score higher in denial than other sub-groups.

For a summary of all Chapter 4 results, please see Table 4.5.

Table 4.1.: Mean Scores (SD) and Group Differences in Self-Concepts and Appraisals by Culture and Gender in Study 1A and Study 2A

Scale	Category	Total	British	Hongkongese	Taiwanese	Main Effect Culture	Main Effect Gender	Interaction Culture x Gender
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df1,df2); *p*; η^2	*F* (df1,df2); *p*; η^2	*F* (df1,df2); *p*; η^2
Self-Concepts								
Revised Personal Style Inventory (PSI-II)								
MANCOVA (Sub-Scales)								
Study 1A						1.65 (4,240); .161	**3.74 (2,119); .027***	0.40 (4,240); .810
Study 2A						**5.43 (4,820); <.001***	**10.52 (2,409); <.001***	**2.85 (4,820); .023***
Autonomy								
Study 1A	Total	3.74 (0.54)	3.59 (0.53)	3.82 (0.53)	3.83 (0.52)	2.80 (2,120); .064	0.49 (1,120); .487	0.27 (2,120); .766
	Male	3.76 (0.54)	3.61 (0.58)	3.81 (0.48)	3.92 (0.54)			
	Female	3.71 (0.53)	3.58 (0.48)	3.82 (0.59)	3.75 (0.51)			
Study 2A	Total	3.88 (0.56)	3.79 (0.57)	3.88 (0.54)	3.95 (0.58)	2.43 (2,410); .089	0.33 (1, 410); .568	1.26 (2, 410); .286
	Male	3.88 (0.58)	3.84 (0.56)	3.85 (0.53)	3.95 (0.65)			
	Female	3.87 (0.55)	3.74 (0.58)	3.92 (0.54)	3.96 (0.51)			
Sociotropy								
Study 1A	Total	3.99 (0.60)	4.02 (0.71)	4.00 (0.52)	3.93 (0.56)	0.49 (2,120); .615	**6.83 (1,120); .010***	0.50 (2,120); .608
	Male	3.86 (0.63)	3.86 (0.75)	3.93 (0.47)	3.75 (0.65)			
	Female	4.12 (0.55)	4.18 (0.63)	4.06 (0.56)	4.11 (0.40)			
Study 2A	Total	4.11 (0.62)	4.20 (0.65) [a]	3.98 (0.59) [b]	4.14 (0.60) [a,b]	**5.84 (2,410); .003***	**16.53 (1,410); <.001***	2.561 (2,410); .078
	Male	3.97 (0.63)	3.95 (0.63)	3.90 (0.62)	4.04 (0.63)			
	Female	4.25 (0.58)	4.44 (0.57)	4.06 (0.56)	4.23 (0.54)			
Rosenberg Self-Esteem Scale (RSES)								
Study 1A	Total	2.86 (0.47)	2.92 (0.53)	2.84 (0.41)	2.83 (0.46)	1.43 (2,120); .244	2.45 (1,120); .120	1.84 (2,120); .164
	Male	2.94 (0.46)	2.94 (0.50)	2.87 (0.45)	3.06 (0.43)			
	Female	2.79 (0.47)	2.89 (0.57)	2.80 (0.37)	2.60 (0.37)			
Study 2A	Total	2.79 (0.49)	2.93 (0.52) [a]	2.71 (0.43) [b]	2.73 (0.49) [b]			

	Male	2.86 (0.49)	2.98 (0.54)	2.80 (0.44)	2.81 (0.49)	**8.87 (2,410); <.001***	**9.01 (1,410); .003***	0.33 (2,410); .719
	Female	2.71 (0.48)	2.88 (0.50)	2.62 (0.41)	2.64 (0.49)			
Appraisals								
Analysis-Holism Scale (AHS)								
MANCOVA (Sub-Scales)								
Study 1A						**3.02 (8,236); .003***	**4.79 (4,117); .001***	1.31 (8,236); .241
Study 2A						**17.14 (8,816); <.001***	**5.63 (4,407); <.001***	1.10 (8,816); .357
Causality								
Study 1A	Total	5.30 (0.75)	5.00 (0.80) [b]	5.40 (0.66) [a]	5.60 (0.62) [a]	**5.70 (2,120); .004***	0.13 (1,120); .722	0.69 (2,120); .505
	Male	5.28 (0.76)	4.94 (0.75)	5.32 (0.73)	5.72 (0.60)			
	Female	5.32 (0.74)	5.05 (0.86)	5.49 (0.59)	5.49 (0.65)			
Study 2A	Total	5.44 (0.82)	4.97 (0.85) [c]	5.54 (0.68) [b]	5.81 (0.67) [a]	**47.39 (2,410); <.001***	**9.52 (1,410); .002***	0.64 (2,410); .527
	Male	5.31 (0.85)	4.83 (0.86)	5.45 (0.71)	5.64 (0.76)			
	Female	5.57 (0.76)	5.11 (0.82)	5.62 (0.64)	5.98 (0.52)			
Attitude Toward Contradictions								
Study 1A	Total	4.62 (0.95)	4.45 (1.03)	4.74 (0.93)	4.68 (0.86)	0.98 (2,120); .379	2.04 (1,120); .156	1.29 (2,120); .278
	Male	4.53 (1.05)	4.53 (1.19)	4.51 (0.94)	4.57 (1.05)			
	Female	4.70 (0.84)	4.38 (0.85)	4.97 (0.88)	4.78 (0.63)			
Study 2A	Total	4.78 (0.87)	4.68 (1.02) [b]	4.73 (0.69) [a,b]	4.93 (0.86) [a]	**3.74 (2,410); .025***	**5.24 (1,410); .023***	**3.08 (2,410); .047***
	Male	4.67 (0.95)	4.42 (1.10)	4.71 (0.66)	4.89 (0.97)			
	Female	4.88 (0.78)	4.93 (0.88)	4.76 (0.71)	4.96 (0.74)			
Perception of Change								
Study 1A	Total	4.79 (0.79)	5.05 (0.71)	4.74 (0.75)	4.49 (0.86)	**4.71 (2,120); .011***	**8.30 (1,120); .005***	0.79 (2,120); .455
	Male	4.61 (0.87)	4.90 (0.66)	4.60 (0.86)	4.17 (1.03)			
	Female	4.98 (0.65)	5.19 (0.74)	4.87 (0.62)	4.82 (0.48)			
Study 2A	Total	4.73 (0.83)	4.87 (0.76) [a]	4.43 (0.87) [b]	4.91 (0.79) [a]	**11.76 (2,410); <.001***	**6.68 (1,410); .010***	0.22 (2,410); .801
	Male	4.62 (0.87)	4.73 (0.78)	4.30 (0.86)	4.85 (0.88)			
	Female	4.85 (0.78)	5.01 (0.72)	4.56 (0.86)	4.97 (0.68)			
Locus of Attention								
Study 1A	Total	5.01 (0.86)	4.97 (0.80)	4.89 (0.88)	5.25 (0.90)	1.21 (2,120); .301	**7.56 (1,120); .007***	**3.12 (2,120); .048***
	Male	5.21 (0.92)	5.16 (0.72)	4.90 (1.03)	5.74 (0.79)			
	Female	4.82 (0.76)	4.78 (0.84)	4.88 (0.73)	4.76 (0.73)			

Study 2A	Total	5.12 (0.80)	5.19 (0.79)	5.09 (0.72)	5.09 (0.88)	0.96 (2,410);	1.10 (1,410);	0.21 (2,410);
	Male	5.17 (0.86)	5.25 (0.81)	5.16 (0.74)	5.10 (1.02)	.383	.294	.809
	Female	5.08 (0.73)	5.14 (0.78)	5.03 (0.70)	5.07 (0.73)			
Public and Communal Self Appraisals Measure (PCSAM)								
MANCOVA (Sub-Scales)								
Study 1A						1.33 (6,238); .245	0.73 (3,118); .533	0.25 (6,238); .958
Study 2A						**11.74 (6,818); <.001***	1.71 (3,408); .164	0.37 (6,818); .898
Challenge to Beliefs and Belonging								
Study 1A	Total	2.48 (1.40)	2.32 (1.17)	2.56 (1.54)	2.63 (1.51)	0.47 (2,120);	1.78 (1,120);	0.14 (2,120);
	Male	2.31 (1.27)	2.23 (1.27)	2.33 (1.21)	2.40 (1.44)	.624	.184	.872
	Female	2.66 (1.50)	2.41 (1.07)	2.78 (1.80)	2.85 (1.59)			
Study 2A	Total	2.73 (1.47)	2.34 (1.30) [b]	2.99 (1.55) [a]	2.87 (1.48) [a,b]	**7.64 (2,410);**	0.65 (1,410);	0.69 (2,410);
	Male	2.67 (1.50)	2.22 (1.33)	2.84 (1.51)	2.96 (1.56)	**<.001***	.419	.504
	Female	2.79 (1.45)	2.47 (1.27)	3.14 (1.58)	2.78 (1.41)			
Challenge to Communal Aspects of Self								
Study 1A	Total	3.63 (1.06)	3.78 (0.96)	3.58 (1.22)	3.48 (0.95)	0.98 (2,120);	0.68 (1,120);	0.02 (2,120);
	Male	3.57 (1.02)	3.74 (0.98)	3.51 (1.05)	3.40 (1.07)	.379	.410	.984
	Female	3.69 (1.11)	3.83 (0.96)	3.65 (1.40)	3.56 (0.84)			
Study 2A	Total	3.60 (1.14)	3.86 (1.02) [a]	3.52 (1.22) [a,b]	3.43 (1.15) [b]	**8.42 (2,410);**	0.29 (1,410);	0.07 (2,410);
	Male	3.62 (1.19)	3.83 (1.03)	3.54 (1.20)	3.51 (1.32)	**<.001***	0.589	0.931
	Female	3.58 (1.10)	3.90 (1.01)	3.50 (1.25)	3.36 (0.95)			
Challenge to Public Roles and Identity								
Study 1A	Total	2.35 (1.28)	2.15 (1.14)	2.53 (1.35)	2.39 (1.38)	1.28 (2,120);	1.65 (1,120);	0.53 (2,120);
	Male	2.25 (1.24)	2.11 (1.13)	2.48 (1.20)	2.09 (1.45)	.281	.202	.587
	Female	2.46 (1.33)	2.18 (1.17)	2.58 (1.50)	2.69 (1.28)			
Study 2A	Total	2.57 (1.44)	2.17 (1.39) [b]	2.67 (1.41) [a]	2.86 (1.43) [a]	**7.07 (2,410);**	1.32 (1,410);	0.27 (2,410);
	Male	2.65 (1.48)	2.24 (1.38)	2.67 (1.44)	3.02 (1.55)	**<.001***	.251	.767
	Female	2.49 (1.39)	2.10 (1.41)	2.66 (1.40)	2.71 (1.29)			

Revised Post-Traumatic Cognitions Inventory (PTCI2)								
MANCOVA (Sub-Scales)								
Study 1A						**2.31 (8,236); .021***	1.89 (4,117); .116	1.22 (8,236); .288
Study 2A						**6.60 (8,816); <.001***	1.27 (4,407); .280	1.69 (8,816); .098
Negative Thoughts about the Self								
Study 1A	Total	2.37 (1.10)	2.01 (0.94) [b]	2.77 (1.16) [a]	2.32 (1.06) [a,b]	**6.7 (2,120); .002***	1.93 (1,120); .167	1.77 (2,120); .175
	Male	2.28 (1.08)	2.09 (1.08)	2.69 (1.00)	1.95 (1.04)			
	Female	2.47 (1.12)	1.94 (0.78)	2.84 (1.32)	2.70 (0.96)			
Study 2A	Total	2.62 (1.26)	2.07 (1.09) [b]	2.96 (1.28) [a]	2.82 (1.24) [a]	**21.49 (2,410); <.001***	0.03 (1,410); .857	0.28 (2,410); .753
	Male	2.60 (1.31)	1.96 (0.98)	2.95 (1.38)	2.89 (1.33)			
	Female	2.63 (1.22)	2.17 (1.18)	2.98 (1.19)	2.75 (1.15)			
Self-Blame								
Study 1A	Total	2.52 (1.25)	2.12 (1.30) [b]	2.89 (1.10) [a]	2.55 (1.25) [a,b]	**5.29 (2,120); .006***	3.67 (1,120); .058	3.48 (2,120); .034
	Male	2.36 (1.15)	2.15 (1.32)	2.88 (0.89)	1.91 (1.00)			
	Female	2.68 (1.33)	2.10 (1.31)	2.91 (1.30)	3.19 (1.16)			
Study 2A	Total	2.73 (1.45)	2.17 (1.50) [b]	3.10 (1.38) [b]	2.93 (1.30) [a]	**15.22 (2,410); <.001***	0.01 (1,410); .922	0.34 (2,410); .715
	Male	2.72 (1.45)	2.05 (1.39)	3.14 (1.44)	2.96 (1.31)			
	Female	2.75 (1.44)	2.30 (1.60)	3.05 (1.33)	2.90 (1.29)			
Overgeneralised Danger								
Study 1A	Total	3.43 (1.38)	3.30 (1.48)	3.58 (1.20)	3.41 (1.48)	0.79 (2,120); .457	**6.44 (1,120); .012***	0.78 (2,120); .462
	Male	3.14 (1.34)	3.01 (1.58)	3.43 (0.94)	2.89 (1.46)			
	Female	3.73 (1.35)	3.59 (1.35)	3.73 (1.41)	3.94 (1.33)			
Study 2A	Total	3.56 (1.43)	3.28 (1.45)	3.64 (1.30)	3.75 (1.51)	**3.28 (2,410); .039***	2.23 (1,410); .136	2.06 (2,410); .129
	Male	3.45 (1.46)	3.05 (1.29)	3.42 (1.45)	3.88 (1.54)			
	Female	3.67 (1.40)	3.52 (1.57)	3.85 (1.11)	3.63 (1.47)			
Preoccupation with Unfairness								
Study 1A	Total	2.24 (1.24)	1.85 (1.08) [b]	2.56 (1.28) [a]	2.35 (1.30) [a,b]	**4.46 (2,120); .014***	2.51 (1,120); .116	0.60 (2,120); .552
	Male	2.08 (1.20)	1.66 (1.02)	2.53 (1.12)	2.03 (1.38)			
	Female	2.40 (1.27)	2.03 (1.12)	2.59 (1.44)	2.68 (1.16)			
Study 2A	Total	2.48 (1.38)	2.07 (1.26) [b]	2.80 (1.43) [a]	2.55 (1.36) [a,b]	**10.38 (2,410); <.001***	0.08 (1,410); .772	3.19 (2,410); .042
	Male	2.49 (1.42)	1.84 (1.08)	2.87 (1.48)	2.76 (1.44)			
	Female	2.46 (1.36)	2.31 (1.39)	2.74 (1.40)	2.34 (1.25)			

Note: Statistics for the above variables derive from ANCOVA unless otherwise specified. * $p < .05$.
The superscripts (i.e., a, b, c) is the same for groups with no significant difference found but different for groups with a significant difference found.

Table 4.2.: Mean Scores (SD) and Group Differences in Cognitive Processing Styles and Memory by Culture and Gender in Study 1A and Study 2A

Scale	Category	Total	British	Hongkongese	Taiwanese	Main Effect Culture*	Main Effect Gender*	Interaction Culture x Gender*
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df1,df2); *p*	*F* (df1,df2); *p*	*F* (df1,df2); *p*
Cognitive Processing Styles								
State Dissociation Questionnaire (SDQ)								
Study 1A	Total	1.58 (0.92)	1.73 (0.90)	1.53 (0.99)	1.43 (0.82)	2.20 (2,120);	0.54 (1,120);	1.54 (2,120);
	Male	1.57 (0.91)	1.89 (0.76)	1.35 (0.98)	1.41 (0.91)	.115	.463	.218
	Female	1.60 (0.94)	1.58 (1.02)	1.71 (0.99)	1.45 (0.75)			
Study 2A	Total	1.79 (0.96)	1.76 (1.03)	1.75 (0.89)	1.85 (0.95)	0.04 (2,410);	0.21 (1,410);	2.41 (2,410);
	Male	1.79 (0.97)	1.60 (1.04)	1.84 (0.91)	1.92 (0.96)	.957	.650	.091
	Female	1.79 (0.95)	1.92 (1.01)	1.66 (0.88)	1.78 (0.94)			
Data-Driven Processing Scale (DDPS)								
Study 1A	Total	1.60 (1.04)	1.95 (0.92) [a]	1.47 (1.14) [a,b]	1.26 (0.94) [b]	**5.92 (2,120);**	0.68 (1,120);	3.20 (2,120);
	Male	1.55 (1.11)	2.15 (1.01)	1.15 (1.13)	1.26 (0.87)	**.004***	.411	.044
	Female	1.64 (0.98)	1.75 (0.79)	1.79 (1.07)	1.26 (1.04)			
Study 2A	Total	1.81 (0.98)	1.85 (1.01)	1.83 (0.97)	1.74 (0.96)	**3.06 (2,410);**	0.32 (1,410);	0.51 (2,410);
	Male	1.77 (1.02)	1.72 (1.03)	1.81 (1.04)	1.78 (1.00)	**.048***	.573	.601
	Female	1.84 (0.94)	1.98 (0.99)	1.86 (0.89)	1.69 (0.93)			
Lack of Self-Referent Processing Scale (LSRPS)								
Study 1A	Total	1.19 (0.86)	1.45 (0.92) [a]	1.05 (0.74) [a,b]	1.00 (0.88) [b]	**4.87 (2,120);**	0.58 (1,120);	0.59 (2,120);
	Male	1.17 (0.88)	1.53 (0.91)	0.93 (0.59)	1.00 (1.05)	**.009***	.447	.557
	Female	1.20 (0.86)	1.37 (0.95)	1.17 (0.85)	0.99 (0.69)			
Study 2A	Total	1.39 (0.95)	1.54 (0.97) [a]	1.36 (0.98) [a,b]	1.26 (0.89) [b]	**5.19 (2,410);**	0.24 (1,410);	1.34 (2,410);
	Male	1.39 (1.00)	1.42 (1.01)	1.39 (1.02)	1.37 (0.97)	**.006***	.626	.262
	Female	1.39 (0.91)	1.67 (0.91)	1.34 (0.94)	1.16 (0.80)			
Memory – Positive Events								
Centrality of Event Scale - Short Form (CES-SF) – Positive Events								

Study 1A	Total	4.21 (0.83)	4.01 (0.94)	4.38 (0.67)	4.25 (0.86)	2.01 (2,120);	0.61 (1,120);	0.05 (2,120);
	Male	4.28 (0.85)	4.08 (0.99)	4.43 (0.64)	4.37 (0.88)	.139	.437	.952
	Female	4.14 (0.82)	3.95 (0.90)	4.33 (0.70)	4.12 (0.84)			
Study 2A	Total	3.95 (0.81)	3.77 (0.85) [b]	3.91 (0.79) [a,b]	4.18 (0.74) [a]	**6.64 (2,410);**		0.88 (2,410);
	Male	4.04 (0.77)	3.77 (0.89)	4.06 (0.67)	4.29 (0.64)	**.001***	**5.49 (1,410);**	.415
	Female	3.87 (0.84)	3.76 (0.81)	3.77 (0.88)	4.08 (0.81)		**.020***	
Memory Questionnaire – Positive Events								
MANCOVA (Sub-Scales)								
Study 1A						1.20 (6,238); .308	0.47 (3,118); .707	0.47 (6,238); .833
Study 2A						1.58 (6,818); .150	1.21 (3,408); .306	1.09 (6,818); .366
Disorganisation								
Study 1A	Total	0.73 (0.72)	0.79 (0.76)	0.72 (0.73)	0.66 (0.63)	0.39 (2,120);	0.44 (1,120);	0.61 (2,120);
	Male	0.78 (0.71)	0.89 (0.81)	0.68 (0.57)	0.78 (0.75)	.678	.510	.544
	Female	0.68 (0.72)	0.69 (0.70)	0.77 (0.88)	0.55 (0.49)			
Study 2A	Total	0.89 (0.87)	0.96 (0.94)	0.97 (0.93)	0.73 (0.71)	2.52 (2,410);	0.01 (1,410);	0.49 (2,410);
	Male	0.88 (0.88)	0.94 (0.96)	1.03 (0.93)	0.66 (0.67)	.082	.913	.611
	Female	0.90 (0.87)	0.98 (0.93)	0.92 (0.94)	0.79 (0.74)			
Disjointedness								
Study 1A	Total	1.49 (0.77)	1.45 (0.70)	1.41 (0.84)	1.68 (0.75)	1.25 (2,120);	0.01 (1,120);	1.15 (2,120);
	Male	1.47 (0.82)	1.50 (0.78)	1.26 (0.77)	1.75 (0.89)	.290	.937	.321
	Female	1.51 (0.72)	1.40 (0.62)	1.56 (0.89)	1.61 (0.60)			
Study 2A	Total	1.59 (0.85)	1.62 (0.86)	1.62 (0.88)	1.53 (0.81)	0.41 (2,410);	0.54 (1,410);	1.11 (2,410);
	Male	1.61 (0.84)	1.56 (0.85)	1.69 (0.85)	1.59 (0.83)	.664	.463	.329
	Female	1.56 (0.86)	1.68 (0.88)	1.54 (0.91)	1.47 (0.80)			
Flashback Quality								
Study 1A	Total	50.25 (16.94)	47.63 (17.62)	49.46 (18.06)	55.38 (13.12)	1.89 (2,120);	1.03 (1,120);	0.04 (2,120);
	Male	48.41 (17.80)	45.33 (19.36)	48.00 (17.95)	53.63 (14.76)	.155	.313	.958
	Female	52.09 (15.97)	49.92 (15.76)	50.92 (18.44)	57.13 (11.48)			
Study 2A	Total	52.19 (17.34)	50.16 (17.17)	53.56 (18.23)	52.84 (16.52)	2.05 (2,410);	3.60 (1,410);	1.61 (2,410);
	Male	53.76 (17.79)	50.74 (17.50)	53.69 (18.49)	56.86 (17.08)	.130	0.059	.202
	Female	50.61 (16.77)	49.57 (16.94)	53.43 (18.10)	48.83 (15.00)			
Thinking About Life Experiences (TALE) Scale – Positive Events								

MANCOVA (Sub-Scales)								
Study 1A						1.56 (6,238); .159	1.05 (3,118); .375	0.24 (6,238); .961
Study 2A						**8.53 (6,818); <.001***	1.53 (3,408); .206	0.86 (6,818); .524
Self-Continuity								
Study 1A	Total	3.17 (0.77)	3.04 (0.93)	3.15 (0.72)	3.40 (0.48)	2.30 (2,120); .105	0.70 (1,120); .404	0.18 (2,120); .839
	Male	3.09 (0.86)	2.91 (1.05)	3.09 (0.82)	3.35 (0.53)			
	Female	3.25 (0.66)	3.17 (0.79)	3.20 (0.63)	3.45 (0.44)			
Study 2A	Total	3.17 (0.83)	2.79 (0.87) [b]	3.29 (0.69) [a]	3.43 (0.79) [a]	**22.21 (2,410); <.001***	0.03 (1,410); .863	0.53 (2,410); .591
	Male	3.17 (0.84)	2.73 (0.87)	3.32 (0.70)	3.46 (0.78)			
	Female	3.18 (0.82)	2.86 (0.87)	3.26 (0.69)	3.41 (0.81)			
Social Bonding								
Study 1A	Total	3.14 (0.77)	3.23 (0.91)	3.08 (0.75)	3.09 (0.54)	0.35 (2,120); .708	2.40 (1,120); .124	0.18 (2,120); .833
	Male	3.02 (0.75)	3.18 (0.87)	2.93 (0.71)	2.94 (0.63)			
	Female	3.25 (0.77)	3.28 (0.97)	3.23 (0.77)	3.24 (0.39)			
Study 2A	Total	3.27 (0.85)	3.23 (0.90)	3.23 (0.87)	3.34 (0.78)	0.02 (2,410); .978	0.01 (1,410); .931	0.99 (2,410); .373
	Male	3.26 (0.87)	3.13 (0.97)	3.25 (0.85)	3.41 (0.78)			
	Female	3.27 (0.83)	3.34 (0.81)	3.20 (0.90)	3.28 (0.78)			
Directing Behaviour								
Study 1A	Total	3.37 (0.73)	3.24 (0.86)	3.42 (0.66)	3.47 (0.59)	0.70 (2,120); .498	1.80 (1,120); .182	0.20 (2,120); .815
	Male	3.32 (0.83)	3.14 (0.92)	3.42 (0.79)	3.43 (0.72)			
	Female	3.42 (0.62)	3.33 (0.80)	3.43 (0.53)	3.51 (0.44)			
Study 2A	Total	3.39 (0.79)	3.11 (0.90) [b]	3.48 (0.70) [a]	3.56 (0.70) [a]	**11.6 (2,410); <.001***	3.20 (1,410); .074	2.27 (2,410); .104
	Male	3.32 (0.86)	2.93 (0.96)	3.49 (0.73)	3.54 (0.74)			
	Female	3.45 (0.72)	3.30 (0.81)	3.47 (0.67)	3.58 (0.66)			
Memory – Stressful Events								
Centrality of Event Scale – Short Form (CES-SF) – Stressful Events								
Study 1A	Total	3.61 (0.97)	3.34 (0.97)	3.82 (0.94)	3.72 (0.93)	2.73 (2,120); .069	3.09 (1,120); .081	2.69 (2,120); .072
	Male	3.48 (1.02)	2.96 (0.97)	3.82 (0.93)	3.77 (0.97)			
	Female	3.75 (0.90)	3.73 (0.84)	3.81 (0.96)	3.68 (0.93)			
Study 2A	Total	3.48 (0.98)	3.30 (1.03)	3.5 (0.99)	3.65 (0.89)	2.25 (2,410); .107	0.58 (1,410); .445	0.92 (2,410); .397
	Male	3.43 (1.01)	3.13 (1.08)	3.46 (0.93)	3.70 (0.95)			
	Female	3.53 (0.95)	3.46 (0.96)	3.54 (1.06)	3.59 (0.84)			

Memory Questionnaire – Stressful Events								
MANCOVA (Sub-Scales)								
Study 1A						0.92 (6,238); .479	0.76 (3,118); .516	0.82 (6,238); .557
Study 2A						**2.12 (6,818); .048***	0.18 (3,408); .912	0.65 (6,818); .694
Disorganization								
Study 1A	Total	1.02 (1.01)	0.94 (1.00)	1.04 (1.11)	1.10 (0.87)	0.28 (2,120); .756	0.47 (1,120); .493	1.53 (2,120); .222
	Male	1.05 (1.01)	0.83 (0.96)	1.04 (1.08)	1.39 (0.91)			
	Female	0.99 (1.02)	1.05 (1.05)	1.04 (1.17)	0.81 (0.74)			
Study 2A	Total	1.26 (1.02)	1.23 (1.18)	1.31 (0.95)	1.22 (0.92)	0.51 (2,410); .603	0.18 (1,410);.675	1.09 (2,410); .338
	Male	1.23 (1.02)	1.17 (1.12)	1.39 (1.07)	1.13 (0.86)			
	Female	1.28 (1.02)	1.3 (1.24)	1.24 (0.81)	1.31 (0.98)			
Disjointedness								
Study 1A	Total	1.50 (0.90)	1.56 (0.93)	1.39 (0.96)	1.57 (0.76)	0.52 (2,120); .598	0.19 (1,120); .668	0.23 (2,120); .798
	Male	1.44 (0.94)	1.54 (1.02)	1.26 (0.95)	1.55 (0.78)			
	Female	1.56 (0.86)	1.58 (0.85)	1.52 (0.96)	1.59 (0.77)			
Study 2A	Total	1.67 (0.93)	1.78 (0.96)	1.52 (0.91)	1.71 (0.89)	2.31 (2,410); .101	0.18 (1,410); .668	0.80 (2,410); .451
	Male	1.63 (0.96)	1.67 (0.96)	1.55 (0.92)	1.67 (0.99)			
	Female	1.71 (0.90)	1.89 (0.95)	1.49 (0.91)	1.74 (0.78)			
Flashback								
Study 1A	Total	42.45 (21.58)	38.71 (22.19)	43.33 (21.49)	46.75 (20.46)	1.27 (2,120); .285	1.91 (1,120); .169	0.52 (2,120); .599
	Male	39.50 (21.76)	34.67 (23.04)	39.25 (22.18)	47.13 (17.89)			
	Female	45.41 (21.15)	42.75 (21.00)	47.42 (20.42)	46.38 (23.35)			
Study 2A	Total	41.81 (23.45)	40.07 (22.66)	40.24 (24.16)	45.11 (23.33)	0.59 (2,410); .557	0.44 (1,410); .506	0.14 (2,410); .867
	Male	40.42 (23.44)	37.37 (22.19)	38.46 (23.55)	45.43 (24.06)			
	Female	43.2 (23.44)	42.77 (22.97)	42.03 (24.79)	44.8 (22.75)			
Thinking About Life Experiences (TALE) Scale – Stressful Events								
MANCOVA (Sub-Scales)								
Study 1A						**2.89 (6,238); .010***	1.11 (3,118); .346	0.34 (6,238); .916
Study 2A						**19.76 (6,818); <.001***	2.58 (3,408); .053	0.71 (6,818); .641

Self-Continuity								
Study 1A	Total	2.99 (0.82)	2.64 (0.93) [b]	3.19 (0.66) [a]	3.21 (0.71) [a]	**7.34 (2,120);**	2.67 (1,120);	0.42 (2,120);
	Male	2.86 (0.84)	2.43 (0.93)	3.12 (0.71)	3.13 (0.61)	**<.001***	.105	.656
	Female	3.11 (0.80)	2.84 (0.91)	3.26 (0.61)	3.30 (0.80)			
Study 2A	Total	3.16 (0.75)	2.73 (0.75) [b]	3.31 (0.62) [a]	3.44 (0.67) [a]	**43.08**	0.14 (1,120);	0.96 (2,120);
	Male	3.14 (0.78)	2.63 (0.77)	3.32 (0.64)	3.46 (0.68)	**(2,120);**	.713	.383
	Female	3.18 (0.71)	2.83 (0.72)	3.31 (0.6)	3.42 (0.67)	**<.001***		
Social Bonding								
Study 1A	Total	2.95 (0.81)	2.88 (0.97)	2.94 (0.79)	3.07 (0.56)	0.13 (2,120);	0.30 (1,120);	0.06 (2,120);
	Male	2.93 (0.82)	2.84 (0.98)	2.89 (0.80)	3.10 (0.54)	.879	.583	.946
	Female	2.97 (0.81)	2.92 (0.98)	2.98 (0.78)	3.04 (0.59)			
Study 2A	Total	3.11 (0.73)	2.66 (0.77) [b]	3.29 (0.57) [a]	3.40 (0.60) [a]	**50.22**	3.88 (1,120);	1.45 (2,120);
	Male	3.05 (0.77)	2.51 (0.76)	3.27 (0.65)	3.36 (0.57)	**(2,120);**	.050	.235
	Female	3.18 (0.69)	2.81 (0.76)	3.31 (0.48)	3.43 (0.63)	**<.001***		
Directing Behaviour								
Study 1A	Total	3.30 (0.82)	3.11 (1.04)	3.38 (0.65)	3.44 (0.62)	1.06 (2,120);	3.06 (1,120);	0.90 (2,120);
	Male	3.20 (0.80)	2.88 (0.93)	3.36 (0.72)	3.43 (0.55)	.349	.083	.410
	Female	3.39 (0.84)	3.34 (1.12)	3.41 (0.59)	3.45 (0.71)			
Study 2A	Total	3.19 (0.72)	2.98 (0.77) [b]	3.24 (0.67) [a]	3.35 (0.67) [a]	**8.54 (2,120);**	0.01 (1,120);	1.67 (2,120);
	Male	3.18 (0.75)	2.87 (0.77)	3.26 (0.71)	3.40 (0.68)	**<.001***	.920	.189
	Female	3.21 (0.68)	3.10 (0.76)	3.22 (0.63)	3.30 (0.65)			

Note: Statistics for the above variables derive from ANCOVA unless otherwise specified. * $p < .05$.
The superscripts (i.e., a, b, c) is the same for groups with no significant difference found but different for groups with a significant difference found.

Table 4.3.: Mean Scores (SD) and Group Differences in Coping Strategies by Culture and Gender in Study 1A – Baseline (Responses to Stressors before the Baseline) and Study 1B – Follow-up (Responses to Stressors between T1 and T2)

Scale	Category	Total	British	Hongkongese	Taiwanese	Main Effect Culture	Main Effect Gender	Interaction Culture x Gender
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df1,df2); *p*	*F* (df1,df2); *p*	*F* (df1,df2); *p*
Self-Concealment Scale (SCS)								
Study 1A	Total	2.79 (0.79)	2.59 (0.82)	2.94 (0.72)	2.84 (0.79)	2.84 (2,120);	0.09 (1,120);	0.21 (2,120),
	Male	2.80 (0.78)	2.56 (0.77)	3.01 (0.64)	2.85 (0.94)	.062	.767	.810
	Female	2.77 (0.80)	2.62 (0.89)	2.87 (0.79)	2.84 (0.65)			
Response to Intrusions Questionniare								
MANCOVA (Sub-Scales)								
Study 1A						1.28 (6, 238);	1.37 (3,118);	0.85 (6,238);
						.267	.254	.533
Study 1B						1.06 (6,216);	0.39 (3,107);	0.26 (6,216);
						.387	.763;	.955
Thought Suppression								
Study 1A	Total	1.18 (0.76)	1.12 (0.83)	1.09 (0.76)	1.39 (0.65)	2.52 (2,120);	2.73 (1,120);	0.50 (2,120);
	Male	1.03 (0.76)	0.93 (0.77)	1.04 (0.71)	1.17 (0.82)	.084	.101	.610
	Female	1.32 (0.75)	1.31 (0.86)	1.15 (0.81)	1.60 (0.33)			
Study 1B	Total	1.06 (0.67)	1.01 (0.73)	0.95 (0.67)	1.28 (0.53)	1.29 (2,109);	0.24 (1,109);	0.03 (2,109);
	Male	1.03 (0.69)	0.98 (0.72)	0.92 (0.71)	1.27 (0.60)	.279	.627	.971
	Female	1.08 (0.66)	1.04 (0.76)	0.99 (0.64)	1.30 (0.46)			
Rumination								
Study 1A	Total	0.77 (0.64)	0.76 (0.72)	0.73 (0.62)	0.84 (0.55)	0.05 (2,120),	3.30 (1,120);	0.34 (2,120);
	Male	0.68 (0.63)	0.63 (0.72)	0.70 (0.56)	0.72 (0.63)	.947	.072	.710
	Female	0.87 (0.64)	0.89 (0.72)	0.77 (0.69)	0.97 (0.43)			
Study 1B	Total	0.82 (0.70)	0.75 (0.68)	0.75 (0.67)	1.04 (0.74)	1.33 (2,109);	0.11 (1,109);	0.09 (2,109);
	Male	0.81 (0.70)	0.72 (0.69)	0.73 (0.64)	1.05 (0.80)	.268	.739	.916
	Female	0.83 (0.69)	0.78 (0.68)	0.77 (0.71)	1.03 (0.70)			
Numbing								
Study 1A	Total	0.59 (0.56)	0.64 (0.56)	0.54 (0.60)	0.58 (0.49)	0.12 (2,120):	2.40 (1,120);	1.83 (2,120);
	Male	0.52 (0.57)	0.62 (0.51)	0.53 (0.71)	0.35 (0.37)	.889	.124	.164
	Female	0.66 (0.54)	0.67 (0.61)	0.54 (0.48)	0.81 (0.50)			

Study 1B	Total	0.44 (0.49)	0.52 (0.54)	0.35 (0.42)	0.45 (0.51)	1.86 (2,109);	0.13 (1,109);	0.27 (2,109);
	Male	0.43 (0.45)	0.51 (0.50)	0.38 (0.46)	0.38 (0.38)	.160	.720	.764
	Female	0.45 (0.53)	0.52 (0.58)	0.32 (0.39)	0.53 (0.63)			
Brief COPE								
MANCOVA (Sub-Scales)								
Study 1A						**4.19 (28,216); <.001***	**2.03 (14,107); .022***	1.11 (28,216); .325
Study 1B						**1.67 (28,194); .024***	0.89 (14,97); .574	1.00 (28,194); .465
Active Coping								
Study 1A	Total	2.62 (0.86)	2.09 (0.92) [b]	2.79 (0.63) [a]	3.14 (0.64) [a]	**17.01**	0.13 (1,120);	0.58 (2,120);
	Male	2.63 (0.91)	2.08 (0.90)	2.75 (0.71)	3.28 (0.71)	**(2,120); <.001***	.718	.561
	Female	2.60 (0.82)	2.10 (0.96)	2.83 (0.55)	3.00 (0.55)			
Study 1B	Total	2.95 (1.40)	3.34 (1.96) [a]	2.50 (0.89) [b]	3.05 (0.71) [a,b]	**7.48 (2,109); <.001***	0.18 (1,109); .669	0.80 (2,109); .453
	Male	3.04 (1.43)	3.59 (2.03)	2.39 (0.62)	3.19 (0.79)			
	Female	2.87 (1.38)	3.11 (1.89)	2.61 (1.09)	2.90 (0.59)			
Planning								
Study 1A	Total	2.55 (0.92)	1.89 (0.90) [b]	2.83 (0.66) [a]	3.11 (0.66) [a]	**24.87**	0.04 (1,120);	0.63 (2,120);
	Male	2.56 (0.97)	1.90 (0.99)	2.77 (0.68)	3.25 (0.71)	**(2,120); <.001***	.835	.532
	Female	2.53 (0.87)	1.88 (0.82)	2.90 (0.66)	2.97 (0.59)			
Study 1B	Total	2.90 (1.48)	3.27 (2.10) [a]	2.46 (0.93) [b]	3.00 (0.64) [a,b]	**4.80 (2,109); .010***	0.00 (1,109); .994	0.07 (2,109); .935
	Male	2.90 (1.42)	3.30 (1.99)	3.03 (0.81)	3.03 (0.81)			
	Female	2.90 (1.54)	3.24 (2.25)	2.96 (0.41)	2.96 (0.41)			
Positive Reframing								
Study 1A	Total	2.44 (0.87)	2.06 (0.91) [b]	2.54 (0.76) [a]	2.86 (0.74) [a]	**6.41 (2,120); .002***	0.01 (1,120); .911	1.69 (2,120); .189
	Male	2.45 (0.84)	2.13 (0.85)	2.38 (0.65)	3.03 (0.83)			
	Female	2.44 (0.91)	2.00 (0.99)	2.71 (0.85)	2.69 (0.63)			
Study 1B	Total	2.46 (1.28)	2.60 (1.74)	2.14 (0.90)	2.72 (0.82)	2.75 (2,109);	0.18 (1,109);	0.42 (2,109);
	Male	2.38 (1.29)	2.39 (1.83)	2.16 (0.76)	2.66 (0.96)	.068	.669	.661
	Female	2.54 (1.28)	2.80 (1.68)	2.13 (1.02)	2.79 (0.64)			
Acceptance								
Study 1A	Total	2.80 (0.76)	2.48 (0.84) [b]	2.92 (0.61) [a]	3.11 (0.66) [a]	**7.14 (2,120); .001***	1.06 (1,120); .306	1.15 (2,120); .320
	Male	2.71 (0.80)	2.33 (0.82)	2.77 (0.64)	3.19 (0.75)			
	Female	2.89 (0.71)	2.63 (0.86)	3.06 (0.56)	3.03 (0.56)			
Study 1B	Total	3.16 (1.32)	3.72 (1.81) [a]	2.73 (0.78) [b]	2.97 (0.66) [a,b]			

	Male	2.07 (1.38)	3.45 (1.99)	2.73 (0.77)	3.00 (0.82)	**10.69**	0.07 (1,109);	1.13 (2,109);
	Female	3.26 (1.27)	3.98 (1.63)	2.74 (0.81)	2.93 (0.43)	**(2,109); <.001***	.786	.327
Humor								
Study 1A	Total	1.90 (0.80)	1.97 (0.94)	1.81 (0.66)	1.94 (0.80)	0.31 (2,120);	1.07 (1,120);	0.25 (2,120);
	Male	1.98 (0.80)	2.02 (0.94)	1.96 (0.62)	1.97 (0.87)	.733	.304	.778
	Female	1.82 (0.80)	1.91 (0.95)	1.67 (0.67)	1.91 (0.76)			
Study 1B	Total	2.03 (0.95)	2.42 (1.76) [a]	1.66 (0.72) [b]	2.03 (0.95) [a,b]	**4.31 (2,109);**	0.75 (1,109);	2.44 (2,109);
	Male	1.88 (1.23)	1.95 (1.67)	1.70 (0.80)	2.00 (1.05)	**.016***	.388	.092
	Female	2.20 (1.34)	2.87 (1.76)	1.61 (0.66)	2.07 (0.85)			
Religion								
Study 1A	Total	1.66 (0.80)	1.47 (0.79)	1.75 (0.88)	1.80 (0.65)	2.61 (2,120);	0.06 (1,120);	0.74 (2,120);
	Male	1.62 (0.75)	1.52 (0.77)	1.60 (0.78)	1.78 (0.68)	.078	.808	.479
	Female	1.70 (0.85)	1.42 (0.82)	1.90 (0.97)	1.81 (0.63)			
Study 1B	Total	1.62 (1.03)	1.76 (1.42)	1.46 (0.70)	1.67 (0.70)	1.48 (2,109);	0.01 (1,109);	0.18 (2,109);
	Male	1.58 (0.96)	1.73 (1.26)	1.34 (0.70)	1.69 (0.79)	.232	.923	.834
	Female	1.67 (1.10)	1.78 (1.59)	1.57 (0.70)	1.64 (0.60)			
Using Emotional Support								
Study 1A	Total	2.55 (0.93)	2.19 (1.04) [b]	2.72 (0.84) [a]	2.84 (0.72) [a]	**6.11 (2,120);**	2.05 (1,120);	0.08 (2,120);
	Male	2.42 (0.95)	2.06 (1.11)	2.63 (0.81)	2.66 (0.75)	**.003***	.155	.920
	Female	2.68 (0.91)	2.31 (0.98)	2.81 (0.87)	3.03 (0.67)			
Study 1B	Total	2.90 (1.44)	3.40 (1.95) [a]	2.48 (0.98) [b]	2.77 (0.81) [b]	**8.20 (2,109);**	8.28 (1,109);	1.92 (2,109);
	Male	2.54 (1.28)	2.80 (1.80)	2.34 (0.84)	2.47 (0.90)	**<.001***	.005	.152
	Female	3.25 (1.52)	3.98 (1.95)	2.61 (1.11)	3.11 (0.53)			
Using Instrumental Support								
Study 1A	Total	2.57 (0.94)	2.13 (0.99) [b]	2.71 (0.82) [a]	3.02 (0.76) [a]	**10.91**	0.03 (1,120);	0.26 (2,120);
	Male	2.52 (0.95)	2.15 (1.09)	2.60 (0.75)	2.97 (0.83)	**(2,120); <.001***	.875	.772
	Female	2.61 (0.93)	2.10 (0.90)	2.81 (0.89)	3.06 (0.70)			
Study 1B	Total	2.84 (1.55)	3.24 (2.23) [a]	2.41 (0.94) [b]	2.88 (0.68) [a,b]	**4.38 (2,109);**	2.72 (1,109);	0.59 (2,109);
	Male	2.58 (1.42)	2.82 (2.15)	2.27 (0.72)	2.66 (0.72)	**.015***	.102	.559
	Female	3.11 (1.64)	3.65 (2.27)	2.54 (1.11)	3.14 (0.53)			
Self-Distraction								
Study 1A	Total	2.74 (0.90)	2.40 (1.04) [b]	2.88 (0.78) [a]	3.06 (0.68) [a]	**5.77 (2,120);**	**7.92 (1,120);**	0.32 (2,120);
	Male	2.52 (0.84)	2.25 (0.93)	2.63 (0.80)	2.78 (0.66)	**.004***	**.006***	.726

	Female	2.96 (0.91)	2.54 (1.13)	3.13 (0.68)	3.34 (0.60)			
Study 1B	Total	2.73 (1.41)	2.33 (0.78) [a]	2.33 (0.78) [b]	2.52 (0.84) [b]	**9.33 (2,109); <.001***	0.91 (1,109); .342	0.67 (2,109); .516
	Male	2.65 (1.46)	2.19 (0.73)	2.25 (0.78)	2.19 (0.73)			
	Female	2.80 (1.36)	2.89 (0.81)	2.41 (0.79)	2.89 (0.81)			
Denial								
Study 1A	Total	1.30 (0.51)	1.09 (0.27) [b]	1.34 (0.55) [a]	1.53 (0.61) [a]	**7.48 (2,120); <.001***	1.22 (1,120); .273	0.34 (2,120); .716
	Male	1.24 (0.44)	1.08 (0.24)	1.25 (0.47)	1.47 (0.53)			
	Female	1.35 (0.57)	1.10 (0.29)	1.09 (0.27)	1.60 (0.69)			
Study 1B	Total	1.25 (0.43)	1.28 (0.96)	1.22 (0.48)	1.25 (0.43)	0.20 (2,109); .816	0.00 (1,109); .995	0.52 (2,109); .596
	Male	1.27 (0.72)	1.30 (1.03)	1.32 (0.57)	1.16 (0.30)			
	Female	1.23 (0.66)	1.26 (0.92)	1.13 (0.38)	1.36 (0.53)			
Venting								
Study 1A	Total	2.16 (0.90)	1.73 (0.73) [b]	2.64 (0.86) [a]	2.63 (0.76) [a]	**16.85 (2,120); <.001***	**5.86 (1,120); .017***	0.37 (2,120); .693
	Male	2.16 (0.90)	1.60 (0.68)	2.54 (0.88)	2.41 (0.84)			
	Female	2.43 (0.88)	1.85 (0.77)	2.73 (0.83)	2.84 (0.63)			
Study 1B	Total	2.60 (1.29)	2.93 (1.80) [a]	2.27 (0.88) [b]	2.60 (0.61) [a,b]	**5.82 (2,109); .004***	0.87 (1,109); .353	0.34 (2,109); .713
	Male	2.45 (1.33)	2.91 (1.94)	2.07 (0.76)	2.34 (0.57)			
	Female	2.75 (1.24)	2.96 (1.80)	2.46 (0.95)	2.89 (0.53)			
Substance Use								
Study 1A	Total	1.43 (0.75)	1.33 (0.75)	1.46 (0.71)	1.53 (0.81)	0.47 (2,120); .626	0.34 (1,120); .559	3.55 (2,120); .032
	Male	1.44 (0.78)	1.40 (0.82)	1.60 (0.85)	1.25 (0.58)			
	Female	1.42 (0.72)	1.27 (0.68)	1.31 (0.53)	1.81 (0.93)			
Study 1B	Total	1.47 (1.09)	1.79 (1.58) [a]	1.20 (0.49) [b]	1.38 (0.70) [a,b]	**4.14 (2,109); .018***	0.19 (1,109); .667	1.79 (2,109); .171
	Male	1.48 (1.23)	1.98 (1.85)	1.25 (0.53)	1.09 (0.38)			
	Female	1.46 (0.95)	1.61 (1.27)	1.15 (0.46)	1.71 (0.85)			
Behavioural Disengagement								
Study 1A	Total	1.55 (0.61)	1.25 (0.44) [b]	1.89 (0.65) [a]	1.48 (0.52) [b]	**17.50 (2,120); <.001***	2.56 (1,120); .112	1.57 (2,120); .212
	Male	1.48 (0.56)	1.27 (0.42)	1.81 (0.59)	1.28 (0.48)			
	Female	1.62 (0.65)	1.23 (0.47)	1.96 (0.71)	1.69 (0.48)			
Study 1B	Total	1.54 (0.96)	1.60 (1.32)	1.53 (0.74)	1.47 (0.51)	0.41 (2,109); .665	2.74 (1,109); .101	0.83 (2,109); .440
	Male	1.39 (0.75)	1.36 (1.00)	1.52 (0.66)	1.25 (0.41)			
	Female	1.70 (1.11)	1.83 (1.56)	1.54 (0.82)	1.71 (0.51)			
Self-Blame								
Study 1A	Total	2.05 (0.74)	1.74 (0.86) [b]	2.31 (0.69) [a]	2.14 (0.41) [a]			

	Male	2.08 (0.71)	2.00 (0.94)	2.06 (0.40)	2.06 (0.40)	**9.04 (2,120); <.001***	0.18 (1,120); .670	4.52 (2,120); .013
	Female	2.03 (0.78)	1.48 (0.68)	2.46 (0.74)	2.22 (0.41)			
Study 1B	Total	2.51 (1.52)	3.14 (2.09) [a]	2.20 (0.89) [b]	2.03 (0.81) [b]	**7.44 (2,109); <.001***	0.06 (1,109); .813	0.12 (2,109); .885
	Male	2.42 (1.53)	3.14 (2.14)	2.16 (0.79)	1.78 (0.82)			
	Female	2.61 (1.52)	3.15 (2.09)	2.24 (1.00)	2.32 (0.72)			
Trait Dissociation Questionnaire								
Study 1A	Total	0.65 (0.58)	0.65 (0.54)	0.68 (0.65)	0.62 (0.57)	0.35 (2,120); .709	1.38 (1,120); .243	**3.47 (2,120); .034***
	Male	0.60 (0.63)	0.72 (0.65)	0.65 (0.73)	0.34 (0.33)			
	Female	0.71 (0.53)	0.57 (0.40)	0.71 (0.57)	0.90 (0.62)			
Study 1B	Total	0.56 (0.58)	0.46 (0.45)	0.58 (0.59)	0.67 (0.72)	0.09 (2,109); .919	2.47 (1,109); .119	2.81 (2,109); .065
	Male	0.50 (0.56)	0.49 (0.41)	0.57 (0.69)	0.41 (0.58)			
	Female	0.62 (0.60)	0.43 (0.50)	0.58 (0.48)	0.98 (0.76)			

Note: Statistics for the above variables derive from ANCOVA unless otherwise specified. * $p < .05$.
The superscripts (i.e., a, b, c) is the same for groups with no significant difference found but different for groups with a significant difference found.

Table 4.4.: Mean Scores (SD) and Group Differences in Self-concealment, Response to Intrusions, Coping Styles, Trait Dissociation by Culture and Gender in Study 2A – Baseline (Responses to Stressors before the Baseline) and Study 2B – Follow-up (Responses to Stressors between T1 and T2)

Scale	Category	Total	British	Hongkongese	Taiwanese	Main Effect Culture	Main Effect Gender	Interaction Culture x Gender
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df1,df2); *p*	*F* (df1,df2); *p*	*F* (df1,df2); *p*
Self-Concealment Scale (SCS)								
Study 2A	Total	3.11 (0.81)	2.95 (0.78) [b]	3.18 (0.79) [a]	3.21 (0.83) [a]	**4.75 (2,410); .009***	**4.03 (1,410); .045***	0.57 (2,410); .567
	Male	3.18 (0.79)	3.06 (0.75)	3.24 (0.74)	3.25 (0.87)			
	Female	3.04 (0.82)	2.83 (0.80)	3.13 (0.84)	3.17 (0.79)			
Response to Intrusions Questionnaire								
MANCOVA (Sub-Scales)								
Study 2A						**5.60 (6,818); <.001***	1.13 (3,408); .335	0.95 (6,818); .461
Study 2B						**4.62 (6,710); <.001***	0.69 (3,354); .559	0.99 (6,710); .428
Thought suppression								
Study 2A	Total	1.11 (0.80)	1.27 (0.81) [a]	1.01 (0.78) [a,b]	1.07 (0.80) [b]	**4.13 (2,410); .017***	0.97 (1,410); .326	2.09 (2,410); .125
	Male	1.07 (0.79)	1.11 (0.81)	1.04 (0.80)	1.06 (0.76)			
	Female	1.16 (0.82)	1.43 (0.79)	0.98 (0.77)	1.08 (0.83)			
Study 2B	Total	1.06 (0.67)	1.28 (0.53) [a]	0.95 (0.67) [b]	1.28 (0.53) [a,b]	**3.25 (2,356); .040***	0.01 (1,356); .935	0.55 (2,356); .577
	Male	1.03 (0.69)	1.27 (0.60)	0.92 (0.71)	1.27 (0.60)			
	Female	1.08 (0.66)	1.30 (0.46)	0.99 (0.64)	1.30 (0.46)			
Rumination								
Study 2A	Total	0.88 (0.67)	0.81 (0.62)	0.94 (0.74)	0.90 (0.65)	2.31 (2,410); .100	0.20 (1,410); .655	0.70 (2,410); .499
	Male	0.86 (0.69)	0.71 (0.62)	0.92 (0.73)	0.94 (0.70)			
	Female	0.91 (0.65)	0.90 (0.62)	0.96 (0.73)	0.86 (0.61)			
Study 2B	Total	0.82 (0.70)	0.72 (0.69)	0.75 (0.67)	1.04 (0.74)	0.33 (1,356); .722	0.90 (1,356); .343	0.73 (2,356); .481
	Male	0.81 (0.70)	0.78 (0.68)	0.73 (0.64)	1.05 (0.80)			
	Female	0.83 (0.69)	0.75 (0.68)	0.77 (0.71)	1.03 (0.70)			
Numbing								
Study 2A	Total	0.57 (0.58)	0.69 (0.56) [a]	0.53 (0.61) [a,b]	0.48 (0.54) [b]	**7.00 (2,410); .001***	0.47 (1,410); .495	0.30 (2,410); .738
	Male	0.59 (0.61)	0.69 (0.60)	0.57 (0.63)	0.51 (0.59)			

	Female	0.55 (0.55)	0.70 (0.53)	0.49 (0.60)	0.45 (0.49)			
Study 2B	Total	0.44 (0.49)	0.52 (0.54) [a]	0.35 (0.42) [b]	0.45 (0.51) [b]	**8.27 (2,356);**	1.02 (1,356);	0.37 (2,356);
	Male	0.43 (0.45)	0.51 (0.50)	0.38 (0.46)	0.38 (0.38)	**<.001***	.313	.691
	Female	0.45 (0.53)	0.52 (0.58)	0.32 (0.39)	0.53 (0.63)			
COPE Inventory								
MANCOVA (Sub-scales)								
Study 2A						**6.60 (30,794); <.001***	**4.43 (15,396); <.001***	**1.57 (30,794); .027***
Study 2B						**4.31 (30,686); <.001***	**2.91 (15,342); <.001***	**1.57 (30,686); .028***
Active coping								
Study 2A	Total	2.35 (0.65)	2.24 (0.66) [b]	2.46 (0.62) [a]	2.36 (0.66) [a,b]	**4.45 (2,410);**	0.17 (1,410);	1.26 (2,410);
	Male	2.37 (0.71)	2.18 (0.70)	2.49 (0.64)	2.43 (0.74)	**.012***	.677	.284
	Female	2.33 (0.60)	2.3 (0.62)	2.43 (0.60)	2.28 (0.57)			
Study 2B	Total	2.10 (0.73)	1.81 (0.73) [b]	2.20 (0.73) [a]	2.25 (0.66) [a]	**9.70 (2,356);**	0.12 (1,356);	0.76 (2,356);
	Male	2.10 (0.75)	1.87 (0.77)	2.18 (0.71)	2.22 (0.74)	**<.001***	.728	.469
	Female	2.09 (0.71)	1.75 (0.70)	2.21 (0.75)	2.29 (0.57)			
Planning								
Study 2A	Total	2.41 (0.71)	2.39 (0.77)	2.45 (0.66)	2.41 (0.69)	0.53 (2,410);	0.05 (1,410);	3.01 (2,410);
	Male	2.41 (0.74)	2.26 (0.80)	2.52 (0.69)	2.45 (0.69)	.590	.832	.050
	Female	2.42 (0.68)	2.51 (0.72)	2.37 (0.62)	2.37 (0.70)			
Study 2B	Total	2.15 (0.76)	1.93 (0.84) [b]	2.24 (0.71) [a]	2.26 (0.70) [a]	**3.83 (2,356);**	0.04 (1,356);	1.09 (2,356);
	Male	2.18 (0.76)	2.03 (0.87)	2.22 (0.72)	2.26 (0.70)	**.023***	.837	.336
	Female	2.13 (0.76)	1.84 (0.81)	2.26 (0.71)	2.27 (0.70)			
Positive reinterpretation & growth								
Study 2A	Total	2.67 (0.68)	2.51 (0.72) [b]	2.68 (0.65) [a]	2.81 (0.63) [a]	**5.66 (2,410);**	1.02 (1,410);	0.76 (2,410);
	Male	2.64 (0.70)	2.42 (0.69)	2.68 (0.67)	2.81 (0.68)	**.004***	.314	.469
	Female	2.70 (0.66)	2.60 (0.74)	2.69 (0.63)	2.81 (0.59)			
Study 2B	Total	2.36 (0.76)	2.17 (0.77)	2.39 (0.76)	2.50 (0.71)	2.65 (2,356);	3.80 (1,356);	1.31 (2,356);
	Male	2.29 (0.73)	2.09 (0.78)	2.37 (0.75)	2.37 (0.67)	.072	.052	.272
	Female	2.43 (0.77)	2.24 (0.77)	2.40 (0.78)	2.63 (0.73)			
Acceptance								
Study 2A	Total	2.79 (0.66)	2.75 (0.66) [a,b]	2.68 (0.66) [b]	2.96 (0.62) [a]	**4.20 (2,410);**	1.75 (1,410);	0.43 (2,410);
	Male	2.74 (0.65)	2.66 (0.67)	2.61 (0.63)	2.96 (0.61)	**.016***	.187	.650
	Female	2.85 (0.66)	2.84 (0.64)	2.75 (0.68)	2.95 (0.65)			
Study 2B	Total	2.62 (0.75)	2.51 (0.79) [b]	2.52 (0.78) [b]	2.81 (0.66) [a]			

	Male	2.61 (0.78)	2.42 (0.84)	2.58 (0.77)	2.80 (0.69)	**4.77 (2,356);**	0.04 (1,356);	1.71 (2,356);
	Female	2.62 (0.73)	2.59 (0.74)	2.45 (0.78)	2.83 (0.62)	**.009***	.846	.182
Humour								
Study 2A	Total	2.07 (0.89)	2.24 (0.89) [a]	1.95 (0.84) [b]	2.02 (0.93) [a,b]	**4.54 (2,410);**	**3.99 (1,410);**	1.18 (2,410);
	Male	2.17 (0.87)	2.25 (0.83)	2.13 (0.86)	2.12 (0.93)	**.011***	**.047***	.308
	Female	1.97 (0.90)	2.23 (0.96)	1.77 (0.77)	1.92 (0.92)			
Study 2B	Total	1.86 (0.84)	1.98 (0.90)	1.72 (0.76)	1.91 (0.85)	2.69 (2,356);	0.10 (1,356);	3.02 (2,356);
	Male	1.89 (0.82)	1.85 (0.81)	1.85 (0.83)	1.96 (0.82)	.070	.750	.050
	Female	1.84 (0.87)	2.11 (0.96)	1.59 (0.67)	1.85 (0.89)			
Religious coping								
Study 2A	Total	1.37 (0.70)	1.20 (0.62) [b]	1.64 (0.81) [a]	1.27 (0.56) [b]	**14.75**	0.31 (1,410);	0.56 (2,410);
	Male	1.39 (0.69)	1.19 (0.59)	1.71 (0.84)	1.26 (0.49)	**(2,410);**	.580	.571
	Female	1.35 (0.70)	1.20 (0.65)	1.57 (0.79)	1.29 (0.62)	**<.001***		
Study 2B	Total	1.35 (0.67)	1.18 (0.56) [b]	1.53 (0.76) [a]	1.31 (0.64) [a,b]	**5.49 (2,356);**	0.01 (1,356);	0.40 (2,356);
	Male	1.35 (0.65)	1.22 (0.59)	1.52 (0.69)	1.30 (0.63)	**.004***	.908	.672
	Female	1.34 (0.70)	1.14 (0.52)	1.54 (0.82)	1.32 (0.65)			
Use of emotional social support								
Study 2A	Total	2.39 (0.81)	2.51 (0.88) [a]	2.29 (0.73) [b]	2.38 (0.80) [a,b]	**3.55 (2,410);**	**6.70 (1,410);**	**3.76 (2,410);**
	Male	2.29 (0.80)	2.26 (0.81)	2.30 (0.74)	2.30 (0.85)	**.029***	**.010***	**.024***
	Female	2.50 (0.81)	2.77 (0.87)	2.27 (0.73)	2.46 (0.74)			
Study 2B	Total	2.20 (0.84)	2.08 (0.83) [a,b]	2.12 (0.81) [b]	2.38 (0.87) [a]	**3.29 (2,356);**	**10.33**	1.76 (2,356);
	Male	2.06 (0.80)	1.93 (0.77)	2.04 (0.80)	2.17 (0.81)	**.038***	**(1,356);**	.173
	Female	2.33 (0.87)	2.21 (0.87)	2.19 (0.81)	2.60 (0.88)		**.001***	
Use of instrumental social support								
Study 2A	Total	2.38 (0.77)	2.33 (0.77)	2.35 (0.72)	2.45 (0.82)	0.38 (2,410);	1.08 (1,410);	**6.35 (2,410);**
	Male	2.34 (0.80)	2.11 (0.74)	2.46 (0.73)	2.45 (0.89)	.687	.300	**.002***
	Female	2.41 (0.74)	2.55 (0.75)	2.24 (0.69)	2.45 (0.75)			
Study 2B	Total	2.11 (0.86)	1.80 (0.77) [b]	2.14 (0.82) [a,b]	2.36 (0.90) [a]	**7.43 (2,356);**	**4.40 (1,356);**	1.29 (2,356);
	Male	2.04 (0.87)	1.78 (0.82)	2.04 (0.83)	2.24 (0.89)	**<.001***	**.037***	.277
	Female	2.19 (0.86)	1.83 (0.73)	2.22 (0.81)	2.49 (0.89)			
Mental disengagement								
Study 2A	Total	2.26 (0.65)	2.34 (0.65)	2.19 (0.69)	2.24 (0.62)	3.04 (2,410);	1.47 (1,410);	2.97 (2,410);
	Male	2.22 (0.64)	2.21 (0.60)	2.26 (0.70)	2.20 (0.62)	.049	.226	.052
	Female	2.29 (0.67)	2.47 (0.67)	2.12 (0.67)	2.27 (0.62)			
Study 2B	Total	1.94 (0.68)	1.89 (0.69)	1.88 (0.67)	2.05 (0.68)	2.14 (2,356);	1.65 (1,356);	0.03 (2,356);
	Male	1.91 (0.68)	1.82 (0.70)	1.83 (0.66)	2.05 (0.68)	.119	.199	.967
	Female	1.98 (0.68)	1.96 (0.68)	1.93 (0.67)	2.06 (0.69)			

Denial								
Study 2A	Total	1.54 (0.60)	1.38 (0.52) [b]	1.68 (0.69) [a]	1.55 (0.56) [b]	**9.59 (2,410); <.001***	3.27 (1,410); .071	**3.6 (2,410); .028***
	Male	1.59 (0.62)	1.32 (0.44)	1.79 (0.72)	1.65 (0.57)			
	Female	1.49 (0.58)	1.45 (0.58)	1.57 (0.64)	1.44 (0.53)			
Study 2B	Total	1.42 (0.58)	1.27 (0.46)	1.51 (0.64)	1.46 (0.59)	1.97 (2,356); .141	0.70 (1,356); .402	0.57 (2,356); .569
	Male	1.46 (0.62)	1.27 (0.49)	1.59 (0.70)	1.51 (0.62)			
	Female	1.37 (0.54)	1.27 (0.44)	1.43 (0.59)	1.40 (0.56)			
Focus on and venting of emotions								
Study 2A	Total	2.25 (0.72)	2.19 (0.81)	2.25 (0.68)	2.30 (0.67)	0.30 (2,410); .741	**14.19 (1,410); <.001***	**5.15 (2,410); .006***
	Male	2.11 (0.68)	1.89 (0.64)	2.23 (0.70)	2.22 (0.66)			
	Female	2.39 (0.74)	2.50 (0.85)	2.28 (0.66)	2.39 (0.68)			
Study 2B	Total	2.07 (0.78)	1.73 (0.71) [b]	2.14 (0.77) [b]	2.31 (0.74) [a]	**10.00 (2,356); <.001***	**8.31 (1,356); .004***	0.12 (2,356); .888
	Male	1.97 (0.75)	1.56 (0.60)	2.04 (0.73)	2.25 (0.74)			
	Female	2.17 (0.80)	1.89 (0.77)	2.23 (0.81)	2.38 (0.74)			
Substance Use								
Study 2A	Total	1.46 (0.77)	1.59 (0.85) [a]	1.50 (0.76) [a]	1.30 (0.65) [b]	**9.39 (2,410); <.001***	**7.14 (1,410); .008***	0.36 (2,410); .695
	Male	1.57 (0.84)	1.67 (0.91)	1.65 (0.84)	1.40 (0.76)			
	Female	1.35 (0.67)	1.51 (0.78)	1.35 (0.65)	1.20 (0.52)			
Study 2B	Total	1.34 (0.66)	1.35 (0.67)	1.36 (0.66)	1.31 (0.67)	2.47 (2,356); .086	1.63 (1,356); .203	1.53 (2,356); .219
	Male	1.41 (0.71)	1.38 (0.70)	1.36 (0.61)	1.48 (0.80)			
	Female	1.28 (0.61)	1.33 (0.64)	1.36 (0.70)	1.14 (0.44)			
Behavioural disengagement								
Study 2A	Total	1.77 (0.61)	1.58 (0.54) [b]	1.92 (0.64) [a]	1.81 (0.60) [a]	**10.65 (2,410); <.001***	0.41 (1,410); .520	0.91 (2,410); .402
	Male	1.79 (0.62)	1.57 (0.54)	2.00 (0.65)	1.81 (0.60)			
	Female	1.75 (0.60)	1.59 (0.54)	1.84 (0.63)	1.81 (0.60)			
Study 2B	Total	1.61 (0.63)	1.32 (0.46) [b]	1.72 (0.68) [a]	1.76 (0.63) [a]	**9.28 (2,356); <.001***	0.64 (1,356); .424	0.09 (2,356); .916
	Male	1.65 (0.65)	1.36 (0.51)	1.75 (0.65)	1.81 (0.68)			
	Female	1.57 (0.61)	1.29 (0.42)	1.70 (0.70)	1.70 (0.58)			
Restraint								
Study 2A	Total	2.22 (0.64)	2.09 (0.66) [b]	2.28 (0.65) [a]	2.29 (0.60) [a,b]	**4.13 (2,410); .017***	0.39 (1,410); .533	0.76 (2,410); .470
	Male	2.24 (0.62)	2.08 (0.59)	2.35 (0.66)	2.29 (0.59)			
	Female	2.20 (0.66)	2.10 (0.73)	2.21 (0.63)	2.30 (0.62)			
Study 2B	Total	1.96 (0.72)	1.62 (0.63) [b]	2.07 (0.75) [a]	2.15 (0.67) [a]	**11.85 (2,356); <.001***	0.24 (1,356); .626	2.35 (2,356); .097
	Male	1.99 (0.72)	1.65 (0.61)	2.17 (0.75)	2.11 (0.69)			
	Female	1.93 (0.73)	1.58 (0.65)	1.97 (0.74)	2.20 (0.66)			

Suppression of competing activities								
Study 2A	Total	2.15 (0.68)	2.04 (0.63) [b]	2.23 (0.71) [a]	2.17 (0.70) [a,b]	**3.05 (2,410); .049***	4.12 (1,410); .043	0.07 (2,410); .930
	Male	2.22 (0.71)	2.09 (0.67)	2.30 (0.72)	2.27 (0.74)			
	Female	2.08 (0.64)	2.00 (0.58)	2.16 (0.70)	2.07 (0.64)			
Study 2B	Total	1.87 (0.73)	1.57 (0.57) [b]	2.00 (0.77) [a]	1.99 (0.74) [a]	**5.98 (2,356); .003***	1.63 (1,356); .203	0.78 (2,356); .458
	Male	1.92 (0.74)	1.67 (0.60)	2.00 (0.75)	2.06 (0.79)			
	Female	1.81 (0.72)	1.48 (0.54)	1.99 (0.80)	1.93 (0.69)			
Trait Dissociation Questionnaire								
Study 2A	Total	0.81 (0.79)	0.71 (0.66) [b]	0.91 (0.88) [a]	0.80 (0.80) [a,b]	**3.62 (2,410); .028***	0.48 (1,410); .489	0.42 (2,410); .658
	Male	0.83 (0.77)	0.70 (0.65)	0.90 (0.76)	0.89 (0.87)			
	Female	0.78 (0.81)	0.72 (0.68)	0.92 (0.98)	0.71 (0.72)			
Study 2B	Total	0.81 (0.76)	0.66 (0.67) [a,b]	0.98 (0.84) [a]	0.77 (0.73) [b]	**3.14 (2,356); .045***	0.10 (1,356); .756	0.84 (2,356); .434
	Male	0.84 (0.81)	0.59 (0.66)	1.05 (0.94)	0.84 (0.73)			
	Female	0.79 (0.72)	0.73 (0.67)	0.92 (0.74)	0.69 (0.73)			

Note: Statistics for the above variables derive from ANCOVA unless otherwise specified. * $p < .05$.
The superscripts (i.e., a, b, c) is the same for groups with no significant difference found but different for groups with a significant difference found.

Table 4.5 Results of Self-Report Measures in an Overview

Hypotheses	Results	Notes
(H1) Cultural Differences in Self-Concepts & Appraisals		
(H1.1) Cultural differences in sociotropy: *Taiwanese & Hongkongese > British*	**Yes**, a significant effect (Study 2)	*BUT British > Hongkongese*
(H1.2) Cultural differences in autonomy: *British > Hongkongese & Taiwanese*	**No** cultural difference	
(H1.3) Cultural differences in self-esteem: *British > Hongkongese & Taiwanese*	**Yes**, a significant effect (Study 2)	
(H1.4) Cultural differences in the Analysis-Holism Scale (AHS): *Hongkongese & Taiwanese > British*	**Yes**, significant effects (Studies 1 & 2) Cultural differences in causality (Study 2), attitude toward contradictions (Study 2), and perception of change (Studies 1 & 2)	*BUT (For perception of change) British >Hongkongese*
(H1.5) Cultural differences in the Public and Communal Self Appraisals Measure (PCSAM): *Taiwanese & Hongkongese > British*	**Yes**, a significant effect (Study 2) Cultural differences in challenge to beliefs and belonging (Study 2), communal aspects of self (Study 2) and public roles and identity (Study 2)	*BUT (For challenge to communal aspects of self) British > Taiwanese & Hongkongese*
(H1.6) Cultural differences in Post-Traumatic Cognition Inventory (PTCI): *British > Hongkongese & Taiwanese*	**Yes**, significant effects (Studies 1 & 2) Cultural differences in negative thoughts about the self (Studies 1 & 2), self-blame (Studies 1 & 2), overgeneralised danger (Study 2), and preoccupation with unfairness (Studies 1, 2)	*BUT (For most of the subscales) Hongkongese & Taiwanese > British*
(H2) Cultural Differences in Cognitive Processing Styles & Memory		
(H2.1) Cultural differences in state dissociation: *British > Hongkongese & Taiwanese*	**No** cultural difference	
(H2.2) Cultural differences in data-driven processing: *British > Hongkongese & Taiwanese*	**Yes**, significant effects (Studies 1 & 2)	

(H2.3) Cultural differences in lack of self-referent processing: *British > Hongkongese & Taiwanese*	**Yes**, significant effects (Studies 1 & 2)	
(H2.4) Cultural differences in centrality of the positive event: *British > Hongkongese & Taiwanese*	**Yes**, a significant effect (Study 2)	*BUT Taiwanese > British*
(H2.5) Cultural differences in memory qualities (disorganization, disjointedness & flashback quality): *British > Hongkongese & Taiwanese*	**No** cultural difference	
(H2.6) Cultural differences in the use of memory for self-continuity: *Taiwanese > Hongkongese & British*	**Yes**, a significant effect (Study 2) – Both positive/ negative memories	
(H3) Cultural Differences in Coping Strategies		
(H3.1) Cultural differences in self-concealment: *Hongkongese & Taiwanese > British*	**Yes**, a significant effect (Study 2)	
(H3.2) Cultural differences in thought suppression & numbing: *British > Hongkongese & Taiwanese*	**Yes**, significant effects (Study 2)	
(H3.3) Cultural differences in rumination: *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H3.4) Cultural differences in the use of problem-focused coping: *British > Hongkongese & Taiwanese*	**Yes**, significant effects (Studies 1 & 2)	
(H3.5) Cultural differences in the use of emotion-focused coping: *Taiwanese > Hongkongese & British*	**Yes**, significant effects (Studies 1 & 2)	
(H3.6) Cultural differences in trait dissociation: *British > Hongkongese & Taiwanese*	**Yes**, a significant effect (Study 2)	*BUT Hongkongese > Taiwanese*

4.5 Discussion

4.5.1 Cultural Differences in Self-Concept

In line with our hypothesis, cultural differences were found in the Revised Personal Style Inventory (PSI-II). However, the present research, unlike Mak, Law and Teng (2011), showed that British participants scored lower in sociotropy than Hongkongese ones. Sociotropy is featured by an excessive concern that leads individuals to invest in their interpersonal relationships for a feeling of self-worth (Sato & McCann, 1998). Given the fast-paced life, Hongkongese tend to spend time on sectors with explicit outcomes (e.g., career development) rather than those without (e.g., relationships) compared to their British counterparts. Also, British may feel a sense of low geographical mobility since the withdrawal of the United Kingdom from the European Union in 2016. According to Lou and Li (2017), people in a low-relational-mobility society are more likely to endorse destiny beliefs and thus to be more concerned about social relationships than those in a high-relational-mobility society.

The lack of cultural differences found in autonomy may indicate it is a universal need across cultures. According to self-determination theory (Ryan & Deci, 2000, 2017), autonomy is one of the three basic and universal psychological needs in personal growth. A study conducted by Nalipay, King, and Cai (2020) showed that autonomy significantly predicted one's achievement in both individualistic and collectivistic cultures. Other studies (e.g., Jang, Reeve, Ryan, & Kim, 2009; Zhou, Ma, & Deci, 2009) also provide evidence against the argument of some cross-cultural researchers (e.g., Liu & Flick, 2019) that autonomy may be irrelevant in the East.

Consistent with the previous findings (e.g., Chiu, 1992), Taiwanese and Hongkongese participants scored significantly lower in self-esteem than did their British counterparts. The low level of self-esteem in Chinese could be explained by their attitudes towards themselves.

In collectivistic cultures, self-enhancement (e.g., acknowledging one's strengths) appears to be less socially appropriate than self-criticism (e.g., admitting one's mistakes) (Markus & Kitayama, 1991). Another explanation for the above cultural differences would be more self-effacing and modest values, which are reinforced by schools, families, and society in collectivistic culture (Chan, 2000).

4.5.2 Cultural Differences in Appraisals

Most of the observed group differences in analytic-holistic thinking can be attributed to the focus of Chinese and British on collective (e.g., contexts) and individual information (e.g., individual qualities) respectively. For instance, the significant cultural difference in 'causality' is consistent with the previous findings that East Asian (i.e., Taiwanese and Hongkongese) are more likely to consider the contextual information of the phenomenon (Choi, Dalal, Kim-Prieto & Park, 2003) and thus less likely to commit the fundamental attribution error (e.g., Choi & Nisbett, 1998) than Westerners. The higher score of the sub-scale 'attitude towards contradictions' in Taiwanese than in British could be explained by naïve dialecticism (Peng & Nisbett, 1999). Given the 'yin-yang' approach, Chinese tended to accept two opposite propositions as potentially correct and thus pursue a compromised middle ground towards contradictions. Inconsistent with our hypothesis, British participants scored a higher level of 'perception of changes' than did their Hongkongese counterparts in Study 2. One possible explanation would be the timeframe of Study 2 (i.e., 2020) where Brexit actually happened in January and the coronavirus hit the United Kingdom in April. After being exposed to unprecedented geopolitical changes, British emerging adults are more likely to feel uncertain about their prospects and hold a non-static view of the world than before.

In terms of the Public and Communal Self Appraisals Measure (PCSAM), cultural differences were found but the results of the group comparison were not exactly the same as

we hypothesised. In line with our prediction, British scored lower than Hongkongese and/or Taiwanese in 'challenge to beliefs and belonging' and 'challenge to public roles and identity'. Even under stress, Chinese strive to fit in with others and the social contexts to fulfill the goal of the interdependent self (e.g., Markus & Kitayama, 2010). In contrast to our hypothesis, British scored higher than the other two groups in 'challenge to communal aspects of self'. This unexpected result could be explained by Su and Chen (2008) that Chinese trauma survivors may view an equal change of others encountering a similar situation, and thus take less responsibility of causing the trauma than do Westerners. Compared to Chinese, British tend not to consider the 'whole picture', which is common in the holistic thinking style, and assign more responsibility to themselves for causing traumas to the community.

The Post-Traumatic Cognition Inventory (PTCI) showed cultural differences in all sub-scales. According to Engelbrecht and Jobson (2014), the PTCI may not be appropriate for use with a non-clinical sample as it tapped into individual-type (e.g., personal capability) rather than collective-type (e.g., social relationship) appraisals of everyday events. However, the present research with a university sample found cultural differences in the PTCI. These seemingly discrepant findings might be explained away by the events to be appraised. In Studies 1 and 2, participants were instructed to evaluate the most distressing events in their lifetime or during the follow-up. Although these events were not necessarily traumatic, they were thought to cause a higher level of distress to participants than everyday stressful events.

Unlike Engelbrecht and Jobson's (2014) conclusion, the present research found that the PTCI may be effective to assess post-traumatic negative cognitions in both individualistic and collectivistic cultures. Su and Chen (2008) assumed that the PTCI contains the sub-scale of 'self-blame', which failed to show cultural differences. Hence, researchers such as Engelbrecht and Jobson (2014) claimed that the PTCI was less culturally appropriate to

assess posttraumatic cognitions in Asian population. Surprisingly, the PTCI found significant cultural differences in both Studies 1 and 2 while the PCSAM detected the same results only in Study 2. As the sample size of Study 2 (N=420) is bigger than that of Study 1 (N=128), it is reasonable to conclude that the PTCI is more effective than the PCSAM in detecting cultural differences (shown in their effect sizes) given a particular level of significance (p = .05).

4.5.3 Cultural Differences in Cognitive Processing Styles

The higher tendency of British rather than Chinese to engage in data-driven processing and lack of self-referent processing may originate from their thinking styles. Westerners (relative to East Asians) think more analytically, with a focus on objects themselves rather than the relationships between the objects and contexts. Therefore, Westerners are more likely to separate the object from the background than to link an object with its context (Masuda & Nisbett 2006). During trauma, Westerners may easily dissociate themselves like 'objects' from the contextual information. Therefore, trauma survivors may process the traumatic events on a surface level as if they happened to someone else. Data-driven processing refers to processing sensory impressions

State dissociation, although it was highly correlated with the above processing styles, may be a universal response to traumatic events (Putnam, 1985). According to American Psychiatric Association (2013), dissociation refers to disruptions in the experience of one's 'consciousness, memory, identity, emotion, perception, body representation, motor control, and[/or] behaviour' (p. 291). During trauma, the disintegration of one's experiences and affective contents from the stream of consciousness and memory is sometimes described as part of the primary defense system (e.g., Cramer, 1991). This immediate and transient response could prevent victims from being overwhelmed by intensive emotions until it ends.

The above may partly explain why the cultural difference in state dissociation was non-significant.

4.5.4 Cultural Differences in Memory Centrality, Qualities, and Functions

Participants across cultures tend to rate their (most) positive events more central than their (most) stressful events to their identities and personal stories. The higher perceived centrality of positive events than negative events is consistent with past research (e.g., Scherman, Salgado, Shao and Berntsen, 2015). It is widely accepted that people are motivated to view themselves positively, or self-enhance. Hence, people are inclined to elaborate positive rather than negative information about themselves. This tendency may make positive events more readily available to be recalled as a central event to the self. Although the motive of self-enhancement is universal, its magnitude varies across cultures (e.g., Brown & Kobayashi, 2002; Sedikides, Gaertner, & Toguchi, 2003). The motive of self-enhancement may be weaker in collectivistic cultures than in individualistic cultures (e.g., Heine, Lehman, Markus, & Kitayama, 1999; Markus & Kitayama, 1991). One main account for cultural differences in self-enhancement is social comparison. Upward social comparison is linked with self-enhancement while downward social enhancement is related to self-improvement (Crocker, Thompson, McCraw, & Ingerman, 1987). When self-esteem is threatened, East Asians tend to seek upward social comparison for self-improvement while Westerners tend to engage in downward social comparison for self-enhancement (e.g., Ross, Heine, Wilson, & Sugimori, 2005). The value of interdependence in collectivistic cultures may lead to a desire to keep up with the group standard rather than stand out. Hence, the Taiwanese and Hongkongese groups were less likely to view positive memory as central for self-enhancement compared to the British group.

Problematic qualities of memory showed cultural differences in stressful memories but not in positive memories. There is a higher possibility of intact memory retrieval of a

positive event (relative to a stressful event) as people have fewer difficulties remembering the contextual information of the events. Therefore, positive memories are believed to be free from disorganization, disjointedness, and flashback across cultures. In contrast, a stressful event may threaten people's view of themselves (e.g., as worthy and capable) and thus are not fully elaborated and incorporated into the autobiographical memory knowledge base (e.g., Ehlers & Clark, 2000). In this case, stressful memories are disorganised, disjointed from other memories, and thus easily triggered as a flashback by external cues.

The use of memory for self-continuity showed cultural differences in both positive and stressful memories. The finding that Taiwanese and Hongkongese reported a greater use to create self-continuity is consistent with previous studies (e.g., Ji, Hong, Guo, Zhang, Su & Li, 2019; Liao et al., 2016). The abovementioned cultural differences in analytic-holistic thinking may extend to the perception of time, with past, present and future as the context. Compared to Westerners, East Asians perceive one's past and future behaviour as more relevant than one's overall impression when making a judgment of the person (Sedikides, Hong, & Wildschut, 2022). More interestingly, East Asians remember information about past and future behaviour better than Westerners (Ji, Guo, Zhang, & Messervey, 2009). Also, East Asians are more likely than Westerners to consider past information when predicting future events (Ji, Zhang, & Guo, 2008) while attending to the consequences (Maddux & Yuki 2006). Therefore, Taiwanese and Hongkongese may tend to view past events as more relevant to the present ones, which in turn, is also subjectively linked to future ones. This perception of memory helps create a sense of connection between temporal selves (Sedikides, Hong, & Wildschut, 2022). The greater use of memory by East Asian for self-continuity could also be attributed to a lack of contextual support for the autonomous self in collectivistic cultures (Liao et al., 2016). Culture influences not only the early development of autobiographical memory (Nelson & Fivush, 2004) but also the functional use of memory

in adulthood (Wang & Conway, 2004). Wang (2014) posited that the need to fulfill the developmental goals of autonomy and relatedness may be universal especially in emerging adults although how strong the need varies across cultures. If a culture failed to provide enough support to fulfill a goal, people will retrieve individual psychological resources including Autobiographical memory (Markowitsch & Staniloiu, 2011; Tulving, 2005) to achieve it. Researchers such as Lee and his colleagues (2010) discovered a shift of values towards the autonomous self in Taiwanese. In the traditional collectivistic culture of Taiwan, there is no emphasis on continuity (e.g., English & Chen, 2011; Heine, 2001) and uniqueness of one's self (e.g., Triandis, 1989; Wang & Conway, 2004). Given insufficient contextual support for the development goals, Taiwanese emerging adults may draw on their autobiographical memories for self-continuity to fulfil the goal of autonomous self (Bluck & Liao, 2013; Sani, 2008).

4.5.5 Cultural Differences in Coping Strategies

The higher level of self-concealment in Taiwanese and Hongkongese than in British participants is consistent with the previous findings (e.g., Constantine et al., 2004). While self-expression is valued in individualistic cultures, it is not privileged with such a cultural emphasis in collectivistic cultures. To maintain interpersonal relationships, the disclosure of one's personally distressing information is not a culturally consistent feature of interdependence (e.g., Kim & Sherman, 2007) for two reasons. First, the expression of one's thoughts or feelings itself may be seen as attention-seeking behaviour, which violates the goal of fitting into a social group they belong to. Second, sharing potentially distressing information would burden significant others and thus in collective cultures, is neither encouraged nor viewed positively. According to a study on symptoms of depression and social anxiety (Okazaki, 2000), an 18-year-old Chinese student endorsed the response of self-concealment 'most or all the time' as he didn't want to share his blues with family to make

them sad. Hence, these varied levels of self-concealment could be attributed to cultural values.

The results of Study 1 about coping styles were rendered questionable due to covariates. In Study 1, Taiwanese and Hongkongese are more likely to endorse all coping styles (if there are cultural differences) than their British counterparts at baseline but the opposite became the case in the follow-up. These discrepant findings may be explained away by the inclusion of covariates in the two time points. At baseline (i.e., Study 1A), we did not collect the data regarding participants' exposure to stressful events (which are highly distressing but not traumatic), for example, the number of stressful events and the perceived severity of the most distressing event for each participant (ranging from 0 to 100). In the follow-up (i.e., Study 1B), we assumed that stressful events in general may also cause an effect like what traumatic events do. Hence, we included and controlled the characteristics of stressful events as covariates. There were a possibility that Taiwanese and Hongkongese participants during Study 1A (i.e., from October 2017 to April 2018) experienced more stressful (but not traumatic) events than their British counterparts.

Cultural differences were found in the categories of coping styles in Study 2 although the COPE inventory comprises various sub-scales. According to Sica, Novara, Dorz, and Sanavio (1997), coping styles are divided into five types: (1) problem-focused (i.e., active coping, planning, and suppression of competing activities), (2) avoidant coping (i.e., behavioural disengagement, denial, mental disengagement, mental disengagement, substance use, and humor), (3) social support (i.e., emotional social support, instrumental social support, and venting emotions), (4) emotion-focused (e.g., Positive reinterpretation and growth, restraint, and acceptance), and (5) religion (i.e., religious coping). In Study 2, we observed a transition of coping styles in different cultures across time. At baseline (i.e., Study 2A), British tended to use more avoidant coping compared to the other two groups. Within

the Asian group, Hongkongese participants tended to use problem-focused coping while Taiwanese participants tended to engage in emotion-focused coping. In the follow-up (i.e., Study 2B), Hongkongese changed to religious coping and Taiwanese turned to social support. The transition of coping styles could be attributed to learned helplessness, which is a behaviour observed in people after repeated exposure to aversive stimuli beyond their control (Maier & Seligman, 1976). On the one hand, during Study 2B (i.e., from August 2019 to June 2020), there were a greater number of major stressful events happening in Asia (e.g., an early outbreak of coronavirus and geopolitical tensions). On the other hand, compared to those from individualistic cultures, people from collectivistic cultures tend to have an external locus of control (e.g., Waterman, 1981), which refers to a belief that outcomes are controlled by external factors beyond one's control (Rotter, 1954). It is possible that Being exposed to those major stressful events, Taiwanese and Hongkongese with little perceived control are more vulnerable to learned helplessness than British. They may stop trying active coping and turn to religious coping or social support to elicit a sense of security.

Different from the SDQ, the Trait Dissociation Questionnaire (TDQ) showed cultural differences where Hongkongese scored higher than Taiwanese. As an integral aspect of personality, trait dissociation is believed to be a coping strategy towards an unresolved cultural identity (e.g., Weinreich, Luk, & Bond, 1996). Hongkongese have developed a unique sense of their own cultural identity as a result of intercultural exposure (Bond & King, 1985). As a cosmopolis, Hong Kong embraces various cultures, including but not limited to Chinese traditions and British values. Compared to Taiwanese, Hongkongese tend to hold a mixed identity of Asians (representing collectivistic cultures) and Westerners (representing individualistic cultures). When these two identifications conflict with each other, people may experience identity diffusion (Weinreich, 1989). Identity diffusion is defined as 'the overall dispersion of, and magnitude of, one's identification conflicts with significant others'

(Weinreich, 1980, p. 17). This represents a lack of sense of coherence in, and more seriously, confusion about one's identity (e.g., Marcia, Waterman, Matteson, Archer, & Orlofsky, 1993; Phinney, 1990). With this contra-identification, Hongkongese may have a general tendency to dissociate themselves from their stressful experience. Interestingly, high identity diffusion is accompanied by low self-esteem (Weinreich, Luk, & Bond, 1996), which was also shown in the present study, and by a high level of trait dissociation.

Whereas most of the results were replicated across Studies 1 and 2, some findings were only significant in Study 2. This discrepancy may be explained away by the larger statistical power in Study 2 due to its larger sample size (Cohen, 1992). It is also possible that some of the cultural differences were underestimated in Study 1 as all of the participants were living in the United Kingdom. Those Hongkongese and Taiwanese participants in Study 1, who were students at Oxford, may not be fully representative of their original cultures and may have adapted to cultural norms in the United Kingdom. or self-selected for affinity to them.

Chapter 5

Cultural Differences in Objective Measures

5.1 Overview

Objective measures have several advantages compared to self-report questionnaires that are relevant in the study of cultural differences in behavioural and psychological processes. Self-report questionnaires heavily rely on participants' subjective accounts of their experiences, and are susceptible to biases of social desirability and memory recall, and response style effects (e.g., Paulhus, 1991). Cultural effects cannot be fully captured by self-report questionnaires as culture includes 'some set of more subtle and implicit practices and social structures that respondents cannot report because these practices are deeply woven into everyday life and are a normal part of living' (Oyserman, Coon, & Kemmelmeier, 2002, p. 7). Participants may not be aware of their way of thinking, which is pervasively shaped or influenced by the culture they live in. Even for those who are fully aware, participants tend to answer questions in a socially desirable or acceptable manner. This would make it difficult to falsify hypotheses relating to culture itself and does not meet the deductive standard of evaluation for scientific theories. In contrast, objective measures use standardised and controlled procedures to assess observable and measurable aspects of behaviour, such as reaction time and brain activity. The inclusion of both self-report questionnaires and objective measures allows researchers to obtain a comprehensive set of data and to test hypotheses rigorously across measurement methods.

The present set of studies tested cultural differences using objective measures of cognitive variables, in addition to self-report questionnaires. Objective measures are mainly categorised into three types, namely (1) observation of behaviour, which involves directly observing people's behavior (such as communication, social interaction, and non-verbal expressions of emotions) in real-life situations or in laboratory settings; (2) physiological

measures, which include measurements of physiological responses (such as heart rate, skin conductance, and cortisol levels) to stimuli, stress and other physiological processes (e.g., Ekman & Friesen, 1971); (3) cognitive measures, which assess fundamental cognitive processes (such as attention, perception, and memory). In the present research, most of the key variables in stress responses are cognitive processes (such as self-concept and autobiographical memory). Therefore, cognitive measures (including computerised tasks and standardised laboratory tasks) were the main type of objective measures used.

Computerised tasks have been used in the literature to identify culture-specific self-concept. Self-concept is a complex and multifaceted construct with different domains of the self, including physical self, social self, emotional self, moral self, and spiritual self (e.g., Markus & Wurf, 1987; Brown, 1998). Some aspects of self, particularly those related to implicit attitudes or beliefs, may not be easily accessible through self-report questionnaires (e.g., Bargh & Morsella, 2008). Implicit measures in the form of computerised tasks, such as the Perceptual Matching Task (PMT) and the Implicit Association Test (IAT), can tap into these unconscious and automatic aspects and offer a relatively unbiased view of individuals' self-concept (e.g., Greenwald et al., 1998; Heine, Lehman, Peng, & Greenholtz, 2002).

Besides computerised tasks, objective measures can also take the form of standardised laboratory tasks. These tasks, typically conducted in a laboratory setting, enable researchers to create a controlled environment where participants are exposed to the same stimuli. Therefore, they can produce valid data about cognitive, emotional, or behavioural processes to these stimuli. Given the standardised task procedure, other researchers could easily replicate a study and further confirm the results if necessary. Most importantly, standardisation of these tasks is key to the comparability of research findings from different samples and time points, thus allowing for their applicability to the population at large. Among the standardised laboratory tasks, researchers commonly measure self-descriptions

with the Twenty Statement Test (TST), while assessing autobiographical memory variables with the Self-defining Memory Task (SDMT) and the Autobiographical Memory Test (AMT).

Similar to Chapter 4, the statistical analyses in Chapter 5, in general, were aimed to investigate the main effects of culture (i.e., a between-subject factor with 3 levels: British, Hongkongese, and Taiwanese) and gender (i.e., a between-subject factor with 2 levels: male and female) as well as their interaction on the target variables of the five objective measures (based on our hypotheses). For the PMT, IAT, AMT, and SDMT, we checked whether there was a main effect of the counterbalancing condition. If so, it was included as a covariate in the main analysis. Before statistical analyses, the raw data of the MTST, AMT, and SDMT were transformed into percentages. The percentage in a category was the number of responses in the category divided by the number of total valid responses and then multiplied by 100.

5.2 Perceptual Matching Task (PMT)

5.2.1 Introduction

The Perceptual Matching Task (PMT) is a common computerised task to assess self-prioritisation effect (SPE). This effect refers to the tendency to process information that is relevant to one's self-concept more deeply and quickly than other information (e.g., Rogers, Kuiper, & Kirker, 1977; Symons & Johnson, 1997). This self-prioritisation effect (i.e., self-over-other bias) has been well-demonstrated in various cognitive performances, including memory, decision-making, and problem-solving (e.g., Cunningham, Turk, Macdonald, & Macrae, 2008; Markus, 1977; Turk, Cunningham, & Macrae, 2008). Compared to these high-level abilities, the ability to perceptually process information is relatively low-level but crucial for self-survival, especially in a dynamically changing environment (Sui, He, & Humphreys, 2012). Perceptual processing is influenced by the self-prioritisation effect, which

can be measured by the PMT (e.g., Sui, He, & Humphreys 2012; Huang, Chen, & Zhou, 2023). In this timed task, participants are instructed to judge whether different pairings of geometric shapes with person-referential words representing the self, a close other, and an unfamiliar other match those already learned in the prior training phase. The performance score (expressed in terms of signal-detection sensitivity measure *d'*) reflects the degree to which self-related stimuli are prioritised compared to other-related stimuli (i.e., whether there is a potential self-over-other bias). The self-prioritisation effect may show cultural differences. On the one hand, Westerners preferentially process self-referential information while East Asians' processing focuses more on interpersonal relationships with others (e.g., Sui, Liu, & Han, 2009). On the other hand, independent and interdependent self-construal (predominately in the individualistic and collectivistic cultures respectively) can be interpreted by the differences in culturally promoted self-schemas, specifically with the relation of the self to close others (Markus & Kitayama, 2010). The self in the independent self-schema is clearly separate from others while the self in the interdependent self-schema is interconnected with and (partly) includes significant others (e.g., mother, brother, and friend) (Markus & Kitayama, 1991; Heine, 2008). The PMT examines implicitly whether there is an overlap of the self with close others. If such overlap is absent, there would be a prioritization of self-related information (demonstrated in faster reaction times or higher sensitivity in the PMT) compared to close-other-related information. It is therefore hypothesised that there will be (1) cultural differences where British participants will show a stronger self-prioritisation effect (SPE) than their Hongkongese and Taiwanese counterparts; (2) an interaction between culture and person-referential words where the British group will show a stronger SPE in the self-over-close-other bias than the other two groups.

5.2.2 Hypotheses

- There will be cultural differences in the self -prioritisation effect (***Hypothesis 1***).

- British participants will have a higher sensitivity score (*d'*) than Hongkongese and Taiwanese participants (***Hypothesis 1.1***).
- British participants will give correct responses more rapidly (evidenced by a shorter mean reaction time for hits and correct rejections) compared to Hongkongese and Taiwanese participants (***Hypothesis 1.2***).

- There will be an interaction between culture and person-referential words in the self-prioritisation effect (***Hypothesis 2***).
  - British participants will have a higher sensitivity score (*d'*) especially in the self-over-close-other bias than Hongkongese and Taiwanese participants (***Hypothesis 2.1***).
  - British participants will give correct responses more rapidly (evidenced by a shorter mean reaction time for hits and correct rejections) especially in the self-over-close-other bias compared to Hongkongese and Taiwanese participants (***Hypothesis 2.2***).

5.2.3 Task

The Perceptual Matching Task (PMT) was given in Study 2A and was adapted from Sui, He and Humphreys (2012). Before the task started, participants were asked about their age, gender and handedness.

The PMT was designed to implicitly assess the self-prioritisation effect. Three abstract geometric shapes (i.e., triangle, square, and circle, each 3.8° x 3.8°) were presented above a white fixation cross (0.8° x 0.8°). In the training phase, each of these shapes was assigned with a customised label representing either the participants themselves (i.e., 'you'), a close other (i.e., 'your best friend'), or an unfamiliar other (i.e., 'a stranger'), and participants were instructed to learn these associations. The assignments of shapes to labels were counterbalanced across participants to rule out any effects of differential familiarity

with the shapes beyond their association with self/other-information. After training, in each trial, one of the word 'You', 'Friend', or 'Stranger' (3.1°/3.6° X 1.6°) was shown below the fixation cross. The distance between the centre of the shape or the word and the fixation cross was 3.5°. All stimuli were displayed on a grey background, with each pair appearing for 500 ms on the screen. During the matching stage, participants performed a shape-label matching task where they judged whether the label was matched to the respective shape by pressing either the 'M' (labelled 'Yes') or 'N' (labelled 'No') key on the keyboard within the response limit of 1100ms. After pressing a key, participants immediately received one of the following feedback options: (1) 'Correct!' in green, (2) 'Wrong!' in red, and (3) 'Too late!' in red. If no judgment was made within the time limit, the pair disappeared and was registered as missing. The next pair of stimuli appeared on the screen after the fixation cross, which lasted 2000ms (target onset-to-onset time: 116/ 117ms). There were 1 practice block with 9 trials and 6 experimental blocks with 60 trials for 6 conditions (i.e., self-matched, self-nonmatched, familiar-matched, familiar-nonmatched, unfamiliar-matched, and unfamiliar-nonmatched). At the end of each block, participants were informed of their performance and given a break of 8 seconds. This experiment was conducted on the laptops of the same model across three regions (see Apparatus) and with E-prime software (2.0.10.356, Professional Version). Before the trial block, the instructions to the participants were orally provided by trained experimenters and visually presented on the screen. This computerised task lasted approximately 18 minutes.

5.2.4 Statistical Analyses

The PMT data, based on Macmillan and Creelman's (1991) detection theory, was analysed with two performance indicators, sensitivity score (*d'*) and mean reaction time (MRT). As shown in Table 5.1, there were two matching conditions (between a person-referential word and a geometric shape), namely matched vs. non-matched. In the matched

condition, accuracy scores represent hit rates while mean reaction times (MRTs) represent MRTs for hits. In the non-matched condition, accuracy scores represent the correct-rejection rate while MRTs represent MRTs for correct rejections. The false alarm rate was calculated by subtracting the correct rejection rate from 1 and the miss rate was calculated by subtracting the hit rate from 1 (for signal detection theory, see Figure 5.1). While the accuracy scores are separately presented in Table 5.1, we used *d'* (which takes account of participants' performance and potential response biases) for further analyses. The statistics *d'* ('d-prime') was the difference between the z-transformed hit rates and false alarm rates (i.e., the distance between signal and signal plus noise). The larger *d'*, the better the sensitivity (proportionally more hits than false alarms) of the participants in the task. On the other hand, the mean reaction time (MRT) was the average time required for a participant. We excluded correct responses shorter than 200ms from the analysis and participants with an accuracy rate of 0 before calculating *d'*s and MRTs. Both performance indicators were then submitted to two separate 3-way mixed ANOVAs with the between-subject factors culture, gender, and the within-subject factor person-referential words (self, friend, and stranger). The main effects of culture and person-referential words are relevant to our hypotheses about whether task performance differs between cultures and person references. More interestingly, an interaction of these factors would indicate whether there are cultural differences for certain person references (i.e., close other).

Figure 5.1 Signal Dectection (Sensory Decision) Theory

Signal	**Responses**	
	'Yes'	**'No'**
Present	Hit	Miss
Absent	False Alarm	Correct Rejection

5.2.5 Results

All participants were right-handed and had normal or corrected-to-normal visions. Two Hongkongese participants with an accuracy rate of 0 were excluded from the analysis, eliminating less than 0.5% of the data overall.

A three-way mixed ANOVA revealed a significant main effect of culture, $F(2,414) = 8.11$, $p < .001$, $\eta^2 = .038$, and person-referential words, $F(2,413) = 142.01$, $p < .001$, $\eta^2 = .407$, on overall sensitivity (*d'*) as a performance indicator. The Taiwanese group had a higher *d'* ($M = 1.90$, $SE = 0.07$, $p < .001$) than the Hongkongese ($M = 1.49$, $SE = 0.07$, $p < .001$) and the British groups ($M = 1.70$, $SE = 0.07$), although the latter comparison was a non-significant trend ($p = .150$). Participants across cultures had a higher score for self-referential words ($M = 2.01$, $SE = 0.05$) than for close other-referential ($M = 1.57$, $SE = 0.04$, $p < .001$) and unfamiliar other-referential words ($M = 1.51$, $SE = 0.05$, $p < .001$). Contrary to our hypothesis, there was no interaction between culture and person-referential words on the *d'*. This showed no self-over-close-other bias in the sensitivity performance specifically for the British group as hypothesised nor other groups. There was also no effect of gender or interaction.

The ANOVA of the mean reaction time for correct responses (i.e., hits and correct rejections) showed a large effect of person-referential words, $F(2,413) = 157.03$, $p < .001$, $\eta^2 = .432$. It took participants significantly less time to give correct responses for self-referential words ($M = 644.47$ ms, $SE = 3.74$) than for close other-referential ($M = 670.84$ ms, $SE = 3.86$, $p < .001$) and unfamiliar other-referential words ($M = 673.14$ ms, $SE = 3.84$, $p < .001$). There was no main effect of culture, gender or interaction. The results of the mean reaction time showed the expected self-over-close-other bias in all participants but in such bias no cultural difference was found.

Descriptive statistics of accuracy scores and mean reaction times in each cultural group for each person-referential word are displayed in Table 5.1. These two performance indicators are presented for matched and non-matched conditions.

Table 5.1 Accuracy Score and Mean Reaction Time as a Function of Match Condition (Matched vs. Unmatched) and Person-Referential Words (Self, Friend, and Stranger) in the Perceptual Matching Task

Matching Condition	Person-Referential Word		Accuracy Score				Mean Reaction Time (ms)			
			Total *M* (*SD*)	British *M* (*SD*)	Hongkongese *M* (*SD*)	Taiwanese *M* (*SD*)	Total *M* (*SD*)	British *M* (*SD*)	Hongkongese *M* (*SD*)	Taiwanese *M* (*SD*)
Matched	Self	Total	0.85 (0.14)	0.86 (0.12)	0.81 (0.17)	0.87 (0.11)	596 (75)	593 (79)	597 (71)	597 (76)
		Male	0.84 (0.16)	0.85 (0.14)	0.80 (0.19)	0.86 (0.14)	603 (82)	596 (79)	608 (80)	606 (88)
		Female	0.86 (0.12)	0.86 (0.10)	0.83 (0.16)	0.89 (0.08)	588 (67)	590 (80)	586 (59)	588 (61)
	Close Other	Total	0.77 (0.15)	0.78 (0.15)	0.73 (0.17)	0.80 (0.14)	652 (79)	652 (79)	653 (77)	652 (82)
		Male	0.76 (0.17)	0.77 (0.15)	0.70 (0.18)	0.79 (0.15)	655 (87)	650 (83)	661 (82)	654 (96)
		Female	0.78 (0.14)	0.78 (0.14)	0.76 (0.15)	0.80 (0.12)	650 (71)	653 (75)	646 (71)	651 (67)
	Unfamiliar Other	Total	0.72 (0.17)	0.70 (0.18)	0.70 (0.17)	0.76 (0.13)	661 (79)	665 (83)	655 (77)	662 (78)
		Male	0.72 (0.18)	0.68 (0.19)	0.70 (0.18)	0.77 (0.15)	662 (84)	663 (82)	657 (84)	667 (88)
		Female	0.73 (0.15)	0.73 (0.17)	0.70 (0.16)	0.76 (0.12)	659 (74)	667 (85)	653 (70)	657 (67)
Non-matched	Self	Total	0.77 (0.14)	0.77 (0.16)	0.75 (0.14)	0.79 (0.12)	697 (79)	703 (86)	694 (77)	693 (73)
		Male	0.77 (0.15)	0.76 (0.17)	0.75 (0.15)	0.79 (0.15)	701 (89)	703 (94)	705 (85)	694 (89)
		Female	0.77 (0.13)	0.78 (0.15)	0.74 (0.14)	0.80 (0.09)	693 (66)	702 (76)	683 (66)	693 (54)
	Close Other	Total	0.75 (0.14)	0.74 (0.14)	0.73 (0.15)	0.79 (0.12)	693 (79)	705 (79)	683 (76)	690 (79)
		Male	0.75 (0.15)	0.73 (0.16)	0.74 (0.15)	0.78 (0.14)	693 (88)	702 (84)	690 (85)	685 (95)
		Female	0.76 (0.13)	0.76 (0.13)	0.72 (0.15)	0.80 (0.09)	693 (68)	708 (74)	676 (66)	694 (59)
	Unfamiliar Other	Total	0.78 (0.14)	0.78 (0.15)	0.76 (0.14)	0.80 (0.13)	689 (76)	698 (74)	682 (77)	689 (77)
		Male	0.78 (0.16)	0.78 (0.17)	0.76 (0.14)	0.80 (0.15)	692 (85)	695 (75)	689 (89)	692 (92)
		Female	0.78 (0.13)	0.79 (0.13)	0.75 (0.14)	0.80 (0.11)	687 (66)	701 (73)	675 (65)	685 (58)

Note: The matched condition means that the pair of a person-referential word and a geometric shape matched the familiarised protocol; the non-matched condition means that the pair did not match the familiarised protocol. Accuracy score (proportion correct) ranged from 0 to 1; Mean reaction time was corrected for rushed responses < 200 ms and for accuracy unequal to 1. A total of two Hongkongese participants were removed due to an accuracy rate of 0 for the respective shape condition.

5.2.6 Discussion

The PMT was the first to test the self-prioritisation effect on perceptual matching performance using a newly established self-related association versus associations with other labels. The present research found the main effects of culture, where surprisingly, the Taiwanese group rather than the British group had the highest sensitivity score (*d'*). This sensitivity may be due to an emerging need in Taiwanese to fulfill the demand for an independent self (Liao et al., 2016). The significant effect of person-referential words on mean reaction times for correct responses was consistent with studies of the self-prioritisation effect using the perceptual matching task (e.g., Sui, 2012). This self-prioritisation effect fits with the idea of self-survival, where self-relevant information (e.g., self-referential pairs) requires rapid processing at multiple levels (including attention, recognition, and categorization) (e.g., Sui & Liu, 2009).

The non-significant interaction between culture and person-referential words showed no cultural difference in the self-over-close-other bias, which was instead present across all three cultures. It is questionable that the self-over-close-other bias in the present study can be operationalised by the self versus a friend. Previous studies (e.g., Zhu, Zhang, Fan, & Han, 2007) that found cultural differences in the self-prioritisation effect adopted significant other family members (e.g., 'mother') as 'close other'. In terms of self-close other connectedness, only 'closest family member' and 'close family members' (rather than 'closest friend' and 'close friends') showed cultural differences between East Asians and Westerners (Li, 2002). According to Li, Zhang, Bhatt and Yum (2006), the extent of self-close other connectedness diminishes from 'closest family member', 'close family members', to 'closest friend', 'close friends', 'relatives', 'colleagues', and 'neighbours'. Therefore, the present study that referred 'close other' to 'a friend' cannot yield the expected self-prioritisation effect. Some researchers also argued that the self-prioritisation effect in low-level perceptual processing

was a basic psychological process; cultural differences may only emerge in higher-level semantic tasks (e.g., Sparks, Cunningham, & Kritikos, 2016).

To better detect cultural differences in the self-prioritisation effect (especially in self-over-close-other bias), future research could (1) label 'closest family member' as 'close other' and (2) incorporate a higher-level semantic task.

5.3 Implicit Association Test (IAT)

5.3.1 Introduction

Implicit self-concept is unconscious self-representations that influence our thoughts, feelings, and behavior without our awareness (Bargh, 1990). Unlike explicit self-concepts, implicit ones are automatically activated in response to certain stimuli or situations and can be assessed by indirect methods (Greenwald & Banaji, 1995). The Implicit Association Test (IAT) is a widely used implicit measure of attitudes. This study explored whether it can be adapted to detect cultural differences in implicit self-concept. In the IAT, participants are asked to categorise words that are presented in different combinations. Response times are analysed to capture automatic associations between the self and other concepts. Participants tend to categorise stimuli that more strongly associate with themselves (congruent trials) more rapidly than those that less strongly associate with themselves (incongruent trials) (Greenwald et al., 1998). The dependent variable is the differences in response latencies to stimuli between congruent and incongruent trials. Despite its popular use in studies of self-concept, most focused on the association of the self with positive and negative characteristics (e.g., David, 2010; Jiang, Yue, & Lu, 2011). For example, the categories represented self-related concepts (e.g., 'White') and attributes of different valences (e.g., 'pleasant'). The link between implicit self-concept and attributes of different cultures has yet to be explored with the IAT. The present study was the first of its kind to test if two basic human needs (i.e., autonomy and interpersonal distance) differ across cultures.

5.3.2 Hypotheses

- There will be cultural differences in (implicit) agency and interpersonal distance (***Hypothesis 3***).
    - British participants will show a stronger IAT effect for (implicit) autonomy (demonstrated by a higher *D* measure) than Hongkongese and Taiwanese participants (***Hypothesis 3.1***).
    - British participants will show a stronger IAT effect for (implicit) separateness (demonstrated by a higher *D* measure) than Hongkongese and Taiwanese participants (***Hypothesis 3.2***).

5.3.3 Task

In Study 1A, a 2-part Implicit Association Test (adapted from IAT; Greenwald et al., 1998) tested participants' implicit self-concept related to two cultural attributes (i.e., 'agency' and 'interpersonal distance') separately. 'Agency' is defined as the degree of self-rule and autonomous functioning with two extreme ends, 'autonomy' (which refers to 'the state of being a self-governing agent') versus 'heteronomy' (which refers to 'the state of being governed from outside') (Kagitcibasi, 2005, p. 404). 'Interpersonal distance' is defined as 'the degree of connection with others' (Kagitcibasi, 2005, p. 404) with two extreme ends, 'separateness' (which refers to being disconnected from others with well-defined self-boundaries) versus 'relatedness' (which refers to the state that boundaries of the selves may be fused with others) (Kagitcibasi, 2005). For each of the parts, the task consisted of 7 blocks (including 5 practice blocks and 2 critical ones) of categorisation trials, with 24 trials for each block (see Appendix L1 for the IAT visual illustration). Participants were given an IAT information sheet (see Appendix L2) to become familiar with the cultural attributes. They were then asked to sort a list of words (e.g., 'Compliance' and 'Liberty' for the Agency part) into the appropriate side of the screen displaying the relevant category by pressing a left ('E')

or right key ('I') rapidly. The word sets were comparable in terms of word frequency (see Appendix L3) (Van Heuven, Mandera, Keuleers, & Brysbaert, 2014). If an incorrect response was made, a red cross was displayed under the word. Participants had to make the correct response to move to the next word. The next word was then presented after a 150-ms inter-trial interval. As the IAT was a timed task, they were asked to go as fast as possible while making as few mistakes as they could. In the first block, participants practiced a target concept discrimination (i.e., the 'self-other' category) by sorting words into 'Me' or 'Not Me' labels. In the second block, participants practiced an attribute discrimination (e.g., the 'agency' category) by sorting words into 'autonomy' and 'heteronomy' categories. In the third and fourth blocks, participants sorted words into two paired categories, each including the target concept and the attribute that were assigned to the same key in the preceding two blocks (e.g., 'Me+Autonomy' for the left key and 'Not Me+Heteronomy' for the right key). The fifth block is identical to the first one except with two target concept labels switched to the opposite side (i.e., 'Not Me' and 'Me'). Finally, the sixth and seventh blocks are like the third and fourth ones, but use the reverse key assignments (i.e., 'Not Me+Autonomy' for the left key and 'Me+Heteronomy' for the right key). Half of the participants did the sequence of 7 blocks interchanging the positions of Blocks 1, 3, and 4 with Blocks 5, 6, and 7 to counterbalance possible order effects (Greenwald et al., 1998). All blocks were practice blocks except for the four critical blocks (i.e., Blocks 3, 4, 6, and 7) from which data were extracted to calculate the IAT effect. The IAT effect is interpreted as the association strength of a target concept (i.e., 'Me' or Not Me') and an attribute (i.e., 'Autonomy' and 'Heteronomy') by assuming that participants respond faster when both mapped on the same response key are strongly associated than when they are weakly associated. A PC-type, 15.6-inch computer with a MatLab programme was used to administer the computerised task, where a time interval between the start of the word presented and the correct keyboard

response made by a participant was recorded. This response latency, which was averaged for each block, reflects the strength of the participants' automatic association between the target concepts (i.e., 'self-other' category) and the attributes (i.e., 'agency' and 'interpersonal distance' categories). The IAT scores were computed with the *D* algorithm (Greenwald, Nosek, & Banaji, 2003), which is the standard computation of the IAT effects. The IAT effects measure how much easier for a participant to complete this categorisation task when the self is paired with 'autonomy' compared to the self is paired with 'heteronomy'. The above experimental procedure and design also apply to the subset of 'interpersonal distance'. Like blocks in each set, two subsets themselves were also presented in a counter-balancing design to control the order effect (see Appendix L4). This adapted IAT was co-programmed by Mr Daniel Walter and Mr Lawrence Yu. For the experimental procedure and experimenter's instructions of the IAT, please refer to Appendices L5 and L6 respectively.

For Study 2A, the IAT used in Study 1A was further modified in the following ways: (1) Only one of the attributes, 'agency' ('autonomy' vs. 'heteronomy'), was retained because of a significant order effect; (2) the modified IAT was programmed to record errors (along with the response latencies) so that we could later replace error latencies with values that functioned as error penalties (Greenwald et al., 2003); (3) a Chinese-translated IAT was developed for the local participants in Taiwan and Hong Kong. Prior to the study, the word list (used in Study 1A) was translated and backtranslated for the Chinese version by two native, bilingual volunteers. The translated Chinese items for 'autonomy' and 'heteronomy' words were comparable in terms of word frequency (Cai & Brysbaert, 2010) (see Appendix L3).

5.3.4 Statistical Analyses

The IAT data for statistical analyses were extracted only from the 96 trials of the 4 critical blocks (i.e., Blocks 3, 4, 6, and 7). The IAT effect, which reflects the strength of

participants' implicit association between target concepts and attributes, was the difference in mean response times between congruent trials and incongruent trials. Using the 'agency' as an example, we computed the IAT effect for (implicit) autonomy by subtracting the mean latency for the critical blocks of the Me+Autonomy (i.e., Blocks 3, 4) from that for the critical blocks of the Me+Heteronomy (i.e., Blocks 6, 7). In this case, the higher the IAT effect, the stronger association of the self with (implicit) autonomy. For the IAT effect, the *D* measure was adopted due to its strong correlations with the parallel self-report measures, and resistance to counterbalancing order (Greenwald et al., 2003). The *D* measure was calculated by dividing the difference between critical block means by the standard deviation of all the latencies in the two critical blocks. According to the IAT scoring procedures recommended by Greenwald and his colleagues (2003), we (1) deleted trials greater than 10,000ms and participants who have latency less than 300ms in more than 10% of trials (i.e., 17 trials); (2) computed the mean latency for responses in each of Blocks 3, 4, 6 and 7; (3) computed the pooled standard deviation for all trials in Blocks 3 and 6 and likewise for all trials in Blocks 4 and 7; (4) replaced each error latency with a block mean (computed in Step 2) + 600s; (5) averaged the resulting values for each of the 4 critical blocks; (6) computed the two difference scores in mean latencies between Block 6 and Block 3 and between Block 7 and Block 4 respectively; (7) divided each difference score by its associated standard deviation from Step 3; and (8) calculated the *D* measure by taking the equal-weight average of the two resulting ratios from Step 7. In Study 1A, the *D* measures of 'agency' (part 1) and 'interpersonal distance' (part 2) were subjected to a two separate 2-way ANOVA with culture, gender, as well as two counterbalancing conditions of (1) parts 1 (agency) and 2 (interpersonal distance) and of (2) steps 1, 3, 4 and 5, 6, 7 as between-subject factors. In Study 2A, the *D* measure of 'agency' and the number of incorrect responses were submitted

to two separate 2-way ANCOVAs with culture and gender and the counterbalancing condition of steps.

5.3.5 Results

The ANOVA in Study 2 on the IAT effect (i.e., *D* measure) showed a significant effect of culture, $F(2,408) = 9.54$, $p < .001$, $\eta^2 = .045$ and its interaction with gender, $F(2,408) = 3.08$, $p = .047$, $\eta^2 = .015$, but no main effect of gender. British participants ($M_{Adj} = 0.09$, $SE = 0.02$) had a higher *D* measure (where the response time for Me+Autonomy was shorter than that for Me+Heteronomy) than did Hongkongese ($M_{Adj} = -0.01$, $SE = 0.02$, $p = .002$) and Taiwanese participants ($M_{Adj} = -0.03$, $SE = 0.02$, $p < .001$). While in the British and Taiwanese groups, females showed a stronger tendency for autonomy than males, this case was reversed in the Hongkongese group. In Study 1, however, there were no expected cultural differences in the *D* measure for agency, $F(2,105) = 0.67$, $p = .515$, $\eta^2 = .013$, or for interpersonal distance, $F(2,105) = 0.10$, $p = .905$, $\eta^2 = .002$.

Descriptive statistics of mean latencies and *D* Measure in each cultural group for each stimuli are displayed in Table 5.2.

Table 5.2.: Responses in Implicit Association Test (IAT) from the British, Hongkongese, and Taiwanese Groups

Category		Total *M (SD)*	British *M (SD)*	Hongkongese *M (SD)*	Taiwanese *M (SD)*
Mean Latencies (in milliseconds)					
Agency					
Block 3 (Me+Autonomy vs. Not Me+Heteronomy)					
Study 1A	Total	1,030 (347)	1,007 (383)	1,049 (354)	1,037 (280)
	Male	1,064 (406)	1,083 (483)	1,083 (411)	1,006 (264)
	Female	997 (275)	930 (235)	1,015 (292)	1,068 (300)
Study 2A	Total	1,310 (549)	1,190 (419)	1,437 (623)	1,305 (562)
	Male	1,356 (556)	1,261 (443)	1,487 (651)	1,325 (541)
	Female	1,264 (539)	1,120 (384)	1,388 (595)	1,285 (585)
Block 4 (Me+Autonomy vs. Not Me+Heteronomy)					
Study 1A	Total	927 (251)	910 (267)	935 (265)	941 (208)
	Male	959 (277)	970 (314)	967 (294)	929 (194)
	Female	895 (221)	850 (199)	902 (236)	953 (227)
Study 2A	Total	1,097 (367)	1,023 (305)	1,186 (415)	1,083 (358)
	Male	1,125 (370)	1,060 (296)	1,194 (426)	1,122 (372)
	Female	1,069 (363)	985 (310)	1,179 (407)	1,045 (341)
Block 6 (Not Me+Autonomy vs. Me+Heteronomy)					
Study 1A	Total	1,463 (493)	1,496 (557)	1,438 (503)	1,450 (373)
	Male	1,554 (566)	1,736 (614)	1,458 (578)	1,423 (410)
	Female	1,372 (391)	1,257 (368)	1,418 (426)	1,476 (344)
Study 2A	Total	1,258 (481)	1,229 (439)	1,328 (537)	1,218 (458)
	Male	1,302 (527)	1,287 (489)	1,414 (627)	1,207 (436)
	Female	1,214 (428)	1,170 (377)	1,245 (422)	1,228 (482)
Block 7 (Not Me+Autonomy vs. Me+Heteronomy)					
Study 1A	Total	1,215 (388)	1,191 (349)	1,173 (373)	1,313 (455)
	Male	1,286 (443)	1,332 (360)	1,202 (471)	1,342 (518)
	Female	1,145 (311)	1,051 (279)	1,145 (249)	1,284 (398)
Study 2A	Total	1,104 (362)	1,078 (332)	1,141 (397)	1,092 (355)
	Male	1,140 (384)	1,128 (362)	1,198 (449)	1,095 (332)
	Female	1,068 (337)	1,029 (293)	1,087 (334)	1,088 (379)
Interpersonal Distance					
Block 3 (Me+Separateness vs. Not Me+Relatedness)					
Study 1A	Total	1,132 (415)	1,090 (397)	1,172 (467)	1,134 (360)
	Male	1,217 (488)	1,219 (502)	1,285 (564)	1,109 (326)

	Female	1,047 (307)	961 (190)	1,059 (318)	1,158 (400)
Block 4 (Me+Separateness vs. Not Me+Relatedness)					
Study 1A	Total	1,027 (346)	1,022 (376)	1,022 (329)	1,044 (334)
	Male	1,074 (396)	1,103 (466)	1,052 (369)	1,062 (340)
	Female	981 (283)	941 (241)	992 (288)	1,026 (339)
Block 6 (Not Me+Separateness vs. Me+Relatedness)					
Study 1A	Total	1,288 (454)	1,194 (406)	1,364 (548)	1,315 (342)
	Male	1,352 (469)	1,272 (393)	1,441 (591)	1,339 (361)
	Female	1,224 (432)	1,117 (412)	1,287 (501)	1,290 (333)
Block 7 (Not Me+Separateness vs. Me+Relatedness)					
Study 1A	Total	1,122 (400)	1,082 (457)	1,143 (417)	1,152 (269)
	Male	1,171 (441)	1,190 (547)	1,184 (430)	1,124 (265)
	Female	1,074 (352)	974 (321)	1,102 (409)	1,180 (278)
***D* Scores**					
Agency (Heteronomy – Autonomy)					
Study 1A	Total	0.55 (0.42)	0.60 (0.37)	0.49 (0.49)	0.55 (0.36)
	Male	0.59 (0.45)	0.73 (0.31)	0.46 (0.58)	0.56 (0.37)
	Female	0.50 (0.38)	0.47 (0.39)	0.52 (0.38)	0.53 (0.37)
Study 2A	Total	0.00 (0.80)	0.05 (0.77)	-0.03 (0.79)	-0.02 (0.83)
	Male	-0.01 (0.80)	0.03 (0.78)	-0.01 (0.80)	-0.04 (0.82)
	Female	0.01 (0.80)	0.08 (0.78)	-0.06 (0.78)	0.00 (0.84)
Interpersonal Distance (Relatedness – Separateness)					
Study 1A	Total	0.20 (0.50)	0.15 (0.46)	0.22 (0.57)	0.26 (0.46)
	Male	0.22 (0.46)	0.19 (0.41)	0.22 (0.54)	0.25 (0.43)
	Female	0.19 (0.55)	0.11 (0.52)	0.21 (0.62)	0.27 (0.51)
Incorrect Number					
Agency					
Block 3 (Me+Autonomy vs. Not Me+Heteronomy)					
Study 2A	Total	1.78 (1.65)	1.74 (1.55)	1.88 (1.81)	1.71 (1.59)
	Male	1.84 (1.60)	1.81 (1.59)	1.87 (1.56)	1.83 (1.67)
	Female	1.72 (1.70)	1.66 (1.51)	1.90 (2.04)	1.60 (1.52)
Block 4 (Me+Autonomy vs. Not Me+Heteronomy)					
Study 2A	Total	1.88 (1.56)	1.86 (1.51)	1.94 (1.61)	1.84 (1.56)
	Male	1.95 (1.60)	2.09 (1.67)	1.82 (1.54)	1.94 (1.60)
	Female	1.81 (1.51)	1.64 (1.31)	2.06 (1.68)	1.73 (1.52)
Block 6 (Not Me+Autonomy vs. Me+Heteronomy)					
Study 2A	Total	4.51 (2.99)	3.93 (3.13)	5.16 (2.94)	4.45 (2.76)
	Male	4.83 (3.15)	4.49 (3.29)	5.31 (2.85)	4.70 (3.26)
	Female	4.20 (2.79)	3.37 (2.88)	5.01 (3.04)	4.20 (2.15)

Block 7 (Not Me+Autonomy vs. Me+Heteronomy)					
Study 2A	Total	3.25 (2.71)	3.24 (2.67)	3.51 (2.95)	3.01 (2.48)
	Male	3.39 (2.70)	3.43 (2.80)	3.37 (2.65)	3.37 (2.67)
	Female	3.12 (2.72)	3.06 (2.53)	3.66 (3.23)	2.64 (2.24)
Total					
Study 2A	Total	11.42 (7.00)	10.77 (6.80)	12.50 (7.52)	11.01 (6.57)
	Male	12.00 (7.09)	11.81 (7.52)	12.37 (6.34)	11.84 (7.41)
	Female	10.84 (6.88)	9.73 (5.88)	12.63 (8.56)	10.17 (5.52)

Note: A total of two Hongkongese participants were removed as participants who have latency less than 300 ms in more than 10% of trials (i.e., 17 trials) according to the improved IAT scoring algorithm (Greenwald, Nosek, & Banaji, 2003).

5.3.6 Discussion

As predicted, the British group showed a stronger IAT effect for autonomy than the other two groups. This finding may be explained by Itai (2008) that autonomy is more supported and encouraged in individualistic cultures like the United Kingdom than in collectivistic ones. Kitayama and Duffy (2004) viewed autonomy as one of 'the ever-important cultural mandates' (p. 60) in individualists. Given this cultural context, British participants tended to identify themselves with autonomy rather than heteronomy. According to Greenwald and his colleagues (1998), a superior IAT performance was observed when associatively compatible categories (compared with associatively noncompatible) were mapped onto the same response. Hence, British participants categorised the IAT stimuli more rapidly when 'Me' was paired with 'Autonomy' (i.e., a compatible combination) than when 'Me' was paired with 'Heteronomy' (i.e., a non-compatible combination).

The non-significant findings in Study 1 may be due to an order effect of two sets of stimuli for agency and interpersonal distance. An order effect occurred when the differences in participants' responses result from the order of conditions where stimuli were presented (Jhangiani, Chiang, Cuttler, & Leighton, 2019). We controlled the order effect using counterbalancing with a total of 8 conditions, which were later included as a covariate in the subsequent statistical analyses. Counterbalancing is commonly used to distribute the order effect evenly across all conditions so that their influence is 'balanced' and thus does not cofound the main effects of independent variables. However, the order effect cannot be eliminated. Also, the practice of counterbalancing the block order between participants cancelled out the order effect on the aggregate level, but on the individual level, the IAT effect may still be influenced by the effect of cognitive inertia (for a review, see Messner & Vosgerau, 2009). Cognitive inertia may lead to slower responses in all trials of the second block, no matter with a 'compatible' or 'non-compatible' combination. In this case, the order

effect accumulates from the interplay of cognitive inertia (slower responses in the second block) and the IAT effect (faster responses in the 'compatible' block). When the faster 'compatible' bock was presented first, cognitive inertia further slowed down responses in the subsequent, slower 'non-compatible' block; the differences in response latencies (i.e., the IAT effect) between the two blocks were enlarged. In contrast, when the 'non-compatible' block came first, cognitive inertia slowed down the responses in the faster 'compatible' block; the IAT effect was reduced. The significant order effect showed that the IAT effect (*D* measure) may be wiped out and even reversed. To minimise the above-mentioned order effect, we retained only the dimension of agency (i.e., autonomy vs. heteronomy), which showed non-significant but noticeable cultural differences, for the IAT in Study 2.

For future research, the IAT is recommended to be presented on the Inquisit program (Draine, 2004) to record the response latencies between the stimulus presentation and correct responses. Given the built-in error penalty, error trials are easier to include in the subsequent statistical analyses.

5.4 Twenty Statement Test (TST)

5.4.1 Introduction

The Twenty Statement Test (TST) is a standardised psychological tool designed to assess individual differences in self-descriptions. The test uses a simple, open-ended prompt, 'I am…' (or 'I am not…'), followed by blank spaces to elicit 20 statements from participants about their perceptions of themselves. Participants' responses are coded into different categories, ranging from physical attributes to personality traits and beliefs. This standardised coding of original qualitative data allows for statistical analyses and comparisons. In recent decades, researchers have developed modified versions of the TST for specific study proposes. One such modified version was developed by Hong and her colleagues (2001), which assesses cultural differences in spontaneous self-descriptions by manipulating the

salience of the individual self ('I') and the collective self ('We'), as well as cultural identity activation (e.g., 'being Chinese' or 'being Americans'). Past research found that Asians generated more self-statements about collective duties but less about individual rights than Westerners when their cultural identity is evoked (e.g., Hong et al., 2001). According to the dynamic constructivist approach (Hong et al., 2000), when both independent and interdependent self-construals are available to an individual, their relative accessibility would make one of the self-construals salient; contextual cues, for example, could make either type temporally accessible than the other one (Trafimow, Triandis, & Gato, 1991; for a review, see Higgins, 1996). This approach is especially useful to investigate individuals who have been historically exposed to more than one cultures (e.g., Hongkongese). The expected differences may become more pronounced when one's cultural identity is activated. In this research, we examined the dynamic activation of participants' spontaneous self-descriptions associated with their cultural identity.

5.4.2 Hypotheses

- There will be cultural differences in self-descriptions about collective duties and individual rights (***Hypothesis 4***).
    - British participants will generate fewer self-statements about collective duties than would Hongkongese and Taiwanese participants (***Hypothesis 4.1***).
    - British participants will generate more self-statements about individual rights than would Hongkongese and Taiwanese participants (***Hypothesis 4.2***).
- There will be an interaction between culture and the self-condition (i.e., individual self or collective self) in the self-descriptions (***Hypothesis 5***).
    - In the condition of individual self ('I'), British participants will be more likely to mention fewer duties than Hongkongese and Taiwanese participants (***Hypothesis 5.1***).

- In the condition of individual self ('I'), British participants will be more likely to mention more rights than Hongkongese and Taiwanese participants (***Hypothesis 5.2***).
- In the condition of collective self ('We'), British participants will be less likely to mention more duties than Hongkongese and Taiwanese participants (***Hypothesis 5.3***).
- In the condition of collective self ('We'), British participants will be less likely to mention fewer rights than Hongkongese and Taiwanese participants (***Hypothesis 5.4***).

- There will be an interaction between culture and cultural identity activation in the self-descriptions (***Hypothesis 6***).
  - British participants, when their cultural identity is activated, will be more likely to mention fewer duties than Hongkongese and Taiwanese participants (***Hypothesis 6.1***).
  - British participants, when their cultural identity is activated, will be more likely to mention more rights than Hongkongese and Taiwanese participants (***Hypothesis 6.2***).

5.4.3 Task

Study 1A

1) Modified Twenty Statements Test (Hong et al., 2001; adapted from Kuhn & McPartland, 1954)

To assess the spontaneous self-descriptions, participants in each culture were randomly assigned to one of the experimental conditions: 'Individual self' or 'Collective self'. In the condition of 'individual self', participants were instructed to complete 10 sentences starting with 'I' and 'I being (British/ Hongkongese/

Taiwanese)' respectively. In the condition of 'collectivistic self', they were asked to complete 10 sentences starting with 'We' and 'We being (British/ Hongkongese/ Taiwanese)' respectively. Regardless of which experimental condition, each participant was instructed to first complete the 10 sentences starting with 'I' or 'We' alone (i.e., baseline) and then proceed to the other 10 sentences starting with 'I being (British/ Taiwanese/ Hongkongese)' or 'We being (British/ Hongkongese/ Taiwanese)' (i.e., cultural identity reminder) (see Appendix M for the experimental structure of the Modified Twenty Statements Test). According to the coding scheme developed in previous research (Cousins, 1989; Ip, Bood, 1995; Hong et al., 2001), each response was coded into one of the 9 categories (i.e., duties, rights, physical attributes, personality traits, abilities, psychological processes, social roles and identities, behaviors, and uncodable responses). Two Chinese-English bilingual raters coded all the responses independently after being trained with the coding scheme. The inter-rater agreement for the categories was substantial (k = .63), and disagreement was resolved by a discussion panel with the researcher who was blind to the participants' conditions or responses.

Study 2A

2) Modified Twenty Statements Test (from Study 1A)

The Twenty Statement Test was further modified by (1) dividing the 'baseline' and 'cultural identity reminder' conditions into two separate pages, and (2) adding a question asking the extent of participants' identification with their own culture. In Study 1A, the test consisted of the questions for the baseline condition (i.e., 'Who am I?' or 'Who are we?') and for the condition with a cultural identity reminder (i.e., 'Who am I being British/ Hongkongese/ Taiwanese?' or 'Who are we being British/ Hongkongese/ Taiwanese?') on the same page. However, we found that some

participants scanned all the items within a page before they started to answer. In this case, they might have noticed the second half of the test about their cultural identity. This early exposure to the latter condition (i.e., cultural identity activation) might affect their cognition when they generated 10 sentences in the former condition (i.e., baseline). Therefore, the two conditions were separated in a way that participants had to finish the baseline condition before being reminded of their cultural identity. Furthermore, the influence of cultural identity reminders may vary across individuals, depending on to what extent the participants identified with their own culture. In the revised version, participants were asked to rate 'To what extent do you identify as British/ Hongkongese/ Taiwanese?' with a slider from *0 Not at all* to *100 Completely*. This variable, if the main effect of culture on self-concept is significant, could then be a post-check for any group differences in their baseline cultural identity. The inter-rater agreement for the categories was high (k = .81), and disagreement was resolved by a discussion panel.

5.4.4 Statistical Analyses

The MTST data most relevant to our hypotheses were the percentages of duty-related and right-related responses in Studies 1A and 2A. The percentage of responses in a category was the number of responses in the category divided by the number of codable responses and then multiplied by 100. The percentages of duty-related and rights-related responses were submitted to a two separate 4-way ANOVA with culture, gender, self-condition (i.e., a between-subject factor with 2 levels: individual or collective self) and cultural identity activation (i.e., a within-subject factor with 2 levels: baseline or activation). If the above main analysis showed significant effects involving culture, we conducted an ANOVA with culture (as an independent variable) on participants' self-identification with their own culture (as a dependent variable) to check for any cultural differences at baseline.

5.4.5 Results

Of all responses across the three cultural groups, uncodable responses constituted 7.93% in Study 1A and 3.49% in Study 2A. There were no significant cultural differences in uncodable responses (Study 1A: 7.4% in the British group, 8.96% in the Hongkongese group, and 7.19% in the Taiwanese group; Study 2A: 2.93% in the British group, 4.21% in the Hongkongese group and 3.32% in the Taiwanese group). There was no effect of gender or its interaction with culture in the duty-related or right-related responses. But the interaction between gender and cultural activation was significant in individual rights, $F(1,116) = 5.32$, $p = .023$, $\eta^2 = .044$. Only when the cultural identity was activated, there were gender differences where females ($M_{Adj} = 3.46\%$, $SE = 0.70\%$) mentioned more rights than males ($M_{Adj} = 0.62\%$, $SE = 0.36\%$, $p = .024$). In Study 2A, the added scale to measure one's self-identification (from *0 Not at all* to *100 Completely*) with one's culture showed group differences, $F(2,417) = 28.84$, $p < .001$, $\eta^2 = .122$. British participants ($M = 71.22$, $SD = 25.71$) identified themselves much less with their culture than Hongkongese ($M = 84.76$, $SD = 18.86$, $p < .001$) and Taiwanese participants ($M = 88.94$, $SD = 15.24$, $p < .001$).

Table 5.3 shows the mean percentages of responses from the three cultural groups in each category, separately for the baseline and cultural activation conditions. In the baseline condition, the three cultural groups generated relatively similar percentages of responses in all categories but their responses diverged when their collective self or cultural identity was activated.

Main Analysis of Hypothesis 4

The mixed ANOVA showed expected cultural differences in the mean percentages of collective duties, Study 1A: $F(2,116) = 9.09$, $p < .001$, $\eta^2 = .135$; Study 2A: $F(2,408) = 16.02$, $p < .001$, $\eta^2 = .073$, but not in individual rights, Study 1A: $F(2,116) = 2.21$, $p = .114$, $\eta^2 = .037$; Study 2A: $F(2,408) = 0.36$, $p = .697$, $\eta^2 = .002$. The British group (Study 1A: $M_{Adj} =$

1.51%, *SE* = 1.50%; Study 2A: M_{Adj} = 1.99%, *SE* = 1.00%) mentioned fewer duties than the Hongkongese group (Study 1A: M_{Adj} = 10.55%, *SE* = 1.51%, p <.001; Study 2A: M_{Adj} = 10.01%, *SE* = 1.00%, p <.001) and the Taiwanese group (Study 2A: M_{Adj} = 6.10%, *SE* = 1.00%, p = .012).

Main Analysis of Hypothesis 5

There was a significant interaction between culture and self-condition on collective duties (Study 2A: $F(2,408) = 3.89$, p = .021, η^2 = .019). In the collective-self ('We') condition, British participants (M_{Adj} = 3.47%, *SE* = 1.41%) generated fewer self-statements about duties compared to Hongkongese (M_{Adj} = 15.42%, *SE* = 1.43%, p <.001) and Taiwanese participants (M_{Adj} = 9.78%, *SE* = 1.39%, p =.005). But the above cultural difference was absent in the individual-self ('I') condition. Contrary to our hypothesis, the interaction between culture and self-condition on individual rights was non-significant in both studies.

Main Analysis of Hypothesis 6

The ANOVAs also found an interaction between culture and cultural identity activation on collective duties, Study 1A: $F(2,116) = 7.73$, p <.001, η^2 = .118; Study 2A: $F(2,408) = 16.02$, p <.001, η^2 = .073, and individual rights, Study 1A: $F(2,116) = 5.69$, p = .004, η^2 = .089. There was no significant cultural difference in the baseline, but when cultural identity was activated, British participants (M_{Adj} = 2.26%, *SE* = 1.81%) mentioned fewer duties than their Hongkongese (M_{Adj} = 18.03%, *SE* = 1.81%, p <.001) and Taiwanese counterparts (M_{Adj} = 11.62%, *SE* = 1.82%, p <.001) when their cultural identity was made salient, regardless of the individual-self or collective-self condition. These observed patterns also applied to individual rights (only in Study 1A). Cultural differences were only found in the condition of cultural identity activation, where British participants (Study 1A: M_{Adj} =

3.63%, *SE* = 0.80%) mentioned more rights than their Hongkongese counterparts (Study 1A: M_{Adj} = 0.39%, *SE* = 0.80%, p = .014).

Additional Analyses

All participants, when their cultural identity was evoked, mentioned more personal characteristics (i.e., the sum of the mean proportions of physical characteristics, personality traits, abilities, and psychological processes) compared to the baseline condition. Among British participants, the mean proportion of personal characteristics mentioned grew from 62.89% in the baseline to 81.57% in the condition of cultural identity activation, $F(1,139)$ = 76.99, p <.001, η^2 = .356. Among Taiwanese participants, the mean proportion of personal characteristics mentioned also rose from 52.65% in the baseline to 73.21% in the condition of cultural identity activation, $F(1,139)$ = 35.08, p <.001, η^2 = .201. Among Hongkongese participants, the mean proportion of personal characteristics mentioned showed a relatively slight increase from 53.70% to 68.10%, $F(1,139)$ = 18.94, p <.001, η^2 = .120. On the other hand, British participants, compared to other participants, defined themselves more by personal characteristics only in the collective-self condition. In the individual-self condition, 73.56% of all participants across cultures mentioned mainly personal characteristics and there were no cultural differences with *M*s = 77.90% for the British group, 69.07% for the Hongkongese group, and 73.84% for the Taiwanese group, $F(2,201)$ = 3.00, p = .052, η^2 = .029. In the collective-self conditions, 57.65% of all participants generated self-statements related to personal characteristics, and there were significant cultural differences, $F(2,207)$ = 8.16, p <.001, η^2 = .073, where the British group (*M* = 66.77%) mentioned personal characteristics more often than the Hongkongese group (*M* = 52.95%) and the Taiwanese group (*M* = 53.21%).

Table 5.3 Percentages of Responses in the Modified Twenty Statement Test (MTST) from the British, Hongkongese and Taiwanese Groups

Category		**Cultural Group**					
		British		**Hongkongese**		**Taiwanese**	
Duties (%)		**(Baseline Condition – no Cultural Identity Activation)**					
		I	We	I	We	I	We
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**0.00 (0.00)**	**2.44 (8.35)**	**0.93 (4.54)**	**5.61 (11.17)**	**0.00 (0.00)**	**5.57 (12.19)**
	Male	0.00 (0.00)	4.17 (11.65)	1.71 (6.16)	1.82 (4.05)	0.00 (0.00)	8.33 (16.53)
	Female	0.00 (0.00)	0.85 (3.08)	0.00 (0.00)	8.82 (14.18)	0.00 (0.00)	2.81 (5.25)
Study 2A	**Total**	**0.16 (1.34)**	**3.30 (9.61)**	**0.28 (1.67)**	**3.71 (10.71)**	**0.32 (1.81)**	**0.84 (4.04)**
	Male	0.33 (1.91)	4.20 (11.57)	0.28 (1.67)	2.35 (7.41)	0.33 (1.91)	1.11 (5.23)
	Female	0.00 (0.00)	2.38 (7.11)	0.29 (1.69)	5.03 (13.13)	0.30 (1.74)	0.57 (2.42)
Duties (%)		**(Cultural Identity Activation)**					
		I being British	We being British	I being Hongkongese	We being Hongkongese	I being Taiwanese	We being Taiwanese
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**2.17 (5.18)**	**1.29 (4.80)**	**9.55 (15.39)**	**26.46 (30.07)**	**3.75 (8.06)**	**12.29 (27.02)**
	Male	1.67 (3.89)	1.85 (6.42)	11.47 (19.84)	29.04 (32.90)	6.25 (10.61)	21.81 (36.00)
	Female	2.73 (6.47)	0.77 (2.77)	7.27 (7.86)	24.27 (28.63)	1.25 (3.54)	2.78 (7.86)
Study 2A	**Total**	**0.87 (3.32)**	**3.68 (10.45)**	**8.92 (19.73)**	**27.13 (33.99)**	**4.51 (13.97)**	**18.69 (29.21)**
	Male	0.59 (2.39)	5.5 (13.73)	10.56 (20.42)	28.43 (34.57)	3.86 (13.05)	19.72 (30.09)
	Female	1.14 (4.04)	1.81 (4.86)	7.24 (19.16)	25.87 (33.88)	5.19 (15.04)	17.70 (28.71)
Rights (%)		**(Baseline Condition – no Cultural Identity Activation)**					
		I	We	I	We	I	We
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**0.00 (0.00)**	**1.07 (3.72)**	**0.00 (0.00)**	**1.86 (4.27)**	**0.00 (0.00)**	**0.89 (3.57)**
	Male	0.00 (0.00)	1.19 (4.12)	0.00 (0.00)	2.93 (5.03)	0.00 (0.00)	0.00 (0.00)
	Female	0.00 (0.00)	0.96 (3.47)	0.00 (0.00)	0.96 (3.47)	0.00 (0.00)	1.79 (5.05)
Study 2A	**Total**	**0.00 (0.00)**	**0.70 (4.88)**	**0.00 (0.00)**	**0.14 (1.20)**	**0.00 (0.00)**	**0.29 (1.74)**
	Male	0.00 (0.00)	0.28 (1.67)	0.00 (0.00)	0.29 (1.71)	0.00 (0.00)	0.59 (2.46)
	Female	0.00 (0.00)	1.14 (6.76)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Rights (%)		**(Cultural Identity Activation)**					
		I being British	We being British	I being Hongkongese	We being Hongkongese	I being Taiwanese	We being Taiwanese
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**5.70 (8.98)**	**1.51 (4.30)**	**0.42 (2.04)**	**0.42 (2.04)**	**2.50 (5.77)**	**3.40 (7.76)**
	Male	4.17 (5.15)	0.93 (3.21)	0.77 (2.77)	0.00 (0.00)	1.25 (3.54)	0.00 (0.00)

	Female	7.37 (11.94)	2.05 (5.19)	0.00 (0.00)	0.77 (2.77)	3.75 (7.44)	6.81 (10.12)
Study 2A	**Total**	**1.06 (3.19)**	**0.28 (2.37)**	**0.88 (3.46)**	**1.74 (5.41)**	**0.82 (3.65)**	**1.84 (5.21)**
	Male	0.88 (2.88)	0.00 (0.00)	0.56 (2.32)	1.47 (4.36)	0.29 (1.71)	1.67 (5.07)
	Female	1.24 (3.50)	0.57 (3.38)	1.21 (4.35)	2.00 (6.32)	1.36 (4.89)	2.01 (5.41)
Physical attributes				**(Baseline Condition – no Cultural Identity Activation)**			
(%)		I	We	I	We	I	We
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**1.59 (4.23)**	**0.89 (3.08)**	**1.46 (5.41)**	**2.69 (9.33)**	**1.88 (7.50)**	**0.78 (3.13)**
	Male	0.93 (3.21)	0.00 (0.00)	1.92 (6.93)	4.95 (13.44)	3.75 (10.61)	1.56 (4.42)
	Female	2.31 (5.19)	1.71 (4.17)	0.91 (3.02)	0.77 (2.77)	0.00 (0.00)	0.00 (0.00)
Study 2A	**Total**	**3.74 (6.71)**	**2.14 (5.37)**	**1.52 (4.06)**	**0.62 (3.89)**	**1.63 (3.95)**	**0.14 (1.17)**
	Male	4.91 (7.55)	2.53 (6.08)	1.73 (4.41)	0.88 (5.14)	1.47 (3.59)	0.28 (1.67)
	Female	2.60 (5.65)	1.75 (4.59)	1.3 (3.71)	0.36 (2.11)	1.79 (4.34)	0.00 (0.00)
Physical attributes				**(Cultural Identity Activation)**			
(%)		I being British	We being British	I being Hongkongese	We being Hongkongese	I being Taiwanese	We being Taiwanese
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**0.00 (0.00)**	**0.00 (0.00)**	**0.42 (2.04)**	**0.46 (2.27)**	**0.00 (0.00)**	**0.00 (0.00)**
	Male	0.00 (0.00)	0.00 (0.00)	0.77 (2.77)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
	Female	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.85 (3.08)	0.00 (0.00)	0.00 (0.00)
Study 2A	**Total**	**0.14 (1.20)**	**0.30 (1.76)**	**0.00 (0.00)**	**0.00 (0.00)**	**0.00 (0.00)**	**0.00 (0.00)**
	Male	0.00 (0.00)	0.59 (2.46)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
	Female	0.29 (1.69)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Personality traits				**(Baseline Condition – no Cultural Identity Activation)**			
(%)		I	We	I	We	I	We
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**16.77 (21.47)**	**11.94 (20.45)**	**6.84 (11.36)**	**7.62 (10.05)**	**3.82 (7.26)**	**9.10 (16.88)**
	Male	7.50 (20.06)	14.96 (22.32)	7.93 (12.42)	10.05 (11.91)	2.64 (4.90)	1.56 (4.42)
	Female	26.89 (18.87)	9.15 (19.04)	5.56 (10.41)	5.56 (8.08)	5.00 (9.26)	16.65 (21.47)
Study 2A	**Total**	**7.64 (9.65)**	**2.89 (8.40)**	**5.34 (8.39)**	**1.34 (4.24)**	**5.92 (9.81)**	**2.13 (5.70)**
	Male	4.58 (8.37)	2.37 (6.60)	4.23 (8.86)	1.21 (4.17)	4.15 (7.86)	2.35 (5.21)
	Female	10.60 (9.98)	3.43 (9.98)	6.49 (7.83)	1.46 (4.37)	7.75 (11.31)	1.92 (6.21)
Personality traits				**(Cultural Identity Activation)**			
(%)		I being British	We being British	I being Hongkongese	We being Hongkongese	I being Taiwanese	We being Taiwanese
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**9.99 (9.69)**	**16.02 (18.32)**	**1.67 (4.82)**	**3.8 (10.99)**	**1.87 (5.44)**	**8.57 (11.71)**
	Male	7.59 (8.70)	20.49 (24.10)	3.08 (6.30)	2.83 (6.60)	1.25 (3.54)	6.25 (10.61)

	Female	12.61 (10.44)	11.9 (10.04)	0.00 (0.00)	4.62 (13.91)	2.5 (7.07)	10.89 (13.00)
Study 2A	**Total**	**2.32 (9.87)**	**7.48 (11.62)**	**0.28 (1.67)**	**1.30 (4.17)**	**2.69 (7.09)**	**3.58 (6.96)**
	Male	2.06 (7.29)	7.93 (12.24)	0.56 (2.32)	1.18 (3.27)	4.12 (9.25)	4.75 (7.76)
	Female	2.57 (11.97)	7.02 (11.11)	0.00 (0.00)	1.43 (4.94)	1.21 (3.31)	2.43 (5.97)
Abilities (%)		**(Baseline Condition – no Cultural Identity Activation)**					
		I	We	I	We	I	We
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	Total	**0.48 (2.32)**	**1.29 (3.57)**	**0.00 (0.00)**	**2.04 (4.78)**	**3.13 (4.79)**	**0.69 (2.78)**
	Male	0.00 (0.00)	0.93 (3.21)	0.00 (0.00)	3.43 (6.10)	1.25 (3.54)	1.39 (3.93)
	Female	1.01 (3.35)	1.62 (3.97)	0.00 (0.00)	0.85 (3.08)	5.00 (5.35)	0.00 (0.00)
Study 2A	Total	**0.29 (1.69)**	**0.72 (3.13)**	**0.46 (2.21)**	**0.5 (2.39)**	**1.36 (6.27)**	**0.58 (3.05)**
	Male	0.29 (1.71)	1.42 (4.31)	0.56 (2.32)	0.00 (0.00)	1.57 (6.10)	1.17 (4.29)
	Female	0.29 (1.69)	0.00 (0.00)	0.36 (2.11)	0.98 (3.30)	1.14 (6.53)	0.00 (0.00)
Abilities (%)				**(Cultural Identity Activation)**			
		I being British	We being British	I being Hongkongese	We being Hongkongese	I being Taiwanese	We being Taiwanese
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**4.06 (7.20)**	**2.68 (5.84)**	**0.46 (2.27)**	**3.26 (7.18)**	**3.12 (6.02)**	**2.57 (4.60)**
	Male	4.47 (5.56)	0.93 (3.21)	0.85 (3.08)	4.29 (9.57)	1.25 (3.54)	2.50 (4.63)
	Female	3.61 (8.93)	4.29 (7.27)	0.00 (0.00)	2.39 (4.56)	5.00 (7.56)	2.64 (4.90)
Study 2A	**Total**	**1.59 (5.32)**	**0.61 (3.14)**	**1.00 (5.14)**	**0.43 (2.05)**	**1.21 (3.31)**	**0.76 (2.85)**
	Male	1.47 (5.58)	0.28 (1.67)	0.28 (1.67)	0.59 (2.39)	1.80 (3.95)	1.14 (3.28)
	Female	1.71 (5.14)	0.95 (4.15)	1.75 (7.11)	0.29 (1.69)	0.61 (2.42)	0.39 (2.35)
Psychological processes (%)		**(Baseline Condition – no Cultural Identity Activation)**					
		I	We	I	We	I	We
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**44.42 (25.34)**	**52.60 (23.45)**	**51.10 (29.06)**	**46.85 (30.27)**	**48.10 (27.11)**	**53.33 (27.59)**
	Male	49.03 (24.77)	52.94 (26.59)	50.11 (28.13)	36.67 (26.01)	41.25 (33.47)	57.71 (35.56)
	Female	39.39 (26.16)	52.29 (21.24)	52.27 (31.47)	55.47 (31.89)	54.94 (18.65)	48.95 (17.98)
Study 2A	**Total**	**59.09 (28.99)**	**49.48 (25.36)**	**50.91 (28.28)**	**46.60 (28.70)**	**52.67 (30.95)**	**41.61 (31.91)**
	Male	60.29 (30.04)	47.84 (25.14)	48.99 (31.38)	42.52 (30.35)	54.89 (29.38)	41.30 (30.72)
	Female	57.94 (28.32)	51.17 (25.84)	52.88 (25.01)	50.57 (26.84)	50.37 (32.78)	41.91 (33.45)
Psychological processes (%)				**(Cultural Identity Activation)**			
		I being British	We being British	I being Hongkongese	We being Hongkongese	I being Taiwanese	We being Taiwanese
Study 1A	**Total**	**59.21 (22.93)**	**55.78 (23.60)**	**78.23 (20.43)**	**42.22 (29.11)**	**74.58 (23.53)**	**70.88 (25.65)**
	Male	65.46 (24.42)	55.47 (24.08)	77.16 (18.73)	35.15 (29.38)	72.92 (26.39)	68.06 (32.78)
	Female	52.38 (20.07)	56.07 (24.13)	79.49 (23.15)	48.21 (28.65)	76.25 (22.00)	73.71 (17.81)

Study 2A	**Total**	**80.94 (20.76)**	**69.84 (23.06)**	**78.06 (26.82)**	**54.78 (35.88)**	**81.75 (25.03)**	**57.45 (32.14)**
	Male	77.69 (20.62)	64.90 (23.58)	78.58 (27.57)	54.61 (35.03)	79.87 (26.15)	57.89 (31.49)
	Female	84.10 (20.70)	74.93 (21.69)	77.52 (26.42)	54.95 (37.19)	83.69 (24.08)	57.02 (33.20)
Social roles and identities (%)		**(Baseline Condition – no Cultural Identity Activation)**					
		I	We	I	We	I	We
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**27.16 (25.84)**	**11.54 (21.42)**	**32.62 (30.29)**	**22.51 (22.76)**	**31.22 (27.97)**	**13.56 (21.24)**
	Male	31.06 (28.62)	13.8 (30.02)	28.21 (27.01)	28.43 (24.97)	36.41 (32.37)	17.64 (29.15)
	Female	22.9 (23.02)	9.47 (9.04)	37.84 (34.35)	17.50 (20.36)	26.03 (23.81)	9.48 (8.90)
Study 2A	**Total**	**21.83 (25.07)**	**26.45 (27.03)**	**36.22 (31.87)**	**39.68 (31.18)**	**32.05 (31.97)**	**44.86 (35.02)**
	Male	19.10 (24.30)	25.26 (22.46)	39.06 (33.98)	44.98 (35.10)	32.43 (33.40)	44.58 (33.93)
	Female	24.48 (25.86)	27.67 (31.35)	33.30 (29.77)	34.54 (26.33)	31.65 (30.95)	45.14 (36.52)
Social roles and identities (%)		**(Cultural Identity Activation)**					
		I being British	We being British	I being Hongkongese	We being Hongkongese	I being Taiwanese	We being Taiwanese
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**3.25 (5.88)**	**2.00 (5.00)**	**3.89 (8.72)**	**12.16 (18.96)**	**8.47 (19.90)**	**1.39 (3.80)**
	Male	4.38 (6.92)	2.5 (4.52)	3.08 (6.30)	13.51 (23.45)	14.44 (26.77)	1.39 (3.93)
	Female	2.02 (4.49)	1.54 (5.55)	4.85 (11.19)	11.03 (15.10)	2.50 (7.07)	1.39 (3.93)
Study 2A	**Total**	**4.54 (13.26)**	**4.21 (8.69)**	**7.03 (17.06)**	**12.22 (25.22)**	**6.56 (17.23)**	**15.56 (30.04)**
	Male	6.50 (17.74)	5.21 (10.20)	5.59 (15.77)	12.48 (24.87)	8.89 (20.27)	12.75 (28.76)
	Female	2.63 (6.19)	3.17 (6.80)	8.51 (18.40)	11.97 (25.91)	4.16 (13.29)	18.29 (31.39)
Behaviors (%)		**(Baseline Condition – no Cultural Identity Activation)**					
		I	We	I	We	I	We
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**9.58 (15.24)**	**18.23 (18.67)**	**7.06 (11.42)**	**10.82 (14.98)**	**11.87 (17.57)**	**16.07 (16.17)**
	Male	11.48 (19.97)	12.02 (14.61)	10.13 (14.03)	11.72 (20.07)	14.7 (17.58)	11.81 (16.12)
	Female	7.50 (7.95)	23.95 (20.67)	3.43 (6.10)	10.06 (9.66)	9.03 (18.29)	20.33 (16.09)
Study 2A	**Total**	**7.25 (12.11)**	**14.31 (16.76)**	**5.27 (9.26)**	**7.41 (13.00)**	**6.07 (13.06)**	**9.55 (20.15)**
	Male	10.50 (14.60)	16.1 (17.77)	5.16 (8.95)	7.76 (11.60)	5.16 (10.00)	8.61 (19.88)
	Female	4.10 (8.09)	12.46 (15.7)	5.39 (9.69)	7.07 (14.39)	7.00 (15.71)	10.46 (20.64)
Behaviors (%)		**(Cultural Identity Activation)**					
		I being British	We being British	I being Hongkongese	We being Hongkongese	I being Taiwanese	We being Taiwanese
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Study 1A	**Total**	**15.62 (14.53)**	**20.72 (20.34)**	**5.37 (9.73)**	**11.22 (12.37)**	**5.69 (10.97)**	**0.89 (3.57)**
	Male	12.27 (10.06)	17.84 (15.79)	2.82 (5.59)	15.18 (15.35)	2.64 (4.90)	0.00 (0.00)
	Female	19.28 (18.03)	23.38 (24.14)	8.38 (12.73)	7.86 (8.38)	8.75 (14.58)	1.79 (5.05)

Study 2A	**Total**	**8.53 (10.84)**	**13.60 (16.28)**	**3.83 (8.24)**	**2.38 (6.59)**	**2.46 (9.78)**	**2.12 (4.89)**
	Male	10.80 (11.82)	15.60 (18.26)	3.89 (9.94)	1.24 (4.41)	1.18 (3.27)	2.08 (5.06)
	Female	6.32 (9.43)	11.54 (13.92)	3.78 (6.17)	3.49 (8.08)	3.79 (13.52)	2.16 (4.79)

5.4.6 Discussion

The percentage of uncodable responses (i.e., 7.93% in Study 1A and 3.49% in Study 2A) is similar to the previous research, for example, 5.26% in Hong et al. (2001). Most of the uncodable responses were either participants' names (e.g., 'I am John.') or a repetition of the prompt (e.g., 'I am myself.' and 'I am Hongkongese.') The observed drop of 4.44% from Study 1A to Study 2A in the uncodable responses was due to the enhanced training of bilingual coders for the benefit of the doubt. Also, British participants tended not to identify themselves with their national identity (e.g., 'I being British do not feel a strong sense of patriotism.'). The weak sense of belonging to the country may be linked to young people's dissatisfaction with the political turmoil since Brexit in 2016 (e.g., Tyrrell, Sime, Kelly, & McMellon, 2019).

The non-significant gender difference may be due to historical movements against the unequal legal statuses of gender, which improved women's citizenship rights and duties (Avdela, 2004) and even their self-perceptions. Since the 1850s, feminism has emerged with liberation, individualism, and social mobility for women (Sanders, 2004). Particularly, the fourth wave of the feminist movement emphasised equal opportunities and challenged rigid gender norms (Chamberlain, 2017). This trend of striving for women's rights peaked at the HeforShe campaign in 2014 and #MeToo movement in 2017 (when our current research was started). Even the Taiwanese tended to inherit the Confucian culture, where women were viewed as the guardians of traditional family values and social order and educated to be good wives and mothers (Spring, 2008). However, this gender-role attitude became less pronounced in the youngest cohorts due to their exposure to globalization (e.g., Yang, 2016). In this circumstance, it was no surprise with no significant main effect of gender or the interaction between gender and culture in the studies.

The results showed that British participants, when their cultural identity was activated, mentioned more rights and fewer duties than did their Hongkongese and Taiwanese counterparts. Such cultural differences were not observed in the baseline. These findings were consistent with Hong and her colleagues' (2001) conclusion that Asians mentioned more duties and fewer rights to describe themselves compared to Westerners in the condition of cultural identity activation. The observed differences supported the dynamic constructivist approach, where cultural differences in self-descriptions emerge only when the relevant cultural theories are evoked. The self-descriptions of the Asian cultures are about one's duties towards others in one's social network while Westerners' self-descriptions concern the belief in inalienable individual rights (e.g., Kao & Sinha, 1997; Schweder & Miller, 1985). Also, cultural differences in self-descriptions are related to the perception of social organisations in Asian and Western cultures (e.g., Chiu, Dweck, Tong, & Fu, 1997). Chinese view social structures as relatively fixed (Chiu et al., 1997) and thus have a relatively malleable individual self to fit into the social reality by the emphasis on collective duties (Su et al., 1999). In contrast, Westerners tend to assume relatively malleable social structures (Chiu et al., 1997), which can be changed to accommodate personal needs and aspirations (Su et al., 1999). For non-significant group differences in rights in Study 2A, one possible explanation was that Hongkongese and Taiwanese participants were especially aware of their personal entitlements and privileges (e.g., 'I as Hongkongese am a voter.' and 'We as Taiwanese have the right to freedom.') during the social movements from 2018 to 2019 where Study 2A was conducted.

In contrast to our hypothesis, all participants mentioned more personal characteristics in the condition of cultural identity activation than in the baseline. This unexpected finding could be explained by national personification, which involves the symbolic portrayal of a nation or a country through the embodiment of human attributes and characteristics

(Elgenius, 2018). It serves the purpose of concretely representing a nation's identity, value, and heritage, through which a sense of collective identity and belonging would be evoked (e.g., Arthur & Arthur, 2019; Hobsbawm & Ranger, 2012). When a cultural identity is made salient, the stereotypes related to a country or region could be readily accessible. For example, British participants said they 'have an English accent' (abilities); Hongkongese participants said they 'value freedom' (psychological processes); Taiwanese participants said they 'are filled with warmth and humanity' (personality traits). As one of the personal characteristics, psychological processes cover the most sub-categories among the 8 coding categories, ranging from attitude, cognitions, beliefs, values, interests, and preferences, to motivation, needs, wishes, and aspirations, as well as feelings and emotions (Cousins, 1989; Ip, Bood, 1995; Hong et al., 2001). The popularity of national personification, together with the wide coverage of psychological processes, contributes to the increasing proportion of personal characteristics in the condition of cultural identity activation. Also, the cultural difference in personal characteristics observed only in the condition of collective self could be attributed to varied self-conceptions across cultures. The 'We' manipulation (i.e., in the collective-self condition) enhances the collectivistic orientations regardless of the participants' cultural background. But the extent to which the manipulation affects spontaneous self-cognitions depends on what constitutes the individual and collective selves in the culture. In Chinese culture, duties are central to the conception of the collective self. Hence, the priming of the collective self-conception would make Hongkongese and Taiwanese participants less likely to mention personal characteristics than their British counterparts.

To further test the dynamic constructivist approach, we could further study a bicultural or multicultural group which have been pervasively exposed to at least two cultures. Hongkongese have been exposed to both Chinese and Western cultural influences.

In future studies, we would compare Hongkongese participants' spontaneous self-descriptions when their Chinese or British cultural identity is made salient.

5.5 Autobiographical Memory Test (AMT)

5.5.1 Introduction

The autobiographical memory test (AMT) is a standardised assessment of the specificity of autobiographical memory. The type of memory related to one's personal events is called autobiographical memory, which is 'a uniquely human system that integrates memories of past experiences into an overarching life narrative' (Fivush, 2011, p. 559). These memories vary in their level of specificity, which is measured by the AMT. Specific memories are unique events with a brief duration of less than one day while general memories are abstract and conceptual events (e.g., Ridout, Dritschel, Matthews, & O'Carroll, 2016; Singer & Blagov, 2000). Studies have shown cultural differences in autobiographical memory specificity (AMS). For example, Jobson (2009a) found that people from collectivistic cultures tend to have reduced autobiographical memory specificity compared with those from individualistic cultures. This has been presumed to occur because collectivistic cultures emphasise the independent self less than individualistic cultures, and thus there are fewer demands to recall the specific details of autobiographical memories used to differentiate the self from others (e.g., Wang & Conway, 2004). Hence, autobiographical memory shapes how people see themselves and understand the world (Conway & Pleydell-Pearce, 2000; Bluck & Alea, 2011).

5.5.2 Hypotheses

- There will be cultural differences in autobiographical memory specificity (number of the specific memories and omissions) and the latencies to retrieve the specific memories (***Hypothesis 7***).

- British participants will retrieve memories of a higher level of specificity than Hongkongese and Taiwanese participants (***Hypothesis 7.1***).
- British participants will retrieve specific memories more quickly than Hongkongese and Taiwanese participants (***Hypothesis 7.2***).
- British participants will have fewer omissions than Hongkongese and Taiwanese participants (***Hypothesis 7.3***).

5.5.3 Task

The Autobiographical Memory Test (AMT; Williams & Broadbent, 1986) was given in Study 2A. This laboratory measure, based on Francis Galton's cue-word method as adapted in previous research (e.g., Crovitz, 1975; Lloyd & Lishman, 1975; Robinson, 1976) was designed to assess autobiographical memory specificity (AMS) among individuals with emotional disturbance. Participants were presented (both verbally and visually) with a total of 18 cue words and instructed to recall a specific event (i.e., an event that lasted less than a day and occurred at a particular time and place) in response to each word in 30 seconds. Before the test started, participants were told that the event recalled might be important or trivial and could have happened at any point in the participants' life except those happening less than a week. They were also reminded to retrieve a different memory for each cue word. After that, three cue words, 'enjoy' (positive), 'tired' (negative), and 'bold' (neutral) were given for practice to confirm that participants could follow the instructions. From the lexical set of Brittlebank., Scott, Williams and Ferrier (1993), we selected six positive (i.e., 'friendly', 'eager', 'peaceful', 'proud', 'happy' and 'relieved'), six negative (i.e., 'hurt', 'guilty', 'weakness', 'failure', 'worse' and 'sad') and six neutral words (i.e., 'refund', 'bathe', 'absence', 'rhythm', 'search' and 'occasion') that were comparable in terms of emotionality ratings (for positive and negative words) and Kucera-Francis frequency (for words of all valences). Prior to the study, these cue words were subjected to translation and back-

translation for the Chinese version by two native, bilingual volunteers. The back-translated English words were then compared to the original English list and no notable differences were found. The 18 words were presented in a fixed order with different valences alternating. The presenting order of valences depends on a counter-balancing design to avoid the practice effect. The memories were coded by trained experimenters based on the standard criteria of a 'specific' memory (e.g., Dalgleish et al., 2007; William et al., 2007): (1) a unique occurrence (with a particular place and time) and (2) a brief duration of fewer than 24 hours. The experimenters focused on the specificity of the participants' first memory response and thus ignored utterances such as 'Ah, now let me think'. If the initial response was non-specific, a standard probing question would be asked (i.e., 'Can you think of a particular time?'). If the subsequent response remained non-specific, the prompting procedure would be repeated. If no specific response was retrieved within the time available, a time of 30s was recorded, and the experimenter proceeded to the next cue word. The response latency is the time interval from when the cue word was presented to when a specific memory was retrieved or the end of the 30s period. In accordance with the coding rule of previous research (e.g., Griffith et al., 2012; Heron et al.; Takano, Mori, Nishiguchi, Moriya, & Raes, 2017), all responses were audio-recorded and later coded into one of the five categories: (1) 'specific' memory, a particular event that happened within a single day (e.g., 'I had a job interview in English'); (2) 'extended' memory, an event that happened over a day (e.g., 'I couldn't shake off my cold for a while'); (3) 'categoric', categories of events or an event that repeatedly happened (e.g., 'I felt tired every day'); (4) 'semantic associate', an associate of the cue word presented (e.g., 'life', 'lottery'); and (5) 'omission', where participants fail to give a response (e.g., 'nothing in particular'). Consistent with past studies (e.g., Heron et al., 2012), there was the 'benefit of doubt' rule for ambiguous events in the current AMT coding protocol. If experimenters are uncertain whether an event recalled is specific or not, the event is coded as

'specific'. Experimenters' allocation of memories to the above 5 categories was cross-checked by each other with a random 10% sample after the completion of the experiment. The inter-rater agreement for the categories was substantial (k = .75), and disagreement was resolved by a discussion panel.

5.5.4 Statistical Analyses

For the AMT data, the variables of interest were autobiographical memory specificity (AMS) and the time required to retrieve a specific memory, and omissions as they are indicators of difficulties in retrieving specific memories. In terms of AMS, the percentage of specific memories was the number of specific memories divided by the total number of responses (i.e., 18 across valences or 6 for each valence: positive, negative and neutral) and then multiplied by 100. Three separate mixed 3-way ANOVAs were conducted to examine the effect of culture gender (between-subject factors) and valence (a within-subject factor with 3 levels: positive, negative, and neutral) on the mean percentage of specific autobiographical memories and the mean response latencies to retrieve them.

5.5.5 Results

All participants across cultures recalled a specific personal memory for at least some of the 18 cue words. Of the 18 responses from every participant, following pre-established criteria (e.g., Griffith et al., 2012), participants recalled a mean of 13.87 specific memories (16.41 for the British group, 13.09 for the Hongkongese group, and 12.13 for the Taiwanese group), 0.33 extended memories (0.19 for the British group, 0.31 for the Hongkongese group, and 0.49 for the Taiwanese group), 0.80 categoric memories (0.28 for the British group, 1.15 for the Hongkongese group, and 0.97 for the Taiwanese group), 0.04 semantic associates (0.03 for the British group, 0.05 for the Hongkongese group, and 0.03 for the Taiwanese group) and 2.79 omissions (1.09 for the British group, 2.89 for the Hongkongese group, and 4.38 for the Taiwanese group).

The number of prompts needed also showed the effects of culture, $F(2,414) = 5.03$, $p = .007$, $\eta^2 = .024$, and valence, $F(2,828) = 8.76$, $p < .001$, $\eta^2 = .021$, and Culture x Valence Interaction, $F(4,828) = 2.60$, $p = .035$, $\eta^2 = .012$, but there were no effects or interactions with gender. The Hongkongese participants ($M_{Adj} = 0.47$, $SE = 0.04$) needed more prompts to retrieve a specific event for cues of each valence than did the British ($M_{Adj} = 0.33$, $SE = 0.04$, $p = .039$) and Taiwanese participants ($M_{Adj} = 0.30$, $SE = 0.04$, $p = .010$). More prompts were needed for neutral cues ($M_{Adj} = 0.46$, $SE = 0.04$) than for positive ($M_{Adj} = 0.30$, $SE = 0.03$, $p < .001$) and negative cues ($M_{Adj} = 0.34$, $SE = 0.03$, $p = .019$). However, the valence which requires relatively fewer prompts diverged between cultures. For British participants, fewer prompts were needed for positive items ($M = 0.24$, $SD = 0.52$) than for negative items ($M = 0.39$, $SD = 0.71$, $p = .033$); For Hongkongese participants, fewer prompts were needed for negative items ($M = 0.36$, $SD = 0.65$) than for neutral items ($M = 0.64$, $SD = 0.96$, $p = .006$). For Taiwanese participants, fewer prompts were needed for positive items ($M = 0.23$, $SD = 0.53$) than for neutral items ($M = 0.40$, $SD = 0.70$, $p = .013$).

The three cultural groups are detailed in Table 5.4 as a percentage of the 6 responses per valence. Figure 5.4 shows the mean latencies to retrieve specific personal memories for the positive, negative and neutral cue words.

Table 5.4 Mean Percentage of Responses in the Autobiographical Memory Test (AMT) from the British, Hongkongese, and Taiwanese Groups

Category		Total *M (SD)*	British *M (SD)*	Hongkongese *M (SD)*	Taiwanese *M (SD)*
Specific Memory (%)					
Positive Items	**Total**	**81.94 (22.54)**	**93.69 (13.33)**	**78.10 (24.82)**	**74.05 (22.82)**
	Male	80.00 (21.80)	91.43 (16.96)	77.62 (20.83)	70.95 (22.29)
	Female	83.89 (23.14)	95.95 (7.74)	78.57 (28.40)	77.14 (23.08)
Negative Items	**Total**	**75.87 (25.15)**	**87.98 (17.78)**	**73.21 (26.42)**	**66.43 (25.44)**
	Male	73.41 (24.85)	84.76 (19.40)	72.14 (23.52)	63.33 (26.56)
	Female	78.33 (25.26)	91.19 (15.47)	74.29 (29.17)	69.52 (24.07)
Neutral Items	**Total**	**73.41 (28.64)**	**91.79 (14.62)**	**66.79 (29.62)**	**61.67 (29.29)**
	Male	70.56 (30.36)	91.43 (15.73)	64.29 (29.80)	55.95 (30.96)
	Female	76.27 (26.57)	92.14 (13.53)	69.29 (29.44)	67.38 (26.53)
Categoric Memory (%)					
Positive Items	**Total**	**3.61 (9.04)**	**0.95 (3.88)**	**4.88 (11.04)**	**5.00 (9.94)**
	Male	4.37 (9.82)	1.43 (4.70)	5.24 (11.19)	6.43 (11.45)
	Female	2.86 (8.14)	0.48 (2.80)	4.52 (10.96)	3.57 (7.97)
Negative Items	**Total**	**5.52 (11.49)**	**2.02 (6.15)**	**7.74 (13.47)**	**6.79 (12.63)**
	Male	5.95 (11.66)	2.62 (6.74)	7.14 (12.55)	8.10 (13.83)
	Female	5.08 (11.32)	1.43 (5.49)	8.33 (14.40)	5.48 (11.25)
Neutral Items	**Total**	**4.21 (9.54)**	**1.67 (5.40)**	**6.55 (12.27)**	**4.40 (9.08)**
	Male	4.44 (10.12)	0.95 (4.82)	7.38 (13.20)	5.00 (9.56)
	Female	3.97 (8.94)	2.38 (5.87)	5.71 (11.31)	3.81 (8.59)
Extended Memory (%)					
Positive Items	**Total**	**1.63 (6.56)**	**0.95 (6.25)**	**1.31 (4.50)**	**2.62 (8.31)**
	Male	1.90 (6.65)	1.43 (8.39)	1.67 (5.04)	2.62 (6.11)
	Female	1.35 (6.48)	0.48 (2.80)	0.95 (3.90)	2.62 (10.09)
Negative Items	**Total**	**1.43 (6.35)**	**1.07 (7.54)**	**1.07 (4.10)**	**2.14 (6.88)**
	Male	1.59 (7.30)	1.67 (10.29)	1.43 (4.70)	1.67 (5.78)
	Female	1.27 (5.26)	0.48 (2.80)	0.71 (3.40)	2.62 (7.84)
Neutral Items	**Total**	**2.46 (7.76)**	**1.19 (5.88)**	**2.74 (7.64)**	**3.45 (9.27)**
	Male	1.90 (6.65)	1.19 (6.55)	2.14 (6.90)	2.38 (6.52)
	Female	3.02 (8.71)	1.19 (5.17)	3.33 (8.32)	4.52 (11.32)
Semantic Associate (%)					
Positive Items	**Total**	**0.20 (1.81)**	**0.12 (1.41)**	**0.48 (2.79)**	**0.00 (0.00)**
	Male	0.16 (1.62)	0.00 (0.00)	0.48 (2.80)	0.00 (0.00)
	Female	0.24 (1.98)	0.24 (1.99)	0.48 (2.80)	0.00 (0.00)

Negative Items	**Total**	**0.12 (1.41)**	**0.12 (1.41)**	**0.24 (1.98)**	**0.00 (0.00)**
	Male	0.08 (1.15)	0.00 (0.00)	0.24 (1.99)	0.00 (0.00)
	Female	0.16 (1.62)	0.24 (1.99)	0.24 (1.99)	0.00 (0.00)
Neutral Items	**Total**	**0.28 (2.92)**	**0.24 (1.98)**	**0.12 (1.41)**	**0.48 (4.44)**
	Male	0.40 (3.80)	0.48 (2.80)	0.00 (0.00)	0.71 (5.98)
	Female	0.16 (1.62)	0.00 (0.00)	0.24 (1.99)	0.24 (1.99)
Omission (%)					
Positive Items	**Total**	**11.67 (16.97)**	**4.29 (9.02)**	**12.38 (18.03)**	**18.33 (19.00)**
	Male	13.57 (17.63)	5.71 (10.95)	15.00 (18.42)	20.00 (19.37)
	Female	9.76 (16.10)	2.86 (6.33)	9.76 (17.37)	16.67 (18.61)
Negative Items	**Total**	**16.11 (19.60)**	**8.81 (14.20)**	**14.88 (18.72)**	**24.64 (21.85)**
	Male	18.97 (20.27)	10.95 (15.77)	19.05 (17.79)	26.90 (23.45)
	Female	13.25 (18.52)	6.67 (12.17)	10.71 (18.83)	22.38 (20.04)
Neutral Items	**Total**	**18.69 (23.83)**	**5.12 (11.11)**	**20.95 (24.19)**	**30.00 (26.16)**
	Male	22.70 (26.50)	5.95 (11.71)	26.19 (26.25)	35.95 (28.75)
	Female	14.68 (20.10)	4.29 (10.50)	15.71 (20.83)	24.05 (21.91)

Main Analysis of Hypothesis 7.1

The mixed-effect ANOVA with the between-subject factors, culture and gender and a within-subject factor, valence for the mean percentage of specific autobiographical memories found the main effects of culture, $F(2,414) = 56.73$, $p < .001$, $\eta^2 = .215$, and gender, $F(1,414) = 6.41$, $p = .012$, $\eta^2 = .015$. There were no interactions with gender or valence. British participants ($M = 91.15\%$, $SE = 1.66$) reported a higher percentage of specific memories than did their Hongkongese ($M_{Adj} = 72.70\%$, $SE = 1.66$, $p < .001$) and Taiwanese counterparts ($M_{Adj} = 67.38\%$, $SE = 1.66$, $p < .001$). Female participants ($M = 79.50\%$, $SE = 1.35$) were more likely to recall specific memories to cue words than male participants ($M = 74.66\%$, $SE = 1.35$, $p = .012$).

Main Analysis of Hypothesis 7.2

Similarly, for the latency to retrieve specific personal memories, there were significant main effects of culture, $F(2,410) = 43.23$, $p < .001$, $\eta^2 = .174$, gender, $F(1,410) = 24.23$, $p < .001$, $\eta^2 = .056$. There were no 2-way or 3-way interactions with gender. The British group ($M_{Adj} = 13.87$s, $SE = 0.41$s) recalled specific personal memories more quickly compared to the Hongkongese group ($M_{Adj} = 16.62$s, $SE = 0.42$s, $p < .001$), which in turn was quicker than the Taiwanese group ($M_{Adj} = 19.31$s, $SE = 0.41$s, $p < .001$). It took female participants a significantly shorter time ($M_{Adj} = 15.42$s, $SE = 0.34$s) to retrieve a specific memory compared to male participants ($M_{Adj} = 17.78$s, $SE = 0.34$s, $p < .001$).

Main Analysis of Hypothesis 7.3

Also, the percentage of omissions in response to cues showed the main effects of culture, $F(2,414) = 54.71$, $p < .001$, $\eta^2 = .209$, gender, $F(1,414) = 16.79$, $p < .001$, $\eta^2 = .039$. There were no interactions with gender. The British group ($M = 6.07\%$, $SE = 1.24$) showed fewer omissions than did the Hongkongese group ($M_{Adj} = 16.07\%$, $SE = 1.24$, $p < .001$),

followed by the Taiwanese group (M_{Adj} = 24.33%, SE = 1.24, p <.001). Male participants (M = 18.41%, SE = 1.01) were more likely not to give any response to cue words than female participants (M = 12.57%, SE = 1.01, p <.001).

Additional Analyses

On the percentage of specific memories, there were a main effect of valence, $F(2,413)$ = 35.83, p <.001, η^2 = .148, and an interaction between culture and valence, $F(4,828)$ = 5.60, p <.001, η^2 = .026. Positive items (M = 81.94%, SE = 1.02) tended to elicit more specific personal memories across participants compared to negative items (M = 75.87%, SE = 1.15, p <.001) and neutral items (M = 73.41%, SE = 1.24, p <.001). As shown in Figure 5.1, positive items elicited the highest proportion of specific personal memories in all participants but whether negative items did the worst in terms of autobiographical memory specificity depends on cultural groups. All groups retrieved more specific memories to positive cues than to neutral and negative cues. While in the Taiwanese groups, both negative and neutral cues elicited the lowest percentage of specific memories, this only applied to negative cues for British participants and neutral cues for Hongkongese participants.

On the latency to retrieve specific memories, there were also a significant effect of valence, $F(2,820)$ = 73.05, p <.001, η^2 = .151, as well as an interaction between culture and valence, $F(4,820)$ = 6.72, p <.001, η^2 = .032. memories were retrieved more quickly to positive (M_{Adj} = 15.12s, SE = 0.26s) than for negative (M_{Adj} = 17.45s, SE = 0.26s, p <.001) or neutral cues (M_{Adj} = 17.23s, SE = 0.29s, p <.001). As shown in Figure 5.2, positive items took all cultural groups the shortest time to recall a specific memory but which valence took the longest time varied across cultural groups. In Taiwanese groups, both negative and neutral cues took the longest time to retrieve a specific memory, while this only applied to negative cues for British participants and neutral cues for Hongkongese participants.

A similar pattern was observed in the number of omissions, with a main effect of valence, $F(2,413) = 35.83$, $p < .001$, $\eta^2 = .148$, and an interaction between culture and valence, $F(2,413) = 29.42$, $p < .001$, $\eta^2 = .125$. Positive items ($M = 11.67\%$, $SE = 0.78$) tended to elicit the fewest omissions across participants compared to negative items ($M = 16.11\%$, $SE = 0.90$, $p < .001$) and neutral items ($M = 18.69\%$, $SE = 1.03$, $p < .001$). All groups retrieved have fewer omissions to positive cues than to the other two types of cues. While in the British groups, negative cues elicited the most omissions, this applied to neutral cues for Hongkongese and Taiwanese participants.

5.5.6 Discussion

As predicted, the British participants retrieved more specific memories than their Hongkongese and Taiwanese counterparts. Consistent with previous literature (e.g., Humphries and Jobson, 2012; Dritschel, Kao, Astell, Neufeind, & Lai, 2011), the observed effect of culture in AMS could be attributed to different construals of the self (Markus & Kitayama, 2010). In individualistic (typically Western) cultures, the self is perceived to be a unique, autonomous, and independent entity with a priority on internal attributes (e.g., abilities, personality traits and psychological motives). In contrast, in collectivistic culture (typically East Asian) cultures, the self is defined by an interdependent entity belonging to a social group or attending to the surrounding social context. Hence, the goal of the independent self is to differentiate from others by promoting personal interest while the interdependent self is aimed to fit in with others by engaging in culturally appropriate actions (e.g., Humphries and Jobson, 2012; Markus & Kitayama, 2010). These differences in self-construal have been found to influence autobiographical remembering (Wang & Conway, 2004), referring to a cognitive process where one actively retrieves and reconstructs specific events from one's personal past (Conway & Pleydell-Pearce, 2000). Autobiographical remembering, in turn, helps one engage in a goal, values, and belief systems that are

congruent with one's culture (for a review, see Ross & Wang, 2010). This cultural influence, therefore, also extends to autobiographical memory specificity (AMS). As a substantial body of research has demonstrated, people from individualistic cultures tended to recall more specific autobiographical memories compared to those from collectivistic cultures (for a review, see Wang, 2009). The retrieval of specific autobiographical memories is crucial in individualistic cultures 'to differentiate the self from others, thereby reaffirming the self as an autonomous self' (Wang & Conway, 2004, p. 912). The emphasis on AMS may not hold the same for people from collectivistic cultures without a goal to stand out from others (Wang & Conway, 2004). Given that the independent self is highly valued, people from individualistic cultures tend to be encouraged to think of and talk about their personal experiences in a more elaborate way than those from collectivistic cultures (e.g., Leichtman, Wang, & Pillemer, 2003). In this cultural context, specific events would be rapidly available at recall in the autobiographical knowledge base (e.g., Conway & Pleydell-Pearce, 2000). Another explanation for the observed cultural differences is elaborate and understated communication styles, which are characteristics of high-context and low-context communications respectively (Hall, 1976). According to Liu (2016), people from individualistic cultures (e.g., Europeans) tend to use the elaborate style (involving the use of expressive language) as they perceive self-expression as a means of social control and are more likely to initiate conversations for opportunities. But those from collectivistic cultures (e.g., East Asians) tend to use the understated style (involving the extensive use of non-verbal expressions) as they regard silence as a means of control strategy and speak little (especially about their personal past) to remain socially discreet. Therefore, East Asians are less likely to elaborate their autobiographical memory without further prompts (e.g., follow-up questions) than Westerners. Hence, the British group (i.e., an individualistic culture) tended to recall specific memory not only more but also quicker with fewer prompts needed compared to the

Hongkongese and Taiwanese groups (i.e., collectivistic cultures). It is also possible that some Hongkongese and Taiwanese participants were not comfortable sharing the memories. However, this explanation for the results is not very likely as they did not have to disclose what exactly the event was.

In line with previous research (e.g., Davis, 1999; Seidlitz & Diener, 1998), the present study showed that female participants performed better in the AMT than male participants. Such gender differences in AMT performance could be explained by socialization (especially in early childhood) (e.g., Buckner & Fivush, 1998) and evolutionary theories (e.g., Buss, 1995). For example, parents are inclined to reminisce with their children with gender-specific styles; pragmatic and elaborative narrative styles were more frequently found in 'memory talks' with sons and daughters respectively (e.g., Fivush, 2014; Nelson, 2003). Also, parents prefer a deeper elaboration with emotional details with their daughters than with sons (e.g., Fivush & Reese, 1992). Therefore, females tend to possess vivid, emotional memories with specific details, thus easily recalling events of a higher specificity (Alea & Bluck, 2003). Fivush (1998) stated that females may 'define themselves more strongly in terms of their autobiographical experiences than do males' (p. 97). This gender-specific socialization with autobiographical memory may originate from evolutionary needs, where men and women have faced different adaptive challenges and acquired corresponding social skills throughout the reproduction process (Buss, 1995). From an evolutionary perspective, empathy is developed mainly in females to maintain relationships with others (e.g., Surrey, 1985). This trait is focused on emotional responses to another person's inner states and thus allows better prediction about others' feelings and behaviour (Davis, 1983). Robinson and Swanson (1990) said, 'People who are less aware of their own subjective states may also be less insightful about others' (p. 330). Therefore, empathy, as an important trait of females, requires the self to engage in 'memory talk' with different details and exercise their autobiographical memory

since early childhood (e.g., Neisser, 1988). With more chances to practice, it is not surprising to see females, compared to males, provide specific memories quicker with fewer external cues when being asked to do so.

The exhaustive conditions of valence are a highlight of this present study, which was one of the first to test AMS by including neutral cue words in cross-cultural research. Traditionally, researchers (e.g., Williams & Broadbent, 1986; Takano et al, 2017) have adopted cue words of only the two opposite valences (i.e., positive and negative) in the AMT (regardless of the verbal or written version). These limited choices of manipulation may not sufficiently support any conclusions about the effect of valence, which was argued to be shown in delayed retrieval of positive memories (e.g., Williams and Broadbent, 1986) or in the rAMS of negative memories (e.g., Dritschel et al., 2011). The present study found that positive items across cultural groups took the shortest time to elicit the most specific personal memories with the fewest prompts, but for the comparison between negative or neutral items, different patterns were found for different cultural groups. Hence, the effect of valence on the AMT performance may be reflected better in responses to positive items (rather than negative ones).

The most striking finding was the interaction between culture and valence in the retrieval of specific autobiographical memories. The high level of specificity of positive cue words across participants may be a consequence of a positive bias in memory retrieval. Walker, Skwronski and Thompson (2003) found that participants in a memory retrieval task demonstrate better recall for positive stimuli compared to negative or neutral ones. Kensinger and Schacter (2008) explained the positive bias by neural mechanisms that heightened activation of the amygdala for positive items. But surprisingly, the opposite result that negative cue words would impair AMT performance was only applicable to the British group. For the Hongkongese and Taiwanese groups, neutral items were as hard as negative

ones, or sometimes, the hardest to recall specific memories. These culture-specific findings may illustrate the importance of emotional memories in high-context cultures, where people tend to rely on contextual information (e.g., non-verbal cues) to make sense of the world. In general, positive, negative, and neutral cue words have been assumed to elicit memories of the corresponding valences (e.g., Young, Erickson, & Drevets, 2012). The emotional content (either positive or negative), as part of context information, provides additional richness and depth to the encoding process of an event (e.g., Holland & Kensinger, 2010). This emotional intensity associated with the event creates a stronger contextual association, making it easier to be retrieved later (for a review, see Buchanan, 2007). Hence, in the Hongkongese and Taiwanese groups, the events cued by neutral items (compared to those cued by positive or negative ones) were harder to elaborate on without emotional content.

For future research, we could further investigate the latencies to recall various types of autobiographical memories by dividing the total latencies to retrieve a specific memory into two parts: (a) the latency to retrieve a general memory (e.g., categoric or generic) and (b) the subsequent latency to retrieve a specific memory (by subtraction from the total time).

5.6 Self-Defining Memory Task (SDMT)

5.6.1 Introduction

The Self-Defining Memory Task (SDMT) is an objective measure of self-defining memories in various important dimensions. Self-defining memories (SDMs) are ‘memories that are affectively intense, repetitive, and vivid and comprise enduring concerns about oneself’ (Singer & Salovey, 1993, p. 592). They are a specific type of autobiographical memories that relate to themes of self-identity (e.g., McAdams, 1989a, 1989b) and self-discovery (e.g., Singer & Moffitt, 1992). Memories related to the self are often more vivid and easier to recall than those that are not self-relevant (Conway & Pleydell-Pearce, 2000). Self-relevant memories are processed and encoded differently than other memories, with

more attention and elaboration given to information that is personally relevant to the individual (Hull, Van Treuren, Ashford, Propsom, & Andrus, 1988). Self-defining memories can be assessed in different aspects by the self-defining memory task (for a review, see Singer & Salovey, 1993). In this task, participants are instructed to generate 10 self-defining memories and rate each of them on emotions, vividness, and importance. Past research has indicated specificity, meaning, content, and affect and detailedness (e.g., Blagov & Singer, 2004) as crucial aspects of self-defining memories. For these five aspects, self-defining memories from participants were coded with the scoring manuals developed by Singer and Blagov (2000), Thorne and McLean (2001) and Levine, Svoboda, Hay, Winocur and Moscovitch (2002).

5.6.2 Hypotheses

- There will be cultural differences in the dimensions of self-defining memories (i.e., specificity, meaning, content, affect, and detailedness) (***Hypothesis 8***).
    - British participants will recall more specific self-defining memories than Hongkongese and Taiwanese participants (***Hypothesis 8.1***).
    - Taiwanese participants will recall more integrative memories than Hongkongese and British participants (***Hypothesis 8.2***).
    - British participants will recall more self-defining memories about 'Achievement/ Mastery' than Hongkongese and Taiwanese participants (***Hypothesis 8.3*).**
    - British participants will recall fewer self-defining memories about 'Relationship' than Hongkongese and Taiwanese participants (***Hypothesis 8.4*).**
    - British participants will recall more positive self-defining memories than Hongkongese and Taiwanese participants (***Hypothesis 8.5*).**
    - British participants will recall fewer negative self-defining memories than Hongkongese and Taiwanese participants (***Hypothesis 8.6*).**

- British participants will recall more memory details than Hongkongese and Taiwanese participants (***Hypothesis 8.7*).**

5.6.3 Task

Study 1A

1) Self-Defining Memory Task (Moffitt & Singer, 1994)

This task is designed to measure the features of self-defining autobiographical memories among participants. A self-defining memory was described as (1) being at least one year old; (2) being very familiar, clear and important; (3) involving an enduring theme, issue, or conflict from their life; (4) being linked to other memories that shared similar themes or concern; (5) leading to strong feelings (regardless of the valence); and (6) being recalled and thought about many times (Singer & Moffitt, 1992). Participants were reminded that self-defining memories were the type of memory that helps self-understanding and powerfully conveyed to others whom you have become. They were further instructed to generate a total of 10 memories and then rate each of them on 12 emotions, namely 'happy', 'sad', 'angry', 'fearful', 'surprised', 'ashamed', 'disgusted', 'guilty', 'interested', 'contemptful' (Izard, 1977), 'proud' and 'embarrassed' (Moffitt & Singer, 1994), vividness and importance on a scale of 0 = *not at all* to 6 = *extremely* to reflect their feelings at the moment of recalling the experience. They were also asked to indicate the approximate number of years ago each of the remembered events took place (to the nearest whole number). According to Blagov and Singer (2004), the 10 self-defining memories provided by each participant were coded for four dimensions (i.e., specificity, meaning, affect, and content) with the 'Classification System and Scoring Manual for Self-defining Autobiographical Memories' (Singer & Blagov, 2000) and the 'Manual for Coding Events in Self-defining Memories' (Thorne & McLean, 2001). Specificity is

operationalised by the temporal and unique details of the narrative (e.g., specific, episodic, and generic). Meaning reflects whether participants acquired a high-level lesson from the memory (i.e., integrative and non-integrative). Affect refers to the subjective emotion upon recall of the memory (i.e., positive, negative, mixed and neutral). Content is defined as the event types in memories, including (1) 'life-threatening event (LTE)', with 5 sub-categories: (i) 'death or serious illness or injury of someone else', (ii) 'serious accident or illness of self', (iii) 'physical assault to oneself', (iv) 'rape or sexual abuse (to oneself)' and 'LTE not classifiable', (2) 'recreation/exploration' (e.g., 'riding a cow', 'a lively cake fight', and 'being mischievous for the fun of it'), (3) 'relationship' (e.g., 'first love', 'breakup', and 'parents' divorce'), (4) 'achievement/mastery' (e.g., 'winning competitions', 'learning skills', and 'struggling to be popular'), (5) 'guilt/shame' (e.g., 'guilt about getting pregnant', 'making a moral or ethical decision', and 'remorse for stealing'), (6) 'drug, alcohol, or tobacco use' (e.g., 'first time smoking cigarettes or pot', 'getting extremely drunk', and 'overdosing on pills'). Another important variable is whether a time stamp was present in the description of an event. A time stamp is the only statement indicating when an event happened in one's life, without giving additional information about one's life or meaning drawn from the event (Singer & Blagov, 2000). Two Chinese-English bilingual independent coders received a series of training sessions with the coding scheme and coded all the responses independently. The inter-rater agreement for the categories was substantial (k = .72), and disagreement was resolved by a discussion panel.

<u>Study 2A</u>

2) Modified Self-Defining Memory Task (from Study 1A)

The Self-Defining Memory Task was refined by (1) deliberately eliciting both positive and negative memories and (2) adapting the list of emotions to the memory valence. To assess the features of memories of different valences, participants were instructed to generate 5 positive memories and 5 negative memories. After that, participants rated 8 positive emotions (i.e., 'happy', 'content', 'interested', 'proud', 'loving', 'relaxed', 'amused' and 'excited') for each of the positive memories, and another 8 negative emotions (i.e., 'sad', 'angry', 'fearful', 'ashamed', 'disgusted', 'guilty', 'embarrassed' and 'contemptful') for each of the negative memories using a 7-point scale (0 = *not at all* to 6 = *extremely*) to reflect their current affective responses. Like those in Study 1A, the 10 self-defining memories in Study 2A were coded for specificity, integration of meaning, valence, and event type. Following the coding framework developed by Levine, Svoboda, Hay, Winocur and Moscovitch (2002), these memories were also coded for detailedness, which refers to the number of information bits or details (i.e., a unique occurrence, observation, or thought). Detailedness can be divided into two categories: (1) internal details regarding the event itself (e.g., time, place, perceptual sensations, and thoughts/emotions); and (2) external details regarding semantic information (e.g., general knowledge, other autobiographical events, and metacognitive statements). The inter-rater agreement for the categories was substantial (k = .78), and disagreement was resolved by a discussion panel.

5.6.4 Statistical Analyses

For the SDMT data, this research examined five dimensions of self-defining memories (i.e., specificity, meaning, content, affect and detailedness). The percentage of responses in a category was the number of responses in the category divided by the total number of responses (i.e., 10 across valences or, in Study 2A, 5 for each valence: positive

and negative) and then multiplied by 100. In Study 1A, we conducted three separate 2-way MANOVAs with culture and gender on multiple levels of specificity, content, and affect, as well as a 2-way ANOVA on the percentage of integrated memories (under the meaning dimension). In Study 2A, we conducted a mixed 3-way MANOVA with culture, gender and valence for specificity, content and detailedness, as well as a mixed 3-way ANOVA for meaning.

5.6.5 Results

Descriptive statistics showed that the self-defining memory task elicited emotionally significant events from participants. On a scale of 0 to 6, the mean rating of the 10 memories across participants indicated that the memories recalled were considered vivid (Study 1A: M = 5.66, SD = 0.82; Study 2A: M = 5.53, SD = 0.87) and important (Study 1A: M = 5.48, SD = 0.88; Study 2A: M = 5.18, SD = 0.98). The number of years ago the events that happened ranged from 6.5 to 15.4 (M = 5.66, SD = 0.82) in Study 1A and from 0.2 to 13.4 (M = 5.26, SD = 2.47) in Study 2A. Of the 10 memories from all participants, on average, around 26.95% (SD = 21.09%) in Study 1A and 15.81% (SD = 16.74%) in Study 2A were recalled with a time stamp. In Study 1A, there were no significant cultural differences in vividness, importance, number of years ago, or time stamp. In Study 2A, one of the manipulations was the valence of memories requested; positive and negative memories were both compared between cultures. The presence of a time stamp was the only variable that was found with a significant cultural effect on both positive, $F(2,413) = 31.67$, $p < .001$, $\eta^2 = .133$, and negative memories, $F(2,413) = 59.80$, $p < .001$, $\eta^2 = .225$. The Taiwanese group recalled a greater proportion of positive (M_{Adj} = 48.82%, SE = 2.58%) and negative memories with a time stamp (M_{Adj} = 52.92%, SE = 2.56%)) than the Hongkongese (M_{Adj} = 27.39%, SE = 2.58%, p <.001; M_{Adj} = 24.64%, SE = 2.56%, p <.001) and British groups (M_{Adj} = 21.08%, SE = 2.58%, p <.001; M_{Adj} = 14.87%, SE = 2.56%, p <.001). For negative memories, Taiwanese

participants recalled more vivid (M = 5.75, SD = 0.88), more important (M = 5.16, SD = 0.99), and older (M = 6.20, SD = 2.66) memories than did their Hongkongese counterparts (M = 5.26, SD = 1.00, p <.001; M = 4.78, SD = 1.22, p = .007; M = 5.33, SD = 2.76, p = .013).

Main Analysis of Hypothesis 8.1

Specific self-defining memories were less common in Study 1A (38.67%) but more common in Study 2A (66.12%) than non-specific ones (Study 1A: 61.33%; Study 2A: 33.88%); the latter was the sum of episodic (Study 1A: 53.28%; Study 2A: 22.94%) and generic (Study 1A: 8.05%; Study 2A: 10.94%) self-defining memories. Most of the types of self-defining memories showed cultural differences in the level of specificity in both studies, Study 1A: F(4,244) = 5.29, p <.001, η^2 = .080; Study 2A: F(6,824) = 17.07, p <.001, η^2 = .111. The subsequent analyses found a significant cultural effect on the mean proportion of specific, Study 1A: F(2,122) = 10.77, p <.001, η^2 = .150; Study 2A: F(2,413) = 56.67, p <.001, η^2 = .215, episodic, Study 1A: F(2,122) = 10.78, p <.001, η^2 = .150; Study 2A: F(2,413) = 31.15, p <.001, η^2 = .131, and generic memories, Study 2A: F(2,413) = 22.26, p <.001, η^2 = .097. In Study 1A, British participants retrieved a greater proportion of specific memories (M = 51.88%, SD = 28.41%) and a smaller proportion of episodic memories (M = 40.63%, SD = 23.83%) than did Hongkongese (M = 32.08%, SD = 23.79%, p <.001; M = 58.96%, SD = 24.69%, p <.001) and Taiwanese participants (M = 28.75%, SD = 22.11%, p <.001; M = 63.75%, SD = 25.24%, p <.001). In Study 2A, the finding of a greater proportion of specific memories in the British group (M_{Adj} = 82.84%, SE = 1.98%) compared to the Hongkongese (M_{Adj} = 54.26%, SE = 1.98%, p <.001) and Taiwanese groups (M_{Adj} = 61.26%, SE = 1.98%, p <.001) was replicated. Also, British participants recalled fewer 'episodic' (M_{Adj} = 13.57%, SE = 1.52%) and 'generic' memories (M_{Adj} = 3.59%, SE = 1.36%), compared to their Hongkongese (M_{Adj} = 30.11%, SE = 1.52%, p <.001; M_{Adj} = 15.63%, SE = 1.36%, p <.001) and Taiwanese counterparts (M_{Adj} = 25.11%, SE = 1.52%, p <.001; M_{Adj} =

13.56%, SE = 1.36%, p <.001). There was no gender effect or interaction with gender on the level of memory specificity across the two studies.

Main Analysis of Hypothesis 8.2

Integrative memories were less common in Study 1A (9.53%) and Study 2A (3.91%) than non-integrative memories (Study 1A: 90.47%; Study 2A: 96.09%). The meaning of self-defining memories showed cultural differences only in Study 2A. The MANCOVA showed a main effect of culture, F(2,413) = 6.59, p = .002, η^2 = .031, but no gender effect or interaction, on the recall of integrative memories. Hongkongese participants (M_{Adj} = 1.27%, SE = 0.89%) recalled fewer integrative memories than did their British (M_{Adj} = 5.31%, SE = 0.89%, p = .004) and Taiwanese counterparts (M_{Adj} = 5.13%, SE = 0.89%, p = .007). Specifically, the observed group difference was found in self-defining memories of positive valence, F(2,413) = 6.12, p = .002, η^2 = .029. When being asked to generate positive self-defining memories, the Hongkongese group (M_{Adj} = 1.69%, SE = 1.31%) retrieved a significantly smaller proportion of integrative ones than the British (M_{Adj} = 7.48%, SE = 1.31%, p = .006) and Taiwanese (M_{Adj} = 7.12%, SE = 1.31%, p = .011) groups.

Main Analysis of Hypotheses 8.3 & 8.4

Of all responses across three cultures, uncodable responses constituted 7.19% in Study 1A and 10.41% (with positive valence: 3.33% vs. negative valence: 17.48%) in Study 2A. The cultural difference in uncodable responses was only found in Study 2A, F(2,417) = 8.25, p <.001, η^2 = .038, where Hongkongese participants (M = 14.00%, SD = 20.77%) recalled more responses that were uncodable than did Taiwanese (M = 9.21%, SD = 17.90%, p <.001) and British participants (M = 8.00%, SD = 14.23%, p = .007). In Study 1A, neither cultural/gender differences nor interaction were significant. In Study 2A, there were significant effects of culture, F(12,816) = 5.55, p <.001, η^2 = .075 and valence, F(6,407) = 339.49, p <.001, η^2 = .833, as well as the interaction between both, F(12,816) = 2.76, p =

.001, η^2 = .039, on the memory content. British participants recalled a significantly greater proportion of memories under LTE (*M* = 12.96%, *SE* = 0.94%) and 'Drug, alcohol or tobacco use' (*M* = 0.77%, *SE* = 0.15%) but a significantly smaller proportion of those under 'Achievement/ Mastery' (*M* = 27.08%, *SE* = 1.43%) than their Hongkongese (*M* = 7.31%, *SE* = 0.94%, *p* <.001; *M* = 0.09%, *SE* = 0.15%, *p* <.001; *M* = 39.13%, *SE* = 1.43%, *p* <.001) and Taiwanese counterparts (*M* = 8.31%, *SE* = 0.94%, *p* = .001; *M* = 0%, *SE* = 0.15%, *p* = .040; *M* = 32.13%, *SE* = 1.43%, *p* = .004). The subsequent ANOVAs found cultural differences in the proportions of memories categorised as 'Life-Threatening Events (LTEs)', *F*(2,412) = 10.38, *p* <.001, η^2 = .048, 'Achievement/ Mastery', *F*(2,412) = 17.89, *p* <.001, η^2 = .080, and 'Drug, alcohol, or tobacco use', *F*(2,412) = 8.17, *p* <.001, η^2 = .038, as well as valence differences in all categories, including LTEs, *F*(1,412) = 268.59, *p* <.001, η^2 = .395, 'Recreation/ Exploration', *F*(1,412) = 505.40, *p* <.001, η^2 = .551, 'Relationship', *F*(1,412) = 537.89, *p* <.001, η^2 = .566, 'Achievement/ Mastery', *F*(1,412) = 320.63, *p* <.001, η^2 = .438, 'Guilt/shame', *F*(1,412) = 43.38, *p* <.001, η^2 = .095, and 'Drug, alcohol, or tobacco use', *F*(1,412) = 4.87, *p* <.001, η^2 = .012. There was an interaction between culture and valence on the proportion of memories under LTEs, *F*(2,412) = 8.39, *p* <.001, η^2 = .012. For positive prompt, the British group (*M* = 0.89%, *SE* = 0.31%) did not recall more LTEs than did the Hongkongese (*M* = 0.29%, *SE* = 0.31%, *p* =.512) and Taiwanese groups (*M* = 0.58%, *SE* = 0.31%, *p* = 1.000). But for negative prompt, there was a significant cultural difference with a higher report of LTE in the British group (*M* = 25.04%, *SE* = 1.85%) than the other two groups (Hongkongese: *M* = 14.34%, *SE* = 1.86%, *p* <.001; Taiwanese: *M* = 16.03%, *SE* = 1.86%, *p* = .002) (See Figure 5.2).

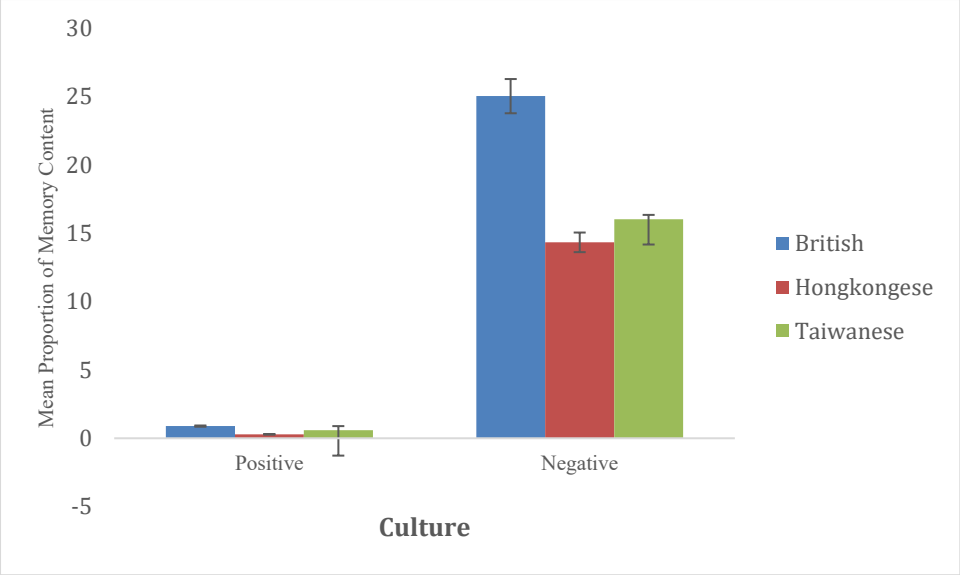


Figure 5.2 Mean proportions of memories categorised to 'Life-Threatening Events' (LTEs) in the self-defining memory task of Study 2A. The error bars represent one standard error around the mean.

Main Analysis of Hypothesis 8.5

Affect, as the outcome variable only in Study 1A, showed both cultural, $F(4,244) = 3.04$, $p = .018$, $\eta^2 = .047$, and gender differences, $F(2,121) = 4.96$, $p = .008$, $\eta^2 = .076$. Specifically, the main effects of culture, $F(2,122) = 4.21$, $p = .017$, $\eta^2 = .065$, and gender, $F(1,122) = 7.99$, $p = .005$, $\eta^2 = .061$, on the affect of memories were found in negative but not in positive memories. Taiwanese participants were more likely to recall negative memories ($M = 42.50\%$, $SD = 27.71\%$) than their British counterparts ($M = 30.00\%$, $SD = 20.53\%$, $p = .034$). Also, female participants tended to retrieve more negative memories ($M = 41.72\%$, $SD = 21.64\%$) compared to male participants ($M = 32.19\%$, $SD = 22.43\%$, $p = .005$). The emotionality ratings showed cultural differences in negative memories in both studies, Study 1A: $F(16,232) = 3.77$, $p < .001$, $\eta^2 = .206$; Study 2A: $F(16,814) = 15.96$, $p < .001$, $\eta^2 = .239$. British participants tended to feel less disgusted (Study 1A: $M = 1.78$, $SD = 0.60$; Study 2A: $M_{Adj} = 2.69$, $SE = 0.12$) than Hongkongese (Study 1A: $M = 2.55$, $SD = 1.06$, $p < .001$; Study 2A: $M_{Adj} = 4.16$, $SE = 0.12$, $p < .001$) and Taiwanese participants (Study 1A: $M = 2.61$, $SD = 1.23$, $p < .001$; Study 2A: $M_{Adj} = 4.41$, $SE = 0.12$, $p < .001$). The cultural difference also

remained in positive memories only in Study 2, $F(16,816) = 7.12$, $p < .001$, $\eta^2 = .123$. When recalling positive memories, the British group felt less content ($M = 5.56$, $SE = 0.71$), interested ($M = 4.46$, $SE = 0.11$), relaxed ($M = 4.16$, $SE = 0.10$), amused ($M = 4.13$, $SE = 0.11$), and excited ($M = 4.71$, $SE = 0.10$) than their Hongkongese ($M = 5.85$, $SE = 0.71$, $p = .013$; $M = 5.23$, $SE = 0.11$, $p < .001$; $M = 4.72$, $SE = 0.10$, $p < .001$; $M = 4.66$, $SE = 0.11$, $p = .002$; $M = 5.39$, $SE = 0.10$, $p < .001$) and Taiwanese group ($M = 6.01$, $SE = 0.71$, $p < .001$; $M = 5.33$, $SE = 0.11$, $p < .001$; $M = 4.91$, $SE = 0.10$, $p < .001$; $M = 4.79$, $SE = 0.11$, $p < .001$; $M = 5.46$, $SE = 0.10$, $p < .001$). For 'loving', British participants rated a higher level ($M = 4.47$, $SE = 0.11$) than Taiwanese ($M = 4.85$, $SE = 0.11$, $p = .036$) but not Hongkongese participants ($M = 4.69$, $SE = 0.11$, $p = .439$). In Study 2A, there was also a gender difference in emotionality ratings of positive, $F(8,407) = 4.29$, $p < .001$, $\eta^2 = .078$, and negative memories, $F(8,406) = 3.34$, $p = .001$, $\eta^2 = .062$. For positive memories, female participants tended to feel more loving ($M = 4.89$, $SE = 0.09$) than their male counterparts ($M = 4.46$, $SE = 0.09$, $p < .001$). For negative memories, they were more likely to feel sadder ($M_{Adj} = 4.93$, $SE = 0.09$) but less ashamed ($M_{Adj} = 3.61$, $SE = 0.09$) and embarrassed ($M_{Adj} = 3.46$, $SE = 0.10$) than male participants ($M_{Adj} = 4.68$, $SE = 0.09$, $p = .044$; $M_{Adj} = 3.89$, $SE = 0.09$, $p = .039$; $M_{Adj} = 3.81$, $SE = 0.10$, $p = .009$).

Main Analysis of Hypotheses 8.6 & 8.7

Detailedness, as the outcome variable only in Study 2A, showed significant effects of culture, $F(4,826) = 12.38$, $p < .001$, $\eta^2 = .056$, gender, $F(2,412) = 5.19$, $p = .006$, $\eta^2 = .024$, and valence, $F(2,412) = 14.57$, $p = .009$, $\eta^2 = .023$. The subsequent ANCOVAs found cultural differences in both internal details, $F(2,413) = 25.52$, $p < .001$, $\eta^2 = .110$, and external details, $F(2,413) = 6.87$, $p = .001$, $\eta^2 = .032$. Hongkongese participants recalled memories with fewer internal ($M_{Adj} = 3.69$, $SE = 0.28$) and external details ($M_{Adj} = 0.08$, $SE = 0.04$) than did British ($M_{Adj} = 6.15$, $SE = 0.28$, $p < .001$; $M_{Adj} = 0.23$, $SE = 0.04$, $p = .018$) and Taiwanese

participants (M_{Adj} = 6.13, SE = 0.28, p <.001; M_{Adj} = 0.27, SE = 0.04, p = .001). There was a gender difference in internal details, F(1,413) = 10.27, p = .001, η^2 = .024, but not in external details, F(1,413) = 1.88, p = .171, η^2 = .005. Female participants were found to recall more internal details of memories (M_{Adj} = 5.84, SE = 0.23) than male participants (M_{Adj} = 4.81, SE = 0.23, p = .001). Also, the analysis also found the effect of valence in both internal, F(1,413) = 1.88, p = .171, η^2 = .005, and external details, F(1,413) = 1.88, p = .171, η^2 = .005, where participants tend to report more internal details (M_{Adj} = 5.54, SE = 0.18) but fewer external details (M_{Adj} = 0.17, SE = 0.21) in negative memories than in positive ones (internal details: M_{Adj} = 5.11, SE = 0.16; external details: M_{Adj} = 0.22, SE = 0.03).

The detailed statistics for the specificity, meaning, content, affect, and detailedness of self-defining memories from each cultural group are displayed in Table 5.5.

Table 5.5 Responses in the Self-Defining Memory Task (SDMT) from the British, Hongkongese, and Taiwanese Groups (including Specificity, Meaning, Content, Affect, and Detailedness)

Category		Total	British	Hongkongese	Taiwanese	Main Effect Culture	Main Effect Gender	Interaction Culture x Gender
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*F* (df1,df2); *p*; η^2	*F* (df1,df2); *p*; η^2	*F* (df1,df2); *p*; η^2
Specificity								
MANOVA (Sub-Scales)								
Study 1A						**5.29 (4,244); <.001*; .080**	0.17 (2,121); .841; .003	1.47 (4,244); .213; .023
MANCOVA (Sub-Scales)								
Study 2A (Positive)						**22.89 (4,826); <.001*; .100**	0.75 (2,412); .471; .004	1.93 (4,826); .104; .009
Study 2A (Negative)						**11.85 (6,824); <.001*; .079**	0.90 (3,411); .442; .007	1.63 (6,824); .137; .012
Specific (%)								
Study 1A	Total	38.67 (27.10)	51.88 (28.41) [a]	32.08 (23.79) [b]	28.75 (22.11) [b]	**10.77 (2,122); <.001*; .150**	0.02 (1,122); .902; 0	2.05 (2,122); .134; .032
	Male	39.22 (25.96)	53.33 (25.31)	36.67 (23.53)	21.88 (18.70)			
	Female	38.13 (28.39)	50.42 (31.69)	27.50 (23.64)	35.63 (23.66)			
Study 2A (Positive) #	Total	68.57 (29.81)	86.86 (20.61) [a]	56.57 (30.34) [b]	62.29 (28.50) [b]	**50.63 (2,413); <.001*; .197**	0.07 (1,413); .792; 0	3.85 (2,413); .022; .018
	Male	68.19 (29.50)	82.29 (23.48)	55.71 (30.44)	66.57 (28.23)			
	Female	68.95 (30.18)	91.43 (16.18)	57.43 (30.44)	58.00 (28.31)			
Study 2A (Negative) #	Total	63.67 (30.22)	79.00 (24.50) [a]	51.86 (30.05) [b]	60.14 (29.33) [c]	**34.57 (2,413); <.001*; .143**	1.36 (1,413); .244; .003	3.8 (2,413); .023; .018
	Male	62.00 (30.78)	73.71 (26.49)	48.57 (30.75)	63.71 (29.94)			
	Female	65.33 (29.64)	84.29 (21.24)	55.14 (29.18)	56.57 (28.48)			
Episodic (%)								
Study 1A	Total	53.28 (26.30)	40.63 (23.83) [b]	58.96 (24.69) [a]	63.75 (25.24) [a]	**10.78 (2,122); <.001*; .150**	0.12 (1,122); .728; .001	2.51 (2,122); .086; .039
	Male	53.13 (25.63)	38.33 (19.03)	55.42 (25.19)	71.88 (22.28)			
	Female	53.44 (27.15)	42.92 (28.05)	62.50 (24.18)	55.63 (26.07)			
Study 2A (Positive) #	Total	20.86 (22.90)	9.71 (15.45) [b]	28.43 (25.17) [a]	24.43 (22.64) [a]	**29.39 (2,413); <.001*; .125**	1.14 (1,413); .285; .003	2.11 (2,413); .123; .010
	Male	22.00 (22.43)	13.43 (18.25)	29.71 (24.73)	22.86 (21.07)			
	Female	19.71 (23.35)	6.00 (10.95)	27.14 (25.72)	26.00 (24.16)			
Study 2A (Negative) #	Total	25.00 (24.54)	17.29 (21.08) [b]	31.86 (26.27) [a]	25.86 (23.93) [a]	**13.06 (2,413); <.001*; 59**		
	Male	26.57 (25.82)	20.86 (22.70)	34.57 (27.65)	24.29 (25.23)			

	Female						1.69 (1,413); .195; .004	1.81 (2,413); .165; .009
		23.43 (23.14)	13.71 (18.82)	29.14 (24.72)	27.43 (22.63)			
Generic (%)								
Study 1A	Total	8.05 (10.28)	7.50 (11.01)	8.96 (9.51)	7.50 (10.47)	0.29	0.27	0.54
	Male	7.66 (9.88)	8.33 (11.29)	7.92 (8.84)	6.25 (9.57)	(2,122); .745; .005	(1,122); .605; .002	(2,122); .587; .009
	Female	8.44 (10.72)	6.67 (10.90)	10.00 (10.22)	8.75 (11.47)			
Study 2A (Positive)#	Total	10.57 (20.74)	3.43 (10.71) [b]	15.00 (24.95) [a]	13.29 (21.94) [a]	**13.32 (2,413); <.001*; .061**	0.62 (1,413); .431; 0.002	1.11 (2,413); .330; .005
	Male	9.81 (20.54)	4.29 (11.74)	14.57 (24.77)	10.57 (21.73)			
	Female	11.33 (20.96)	2.57 (9.58)	15.43 (25.29)	16.00 (21.96)			
Study 2A (Negative)#	Total	11.29 (18.36)	3.71 (10.62) [b]	16.29 (20.01) [a]	13.86 (20.34) [a]	**20.01 (2,413); <.001*; .088**	0 (1,413); 0.97; 0	1.76 (2,413); 0.174; .008
	Male	11.33 (18.64)	5.43 (13.15)	16.86 (20.61)	11.71 (19.71)			
	Female	11.24 (18.13)	2.00 (6.94)	15.71 (19.53)	16.00 (20.88)			
Meaning								
Integrated (%)								
Study 1A	Total	9.53 (15.77)	10 (18.10)	9.17 (12.52)	9.38 (16.84)	0.03	0.02	0.83 (2,122);
	Male	9.69 (13.21)	7.92 (13.18)	11.25 (13.93)	10.00 (12.65)	(2,122); .966; .001	(1,122); .885; 0	0.436; .014
	Female	9.37 (18.07)	12.08 (22.06)	7.08 (10.83)	8.75 (20.62)			
Study 2A (Positive) #	Total	5.43 (15.67)	7.43 (17.52) [a]	1.71 (7.39) [b]	7.14 (18.90) [a]	**6.12**	0.11	0.35
	Male	5.71 (16.88)	8.29 (17.53)	1.14 (4.68)	7.71 (22.40)	**(2,413); .002*; .029**	(1,413); .738; 0	(2,413); .707; .002
	Female	5.14 (14.38)	6.57 (17.60)	2.29 (9.35)	6.57 (14.73)			
Study 2A (Negative) #	Total	2.38 (8.74)	3.14 (9.97)	0.86 (5.29)	3.14 (9.97)	**3.2**	0.45	0.15
	Male	2.67 (9.41)	3.43 (10.20)	1.43 (7.08)	3.14 (10.57)	**(2,413); .042*; .015**	(1,413); .503; .001	(2,413); .861; .001
	Female	2.10 (8.03)	2.86 (9.80)	0.29 (2.39)	3.14 (9.41)			
Content								
MANOVA (Sub-scales)								
Study 1A						0.31 (10,238); .978; .013	0.55 (5,118); .238; .055	1.03 (10,238); .423; .041
Study 2A (Positive)						**2.22 (10,818); .015*; .026**	1.13 (5,408); .345; .014	1.69 (10,818); .078; .020
Study 2A (Negative)						**4.99 (10,818); <.001*, .058**	**2.59 (5,408); .026*; .031**	0.82 (10,818); .608; .010
Life-Threatening Event (LTE) (%)								
Study 1A	Total	9.82 (12.00)	10.9 (12.38)	9.91 (13.14)	8.08 (9.55)			
	Male	9.92 (13.31)	9.95 (10.76)	13.63 (16.98)	4.33 (8.28)			

	Female					0.55 (2,122); .577; .00	0.09 (1,122); .759; .00	4.15 (2,122); .018; .06
		9.72 (10.64)	11.85 (13.97)	6.19 (5.97)	11.82 (9.48)	9	1	4
Study 2A (Positive)	Total	0.59 (3.69)	0.89 (4.25)	0.29 (2.39)	0.58 (4.13)	0.94	0.24	3.97
	Male	0.67 (4.12)	0.29 (2.39)	0.58 (3.38)	1.16 (5.82)	(2,412); .390; .00	(1,412); .626; .00	(2,412); .020; .01
	Female	0.50 (3.22)	1.50 (5.47)	0.00 (0.00)	0.00 (0.00)	5	1	9
Study 2A (Negative)	Total	18.48 (22.29)	25.04 (23.07) [a]	14.34 (21.16) [b]	16.03 (21.23) [b]	**9.61 (2,412); <.001*; .045**	0 (1,412); .948; 0	0.19 (2,412); .828; .00
	Male	18.43 (20.57)	24.36 (21.65)	13.96 (18.57)	16.88 (20.21)			1
	Female	18.54 (23.93)	25.71 (24.56)	14.71 (23.57)	15.19 (22.31)			
Recreation/ Exploration (%)								
Study 1A	Total	16.64 (17.90)	15.49 (15.07)	17.60 (16.56)	16.94 (23.44)	0.17	0.12	0.24
	Male	16.99 (18.35)	15.28 (16.27)	17.23 (15.12)	19.21 (25.44)	(2,122); .847; .00	(1,122); .733; .00	(2,122); .788; .00
	Female	16.30 (17.59)	15.70 (14.12)	17.97 (18.21)	14.67 (21.85)	3	1	4
Study 2A (Positive)	Total	31.85 (26.01)	34.52 (26.94)	29.24 (26.72)	31.76 (24.19)	1.44	0.02	0.8
	Male	31.70 (27.44)	36.4 (26.95)	27.17 (28.95)	31.45 (25.95)	(2,412); .237; .00	(1,412); .899; 0	(2,412); .449; .00
	Female	32.00 (24.57)	32.64 (26.98)	31.29 (24.36)	32.07 (22.50)	7		4
Study 2A (Negative)	Total	2.46 (8.57)	2.95 (8.97)	1.91 (7.53)	2.52 (9.14)	0.52	**9.86**	0.33
	Male	3.77 (10.61)	4.71 (11.10)	3.12 (9.71)	3.48 (11.06)	(2,412); .592; .00	**(1,412); .002*; .0**	(2,412); .718; .00
	Female	1.16 (5.61)	1.19 (5.73)	0.71 (4.20)	1.57 (6.68)	3	**23**	2
Relationship (%)								
Study 1A	Total	36.81 (23.12)	37.30 (20.90)	35.90 (22.89)	37.42 (27.03)	0.06	3.56	0.38
	Male	33.16 (23.73)	35.58 (20.34)	32.14 (24.29)	31.08 (28.48)	(2,122); .943; .00	(1,122); .062; .02	(2,122); .684; .00
	Female	40.45 (22.07)	39.03 (21.74)	39.65 (21.24)	43.77 (24.76)	1	8	6
Study 2A (Positive)	Total	19.79 (20.01)	20.85 (18.79)	17.04 (20.11)	21.47 (20.92)	2.07	**4.24 (1,412);**	2.16 (2,412);
	Male	17.79 (18.81)	20.57 (17.08)	12.17 (16.86)	20.58 (21.19)	(2,412); .128; .01	**0.04*; .010**	0.116; .010
	Female	21.77 (20.98)	21.12 (20.47)	21.83 (21.96)	22.36 (20.78)	0		
Study 2A (Negative)	Total	57.09 (28.15)	56.56 (27.92)	55.97 (28.95)	58.75 (27.70)	0.38	**4.89**	0.09
	Male	54.04 (28.25)	54.14 (28.40)	52.15 (28.17)	55.82 (28.47)	(2,412); .686; .00	**(1,412); .028*; .0**	(2,412); .918; 0
	Female	60.12 (27.79)	58.98 (27.42)	59.74 (29.42)	61.64 (26.80)	2	**12**	
Achievement/ Mastery (%)								
Study 1A	Total	34.24 (21.13)	33.62 (21.27)	34.62 (21.08)	34.59 (21.64)	0.03	2.57	1.08
	Male	36.81 (21.87)	36.12 (21.50)	34.39 (22.33)	41.48 (22.42)	(2,122); .968; .00	(1,122); .112; .02	(2,122); .343; .01
	Female	31.66 (20.19)	31.11 (21.19)	34.84 (20.22)	27.71 (19.08)	1	1	7
Study 2A (Positive)	Total	47.54 (25.94)	43.45 (24.62) [b]	53.43 (27.05) [a]	45.76 (25.24)	**5.93**	2.90	3.40
	Male	49.65 (28.28)	42.45 (25.44)	60.07 (29.45)	46.52 (27.15)	**(2,412); .003*; .0**	(1,412); .089; .00	(2,412); .034; .01
	Female	45.44 (23.28)	44.45 (23.91)	46.88 (22.82)	45.00 (23.37)	**28**	7	6
Study 2A (Negative)	Total	17.97 (22.88)	10.71 (15.91) [b]	24.77 (27.81) [a]	18.48 (21.27) [a]			

	Male	19.72 (23.15)	12.60 (18.37)	25.65 (27.50)	21.01 (21.04)	**14.06 (2,412); <.001*; .064**	2.62 (1,412); .106; .006	0.19 (2,412); .824; .001
	Female	16.24 (22.52)	8.83 (12.86)	23.90 (28.28)	15.98 (21.36)			
Guilt/ Shame (%)								
Study 1A	Total	1.97 (5.46)	2.27 (5.38)	1.27 (3.98)	2.58 (7.28)	0.65 (2,122); .526; .010	0.37 (1,122); .546; .003	0.13 (2,122); .882; .002
	Male	2.24 (6.12)	2.23 (5.36)	1.67 (4.82)	3.12 (8.73)			
	Female	1.70 (4.75)	2.31 (5.52)	0.88 (2.98)	2.03 (5.72)			
Study 2A (Positive)	Total	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	. (2,412); .; .	. (1,412); .; .	. (2,412); .; .
	Male	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)			
	Female	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)			
Study 2A (Negative)	Total	3.51 (10.95)	3.49 (10.33)	2.83 (10.36)	4.22 (12.10)	0.55 (2,412); .579; .003	0 (1,412); .997; 0	3.46 (2,412); .032; .016
	Male	3.51 (10.72)	2.98 (8.65)	4.76 (13.79)	2.80 (9.01)			
	Female	3.52 (11.20)	4.00 (11.82)	0.93 (4.45)	5.62 (14.45)			
Drug, Alcohol, or Tobacco Use (%)								
Study 1A	Total	0.52 (2.35)	0.42 (2.02)	0.70 (2.75)	0.39 (2.21)	0.23 (2,122); .793; .004	2.67 (1,122); .105; .021	0.08 (2,122); .925; .001
	Male	0.86 (3.00)	0.83 (2.82)	0.94 (3.2)	0.78 (3.12)			
	Female	0.17 (1.39)	0.00 (0.00)	0.46 (2.27)	0.00 (0.00)			
Study 2A (Positive)	Total	0.10 (1.38)	0.29 (2.38)	0.00 (0.00)	0.00 (0.00)	1.99 (2,412); .139; .010	0 (1,412); 1; 0	0 (2,412); 1; 0
	Male	0.10 (1.39)	0.29 (2.39)	0.00 (0.00)	0.00 (0.00)			
	Female	0.10 (1.38)	0.29 (2.39)	0.00 (0.00)	0.00 (0.00)			
Study 2A (Negative)	Total	0.48 (3.25)	1.25 (5.13) [a]	0.18 (2.12) [b]	0.00 (0.00) [b]	**6.15 (2,412); .002*; .029**	0.09 (1,412); .758; 0	0.18 (2,412); .834; .001
	Male	0.53 (3.40)	1.21 (5.00)	0.36 (3.01)	0.00 (0.00)			
	Female	0.43 (3.10)	1.29 (5.29)	0.00 (0.00)	0.00 (0.00)			
Affect								
MANCOVA (Sub-Scales)								
Study 1A						**3.04 (4,244); .018*; .047**	**4.96 (2,121); .008*; .076**	2.30 (4,244); .082; .033
Positive (%)								
Study 1A	Total	49.37 (22.82)	53.33 (21.27)	45.21 (18.79)	49.69 (29.35)	1.60 (2,122); .206; .026	1.27 (1,122); .263; .010	**3.83 (2,122); .024*; .059**
	Male	50.62 (24.68)	53.33 (23.16)	41.67 (17.86)	60.00 (31.83)			
	Female	48.13 (20.92)	53.33 (19.71)	48.75 (19.41)	39.38 (23.23)			
Negative (%)								
Study 1A	Total	36.95 (22.47)	30.00 (20.53) [b]	40.21 (18.85)	42.50 (27.71) [a]	**4.21 (2,122); .017*; .065**	**7.99 (1,122); .005*; .061**	2.34 (2,122); .101; .037
	Male	32.19 (22.43)	24.58 (19.56)	40.00 (20.43)	31.87 (26.39)			
	Female	41.72 (21.64)	35.42 (20.43)	40.42 (17.56)	53.12 (25.49)			
Detailedness								

MANOVA (Sub-Scales)								
Study 2A (Positive)						**13.26 (4,826); <.001*; .060**	**4.25 (2,412); .015*; .020**	0.09 (4,826); .987; .000
MANCOVA (Sub-Scales)								
Study 2A (Negative)						**10.20 (4,826); <.001*; .047**	**5.41 (2,412); .005*; .026**	0.48 (4,826); .749; .002
Internal Details								
Study 2A (Positive)	Total	5.11 (3.46)	5.95 (4.06) [a]	3.45 (1.90) [b]	5.92 (3.43) [a]	**27.61 (2,413); <.001*; .118**	**8.30 (1,413); .004*; .020**	0.07 (2,413); .928; 0
	Male	4.66 (3.12)	5.45 (3.66)	2.97 (1.24)	5.55 (3.20)			
	Female	5.56 (3.71)	6.46 (4.39)	3.93 (2.29)	6.29 (3.64)			
Study 2A (Negative)	Total	5.54 (3.82)	6.35 (4.49) [a]	3.93 (2.44) [b]	6.34 (3.73) [a]	**20.58 (2,413); <.001*; .091**	**10.78 (1,413); .001*; .025**	0.35 (2,413); .708; .002
	Male	4.95 (3.32)	5.61 (3.69)	3.29 (1.60)	5.96 (3.59)			
	Female	6.13 (4.19)	7.09 (5.10)	4.58 (2.94)	6.72 (3.85)			
External Details								
Study 2A (Positive)	Total	0.22 (0.57)	0.26 (0.56) [a]	0.08 (0.30) [b]	0.31 (0.75) [a]	**6.23 (2,413); .002*; .029**	2.43 (1,413); .120; .006	0.05 (2,413); .953; 0
	Male	0.17 (0.49)	0.23 (0.55)	0.03 (0.11)	0.27 (0.61)			
	Female	0.26 (0.65)	0.29 (0.57)	0.13 (0.40)	0.36 (0.88)			
Study 2A (Negative)	Total	0.16 (0.43)	0.20 (0.43) [a]	0.07 (0.18) [b]	0.23 (0.57) [a]	**5.74 (2,413); .003*; .027**	0.84 (1,413); .361; .002	0.29 (2,413); .748; .001
	Male	0.14 (0.37)	0.19 (0.41)	0.06 (0.19)	0.19 (0.45)			
	Female	0.18 (0.48)	0.21 (0.46)	0.07 (0.17)	0.27 (0.67)			
Time Stamp								
Present (%)								
Study 1A	Total	26.95 (21.09)	22.92 (19.57)	28.33 (21.96)	30.94 (21.61)	1.55 (2,122); .216; .025	0.94 (1,122); .334; .008	0.48 (2,122); .623; .008
	Male	28.75 (22.71)	26.67 (20.36)	27.92 (24.31)	33.13 (24.42)			
	Female	25.16 (19.35)	19.17 (18.40)	28.75 (19.85)	28.75 (18.93)			
Study 2A (Positive)#	Total	32.43 (32.68)	21.00 (22.93) [b]	27.43 (30.57) [b]	48.86 (36.48) [a]	**31.67 (2,413); <.001*; .133**	0.34 (1,413); .562; .001	0.46 (2,413); .631; .002
	Male	31.62 (33.00)	19.43 (21.53)	25.43 (29.47)	50.00 (37.88)			
	Female	33.24 (32.41)	22.57 (24.30)	29.43 (31.71)	47.71 (35.27)			
Study 2A (Negative)#	Total	30.81 (34.30)	15.00 (23.76) [c]	24.57 (29.80) [b]	52.86 (36.23) [a]	**59.80 (2,413); <.001*; .225**	2.49 (1,413); .115; .006	0.77 (2,413); .462; .004
	Male	33.05 (35.26)	15.43 (24.12)	26.00 (30.90)	57.71 (35.31)			
	Female	28.57 (33.24)	14.57 (23.57)	23.14 (28.82)	48.00 (36.74)			
Emotion								
(Positive Emotions)								
MANOVA (Sub-Scales)								

Study 1A						1.93 (8,240); .056; .061	2.33 (4,119); .060, .073	1.50 (8,240); .158, .048
Study 2A (Positive)						**7.12 (16,816); <.001*; .123**	**4.29 (8,407); <.001*; .078**	0.64 (16,816); .849; .012
Happy								
Study 1A	Total	4.20 (1.11)	4.28 (1.01)	4.24 (0.82)	4.03 (1.56)	0.53 (2,122); .590; .009	5.31 (1,122); .023; .042	4.33 (2,122); .015; .066
	Male	4.37 (1.10)	4.31 (1.00)	4.22 (0.92)	4.69 (1.46)			
	Female	4.03 (1.10)	4.25 (1.03)	4.25 (0.73)	3.38 (1.42)			
Study 2A (Positive)	Total	5.90 (0.73)	5.92 (0.78)	5.82 (0.72)	5.97 (0.70)	1.51 (2,414); .223; .007	0 (1,414); .979; 0	1.27 (2,414); .281; .006
	Male	5.90 (0.75)	5.85 (0.85)	5.89 (0.59)	5.97 (0.81)			
	Female	5.90 (0.72)	5.99 (0.70)	5.75 (0.83)	5.97 (0.58)			
Interested								
Study 1A	Total	3.68 (1.27)	3.50 (1.31)	3.75 (1.05)	3.86 (1.49)	0.92 (2,122); .403; .015	9.28 (1,122); .003; .071	1.4 (2,122); .251; .022
	Male	3.99 (1.31)	3.78 (1.43)	3.89 (1.17)	4.46 (1.27)			
	Female	3.38 (1.16)	3.23 (1.14)	3.61 (0.92)	3.26 (1.49)			
Study 2A (Positive)	Total	5.01 (1.36)	4.46 (1.50) [b]	5.23 (1.20) [a]	5.33 (1.18) [a]	**18.84 (2,414); <.001*; .083**	1.61 (1,414); .206; .004	0.89 (2,414); .411; .004
	Male	5.09 (1.32)	4.49 (1.45)	5.43 (0.91)	5.35 (1.33)			
	Female	4.93 (1.39)	4.43 (1.55)	5.03 (1.42)	5.32 (1.02)			
Proud								
Study 1A	Total	3.67 (1.18)	3.81 (1.03)	3.6 (1.18)	3.56 (1.38)	0.57 (2,122); 0.566; 0.009	3.48 (1,122); 0.065; 0.028	1.14 (2,122); 0.322; 0.018
	Male	3.83 (1.22)	3.84 (1.03)	3.73 (1.34)	3.99 (1.34)			
	Female	3.50 (1.12)	3.78 (1.06)	3.46 (1.01)	3.13 (1.33)			
Study 2A (Positive)	Total	5.16 (1.19)	4.98 (1.28)	5.24 (1.14)	5.27 (1.13)	2.47 (2,414); .086; .012	0.01 (1,414); .915; 0	1.39 (2,414); .250; .007
	Male	5.17 (1.19)	4.89 (1.23)	5.37 (1.05)	5.24 (1.24)			
	Female	5.16 (1.2)	5.07 (1.33)	5.10 (1.22)	5.29 (1.03)			
Surprised								
Study 1A	Total	3.25 (1.25)	2.95 (1.27)	3.23 (1.09)	3.75 (1.33)	**4.12 (2,122); .019*; .063**	0.8 (1,122); .371; .007	0.39 (2,122); .680; .006
	Male	3.37 (1.38)	3.03 (1.43)	3.46 (1.05)	3.74 (1.68)			
	Female	3.14 (1.12)	2.86 (1.12)	3.00 (1.10)	3.76 (0.93)			
Content								
Study 2A (Positive)	Total	5.81 (0.86)	5.56 (0.95) [b]	5.85 (0.81) [a]	6.01 (0.76) [a]	**10.25 (2,414); <.001*; .047**	0.02 (1,414); .88; 0	1.56 (2,414); .212; .007
	Male	5.81 (0.85)	5.52 (0.99)	5.96 (0.59)	5.96 (0.85)			
	Female	5.80 (0.88)	5.6 (0.91)	5.74 (0.96)	6.06 (0.67)			
Loving								
Study 2A (Positive)	Total	4.67 (1.28)	4.47 (1.33) [b]	4.69 (1.30)	4.85 (1.18) [a]	**3.20 (2,414); .042*; .015**	**12.43 (1,414); <.001*; .029**	0.47 (2,414); .626; .002
	Male	4.46 (1.29)	4.17 (1.32)	4.52 (1.22)	4.67 (1.30)			
	Female	4.89 (1.23)	4.77 (1.28)	4.86 (1.37)	5.03 (1.03)			

Relaxed								
Study 2A (Positive)	Total	4.60 (1.21)	4.16 (1.25) [b]	4.72 (1.13) [a]	4.91 (1.13) [a]	**15.55 (2,414); <.001*; .070**	1.28 (1414); .258; .003	0.64 (2,414); .525; .003
	Male	4.53 (1.25)	4.05 (1.35)	4.75 (0.98)	4.80 (1.27)			
	Female	4.66 (1.17)	4.27 (1.15)	4.69 (1.27)	5.02 (0.97)			
Amused								
Study 2A (Positive)	Total	4.53 (1.31)	4.13 (1.32) [b]	4.66 (1.25) [a]	4.79 (1.27) [a]	**10.21 (2,414); <.001*; .047**	0.11 (1,414); .744; 0	0.14 (2,414); .870; .001
	Male	4.51 (1.31)	4.10 (1.31)	4.69 (1.12)	4.74 (1.40)			
	Female	4.55 (1.31)	4.17 (1.34)	4.63 (1.38)	4.84 (1.13)			
Excited								
Study 2A (Positive)	Total	5.19 (1.27)	4.71 (1.45) [b]	5.39 (1.09) [a]	5.46 (1.10) [a]	**15.85 (2,414); <.001*; .071**	0.62 (1,414); .431; .002	0.93 (2,414); .394; .004
	Male	5.24 (1.24)	4.66 (1.44)	5.53 (0.82)	5.51 (1.18)			
	Female	5.14 (1.29)	4.77 (1.46)	5.24 (1.30)	5.41 (1.01)			
(Negative Emotions) MANOVA (Sub-Scales)								
Study 1A						**3.77 (16,232); <.001*; .206**	1.97 (8,116); .056; .121	1.23 (16,232); .244; .078
Study 2A (Negative)#						**15.96 (16,814); <.001*; .239**	**3.34 (8,406); .001*; .062**	1.35 (16,814); .162, .026
Sad								
Study 1A	Total	3.09 (1.01)	3.02 (0.89)	3.17 (0.90)	3.07 (1.31)	0.28 (2,122); .755; .005	2.73 (1,122); .101; .022	2.01 (2,122); .138; .032
	Male	2.96 (1.12)	2.77 (1.04)	3.27 (0.96)	2.77 (1.38)			
	Female	3.22 (0.88)	3.26 (0.65)	3.07 (0.85)	3.37 (1.20)			
Study 2A (Negative)	Total	4.80 (1.32)	4.92 (1.26) [a]	4.58 (1.33) [b]	4.91 (1.33)	**3.66 (2,413); .027*; .017**	**4.1 (1,413); .044*; .010**	2.61 (2,413); .075; .012
	Male	4.69 (1.34)	4.62 (1.32)	4.54 (1.33)	4.91 (1.35)			
	Female	4.91 (1.29)	5.22 (1.14)	4.61 (1.34)	4.90 (1.32)			
Angry								
Study 1A	Total	2.46 (0.93)	2.14 (0.71)	2.65 (0.97)	2.63 (1.06)	**4.58 (2,122); .012*; .070**	0.23 (1,122); .629; .002	1.36 (2,122); .261; .022
	Male	2.43 (0.96)	2.01 (0.80)	2.80 (0.88)	2.51 (1.11)			
	Female	2.49 (0.91)	2.28 (0.60)	2.51 (1.05)	2.76 (1.04)			
Study 2A (Negative)	Total	4.05 (1.38)	3.89 (1.46)	4.09 (1.29)	4.16 (1.37)	1.23 (2,413); .294; .006	2.80 (1,413); .095; 0.007	0.72 (2,413); .485; .003
	Male	3.95 (1.46)	3.71 (1.55)	3.98 (1.34)	4.15 (1.48)			
	Female	4.15 (1.28)	4.08 (1.35)	4.21 (1.24)	4.16 (1.27)			
Fearful								
Study 1A	Total	2.64 (1.02)	2.49 (1.05)	2.71 (0.92)	2.76 (1.13)	0.84 (2,122); .434; .014	0.23 (1,122); .632; .002	1.3 (2,122); .277; .021
	Male	2.62 (1.08)	2.5 (1.17)	2.83 (0.79)	2.51 (1.33)			
	Female	2.66 (0.97)	2.49 (0.94)	2.59 (1.05)	3.02 (0.86)			
Study 2A (Negative)	Total	3.61 (1.54)	2.97 (1.38) [b]	3.75 (1.44) [a]	4.12 (1.58) [a]			

	Male	3.59 (1.55)	2.85 (1.35)	3.72 (1.4)	4.18 (1.61)	**22.55 (2,413); <.001*; .098**	0.31 (1,413); 0.578; .001	0.68 (2,413); .509; .003
	Female	3.64 (1.54)	3.08 (1.4)	3.78 (1.49)	4.05 (1.56)			
Ashamed								
Study 1A	Total	2.32 (0.91)	2.08 (0.79)	2.57 (0.97)	2.32 (0.89)	**3.79**	0.51	2.25
	Male	2.40 (0.92)	2.10 (0.77)	2.85 (0.90)	2.19 (0.95)	**(2,122); .025*; .058**	(1,122); .476; .004	(2,122); .110; .036
	Female	2.24 (0.89)	2.06 (0.83)	2.29 (0.99)	2.45 (0.83)			
Study 2A (Negative)	Total	3.75 (1.37)	3.52 (1.30)	3.88 (1.37)	3.85 (1.42)	2.78	**4.30**	0.88
	Male	3.89 (1.40)	3.59 (1.44)	3.98 (1.33)	4.11 (1.40)	(2,413); .063; .013	**(1,413); .039*; .010**	(2,413); .414; .004
	Female	3.61 (1.33)	3.46 (1.15)	3.77 (1.42)	3.59 (1.40)			
Disgusted								
Study 1A	Total	2.27 (1.03)	1.78 (0.60)	2.55 (1.06)	2.61 (1.23)	**10.07 (2,122); <.001*; .142**	0.02 (1,122); .899; 0	1.01 (2,122); .368; .016
	Male	2.30 (1.03)	1.78 (0.64)	2.72 (0.97)	2.47 (1.27)			
	Female	2.25 (1.05)	1.78 (0.58)	2.38 (1.14)	2.74 (1.21)			
Study 2A (Negative)	Total	3.75 (1.58)	2.68 (1.31) [b]	4.17 (1.27) [a]	4.42 (1.55) [a]	**65.82 (2,413); <.001*; .242**	2.29 (1,413); .131; .006	0.82 (2,413); .440; .004
	Male	3.86 (1.63)	2.77 (1.39)	4.19 (1.23)	4.63 (1.64)			
	Female	3.64 (1.52)	2.58 (1.23)	4.15 (1.32)	4.21 (1.43)			
Guilty								
Study 1A	Total	2.26 (0.90)	1.97 (0.65)	2.54 (1.03)	2.26 (0.90)	**5.34**	2.13	1.97
	Male	2.39 (0.98)	2.00 (0.71)	2.86 (1.02)	2.25 (1.02)	**(2,122); .006*; .080**	(1,122); .147; .017	(2,122); .144; .031
	Female	2.13 (0.79)	1.94 (0.59)	2.22 (0.95)	2.28 (0.80)			
Study 2A (Negative)	Total	3.56 (1.38)	3.26 (1.32) [b]	3.76 (1.42) [a]	3.68 (1.36) [a]	**5.23**	2.87	0.90
	Male	3.68 (1.44)	3.27 (1.45)	3.87 (1.37)	3.90 (1.44)	**(2,413); .006*; .025**	(1,413); .091; .007	(2,413); .407; .004
	Female	3.45 (1.31)	3.24 (1.20)	3.65 (1.47)	3.45 (1.25)			
Embarrassed								
Study 1A	Total	2.41 (1.00)	2.38 (0.88)	2.48 (0.93)	2.34 (1.25)	0.20	0 (1,122); .982; 0	0.40
	Male	2.42 (0.92)	2.43 (0.90)	2.54 (0.78)	2.22 (1.13)	(2,122); .818; .003		(2,122); .671; .007
	Female	2.39 (1.08)	2.32 (0.89)	2.41 (1.07)	2.47 (1.38)			
Study 2A (Negative)	Total	3.64 (1.40)	3.63 (1.37)	3.55 (1.44)	3.73 (1.38)	0.57	**6.88**	0.63
	Male	3.82 (1.39)	3.79 (1.41)	3.84 (1.31)	3.83 (1.48)	(2,413); .567; .003	**(1,413); .009*; .016**	(2,413); .534; .003
	Female	3.46 (1.38)	3.47 (1.32)	3.27 (1.51)	3.63 (1.28)			
Contemptful								
Study 1A	Total	2.04 (0.91)	2.03 (0.88)	2.08 (0.86)	2.01 (1.04)	0.06	0.46	2.92
	Male	1.99 (0.82)	1.75 (0.65)	2.24 (0.74)	1.96 (1.05)	(2,122); .944; .001	(1,122); .498; .004	(2,122); .057; .046
	Female	2.10 (0.99)	2.31 (1.00)	1.91 (0.94)	2.06 (1.06)			
Study 2A (Negative)	Total	2.94 (1.39)	2.82 (1.33)	3.02 (1.38)	2.98 (1.47)	0.64	3.11	1.13
	Male	3.07 (1.46)	2.82 (1.45)	3.18 (1.32)	3.21 (1.59)	(2,413); .526; .003	(1,413); .078; .007	(2,413); .324; .005
	Female	2.81 (1.31)	2.83 (1.20)	2.85 (1.42)	2.76 (1.30)			
Others								

(Memory Features)								
MANOVA (Sub-Scales)								
Study 1A						0.99 (4,244); .416, .016	0.87 (2,121); .422; .014	0.92 (4,244)' .456; .015
Study 2A (Positive)						1.49 (4,828); .202; .007	0.27 (2,413); .764; .001	0.41 (4,828); .804; .002
Study 2A (Negative)						**5.24 (4,826); <.001*; .025**	0.61 (2,412); .542; .003	1.93 (4,826); .103; .009
Vividness								
Study 1A	Total	5.66 (0.82)	5.56 (0.80)	5.64 (0.78)	5.85 (0.91)	1.25 (2,122); .291; .020	0.37 (1,122); .543; .003	1.55 (2,122); .216; .025
	Male	5.68 (0.83)	5.54 (0.88)	5.56 (0.73)	6.09 (0.81)			
	Female	5.64 (0.83)	5.57 (0.73)	5.73 (0.84)	5.61 (0.98)			
Study 2A (Positive)	Total	5.56 (0.81)	5.52 (0.84)	5.55 (0.78)	5.60 (0.81)	0.38 (2,414); .685; .002	0.23 (1,414); .631; .001	0.24 (2,414); .787; .001
	Male	5.58 (0.79)	5.51 (0.77)	5.60 (0.79)	5.63 (0.83)			
	Female	5.54 (0.83)	5.54 (0.92)	5.50 (0.78)	5.58 (0.79)			
Study 2A (Negative)	Total	5.51 (0.92)	5.50 (0.81)	5.26 (1.00) [b]	5.75 (0.88) [a]	**10.26 (2,414); <.001*; .047**	0.02 (1,414); .888; 0	1.45 (2,414); .237; .007
	Male	5.51 (0.89)	5.42 (0.75)	5.27 (0.98)	5.85 (0.82)			
	Female	5.50 (0.95)	5.59 (0.86)	5.26 (1.03)	5.65 (0.93)			
Importance								
Study 1A	Total	5.48 (0.79)	5.34 (0.76)	5.50 (0.80)	5.68 (0.80)	1.83 (2,122); .165; .029	0.19 (1,122); .662; .002	1.39 (2,122); .252; .022
	Male	5.43 (0.88)	5.22 (0.87)	5.38 (0.85)	5.83 (0.88)			
	Female	5.54 (0.69)	5.46 (0.63)	5.62 (0.74)	5.53 (0.71)			
Study 2A (Positive)	Total	5.37 (0.86)	5.27 (0.84)	5.35 (0.94)	5.51 (0.77)	2.86 (2,414); .058; .014	0.53 (1,414); .467; .001	0.65 (2,414); .523; .003
	Male	5.40 (0.83)	5.27 (0.85)	5.44 (0.83)	5.50 (0.81)			
	Female	5.34 (0.89)	5.26 (0.84)	5.25 (1.04)	5.52 (0.74)			
Study 2A (Negative)	Total	4.98 (1.05)	5.01 (0.87)	4.78 (1.22) [b]	5.16 (0.99) [a]	**4.81 (2,414); .009*; .023**	1.09 (1,414); .296; .003	1.95 (2,414); .144; .009
	Male	5.04 (0.99)	4.95 (0.88)	4.96 (1.11)	5.19 (0.97)			
	Female	4.93 (1.10)	5.07 (0.86)	4.59 (1.31)	5.13 (1.02)			
Years								
Study 1A	Total	6.51 (2.66)	6.37 (2.64)	6.23 (2.37)	7.13 (3.07)	1.21 (2,122); .301; .020	3.61 (1,122); .060; .029	0.23 (2,122); .797; .004
	Male	6.96 (2.79)	7.00 (3.12)	6.49 (2.42)	7.59 (2.82)			
	Female	6.06 (2.47)	5.74 (1.92)	5.96 (2.33)	6.66 (3.33)			
Study 2A (Positive)#	Total	4.69 (2.25)	4.78 (2.15)	4.39 (2.24)	4.89 (2.33)	2.05 (2,413); .130; .010	0.75 (1,413); .386; .002	0.48 (2,413); .621; .002
	Male	4.60 (2.24)	4.73 (2.20)	4.17 (2.22)	4.91 (2.26)			
	Female	4.77 (2.26)	4.82 (2.10)	4.61 (2.26)	4.88 (2.41)			
Study 2A (Negative)#	Total	5.83 (2.55)	5.97 (2.13)	5.33 (2.76) [b]	6.20 (2.66) [a]			

	Male	5.72 (2.58)	5.82 (2.12)	5.18 (2.71)	6.16 (2.80)	**4.39**	0.8	0.08
	Female					**(2,413); .013*; .0**	(1,413); .371; .00	(2,413); .919; 0
		5.95 (2.52)	6.13 (2.14)	5.48 (2.83)	6.24 (2.52)	**21**	2	

Note: Statistics for the above variables derive from ANOVA unless otherwise specified (# ANCOVA). * $p < .05$.
The superscripts (i.e., a, b, c) is the same for groups with no significant difference found but different for groups with a significant difference found.

For a summary of all Chapter 5 results, please see Table 5.6.

Table 5.6 Results of Objective Measures in an Overview

Hypotheses	Results	Notes
Perceptual Matching Task (PMT)		
(H1) Cultural Differences in the Self-Prioritisation Effect		
(H1.1) Cultural differences in the sensitivity score (*d'*): *British > Hongkongese & Taiwanese*	**Yes**, a significant effect	*BUT Taiwanese > Hongkongese*
(H1.2) Cultural differences in the mean reaction times for correct responses: *British > Hongkongese & Taiwanese*	**No** cultural difference	
(H2) Interaction between Culture and Person-Referential Words in the Self-Prioritisation Effect		
(H2.1) The sensitivity score (*d'*) in the self-over-close-other bias *British > Hongkongese & Taiwanese*	**No** interaction	
(H2.2) The mean reaction times for correct responses in the self-over-close-other bias *British > Hongkongese & Taiwanese*	**No** interaction	*BUT a significant effect of person-referential words* *Self > Close other > Unfamiliar other*
Implicit Association Test (IAT)		
(H3) Cultural Differences in Agency and Interpersonal Distance		
(H3.1) Cultural differences in the IAT effect (*D*) for autonomy: *British > Hongkongese & Taiwanese*	**Yes**, a significant effect (Study 2)	
(H3.2) Cultural differences in the IAT effect (*D*) for separateness: *British > Hongkongese & Taiwanese*	**No** cultural difference (Studies 1 & 2)	
Modified Twenty Statement Test (MTST)		
(H4) Cultural Differences in Self-Descriptions		

(H4.1) Cultural differences in self-statements about collective duties: *Hongkongese & Taiwanese > British*	**Yes**, a significant effect (Studies 1 & 2)	*BUT Hongkongese > British (Study 1A); Hongkongese > Taiwanese > British (Study 2)*
(H4.2) Cultural differences in self-statements about individual rights: *British > Hongkongese & Taiwanese*	**No** cultural difference	
(H5) Interaction between Culture and Self-Condition in Self-Descriptions		
(H5.1) Self-statements about collective duties in the condition of individual self ('I'): *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H5.2) Self-statements about individual rights in the condition of individual self ('I'): *British > Hongkongese & Taiwanese*	**No** cultural difference	
(H5.3) Self-statements about collective duties in the condition of collective self ('We'): *Hongkongese & Taiwanese > British*	**Yes**, a significant effect (Study 2)	*BUT Hongkongese > Taiwanese > British (Study 2)*
(H5.4) Self-statements about individual rights in the condition of collective self ('We'): *British > Hongkongese & Taiwanese*	**No** cultural difference	
(H6) Interaction between Culture and Cultural Identity Activation in Self-Descriptions		
(H6.1) Self-statements about collective duties when the cultural identity is activated: *Hongkongese & Taiwanese > British*	**Yes**, a significant interaction (Studies 1 & 2)	*BUT Hongkongese > British & Taiwanese (Study 1); Hongkongese > Taiwanese > British (Study 2)*
(H6.2) Self-statements about individual rights when the cultural identity is activated: *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 1)	*BUT British > Hongkongese (Study 1)*
Autobiographical Memory Test (AMT)		
(H7) Cultural Differences in the Variables of Autobiographical Memories		
(H7.1) Cultural differences in autobiographical memory specificity: *British > Hongkongese & Taiwanese*	**Yes**, a significant effect	

(H7.2) Cultural differences in response latencies: *British < Hongkongese & Taiwanese*	**Yes**, a significant effect	*BUT British < Hongkongese < Taiwanese*
(H7.3) Cultural differences in omissions: *British < Hongkongese & Taiwanese*	**Yes**, a significant effect	*BUT British < Hongkongese < Taiwanese*
Self-Defining Memory Task (SDMT)		
(H8) Cultural Differences in Specificity, Meaning, Content, Affect, and Detailedness of Self-Defining Memories		
(H8.1) Cultural differences in the number of specific memories (Specificity): *British > Hongkongese & Taiwanese*	**Yes**, significant effects (Studies 1 & 2)	
(H8.2) Cultural differences in the number of integrated memories (Meaning): *British > Hongkongese & Taiwanese*	**Yes**, a significant effect (Study 2)	*BUT British & Taiwanese > Hongkongese*
(H8.3) Cultural differences in the number of memories about 'Achievement/ Mastery' (Content): *British > Hongkongese & Taiwanese*	**Yes**, a significant effect (Study 2)	*BUT British < Hongkongese & Taiwanese*
(H8.4) Cultural differences in the number of memories about 'Relationship' (Content): *Hongkongese & Taiwanese > British*	**No** cultural difference	
(H8.5) Cultural differences in the number of positive memories (Valence): *British > Hongkongese & Taiwanese*	**No** cultural difference	
(H8.6) Cultural differences in the number of negative memories (Valence): *Hongkongese & Taiwanese > British*	**Yes**, a significant effect	*BUT Taiwanese > British*
(H8.7) Cultural differences in the number of memory details (Detailedness): *British > Hongkongese & Taiwanese*	**Yes**, a significant effect	*BUT British & Taiwanese > Hongkongese*

5.6.6 Discussion

The Taiwanese group tended to retrieve more distinctive self-defining memories (in terms of time stamp, vividness, and importance) than other cultural groups. According to Nisbett and his colleagues (2001), East Asians adopt a holistic thinking style while Westerners hold an analytic thinking style. When predicting future events, East Asians tend to process a cyclical view that assumes a state of constant change (Choi et al., 2007). A more open-ended future has been associated with more vivid autobiographical remembering in emerging adulthood (Demiray & Bluck, 2012). Interestingly, most of the cultural differences in memory quality were only observed in negative memories. Researchers (e.g., Endo & Meijer, 2004) explained that East Asians (e.g., Taiwanese) were more likely to show a negative bias in memory than Westerners. The level of a group deviating from traditional Chinese culture is positively correlated with the period of exposure to Western culture (Cheng et al., 2012). Compared to Hongkongese, Taiwanese has been exposed to Western culture for a relatively shorter period. This would explain why the Taiwanese group retrieved more distinctive self-defining memories (especially negative ones).

Only the descriptive statistics of Study 2A (with 66.12% specific and 33.88% non-specific self-defining memories) for memory specificity were comparable to those of previous studies with non-clinical samples (e.g., Blagov & Singer, 2004; Singer & Moffitt, 1992). The unusual pattern observed in Study 1A (with 38.67% specific and 61.33% non-specific self-defining memories) was mainly attributed to the tendency of generating episodic memories among Hongkongese (58.96%) and Taiwanese (63.75%) students in Oxford. Being far away from the home country/region where most of the self-defining memories happened may have contributed to this unusual result. Consistent with our hypothesis, Hongkongese and Taiwanese participants were found to recall a significantly smaller proportion of specific self-defining memories than British participants. This discrepancy may originate from

cultural variances in three aspects, including (1) cultural values, (2) self-construal, and (3) societal influences. First, cultural values play a pivotal role in shaping memory processes. British culture (predominately rooted in individualism), attaches importance to personal accomplishment, autonomy, and uniqueness (e.g., Hofstede, 1980; Triandis, 1995). These cultural values enable self-expression and encourage the development of distinct personal narratives (e.g., Inglehart & Oyserman, 2004), thus fostering the recollection of specific self-defining memories. In contrast, Chinese culture (predominately rooted in collectivism) places a strong emphasis on relationships, conformity and harmony (e.g., Hofstede, 1980; Triandis, 1995). Such values favour conformity to social norms, resulting in a greater focus on shared experience and less focus on individual distinctiveness (Sherif, 1936). Hence, Chinese tend to recall self-defining memories that represent collective achievements or social roles rather than unique personal experiences. Given 'uniqueness' is a crucial condition for 'specificity', Chinese are less likely to generate memories that are counted towards 'specific'. Second, self-construal also shapes the way self-defining memories are recalled. British tend to hold an independent self-construal, where the self is defined primarily in terms of individual attributes and personal goals (Markus & Kitayama, 1991). This self-construal corresponds to the cultural emphasis on individualism and promotes the retrieval of specific autobiographical memories that enhance personal uniqueness. On the other hand, the Chinese tend to hold interdependent self-construal, where the self is associated with social relationships and communal goals (Markus & Kitayama, 1991). This interdependent self-construal allows the recall of memories centred around collective identities, as opposed to individually unique events. Third, societal influences such as education and media, also contribute to the variation in the specificity of self-defining memory. Formal education systems in the United Kingdom often involve activities that encourage self-expression (such as creative writing and public speaking) (e.g., Baraldi, 2008), which may benefit the

formation and retrieval of specific self-defining memories. In contrast, the Chinese education system in Hong Kong and Taiwan promotes conformity to well-established knowledge and authority (e.g., Zhai, 2017). Also, media representation and cultural narratives in the Western culture may make the specific memory cues more salient and readily available, compared to those in Chinese culture (e.g., Wang & Ross, 2005; Graesser, Olde, & Klettke, 2003). Overall, these cultural differences in the level of specificity of self-defining memories echo the previous finding that Chinese are more likely to show rAMS than British people (e.g., Humphries & Jobson, 2012). Therefore, the current finding extends this cultural difference in AMS from everyday, general autobiographical memories to self-defining memories that are directly related to self-concept and psychological well-being.

The descriptive statistics in present studies for memory meaning supported Blagov's (2004) findings that integrative memories (29.3%) were less common than non-integrative ones (70.7%). According to Singer and Blagov (2000), integrative memories entail the lesson that the events have taught the individual in terms of their life or sense of identity while non-integrative memories may be only filled with emotions, a time stamp, or generalizations about the individual or the event. In response to the prompt for positive valence, both the British and Taiwanese groups generated more integrative memories than the Hongkongese group. But such a higher report of integrative memories in the former two groups may be understood in two different stages of memory processes. On the one hand, during memory encoding, Taiwanese may be likely to have self-reflection, which is highly encouraged to cultivate virtues, such as benevolence and righteousness (Hwang, 2001; Tu, 1978) under the influence of traditional Confucian culture (e.g., Liu & Giner-Sorolla, 2023; Wong & Tsai, 2007). This tendency to self-reflect enables them to move just experiencing into understanding, thus increasing the level of self-awareness and consciousness through the event. On the other hand, during memory retrieval, British people tend to report integrative

memories due to the characteristics of English, such as vocabulary and sentence structure. For example, compared to Chinese, English contains a wide range of lexical resources, including adjectives (e.g., 'thought-provoking'), adverbs (e.g., 'introspectively'), and verbs (e.g., 'contemplate') to describe their thoughts, feelings more precisely. Also, English sentences can consist of subordinate clauses and phrases to insert viewpoints and reflections. These sentence structures help people easily include 'an indication of why the memory is important and emotional' (Blagov & Singer, 2004, p. 493).

The cultural difference in memory valence in Study 1A can be explained by memory bias. Substantial research has shown that sometimes Asians tend to focus more on negative experiences when being asked to retrieve a memory compared to Westerners (e.g., Endo & Meijer, 2004; Oishi, 2002). Inconsistent with our hypothesis, the British group, in general, rated a lower level of emotions for the memories regardless of the valence compared to the other two groups. Different cultural views of emotions in relation to the self determine the level of memory emotionality (Wang, 2004). According to past literature (e.g., Bond, 1991; Lupton, 1998), people from individualistic cultures view emotions as a way to express self-authenticity to reinforce the self as an individual entity. People from collectivistic cultures, in contrast, view emotions as a potentially destructive source against harmonious relationships, thus undermining the self as a relational entity. The discrepancy from the previous findings might be explained away by the inflating need for self-expression in Hong Kong and Taiwan in 2019, where moderation in all matters of the heart was no longer culturally important.

As predicted, the level of detailedness of self-defining memories showed cultural differences. The present research found that the British and Taiwanese participants recalled a greater number of details (regardless of memory valence) than their Hongkongese counterparts. This finding was partly consistent with previous literature (e.g., Wang, 2001, 2006) that Westerners were more likely to access memories of more details than Chinese.

Westerners' tendency to generate memories with more details can be traced back to their developmental origin. According to Wang and Leichtman (2000), the childhood memories of European American adults were lengthier and more emotionally elaborate than those of Chinese adults. This cultural difference was thought to become more pronounced as age increased (Wang, 2004). During early socialization, children's self-construal formed in different cultures influence the detailedness of their memories about the self from two perspectives. From a cognitive perspective, the independent self-construal tends to be attuned to self-related information while the interdependent self-construal tends to be focused on information related to significant others and the surrounding community (e.g., Shweder & Bourne, 1984; Wang & Brockmeier, 2002). This selective focus in information processing may lead to a bias of memory accessibility to either the self alone or the self in relation to others. From a functional perspective, personal recollections of discrete, unique events (focused on themselves alone) with details and elaboration help individuals differentiate the self from others and thus reinforce the self as a separate entity. Conversely, those memories of brief, skeletal events (centered on collective activities) enable individuals to engage in relationships and thus enhance the self as a relational entity (e.g., Mullen, 1994; Wang, 2001). Therefore, it was not surprising that the British group showed a higher level of detailedness than the Hongkongese group. Interestingly, the Taiwanese group was found with as many details in their memories as the British group. One possible reason is the emerging need for individuality in Taiwanese adults (Liao et al., 2016). Lou and his colleagues discovered that Taiwanese aged 15-24 tended to hold non-traditional beliefs to stand out from the group they belong to. Despite a certain level of Chinese culture shared, Taiwan experienced Western culture later than Hong Kong (e.g., Lou et al., 2012), and may not provide much contextual support for individuals' need to achieve the developmental goal of autonomy (Wang, 2014) as Hong Kong does. In this case, Taiwanese may retrieve detailed,

lengthy, and elaborate memories centred on themselves as the main character to obtain the goal (e.g., Liao et al., 2016; Wang, 2001).

5.7 General Discussion

Both self-concept and autobiographical memory are pervasively influenced by culture and thus are hard to capture solely by explicit measures. Therefore, self-report questionnaires (in Chapter 4) and objective measures (in Chapter 5) were included in this thesis as they provide complementary information.

However, sometimes the measures use the same labels, such as 'autonomy' but have different meanings. 'Autonomy' in the Revised Personal Style Inventory (PSI-II), which is independent of the other construct, 'sociotropy', in this scale includes excess concern about autonomous achievement and entails negative implications for psychological well-being. In contrast, 'autonomy' in the IAT, which is an end of a continuum of 'agency' with 'heteronomy' as the other end, is a neutral state of autonomous functioning. This distinction may explain why the 'agency' was significant in the IAT but not in PSI-II.

On the other hand, some measures with different labels are supposed to assess a similar construct (with different perspectives). For example, 'self-reference' was explicitly measured as self-esteem in the Rosenberg Self-Esteem Scale (RSES) and was implicitly assessed as the self-prioritisation effect (SPE) in the Perceptual Matching Task (PMT). According to Schäfer and Frings (2019), self-esteem is a focus on oneself and was reflected in faster responses towards self-relevant stimuli (due to SPE) compared to other-relevant stimuli. Hence, significant cultural differences in 'self-reference' were found in both explicit and implicit measures.

Similar to Chapter 4, the current findings in Chapter 5 are limited by the characteristics of Study 1A (compared to Study 2A): (1) smaller sample size and (2) less representative of their respective cultures. However, there were more significant results in

Chapter 5 than in Chapter 4, which suggested that objective measures may be more sensitive to subtle group differences.

Chapter 6

Association of Self-Concept and Appraisals with Post-Traumatic/Stress Outcomes

6.1 Overview

Self-concept and appraisals play important roles in people's perceptions of themselves and stressful events, and therefore they are closely associated with post-traumatic/stress outcomes. Individuals who perceive themselves or the events negatively are more vulnerable to psychopathology, including PTSD symptoms (e.g., Ponnamperuma, & Nicolson, 2016), anxiety (e.g., Maner & Schmidt, 2006), and depression (e.g., Newby & Moulds, 2011). While a stressful event can challenge one's self-concept and appraisals of the world, it can also lead to personal growth and positive changes in these areas (e.g., Shigemoto, Ashton, & Robitschek, 2016).

6.1.1 Personal Styles and Post-Traumatic/Stress Outcomes

Both autonomy and sociotropy of the Revised Personal Style Inventory (PSI-II) refer to rigid personality types; the former is about autonomous achievement while the latter is focused on interpersonal relationships (Beck, 1983). These personalities are thought to derive from negative developmental experiences (Robins et al., 1994) and confer increased vulnerability to psychopathology (e.g., Blatt & Maroudas, 1992; Nietzel & Harris, 1990). Autonomy reflects excessive concerns about independence with characteristics of self-criticism and the need for control (e.g., Beck, 1983; Bowlby, 1977), which are associated with psychopathological symptoms (e.g., Shahar, 2015). Also, the tendency of individuals with high autonomy not to seek help from others (Beck, 1983) may hinder post-traumatic growth. Previous research found that high autonomy is strongly associated with a heightened risk of trauma-related psychopathology (e.g., Robins et al., 1994). Sociotropy is characterised

by a strong desire for relationships and a need for approval from others (e.g., Beck, 1983; Bowlby, 1977). Individuals with high sociotropy may be more vulnerable to psychopathology as traumatic events can disrupt their social networks and thus lead to increased distress (e.g., Green, 2003). But sociotropy, meanwhile, may contribute to post-traumatic growth. Trauma may prompt individuals with high sociotropy to reevaluate their relationships and priorities so that they may be motivated to strengthen their bonds and derive meaning from their connections. The interaction between autonomy and sociotropy has received research attention. High autonomy and high sociotropy render individuals susceptible to distress when their need for independence clashes with their need for social support (Kolts, Robinson, & Tracy, 2004). But they may strike a balance between these two desires after trauma and thus develop healthier and more meaningful relationships than before.

6.1.2 Self-Esteem and Post-Traumatic/Stress Outcomes

Self-esteem, as a particular measure of components of self-concept (Huitt, 2004), is closely linked to psychological well-being after stressful events. Low self-esteem is considered a vulnerability factor for the development of psychopathology after trauma (Sowislo & Orth, 2013). Conversely, high self-esteem can serve as a protective factor to buffer against the negative psychological effects of trauma (Rossi, Panzeri, Taccini, Parola, & Mannarini, 2022). On the other hand, individuals with high self-esteem tend to exhibit greater emotion regulation, which is conducive to post-traumatic growth after the experience of traumatic events (Brown, & Marshall, 2001). Self-esteem predicted life satisfaction (psychological well-being) better in individualistic than collectivistic cultures (Diener & Diener, 1995).

6.1.3 Thinking Styles and Post-Traumatic/Stress Outcomes

A large body of literature on individualism-collectivism has highlighted the importance of cultural differences in thinking styles (e.g., Nisbett, 2004). One of the major

constructs is analytic versus holistic thinking (Nisbett, 1998; Peng & Nisbett, 1999), which can influence how individuals perceive and interpret traumatic events. Despite little relevant research, these thinking styles may be associated with post-traumatic outcomes in different ways. According to Choi and his colleagues (2007), analytic thinking involves breaking down complex information into its constituent parts and focusing on details while holistic thinking involves a broader, more integrative approach to understanding experiences and connecting various elements. Individuals with analytic thinking may easily engage in rumination, repeatedly dissecting the traumatic events, their thoughts, and emotions. Such ruminative analytic thinking can lead to increased distress, particularly when the analysis becomes overly negative or obsessive (Watkins & Teasdale, 2001). Analytic thinkers also struggle with emotional processing as they may attempt to understand their emotions through logical analysis rather than emotional expression. Such struggle can impede recovery and post-traumatic growth (e.g., Zech & Rimé, 2005). In contrast, individuals with holistic thinking may have a greater capacity for understanding and integrating their emotions into their cognitive framework. This emotional processing ability can enhance their resilience against psychopathology (e.g., Kaye-Kauderer, Feingold, Feder, Southwick, & Charney, 2021). Also, holistic thinkers tend to view their traumatic experiences as part of their overall life narrative and seek a sense of purpose, which contributes to post-traumatic growth (Lee, Cheng, Lee, Esposito, & Cheon, 2023).

6.1.4 Trauma/Stress Appraisals and Post-Traumatic/Stress Outcomes

Trauma/stress appraisals contribute to post-traumatic/stress outcomes both in the short-term and long-term. Psychopathology arises when individuals process a traumatic/stressful event as highly threatening to their safety (external threat, e.g., the world is dangerous) or sense of self (internal threat, e.g., I am inadequate). Ehlers and Clark's cognitive model (2000) suggests that PTSD becomes persistent when excessively negative

appraisals of the trauma create 'a sense of serious current threat' (p. 320). According to Beck's (1987) cognitive model, depression arises when individuals have automatic thoughts about themselves, the world, and the future after stressful events. Individuals who are unable to view the trauma as a time-limited event without global negative implications for other areas of their lives are prone to psychopathological symptoms (e.g., Beck, 1967, 1970; Beck & Alford, 2009). Also, the negative interpretations of one's initial psychological symptoms (e.g., intrusive recollections and flashbacks), other people's reactions, and consequences of the trauma in other life domains contribute to trauma-related psychopathology (e.g., Ehlers & Clark, 2000). On the other hand, positive trauma appraisals, which refers to perceiving the traumatic event as a challenge rather than solely a threat, can lead to post-traumatic growth (Calhoun & Tedeschi, 1995). When individuals appraise a traumatic/stressful event positively, they may experience personal growth, improved relationships, and a deeper appreciation of life (Zoellner & Maercker, 2006). To assess trauma/stress appraisals, we used both the Public and Communal Self Appraisals Measure (PCSAM) and the revised Post-Traumatic Cognitions Inventory (PTCI2) in this research.

6.1.5 Self-Prioritisation Effect (SPE) and Post-Traumatic/Stress Outcomes

The self-prioritisation effect (SPE) describes that one allocates more cognitive resources (e.g., attention, perceptual processing, and memory) to stimuli that are self-relevant over those relevant to others (e.g., Sui, 2012, see Chapter 5). The tendency to focus on oneself and one's internal experience is associated with various forms of psychopathology (Woodruff-Borden, Brothers, & Lister, 2001). For example, when anxious individuals exhibit a heightened self-prioritisation effect, they may allocate excessive attention to their own thoughts and feelings, leading to rumination and exacerbation of symptoms (Ingram, 1990). On the other side, traumatic/stressful events often lead individuals to reevaluate their priorities and values (Tedeschi, Shakespeare-Finch, Taku, & Calhoun, 2018). The SPE may

involve a shift in focus towards their personal growth and self-care. This shift can contribute to the development of post-traumatic growth as they place a stronger emphasis on their own psychological well-being and resilience after the trauma.

6.1.6 Implicit Self-Concept and Post-Traumatic/Stress Outcomes

The implicit self-concept (measured by the Modified Implicit Association Test, see Chapter 5) in this research refers to the degree of autonomous functioning (labelled as 'agency'), extending from autonomy (a state of being self-governing) to heteronomy (a state of being governed) (Kagitcibasi, 2005). Autonomy is often regarded as a protective factor against psychopathology. Individuals with a stronger sense of autonomy are less likely to develop psychopathological symptoms in their stressful life (Fotiadis, Abdulrahman, & Spyridou, 2019). Also, autonomy is associated with better psychological adjustment and resilience in the face of stressors (Weinstein & Ryan, 2011). For post-traumatic growth, autonomy can facilitate engagement in self-directed growth activities and the meaning-making process. Individuals with high autonomy may take the initiative in pursuing activities that promote personal growth (e.g., self-help resources or community services). Also, autonomy enables them to construct their own narrative and interpretation of the trauma that aligns with their evolving sense of self (Ford, & Russo, 2006; Helgeson, Reynolds, & Tomich, 2006).

6.1.7 Self-Description and Post-Traumatic/ Stress Outcomes

Collective duties and individual rights, among the nine categories of the Modified Twenty Statement Test, are the focus of this research (see Chapter 5). Duties refer to 'attributes that one should possess, actions that one ought to perform, as well as obligations, duties, and responsibilities to others' while rights refer to 'personal entitlements, including rights and privileges' (Hong et al., 2001). The self-descriptions of these two categories can relate to post-traumatic/stress outcomes in different ways. Reports of collective duties in self-

description is associated with the availability of social support, which is a well-established protective factor against psychopathology (Thoits, 2011). The duty-related self-description fosters post-traumatic growth as the sense of collective duties provides a framework for individuals to find purpose in contributing to their communities (Park, 2010). In contrast, the emphasis on individual rights may render individuals vulnerable to stress, feelings of powerlessness, and even psychopathological symptoms. However, the self-description about rights may suggest that those individuals are aware of their personal entitlement to access mental health care and resources and take an active role in their recovery and growth (Joseph & Linley, 2005).

6.2 Research Question and Hypotheses

This chapter was focused on the association of self-concept and appraisals of traumatic/stressful events with psychopathology (i.e., PTSD symptoms, anxiety and depression) and post-traumatic growth. This association was examined cross-sectionally and longitudinally in Studies 2A and 2B respectively. We first tested whether the self-concept and trauma/stress appraisals would predict post-traumatic/stress outcomes across cultural groups in both studies. Also, if there were cultural differences in the variables discussed above (in Chapters 4 and 5), we then investigated whether culture would moderate the relationship between self-concept and trauma appraisals at baseline (in Studies 2A and 2B) and post-traumatic/stress outcomes at baseline (in Study 2A) or at follow-up (in Study 2B).

The hypotheses regarding cultural moderation (in Chapters 6, 7, and 8) were informed by previous research and theoretical frameworks suggesting that culture shapes how individuals interpret and respond to specific cognitive/behavioural processes. For instance, in collectivistic cultures, social support might be more strongly linked to psychological well-being due to a greater emphasis on interdependence and relational harmony. Conversely, in individualistic cultures, personal achievement may have a stronger association with well-

being outcomes. Therefore, we expected that predictors closely aligned with cultural values would exhibit stronger predictor-outcome relationships within culturally congruent contexts.

Personal Styles (Revised Personal Style Inventory)

- Personal styles will be associated with post-traumatic/stress outcomes (***Hypothesis 1***).
    - Autonomy will positively predict psychopathology (***Hypothesis 1.1***).
    - Sociotropy will positively predict psychopathology (***Hypothesis 1.2***).
    - Autonomy will negatively predict post-traumatic growth (***Hypothesis 1.3***).
    - Sociotropy will positively predict post-traumatic growth (***Hypothesis 1.4***).
- Culture will moderate the relationship between personal styles and post-traumatic/stress outcomes (***Hypothesis 2***).
    - For the British group, the (hypothesised) positive relationship between autonomy and psychopathology will be stronger than for the two other groups (***Hypothesis 2.1***).
    - For the British group, the (hypothesised) positive relationship between sociotropy and psychopathology will be weaker than for the two other groups (***Hypothesis 2.2***).
    - For the British group, the (hypothesised) negative relationship between autonomy and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 2.3***).
    - For the British group, the (hypothesised) positive relationship between sociotropy and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 2.4***).

Self-Esteem (Rosenberg Self-Esteem Scale)

- Self-esteem will be associated with post-traumatic/stress outcomes (***Hypothesis 3***).
    - Self-esteem will negatively predict psychopathology (***Hypothesis 3.1***).

- Self-esteem will positively predict post-traumatic growth (***Hypothesis 3.2***).

- Culture will moderate the relationship between self-esteem and post-traumatic/stress outcomes (***Hypothesis 4***).
  - For the British group, the (hypothesised) negative relationship between self-esteem and psychopathology will be stronger than for the two other groups (***Hypothesis 4.1***).
  - For the British group, the (hypothesised) positive relationship between self-esteem and post-traumatic growth will be stronger than the two other groups (***Hypothesis 4.2***).

<u>Thinking Styles (Analysis-Holism Scale)</u>

- Thinking styles (analytic vs. holistic thinking) will be associated with post-traumatic/stress outcomes (***Hypothesis 5***).
  - Interactionism (a high score of 'causality' scale) will negatively predict psychopathology (***Hypothesis 5.1***).
  - Naïve dialecticism (a high score of 'attitude towards contractions') will negatively predict psychopathology (***Hypothesis 5.2***).
  - Cyclic view (a high score of 'perception of change') will negatively predict psychopathology (***Hypothesis 5.3***).
  - Field-dependence (a high score of 'locus of attention') will negatively predict psychopathology (***Hypothesis 5.4***).
  - Interactionism (a high score of 'causality' scale) will positively predict post-traumatic growth (***Hypothesis 5.5***).
  - Naïve dialecticism (a high score of 'attitude towards contractions') will positively predict post-traumatic growth (***Hypothesis 5.6***).
  - Cyclic view (a high score of 'perception of change') will positively predict post-

traumatic growth (***Hypothesis 5.7***).

- Field-dependence (a high score of 'locus of attention') will positively predict post-traumatic growth (***Hypothesis 5.8***).

- Culture will moderate the relationship between thinking styles and post-traumatic/stress outcomes (***Hypothesis 6***).
  - For the British group, the (hypothesised) negative relationship between interactionism (a high score of 'causality' scale) and psychopathology will be weaker than for the two other groups (***Hypothesis 6.1***).
  - For the British group, the (hypothesised) negative relationship between naïve dialecticism (a high score of 'attitude towards contractions') and psychopathology will be weaker than for the two other groups (***Hypothesis 6.2***).
  - For the British group, the (hypothesised) negative relationship between cyclic view (a high score of 'perception of change') and psychopathology will be weaker than for the two other groups (***Hypothesis 6.3***).
  - For the British group, the (hypothesised) negative relationship between field-dependence (a high score of 'locus of attention') and psychopathology will be weaker than for the two other groups (***Hypothesis 6.4***).
  - For the British group, the (hypothesised) positive relationship between interactionism (a high score of 'causality' scale) and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 6.5***).
  - For the British group, the (hypothesised) positive relationship between naïve dialecticism (a high score of 'attitude towards contractions') and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 6.6***).
  - For the British group, the (hypothesised) positive relationship between cyclic view (a high score of 'perception of change') and post-traumatic growth will be weaker

than for the two other groups (***Hypothesis 6.7***).

- For the British group, the (hypothesised) positive relationship between field-dependence (a high score of 'locus of attention') and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 6.8***).

Public and Communal Self Appraisals Measure (PCSAM)

- The PCSAM sub-scales (challenge to belief and belonging, challenge to communal aspects of self, challenge to public roles and identity) will be associated with post-traumatic/stress outcomes (***Hypothesis 7***).
  - The PCSAM sub-scales will positively predict psychopathology (***Hypothesis 7.1***).
  - The PCSAM sub-scales will negatively predict post-traumatic growth (***Hypothesis 7.2***).
- Culture will moderate the relationship between the PCSAM sub-scales and post-traumatic/stress outcomes (***Hypothesis 8***).
  - For the British group, the (hypothesised) positive relationship between the PCSAM sub-scales and psychopathology will be weaker than for the two other groups (***Hypothesis 8.1***).
  - For the British group, the (hypothesised) negative relationship between the PCSAM sub-scales and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 8.2***).

Revised Post-Traumatic Cognitions Inventory (PTCI2)

- The PTCI2 sub-scales (negative thoughts about the self, self-blame, overgeneralised danger, preoccupation with unfairness) will be associated with post-traumatic/stress outcomes (***Hypothesis 9***).
  - The PTCI2 sub-scales will positively predict psychopathology (***Hypothesis 9.1***).
  - The PTCI2 sub-scales will negatively predict post-traumatic growth (***Hypothesis***

9.2).

- Culture will moderate the relationship between the PTCI2 sub-scales and post-traumatic/stress outcomes (***Hypothesis 10***).
    - For the British group, the (hypothesised) positive relationship between the PTCI2 sub-scales and psychopathology will be stronger than for the two other groups (***Hypothesis 10.1***).
    - For the British group, the (hypothesised) negative relationship between the PTCI2 sub-scales and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 10.2***).

<u>Self-Prioritisation Effect (Perceptual Matching Task)</u>

- Self-prioritisation effect (SDE) will be associated with post-traumatic/stress outcomes (***Hypothesis 11***).
    - Self-prioritisation effect will positively predict psychopathology (***Hypothesis 11.1***).
    - Self-prioritisation effect will positively predict post-traumatic growth (***Hypothesis 11.2***).
- Culture will moderate the relationship between the self-prioritisation effect (SDE) and post-traumatic/stress outcomes (***Hypothesis 12***).
    - For the British group, the (hypothesised) positive relationship between the self-prioritisation effect and psychopathology will be stronger than for the two other groups (***Hypothesis 12.1***).
    - For the British group, the (hypothesised) positive relationship between the self-prioritisation effect and post-traumatic growth will be stronger than the two other groups (***Hypothesis 12.2***).

<u>*D* Measure (Modified Implicit Association Test)</u>

- Implicit autonomy (*D* measure) will be associated with post-traumatic/stress outcomes (***Hypothesis 13***).
    - Implicit autonomy will negatively predict psychopathology (***Hypothesis 13.1***).
    - Implicit autonomy will positively predict post-traumatic growth (***Hypothesis 13.2***).
- Culture will moderate the relationship between implicit autonomy (*D* measure) and post-traumatic/stress outcomes (***Hypothesis 14***).
    - For the British group, the (hypothesised) negative relationship between implicit autonomy (*D* measure) and psychopathology will be stronger than for the two other groups (***Hypothesis 14.1***).
    - For the British group, the (hypothesised) positive relationship between implicit autonomy (*D* measure) and post-traumatic growth will be stronger than the two other groups (***Hypothesis 14.2***).

<u>Self-Descriptions (Modified Twenty Statement Test)</u>

- Self-descriptions will be associated with post-traumatic/stress outcomes (***Hypothesis 15***).
    - Duty-related self-descriptions will negatively predict psychopathology (***Hypothesis 15.1***).
    - Right-related self-descriptions will positively predict psychopathology (***Hypothesis 15.2***).
    - Duty-related self-descriptions will positively predict post-traumatic growth (***Hypothesis 15.3***).
    - Right-related self-descriptions will positively predict post-traumatic growth (***Hypothesis 15.4***).
- Culture will moderate the relationship between self-descriptions and post-traumatic/stress outcomes (***Hypothesis 16***).

- For the British group, the (hypothesised) negative relationship between duty-related self-descriptions and psychopathology will be weaker than for the two other groups (***Hypothesis 16.1***).
- For the British group, the (hypothesised) positive relationship between right-related self-descriptions and psychopathology will be stronger than for the two other groups (***Hypothesis 16.2***).
- For the British group, the (hypothesised) positive relationship between duty-related self-descriptions and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 16.3***).
- For the British group, the (hypothesised) positive relationship between right-related self-descriptions and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 16.4***).

6.3 Methods

6.3.1 Measures

For detailed descriptions, please see the 'Measures' sections of Chapters 3 and 4.

<u>Study 2A</u>

(Self-Report Questionnaires)

A. Participant's Demographic Information

1) Demographic Questionnaire

- To collect participants' demographic information, including age, gender, cultural identity, field of study, highest education level achieved, monthly household income

B. Exposure and Processing of Stressful Life and Positive Events

2) Modified Life Events Checklist for DSM-5 (adapted from Life Events Checklist for DSM-5; Weathers et al., 2013)

- To measure participants' multiple exposures (after adding 'you were exposed to it as part of your job') to 18 types of non-traumatic stressful events and 20 types of potentially traumatic events (LTEs)

C. Self-Concept

3) Revised Personal Style Inventory (PSI-II; Robins et al., 1994)

- To assess participants' concerns about interpersonal relationships ('sociotropy') with three sub-scales, namely (1) concern about what others think, (2) dependency, and (3) pleasing others, as well as autonomous achievement ('autonomy') with another three sub-scales, namely (1) perfectionism/self-criticism, (2) need for control, and (3) defensive separation.

4) Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)

- To assess participants' evaluation of themselves and belief in their ability to cope with challenges

D. Appraisals

5) Analysis-Holism Scale (AHS; Choi et al., 2007)

- To assess participants' thinking styles, analytic versus holistic thinking with four domains, namely (1) causality (interactionism versus dispositionism), (2) perception of change (cyclic versus linear), (3) attitude towards contradiction (naïve dialecticism versus formal logic), and (4) locus of attention (field versus parts); a higher AHS score suggests a higher level of holistic thinking (or a lower level of analytic thinking), and vice versa.

6) Public and Communal Self Appraisals Measure (PCSAM; Engelbrecht & Jobson, 2014)

- To assess participants' appraisals of traumatic/stressful events specifically in public and communal aspects, including (1) challenge to beliefs and belonging, (2) challenge to communal aspects of self, and (3) challenge to public roles and identity

7) Revised Post-Traumatic Cognitions Inventory (PTCI2; Ehlers, Clark & Foa, unpublished)
   - To assess participants' general thoughts and beliefs after traumatic/stressful events with 4 sub-scales, namely (1) negative thoughts about the self, (2) self-blame, (3) overgeneralised danger, and (4) preoccupation with unfairness

E. Post-Traumatic/Stress Outcomes

8) Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997)
   - To assess to what extent participants were bothered by the difficulties resulting from their most distressing events during the past 7 days in 3 sub-scales, including: (1) intrusion, (2) avoidance, and (3) hyper-arousal

9) State-Trait Anxiety Inventory (Trait) (Form Y) (STAI-T; Spielberger, 1983)
   - To measure the participants' general, stable anxiety condition related to their personality

10) Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF; Cole et al., 2004)
   - To measure participants' severity of depressive symptoms in the past week

11) Post-Traumatic Growth Inventory – Expanded (PTGI-X; Tedeschi et al., 2017)
   - To measure participants' perceived positive changes after their most distressing events with 5 sub-scales, namely (1) relating to others, (2) new

possibilities, (3) personal strength, (4) spiritual change and (5) appreciation of life

(Objective Measures)

A. Self-Concept

12) Perceptual Matching Task (PMT; Sui, He, & Humphreys, 2012)

- To assess the self-prioritisation effect (SPE) where participants tend to prioritise self-relevant information over information relevant to others; a higher *d'* (a higher sensitivity in the PMT) suggests a stronger SPE

13) Modified Implicit Association Test (adapted from IAT; Greenwald et al., 1998)

- To test participants' implicit self-concept related to agency, the continuum of self-rule and autonomous functioning with two opposite ends (autonomy versus heteronomy); a higher *D* measure suggests a higher level of autonomy (or a lower level of heteronomy)

14) Modified Twenty Statement Test (MTST; Hong et al., 2001; adapted from Kuhn & McPartland, 1954)

- To assess participants' spontaneous self-concept by sorting their responses into 9 categories, where duties and rights were the focus of this research

Study 2B

The measures used at follow-up (i.e., Study 2B) were identical to those used at baseline (i.e., Study 2A).

6.3.2 Statistical Analyses

Before conducting the main analyses, we examined whether self-concept and appraisals correlated with post-traumatic/stress outcomes in Studies 1 and 2. Although most of the associations were supported in the previous literature, we conducted a zero-order

correlation (for details, see Appendix N) to yield a solid grounding for the subsequent regression models. For prediction and (potential) moderation, we focused on the relationship(s) where the self-concept/appraisals (see Chapters 4 and 5) and post-traumatic/stress outcomes (see Chapter 3) showed cultural differences.

The Study 1 data were collected, but not analysed to establish the (temporal) relationship. Apart from the small sample size, there were concerns about the sample not being fully representative of their cultures as those participants all lived in the U.K. Instead, we conducted a comprehensive analysis of the large sample from Study 2, who lived within their respective cultures. We used only the Study 2 sample (which was more representative of the British, Hongkongese, and Taiwanese cultures) to investigate the association between the variables of interest.

To examine the predictive role of the self-concept and appraisals at T1 (Studies 2A and 2B) on post-traumatic/stress outcomes at T1 (Study 2A) or at T2 (Study 2B), we conducted hierarchical multiple regression analyses with PTSD symptoms (IES-R), anxiety (STAI-T), depression (CES-D-SF), and post-traumatic growth (PTGI-X) as outcome variables. The covariates included participants' age, gender, and the characteristics of their exposure to traumatic and stressful events, including the number of traumatic events, the number of stressful events, and the perceived severity of the most distressing event. In Study 2A (i.e., the cross-sectional study), we controlled the traumatic and stressful experiences before the baseline (T1) while in Study 2B (i.e., the longitudinal study), we controlled those experiences not only before the baseline but also during follow-up (T2), as well as the corresponding post-traumatic/stress outcome at T1. The above demographic and stressor variables were entered in Step 1, followed by entering the respective self-concept or appraisals (the total score for RSES, the sub-scales for PSI-II, AHS, PCSAM, PTCI, and MTST, and the differences between the sub-scales for PMT and IAT) in Step 2 as the main

predictor of the outcomes.

To investigate the potential moderating role of culture in the relationship between self-concept/appraisals and post-traumatic/stress outcomes, we expanded the above hierarchical multiple regression model by entering culture (in the form of two dummy variables with the British group as a reference category) and the interaction between each culture dummy variable and the self-concept/appraisals in Step 3.

6.4 Results

Descriptive statistics for post-traumatic/stress psychopathology (i.e., PTSD symptoms, anxiety, and depression) and post-traumatic growth can be found in Table 3.5 of Chapter 3. The zero-order correlation between self-concept/appraisals and post-traumatic/stress outcomes in Study 2 is presented in Appendix N2.

6.4.1 Personal Styles and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by Personal Styles (Hypothesis 1)

In the cross-sectional study (Study 2A), the hierarchical multiple regression analyses showed significant improvements in predicting all symptoms when personal styles were added in Step 2; PTSD symptoms, $R^2_{adj} = 0.19$, $\Delta R^2 = 0.10$, $\Delta F(2,412) = 24.77$, $p < .001$, anxiety, $R^2_{adj} = 0.29$, $\Delta R^2 = 0.23$, $\Delta F(2,412) = 66.40$, $p < .001$, depression, $R^2_{adj} = 0.22$, $\Delta R^2 = 0.18$, $\Delta F(2,412) = 48.45$, $p < .001$, but not post-traumatic growth, $R^2_{adj} = 0.07$, $\Delta R^2 = 0.01$, $\Delta F(2,412) = 1.22$, $p = .296$. Autonomy positively predicted PTSD symptoms, $\beta = 0.28$, $p < .001$, anxiety, $\beta = 0.34$, $p < .001$, and depression, $\beta = 0.34$, $p < .001$, while sociotropy positively predicted PTSD symptoms, $\beta = 0.27$, $p < .001$, and depression, $\beta = 0.19$, $p < .001$, over and above what was predicted age, gender and exposure to traumatic and stressful events (see Tables for detailed results).

The analysis of the follow-up data (Study 2B) did not show significant effects of personal styles (measured at baseline) on outcomes at follow up over and above age, gender,

baseline and follow-up stressor severity and baseline symptoms severity on the respective measures (see Tables for detailed results).

Moderation by Culture of the Relationship between Personal Styles and Post-Traumatic/Stress Outcomes (Hypothesis 2)

The addition of culture and its interaction terms with personal styles in Step 3 of hierarchical multiple regression at baseline showed a significant improvement in the prediction model of PTSD symptoms, $R^2_{adj} = 0.20$, $\Delta R^2 = 0.03$, $\Delta F(6,406) = 2.24$, $p = .038$, anxiety, $R^2_{adj} = 0.41$, $\Delta R^2 = 0.10$, $\Delta F(6,406) = 11.89$, $p < .001$, depression, $R^2_{adj} = 0.27$, $\Delta R^2 = 0.06$, $\Delta F(6,406) = 5.69$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.04$, $\Delta F(6,406) = 3.09$, $p = .006$. In the British group, the positive relationship between autonomy and PTSD symptoms was weaker (compared to the Hongkongese group) while the positive relationship between sociotropy and anxiety was stronger (compared to the Taiwanese group).

In Study 2B, the addition of culture and its interactions with self-esteem in Step 3 showed a significant improvement only when predicting anxiety, $R^2_{adj} = 0.57$, $\Delta R^2 = 0.02$, $\Delta F(6,351) = 2.15$, $p = .047$, due to the main effects of the culture dummy variables.

6.4.2 Self-Esteem and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by Self-Esteem (Hypothesis 3)

The hierarchical multiple regression analyses showed significant improvements in predicting all outcomes at baseline when self-esteem was added in Step 2; PTSD symptoms, $R^2_{adj} = 0.17$, $\Delta R^2 = 0.08$, $\Delta F(1,413) = 39.26$, $p < .001$, anxiety, $R^2_{adj} = 0.56$, $\Delta R^2 = 0.49$, $\Delta F(1,413) = 464.03$, $p < .001$, depression, $R^2_{adj} = 0.41$, $\Delta R^2 = 0.36$, $\Delta F(1,413) = 253.86$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.08$, $\Delta R^2 = 0.01$, $\Delta F(1,413) = 5.40$, $p = .021$. As hypothesised, self-esteem negatively predicted PTSD symptoms, $\beta = -0.28$, $p < .001$, anxiety,

β = -0.71, p < .001, and depression, β = -0.61, p < .001 and positively predicted post-traumatic growth, β = 0.11, p = .021 (see Tables for detailed results).

In Study 2B, after adding self-esteem, the hierarchical multiple regression analyses showed a significant improvement in the prediction of anxiety, R^2_{adj} = 0.57, ΔR^2 = 0.01, $\Delta F(1,358)$ = 6.13, p = .014, depression, R^2_{adj} = 0.38, ΔR^2 = 0.03, $\Delta F(1,358)$ = 16.90, p <.001, but not of post-traumatic growth, R^2_{adj} = 0.32, ΔR^2 = 0.00, $\Delta F(1,358)$ = 0.44, p = .507. As hypothesised, self-esteem negatively predicted anxiety, β = -0.13, p < .001, and depression, β = -0.22, p < .001 (see Tables for detailed results).

Moderation by Culture of the Relationship between Self-Esteem and Post-Traumatic/Stress Outcomes (Hypothesis 4)

The addition of culture and its interactions with self-esteem in Step 3 showed significant improvements in the prediction models of anxiety: R^2_{adj} = 0.60, ΔR^2 = 0.04, $\Delta F(4,409)$ = 10.15, p < .001, depression, R^2_{adj} = 0.42, ΔR^2 = 0.02, $\Delta F(4,409)$ = 3.90, p = .004, and post-traumatic growth, R^2_{adj} = 0.12, ΔR^2 = 0.04, $\Delta F(4,409)$ = 5.21, p <.001, but not of PTSD symptoms, R^2_{adj} = 0.17, ΔR^2 = 0.01, $\Delta F(4,409)$ = 0.93, p = .448 (see Tables 6.10, 6.11, and 6.12 for detailed results). There were significant interactions between culture and self-esteem in the prediction of anxiety and depression. In the British group, the negative relationship between self-esteem and anxiety was weaker compared to the Taiwanese and Hongkongese groups, while the negative relationship between self-esteem and depression was stronger compared to the Hongkongese group.

In the follow-up study, the addition of culture and its interactions with self-esteem in Step 3 showed a significant improvement only in the prediction model of anxiety, R^2_{adj} = 0.58, ΔR^2 = 0.02, $\Delta F(4,354)$ = 3.30, p = .011, due to the main effects of culture variables.

6.4.3 Thinking Styles and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by Thinking Styles (Hypothesis 5)

The hierarchical multiple regression analyses (Study 2A), when thinking styles were added in Step 2, showed a significant improvement in the predictions of PTSD symptoms, $R^2_{adj} = 0.11$, $\Delta R^2 = 0.03$, $\Delta F(4,410) = 3.11$, $p = .015$, anxiety $R^2_{adj} = 0.09$, $\Delta R^2 = 0.03$, $\Delta F(4,410) = 3.14$, $p = .015$, post-traumatic growth, $R^2_{adj} = 0.09$, $\Delta R^2 = 0.03$, $\Delta F(4,410) = 3.47$, $p = .008$, but not depression, $R^2_{adj} = 0.05$, $\Delta R^2 = 0.02$, $\Delta F(4,410) = 1.69$, $p = .152$. Causality positively predicted anxiety, $\beta = 0.16$, $p = .002$. Attitude towards contradiction negatively predicted PTSD symptoms, $\beta = -0.13$, $p = .008$, and anxiety, $\beta = -0.10$, $p = .044$. Perception of change negatively predicted PTSD symptoms, $\beta = -0.11$, $p = .020$. Locus of attention positively predicted post-traumatic growth, $\beta = 0.11$, $p = .033$.

The prospective study (Study 2B) did not find any significant effect of thinking styles on the outcomes at follow-up beyond age, gender, baseline and follow-up stressor severity, and baseline symptom severity on the respective measures.

Moderation by Culture of the Relationship between Thinking Styles and Post-Traumatic/Stress Outcomes (Hypothesis 6)

The addition of culture and its interaction terms with thinking styles in Step 3 of hierarchical multiple regression showed a significant improvement in the prediction model of anxiety, $R^2_{adj} = 0.16$, $\Delta R^2 = 0.09$, $\Delta F(10,400) = 4.63$, $p < .001$, and depression, $R^2_{adj} = 0.11$, $\Delta R^2 = 0.08$, $\Delta F(4,410) = 3.88$, $p < .001$, but not PTSD symptoms, $R^2_{adj} = 0.13$, $\Delta R^2 = 0.03$, $\Delta F(4,410) = 1.57$, $p = .113$, or post-traumatic growth, $R^2_{adj} = 0.11$, $\Delta R^2 = 0.04$, $\Delta F(4,410) = 1.69$, $p = .081$. The negative relationships between causality and anxiety, between perception of change and anxiety, as well as between perception of change and depression were stronger in the Taiwanese group (compared to the British group).

Study 2B did not show any significant improvement in the prediction model of post-traumatic/stress outcomes at follow-up after adding thinking styles in Step 3.

6.4.4 Public and Communal Self-Appraisals Measure (PCSAM) and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by the PCSAM Sub-Scales (Hypothesis 7)

The hierarchical multiple regression analyses showed a significant improvement in the prediction of all outcomes at baseline when the PCSAM sub-scales were added in Step 2; PTSD symptoms, $R^2_{adj} = 0.38$, $\Delta R^2 = 0.29$, $\Delta F(3,411) = 64.15$, $p < .001$, anxiety, $R^2_{adj} = 0.19$, $\Delta R^2 = 0.13$, $\Delta F(3,411) = 21.82$, $p < .001$, depression, $R^2_{adj} = 0.25$, $\Delta R^2 = 0.21$, $\Delta F(3,411) = 38.28$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.13$, $\Delta R^2 = 0.06$, $\Delta F(3,411) = 9.88$, $p < .001$. Challenge to beliefs and belonging positively predict PTSD symptoms, $\beta = 0.24$, $p < .001$, anxiety, $\beta = 0.24$, $p < .001$, and depression, $\beta = 0.27$, $p < .001$. Challenge to communal aspects of self positively predict PTSD symptoms, $\beta = 0.10$, $p = .031$, and post-traumatic growth, $\beta = 0.17$, $p = .003$. Challenge to public roles and identity positively predict PTSD symptoms, $\beta = 0.32$, $p < .001$, anxiety, $\beta = 0.19$, $p = .001$, depression, $\beta = 0.28$, $p < .001$, and post-traumatic growth, $\beta = 0.16$, $p = .011$.

In Study 2B, after adding the PCSAM sub-scales, the hierarchical multiple regression analyses showed a significant improvement in the prediction of anxiety, $R^2_{adj} = 0.58$, $\Delta R^2 = 0.02$, $\Delta F(3,356) = 4.68$, $p = .003$, but not of depression, $R^2_{adj} = 0.36$, $\Delta R^2 = 0.01$, $\Delta F(3,356) = 2.53$, $p = .057$, or post-traumatic growth, $R^2_{adj} = 0.32$, $\Delta R^2 = 0.01$, $\Delta F(3,356) = 0.97$, $p = .409$. Challenge to public roles and identity positively predicted anxiety at T2, $\beta = 0.15$, $p = .002$.

Moderation by Culture of the Relationship between the PCSAM Sub-Scales and Post-Traumatic/Stress Outcomes (Hypothesis 8)

The addition of culture and its interaction terms with the PCSAM sub-scales in Step 3 of hierarchical multiple regression showed a significant improvement in the prediction model of anxiety, $R^2_{adj} = 0.25$, $\Delta R^2 = 0.07$, $\Delta F(8,403) = 5.07$, $p < .001$, depression, $R^2_{adj} = 0.26$, $\Delta R^2 = 0.03$, $\Delta F(8,403) = 2.08$, $p = .037$, post-traumatic growth, $R^2_{adj} = 0.16$, $\Delta R^2 = 0.05$,

$\Delta F(8,403) = 2.82$, $p = .005$, but not of PTSD symptoms, $R^2_{adj} = 0.37$, $\Delta R^2 = 0.01$, $\Delta F(8,403) = 0.40$, $p = .920$. However, there were no significant interactions between culture and the PCSAM sub-scales on the outcomes.

In Study 2B, the addition of culture and its interactions with the PCSAM sub-scales in Step 3 showed significant improvements in the prediction model of anxiety at T2, $R^2_{adj} = 0.59$, $\Delta R^2 = 0.02$, $\Delta F(8,348) = 2.03$, $p = .042$, and post-traumatic growth at T2, $R^2_{adj} = 0.34$, $\Delta R^2 = 0.03$, $\Delta F(8,348) = 2.06$, $p = .039$, but not depression at T2, $R^2_{adj} = 0.36$, $\Delta R^2 = 0.02$, $\Delta F(8,348) = 1.19$, $p = .306$. There was an interaction between culture (Hongkongese vs. British) and challenge to communal aspects of self (T1) on post-traumatic growth (T2) although the predictor itself was non-significant. Separate regression models for each cultural group found that the relationship between challenge to communal aspects of self (T1) on post-traumatic growth (T2) was negative in the British group, $\beta = -0.18$, $p = .048$, while the relationship was non-significant in the Hongkongese group, $\beta = 0.09$, $p = .450$. Interestingly, the relationship was positive in the Taiwanese group, $\beta = 0.22$, $p = .025$.

6.4.5 Post-Traumatic Cognition Inventory (PTCI) and Post-Traumatic/Stress Outcomes

<u>Prediction of Post-Traumatic/Stress Outcomes by the PTCI2 Sub-Scales (Hypothesis 9)</u>

The hierarchical multiple regression analyses, when the PTCI2 sub-scales were added in Step 2 showed a significant improvement in the prediction of all symptoms at baseline; PTSD symptoms, $R^2_{adj} = 0.47$, $\Delta R^2 = 0.37$, $\Delta F(4,410) = 73.00$, $p < .001$, anxiety, $R^2_{adj} = 0.32$, $\Delta R^2 = 0.26$, $\Delta F(4,410) = 40.33$, $p < .001$, depression, $R^2_{adj} = 0.37$, $\Delta R^2 = 0.33$, $\Delta F(4,410) = 55.27$, $p < .001$, but not post-traumatic growth, $R^2_{adj} = 0.08$, $\Delta R^2 = 0.02$, $\Delta F(4,410) = 2.30$, $p = .058$. Negative thoughts about the self positively predicted PTSD symptoms, $\beta = 0.62$, $p < .001$, anxiety, $\beta = 0.64$, $p < .001$, and depression, $\beta = 0.74$, $p < .001$. Overgeneralised danger

positively predicted depression, $\beta = 0.13$, $p = .027$. Preoccupation with unfairness negatively predicted anxiety, $\beta = -0.22$, $p < .001$, and depression, $\beta = -0.24$, $p < .001$.

In Study 2B, after adding the PTCI2 sub-scales, the hierarchical multiple regression analyses showed a significant improvement in the prediction of depression (T2), $R^2_{adj} = 0.36$, $\Delta R^2 = 0.02$, $\Delta F(4,355) = 2.46$, $p = .045$, but not anxiety (T2), $R^2_{adj} = 0.57$, $\Delta R^2 = 0.01$, $\Delta F(4,355) = 1.84$, $p = .122$, or post-traumatic growth (T2), $R^2_{adj} = 0.33$, $\Delta R^2 = 0.01$, $\Delta F(4,355) = 1.57$, $p = .182$.

Moderation by Culture of the Relationship between the PTCI2 Sub-Scales and Post-Traumatic/Stress Outcomes (Hypothesis 10)

The addition of culture and its interaction terms with the PTCI2 sub-scales in Step 3 of hierarchical multiple regression showed a significant improvement in the prediction model of anxiety, $R^2_{adj} = 0.38$, $\Delta R^2 = 0.67$, $\Delta F(10,400) = 4.42$, $p < .001$, depression, $R^2_{adj} = 0.39$, $\Delta R^2 = 0.03$, $\Delta F(10,400) = 1.94$, $p = .039$, and post-traumatic growth, $R^2_{adj} = 0.11$, $\Delta R^2 = 0.04$, $\Delta F(10,400) = 2.02$, $p = .030$, but not PTSD symptoms, $R^2_{adj} = 0.47$, $\Delta R^2 = 0.02$, $\Delta F(10,400) = 1.36$, $p = .199$. The positive relationship between negative thoughts about the self and anxiety was weaker in the Taiwanese group (compared to the British group) while the negative relationship between preoccupation with unfairness and anxiety was stronger.

The analysis of the follow-up data (Study 2B) did not show significant effects of the PTCI2 sub-scales (measured at baseline) on outcomes at T2 beyond the covariates discussed above.

6.4.6 Self-Prioritisation Effect (SPE) and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by the Self-Prioritisation Effect (SPE) (Hypothesis 11)

The hierarchical multiple regression analyses did not show any significant improvement in the post-traumatic stress outcomes at baseline when the self-prioritisation

effect (SPE) was added in Step 2; PTSD symptoms, $R^2_{adj} = 0.09$, $\Delta R^2 = 0.00$, $\Delta F(2,412) = 0.68$, $p = .506$, anxiety, $R^2_{adj} = 0.06$, $\Delta R^2 = 0.00.$, $\Delta F(2,412) = 0.20$, $p = .819$, depression, $R^2_{adj} = 0.05$, $\Delta R^2 = 0.01$, $\Delta F(2,412) = 1.28$, $p = .279$, or post-traumatic growth, $R^2_{adj} = 0.07$, $\Delta R^2 = 0.00$, $\Delta F(2,412) = 0.11$, $p = .901$ (see Tables for detailed results).

The analysis of the follow-up data (Study 2B) did not show significant effects of the SPE (measured at baseline) on outcomes at follow up over and above age, gender, baseline and follow-up stressor severity and baseline symptoms severity on the respective measures.

Moderation by Culture of the Relationship between the Self-Prioritisation Effect (SPE) and Post-Traumatic/Stress Outcomes (Hypothesis 12)

In Study 2A, the addition of culture and its interaction terms with the SPE in Step 3 of hierarchical multiple regression showed a significant improvement in the prediction model of anxiety, $R^2_{adj} = 0.14$, $\Delta R^2 = 0.09$, $\Delta F(6,406) = 7.11$, $p < .001$, depression, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.07$, $\Delta F(6,406) = 5.29$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.04$, $\Delta F(6,406) = 3.14$, $p = .005$, but not of PTSD symptoms, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.02$, $\Delta F(6,406) = 1.57$, $p = .156$. However, the significant improvement was due to the cultural differences in these outcomes, and there was no interaction with SPE.

In Study 2B, the addition of culture and its interactions with the SPE in Step 3 showed significant improvements only in the prediction model of anxiety at follow-up (T2), $R^2_{adj} = 0.58$, $\Delta R^2 = 0.02$, $\Delta F(6,351) = 2.71$, $p = .014$. There was an interaction between the dummy variable of the Taiwanese culture and the difference in mean reaction time for the self over close others (SPE) in the prediction of anxiety, but the subsequent separate regression for each of the cultural groups found no significant prediction of the SPE for anxiety.

6.4.7 *D* Measure (Implicit Association Test) and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by the *D* Measure (Implicit Association Test) (Hypothesis 13)

The hierarchical multiple regression analyses showed a significant improvement only in depression at baseline when the *D* measure was added in Step 2, $R^2_{adj} = 0.06$, $\Delta R^2 = 0.02$, $\Delta F(1,413) = 6.62$, $p = .010$. As hypothesised, the *D* measure negatively predicted depression, *β = -0.12, p = .010.* However, the *D* measure did not improve the prediction of other post-traumatic/stress outcomes at baseline; PTSD symptoms, $R^2_{adj} = 0.09$, $\Delta R^2 = 0.00$, $\Delta F(1,413) = 0.69$, $p = .408$, anxiety, $R^2_{adj} = 0.07$, $\Delta R^2 = 0.01$, $\Delta F(1,413) = 2.64$, $p = .105$, or post-traumatic growth, $R^2_{adj} = 0.07$, $\Delta R^2 = 0.00$, $\Delta F(1,413) = 0.74$, $p = .390$.

The analysis of Study 2B did not show significant effects of the *D* measure (at baseline) on outcomes at follow-up over and above age, gender, baseline and follow-up stressor severity and baseline symptoms severity on the respective measures.

Moderation by Culture of the Relationship between the *D* Measure (Implicit Association Test) and Post-Traumatic/Stress Outcomes (Hypothesis 14)

The addition of culture and its interactions with the *D* measure in Step 3 showed significant improvements in the prediction model of anxiety, $R^2_{adj} = 0.15$, $\Delta R^2 = 0.08$, $\Delta F(4,409) = 9.97$ $p < .001$, depression, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.06$, $\Delta F(4,409) = 6.46$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.09$, $\Delta R^2 = 0.03$, $\Delta F(4,409) = 3.35$, $p = .010$, but not PTSD symptoms, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.02$, $\Delta F(4,409) = 1.91$, $p = .108$. Contrary to our hypothesis, there was no significant interaction between culture and the *D* measure on these outcomes, indicating that culture did not moderate the relationship between autonomy (autonomous self-concept) and post-traumatic/stress outcomes. This pattern of results also held up for the analysis of Study 2B data.

6.4.8 Self-Descriptions and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by the Duty-related and Right-related Self-Descriptions (Modified Twenty Statement Test) (Hypothesis 15)

Neither the cross-sectional study (Study 2A) nor the prospective study (Study 2B) showed significant effects of the self-descriptions on outcomes at follow-up over and above the covariates in Step 1.

Moderation by Culture of the Relationship between the Duty-related and Right-related Self-Descriptions (Modified Twenty Statement Test) and Post-Traumatic/Stress Outcomes (Hypothesis 16)

In Study 2A, after adding the self-descriptions in Step 3, the hierarchical multiple regression analyses showed significant improvements in the predictions of anxiety, $R^2_{adj} = 0.14$, $\Delta R^2 = 0.10$, $\Delta F(10,400) = 4.65$, $p < .001$, depression, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.08$, $\Delta F(10,400) = 3.47$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.11$, $\Delta R^2 = 0.05$, $\Delta F(10,400) = 2.44$, $p = .008$, but not of PTSD symptoms, $R^2_{adj} = 0.09$, $\Delta R^2 = 0.02$, $\Delta F(10,400) = 1.02$, $p = .425$. There was an interaction between culture and the right-related self-description (in the condition of cultural activation) on post-traumatic growth. The positive relationship between the right-related self-description (in the condition of cultural activation) and post-traumatic growth was weaker in the Hongkongese group (compared to the British group).

The analysis of the follow-up data (in Study 2B) did not find any significant improvement in the prediction of these post-traumatic/stress outcomes.

For a summary of all Chapter 6 results, please see Table 6.1.

Table 6.1 Results of the Associations of Self-Concepts and Appraisals with Post-Traumatic/Stress Outcomes in an Overview

Hypotheses	Results	Notes
Personal Styles		
(H1) Association of Personal Styles with Post-Traumatic/Stress Outcomes		
(H1.1) Autonomy will positively predict psychopathology	**Yes**, a significant prediction (Study 2A): PTSD symptoms, anxiety, & depression	
(H1.2) Sociotropy will positively predict psychopathology	**Yes**, a significant prediction (Study 2A): anxiety & depression	
(H1.3) Autonomy will negatively predict post-traumatic growth	**No** significant prediction	
(H1.4) Autonomy will positively predict post-traumatic growth	**No** significant prediction	
(H2) Moderation by Culture of the Relationship between Personal Styles and Post-Traumatic/Stress Outcomes		
(H2.1) The positive relationship between autonomy and psychopathology *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction: PTSD symptoms (Study 2A)	*BUT British < Hongkongese only*
(H2.2) The positive relationship between sociotropy and psychopathology *British < Hongkongese & Taiwanese*	**Yes**, a significant interaction: PTSD symptoms (Study 2A)	*BUT British > Taiwanese only*
(H2.3) The negative relationship between autonomy and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction	
(H2.4) The positive relationship between sociotropy and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
Self-Esteem		
(H3) Association of Self-Esteem with Post-Traumatic/Stress Outcomes		
(H3.1) Self-esteem will negatively predict psychopathology	**Yes**, a significant prediction: anxiety (Studies 2A & 2B), depression (Study 2A)	
(H3.2) Self-esteem will positively predict post-traumatic growth	**Yes**, a significant prediction (Study 2A)	
(H4) Moderation bv Culture of the Relationship between Self-Esteem and Post-Traumatic/Stress Outcomes		

(H4.1) The negative relationship between self-esteem and psychopathology *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): anxiety & depression	*BUT for anxiety, British < Hongkongese & Taiwanese; for depression, British > Hongkongese only*
(H4.2) The positive relationship between self-esteem and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction	
Thinking Styles		
(H5) Association of Thinking Styles with Post-Traumatic/Stress Outcomes		
(H5.1) Interactionism (a high score of 'causality' scale) will negatively predict psychopathology	**Yes**, a significant prediction (Study 2A): anxiety	*BUT a positive prediction of anxiety*
(H5.2) Naïve dialecticism (a high score of 'attitude towards contractions') will negatively predict psychopathology	**Yes**, a significant prediction (Study 2A): anxiety	
(H5.3) Cyclic view (a high score of 'perception of change') will negatively predict psychopathology	**No** significant prediction	
(H5.4) Field-dependence (a high score of 'locus of attention') will negatively predict psychopathology	**No** significant prediction	
(H5.5) Interactionism (a high score of 'causality' scale) will positively predict post-traumatic growth	**No** significant prediction	
(H5.6) Naïve dialecticism (a high score of 'attitude towards contractions') will positively predict post-traumatic growth	**No** significant prediction	
(H5.7) Cyclic view (a high score of 'perception of change') will positively predict post-traumatic growth	**No** significant prediction	
(H5.8) Field-dependence (a high score of 'locus of attention') will positively predict post-traumatic growth	**No** significant prediction	

(H6) Moderation by Culture of the Relationship between Thinking Styles and Post-Traumatic/Stress Outcomes		
(H6.1) The negative relationship between interactionism (a high score of 'causality' scale) and psychopathology *British < Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): for anxiety	*BUT British > Taiwanese only (Study 2A)*
(H6.2) The negative relationship between naïve dialecticism (a high score of 'attitude towards contractions') and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.3) The negative relationship between cyclic view (a high score of 'perception of change') and psychopathology *British < Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): for anxiety & depression	*BUT for both, British > Taiwanese only*
(H6.4) The negative relationship between field-dependence (a high score of 'locus of attention') and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.5) The positive relationship between interactionism (a high score of 'causality' scale) and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.6) The positive relationship between naïve dialecticism (a high score of 'attitude towards contractions') and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.7) The positive relationship between cyclic view (a high score of 'perception of change') and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.8) The positive relationship between field-dependence (a high score of 'locus of attention') and post-traumatic growth	**No** interaction	

British < Hongkongese & Taiwanese		
Public and Communal Self Appraisals Measures (PCSAM)		
(H7) Association of the PCSAM Sub-Scales with Post-Traumatic/Stress Outcomes		
(H7.1) The PCSAM sub-scales will positively predict psychopathology	**Yes**, a significant prediction: challenge to belief (for anxiety & depression - Study 2A); challenge to public roles (for anxiety - Studies 2A & 2B; depression – Study 2A)	
(H7.2) The PCSAM sub-scales will negatively predict post-traumatic growth	**Yes**, a significant prediction: challenge to communal self & challenge to public roles (Study 2A)	
(H8) Moderation by Culture of the Relationship between the PCSAM Sub-Scales and Post-Traumatic/Stress Outcomes		
(H8.1) The positive relationship between the PCSAM sub-scales and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H8.2) The negative relationship between the PCSAM sub-scales and post-traumatic growth *British < Hongkongese & Taiwanese*	**Yes**, a significant interaction: culture & challenge to communal aspects of self (Study 2B)	*BUT significant in British only; Interestingly, significant but positive in Taiwanese (Study 2B)*
Revised Post-Traumatic Cognitions Inventory (PTCI2)		
(H9) Association of the PTCI2 Sub-Scales with Post-Traumatic Stress Outcomes		
(H9.1) The PTCI2 sub-scales will positively predict psychopathology	**Yes**, a significant prediction (Study 2A): negative thoughts about self (for anxiety & depression), overgeneralised danger (for depression), preoccupation with unfairness (for anxiety & depression)	*BUT a negative prediction: preoccupation with unfairness (for anxiety & depression)*
(H9.2) The PTCI2 sub-scales will negatively predict post-traumatic growth	**No** significant prediction	
(H10) Moderation by Culture of the Relationship between the PTCI2 Sub-Scales and Post-Traumatic/Stress Outcomes		
(H10.1) The positive relationship between the PTCI2 sub-scales and psychopathology *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): culture & negative thoughts about the self (for anxiety); culture & preoccupation with unfairness (for anxiety)	*BUT interaction between* culture & negative thoughts about the self (for anxiety) *British < Taiwanese;* culture & preoccupation with unfairness (for anxiety) *British > Taiwanese only*

(H10.2) The negative relationship between the PTCI2 sub-scales and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction
Self-Prioritisation Effect	
(H11) Association of Self-Prioritisation Effect with Post-Traumatic/Stress Outcomes	
(H11.1) Self-prioritisation effect will positively predict psychopathology	**No** significant prediction
(H11.2) Self-prioritisation effect will positively predict post-traumatic growth	**No** significant prediction
(H12) Moderation by Culture of the Relationship between Self-Prioritisation Effect and Post-Traumatic/Stress Outcomes	
(H12.1) The positive relationship between self-prioritisation effect and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction
(H12.2) The positive relationship between self-prioritisation effect and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction
Implicit Self-Concepts	
(H13) Association of Implicit Self-Concepts with Post-Traumatic/Stress Outcomes	
(H13.1) Implicit autonomy will negatively predict psychopathology	**Yes**, a significant prediction: depression (Study 2A)
(H13.2) Implicit autonomy will positively predict post-traumatic growth	**No** significant prediction
(H14) Moderation by Culture of the Relationship between Implicit Self-Concepts and Post-Traumatic/Stress Outcomes	
(H14.1) The negative relationship between implicit autonomy and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction
(H14.2) The positive relationship between implicit autonomy and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction
Self-Descriptions	
(H15) Association of Self-Descriptions with Post-Traumatic/Stress Outcomes	

(H15.1) Duty-related self-descriptions will negatively predict psychopathology	**No** significant prediction	
(H15.2) Right-related self-descriptions will positively predict psychopathology	**No** significant prediction	
(H15.3) Duty-related self-descriptions will positively predict post-traumatic growth	**No** significant prediction	
(H15.4) Right-related self-descriptions will positively predict post-traumatic growth	**Yes**, a significant prediction (Study 2A)	*BUT only in the condition of cultural activation (Study 2A)*
(H16) Moderation by Culture of the Relationship between Self-Descriptions and Post-Traumatic/Stress Outcomes		
(H16.1) The negative relationship between duty-related self-descriptions and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H16.2) The positive relationship between right-related self-descriptions and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H16.3) The positive relationship between duty-related self-descriptions and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	*BUT a positive prediction*
(H16.4) The positive relationship between right-related self-descriptions and post-traumatic growth *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): in the condition of cultural activation	*BUT British < Hongkongese*

6.5 Discussion

6.5.1. Personal Styles and Post-Traumatic/Stress Outcomes

The present research found that both 'autonomy' and 'sociotropy' positively predicted all psychopathological symptoms. Consistent with previous literature (e.g., Foa & Rothbaum, 1998), these two personal styles are rigid beliefs that contribute to negative automatic thoughts and post-traumatic difficulties. Individuals high in sociotropy tend to link their self-esteem to the approval and acceptance of others (e.g., Reijntjes, 2011). This tendency renders them more susceptible to mood disturbances when faced with social rejection or interpersonal conflicts. In contrast, individuals high in autonomy may have rigid beliefs of self-reliance, fear of dependency on others, and reluctance to seek social support (Blatt & Zuroff, 1992). All of these characteristics can contribute to emotional distress and may be particularly relevant in the context of anxiety disorders.

6.5.2. Self-Esteem and Post-Traumatic/Stress Outcomes

The findings indicated that self-esteem is a predictor of symptoms and post-traumatic growth. The negative relationship between self-esteem and psychopathology was supported by previous research (e.g., Orth, Robins, & Robers, 2015). High self-esteem may enhance individuals' resilience and coping strategies, thus serving as a protective factor against the development of symptoms (Leary, 1995; Taylor & Brown, 1988). The present research also found a positive relationship between self-esteem and post-traumatic growth. Individuals with higher self-esteem were more likely to report the experience of positive changes after traumatic/stressful events. This finding was consistent with Tedeschi and Calhoun's (1995) theoretical framework that self-esteem contributes to the cognitive processing of traumatic experiences. High self-esteem may bolster the sense of competence and self-worth, which enables them to perceive stressful events as a challenge rather than a threat (Joseph & Linley,

2008). This in turn, may lead to greater engagement in the process of post-traumatic growth, such as discovering previously untapped strengths.

The present study revealed cultural variations in the strength of the associations between self-esteem and two symptoms (anxiety and depression). The negative relationship between self-esteem and anxiety was more pronounced in the Taiwanese and Hongkongese groups than in the British group. This finding echoed the past research on cultural differences in the manifestation and perception of anxiety (e.g., Hofmann, Asnaani, & Hinton, 2010). People from collectivistic cultures like Taiwan and Hong Kong tend to place a high value on interpersonal relationships. Therefore, low self-esteem may lead to heightened anxiety in these cultures due to concerns about social acceptance and conformity (Markus & Kitayama, 1991). In contrast, the British culture, characterised by individualism, may be more forgiving of variations in self-esteem, leading to a weaker link between self-esteem and anxiety. On the other hand, the stronger relationship between self-esteem and depression in the British group than in the Hongkongese group may originate from cultural expectations of the self. Typically, individualistic cultures emphasise the importance of personal achievement and self-esteem (Triandis, 1995). As such, individuals with lower esteem in the British culture may be more vulnerable to depression due to feelings of inadequacy and failure.

6.5.3 Thinking Styles and Post-Traumatic/Stress Outcomes

The present study examined the relationship between analytical versus holistic thinking styles and post-traumatic/stress outcomes through four sub-scales (causality, attitude towards contradiction, perception of change, and locus of attention). The positive prediction of causality on anxiety suggested that individuals who adopted a more holistic approach to understanding cause-and-effect relationships were more likely to experience anxiety symptoms. This unexpected result may challenge the previous literature that analytic thinking (rather than holistic thinking) was associated with psychopathology (e.g., Watkins &

Teasdale, 2001). In regard to causality, holistic thinking is characterised by a tendency to consider multiple factors and their interactions when attributing causes to events or outcomes. While holistic thinking may offer a broader perspective on causality, it can lead to increased uncertainty and ambiguity (Epstein, 1994). Holistic thinking involves an inclination to view events and phenomena as interconnected and context-dependent, which in turn, may heighten awareness of potential risks and contribute to heightened anxiety (Grupe & Nitschke, 2013). The stronger negative effect of causality on anxiety in the Taiwanese group (compared to the British group) may be attributed to variations in cognitive styles between the two cultures. Different cultural backgrounds can influence how people perceive and interpret causality and its implications. In Taiwanese culture, which emphasises interconnectedness (e.g., Karcher & Lee, 2002), individuals may be more inclined to perceive phenomena as interactional and context-dependent (e.g., Bond, 1991; Bond & Hwang, 1986). In this case, the effect of this perspective on anxiety may be amplified.

The negative prediction of a holistic attitude towards contradictions for PTSD symptoms and anxiety highlighted the role of cognitive adaptability and resilience in the context of trauma (e.g., Foa & Kozak, 1986). A high score of 'attitude towards contradictions' reflects a willingness to accept ambiguity and conflicting thoughts, which may happen after traumatic events. The ability to embrace and integrate these contradictions may lead to reduced emotional distress. Also, PTSD symptoms and anxiety are characterised by cognitive rigidity, including intrusive and repetitive thoughts related to traumatic/stressful events (Brewin, 2001). This cognitive rigidity may be migrated by a holistic attitude towards contradictions by enabling individuals to engage in diverse viewpoints and reconcile contradictory information. This flexibility could prevent them from being trapped in automatic thought patterns that contribute to the maintenance of PTSD and anxiety.

The results revealed the negative prediction of a holistic perception of change for PTSD symptoms. This intriguing finding suggested that individuals who perceive changes as cyclic or recurring were less likely to experience these psychological difficulties. They may view the trauma as a time-limited event and integrate the experience into their larger life narrative, leading to a more positive post-traumatic adjustment (Joseph & Linley, 2005). On the other hand, the weakening effect of the holistic perception of change on anxiety and depression was more pronounced in the Taiwanese group than in the British group. According to Triandis (1995), collectivistic cultures tend to prioritise social harmony and interpersonal relationships. In this cultural context, the Taiwanese group may be more sensitive to changes in their environment to fit in with others than the British group. This expectation of constant changes may lead to reduced anxiety and depression. This is due to their perception of trauma/stress as a part of the social dynamic rather than as a disruption (e.g., Markus & Kitayama, 1991).

As predicted, a holistic locus of attention positively predicted post-traumatic growth. Post-traumatic growth is associated with the capacity to make sense of traumatic experiences, seek meaning in adversity, and re-evaluate life priorities (Calhoun & Tedeschi, 2006). Individuals with a holistic locus of attention may be more adept at recognising the bigger picture and overall patterns for personal growth after traumatic/stressful events (Zoellner & Maercker, 2006).

6.5.4 Public and Communal Self-Appraisals Measure (PCSAM) and Post-Traumatic/Stress Outcomes

The present findings supported the strong associations between the PCSAM scale and outcomes after traumatic/stressful events. The PCSAM represents the main challenges in interpersonal areas for people after trauma/stressful experiences. For instance, ‘challenge to belief and belonging’ (dysfunctional appraisals of one’s belief system) and ‘challenge to

public roles and identity' (disintegration in one's cultural/social roles) positively predicted all symptoms. This finding was consistent with Harter's (1999) that one's beliefs and self-identity play a significant role in psychological well-being. These challenges can be deeply distressing, particularly when one's self-identity is threatened (Janoff-Bulman, 2010). Also, traumatic/stressful events trigger emotional distress by challenging one's 'core belief, which is the basis of one's views about the self, the world and the future (Beck, 1967). 'Challenge to communal aspects of self' (disruption in relationships to others) positively predicted PTSD but not anxiety or depression. Traumatic experiences may challenge have profound effects on individuals' interpersonal relationships (e.g., McFarlane & Bookless, 2001).Unlike anxiety and depression, which can have varied symptomatology, PTSD is characterised by a unique set of symptoms related to traumatic experiences (American Psychiatric Association, 2013), such as re-experiencing, avoidance, and heightened arousal. These core symptoms may be exacerbated by the feelings of mistrust, isolation and hypervigilance. Finally, the positive prediction of post-traumatic growth by 'challenge to communal aspects of self' and 'challenge to public roles and identity', aligned with the idea that disruptions by traumatic/stressful events can serve as catalysts for personal growth (Tedeschi & Calhoun, 2004). In this transformative process, relating to others is one of the important themes covered by these two sub-scales of the PCSAM.

The prospective study found that challenge to public roles and identity (T1) positively predicted anxiety (T2). This temporal relationship suggested that disruption in public roles and cultural/social identity at baseline may serve as precursors to the development of anxiety symptoms at a later point in time. The disintegration of self-identity can lead to a sense of uncertainty, loss of purposes, and existential anxiety (e.g., Erikson, 1968; Giddens, 1991).

6.5.5 Revised Post-Traumatic Cognition Inventory (PTCI2) and Post-Traumatic/Stress Outcomes

Most of the PTCI2 sub-scales were associated with psychopathology. The positive prediction of 'negative thoughts about the self' for all post-traumatic/stress symptoms is in line with the theoretical assumptions and findings (e.g., Alloy, et al., 2000; Beck, 1967; Ehlers & Clark, 2000). Self-critical and pessimistic thoughts can form a self-perpetuating cycle for the severity and persistence of the symptoms (Beck, 1976). Also, the sub-scale, 'overgeneralised danger', positively predicted depression. According to Beck's (1976) cognitive theory of depression, negative thought patterns, including overgeneralisation, play a central role in the onset and maintenance of depression. Overgeralisation involves making a sweeping negative inferences of specific traumatic/stressful events. The cognition of overgeneralised danger are particularly relevant in the context of trauma (e.g., Ehlers & Clark, 2000), as individuals may make global implications of perceived danger and threat from the traumatic event to other situations. This cognitive pattern can exacerbate the emotional distress and increase the risk of developing depression (Ehring, Frank, & Ehlers, 2008). Interestingly, another sub-scale, 'preoccupation with unfairness', negatively predicted the symptoms. One possible explanation was that the impact of preoccupation of unfairness on anxiety and depression may depend on the specific context and the nature of the perceived injustices (Janoff-Bulman, 1992). For example, individuals may use this mindset as a cognitive tool to proactively address the stressors and thus experience lower level of symptoms. In contrast, those who ruminate excessively on the feelings of unfairness without any helpful coping strategies may still be at risk for emotional disturbances.

The results also showed that culture significantly moderated the positive relationship between negative views about the self and anxiety, as well as the negative relationship between preoccupation with unfairness and anxiety. The weakening effect of negative views about the self on anxiety in the Taiwanese group (than in the British group) was explained by the priority of values varied in cultures. In collectivist culture like Taiwan, individuals often

place greater emphasis on social cohesion (Triandis, 1995). This cultural orientation may lead individuals to be less self-focused and self-critical (e.g., Hofmann, Asnaani, & Hinton, 2010), thus potentially attenuating the effect of negative self-cognitions on anxiety. This pattern may also applied to the relationship between preoccupation with unfairness and anxiety. Compared to the British culture, the Taiwanese culture is more vertical collectivistic (e.g., Chiou, 2001) and may be more accepting of certain forms of injustice or unfairness to maintain group cohesion.

6.5.6 Self-Prioritisation Effect (Perceptual Matching Task) and Post-Traumatic/Stress Outcomes

Contrary to our hypotheses, the self-prioritisation effect (SPE) did not predict either psychopathology or post-traumatic growth. This lack of association was inconsistent with the previous studies suggesting that heightened self-prioritisation in cognitive tasks is indicative of vulnerability to psychological symptoms (e.g., Mobini, Reynolds, & Mackintosh, 2013). It is possible that the difference in *d'* for the self-referential and friend-referential words did not capture the cognitive biases that are most relevant to the development of trauma-related psychopathology. While some research suggested the association between self-focused attention and symptoms, the underlying mechanism in these relationships may be more complex and multifaced than the SPE alone (Hirsch, C., & Mathews, 1997). Similarly, the absence of the relationship between the SPE and posttraumatic growth may be explained by the characteristics of participants. The samples used in this research may not have represented the full spectrum of post-traumatic growth experiences, thus limiting the validity of the predictive role of the SPE.

6.5.7 *D* Measure (Implicit Association Test) and Post-Traumatic/Stress Outcomes

The significant finding regarding the *D* measure suggested that autonomy or autonomous self-concept can buffer against depression. Individuals with a greater sense of

autonomy were less likely to experience depressive symptoms. This finding was in accordance with previous research that highlighted the importance of autonomy in one's mental health (Sheldon, Ryan, Deci, & Kasser, 2004). According to self-determination theory (Deci & Ryan, 2012), autonomy is one of the fundamental psychological needs that promote psychological well-being. When the need for autonomy is fulfilled, individuals can make decisions based on their values and preferences. This sense of control and ownership would reduce the feelings of helplessness and hopelessness, which are common in depression (Deci & Ryan, 2000).

6.5.8 Self-Descriptions (Modified Twenty Statement Test) and Post-Traumatic/Stress Outcomes

Contrary to our hypothesis, duty-related or right-related responses did not predict post-traumatic/stress outcomes. The Twenty Statement Test (TST) is a relatively brief objective measure that assesses aspects of self-concept, including duties and rights. It provides a limited snapshot of how individuals perceive themselves within these specific dimensions. It is possible that the TST may not fully capture the complexity of one's self-concept, which encompasses a broad range of beliefs, values, and self-identities (e.g., Rosenberg, 1979). Both psychopathology and post-traumatic growth are multifaceted phenomena influenced by various cognitive, emotional, and contextual factors (e.g., Beck, 1967; Tedeschi & Calhoun, 2004). As such, duty-related or right-related responses may not be directly related to these outcomes.

Chapter 7

Association of Cognitive Processing Styles and Autobiographical Memory with Post-Traumatic/Stress Outcomes

7.1 Overview

Both cognitive processing styles and autobiographical memory have distinct associations with post-traumatic/stress outcomes. In this thesis, cognitive processing styles refer to how individuals process during the traumatic event while autobiographical memory refers to how they encode, store, and retrieve the traumatic event from autobiographical memory. Cognitive processing styles during the trauma (such as state dissociation, data-driven processing style, and lack of self-referent processing style) and a disturbance of autobiographical memory (characterised by poor elaboration and integration into the autobiographical knowledge base) are thought to result in reexperiencing symptoms (i.e., unintentional memories and/or emotional reactions from particular moments of the trauma (e.g., Ehlers & Clark, 2000). These two factors may also hinder individuals from making sense of the traumatic experience for post-traumatic growth.

7.1.1 Cognitive Processing Styles and Post-Traumatic/Stress Outcomes

Traumatic events are unexpected, uncontrollable and extremely threatening. The experience can overwhelm the individual's processing capacity. Some cognitive processing styles during traumatic/stressful events may prevent individuals from effectively encoding the experience and thus increase the likelihood of developing psychopathology. State dissociation refers to the experience of derealisation, depersonalisation, and emotional numbing during trauma may cause the fragmentation of trauma memory (e.g., Spiegel, 1991). Data-driven processing style refers to preferentially processing the sensory impressions related to the trauma (rather than the meaning), leading to easy sensory triggering of

unwanted memories and insufficient retrieval of contextual information (e.g., Roediger, 1990). Lack of self-referent processing styles refers to the absence of self-referential perspective when encoding the traumatic memory, which in turn, is thought to impede the elaboration of the trauma memory and its incorporation with other autobiographical memories (e.g., Ehlers & Clark, 2000; Foa & Hearst-Ikeda, 1996). Prospective studies have shown that these cognitive processing styles, which may contribute to a persistent sense of current threat, predict chronic PTSD after trauma (Halligan et al., 2003; Beierl, Böllinghaus, Clark, Glucksman, & Ehlers, 2020). Also, they interfere with the formation of organised memory of the traumatic/stressful memory (Foa & Hearst-Ikeda, 1996), which is the basis of post-traumatic growth.

7.1.2 Centrality of Events and Post-Traumatic/Stress Outcomes

The centrality of events, or event centrality, refers to how central the traumatic/stressful event is to one's personal identity and everyday experience (Berntsen & Rubin, 2006). If traumatic/stressful memories become a reference point for one's life narrative, the outcomes tend to be harmful to one's psychological well-being (Berntsen, Willert, & Rubin, 2003). The centrality of a traumatic event has been found to be positively associated with the severity of symptoms (e.g., Boals & Ruggero, 2016; Gehrt, Berntsen, Hoyle, & Rubin, 2018). But event centrality can be a double-edged sword as it was positively associated with post-traumatic growth (Boals & Schuettler, 2011).

7.1.3 Memory Qualities and Post-Traumatic/Stress Outcomes

The qualities of traumatic memories, including disorganisation, disjointedness, and flashback quality, play significant roles in trauma-related psychopathology. Disorganisation refers to a lack of coherence and structure in the way traumatic events are encoded and remembered (Amir, Stafford, Freshman, & Foa, 1998). These disorganised memories without chronological order or other contextual information may lead to difficulties in integrating the

trauma into one's life narrative (Halligan et al., 2003). Disjointed memories, as a core symptom of PTSD, are characterised by insufficient binding of different moments of the traumatic events (Ehlers et al., 2004), and contribute to the lack of updating threatening moments with information that puts the threat into the context (e.g., I did not die). Individuals with disjointed memories may experience recurrent intrusive memories and nightmares (Brewin, Dalgleish, & Joseph, 1996). Flashback quality refers to the vividness and sensory intensity of traumatic memories so individuals may relive the traumatic event as if it were happening again (Brewin, 2015). The emotional impact of this flashback quality can contribute to heightened arousal and avoidance symptoms, which are hallmarks of PTSD and trauma-related psychopathology (Ehlers & Clark, 2000). These kinds of poor memory qualities may hinder the process of post-traumatic growth as it is difficult to reconcile the fragmented memory for personal development.

7.1.4 Memory Functions and Post-Traumatic/Stress Outcomes

The functions of autobiographical memory are closely related to trauma-related psychopathology and growth. The use of autobiographical memory for self-continuity can create a sense of continuous and stable self-identity over time, which is thought to be crucial for mental health. Disruption in self-continuity is associated with dissociative symptoms, which can be observed in individuals with PTSD (Armour, Karstoft, & Richardson, 2014). Autobiograhical memories also contribute to social bonding, forming and maintaining meaningful relationships, which are protective factors against psychopathology. Individuals who experience social isolation or perceive a lack of support are more prone to psychological symptoms following trauma (Ozer, Best, Lipsey, & Weiss, 2003). The memory function that directs behaviour involves the use of past experience to guide current goals and actions. In this case, traumatic experience may impact one's behaviour, often leading to avoidance and hypervigilance (Foa & Kozak, 1986). On the other hand, these three memory functions are

hypothesised to positively predict post-traumatic growth. This is because individuals with a strong sense of self-continuity, social support, and clear guidance may easily seek opportunities for personal development and meaningful life changes.

7.1.5 Autobiographical Memory Specificity and Post-Traumatic/Stress Outcomes

Autobiographical memory specificity (AMS), defined as the ability to recall specific memories of past events, has been studied in relation to trauma. Reduced autobiographical memory specificity (rAMS) has been strongly associated with PTSD symptoms (e.g., Williams et al., 2017), anxiety (e.g., Hallford & Mellor, 2017), and depression (e.g., Sumner, Griffith, & Mineka, 2010). Furthermore, Kleim and Ehlers (2008) found that rAMS predicted the development of psychopathological symptoms in trauma survivors. On the other hand, individuals with a high level of AMS tend to experience post-traumatic growth. The ability to retrieve specific details of the traumatic event may facilitate cognitive and emotional processing for positive psychological changes (Taku, Cann, Calhoun, & Tedeschi, 2008).

7.1.6 Self-Defining Memory Features and Post-Traumatic/Stress Outcomes

Self-defining memories are a subset of autobiographical memories that are related to key life events or moments and shape one's self-concept and identity (Singer & Salovey, 1993). The relationship between self-defining memories and post-traumatic/stress outcomes is complex, depending on the features of these memories, including specificity, content, valence, meaning, and detailedness (e.g., Blagov & Singer, 2004). For instance, self-defining memories that are predominantly negative or traumatic can contribute to the development of psychopathological conditions. Individuals with mental disorders, such as depression, tend to retrieve negative self-defining memories rather than positive ones (e.g., Moffitt, Singer, Nelligan, Carlson, & Vyse, 1994). Those who repeatedly recall and ruminate on negative self-defining memories may reinforce negative self-schemas and dysfunctional cognitive patterns that are commonly observed in trauma-related psychopathology (Valentino,

Cicchetti, Rogosch, & Toth, 2008). For post-traumatic growth, self-defining memories are integral components of one's life narrative (Singer & Blagov, 2004). These memories that are specific, integrative, and detailed may enable individuals to integrate the traumatic/stressful event into their life story and reshape their self-identity. In this research, we explored the association of different dimensions of self-defining memories with post-traumatic/stressful outcomes.

7.2 Research Question and Hypotheses

This chapter was aimed to examine the association of cognitive processing styles and autobiographical memory with psychopathology and post-traumatic growth. This association was examined in both a cross-sectional design (Study 2A) and a longitudinal design (Study 2B). Specifically, we first checked whether the cognitive processing styles and autobiographical memory discussed above would predict post-traumatic/stress outcomes across cultures in cross-sectional and/or prospective studies. If the self-concept and appraisals showed cultural differences (in Chapters 4 and 5), we then examined the potentially moderating role of culture in the relationship between the cognitive processing styles and autobiographical memory at baseline (in Studies 2A and 2B) and post-traumatic/stress outcomes at baseline (in Study 2A) or at follow-up (in Study 2B).

<u>Cognitive Processing Styles</u>

- Cognitive processing styles will be associated with post-traumatic/stress outcomes (***Hypothesis 1***).
    - State dissociation will positively predict psychopathology (***Hypothesis 1.1***).
    - Data-driven processing style will positively predict psychopathology (***Hypothesis 1.2***).
    - Lack of self-referent processing style will positively predict post-traumatic growth (***Hypothesis 1.3***).

- State dissociation will negatively predict post-traumatic growth (***Hypothesis 1.4***).
- Data-driven processing style will negatively predict post-traumatic growth (***Hypothesis 1.5***).
- Lack of self-referent processing style will negatively predict post-traumatic growth (***Hypothesis 1.6***).

- Culture will moderate the relationship between maladaptive cognitive processing styles and post-traumatic/stress outcomes (***Hypothesis 2***).
  - For the British group, the (hypothesised) positive relationship between state dissociation and psychopathology will be stronger than for the two other groups (***Hypothesis 2.1***).
  - For the British group, the (hypothesised) positive relationship between data-driven processing style and psychopathology will be stronger than for the two other groups (***Hypothesis 2.2***).
  - For the British group, the (hypothesised) positive relationship between lack of self-referent processing style and psychopathology will be stronger than for the two other groups (***Hypothesis 2.3***).
  - For the British group, the (hypothesised) negative relationship between state dissociation and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 2.4***).
  - For the British group, the (hypothesised) negative relationship between data-driven processing style and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 2.5***).
  - For the British group, the (hypothesised) negative relationship between lack of self-referent processing style and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 2.6***).

Event Centrality

- Event centrality will be associated with post-traumatic/stress outcomes (***Hypothesis 3***).
    - The centrality of the most positive event will negatively predict psychopathology (***Hypothesis 3.1***).
    - The centrality of the most positive event will positively predict post-traumatic growth (***Hypothesis 3.2***).
    - The centrality of the most distressing event will positively predict psychopathology (***Hypothesis 3.3***).
    - The centrality of the most distressing event will positively predict post-traumatic growth (***Hypothesis 3.4***).
- Culture will moderate the relationship between event centrality and post-traumatic/stress outcomes (***Hypothesis 4***).
    - For the British group, the (hypothesised) negative relationship between the centrality of the most positive event and psychopathology will be stronger than for the two other groups (***Hypothesis 4.1***).
    - For the British group, the (hypothesised) positive relationship between the centrality of the most positive event and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 4.2***).
    - For the British group, the (hypothesised) positive relationship between the centrality of the most distressing event and psychopathology will be weaker than for the two other groups (***Hypothesis 4.3***).
    - For the British group, the (hypothesised) positive relationship between the centrality of the most distressing event and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 4.4***).

Memory Qualities

- Memory qualities will be associated with post-traumatic/stress outcomes (***Hypothesis 5***).
    - Disorganisation of the most positive memory will positively predict psychopathology (***Hypothesis 5.1***).
    - Disjointedness of the most positive memory will positively predict psychopathology (***Hypothesis 5.2***).
    - Flashback quality of the most positive memory will positively predict psychopathology (***Hypothesis 5.3***).
    - Disorganisation of the most positive memory will negatively predict post-traumatic growth (***Hypothesis 5.4***).
    - Disjointedness of the most positive memory will negatively predict post-traumatic growth (***Hypothesis 5.5***).
    - Flashback quality of the most positive memory will negatively predict post-traumatic growth (***Hypothesis 5.6***).
    - Disorganisation of the most stressful memory will positively predict psychopathology (***Hypothesis 5.7***).
    - Disjointedness of the most stressful memory will positively predict psychopathology (***Hypothesis 5.8***).
    - Flashback quality of the most stressful memory will positively predict psychopathology (***Hypothesis 5.9***).
    - Disorganisation of the most stressful memory will negatively predict post-traumatic growth (***Hypothesis 5.10***).
    - Disjointedness of the most stressful memory will negatively predict post-traumatic growth (***Hypothesis 5.11***).
    - Flashback of the most stressful memory quality will negatively predict post-traumatic growth (***Hypothesis 5.12***).

- Culture will moderate the relationship between poor memory qualities and post-traumatic/stress outcomes (***Hypothesis 6***).

  (For the most positive memory)

  - For the British group, the (hypothesised) positive relationship between disorganisation and psychopathology will be weaker than for the two other groups (***Hypothesis 6.1***).
  - For the British group, the (hypothesised) positive relationship between disjointedness and psychopathology will be weaker than for the two other groups (***Hypothesis 6.2***)
  - For the British group, the (hypothesised) positive relationship between flashback quality and psychopathology will be weaker than for the two other groups (***Hypothesis 6.3***).
  - For the British group, the (hypothesised) negative relationship between disorganisation and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 6.4***).
  - For the British group, the (hypothesised) negative relationship between disjointedness and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 6.5***).
  - For the British group, the (hypothesised) negative relationship between flashback quality and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 6.6***).

  (For the most stressful memory)

  - For the British group, the (hypothesised) positive relationship between disorganisation and psychopathology will be weaker than for the two other groups (***Hypothesis 6.7***).

- For the British group, the (hypothesised) positive relationship between disjointedness and psychopathology will be weaker than for the two other groups (***Hypothesis 6.8***)
- For the British group, the (hypothesised) positive relationship between flashback quality and psychopathology will be weaker than for the two other groups (***Hypothesis 6.9***).
- For the British group, the (hypothesised) negative relationship between disorganisation and psychopathology will be weaker than for the two other groups (***Hypothesis 6.10***).
- For the British group, the (hypothesised) negative relationship between disjointedness and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 6.11***).
- For the British group, the (hypothesised) negative relationship between flashback quality and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 6.12***).

<u>Memory Functions</u>

- Memory functions will be associated with post-traumatic/stress outcomes (***Hypothesis 7***).

(For the most positive memory)

- Self-continuity will negatively predict psychopathology (***Hypothesis 7.1***).
- Social bonding will negatively predict psychopathology (***Hypothesis 7.2***).
- Directing behaviour will negatively predict psychopathology (***Hypothesis 7.3***).
- Self-continuity will positively predict post-traumatic growth (***Hypothesis 7.4***).
- Social bonding will positively predict post-traumatic growth (***Hypothesis 7.5***).
- Directing behaviour will positively predict post-traumatic growth (***Hypothesis 7.6***).

(For the most stressful memory)

- Self-continuity will negatively predict psychopathology (***Hypothesis 7.7***).
- Social bonding will negatively predict psychopathology (***Hypothesis 7.8***).
- Directing behaviour will negatively predict psychopathology (***Hypothesis 7.9***).
- Self-continuity will positively predict post-traumatic growth (***Hypothesis 7.10***).
- Social bonding will positively predict post-traumatic growth (***Hypothesis 7.11***).
- Directing behaviour will positively predict post-traumatic growth (***Hypothesis 7.12***).

- Culture will moderate the relationship between memory functions and post-traumatic/stress outcomes (***Hypothesis 8***).

  (For the most positive memory)

  - For the British group, the (hypothesised) negative relationship between self-continuity and psychopathology will be weaker than for the two other groups (***Hypothesis 8.1***).
  - For the British group, the (hypothesised) negative relationship between social bonding and psychopathology will be weaker than for the two other groups (***Hypothesis 8.2***).
  - For the British group, the (hypothesised) negative relationship between directing behaviour and psychopathology will be stronger than for the two other groups (***Hypothesis 8.3***).
  - For the British group, the (hypothesised) positive relationship between self-continuity and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 8.4***).
  - For the British group, the (hypothesised) positive relationship between social bonding and post-traumatic growth will be weaker than for the two other groups

(***Hypothesis 8.5***).

- For the British group, the (hypothesised) positive relationship between directing behaviour and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 8.6***).

(For the most stressful memory)

- For the British group, the (hypothesised) negative relationship between self-continuity and psychopathology will be weaker than for the two other groups (***Hypothesis 8.7***).
- For the British group, the (hypothesised) negative relationship between social bonding and psychopathology will be weaker than for the two other groups (***Hypothesis 8.8***).
- For the British group, the (hypothesised) negative relationship between directing behaviour and psychopathology will be stronger than for the two other groups (***Hypothesis 8.9***).
- For the British group, the (hypothesised) positive relationship between self-continuity and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 8.10***).
- For the British group, the (hypothesised) positive relationship between social bonding and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 8.11***).
- For the British group, the (hypothesised) positive relationship between directing behaviour and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 8.12***)

<u>Autobiographical Memory Specificity (AMS)</u>

- AMS will be associated with post-traumatic/stress outcomes (***Hypothesis 9***).

- AMS will negatively predict psychopathology (***Hypothesis 9.1***).
- AMS will positively predict post-traumatic growth (***Hypothesis 9.2***).

- Culture will moderate the relationship between AMS and post-traumatic/stress outcomes (***Hypothesis 10***).
  - For the British group, the (hypothesised) negative relationship between AMS and psychopathology will be stronger than for the two other groups (***Hypothesis 10.1***).
  - For the British group, the (hypothesised) positive relationship between AMS and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 10.2***).

<u>Self-Defining Memory Features</u>

- The features of self-defining memories will be associated with post-traumatic/stress outcomes (***Hypothesis 11***).

  (For the positive events)
  - Specific self-defining memories will negatively predict psychopathology (***Hypothesis 11.1***).
  - Integrative self-defining memories will negatively predict psychopathology (***Hypothesis 11.2***).
  - Self-defining memory related to 'achievement/mastery' will positively predict psychopathology (***Hypothesis 11.3***).
  - Self-defining memory related to 'relationship' will positively predict psychopathology (***Hypothesis 11.4***).
  - Detailed self-defining memories will negatively predict psychopathology (***Hypothesis 11.5***).
  - Specific self-defining memories will positively predict post-traumatic growth (***Hypothesis 11.6***).

- Integrative self-defining memories will positively predict post-traumatic growth (***Hypothesis 11.7***).
- Self-defining memory related to 'achievement/mastery' will negatively predict post-traumatic growth (***Hypothesis 11.8***).
- Self-defining memory related to 'relationship' will positively predict post-traumatic growth (***Hypothesis 11.9***).
- Detailed self-defining memories will positively predict post-traumatic growth (***Hypothesis 11.10***).

(For the negative events)

- Specific self-defining memories will negatively predict psychopathology (***Hypothesis 11.11***).
- Integrative self-defining memories will negatively predict psychopathology (***Hypothesis 11.12***).
- Self-defining memory related to 'achievement/mastery' will positively predict psychopathology (***Hypothesis 11.13***).
- Self-defining memory related to 'relationship' will positively predict psychopathology (***Hypothesis 11.14***).
- Detailed self-defining memories will negatively predict psychopathology (***Hypothesis 11.15***).
- Specific self-defining memories will positively predict post-traumatic growth (***Hypothesis 11.16***).
- Integrative self-defining memories will positively predict post-traumatic growth (***Hypothesis 11.17***).
- Self-defining memory related to 'achievement/mastery' will negatively predict post-traumatic growth (***Hypothesis 11.18***).

- Self-defining memory related to ‘relationship’ will positively predict post-traumatic growth (***Hypothesis 11.19***).
- Detailed self-defining memories will positively predict post-traumatic growth (***Hypothesis 11.20***).

- Culture will moderate the relationship between the features of self-defining memories and post-traumatic/stress outcomes (***Hypothesis 12***).

  (For the positive events)
  - For the British group, the (hypothesised) negative relationship between specific self-defining memories and psychopathology will be stronger than for the two other groups (***Hypothesis 12.1***).
  - For the British group, the (hypothesised) negative relationship between integrative self-defining memories and psychopathology will be weaker than for the two other groups (***Hypothesis 12.2***).
  - For the British group, the (hypothesised) positive relationship between self-defining memory related to ‘achievement/mastery’ and psychopathology will be stronger than for the two other groups (***Hypothesis 12.3***).
  - For the British group, the (hypothesised) positive relationship between self-defining memory related to ‘relationship’ and psychopathology will be weaker than for the two other groups (***Hypothesis 12.4***).
  - For the British group, the (hypothesised) negative relationship between detailed self-defining memory and psychopathology will be stronger than for the two other groups (***Hypothesis 12.5)***.
  - For the British group, the (hypothesised) positive relationship between specific self-defining memories and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 12.6***).

- For the British group, the (hypothesised) positive relationship between integrative self-defining memories and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 12.7***).
- For the British group, the (hypothesised) negative relationship between self-defining memory related to 'achievement/mastery' and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 12.8***).
- For the British group, the (hypothesised) positive relationship between self-defining memory related to 'relationship' and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 12.9***).
- For the British group, the (hypothesised) positive relationship between detailed self-defining memory and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 12.10)***.

(For the negative events)

- For the British group, the (hypothesised) negative relationship between specific self-defining memories and psychopathology will be stronger than for the two other groups (***Hypothesis 12.11***).
- For the British group, the (hypothesised) negative relationship between integrative self-defining memories and psychopathology will be weaker than for the two other groups (***Hypothesis 12.12***).
- For the British group, the (hypothesised) positive relationship between self-defining memory related to 'achievement/mastery' and psychopathology will be stronger than for the two other groups (***Hypothesis 12.13***).
- For the British group, the (hypothesised) positive relationship between self-defining memory related to 'relationship' and psychopathology will be weaker than for the two other groups (***Hypothesis 12.14***).

- For the British group, the (hypothesised) negative relationship between detailed self-defining memory and psychopathology will be stronger than for the two other groups (***Hypothesis 12.15)***.
- For the British group, the (hypothesised) positive relationship between specific self-defining memories and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 12.16***).
- For the British group, the (hypothesised) positive relationship between integrative self-defining memories and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 12.17***).
- For the British group, the (hypothesised) negative relationship between self-defining memory related to 'achievement/mastery' and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 12.18***).
- For the British group, the (hypothesised) positive relationship between self-defining memory related to 'relationship' and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 12.19***).
- For the British group, the (hypothesised) positive relationship between detailed self-defining memory and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 12.20)***.

7.3 Methods

7.3.1 Measures

For detailed descriptions, please see the 'Measures' sections of Chapters 3 and 4.

<u>Study 2A</u>

(Self-Report Questionnaires)

A. Participant's Demographic Information

    1) Demographic Questionnaire

B. Exposure and Processing of Stressful Life and Positive Events

2) Modified Life Events Checklist for DSM-5 (adapted from Life Events Checklist for DSM-5; Weathers et al., 2013)

C. Cognitive Processing Styles

3) State Dissociation Questionnaire (SDQ; Murray et al., 2002)

- To assess participants' dissociative experiences, including derealisation, depersonalisation, and emotional numbing, during the traumatic/ most distressing event

4) Data-Driven Processing Scale (DDPS; Halligan et al., 2002; Halligan et al., 2003)

- To assess participants' engagement in surface-level and perceptual processing during the traumatic/ most distressing event

5) Lack of Self-Referent Processing Scale (LSRPS; Halligan et al., 2002; Halligan et al., 2003)

- To assess participants' lack of self-referential perspective in processing during the traumatic/ most distressing event

D. Autobiographical Memory

6) Centrality of Event Scale-Short Form (CES-SF; Berntsen & Rubin, 2006)

- To measure the extent to which the memory of the most positive/distressing experience forms a central event to their identity, a reference point for everyday life, and a turning point in their life story

7) Memory Questionnaire for the Most Positive/Distressing Event (Halligan et al., 2003)

- To measure the memory qualities of the most positive/distressing event with three sub-scales, namely (1) disorganisation, (2) disjointedness, and (3) flashback quality

8) Thinking About Life Experiences (TALE; Bluck & Alea, 2011) Scale

- To assess participants' use of positive/stressful autobiographical memories in general with three sub-scales, namely (1) self-continuity, (2) social bonding, and (3) directing behaviour

E. Post-Traumatic/Stress Outcomes

9) Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997)

10) State-Trait Anxiety Inventory (Trait) (Form Y) (STAI-T; Spielberger, 1983)

11) Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF; Cole et al., 2004)

12) Post-Traumatic Growth Inventory – Expanded (PTGI-X; Tedeschi et al., 2017)

(Objective Measures)

A. Autobiographical Memory

13) Autobiographical Memory Test (AMT; Williams & Broadbent, 1986)

- To assess autobiographical memory specificity (AMS) by instructing participants to recall a specific event in response to each of 18 cue words in 30 seconds

14) Self-Defining Memory Task (Moffitt & Singer, 1994)

- To elicit a total of 10 self-defining autobiographical memories and code them for different dimensions, including specificity, meaning, affect, content, and detailedness

<u>Study 2B</u>

The measures used at follow-up (i.e., Study 2B) were identical to those used at baseline (i.e., Study 2A).

7.3.2 Statistical Analyses

We first tested whether cognitive processing styles and autobiographical memory correlated with post-traumatic/stress outcomes in Studies 1 and 2 (for details, see Appendix N). For prediction and (potential) moderation, we focused on the relationship(s) where the cognitive processing styles and autobiographical memory (see Chapter 5) and post-traumatic/stress outcomes (see Chapter 3) showed cultural differences. We used only the Study 2 sample to investigate the association between the variables of interest.

To examine the predictive role of cognitive processing styles and autobiographical memory at T1 (Studies 2A and 2B) on post-traumatic/stress outcomes at T1 (Study 2A) or at T2 (Study 2B), we conducted hierarchical multiple regression analyses with PTSD symptoms, anxiety, depression, and post-traumatic growth as outcome variables. The covariates included participants' age, gender, and their exposure to traumatic/stressful events (for details, see Section 6.3.2). The above demographic and trauma/stress exposure variables were entered in Step 1, followed by entering the respective variable of cognitive processing styles or autobiographical memory (the total score for SDQ, DDPS, LSRPS, CES, AMS, and the sub-scales for Memory Questionnaire, TALE, and SDMT) in Step 2 as the main predictor of the outcomes.

To investigate the potential moderating role of culture in the relationship between each variable of cognitive processing styles and autobiographical memory and post-traumatic/stress outcomes, we expanded the above hierarchical multiple regression model by entering culture (in the form of two dummy variables with the British group as a reference category) and the interaction between each culture dummy variable and the variable of interest in Step 3.

7.4 Results

Descriptive statistics for post-traumatic/stress outcomes can be found in Table 3.5 of Chapter 3. The zero-order correlation between cognitive processing styles/ autobiographical memory and post-traumatic/stress outcomes in Study 2 are presented in Appendix N4.

7.4.1 Cognitive Processing Styles

Prediction of Post-Traumatic/Stress Outcomes by Cognitive Processing Styles (Hypothesis 1)

The hierarchical multiple regression analyses showed a significant improvement in predicting all outcomes at baseline when cognitive processing styles were added in Step 2; PTSD symptoms, $R^2_{adj} = 0.32$, $\Delta R^2 = 0.23$, $\Delta F(3,411) = 46.13$, $p < .001$, anxiety, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.03$, $\Delta F(3,411) = 4.74$, $p = .003$, depression, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.06$, $\Delta F(3,411) = 10.04$, $p < .001$, and post-traumatic growth at T1, $R^2_{adj} = 0.16$, $\Delta R^2 = 0.10$, $\Delta F(3,411) = 15.83$, $p < .001$. Lack of self-referent processing positively predicted PTSD symptoms, $\beta = 0.39$, $p < .001$, anxiety, $\beta = 0.14$, $p = .038$, depression, $\beta = 0.18$, $p = .005$, and post-traumatic growth, $\beta = 0.26$, $p < .001$ (see Tables for detailed results). Contrary to our hypotheses, there were no significant predictions of state dissociation or data-driven processing for outcomes.

The analysis of the follow-up data (Study 2B) did not show significant effects of cognitive processing styles (measured at baseline) on outcomes at follow up over and above age, gender, baseline and follow-up stressor severity and baseline symptoms severity on the respective measures.

Moderation by Culture of the Relationship between Cognitive Processing Styles and Post-Traumatic/Stress Outcomes (Hypothesis 2)

The addition of culture and its interactions with cognitive processing styles in Step 3 showed significant improvements in the prediction model of all symptoms at baseline; PTSD symptoms: $R^2_{adj} = 0.35$, $\Delta R^2 = 0.04$, $\Delta F(8,403) = 3.41$, $p < .001$; anxiety, $R^2_{adj} = 0.18$, $\Delta R^2 = 0.10$, $\Delta F(8,403) = 6.40$, $p < .001$, depression, $R^2_{adj} = 0.17$, $\Delta R^2 = 0.08$, $\Delta F(8,403) = 5.33$, $p <$

.001, and post-traumatic growth, $R^2_{adj} = 0.19$, $\Delta R^2 = 0.04$, $\Delta F(8,403) = 2.74$, $p = .006$ (see Tables 7.10, 7.11, and 7.12 for detailed results). This was due to the main effects of culture variables where the British group reported lower levels of symptoms and post-traumatic growth than the other two groups. There was no significant interaction between culture and cognitive processing styles, indicating that culture did not moderate the effect of state dissociation, data-driven processing, or lack of self-referent processing on post-traumatic/stress outcomes. This pattern of results also applied to the analysis of the follow-up data.

7.4.2 Event Centrality

Prediction of Post-Traumatic/Stress Outcomes by Event Centrality (Hypothesis 3)

The hierarchical multiple regression analyses significantly improved the prediction of all outcomes at baseline when the centrality of the most positive and the most distressing events was added in Step 2; PTSD symptoms, $R^2_{adj} = 0.19$, $\Delta R^2 = 0.10$, $\Delta F(2,412) = 24.96$, $p < .001$, anxiety, $R^2_{adj} = 0.08$, $\Delta R^2 = 0.01$, $\Delta F(2,412) = 3.04$, $p = .049$, depression, $R^2_{adj} = 0.07$, $\Delta R^2 = 0.04$, $\Delta F(2,412) = 7.84$, $p < .001$, and post-traumatic growth at T1, $R^2_{adj} = 0.22$, $\Delta R^2 = 0.15$, $\Delta F(2,412) = 40.00$, $p < .001$. The centrality of the most distressing event (but not of the most positive event) positively predicted PTSD symptoms, $\beta = 0.32$, $p < .001$, anxiety, $\beta = 0.12$, $p = .018$, depression, $\beta = 0.20$, $p < .001$. However, the centrality of both types of events (the most positive event, $\beta = 0.11$, $p = .016$; the most distressing event, $\beta = 0.37$, $p < .001$) positively predicted post-traumatic growth.

Study 2B did not find any significant effect of event centrality (measured at baseline) on the outcomes at follow-up beyond age, gender, baseline and follow-up stressor severity, and baseline symptom severity on the respective measures.

Moderation by Culture of the Relationship between Event Centrality and Post-Traumatic/Stress Outcomes (Hypothesis 4)

The addition of culture and its interaction terms with event centrality in Step 3 of hierarchical multiple regression showed a significant improvement in the prediction model of anxiety, $R^2_{adj} = 0.16$, $\Delta R^2 = 0.10$, $\Delta F(6,406) = 8.14$, $p < .001$, depression, $R^2_{adj} = 0.14$, $\Delta R^2 = 0.07$, $\Delta F(6,406) = 6.01$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.23$, $\Delta R^2 = 0.02$, $\Delta F(6,406) = 2.23$, $p = .040$, but not of PTSD symptoms, $R^2_{adj} = 0.19$, $\Delta R^2 = 0.01$, $\Delta F(6,406) = 0.99$, $p = .433$. The positive relationship between the centrality of the most distressing event and depression was stronger in the Hongkongese group than in the British group.

In Study 2B, the addition of culture and its interaction terms with event centrality (measured at baseline) in Step 3 did not improve the prediction model of the outcomes at follow-up beyond Step 2 variables.

7.4.3 Memory Qualities

Prediction of Post-Traumatic/Stress Outcomes by Memory Qualities (Hypothesis 5)

The hierarchical multiple regression analyses showed a significant improvement in predicting all outcomes at baseline when (poor) memory qualities were added in Step 2; PTSD symptoms, $R^2_{adj} = 0.47$, $\Delta R^2 = 0.38$, $\Delta F(6,408) = 50.15$, $p < .001$, anxiety, $R^2_{adj} = 0.15$, $\Delta R^2 = 0.10$, $\Delta F(6,408) = 7.88$, $p < .001$, depression, $R^2_{adj} = 0.16$, $\Delta R^2 = 0.13$, $\Delta F(6,408) = 10.94$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.14$, $\Delta R^2 = 0.08$, $\Delta F(6,408) = 6.74$, $p < .001$. The flashback quality of the most distressing event positively predicted PTSD symptoms, $\beta = 0.64$, $p < .001$, anxiety, $\beta = 0.34$, $p < .001$, depression, $\beta = 0.40$, $p < .001$. The flashback quality of the most positive event negatively predicted anxiety, $\beta = -0.13$, $p = .014$, depression, $\beta = -0.12$, $p = .023$, and positively predicted post-traumatic growth, $\beta = 0.22$, $p < .001$.

The analysis of Study 2B did not show significant effects of memory qualities (measured at baseline) on outcomes at T2 beyond age, gender, baseline and follow-up stressor severity and baseline symptoms severity on the respective measures.

Moderation by Culture of the Relationship between Memory Qualities and Post-Traumatic/Stress Outcomes (Hypothesis 6)

The addition of culture and its interaction terms with memory qualities in Step 3 of hierarchical multiple regression showed significant improvements in the prediction models of all outcomes at baseline; PTSD symptoms, $R^2_{adj} = 0.49$, $\Delta R^2 = 0.04$, $\Delta F(14,394) = 2.12$, $p = .010$, anxiety, $R^2_{adj} = 0.24$, $\Delta R^2 = 0.11$, $\Delta F(14,394) = 4.51$, $p < .001$, depression, $R^2_{adj} = 0.22$, $\Delta R^2 = 0.08$, $\Delta F(14,394) = 3.16$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.19$, $\Delta R^2 = 0.08$, $\Delta F(14,394) = 2.82$, $p < .001$. Separate regressions for each of the cultural groups found that the negative relationship between the flashback quality of the most positive memory and the PTSD symptom was only found in the British group; the negative relationship between the flashback quality of the most positive memory and anxiety was only found in the British and Hongkongese groups.

7.4.4 Memory Functions

Prediction of Post-Traumatic/Stress Outcomes by Memory Functions (Hypothesis 7)

The hierarchical multiple regression analyses showed a significant improvement in predicting all outcomes at baseline when memory functions were added in Step 2; PTSD symptoms, $R^2_{adj} = 0.14$, $\Delta R^2 = 0.06$, $\Delta F(6,408) = 4.88$, $p < .001$, anxiety, $R^2_{adj} = 0.17$, $\Delta R^2 = 0.11$, $\Delta F(6,408) = 9.81$, $p < .001$, depression, $R^2_{adj} = 0.11$, $\Delta R^2 = 0.08$, $\Delta F(6,408) = 6.31$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.25$, $\Delta R^2 = 0.18$, $\Delta F(6,408) = 17.14$, $p < .001$. For self-continuity, the use of stressful memories positively predicted PTSD symptoms, $\beta = 0.25$, $p = .007$, anxiety, $\beta = 0.37$, $p < .001$, depression, $\beta = 0.24$, $p = .010$, while the use of positive memories positively predicted post-traumatic growth, $\beta = 0.14$, $p = .021$. For social bonding, the use of stressful memories positively predicted depression, $\beta = 0.26$, $p = .003$, and negatively predicted post-traumatic growth, $\beta = -0.16$, $p = .041$. For directing behaviour, the use of stressful memories negatively predicted anxiety, $\beta = -0.24$, $p = .004$, and positively

predicted post-traumatic growth, $\beta = 0.33$, $p < .001$, while the use of positive memories negatively predicted depression, $\beta = -0.15$, $p = .029$.

The analysis of Study 2B did not find significant effects of memory functions (measured at baseline) on the outcomes at follow up over and above age, gender, baseline and follow-up stressor severity and baseline symptoms severity on the respective measures.

Moderation by Culture of the Relationship between Memory Functions and Post-Traumatic/Stress Outcomes (Hypothesis 8)

The addition of culture and its interaction terms with memory functions in Step 3 of hierarchical multiple regression showed a significant improvement only in the prediction models of anxiety at baseline, $R^2_{adj} = 0.20$, $\Delta R^2 = 0.05$, $\Delta F(14,394) = 1.86$, $p = .029$. In the Hongkongese group (compared to the British group), the negative relationship between the use of stressful memories for directing behaviour and anxiety was weaker.

In Study 2B, the addition of culture and its interactions with memory functions in Step 3 showed significant improvements in the prediction model of post-traumatic growth at follow-up (T2), $R^2_{adj} = 0.36$, $\Delta R^2 = 0.04$, $\Delta F(14,339) = 1.78$, $p = .040$, but not other post-traumatic/stress outcomes at T2. Separate regression models for each cultural group found that the positive relationship between the use of stressful memories for social bonding and post-traumatic growth was only significant in the British group; the positive relationship between the use of positive memories for directing behaviour and post-traumatic growth was only significant in the Taiwanese group.

7.4.5 Autobiographical Memory Specificity (AMS)

Prediction of Post-Traumatic/Stress Outcomes by Autobiographical Memory Specificity (Hypothesis 9)

The hierarchical multiple regression analyses, when autobiographical memory specificity were added in Step 2, showed a significant improvement in predicting anxiety

(T1), $R^2_{adj} = 0.09$, $\Delta R^2 = 0.03$, $\Delta F(3,411) = 3.79$, $p = .011$, depression (T1), $R^2_{adj} = 0.07$, $\Delta R^2 = 0.03$, $\Delta F(3,411) = 4.98$, $p = .002$, but not PTSD symptoms (T1), $R^2_{adj} = 0.10$, $\Delta R^2 = 0.01$, $\Delta F(3,411) = 1.16$, $p = .326$, or post-traumatic growth (T1), $R^2_{adj} = 0.07$, $\Delta R^2 = 0.01$, $\Delta F(3,411) = 1.09$, $p = .355$. In Step 2, the AMS for neutral cues negatively predicted anxiety, $\beta = -0.15$, $p = .023$, and depression, $\beta = -0.14$, $p = .041$.

In Study 2B, there were no significant effects of AMS for positive, negative, or neutral cues (measured at baseline) on the outcomes at follow up over and above age, gender, baseline and follow-up stressor severity and baseline symptoms severity on the respective measures.

Moderation by Culture of the Relationship between Autobiographical Memory Specificity and Post-Traumatic/Stress Outcomes (Hypothesis 10)

The addition of culture and its interactions with AMS in Step 3 showed significant improvements in the prediction model of anxiety (T1), $R^2_{adj} = 0.15$, $\Delta R^2 = 0.08$, $\Delta F(8,403) = 4.70$, $p < .001$, depression, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.04$, $\Delta F(8,403) = 2.50$, $p = .012$, and post-traumatic growth, $R^2_{adj} = 0.11$, $\Delta R^2 = 0.05$, $\Delta F(8,403) = 3.15$, $p = .002$, but not PTSD symptoms, $R^2_{adj} = 0.10$, $\Delta R^2 = 0.02$, $\Delta F(8,403) = 1.42$, $p = .188$ (see Tables 7.10, 7.11, and 7.12 for detailed results). The negative relationship between the AMS for neutral cues and anxiety was only observed in the British group. Also, the relationship between the AMS for negative cues and post-traumatic growth was positive in the British group but negative in the Hongkongese group.

In Study 2B, the addition of culture and its interaction terms with AMS (measured at baseline) in Step 3 did not improve the prediction model of the outcomes at follow-up beyond Step 2 variables.

7.4.6 Features of Self-Defining Memories

Prediction of Post-Traumatic/Stress Outcomes by the Features of Self-Defining Memories (Hypothesis 11)

The hierarchical multiple regression analyses, when the features of the self-defining memories were added in Step 2, showed significant improvements in predicting anxiety at baseline; $R^2_{adj} = 0.10$, $\Delta R^2 = 0.05$, $\Delta F(12,400) = 0.03$, $p = .027$, but not other outcomes at baseline; PTSD symptoms, $R^2_{adj} = 0.11$, $\Delta R^2 = 0.04$, $\Delta F(12,400) = 1.63$, $p = .081$, depression, $R^2_{adj} = 0.05$, $\Delta R^2 = 0.04$, $\Delta F(12,400) = 1.33$, $p = .201$, and post-traumatic growth, $R^2_{adj} = 0.09$, $\Delta R^2 = 0.04$, $\Delta F(12,400) = 1.64$, $p = .078$. Of positive memories, specificity negatively predicted anxiety, $\beta = -0.15$, $p = .012$. Of negative memories, the event type of 'mastery' positively predicted anxiety, $\beta = 0.15$, $p = .011$, while the internal details positively predicted anxiety, $\beta = 0.25$, $p = .015$.

The Study 2B analysis did not find significant effects of the features of self-defining memories (measured at baseline) on the outcomes at follow up beyond age, gender, baseline and follow-up stressor severity and baseline symptoms severity on the respective measures.

Moderation by Culture of the Relationship between the Features of Self-Defining Memories and Post-Traumatic/Stress Outcomes (Hypothesis 12)

The addition of culture and its interaction terms with the features of self-defining memories in Step 3 of hierarchical multiple regression showed significant improvements in the prediction models of only anxiety (T1), $R^2_{adj} = 0.15$, $\Delta R^2 = 0.11$, $\Delta F(26,374) = 2.03$, $p = .022$, and depression (T1), $R^2_{adj} = 0.11$, $\Delta R^2 = 0.11$, $\Delta F(26,374) = 1.97$, $p = .004$. The separate regression for each cultural group found that the positive relationship between the negative memories categorised as 'relationship' and anxiety was only significant in the Taiwanese group but not the other two groups.

In Study 2B, the addition of culture and its interactions with the features of self-defining memories in Step 3 showed a significant improvement in the prediction model of

anxiety at follow-up (T2), $R^2_{adj} = 0.58$, $\Delta R^2 = 0.05$, $\Delta F(26,320) = 1.55$, $p = .046$, but not other post-traumatic/stress outcomes at T2. However, the subsequent separate regression for each of the cultural groups did not find significant effects of those features on anxiety at T2.

For a summary of all Chapter 7 results, please see Table 7.1.

Table 7.1 Results of the Associations of Cognitive Processing Styles and Autobiographical Memory with Post-Traumatic/Stress Outcomes in an Overview

Hypotheses	Results	Notes
Cognitive Processing Styles		
(H1) Association of Cognitive Processing Styles with Post-Traumatic/Stress Outcomes		
(H1.1) State dissociation will positively predict psychopathology	**No** significant prediction	
(H1.2) Data-driven processing style will positively predict psychopathology	**No** significant prediction	
(H1.3) Lack of self-referent processing style will positively predict psychopathology	**Yes**, a significant prediction (Study 2A): PTSD symptoms, anxiety, depression	
(H1.4) State dissociation will negatively predict post-traumatic growth	**No** significant prediction	
(H1.5) Data-driven processing style will negatively predict post-traumatic growth	**No** significant prediction	
(H1.6) Lack of self-referent processing style will negatively predict post-traumatic growth	**Yes**, a significant prediction (Study 2A)	*BUT a positive prediction*
(H2) Moderation by Culture of the Relationship between Cognitive Processing Styles and Post-Traumatic/Stress Outcomes		
(H2.1) The positive relationship between state dissociation and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H2.2) The positive relationship between data-driven processing style and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H2.3) The positive relationship between lack of self-referent processing style and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H2.4) The negative relationship between state dissociation and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction	

(H2.5) The positive relationship between data-driven processing style and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction	
(H2.6) The positive relationship between lack of self-referent processing style and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction	
Event Centrality		
(H3) Association of Event Centrality with Post-Traumatic/Stress Outcomes		
(H3.1) The centrality of the most positive event will negatively predict psychopathology	**No** significant prediction	
(H3.2) The centrality of the most positive event will positively predict post-traumatic growth	**Yes**, a significant prediction (Study 2A)	
(H3.3) The centrality of the most distressing event will positively predict psychopathology	**Yes**, a significant prediction (Study 2A): anxiety & depression	
(H3.4) The centrality of the most distressing event will positively predict post-traumatic growth	**Yes**, a significant prediction (Study 2A)	
(H4) Moderation by Culture of the Relationship between Event Centrality and Post-Traumatic/Stress Outcomes		
(H4.1) The negative relationship between the centrality of the most positive event and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H4.2) The positive relationship between the centrality of the most positive event and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction	
(H4.3) The positive relationship between the centrality of the most distressing event and psychopathology *British < Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): depression	*BUT British < Hongkongese only*

(H4.4) The positive relationship between the centrality of the most distressing event and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
Memory Qualities		
(H5) Association of Memory Qualities with Post-Traumatic/Stress Outcomes		
(For the most positive memory)		
(H5.1) Disorganisation will positively predict psychopathology	**No** significant prediction	
(H5.2) Disjointedness will positively predict psychopathology	**No** significant prediction	
(H5.3) Flashback quality will positively predict psychopathology	**Yes**, a significant prediction (Study 2A): anxiety, depression	*BUT a negative prediction*
(H5.4) Disorganisation will negatively predict post-traumatic growth		
(H5.5) Disjointedness will negatively predict post-traumatic growth	**No** significant prediction	
(H5.6) Flashback quality will negatively predict post-traumatic growth	**Yes**, a significant prediction (Study 2A)	*BUT a positive prediction*
(For the most stressful memory)		
(H5.7) Disorganisation will positively predict psychopathology	**No** significant prediction	
(H5.8) Disjointedness will positively predict psychopathology	**No** significant prediction	
(H5.9) Flashback quality will positively predict psychopathology	**Yes**, a significant prediction (Study 2A): PTSD symptoms, anxiety, depression	
(H5.10) Disorganisation will negatively predict post-traumatic growth	**No** significant prediction	
(H5.11) Disjointedness will negatively predict post-traumatic growth	**No** significant prediction	
(H5.12) Flashback quality will negatively predict post-traumatic growth	**No** significant prediction	

(H6) Moderation by Culture of the Relationship between Memory Qualities and Post-Traumatic/Stress Outcomes		
(For the most positive memory)		
(H6.1) The positive relationship between disorganisation and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.2) The positive relationship between disjointedness and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.3) The positive relationship between flashback quality and psychopathology *British < Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): PTSD symptoms & anxiety	*BUT the significant negative relationship between flashback quality and PTSD symptoms in British only; the significant negative relationship between flashback quality and anxiety in British & Hongkongese only*
(H6.4) The negative relationship between disorganisation and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.5) The negative relationship between disjointedness and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.6) The negative relationship between flashback quality and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(For the most stressful memory)		
(H6.7) The positive relationship between disorganisation and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.8) The positive relationship between disjointedness and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	

(H6.9) The positive relationship between flashback quality and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.10) The negative relationship between disorganisation and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.11) The negative relationship between disjointedness and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H6.12) The negative relationship between flashback quality and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
Memory Functions		
(H7) Association of Memory Functions with Post-Traumatic/Stress Outcomes		
(For the most positive memory)		
(H7.1) Self-continuity will negatively predict psychopathology	**No** significant prediction	
(H7.2) Social bonding will negatively predict psychopathology	**No** significant prediction	
(H7.3) Directing behaviour will negatively predict psychopathology	**No** significant prediction	
(H7.4) Self-continuity will positively predict post-traumatic growth	**No** significant prediction	
(H7.5) Social bonding will positively predict post-traumatic growth	**No** significant prediction	
(H7.6) Directing behaviour will positively predict post-traumatic growth	**No** significant prediction	
(For the most stressful memory)		
(H7.7) Self-continuity will negatively predict psychopathology	**Yes**, a significant prediction: anxiety (Study 2A)	*BUT a positive prediction*
(H7.8) Social bonding will negatively predict psychopathology	**No** significant prediction	

(H7.9) Directing behaviour will negatively predict psychopathology	**Yes**, a significant prediction: anxiety (Study 2A)	
(H7.10) Self-continuity will positively predict post-traumatic growth	**No** significant prediction	
(H7.11) Social bonding will positively predict post-traumatic growth	**No** significant prediction	
(H7.12) Directing behaviour will positively predict post-traumatic growth	**No** significant prediction	
(H8) Moderation by Culture of the Relationship between Memory Qualities and Post-Traumatic/Stress Outcomes		
(For the most positive memory)		
(H8.1) The negative relationship between self-continuity and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H8.2) The negative relationship between social bonding and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H8.3) The negative relationship between directing behaviour and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H8.4) The positive relationship between self-continuity and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H8.5) The positive relationship between social bonding and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H8.6) The positive relationship between directing behaviour and post-traumatic growth *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2B)	*But significant in Taiwanese only*
(For the most stressful memory)		
(H8.1) The negative relationship between self-continuity and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	

(H8.2) The negative relationship between social bonding and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H8.3) The negative relationship between directing behaviour and psychopathology *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction: anxiety (Study 2A)	
(H8.4) The positive relationship between self-continuity and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H8.5) The positive relationship between social bonding and post-traumatic growth *British < Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2B)	*But significant in British only*
(H8.6) The positive relationship between directing behaviour and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction	
Autobiographical Memory Specificity (AMS)		
(H9) Association of AMS with Post-Traumatic/Stress Outcomes		
(H9.1) AMS will negatively predict psychopathology	**Yes**, a significant prediction (Study 2A): neutral cue (for anxiety & depression)	
(H9.2) AMS will positively predict post-traumatic growth	**No** significant prediction	
(H10) Moderation by Culture of the Relationship between AMS and Post-Traumatic/Stress Outcomes		
(H10.1) The negative relationship between AMS and psychopathology *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): culture & neutral cue AMS (for anxiety)	*BUT negative relationship in British only*
(H10.2) The positive relationship between AMS and post-traumatic growth *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): culture & negative cue AMS	*BUT positive relationship in British; negative relationship in Hongkongese*
Self-Defining Memory Features		
(H11) Association of Self-Defining Memory Features with Post-Traumatic/Stress Outcomes		
(For the positive events)		

(H11.1) Specific self-defining memories will negatively predict psychopathology	**No** significant prediction	
(H11.2) Integrative self-defining memories will negatively predict psychopathology	**Yes**, a significant prediction (Study 2B): for anxiety	*BUT a positive prediction*
(H11.3) Self-defining memory related to 'achievement/mastery' will positively predict psychopathology	**No** significant prediction	
(H11.4) Self-defining memory related to 'relationship' will positively predict psychopathology	**No** significant prediction	
(H11.5) Detailed self-defining memories will negatively predict psychopathology	**No** significant prediction	
(H11.6) Specific self-defining memories will positively predict post-traumatic growth	**No** significant prediction	
(H11.7) Integrative self-defining memories will positively predict post-traumatic growth	**No** significant prediction	
(H11.8) Self-defining memory related to 'achievement/mastery' will negatively predict post-traumatic growth	**No** significant prediction	
(H11.9) Self-defining memory related to 'relationship' will positively predict post-traumatic growth	**No** significant prediction	
(H11.10) Detailed self-defining memories will positively predict post-traumatic growth	**No** significant prediction	
(For the negative events)		
(H11.11) Specific self-defining memories will negatively predict psychopathology	**No** significant prediction	
(H11.12) Integrative self-defining memories will negatively predict psychopathology	**No** significant prediction	
(H11.13) Self-defining memory related to 'achievement/mastery' will positively predict psychopathology	**Yes**, a significant prediction (Study 2A): for anxiety, depression	

(H11.14) Self-defining memory related to 'relationship' will positively predict psychopathology	**No** significant prediction
(H11.15) Detailed self-defining memories will negatively predict psychopathology	**Yes**, a significant prediction (Study 2A): internal details (for anxiety)
(H11.16) Specific self-defining memories will positively predict post-traumatic growth	**No** significant prediction
(H11.17) Integrative self-defining memories will positively predict post-traumatic growth	**No** significant prediction
(H11.18) Self-defining memory related to 'achievement/mastery' will negatively predict post-traumatic growth	**No** significant prediction
(H11.19) Self-defining memory related to 'relationship' will positively predict post-traumatic growth	**No** significant prediction
(H11.20) Detailed self-defining memories will positively predict post-traumatic growth	**No** significant prediction
(H12) Moderation by Culture of the Relationship between Self-Defining Memories and Post-Traumatic/Stress Outcomes	
(For the positive events)	
(H12.1) The negative relationship between specific self-defining memories and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction
(H12.2) The negative relationship between integrative self-defining memories and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction
(H12.3) The positive relationship between self-defining memory related to 'achievement/mastery' and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction

(H12.4) The positive relationship between self-defining memory related to 'relationship' and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction
(H12.5) The negative relationship between detailed self-defining memory and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction
(H12.6) The positive relationship between specific self-defining memories and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction
(H12.7) The positive relationship between integrative self-defining memories and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction
(H12.8) The negative relationship between self-defining memory related to 'achievement/mastery' and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction
(H12.9) The positive relationship between self-defining memory related to 'relationship' and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction
(H12.10) The positive relationship between detailed self-defining memory and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction
(For the negative events)	

(H12.11) The negative relationship between specific self-defining memories and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H12.12) The negative relationship between integrative self-defining memories and psychopathology *British < Hongkongese & Taiwanese*	**No** interaction	
(H12.13) The positive relationship between self-defining memory related to 'achievement/mastery' and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H12.14) The positive relationship between self-defining memory related to 'relationship' and psychopathology *British < Hongkongese & Taiwanese*	**Yes**, a significant interaction: anxiety (Study 2A)	*BUT significant in Taiwanese only*
(H12.15) The negative relationship between detailed self-defining memory and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H12.16) The positive relationship between specific self-defining memories and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction	
(H12.17) The positive relationship between integrative self-defining memories and post-traumatic growth *British < Hongkongese & Taiwanese*	**No** interaction	
(H12.18) The negative relationship between self-defining memory related to 'achievement/mastery' and post-traumatic growth	**No** interaction	

British > Hongkongese & Taiwanese	
(H12.19) The positive relationship between self-defining memory related to 'relationship' and post-traumatic growth	**No** interaction
British < Hongkongese & Taiwanese	
(H12.20) The positive relationship between detailed self-defining memory and post-traumatic growth	**No** interaction
British > Hongkongese & Taiwanese	

7.5 Discussion

7.5.1 Cognitive Processing Styles and Post-Traumatic/Stress Outcomes

The first major finding of this chapter was the positive prediction of post-traumatic outcomes by the lack of self-referent processing. These results were consistent with existing literature that emphasised the key role of cognitive factors in understanding the development of symptoms following traumatic experiences (Ehlers & Clark, 2000; Holmes & Bourne, 2008). Specifically, the lack of self-referent processing may result in individuals failing to fully incorporate the traumatic/stressful events into their autobiographical knowledge base, thus perceiving a persistent sense of disconnectedness and distress (Berntsen & Rubin, 2006). On the other hand, the lack of self-referent processing may indicate that individuals who do not immediately engage in self-focused rumination are more open to external sources of support, such as social connections and community resources, which can be beneficial to post-traumatic growth (Zoellner & Maercker, 2006).

7.5.2 Event Centrality and Post-Traumatic/Stress Outcomes

There were strong associations between the centrality of events and post-traumatic/stress outcomes. In accordance with previous literature (e.g., Boals & Ruggero, 2016; Gehrt et al., 2018), the centrality of the most distressing event positively predicted symptoms. The centrality of the distressing event reflects the extent to which an individual integrates the traumatic experience into their personal identity and autobiographical memory (Berntsen & Rubin, 2006). High centrality suggested that the most distressing event became a pivotal reference point in individuals' self-narratives, leading to intrusive thoughts and flashbacks (Ehlers, Hackmann, & Michael, 2004). Such cognitive processes may contribute to the development of symptoms of PTSD, anxiety, and depression (e.g., Brewin, 2014). The results also showed that the centrality of both the most distressing and the most positive event (reported by the participants) positively predicted post-traumatic growth. The centrality of the

distressing events may lead to heightened emotional distress but can also provide an opportunity for cognitive processing and meaning-making. Conversely, the high centrality of the positive events implied the recognition of one's past experience, which can enhance resilience and foster a greater sense of empowerment (e.g., Shakespeare-Finch & Lurie-Beck, 2014).

The centrality of the most distressing event was more strongly associated with depression in the Hongkongese group than in the British group. Culture shapes the experience and expression of psychopathological symptoms (Kleinman, 1988; Ryder, Alden, & Paulhus, 2000). The present results accorded with previous literature that East Asians reported significantly greater negative emotions in response to intrusive, distressing memories than Westerners (e.g., Mihailova & Jobson, 2020). However, it may challenge the conclusion of Zhang and Cross's (2011) research that Chinese, compared to Westerners, viewed negative events as less problematic for their goals and as less damaging to their psychological well-being. These seemingly discrepant findings could be explained by low self-esteem in the Hongkongese group (for details, see Chapter 4), which increased the likelihood of depression after traumatic/stressful events.

7.5.3 Memory Qualities and Post-Traumatic/Stress Outcomes

Flashback qualities, regardless of positive or negative events, were strongly associated with post-traumatic/stress outcomes. Flashbacks are vivid and intrusive recollection of past experiences. The flashback quality of distressing events is often characterised by the sensory and emotional intensity of these involuntary recollections. These high-quality flashbacks can re-immerse individuals in the traumatic/stressful experiences, leading to heightened arousal and distress. Such intense and vivid flashbacks may contribute to trauma-related psychopathology. On the other hand, the flashback quality of the most positive event was found to negatively predict psychopathology. This finding was consistent

with previous research that has shown a similar association between positive events and psychological well-being (e.g., Hofmann, Luhmann, Fisher, Vohs, & Baumeister, 2014). It is possible that the vividness and intensity of the positive memories may serve as a protective factor to buffer the risk of developing psychopathology after traumatic/stressful events. Also, the flashback quality of the most positive event was significantly associated with post-traumatic growth. This result echoed Fredrickson's (2001) conclusion that positive emotions foster personal growth.

The negative relationship between the flashback quality of positive events and PTSD symptoms was observed in the British group. In individualistic cultures, individuals are more likely to emphasise positive emotions to maintain high self-esteem (Diener & Diener, 1995). This cultural norm could potentially strengthen the buffering effect of positive events on trauma-related psychopathology as those individuals may fully engage with and process the emotions associated with positive memories. Another interesting finding was that the negative relationship between the flashback quality of positive memories and anxiety was specific to the British and Hongkongese groups. Previous research has demonstrated the influence of cultural factors on anxiety symptoms and their cultural variations (e.g., Hofmann, Asnaani, & Hinton, 2010). The British and Hongkongese cultures may share certain similarities in terms of individualism and the importance placed on personal achievement and success. People from individualistic cultures, compared to those from collectivistic cultures, tend to report that their memories of success enhance their self-esteem, which in turn, decreases the risk of developing psychopathology (e.g., Zhang & Cross, 2011).

7.5.4 Memory Functions and Post-Traumatic/Stress Outcomes

The present study found a close link between the functions of autobiographical memory and post-traumatic/stress outcomes. For example, there was a positive relationship between the use of stressful memories for self-continuity and psychopathology. When

individuals continuously focus on stressful memories to maintain their sense of self, they may inadvertently reinforce negative emotions and cognitive patterns. This process may further perpetuate negative self-concept and coping strategies, leading to increased vulnerability of psychopathology. In contrast, the use of positive memories for self-continuity positively predicted post-traumatic growth. When individuals draw upon positive memories to maintain a sense of self, they may activate positive emotions, cognitive schemas, and adaptive coping strategies. These factors would facilitate the process of traumatic growth by promoting resilience, meaning-making and personal transformation.

The present study found that the negative relationship between the use of stressful memories for directing behaviour and anxiety/depression was weaker in the Hongkongese group than in the British group. This may be due to the fact that Westerners viewed the future as more positive and open-ended (e.g., Carstensen & Lang, 1997) and were thus motivated to use memory to guide their future life trajectory (e.g., Baltes, 1997).

7.5.5 Autobiographical Memory Specificity (AMS) and Post-Traumatic/Stress Outcomes

One of the objectives of the autobiographical memory task (AMT) was to examine the relationship between AMS for different types of cues (positive, negative, and neutral) and post-traumatic/stress outcomes. Surprisingly, our findings revealed that AMS for neutral cues, rather than the other two cues, negatively predicted anxiety and depression. A possible explanation for this finding was that individuals with greater AMS in response to neutral cues may possess more adaptive cognitive processes and emotional regulation strategies. AMS has been linked to the ability to retrieve specific details of past experiences (Williams et al., 2007). This cognitive ability may facilitate problem-solving (e.g., Raes et al., 2005) and emotional regulation (e.g., Raes, Hermans, Williams, & Eelen, 2006), which buffers against the development of psychopathological symptoms (e.g., Sumner, Griffith, & Mineka, 2010).

Moreover, neutral cues are absent of emotional intensity so they would accurately reflect individuals' ability to recall specific memories by introducing noises. In this case, AMS for neutral cues is a better predictor for symptoms compared to those for cues of other valences.

There were significant cultural variations in the relationship between the AMS and the outcomes. First, the negative relationship between AMS for neutral cues and anxiety was only applicable to the British group. This could be explained by cultural differences in emotion regulation, which refers to the strategies individuals employ to manage and modulate their emotions (Gross, 1998). The British culture, due to its individualism, encourages the processing and expression of emotions more openly through the elaboration of details (than the other two cultures). This cultural difference may be more salient in the retrieval of memories for neutral cues, which was not supposed to elicit emotions in general. Another finding concerned the opposite relationships between AMS for negative cues and post-traumatic growth in the British and Hongkongese groups respectively. A possible explanation for this interesting finding was cultural differences in the perception of negative emotions. The British culture may value the experience of confronting and processing negative emotions and experiences as a means of fostering personal growth and resilience. Conversely, the Hongkongese culture may prefer emotional restraint and avoidance of negative emotions to maintain harmony (e.g., Bond, 1993). In this cultural context, individuals who are more likely to recall specific memories for negative cues may be more likely to dwell on distressing memories, which can hinder the process of growth. These perceptions of negative experiences that vary across cultures are associated with post-traumatic growth differently.

7.5.6 Features of the Self-Defining Memories and Post-Traumatic/Stress Outcomes

The relationship between features of the self-defining memories and post-traumatic stress outcomes differed across the memory valence. First, the specificity of positive self-

defining memories negatively predicted anxiety. This finding may suggest that positive self-defining memories are those that capture key aspects of one's identity and contribute to their sense of self. A stronger ability to access specific and vivid positive self-defining memories may indicate a more robust and positive self-concept, which in turn serves as a protective factor against anxiety. Positive self-defining memories may also enhance self-esteem, self-efficacy and positive emotions, which could counteract anxious thoughts and feelings (e.g., Singer & Blagov, 2004). Second, the negative self-defining memories related to 'mastery' positively predicted anxiety. The event type, 'mastery', in negative memories reflect the experiences of failure, inadequacy, or lack of control in a situation where one is expected to demonstrate competence or achieve a high level of performance (e.g., Dweck & Sorich,1999). These memories may be associated with negative emotions, self-doubt, and a sense of incompetence, which can contribute to heightened anxiety levels. Individuals who viewed these negative experiences as self-defining may be more likely to experience anxiety in situations that require performance. Finally, the internal details of negative self-defining memories positively predicted anxiety. Previous research has indicated that the retrieval of detailed and vivid memories of negative events is associated with heightened emotional reactivity and increased risk for psychopathology (Dalgleish & Werner-Seidler, 2014). In the context of negative self-defining memories, the presence of internal details related to the event, time, place, perceptual sensations, and thoughts/emotions that occurred during the event may lead to anxiety. This relationship can be explained by data-driven processing (Roediger, 1990), which mainly processes sensory impressions. In this cognitive processing style, all the internal details of negative memories are difficult to retrieve intentionally. Meanwhile, they are easily triggered by external cues because of strong perceptual priming, a form of implicit memory associated with the negative events (Ehlers & Clark, 2000). This negative memory trace may be poorly distinguished from others (Baddeley, 1997). Therefore,

the impaired ability to discriminate stimuli between those during stressful events and those in general may render individuals vulnerable to anxiety symptoms.

For the results of interaction, the positive relationship between the negative memories categorised as ‘relationship’ and depression was only significant in the Taiwanese group but not the other two groups. One possible explanation for this finding is that in collectivistic culture like Taiwan, relationship with family, friends, and significant others are highly valued (e.g., Gambrel, & Cianci, 2003). Negative memories related to ‘relationship’, including divorce, break-ups and interpersonal conflicts, may be salient and more impactful for the Taiwanese group, thus leading to increased vulnerability to depression.

Chapter 8

Associations of Coping Strategies with Post-Traumatic/Stress Outcomes

8.1 Overview

Coping strategies play a crucial role in determining post-traumatic/stress outcomes among individuals who have experienced traumatic/stressful events. These strategies cover a wide range of cognitive, emotional, and behavioural efforts to manage psychological distress from trauma exposure (Folkman & Lazarus, 1980). In the aftermath of traumatic/stressful events, individuals often employ various coping strategies, either adaptive or maladaptive, to reduce psychopathological symptoms. Maladaptive strategies, according to Ehlers and Clark (2000), could contribute to psychopathology by (1) directly producing more symptoms (discussed in Chapter 3), (2) preventing changes in negative appraisals (discussed in Chapter 6), and (3) preventing changes in the nature of trauma memory (discussed in Chapter 7). These coping strategies may also facilitate or hinder the process of post-traumatic growth (for a review, see Henson, Truchot, & Canevello, 2021).

8.1.1 Self-Concealment and Post-Traumatic/Stress Outcomes

Self-concealment, defined as the tendency to hide personal distress and negative experiences from others (e.g., Larson et al., 2015), has been found to be intricately linked to post-traumatic/stress outcomes. Individuals who engage in higher levels of self-concealment following traumatic events have a higher risk of psychopathology, including depression, anxiety, and physical symptoms (e.g., Larson & Chastain, 1990). Self-concealment has also been associated with elevated symptoms of post-traumatic stress disorder (PTSD) and heightened psychological distress (e.g., Chung, Ye, Wang & Thomas, 2022). This is because self-concealment prevents those individuals from sharing and processing their traumatic/stressful experiences with others, which in turn impairs the process of natural recovery (e.g., Pennebaker, 1997) or psychological treatments (e.g., Nam et al., 2013). It, on

the other hand, reduces opportunities for social support, which are crucial factors in the post-traumatic growth process (Pennebaker, 1997). It is hypothesised that self-concealment will positively predict psychopathological symptoms and negatively predict post-traumatic growth.

8.1.2 Responses to Intrusions and Post-Traumatic/Stress Outcomes

Unhelpful responses to intrusions, including thought suppression, rumination, and numbing (Clohessy & Ehlers, 1999; Murray et al., 2002; Steil & Ehlers, 2000), influence post-traumatic/stress outcomes in the long term. Intrusions, characterised by distressing and involuntary thoughts or memories related to traumatic events, are a hallmark of post-traumatic stress disorder (Ehlers & Steil, 1995). Suppression often causes the rebound of those intrusive thoughts or memories, which leads to heightened distress (Shipherd & Beck, 1999, 2005), and predicts post-traumatic stress symptoms prospectively (Beierl, Böllinghaus, Clark, Glucksman, & Ehlers, 2020; Ehring, Ehlers, & Glucksman, 2008; Kleim, Ehlers, & Glucksman, 2012). Rumination, referring to repetitive thinking of negative personal concerns and/or the cause and consequences of a negative mood (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008), is thought to prevent the integration of intrusive thoughts into a coherent narrative and hinder subsequent emotional processing (Greenberg, 1995). Hence, a higher level of rumination is associated with a greater severity of post-traumatic stress symptoms (Steil & Ehlers, 2000; Ehring, Ehlers, & Glucksman, 2008). Numbing, characterised by a reduced capacity to experience emotions, impedes natural emotional expression and processing of traumatic memories (Feeny et al., 2000). It has been identified as a response to intrusions associated with post-traumatic stress symptoms (Murray et al., 2002; Ehring, Ehlers, & Glucksman, 2008). While these responses to intrusions may initially serve as attempts to manage distress, they can perpetuate the cycle of intrusive thoughts and memories and thus contribute to the maintenance of post-traumatic stress symptoms.

However, some coping responses, such as rumination, are positively related with the level of post-traumatic growth (Calhoun, Cann, Tedeschi, & McMillan, 2000).

8.1.3 Coping Styles and Post-Traumatic/Stress Outcomes

Coping styles can shape post-traumatic/stress outcomes, either positively or negatively. Some coping styles, such as denial, are associated with the maintenance or exacerbation of post-traumatic stress symptoms (e.g., Carver et al., 1989). Others, such as seeking social support, have demonstrated a positive impact on reducing post-traumatic stress symptoms (e.g., Carver et al., 1989). Research has shown that the choices of coping styles influence one's trajectory towards post-traumatic stress symptoms or growth. For example, individuals who employ denial as a coping style tend to experience prolonged distress and impaired functioning in the aftermath of trauma (Wartella., Auerbach, & Ward, 2009). Denial may also hinder the emotional processing necessary for recovery. On the other hand, those who engage in humour and seek social support (for instrumental or emotional reasons) often experience greater emotional regulation and resilience in the face of adversity (e.g., Besser, Weinberg, Zeigler-Hill, Ataria, & Neria, 2015; Ogińska-Bulik & Kobylarczyk, 2016). These coping styles enable individuals to gradually reframe their perception of the traumatic/stressful event and integrate it into their life narrative. In terms of post-traumatic growth, these coping styles have been found to be adaptive in promoting psychological well-being (e.g., Tedeschi & Calhoun, 2004).

8.1.4 Trait Dissociation and Post-Traumatic/Stress Outcomes

Trait dissociation, a general tendency for dissociative experiences (such as depersonalisation or derealisation), is pertinent to the understanding of post-traumatic/stress outcomes. It is characterised by feelings of detachment or emotional numbing, which hinders the processing and integration of traumatic memories and emotions. This, in turn, leads to an increased likelihood of persistent distress. Trait dissociation may serve as a coping strategy to

manage psychological distress after traumatic exposure. Substantial research has shown that a high level of trait dissociation is associated with an increased risk of developing post-traumatic stress symptoms (e.g., Sar, 2011; Frewen & Lanius, 2014). On the other hand, the relationship of trait dissociation with post-traumatic growth has varied across empirical studies. Some researchers suggested that trait dissociation is associated with reduced post-traumatic growth due to a potential barrier to emotional processing and integration of the traumatic experience (Gershuny & Thayer, 1999). In contrast, trait dissociation may be an expression of a fragmented sense of self that people may develop after traumatic experience (e.g., Murray et al., 2002). Integration of dissociative experience may result in spiritual-existential change as a key aspect of post-traumatic growth (Cann et al., 2010; Tedeschi et al., 2017).

8.2 Research Question and Hypotheses

This chapter was aimed at investigating the association of coping strategies (either cognitive or behavioural) with post-traumatic stress outcomes. This association was examined in both a cross-sectional design (Study 2A) and a longitudinal design (Study 2B). Specifically, we first checked whether the coping strategies discussed above would predict post-traumatic/stress outcomes in the overall sample in the cross-sectional and/or longitudinal studies. If the coping strategies showed cultural differences (in Chapter 4), we then examined the potentially moderating role of culture in the relationship between the coping strategies at baseline (in Studies 2A and 2B) and post-traumatic/stress outcomes at baseline (in Study 2A) or at follow-up (in Study 2B).

<u>Self-Concealment</u>

- Self-concealment will be associated with post-traumatic/stress outcomes (***Hypothesis 1***).
    - Self-Concealment will positively predict psychopathology (***Hypothesis 1.1***).
    - Self-Concealment will negatively predict post-traumatic growth (***Hypothesis 1.2***).

- Culture will moderate the relationship between self-concealment and post-traumatic/stress outcomes (***Hypothesis 2***).
    - For the British group, the (hypothesised) positive relationship between self-concealment and psychopathology will be stronger than for the two other groups (***Hypothesis 2.1***).
    - For the British group, the (hypothesised) negative relationship between self-concealment and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 2.2***).

<u>Responses to Intrusions</u>

- Responses to intrusions (thought suppression, rumination, and numbing) will be associated with post-traumatic/stress outcomes (***Hypothesis 3***).
    - Responses to intrusions will positively predict psychopathology (***Hypothesis 3.1***).
    - Responses to intrusions will negatively predict post-traumatic growth (***Hypothesis 3.2***).
- Culture will moderate the relationship between responses to intrusions (thought suppression, rumination, and numbing) and post-traumatic/stress outcomes (***Hypothesis 4***).
    - For the British group, the (hypothesised) positive relationship between responses to intrusions (thought suppression, rumination, and numbing) and psychopathology will be stronger than for the two other groups (***Hypothesis 4.1***).
    - For the British group, the (hypothesised) negative relationship between responses to intrusions (thought suppression, rumination, and numbing) and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 4.2***).

<u>Coping Styles</u>

- Coping styles will be associated with post-traumatic/stress outcomes (***Hypothesis 5***).

- Humour will negatively predict psychopathology (***Hypothesis 5.1***).
- Humour will positively predict post-traumatic growth (***Hypothesis 5.2***).
- Use of emotional support will negatively predict psychopathology (***Hypothesis 5.3***).
- Use of emotional support will positively predict post-traumatic growth (***Hypothesis 5.4***).
- The use of instrumental support will negatively predict psychopathology (***Hypothesis 5.5***).
- The use of instrumental support will positively predict post-traumatic growth (***Hypothesis 5.6***).
- Denial will positively predict psychopathology (***Hypothesis 5.7***).
- Denial will negatively predict post-traumatic growth (***Hypothesis 5.8***).

- Culture will moderate the relationship between coping styles and post-traumatic/stress outcomes (***Hypothesis 6***).
  - For the British group, the (hypothesised) negative relationship between humour and psychopathology will be stronger than for the two other groups (***Hypothesis 6.1***).
  - For the British group, the (hypothesised) positive relationship between humour and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 6.2***).
  - For the British group, the (hypothesised) negative relationship between use of emotional support and psychopathology will be weaker than for the two other groups (***Hypothesis 6.3***).
  - For the British group, the (hypothesised) positive relationship between use of emotional support and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 6.4***).

- For the British group, the (hypothesised) positive relationship between the use of instrumental support and psychopathology will be stronger than for the two other groups (***Hypothesis 6.5***).
- For the British group, the (hypothesised) negative relationship between the use of instrumental support and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 6.6***).
- For the British group, the (hypothesised) positive relationship between denial and psychopathology will be stronger than for the two other groups (***Hypothesis 6.7***).
- For the British group, the (hypothesised) negative relationship between denial and post-traumatic growth will be stronger than for the two other groups (***Hypothesis 6.8***).

Trait Dissociation

- Trait dissociation will predict post-traumatic/stress outcomes (***Hypothesis 7***).
  - Trait dissociation will positively predict psychopathology (***Hypothesis 7.1***).
  - Trait dissociation will negatively predict post-traumatic growth (***Hypothesis 7.2***).
- Culture will moderate the relationship between trait dissociation and post-traumatic/stress outcomes (***Hypothesis 8***).
  - For the British group, the (hypothesised) positive relationship between trait dissociation and psychopathology will be stronger than for the two other groups (***Hypothesis 8.1***).
  - For the British group, the (hypothesised) negative relationship between trait dissociation and post-traumatic growth will be weaker than for the two other groups (***Hypothesis 8.2***).

8.3 Methods

8.3.1 Measures

For detailed descriptions, please see the 'Measures' sections of Chapters 3 and 4. The self-report questionnaires related to coping strategies and post-traumatic stress outcomes were used in two formats. At baseline (T1), we used a dispositional version where participants were asked about their experience (e.g., thoughts, feelings, and behaviour) about stressful events or the most distressing event in their lifetime; in the follow-up assessment (T2), we used a time-limited version where the participants were asked to complete questionnaires based on their experience since they finished the baseline study (i.e., 6 months).

Study 2A

A. Participant's demographic information
    1) Demographic Questionnaire
B. Exposure to Traumatic/Stressful Events
    2) Modified Life Events Checklist for DSM-5 (adapted from Life Events Checklist for DSM-5; Weathers et al., 2013)
C. Coping Strategies
    3) Self-Concealment Scale (Larson & Chastain, 1990)
        - To assess participants' tendency to withhold personal information and worry about the negative consequences of self-disclosure
    4) Responses to Intrusions Questionnaire (RIQ; Clohessy & Ehlers, 1999; Steil & Ehlers, 2000; Murray et al., 2002)
        - To assess participants' responses to the intrusive memories of their distressing events with 3 sub-scales, namely (1) thought suppression, (2) rumination, and (3) numbing
    5) COPE Inventory (Carver et al., 1989)

- To measure what participants generally do and feel when experiencing stressful events with 15 sub-scales, namely (1) positive reinterpretation and growth, (2) mental disengagement, (3) focus on and venting of emotions, (4) use of instrumental social support, (5) active coping, (6) denial, (7) religious coping, (8) humour, (9) behavioural disengagement, (10) restraint, (11) use of emotional social support, (12) substance use, (13) acceptance, (14) suppression of competing activities, and (15) planning

6) Trait Dissociation Questionnaire Short Form (TDQ-SF; Murray et al., 2002)

- To assess participants' general tendency for dissociative experiences

D. Post-Traumatic/Stress Outcomes

7) Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997)

8) State-Trait Anxiety Inventory (Trait) (Form Y) (STAI-T; Spielberger, 1983)

9) Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF; Cole et al., 2004)

10) Post-Traumatic Growth Inventory-Expanded (PTGI-X; Tedeschi et al., 2017)

<u>Study 2B</u>

A. Participant's demographic information

11) Demographic Questionnaire

B. Exposure and processing of stressful life and positive events

12) Modified Life Events Checklist for DSM-5

C. Cognitive Processing Styles and Behavioural Strategies

13) Self-Concealment Scale

14) Responses to Intrusions Questionnaire

15) COPE Inventory

16) Trait Dissociation Questionnaire Short Form

D. Post-Traumatic/Stress Outcomes

17) Impact of Event Scale – Revised

18) State-Trait Anxiety Inventory (Trait) (Form Y)

19) Center for Epidemiologic Studies Depression Scale Short Form

20) Post-Traumatic Growth Inventory – Expanded

8.3.2 Statistical Analyses

We first performed a zero-order correlations between coping strategies and post-traumatic/stress outcomes in Studies 1 and 2 (for details, see Appendix N). For prediction and (potential) moderation, we focused on the relationship(s) where the coping strategies (see Chapter 4) and post-traumatic/stress outcomes (see Chapter 3) showed cultural differences. We used only the Study 2 sample to investigate the association between the variables of interest.

To examine the predictive role of the coping strategies at T1 (Studies 2A and 2B) on post-traumatic/stress outcomes at T1 (Study 2A) or at T2 (Study 2B), we conducted hierarchical multiple regression analyses with PTSD symptoms, anxiety, depression, and post-traumatic growth as outcome variables. The covariates included participants' age, gender, and their exposure to traumatic/stressful events (for details, see Section 6.3.2). The above demographic and trauma/stress exposure variables were entered in Step 1, followed by entering the respective coping strategy (total score for self-concealment and trait dissociation, and the sub-scales for responses to intrusions and coping styles) in Step 2 as the main predictor of the outcomes.

To investigate the potential moderating role of culture in the relationship between a

coping strategy and post-traumatic/stress outcomes, we expanded the above hierarchical multiple regression model by entering culture (in the form of two dummy variables with the British group as a reference category) and the interaction between each culture dummy variable and the coping strategy in Step 3.

8.4 Results

Descriptive statistics for post-traumatic/stress psychopathology (i.e., symptoms of post-traumatic stress disorder, anxiety, and depression) and post-traumatic growth can be found in Table 3.5 of Chapter 3. The zero-order correlation between coping strategies and post-traumatic/stress outcomes in Study 2 is presented in Appendix N6.

8.4.1 Self-Concealment and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by Self-Concealment (Hypothesis 1)

The hierarchical multiple regression analyses showed a significant improvement in predicting symptoms at baseline (Study 2A) when self-concealment was added in Step 2; PTSD symptoms, $R^2_{adj} = 0.13$, $\Delta R^2 = 0.04$, $\Delta F(1,413) = 18.13$, $p < .001$, anxiety, Study 2A: $R^2_{adj} = 0.14$, $\Delta R^2 = 0.13$, $\Delta F(1,413) = 65.92$, $p < .001$, and depression, $R^2_{adj} = 0.14$, $\Delta R^2 = 0.10$, $\Delta F(1,413) = 47.57$, $p < .001$. As hypothesised, self-concealment positively predicted PTSD symptoms, $\beta = 0.20$, $p < .001$, anxiety, $\beta = 0.37$, $p < .001$, and depression, $\beta = 0.33$, $p < .001$, over and above what was predicted by age, gender and exposure to traumatic and stressful events (see Tables for detailed results). However, self-concealment did not improve the prediction of post-traumatic growth at T1: Study 2A: $R^2_{adj} = 0.09$, $\Delta R^2 = 0.07$, $\Delta F(1,413) = 0.85$, $p = .358$.

The analysis of the follow-up data (Study 2B) did not show significant effects of self-concealment (measured at baseline) on outcomes at follow up over and above age, gender, baseline and follow-up stressor severity and baseline symptoms severity on the respective measures.

Moderation by Culture of the Relationship between Self-Concealment and Post-Traumatic/Stress Outcomes (Hypothesis 2)

The addition of culture and its interactions with self-concealment in Step 3 showed significant improvements in the prediction model of anxiety and depression symptoms at baseline (anxiety: $R^2_{adj} = 0.25$, $\Delta R^2 = 0.06$, $\Delta F(4,409) = 8.37$, $p < .001$; depression, $R^2_{adj} = 0.17$, $\Delta R^2 = 0.04$, $\Delta F(4,409) = 5.09$, $p < .001$), but not of PTSD symptoms, $R^2_{adj} = 0.13$, $\Delta R^2 = 0.01$, $\Delta F(4,409) = 1.39$, $p = .236$ (see Tables 8.10, 8.11, and 8.12 for detailed results). This was due to main effects of culture variables. As discussed in Chapter 3, British participants reported lower anxiety and depression than Hongkongese and Taiwanese participants. Contrary to our hypothesis, there was no significant interaction between culture and self-concealment, indicating that culture did not moderate the relationship between self-concealment and post-traumatic/stress outcomes. This pattern of results also held up for the analysis of the follow-up data.

8.4.2 Responses to Intrusions and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by Responses to Intrusions (Hypothesis 3)

The hierarchical multiple regression analyses showed a significant improvement in all of the outcomes at baseline when responses to intrusions were added in Step 2 (Study 2A); PTSD symptoms, $R^2_{adj} = 0.53$, $\Delta R^2 = 0.43$, $\Delta F(3,411) = 129.40$, $p < .001$, anxiety, $R^2_{adj} = 0.14$, $\Delta R^2 = 0.08$, $\Delta F(3,411) = 13.16$, $p < .001$ and depression, $R^2_{adj} = 0.17$, $\Delta R^2 = 0.13$, $\Delta F(3,411) = 21.00$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.14$, $\Delta R^2 = 0.07$, $\Delta F(3,411) = 11.60$, $p < .001$. Thought suppression positively predicted PTSD symptoms, $\beta = 0.22$, $p < .001$, but not anxiety, $\beta = -0.06$, $p = .315$, depression, $\beta = -0.02$, $p = .772$, or post-traumatic growth, $\beta = -0.07$, $p = .220$. Rumination positively predicted PTSD symptoms, $\beta = 0.37$, $p < .001$, anxiety, $\beta = 0.29$, $p < .001$, depression, $\beta = 0.30$, $p < .001$, and post-traumatic growth, $\beta = 0.16$, $p = .005$. Numbing positively predicted PTSD symptoms, $\beta = 0.24$, $p < .001$ and depression, $\beta =$

0.12, p = .040 and post-traumatic growth, β = 0.20, p < .001 but not anxiety, β = 0.06, p = .304 (see Tables for detailed results).

The prospective study (Study 2B) did not find any significant effect of responses to intrusions (measured at baseline) on the outcomes at follow-up beyond age, gender, baseline and follow-up stressor severity, and baseline symptom severity on the respective measures.

Moderation by Culture of the Relationship between Responses to Intrusions and Post-Traumatic/Stress Outcomes (Hypothesis 4)

The addition of culture and its interaction terms with responses to intrusions in Step 3 of hierarchical multiple regression showed a significant improvement in the prediction model of PTSD symptoms, R^2_{adj} = 0.56, ΔR^2 = 0.04, ΔF(8,403) = 4.24, p < .001, anxiety, R^2_{adj} = 0.24, ΔR^2 = 0.11, ΔF(8,403) = 7.34, p < .001, depression, R^2_{adj} = 0.24, ΔR^2 = 0.09, ΔF(8,403) = 6.16, p < .001, and post-traumatic growth, R^2_{adj} = 0.16, ΔR^2 = 0.04, ΔF(8,403) = 2.46, p = .013 (see Tables 4.10, 4.11, and 4.12 for detailed results). Partly consistent with our hypothesis, there were significant interactions between culture and numbing in the prediction of PTSD symptoms and anxiety. The positive relationship between numbing and PTSD symptoms was stronger in the Taiwanese group compared to the British group, while the positive relationship between numbing and anxiety was weaker.

8.4.3 Coping Styles and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by Coping Styles (Hypothesis 5)

The hierarchical multiple regression analyses showed a significant improvement in all of the outcomes at baseline when coping styles were added in Step 2, Study 1A: PTSD symptoms, R^2_{adj} = 0.18, ΔR^2 = 0.18, ΔF(4,120) = 6.92, p < .001, anxiety, R^2_{adj} = 0.06, ΔR^2 = 0.08., ΔF(4,120) = 2.75, p = .031; Study 2A: PTSD symptoms, R^2_{adj} = 0.21, ΔR^2 = 0.12, ΔF(4,410) = 15.73, p < .001, anxiety, R^2_{adj} = 0.11, ΔR^2 = 0.06., ΔF(4,410) = 6.53, p <.001, depression, R^2_{adj} = 0.11, ΔR^2 = 0.08, ΔF(4,410) = 9.20, p < .001, and post-traumatic growth,

$R^2_{adj} = 0.25$, $\Delta R^2 = 0.16$, $\Delta F(4,410) = 21.83$, $p < .001$, after adding coping styles. Humour had opposite effects on PTSD symptoms in the two studies, Study 1A: $\beta = 0.26$, $p = .003$; Study 2A, $\beta = -0.10$, $p = .042$. Humour also negatively predicted anxiety (Study 2A), $\beta = -0.13$, $p = .007$, and depression (Study 2A), $\beta = -0.12$, $p = .017$. The use of instrumental support positively predicted post-traumatic growth (Study 2A), $\beta = 0.24$, $p < .001$. Denial positively predicted PTSD symptoms (Study 1A), $\beta = 0.28$, $p = .001$, PTSD symptoms (Study 2A), $\beta = 0.35$, $p < .001$, anxiety (Study 2A), $\beta = 0.22$, $p < .001$, depression (Study 2A), $\beta = 0.27$, $p < .001$, and post-traumatic growth (Study 2A), $\beta = 0.16$, $p < .001$ (see Tables for detailed results).

In the prospective study, after adding coping styles, the hierarchical multiple regression analyses showed a significant improvement in the predictions of anxiety (Study 2B), $R^2_{adj} = 0.57$, $\Delta R^2 = 0.02$, $\Delta F(4,355) = 3.13$, $p = .015$, and post-traumatic growth (Study 2B), $R^2_{adj} = 0.35$, $\Delta R^2 = 0.02$, $\Delta F(4,355) = 2.68$, $p = .032$, but not in depression (Study 2B), $R^2_{adj} = 0.33$, $\Delta R^2 = 0.00$, $\Delta F(4,355) = 0.33$, $p = .855$, or post-traumatic growth (Study 1B), $R^2_{adj} = 0.14$, $\Delta R^2 = 0.04$, $\Delta F(4,108) = 1.49$, $p = .212$. Humour negatively predicted PTSD symptoms (Study 2B), $\beta = -0.10$, $p = .010$ while denial positively predicted post-traumatic growth (Study 2B), $\beta = 0.13$, $p = .006$ (see Tables for detailed results).

<u>Moderation by Culture of the Relationship between Coping Styles and Post-Traumatic/Stress Outcomes (Hypothesis 6)</u>

The addition of culture and its interaction terms with responses to intrusions in Step 3 of hierarchical multiple regression showed a significant improvement in the prediction model of anxiety (Study 2A), $R^2_{adj} = 0.18$, $\Delta R^2 = 0.09$, $\Delta F(10,400) = 4.45$, $p < .001$, depression (Study 2A), $R^2_{adj} = 0.14$, $\Delta R^2 = 0.04$, $\Delta F(10,400) = 2.00$, $p = .032$, post-traumatic growth (Study 2A), $R^2_{adj} = 0.27$, $\Delta R^2 = 0.05$, $\Delta F(10,400) = 3.06$, $p < .001$, but not PTSD symptoms (Study 1A), $R^2_{adj} = 0.20$, $\Delta R^2 = 0.09$, $\Delta F(10,110) = 1.37$, $p = .206$, PTSD symptoms (Study

2A), $R^2_{adj} = 0.21$ $\Delta R^2 = 0.02$, $\Delta F(10,400) = 0.89$, $p = .548$, or anxiety (Study 1A), $R^2_{adj} = 0.08$, $\Delta R^2 = 0.09$, $\Delta F(10,110) = 1.19$, $p = .305$ (see Tables 4.10, 4.11, and 4.12 for detailed results). Partly consistent with our hypothesis, there was a significant interaction between culture and the use of instrumental support in the prediction of anxiety (Study 1A), but the subsequent separate group analyses found no significant prediction of the use of instrumental support for anxiety. Also, there was another interaction between culture and denial in the prediction of anxiety (Study 2A). The positive prediction of denial for anxiety was significant only in the British group, $\beta = 0.30$, $p < .001$, but not in the Hongkongese group, $\beta = 0.11$, $p = .226$, or the Taiwanese group, $\beta = 0.03$, $p = .718$.

In the prospective study, the addition of culture and its interactions with trait dissociation in Step 3 showed significant improvements in the prediction model of post-traumatic growth (Study 1B), $R^2_{adj} = 0.32$, $\Delta R^2 = 0.22$, $\Delta F(10,98) = 3.79$, $p < .001$, anxiety (Study 2B), $R^2_{adj} = 0.58$, $\Delta R^2 = 0.02$, $\Delta F(10,345) = 2.05$, $p = .028$, but not depression (Study 2B), $R^2_{adj} = 0.33$, $\Delta R^2 = 0.02$, $\Delta F(10,345) = 1.08$, $p = .375$, or post-traumatic growth (Study 2B), $R^2_{adj} = 0.35$, $\Delta R^2 = 0.02$, $\Delta F(10,345) = 1.37$, $p = .191$. In Study 1B, there were significant interactions between culture and the coping styles respectively (except denial) in the prediction of post-traumatic growth at follow-up. Only in the Hongkongese group, there were significant negative relationship between use of emotional support and post-traumatic growth, $\beta = -2.05$, $p = .048$, and the positive relationship between the use of instrumental support and post-traumatic growth, $\beta = 2.27$, $p = .030$. The separate group analysis did not find any significant prediction of post-traumatic growth by humour. In Study 2B, there were significant interactions between culture and denial in the prediction of anxiety, as well as between culture and use of emotional support in the prediction of post-traumatic growth at follow-up. The positive relationship between denial and anxiety, $\beta = 2.29$, $p = .019$, and the

negative relationship between use of emotional support and post-traumatic growth, β = -2.33, p = .022, were only found in the British group.

8.4.4 Trait Dissociation and Post-Traumatic/Stress Outcomes

Prediction of Post-Traumatic/Stress Outcomes by Trait Dissociation (Hypothesis 7)

The hierarchical multiple regression analyses showed a significant improvement in predicting most of the outcomes at baseline (Study 2A) when trait dissociation was added in Step 2; PTSD symptoms, $R^2_{adj} = 0.33$, $\Delta R^2 = 0.23$, $\Delta F(1,413) = 143.29$, $p < .001$, anxiety, Study 2A: $R^2_{adj} = 0.24$, $\Delta R^2 = 0.17$, $\Delta F(1,413) = 92.58$, $p < .001$, depression, $R^2_{adj} = 0.33$, $\Delta R^2 = 0.29$, $\Delta F(1,413) = 178.58$, $p < .001$, and post-traumatic growth, $R^2_{adj} = 0.11$, $\Delta R^2 = 0.03$, $\Delta F(1,413) = 15.69$, $p <.001$. As hypothesised, trait dissociation positively predicted PTSD symptoms, $\beta = 0.50$, $p <.001$, anxiety, $\beta = 0.42$, $p < .001$, depression, $\beta = 0.55$, $p < .001$, and post-traumatic growth, $\beta = 0.19$, $p < .001$, over and above what was predicted by age, gender and exposure to traumatic and stressful events (see Tables for detailed results).

The analysis of the follow-up data (Study 2B) did not show significant effects of trait dissociation (measured at baseline) on the outcomes at follow up over and above age, gender, baseline and follow-up stressor severity and baseline symptoms severity on the respective measures.

Moderation by Culture of the Relationship between Trait Dissociation and Post-Traumatic/Stress Outcomes (Hypothesis 8)

The addition of culture and its interactions with trait dissociation in Step 3 showed significant improvements in the prediction model of anxiety and depression symptoms at baseline (anxiety: $R^2_{adj} = 0.34$, $\Delta R^2 = 0.11$, $\Delta F(4,409) = 16.62$, $p < .001$; depression, $R^2_{adj} = 0.40$, $\Delta R^2 = 0.06$, $\Delta F(4,409) = 10.12$, $p <.001$, and post-traumatic growth, $R^2_{adj} = 0.12$, $\Delta R^2 = 0.02$, $\Delta F(4,409) = 2.81$, $p = .025$), but not of PTSD symptoms, $R^2_{adj} = 0.33$, $\Delta R^2 = 0.01$, $\Delta F(4,409) = 1.68$, $p = .153$ (see Tables 8.10, 8.11, and 8.12 for detailed results). This was due

to main effects of culture variables where British participants reported lower anxiety, depression, and post-traumatic growth than Hongkongese and Taiwanese participants. Partly consistent with our hypothesis, there were significant interactions between culture and trait dissociation in the prediction of anxiety symptoms. The positive relationship between trait dissociation and anxiety symptoms was weaker in the Hongkongese and Taiwanese groups compared to the British group.

In the prospective study (Study 2B), the addition of culture and its interactions with trait dissociation in Step 3 showed significant improvements in the prediction model of anxiety at follow-up (T2), $R^2_{adj} = 0.58$, $\Delta R^2 = 0.02$, $\Delta F(4,354) = 4.20$, $p = .002$, but not other post-traumatic/stress outcomes at T2. As hypothesised, the interaction between culture and trait dissociation in the prediction of anxiety symptoms was significant. The positive relationship between trait dissociation and anxiety symptoms at T2 was weaker in the Hongkongese group compared to the British group.

For a summary of all Chapter 8 results, please see Table 8.1.

Table 8.1 Results of the Associations of Coping Strategies with Post-Traumatic/Stress Outcomes in an Overview

Hypotheses	Results	Notes
Self-Concealment		
(H1) Association of Self-Concealment with Post-Traumatic/Stress Outcomes		
(H1.1) Self-concealment will positively predict psychopathology	**Yes**, a significant prediction (Study 2A)	
(H1.2) Self-concealment will negatively predict post-traumatic growth	**No** significant prediction	
(H2) Moderation by Culture of the Relationship between Self-Concealment and Post-Traumatic/Stress Outcomes		
(H2.1) The positive relationship between self-concealment and psychopathology *British > Hongkongese & Taiwanese*	**No** interaction	
(H2.2) The negative relationship between self-concealment and post-traumatic growth *Hongkongese & Taiwanese > British*	**No** interaction	
Responses to Intrusions		
(H3) Association of Responses to Intrusions with Post-Traumatic/Stress Outcomes		
(H3.1) Responses to intrusions will positively predict psychopathology	**Yes**, a significant prediction (Study 2A): thought suppression (for PTSD symptoms); rumination (for all psychopathology); numbing (for PTSD symptoms & depression)	
(H3.2) Responses to intrusions will negatively predict post-traumatic growth	**Yes**, a significant prediction (Study 2A): rumination and numbing	*BUT a positive prediction*
(H4) Moderation by Culture of the Relationship between Responses to Intrusions with Post-Traumatic/Stress Outcomes		
(H4.1) The positive relationship between responses to intrusions (thought suppression, rumination, and numbing) and psychopathology *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A): culture & numbing (for PTSD symptoms & anxiety)	*BUT the interaction between culture & numbing (for PTSD) Taiwanese > British*
(H4.2) The positive relationship between responses to intrusions (thought suppression,	**No** interaction	

rumination, and numbing) and post-traumatic growth *Hongkongese & Taiwanese > British*		
Coping Styles		
(H5) Association of Coping Styles with Post-Traumatic/Stress Outcomes		
(H5.1) Humour will negatively predict psychopathology	**Yes**, a significant prediction: (Study 1A) PTSD symptoms; (Study 2A) PTSD symptoms, anxiety, depression; (Study 2B) PTSD symptoms	*BUT a positive prediction of PTSD symptoms (Study 1A)*
(H5.2) Humour will positively predict post-traumatic growth	**No** significant prediction	
(H5.3) Use of emotional support will negatively predict psychopathology	**No** significant prediction	
(H5.4) Use of emotional support will positively predict post-traumatic growth	**No** significant prediction	
(H5.5) Use of instrumental support will negatively predict psychopathology	**No** significant prediction	
(H5.6) Use of instrumental support will positively predict post-traumatic growth	**Yes**, a significant prediction (Study 2A)	
(H5.7) Denial will positively predict psychopathology	**No** significant prediction	
(H5.8) Denial will negatively predict post-traumatic growth	**Yes**, a significant prediction (Study 2B)	*BUT a positive prediction*
(H6) Moderation by Culture of the Relationship between Coping Styles with Post-Traumatic/Stress Outcomes		
(H6.1) The negative relationship between humour and psychopathology: *British > Hongkongese & Taiwanese*	**No** interaction	
(H6.2) The positive relationship between humour and post-traumatic growth *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 1B)	*BUT no significant result found in separate group analyses*
(H6.3) The negative relationship between use of emotional support and psychopathology *Hongkongese & Taiwanese > British*	**No** interaction	

(H6.4) The positive relationship between use of emotional support and post-traumatic growth *Hongkongese & Taiwanese > British*	**Yes**, a significant interaction (Studies 1B & 2B – step 2)	*BUT significant in Hongkongese only (Study 1B) & in British only (Study 2B)*
(H6.5) The positive relationship between the use of instrumental support and psychopathology *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction: anxiety (Study 1A – step 2)	*BUT no significant result found in separate group analyses*
(H6.6) The negative relationship between the use of instrumental support and post-traumatic growt *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 1B)	*BUT significant in Hongkongese only (Study 1B)*
(H6.7) The positive relationship between denial and psychopathology *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction: anxiety (Studies 2A – both & 2B – step 2)	*BUT significant in British only (Studies 2A & 2B)*
(H6.8) The negative relationship between denial and post-traumatic growth *British > Hongkongese & Taiwanese*	**No** interaction	
Trait Dissociation		
(H7) Association of Trait Dissociation with Post-Traumatic Stress Outcomes		
(H7.1) Trait dissociation will positively predict psychopathology	**Yes**, a significant interaction (Study 2A)	
(H7.2) Trait dissociation will negatively predict post-traumatic growth	**Yes**, a significant prediction (Study 2A)	*BUT a positive prediction*
(H8) Moderation by Culture of the Relationship between Trait Dissociation and Post-Traumatic Stress Outcomes		
(H8.1) The positive relationship between trait dissociation and psychopathology: *British > Hongkongese & Taiwanese*	**Yes**, a significant interaction (Study 2A & 2B): anxiety	*BUT British > Hongkongese only (Study 2B)*
(H8.2) The negative relationship between trait dissociation and post-traumatic growth: *Hongkongese & Taiwanese > British*	**No** interaction	

8.5 Discussion

8.5.1 Self-Concealment and Post-Traumatic/Stress Outcomes

The significant prediction of psychopathology by self-concealment was consistent with previous findings (e.g., Chung, Chen, & Han, 2022; Edmonds, Masuda, & Tully, 2014; Mendoza, Goodnight, Caporino, & Masuda, 2018). Self-concealment, although it preserves the well-being of a collective in some sociocultural contexts (e.g., Wallace & Constantine, 2005), has been generally regarded as a maladaptive coping style in other contexts (Masuda et al., 2011; Masuda, Boone, & Timko, 2011). This is due to the fact that through self-concealment, the suppression of distressing emotions can further lead to greater physiological arousal and exacerbate intrusive thoughts, thus impeding one's ability to cope with the aftermath of the traumatic/stressful event (Mauss & Gross, 2004).

The non-significant prediction of post-traumatic growth by self-concealment may be explained by internal mindfulness. Self-concealment involves 'the conscious concealment of personal information (thoughts, feelings, actions or events) that is highly intimate and negative in valence (Larson & Chastain, 1990). The disclosure of one's trauma-related distress may help the process of cognitive restructuring but is not a necessary act of experiencing post-traumatic growth. The key to post-traumatic growth is, according to Wang, Lee and Yates (2019), a transition from compromised-self (which is featured by affect dysregulation, existential fears, meaninglessness, distorted-self and other-concepts) and to transformed-self (which is featured by self-acceptance, self-fulfillment, self-worth and self-exploration). This transformation occurs in the three areas of post-traumatic growth, namely perception of self, interpersonal relationships, and philosophy of life (Tedeschi & Calhoun, 1995). To achieve post-traumatic growth, sharing trauma with others is not the only way; self-reflection, such as forgiveness and compassion, would help experience positive psychological changes and personal transformations (Wang, Lee, & Yates, 2019). This

suggests that no matter through inner or external resources, individuals who derive meaning from their trauma can experience personal growth and resilience (Tedeschi, Park, & Calhoun, 1998).

8.5.2 Responses to Intrusions and Post-Traumatic/Stress Outcomes

The significant prediction of psychopathology by responses to intrusions has been widely supported in previous literature (e.g., Ehring, Ehlers, & Glucksman, 2008). Thought suppression, rumination, and numbing contribute to the maintenance of trauma-related psychopathology in different ways. First, thought suppression can result in a rebound effect, where those thoughts become more frequent and distressing (Najmi & Wegner, 2009; Wegner, Schneider, Knutson, & McMahon, 1991). Second, rumination involves repetitive thoughts about the trauma and its consequences, leading to the reliving of the traumatic events and heightened negative emotions in the short term (e.g., Michael, Halligan, Clark, & Ehlers, 2007) and to the maintenance of unhelpful appraisals (Ehlers & Clark, 2000). Third, numbing interferes with the emotional processing and integration of traumatic experiences (e.g., Litz, 1992). Either of these responses to intrusions may prevent individuals from engaging in adaptive coping strategies (e.g., seeking help), making the symptoms more salient and difficult to control (e.g., Clohessy & Ehlers, 1999).

The unexpected, positive relationship between rumination and post-traumatic growth can be attributed to the operational definition of rumination (Treynor, Gonzalez, & Nolen-Hoeksema, 2003) Treynor and his colleagues (2003) proposed two types of rumination, brooding (referring to ‘a passive focus on the causes and consequences of negative emotions or experiences’) and ‘reflective pondering’ (referring to a purposeful act to ‘turn inwards to enagage in adaptive problem solving’) (p. 85). For the current finding, one possible explanation is that the form of ‘rumination’ the participants may employ was ‘reflective pondering’, which is thought to facilitate cognitive processing and post-traumatic growth

(e.g., Stockton, Hunt, & Joseph, 2011). Furthermore, the relationship between post-traumatic symptoms and growth is not linear (Kleim & Ehlers, 2009), but curvilinear. At low symptom levels, there is a positive relationship, which was also found in the current study, and only for people at high symptom levels, the association with growth is negative. Thus, our hypotheses, which were based on the assumption of a negative correlation between rumination and post-traumatic growth, did not apply.

The positive relationship between numbing and anxiety was stronger in Taiwanese than in British participants. In a collectivistic culture like Taiwan, people often prioritise group harmony and interdependence over individual interests (Triandis, Leung, Villareal, & Clack, 1985; Wagner, & Moch, 1986). Therefore, they view excessive emotional expression and overt distress as disruptive to relationships (Safdar et al., 2009). In this context, numbing responses (including emotional detachment) may be a way to manage stress without triggering emotional conflicts or burdening others with one's emotions. However, this avoidance coping could lead to a cycle where numbing exacerbates anxiety in the long run. This vicious cycle may occur only in anxiety, which is primarily characterised by excessive worries (Matthews, 1990), which make Taiwanese detach from their emotions rather than share with others.

8.5.3 Coping Styles and Post-Traumatic/Stress Outcomes

There was a significant negative association of humour with psychopathology; the only exception was its positive prediction of PTSD symptoms in Study 1A. These seemingly contradictory findings can be explained by different types of humours. Substantial research on individual differences in humour has identified four styles of humour (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003), namely (1) affiliative humour, which is used to strengthen interpersonal relationships by engaging in witty banter or making amusing remarks; (2) self-enhancing humour, which is used to enhance the self by maintaining a

humorous perspective in the face of adversity; (3) aggressive humour, which is used to serve the purpose of self-enhancement by sarcasm, teasing or ridiculing others; (4) self-defeating humour, which is used to strengthen the bonding with others at the expense of the self through self-disparagement (Martin, 2007). Affiliative and self-enhancing humour are benign types while aggressive and self-defeating humour are injurious ones (e.g., Boerner, Joseph, & Murphy, 2017). There is a possibility that Study 2 participants tended to engage in the benign style of humour while Study 1 participants were inclined to use the injurious style. A growing body of literature has demonstrated that the use of benign humour is negatively associated with PTSD symptoms (e.g., Besser et al., 2015), anxiety (e.g., Martin, 2003) and depression (e.g., Erickson & Feldstein, 2007), while the use of injurious humour is positively associated with psychological difficulties (e.g., Edwards & Martin, 2010). Given that Study 1 participants are all students in Oxford, future studies could focus on whether British culture increases the likelihood of using the injurious style of humour.

The positive prediction of post-traumatic growth by the use of instrumental support is consistent with previous findings (e.g., Scrignaro, Barni, & Magrin, 2011). This implies that people's recognition of their need to ask for help, which facilitates the development of post-traumatic growth (Gil-González, Martín-Rodríguez, Conrad, & Pérez-San-Gregorio, 2022). The relevance to post-traumatic growth was found in the use of instrumental support but not the use of emotional support. This may be due to whether the expression of emotional discomfort can promote personal growth varies across cultures. However, seeking social support for instrumental reasons (e.g., advice, assistance, or information) may directly help people reframe traumatic/stressful events in a way that promotes post-traumatic growth (e.g., Henson et al., 2021; Barskova, & Oesterreich, 2009). Interestingly, the negative association of the use of instrumental support with post-traumatic growth was only found in the Hongkongese group. Financial hardship has been one of the key stressors in Hong Kong

(e.g., Chau, Yen, Morley, & Woo, 2008). Seeking instrumental support (e.g., financial resources) may solve the problem but meanwhile, reduce the likelihood of deriving meanings from their stressful experience for personal growth.

Contrary to our hypothesised direction, there was a positive prediction of post-traumatic growth by denial. Undoubtedly, the denial of a problem only delays potential solutions or creates additional problems (Matthews, Kuller, Siegel, Thompson, & Varat, 1983). But this only happens when the stressor cannot be profitably ignored (Carver et al., 1989). On the contrary, denial is thought to facilitate coping and trauma-related growth (Breznitz, 1983). Some researchers argued that denial in the early stage can provide short-term relief because attention may be overwhelming; it would impede coping later (e.g., Suls & Fletcher, 1985). Therefore, 'denial' that is positively related to post-traumatic growth may refer to 'initial denial', rejecting the trauma at the first encounter. The finding that positive prediction of denial for anxiety was only found in the British group may be due to varied perception of denial across cultures. In the British culture, there may be an emphasis on emotional restraint, where denial is seen as a socially acceptable way of managing anxiety compared to other cultures. This cultural norm can enhance the predictive power of denial for anxiety in the British culture.

Despite its non-significant prediction of post-traumatic growth at T2, use of emotional support significantly interacted with culture in the longitudinal studies. This coping style significantly predicted post-traumatic growth only in the Hongkongese group (Study 1B) or in the British group (Study 2B). There may be two implications. First, the effect of use of emotional support on post-traumatic growth may be delayed. Emotional support refers to providing care, acceptance and reassurance that makes them feel valued and important (Burleson, 2003). It may take time to feel reassured and then reflect on the stressful experience for growth. Second, the effect of emotional support on post-traumatic growth

depends on the stressors. As discussed in Chapter 3, the stressful events commonly reported in Hongkongese group (Study 1B) and in the British group (Study 2B) is acculturation stress.

8.5.4 Trait Dissociation and Post-Traumatic/Stress Outcomes

As predicted, trait dissociation significantly predicted all post-traumatic/stress outcomes. The findings regarding psychopathology are supported by previous literature (e.g., Bryant, 2007; Kihlstrom, Glisky, & Angiulo, 1994) that trait dissociation is a stable characteristic that exists before and after traumatic events and thus may be a risk factor for trauma-related psychopathology. But, contrary to our hypothesised direction, the relationship between trait dissociation and post-traumatic growth was positive. This unintuitive, positive relationship may relate to Lahav, Bellin, and Solomon's (2016) theoretical model, where the report of post-traumatic growth may stem from the mechanism of trait dissociation. Individuals with a high level of trait dissociation cannot retrieve traumatic materials and thus form a disintegrated belief system for adjustment (Hobfoll et al., 2007; Lahav et al., 2016). Also, trait dissociation is an expression of a fragmented sense of self after trauma (Murray, Ehlers, & Mayou, 2002), which may correspond to the compromised-self in the process of post-traumatic growth (Wang, Lee, & Yates, 2019).

The enhancing effect of trait dissociation on anxiety in the British group may be due to the unique characteristics of individualistic cultures. First, there is an emphasis on personal consistency and authenticity where people are expected to exhibit stable personality traits across different situations (e.g., English & Chen, 2007). The behaviour of individuals with a high trait dissociation appears inconsistent or contradictory (e.g., Conrad & Morrow, 2000). This may create a sense of incongruence with the cultural norm and thus lead to anxiety. Second, personal identity and self-esteem are valued in individualistic cultures (e.g., Wang & Ollendick, 2001). Hence, individualists may perceive the experience of trait dissociation as a threat to their self-identity. This threat to one's self-identity can lead to increased anxiety as

they grapple with questions about ‘who am I?’. Third, individualists emphasise on personal autonomy and independence (e.g., Rhee, Uleman, Lee, & Roman, 1995). Trait dissociation may create internal conflicts as individuals feel pressure to conform to cultural ideals of consistency while coping with the reality of their changing behaviour. These internal pressures can contribute to a higher level of anxiety.

Chapter 9

General Discussion

9.1 Review of Results

Based on Ehlers and Clark's (2000) cognitive model of PTSD, we established a link between cognitive/behavioural processes (self-concept, appraisals, cognitive processing styles, autobiographical memory, and coping strategies) and post-traumatic/stress outcomes (psychopathology and post-traumatic growth) in a cross-cultural context. The main feature of the present research was to conceptually separate cultural differences in the manifestation of the cognitive/behavioural processes from cultural differences in psychological well-being as a consequence of those processes. The latter part, often referred to as 'culture-specific cognitive/behavioural processes', has been overlooked in a considerable amount of cross-cultural studies. As shown in Chapter 3, the British group reported significantly lower levels of symptoms and post-traumatic growth than the Hongkongese and Taiwanese groups. This thesis aimed to identify those culture-specific cognitive/behavioural processes that contribute to the group differences in those outcomes. In this case, we compared not only levels of the cognitive/behavioural processes between cultures (in Chapters 4 and 5) but also the predictive power of those processes on post-traumatic stress outcomes (in Chapters 6, 7, and 8).

9.1.1 Cultural Differences in Appraisals, Memory and Coping Strategies

The present study showed the influences of culture on appraisals, memory, and coping strategies. In most of the self-report measures (see Chapter 4) and objective measures (see Chapter 5), the British group was significantly different (with a higher or lower score) from Hongkongese and/or Taiwanese groups while the latter two groups seldom differed from each other. These notable cultural variations in

cognitive/behavioural processes could be partly attributed to individualism versus collectivism. According to Hofstede (1984), the score of individualism in the United Kingdom (89), Hong Kong (25) and Taiwan (17) indicated that Hong Kong tends to lean towards collectivism with a relatively smaller difference from Taiwan (when compared to the United Kingdom). This indication was supported by Hofstede (1984) that Chinese-majority societies are characterised by collectivism. Lockett (1988) further proposed that Hong Kong and Taiwan shared four key elements (i.e., respect for age and hierarchical position, group orientation, concept of face, and importance of relationships). These elements may contribute to a unique set of responses (cognitive and behavioural processes) to traumatic/stressful events. Hence, both the empirical findings of this research and the theoretical literature supported our decision to set the British group as a reference category in our regression analyses to contrast the two Chinese groups (in Chapters 4, 5, and 6).

9.1.2 Appraisals and Post-Traumatic/Stress Outcomes in the Cross-Cultural Context

The findings of the PTCI2 shed light on the cultural influence on appraisals of traumatic/stressful events, which in turn, contributes to individuals' psychological well-being. The British culture, compared to the other two cultures, may emphasise individualistic values and encourage a more assertive and self-assured self-concept, leading to a stronger rejection of negative thoughts about oneself and tendencies to blame oneself or dwell on unfairness (e.g., Markus & Kitayama, 1991). These rejections in the British group may lead to a stronger rebound of negative thoughts about self and a more pronounced level of anxiety than in the Taiwanese group. In contrast, the reassured self-concept contributed to a sense of fair play in the society. Despite the well-established and historical British class system, the low score of

power distance (35) in the United Kingdom indicated that the British group believes that inequalities among people should be minimised. This inherent tension implied that people from the British culture believe that where one is born should not limit one's achievement while acknowledging the importance of birth rank. This sense of fair play in the British culture may weaken the relationship between preoccupation with unfairness and anxiety.

9.1.3 Autobiographical Memory Specificity and Post-Traumatic/Stress Outcomes in the Cross-Cultural Context

Autobiographical memory specificity (AMS) can serve as a culture-specific predictor for post-traumatic/stress outcomes. The present research provided insights into cultural influences on AMS and its implication for psychological well-being. Reduced AMS is thought to be a cognitive marker of psychopathology (e.g., Sumber, Giffth, & Mineka, 2010). It is due to overgeneral memory that may impair the ability to accurately evaluate the level of threat of the traumatic events and to generate adaptive coping strategies (e.g., Raes et al., 2005). In British culture, the emphasis on individualism and self-expression enables individuals to recall specific autobiographical memories, which in turn, help in the elaboration of contextual details and integration into the autobiographical knowledge base. For neutral stimuli, individuals who retrieve memories of higher AMS may experience lower levels of anxiety symptoms. However, the link between the AMS for the negative stimuli and post-traumatic outcomes varied across cultures. The buffering effect of the AMS for neutral cues on anxiety was only present in the British group. It is possible that the cultural norms and socialization processes in the British culture may promote a greater focus on individual experiences and emotions, allowing for a stronger association between AMS and anxiety reduction. On the other hand, the varied

relationship between AMS for negative cues and post-traumatic growth across cultures can be explained by the perception of traumatic/stressful events. The British group tended to have an individual focus and may easily gain insights for personal growth if the negative memories became more specific. In contrast, the Hongkongese group may define the negative impact of the events on their relationship with others. Therefore, the specific details of the event may reduce the likelihood of post-traumatic growth as collectivists may view it as out of their control.

9.1.4 Coping Strategies and Post-Traumatic/Stress Outcomes in the Cross-Cultural Context

Trait dissociation is an example to illustrate how culture-specific coping strategies relate to post-traumatic/stress outcomes. The Hongkongese group reported a higher level of trait dissociation than the other two cultural groups. This could be highly linked to the cultural context of Hong Kong with a high level of stress and collectivistic values, thus contributing to a high level of trait dissociation. On the other hand, individuals with higher levels of trait dissociation are more likely to experience symptoms of trauma-related psychopathology (e.g., Michal et al., 2007; Panter-Brick, Grimon, & Eggerman, 2014). The positive relationship between trait dissociation and anxiety (observed in both cross-sectional and prospective studies) was weaker in the Hongkongese group (compared to the British group). This may relate to the Hongkongese culture, where the sense of autonomy and relatedness are equally important. The efforts to strike a balance between two basic needs may promote trait dissociation as a coping strategy to temporarily detach from anxiety. This habituation may attenuate the adverse effect of trait dissociation on psychopathology.

9.2 Strengths

The present research is one of the first to explore such a wide range of cognitive/behavioural processes potentially associated with post-traumatic/stress outcomes. The research design is characterised by several notable strengths.

First, in the main study (Study 2), we recruited a large sample size of 420 participants and ensured a balanced representation of culture (140 participants from each culture) and gender (210 participants from each gender). This balanced sample allowed for the use of Pillai's trace as a robust test statistic without explicit tests for equality of covariance matrices (Field, 2018).

Second, this longitudinal research was aimed at yielding a temporal, directional relationship between cognitive/behavioural processes at baseline (T1) and post-traumatic stress outcomes in the follow-up (T2). The remarkable follow-up rate (91.7%) exceeded the average rate (84.3%) of similar 6-month longitudinal studies (e.g., Yeterian, Dow, & Kelly, 2012).

Third, the inclusion of both self-report measures and objective measures in both Studies 1 and 2 facilitated the collection of comprehensive data, allowing for rigorous testing of hypotheses across measurement methods.

Finally, the present research aimed to address potential language discrepancies, which are a common difficulty in cross-cultural research. In Study 2, for the Hongkongese and Taiwanese participants, we used well-validated questionnaires or translations of the original measurements and trained the local experimenters who administered the study in their respective languages. Even for the same language, we considered the nuanced differences in the translation of traditional Chinese used in Hong Kong and Taiwan. These practices not only reduced the

potential difficulties in understanding the tasks but more importantly, minimised the confounding effects on results caused by ethnical differences.

9.3 Limitations

We acknowledge the limitations of the research, many of which are shared by previous cross-cultural studies.

The first limitation refers to the unintended group differences in some demographic factors. For example, a significantly higher family income level was found in the British group than in the other two groups (see Chapter 3). Moreover, although the University of Hong Kong and the National Taiwan University were among the top universities in the local region, the University of Oxford is expected to be far more competitive in terms of the admission rate. British participants in Study 2 were mostly Oxford students, who are believed to be more intelligent than their Hongkongese and Taiwanese counterparts. This intelligence difference, which was not examined in this research, may explain some of the observed group differences in variables.

The second limitation concerns the specific sample characteristics. The sample of Study 2 (compared to Study 1) was recruited from the local countries/regions and thus more representative of the three cultures. However, the study focused on university students and thus recruited a young and educated sample with strict ethnicity criteria (aged 18-25, native or almost native). We therefore need to be cautious when making inferences from the current findings to older, less educated, or multi-cultural/multi-lingual samples. The observed relationships may also not directly generalise to clinical samples with a smaller range of (high) symptom scores. Although we set quotas for different sub-groups within the target population (e.g.,

age, gender, and culture) to ensure diverse representation, it was a non-probability method. Hence, it remains unclear whether recruiting a convenience sample by adverts led to over- or under-sampling of people with high-stress symptoms and replication with random sampling could determine whether the results are representative. In future research, we could use social media platforms (which allow for targeted advertising based on demographics and interests) and engage with community organizations to reach underrepresented groups within a population, resulting in more representative samples.'

Third, the correlational design of this research was a main limitation. In addition to cross-sectional data (in Study 2A), we collected the longitudinal data (in Study 2B) to yield a temporal relationship between the cognitive/behavioural processes and post-traumatic/stress outcomes. However, even significant predictions in Study 2B only imply directional relationships but not cause-and-effect relationships. Besides, the T2 values of the predictors (e.g., self-concept and appraisals) were not collected and controlled for when we used the predictors at T1 for outcomes (e.g., PTSD symptoms, anxiety, and depression) at T2. In this case, we are unsure whether the supposed temporal effects (from T1 to T2) simply reflect concurrent associations between T2 predictors and T2 outcomes. The T2 respective measure of life events was also potentially biased by concurrent mental state. Theoretically, the next step to address the causality is to conduct experiments to manipulate the processes and measure their effect on post-traumatic outcomes. Practically, these experiments, which involve traumatic and stressful events, can lead to ethical concerns and risk to psychological safety.

Finally, it was not possible to include additional analyses within the word limit. Ideally, some tests of mediated moderation should be included. For example,

we could have tested whether individualism/collectivism or independent/interdependent self-construals mediated the moderating role of culture on the relationship between cognitive/behavioural processes and post-traumatic outcomes.

Despite these limitations, our research is characterised by a large and balanced sample size. Moreover, we conducted manipulation checks (with the INDCOL and the self-construal scale) to compare the culture at baseline in Study 2. This additional analysis is an advanced modification of our study baseline comparison, which is rarely observed in other cross-cultural studies. Therefore, the findings derived from the triple cultural comparison can contribute to the literature on individualism versus collectivism.

9.4 Future Directions

A balance between data-driven and exploratory approaches can provide a more comprehensive understanding of psychopathology across cultures. This thesis includes a wide range of specific hypotheses that were not formally pre-registered before data collection. This decision was due to the evolving research design (from Study 1 to Study 2) and the exploratory nature of the studies. However, pre-registration is strongly recommended in future studies, particularly those with multi-phase designs, as it helps differentiate the core hypotheses from any exploratory analyses that may emerge during data collection, providing clearer guidance on the confirmatory strengths of the results. Additionally, pre-registration reduces the risk of p-hacking or selective reporting, thus enhancing replicating and credibility of research. A unique feature of this research is its integration of hypothesis-driven and exploratory approaches, which are complementary. Hypothesis-driven components offered testable predictions (e.g., appraisal, memory and coping strategies) that anchored the research in well-established theories (e.g., Ehlers & Clark, 2000), serving focal points for data

interpretation. Meanwhile, the exploratory approach allowed flexibility to reveal unexpected patterns and generate new insights beyond initial expectations (e.g., holistic versus analytic thinking). These exploratory insights informed subsequent hypotheses and deepened understanding of the topic. Given the exploratory nature of this work, alpha inflation from multiple analyses was not addressed. Future researchers are advised to specify key predictors or apply a Bonferroni correction to adjust significance levels when conducting multiple tests. This exploratory approach of this research aligned with its goal of identifying 'culture-specific cognitive/behavioural processes'. Future researchers should aim to balance the data-driven and exploratory methods by pre-registering core hypotheses while remaining open to insights that emerge from the data.

Future researchers should be mindful of methodological adjustments when interpreting results, especially in longitudinal studies where consistency across time points is crucial. While Study 1 served a basis for Study 2, some changes to the measures were made between or/and within the studies on three occasions. First, a brief version of certain measures was used in Study 1; if there were significant findings, we transitioned to the full version in Study 2. In such cases, we aligned the sub-scales between the two versions, such as pairing 'self-distraction' (in the Brief COPE) with 'mental disengagement' (in the COPE Inventory) to preserve comparability. Second, improvements were made across studies to enhance assessment quality. For example, the Twenty Statement Test was adjusted across studies to reduce priming effect (by separating question sets into two pages) and gather additional variables (e.g., participants' degree of self-identification with their culture) to be controlled in subsequent analyses. Third, we were able to update some measures only at a later stage. For example, the Life Events Checklist was modified

not only within studies (e.g., a list of stressful events was added in Study 1B) but also between studies (e.g., we did not obtain the DSM-5 version, LEC-5, including a new type of exposure 'as part of job' until Study 2). These modifications may introduce variance stemming from methodological changes rather than actual differences in data. Moreover, the use of more precise or nuanced measurements in Study 2 may contribute to more reliable findings but limit the generalisability of Study 1 results. To enhance consistency, future researchers could incorporate the refined measures from Study 2 across different study phases, yielding a higher level of comparability and data quality.

Future research could also broaden the exploration of cultural moderation by examining both culturally invariant and variant predictors. This research focused moderation analyses on predictors that exhibited significant cultural differences. This approach operated on the premise that observed variations in cognitive and behavioural processes between cultural groups may reflect underlying social or contextual factors that could meaningfully influence the predictor-outcome relationship. By focusing on culturally variable predictors, we aimed to minimise the detection of spurious or weak moderation effects. However, we recognise that this decision may have limited our ability to identify cultural moderation in relationships where the predictors did not show mean-level cultural differences. Even if predictor levels appear similar across groups, it is possible that culture could still moderate the relationship between cognitive/behavioural processes and post-traumatic outcomes. For instance, while two cultural groups may report similar levels of a predictor (e.g., self-esteem), culturally specific norms or values may shape its association with psychopathology and post-traumatic growth differently. Therefore, researchers could

expand the scope of cultural moderation analysis to include culturally invariant predictors of post-traumatic outcomes.

To better understand the Chinese collectivistic culture, we could extend the investigation to mainland China. One of the interesting findings was the uniqueness of Chinese culture, which may explain non-significant differences between Hong Kong and Taiwan. The collectivistic characteristics in Chinese culture are thought to originate from Confucianism (Li, Lam & Ping Fu, 2000). According to Confucian philosophy, there are five key relationships, namely (1) emperor-subject, (2) father-son, (3) husband-wife, (4) elder-younger brothers, and (5) friend-friend. Most of these relationship involves family members (Gambrel & Cianci, 2003). This emphasis on family cohesiveness may even lead to a Chinese hierarchy of needs, where the sense of belonging becomes the basic need (Nevis, 1983). Therefore, Chinese culture is worthy of further investigation. Most of the Chinese population lives in mainland China rather than in Hong Kong and Taiwan, and the population has been growing in China until 2022 (e.g., Textor, 2021; Yang, Jiang, & Sánchez-Barricarte, 2022). Particularly Han Chinese, which constitute 92% of China's population (Chen et al., 2009), will be the target of the sample. Given that many different sub-cultures co-exist in China, the recruitment of participants could be conducted from different parts of mainland China in proportion to the population distribution in the country. In this case, a sample of mainland Chinese, a highly representative study of Chinese culture, would increase the external validity of the research findings.

9.5 Implications of the Research

For theoretical implications, the present research has tested the cultural sensitivity of different scales used in cross-cultural psychology. For instance, trauma

appraisals are one of the culture-specific cognitive processes in this research. Both the Revised Post-Traumatic Cognition Inventory (PTCI2) and the Public and Communal Self Appraisals Measure (PCSAM) are used to assess appraisals of trauma and its post-traumatic psychological adjustment. The present research found that both are significant predictors of post-traumatic/stress outcomes. However, the PTCI2 detected cultural differences in both Studies 1 and 2 while the PCSAM showed similar results only in Study 2 (with a larger sample size than Study 1). While Engelbrecht and Jobson (2014) suggested that the PTCI2 may tap into the individualistic-type appraisals rather than the collectivistic-type appraisals, the results indicated that the PTCI2 is more sensitive to cultural differences regardless of the sample size.

For clinical implications, the present research has specified several culture-specific cognitive/behavioural processes for culturally informed treatment. For example, the present research identified 'negative thoughts about the self' as a culture-specific cognitive process. Negative appraisals are thought to determine the level of the perceived threat of trauma to the self (Ehlers & Clark, 2000). According to Jobson and O'Kearney (2009), the threat to the autonomous self is greater for trauma survivors from individualistic cultures while the threat to the relatedness-self is greater for those from collectivistic cultures. Cognitive-behavioural therapy, as a group of evidence-based treatments, is aimed at challenging irrational thoughts, changing unhelpful behavior, improving emotional regulation, and developing helpful coping strategies (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012). Hence, the success of CBT depends on cognitive and behavioural processes, both of which are susceptible to cultural influences. The present findings have highlighted the importance of treatment-induced changes in dysfunctional, post-traumatic cognitions, and specifically, negative thoughts about the self after trauma and stress exposure. For

example, victims of sexual assault from collectivistic cultures tend to process the trauma in a way that produces a threat to relatedness-self and have a negative view about themselves as a part of self is disrupted by their inability to 'face' their partners, family, and neighborhood. The efficacy of psychological treatment (e.g., cognitive-behavioural therapy) in the Chinese population would be enhanced if a therapist addresses those negative thoughts about the self.

We hope that our cross-cultural, exploratory research has laid a foundation for further investigation. Future studies can be built on our strengths and lessons to contribute to the understanding of cultural influences on stress responses to traumatic/stressful events.

References

Alea, N., & Bluck, S. (2003). Why are you telling me that? A conceptual model of the social function of autobiographical memory. *Memory*, *11*(2), 165-178.

Aleman, A., Agrawal, N., Morgan, K. D., & David, A. S. (2006). Insight in psychosis and neuropsychological function: meta-analysis. *The British Journal of Psychiatry*, *189*(3), 204-212.

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders (DSM-5®)*. American Psychiatric Pub.

Amir, N., Stafford, J., Freshman, M. S., & Foa, E. B. (1998). Relationship between trauma narratives and trauma pathology. *Journal of traumatic stress*, *11*, 385-392.

Andresen, E. M., Malmgren, J. A., Carter, W. B., & Patrick, D. L. (1994). Screening for depression in well older adults: Evaluation of a short form of the CES-D. *American journal of preventive medicine*, *10*(2), 77-84.

Annamoradnejad, I., Fazli, M., Habibi, J., & Tavakoli, S. (2019). Cross-cultural studies using social networks data. *IEEE Transactions on Computational Social Systems*, *6*(4), 627-636.

Apfelbaum, E. P., Phillips, K. W., & Richeson, J. A. (2014). Rethinking the baseline in diversity research: Should we be explaining the effects of homogeneity?. *Perspectives on Psychological Science*, *9*(3), 235-244.

Arieti, S., & Bemporad, J. R. (1980). The psychological organization of depression. *The American Journal of Psychiatry*, *137*(11), 1360-1365.

Armour, C., Karstoft, K. I., & Richardson, J. D. (2014). The co-occurrence of PTSD and dissociation: Differentiating severe PTSD from dissociative-PTSD. *Social psychiatry and psychiatric epidemiology*, *49*, 1297-1306.

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American psychologist*, *55*(5), 469.

Arnett, J. J. (2007). Emerging adulthood: What is it, and what is it good for?. *Child development perspectives*, *1*(2), 68-73.

Arslan, M. (2001). The work ethic values of protestant British, Catholic Irish and Muslim Turkish managers. *Journal of Business Ethics*, *31*, 321-339.

Arthur, C. E., & Arthur, C. E. (2019). The Spirit of Rebellion: National Heroes, Dom Boaventura, and Personifying National Identity. *Political Symbols and National Identity in Timor-Leste*, 107-135.

Asukai, N., Kato, H., Kawamura, N., Kim, Y., Yamamoto, K., Kishimoto, J., ... & Nishizono-Maher, A. (2002). Reliabiligy and validity of the Japanese-language version of the impact of event scale-revised (Ies-RJ): four studies of different traumatic events. *The Journal of nervous and mental disease*, *190*(3), 175-182.

Avdela, E. (2004). Between duties and rights: gender and citizenship in Greece, 1864–1952. In *Citizenship and the Nation-State in Greece and Turkey* (pp. 130-156). Routledge.

Baddeley, A. D. (1997). *Human memory: Theory and practice*. psychology press.

Baltes, P. B. (1997). On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory. *American psychologist*, *52*(4), 366.

Baraldi, C. (2008). Promoting self-expression in classroom interactions. *Childhood*, *15*(2), 239-257.

Bargh, J. A. (1990). Auto-motives: Preconscious determinants of social interaction. *Handbook of motivation and cognition: Foundations of social behavior*, *2*, 93-130.

Bargh, J. A., & Morsella, E. (2008). The unconscious mind. *Perspectives on psychological science*, *3*(1), 73-79.

Barnes, S. X. D. (2001). *Individualism-collectivism and ego development: A study of the Chinese culture (Taiwan)*. (61), ProQuest Information & Learning, US.

Baron, J. M., & Bluck, S. (2009). Autobiographical memory sharing in everyday life: Characteristics of a good story. *International Journal of Behavioral Development*, *33*(2), 105-117.

Barskova, T., & Oesterreich, R. (2009). Post-traumatic growth in people living with a serious medical condition and its relations to physical and mental health: A systematic review. *Disability and rehabilitation*, *31*(21), 1709-1733.

Basabe, N., & Ros, M. (2005). Cultural dimensions and social behavior correlates: Individualism-Collectivism and Power Distance. *International Review of Social Psychology*, *18*(1), 189-225.

Baumann, C., Winzar, H., & Viengkham, D. (2019). *Confucianism, discipline, and competitiveness*. Routledge.

Baumeister, R. F. (1997). Identity, self-concept, and self-esteem: The self lost and found. In *Handbook of personality psychology* (pp. 681-710). Academic Press.

Beck, A. T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York, NY: Harper & Row.

Beck, A. T. (1970). The core problem in depression. The cognitive triad. *Depression. Theories and Therapies*.

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.

Beck, A. T. (1983). Cognitive therapy of depression: New perspectives. *Treatment of depression: Old controversies and new approaches*.

Beck, A. T., & Alford, B. A. (2009). *Depression: Causes and treatment*. University of Pennsylvania Press.

Beck, A. T., Emery, G., & Greenberg, R. L. (2005). *Anxiety disorders and phobias: A cognitive perspective*. Basic books.

Beck, A.T. (1987). Cognitive models of depression. *Journal of Cognitive Psychotherapy: An International Quarterly*, *1*, 5–37.

Beck, J. S., & Beck, A. T. (2011). Cognitive behavior therapy. *New York: Basics and beyond. Guilford Publication*.

Beesdo, K., Knappe, S., & Pine, D. S. (2009). Anxiety and anxiety disorders in children and adolescents: developmental issues and implications for DSM-V. *Psychiatric Clinics*, *32*(3), 483-524.

Beierl, E. T., Böllinghaus, I., Clark, D. M., Glucksman, E., & Ehlers, A. (2020). Cognitive paths from trauma to posttraumatic stress disorder: A prospective study of Ehlers and Clark's model in survivors of assaults or road traffic collisions. *Psychological medicine*, *50*(13), 2172-2181.

Benjet, C., Bromet, E., Karam, E.G., Kessler, R.C., McLaughlin, K.A., Ruscio, A.M., Shahly, V., Stein, D.J., Petukhova, M., Hill, E., Alonso, J., Atwoli, L., Bunting, B., Bruffaert, R., Caldas-De-Almeida, J.M., De Girolamo, G., Florescu, S., Gureje, O, Huang, Y., . . ., Koenen., K.C. (2016). The epidemiology of traumatic event exposure worldwide: Results from the World Mental Health Survey Consortium. *46*(2)*,* 327-343.

Bergiel, E. B., Bergiel, B. J., & Upson, J. W. (2012). Revisiting Hofstede's dimensions: Examining the cultural convergence of the United States and Japan. *American Journal of Management*, *12*(1), 69-79.

Bernardi, J., Engelbrecht, A., & Jobson, L. (2019). The impact of culture on cognitive appraisals: Implications for the development, maintenance, and treatment of posttraumatic stress disorder. *Clinical Psychologist*, *23*(2), 91-102.

Berntsen, D., & Rubin, D. C. (2004). Cultural life scripts structure recall from autobiographical memory. *Memory & cognition*, *32*(3), 427-442.

Berntsen, D., & Rubin, D. C. (2006). The centrality of event scale: A measure of integrating a trauma into one's identity and its relation to post-traumatic stress disorder symptoms. *Behaviour research and therapy*, *44*(2), 219-231.

Berntsen, D., Willert, M., & Rubin, D. C. (2003). Splintered memories or vivid landmarks? Qualities and organization of traumatic memories with and without PTSD. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *17*(6), 675-693.

Besser, A., Weinberg, M., Zeigler-Hill, V., Ataria, Y., & Neria, Y. (2015). Humor and trauma-related psychopathology among survivors of terror attacks and their spouses. *Psychiatry*, *78*(4), 341-353.

Biggart, N. W., & Hamilton, G. G. (1992). On the limits of a firm-based theory to explain business networks. *Networks and Organizations. Harvard Business School Press, Boston*, 471-490.

Blagov, P. S., & Singer, J. A. (2004). Four dimensions of self-defining memories (specificity, meaning, content, and affect) and their relationships to self-restraint, distress, and repressive defensiveness. *Journal of personality*, *72*, 481-512.

Blatt, S. J., & Maroudas, C. (1992). Convergences among psychoanalytic and cognitive-behavioral theories of depression. *Psychoanalytic psychology*, *9*(2), 157.

Blatt, S. J., & Zuroff, D. C. (1992). Interpersonal relatedness and self-definition: Two prototypes for depression. *Clinical psychology review*, *12*(5), 527-562.

Blatt, S. J., D'Afflitti, J. P., & Quinlan, D. M. (1976). Experiences of depression in normal young adults. *Journal of Abnormal psychology*, *85*(4), 383.

Bluck, S., & Alea, N. (2008). Remembering being me: The self continuity function of autobiographical memory in younger and older adults. *Self continuity: Individual and collective perspectives*, 55-70.

Bluck, S., & Alea, N. (2011). Crafting the TALE: Construction of a measure to assess the functions of autobiographical remembering. *Memory*, *19*(5), 470-486.

Bluck, S., & Liao, H. W. (2013). I was therefore I am: Creating self-continuity through remembering our personal past. *The International Journal of Reminiscence and Life Review*, *1*(1), 7-12.

Boals, A., & Ruggero, C. (2016). Event centrality prospectively predicts PTSD symptoms. *Anxiety, Stress, & Coping*, *29*(5), 533-541.

Boals, A., & Schuettler, D. (2011). A double-edged sword: Event centrality, PTSD and posttraumatic growth. *Applied cognitive psychology*, *25*(5), 817-822.

Boerner, M., Joseph, S., & Murphy, D. (2017). The association between sense of humor and trauma-related mental health outcomes: two exploratory studies. *Journal of Loss and Trauma*, *22*(5), 440-452.

Bond, M. H. (1991). *Beyond the Chinese Face: Insights from Psychology*. Oxford University Press.

Bond, M. H. (1993). Emotions and their expression in Chinese culture. *Journal of nonverbal behavior*, *17*, 245-262.

Bond, M. H., & Hwang, K. K. (1986). *The social psychology of Chinese people*. Oxford University Press.

Bond, M. H., & King, A. Y. (1985). Coping with the threat of westernization in Hong Kong. *International Journal of Intercultural Relations*, *9*(4), 351-364.

Borkovec, T. D., Alcaine, O. M., & Behar, E. (2004). Avoidance theory of worry and generalized anxiety disorder. In Heimberg R. G., Turk C. L., Mennin D. S. (Eds.), *Generalized anxiety disorder: Advances in research and practice* (pp. 77-108). New York, NY: Guilford Press.

Bowlby, J. (1977). The making and breaking of affectional bonds: II. Some principles of psychotherapy: The Fiftieth Maudsley Lecture (expanded version). *The British Journal of Psychiatry*, *130*(5), 421-431.

Brewin, C. R. (2014). Episodic memory, perceptual memory, and their interaction: Foundations for a theory of posttraumatic stress disorder. Psychological Bulletin, 140(1), 69-97.

Brewin, C. R. (2015). Re-experiencing traumatic events in PTSD: New avenues in research on intrusive memories and flashbacks. *European journal of psychotraumatology*, *6*(1), 27180.

Brewin, C. R., Dalgleish, T., & Joseph, S. (1996). A dual representation theory of posttraumatic stress disorder. *Psychological review*, *103*(4), 670.

Brewin, C. R., Gregory, J. D., Lipton, M., & Burgess, N. (2010). Intrusive images in psychological disorders: characteristics, neural mechanisms, and treatment implications. *Psychological review*, *117*(1), 210.

Breznitz, S. (Ed.). (1983). *The denial of stress*. New York: International Universities Press.

Brittlebank, A. D., Scott, J., Mark, J., Williams, G., & Ferrier, I. N. (1993). Autobiographical memory in depression: state or trait marker?. *The British Journal of Psychiatry*, *162*(1), 118-121.

Brown, J. D. (1998). *The Self*. McGraw-Hill, New York.

Brown, J. D., & Kobayashi, C. (2002). Self-enhancement in Japan and America. *Asian Journal of Social Psychology*, *5*(3), 145-168.

Brown, J. D., & Marshall, M. A. (2001). Self-esteem and emotion: Some thoughts about feelings. *Personality and Social Psychology Bulletin*, *27*(5), 575-584.

Bryant, R. A. (1996). Predictors of post-traumatic stress disorder following burns injury. *Burns*, *22*(2), 89-92.

Bryant, R. A. (2003). Early predictors of posttraumatic stress disorder. *Biological psychiatry*, *53*(9), 789-795.

Bryant, R. A. (2007). Does dissociation further our understanding of PTSD?. *Journal of anxiety disorders*, *21*(2), 183-191.

Buchanan, T. W. (2007). Retrieval of emotional memories. *Psychological bulletin*, *133*(5), 761.

Buckner, J. P., & Fivush, R. (1998). Gender and self in children's autobiographical narratives. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *12*(4), 407-429.

Burleson, B. R. (2003). Emotional support skills. In *Handbook of communication and social interaction skills* (pp. 569-612). Routledge.

Buse, N. A., Bernacchio, C., & Burker, E. J. (2013). Cultural variation in resilience as a response to traumatic experience. *Journal of Rehabilitation*, *79*(2), 15.

Buss, D. M. (1995). Psychological sex differences: origins through sexual selection. *American Psychologist, 50*, 164–168.

Cai, Q., & Brysbaert, M. (2010). SUBTLEX-CH: Chinese word and character frequencies based on film subtitles. *PloS one*, *5*(6), e10729.

Calhoun, L. G., & Tedeschi, R. G. (1995). Trauma and transformation: Growing in the aftermath of suffering.

Calhoun, L. G., & Tedeschi, R. G. (2014). The foundations of posttraumatic growth: An expanded framework. In *Handbook of posttraumatic growth* (pp. 3-23). Routledge.

Calhoun, L. G., Cann, A., Tedeschi, R. G., & McMillan, J. (2000). A correlational test of the relationship between posttraumatic growth, religion, and cognitive processing. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *13*(3), 521-527.

Cameron, A., Palm, K., & Follette, V. (2010). Reaction to stressful life events: What predicts symptom severity? *Journal of Anxiety Disorders, 24*(6), 645-649.

Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *Journal of personality and social psychology*, *59*(3), 538.

Cann, A., Calhoun, L. G., Tedeschi, R. G., Taku, K., Vishnevsky, T., Triplett, K. N., & Danhauer, S. C. (2010). A short form of the Posttraumatic Growth Inventory. *Anxiety, Stress, & Coping*, *23*(2), 127-137.

Cannon, W. B. (1939). *Wisdom of the body*. W.W. Norton &Co., New York.

Carstensen, L. L., & Lang, F. (1997). Measurement of time orientation in diverse population. *unpublished data, Stanford University*.

Carver, C. S. (1997). You want to measure coping but your protocol'too long: Consider the brief cope. *International journal of behavioral medicine*, *4*(1), 92-100.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of personality and social psychology*, *56*(2), 267.

Census and Statistics Department, Hong Kong Special Administrative Region. (2022). *Demographic Trends in Hong Kong 1991-2021*. Retrieved September 9, 2023, from https://www.censtatd.gov.hk/en/data/stat_report/product/B1120017/att/B1120017052022XXXXB0100.pdf

Cepeda-Benito, A., & Short, P. (1998). Self-concealment, avoidance of psychological services, and perceived likelihood of seeking professional help. *Journal of Counseling Psychology*, *45*(1), 58.

Chamberlain, P. (2017). *The feminist fourth wave: Affective temporality*. Springer.

Chan, Y. C., Chun, P. K., & Lee, T. K. (2012). Report on the Study of Family Education in Hong Kong. *Hong Kong SAR: Department of Applied Social Science*, *198*.

Chan, Y. M. (2000). Self-esteem: A cross-cultural comparison of British-Chinese, white British and Hong Kong Chinese children. *Educational Psychology*, *20*(1), 59-74.

Chang, E. C. (1996a). Cultural differences in optimism, pessimism, and coping: Predictors of subsequent adjustment in Asian American and Caucasian American college students. *Journal of Counseling Psychology*, *43*(1), 113.

Chang, E. C. (1996b). Evidence for the cultural specificity of pessimism in Asians vs Caucasians: A test of a general negativity hypothesis. *Personality and Individual Differences*, *21*(5), 819-822.

Chang, E. C., & Asakawa, K. (2003). Cultural variations on optimistic and pessimistic bias for self versus a sibling: Is there evidence for self-enhancement in the West and for self-criticism in the East when the referent group is specified?. *Journal of personality and social psychology*, *84*(3), 569.

Chau, P. H., Yen, E., Morley, J. E., & Woo, J. (2008). The effects of environmental stressors on the mortality of the oldest old male population in Hong Kong, 1977–2006. *The Aging Male*, *11*(4), 179-188.

Chen, D. S. (2001). Taiwan's social changes in the patterns of social solidarity in the 20th century. *The China Quarterly*, *165*, 61-82.

Cheng, Y., Lou, C., Gao, E., Emerson, M. R., & Zabin, L. S. (2012). The relationship between external contact and unmarried adolescents' and young adults' traditional beliefs in three East Asian cities: a cross-sectional analysis. *Journal of Adolescent Health*, *50*(3), S4-S11.

Cheung, C. K., & Bagley, C. (1998). Validating an American scale in Hong Kong: the center for epidemiological studies depression scale (CES-D). *The Journal of psychology*, *132*(2), 169-186.

Chi, I., & Chow, N. (1997). Housing and family care for the elderly in Hong Kong. *Ageing International*, *23*, 65-77.

Chiao, J. Y., Cheon, B. K., Pornpattananangkul, N., Mrazek, A. J., & Blizinsky, K. D. (2013). Cultural neuroscience: progress and promise. *Psychological inquiry*, *24*(1), 1-19.

Chiou, J. S. (2001). Horizontal and vertical individualism and collectivism among college students in the United States, Taiwan, and Argentina. *The Journal of Social Psychology*, *141*(5), 667-678.

Chiu, C. Y., Dweck, C. S., Tong, J. Y. Y., & Fu, J. H. Y. (1997). Implicit theories and conceptions of morality. *Journal of personality and social psychology*, *73*(5), 923.

Chiu, L. H. (1992). Self-esteem in American and Chinese (Taiwanese) children. *Current psychology*, *11*(4), 309-313.

Choi, I., & Nisbett, R. E. (1998). Situational salience and cultural differences in the correspondence bias and actor-observer bias. *Personality and Social Psychology Bulletin*, *24*(9), 949-960.

Choi, I., Dalal, R., Kim-Prieto, C., & Park, H. (2003). Culture and judgement of causal relevance. *Journal of personality and social psychology*, *84*(1), 46.

Choi, I., Koo, M., & Choi, J. A. (2007). Individual differences in analytic versus holistic thinking. *Personality and social psychology bulletin*, *33*(5), 691-705.

Christianson, S., & Marren, J. (2012). The impact of event scale-revised (IES-R). *Medsurg Nurs*, *21*(5), 321-322.

Chun, C. A., Moos, R. H., & Cronkite, R. C. (2006). Culture: A fundamental context for the stress and coping paradigm. *Handbook of multicultural perspectives on stress and coping*, 29-53.

Chung, M. C., Chen, Z. S., & Han, B. X. (2022). The impact of anger and self-concealment on post-traumatic stress and psychiatric comorbid symptoms in Chinese prisoners: A longitudinal study. *Criminal Behaviour and Mental Health*, *32*(5), 320-336.

Chung, M. C., Ye, Z., Wang, N., & Thomas, J. (2022). Linking posttraumatic stress disorder with eating disorders among Emirati university female students: The role of self-concealment. *Current Psychology*, *41*(12), 8975-8984.

Clohessy, S., & Ehlers, A. (1999). PTSD symptoms, response to intrusive memories and coping in ambulance service workers. *British journal of clinical psychology*, *38*(3), 251-265.

Cohen, J. (1992). Statistical power analysis. *Current directions in psychological science*, *1*(3), 98-101.

Cole, P. M., Alexander, P. C., & Anderson, C. L. (1996). Dissociation in typical and atypical development. In *Handbook of dissociation* (pp. 69-89). Springer, Boston, MA.

Cole, J. C., Rabin, A. S., Smith, T. L., & Kaufman, A. S. (2004). Development and validation of a Rasch-derived CES-D short form. *Psychological assessment*, *16*(4), 360.

Conrad, S., & Morrow, R. (2000). Borderline personality organization, dissociation, and willingness to use force in intimate relationships. *Psychology of Men & Masculinity*, *1*(1), 37.

Constantine, M. G., Okazaki, S., & Utsey, S. O. (2004). Self-concealment, social self-efficacy, acculturative stress, and depression in African, Asian, and Latin American international college students. *American Journal of orthopsychiatry*, *74*(3), 230-241.

Conway, M. A., & Pleydell-Pearce, C. W. (2000). The construction of autobiographical memories in the self-memory system. *Psychological review*, *107*(2), 261.

Conway, M. A., & Rubin, D. C. (2019). The structure of autobiographical memory. In *Theories of memory* (pp. 103-137). Psychology Press.

Cousins, S. D. (1989). Culture and self-perception in Japan and the United States. *Journal of personality and social psychology*, *56*(1), 124.

Cramer, P. (1991). The development of defense mechanisms: Theory, research and discussion of the scales. *New York7 Springer-Verlag*.

Creamer, M., Bell, R., & Failla, S. (2003). Psychometric properties of the impact of event scale—revised. *Behaviour research and therapy*, *41*(12), 1489-1496.

Creamer, M., Burgess, P., & McFarlane, A. C. (2001). Post-traumatic stress disorder: findings from the Australian National Survey of Mental Health and Well-being. *Psychological medicine*, *31*(7), 1237-1247.

Crocker, J., & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological bulletin*, *130*(3), 392.

Crocker, J., Thompson, L. L., McGraw, K. M., & Ingerman, C. (1987). Downward comparison, prejudice, and evaluations of others: effects of self-esteem and threat. *Journal of personality and social psychology*, *52*(5), 907.

Cross, S. E., Hardin, E. E., & Gercek-Swing, B. (2011). The what, how, why, and where of self-construal. *Personality and Social Psychology Review, 15*(2), 142-179.

Crovitz, H.F., (1970). Galton's walk: Methods for the analysis of thinking, intelligence and creativity, *New York: Harper & Row.*

Cunningham, S. J., Turk, D. J., Macdonald, L. M., & Macrae, C. N. (2008). Yours or mine? Ownership and memory. *Consciousness and cognition*, *17*(1), 312-318.

Dalgleish, T., & Werner-Seidler, A. (2014). Disruptions in autobiographical memory processing in depression and the emergence of memory therapeutics. *Trends in cognitive sciences*, *18*(11), 596-604.

Dalgleish, T., Williams, J. M. G., Golden, A.-M. J., Perkins, N., Barrett, L. F., Barnard, P. J., Au Yeung, C., Murphy, V., Elward, R., Tchanturia, K., & Watkins, E. (2007). Reduced specificity of autobiographical memory and depression: The role of executive control. *Journal of Experimental Psychology: General, 136*(1), 23–42.

David, E. J. R. (2010). Testing the validity of the colonial mentality implicit association test and the interactive effects of covert and overt colonial mentality on Filipino American mental health. *Asian American Journal of Psychology*, *1*(1), 31.

Davis, L. W., Leonhardt, B. L., Siegel, A., Brustuen, B., Luedtke, B., Vohs, J. L., James, A. V., & Lysaker, P. H. (2016). Metacognitive capacity predicts severity of trauma-related dysfunctional cognitions in adults with posttraumatic stress disorder. *Psychiatry Research*, *237*, 182-187.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of personality and social psychology*, *44*(1), 113.

Davis, P. J. (1999). Gender differences in autobiographical memory for childhood emotional experiences. *Journal of personality and social psychology*, *76*(3), 498.

Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry*, *11*(4), 227-268.

Deci, E. L., & Ryan, R. M. (2012). Self-determination theory. *Handbook of theories of social psychology*, *1*(20), 416-436.

Demiray, B., & Bluck, S. (2012). *Future time perspective affects how the past is recalled in young adulthood and midlife.* Poster presented at the 65th Annual Meeting of the Gerontological Society of America, San Diego, CA.

DeVos, G., Marsella, A. J., & Hsu, F. L. (1985). Introduction: Approaches to culture and self. *Culture and self: Asian and Western perspectives*, 2-23.

Dickerson, S. S., & Kemeny, M. E. (2004). Acute stressors and cortisol responses: a theoretical integration and synthesis of laboratory research. *Psychological bulletin*, *130*(3), 355.

Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of personality and social psychology*, *68*(4), 653.

Douw, L., Huang, C., & Ip, D. (2013). *Rethinking Chinese transnational enterprises: Cultural affinity and business strategies*. Routledge.

Draine, S. C. (2004). Inquisit 2.0. 50401 [Computer software]. *Seattle, WA: Millisecond Software*.

Dritschel, B., Kao, C. M., Astell, A., Neufeind, J., & Lai, T. J. (2011). How are depression and autobiographical memory retrieval related to culture?. *Journal of Abnormal Psychology*, *120*(4), 969.

Dückers, M. L., Alisic, E., & Brewin, C. R. (2016). A vulnerability paradox in the cross-national prevalence of post-traumatic stress disorder. *The British Journal of Psychiatry*,*209*(4), 300-305.

Dunn, J. C., Whelton, W. J., & Sharpe, D. (2006). Maladaptive perfectionism, hassles, coping, and psychological distress in university professors. *Journal of counseling psychology*, *53*(4), 511.

Dweck, C. S., & Sorich, L. (1999). Mastery-oriented thinking. *Coping*, *11*, 232-251.

Edmonds, J., Masuda, A., & Tully, E. C. (2014). Relations among self-concealment, mindfulness, and internalizing problems. *Mindfulness*, *5*, 497-504.

Edwards, K. R., & Martin, R. A. (2010). Humor creation ability and mental health: Are funny people more psychologically healthy?. *Europe's Journal of Psychology*, *6*(3), 196-212.

Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour research and therapy*, *38*(4), 319-345.

Ehlers, A., Hackmann, A., & Michael, T. (2004). Intrusive re-experiencing in post-traumatic stress disorder: Phenomenology, theory, and therapy. *Memory, 12*(4), 403-415.

Ehlers, A., & Steil, R. (1995). Maintenance of intrusive memories in posttraumatic stress disorder: A cognitive approach. *Behavioural and cognitive psychotherapy*, *23*(3), 217-249.

Ehring, T., Ehlers, A., & Glucksman, E. (2008). Do cognitive models help in predicting the severity of posttraumatic stress disorder, phobia, and depression after motor vehicle accidents? A prospective longitudinal study. *Journal of consulting and clinical psychology*, *76*(2), 219.

Ehring, T., Frank, S., & Ehlers, A. (2008). The role of rumination and reduced concreteness in the maintenance of posttraumatic stress disorder and depression following trauma. *Cognitive therapy and research*, *32*, 488-506.

Ekman, P., & Friesen, W. V. (1971). Constants across cultures in the face and emotion. *Journal of personality and social psychology*, *17*(2), 124.

Elgenius, G. (2018). *Symbols of nations and nationalism: Celebrating nationhood*. Springer.

Endler, N. S., & Parker, J. D. (1990). Multidimensional assessment of coping: a critical evaluation. *Journal of personality and social psychology*, *58*(5), 844.

Endo, Y., & Meijer, Z. (2004). Autobiographical memory of success and failure experiences. *Progress in Asian social psychology*, *4*, 67-84.

Engelbrecht, A., & Jobson, L. (2014). An investigation of trauma-associated appraisals and posttraumatic stress disorder in British and Asian trauma survivors: the development of the Public and Communal Self Appraisals Measure (PCSAM). *SpringerPlus*, *3*(1), 1-18.

English, T., & Chen, S. (2007). Culture and self-concept stability: consistency across and within contexts among Asian Americans and European Americans. *Journal of personality and social psychology*, *93*(3), 478.

English, T., & Chen, S. (2011). Self-concept consistency and culture: The differential impact of two forms of consistency. *Personality and Social Psychology Bulletin*, *37*(6), 838-849.

Epstein, S. (1994). Integration of the cognitive and the psychodynamic unconscious. *American psychologist*, *49*(8), 709.

Erickson, S. J., & Feldstein, S. W. (2007). Adolescent humor and its relationship to coping, defense strategies, psychological distress, and well-being. *Child psychiatry and human development*, *37*, 255-271.

Erikson, E. H. (1950). *Childhood and society.* New York: W.W. Norton & Company.

Erikson, E. H. (1968). *Identity youth and crisis* (No. 7). WW Norton & company.

Erikson, E. H. (1994). *Identity and the life cycle.* WW Norton & Company.

Evans, G. W., & Cohen, S. (1987). Environmental stress. In D. Stokols & I. Altman (Eds.), *Handbook of environmental psychology* (pp. 571–610). New York: Wiley.

Farruggia, S. P., Chen, C., Greenberger, E., Dmitrieva, J., & Macek, P. (2004). Adolescent self-esteem in cross-cultural perspective: Testing measurement equivalence and a mediation model. *Journal of cross-cultural psychology*, *35*(6), 719-733.

Feeny, N. C., Zoellner, L. A., Fitzgibbons, L. A., & Foa, E. B. (2000). Exploring the roles of emotional numbing, depression, and dissociation in PTSD. *Journal of traumatic stress*, *13*, 489-498.

Felmingham, K., Kemp, A. H., Williams, L., Falconer, E., Olivieri, G., Peduto, A., & Bryant, R. (2008). Dissociative responses to conscious and non-conscious fear impact underlying brain function in post-traumatic stress disorder. *Psychological medicine*, *38*(12), 1771-1780.

Fiske, A. P., Kitayama, S., Markus, H. R., & Nisbett, R. E. (1998). The cultural matrix of social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 915–981). Boston, MA: McGraw-Hill.

Fitzgerald, J. M., Berntsen, D., & Broadbridge, C. L. (2016). The influences of event centrality in memory models of PTSD. *Applied Cognitive Psychology*, *30*(1), 10-21..

Fivush, R. (1998). Gendered narratives: elaboration, structure, and emotion in parent-child reminiscing across the preschool years. In C. P. Thompson, D. J. Hermann, D. Bruce, J. D. Read, D. G. Payne, & M. P. Toglia (Eds.), *Autobiographical memory: Theoretical and applied perspectives* (pp. 79–99). Mahwah, NJ: Erlbaum.

Fivush, R. (2011). The development of autobiographical memory. *Annual review of psychology*, *62*, 559-582.

Fivush, R. (2014). Gendered narratives: Elaboration, structure, and emotion in parent-child reminiscing across the preschool years. In *Autobiographical memory* (pp. 79-104). Psychology Press.

Fivush, R., & Reese, E. (1992). The social construction of autobiographical memory. *Theoretical perspectives on autobiographical memory*, 115-132.

Foa, E. B., Ehlers, A., Clark, D. M., Tolin, D. F., & Orsillo, S. M. (1999). The posttraumatic cognitions inventory (PTCI): Development and validation. *Psychological assessment*, *11*(3), 303.

Foa, E. B., & Hearst-Ikeda, D. (1996). Emotional dissociation in response to trauma: An information-processing approach. In *Handbook of dissociation: Theoretical, empirical, and clinical perspectives* (pp. 207-224). Boston, MA: Springer US.

Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: exposure to corrective information. *Psychological bulletin*, *99*(1), 20.

Foa, E. B., Molnar, C., & Cashman, L. (1995). Change in rape narratives during exposure therapy for posttraumatic stress disorder. *Journal of traumatic stress*, *8*, 675-690.

Foa, E. B., & Rothbaum, B. O. (1998). *Treating the trauma of rape: Cognitive-behavioral therapy for PTSD*. New York: Guilford.

Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of health and social behavior*, 219-239.

Folkman, S., & Lazarus, R. S. (1986). Stress processes and depressive symptomatology. *Journal of abnormal psychology, 95*(2), 107.

Ford, J. D., & Russo, E. (2006). Trauma-focused, present-centered, emotional self-regulation approach to integrated treatment for posttraumatic stress and addiction: Trauma adaptive recovery group education and therapy (TARGET). *American journal of psychotherapy*, *60*(4), 335-355.

Fotiadis, A., Abdulrahman, K., & Spyridou, A. (2019). The mediating roles of psychological autonomy, competence and relatedness on work-life balance and well-being. *Frontiers in psychology*, *10*, 1267.

Franken, R. (1994). *Human motivation*. Pacific Grove, CA: Brooks.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American psychologist*, *56*(3), 218.

Frewen, P. A., & Lanius, R. A. (2014). Trauma-related altered states of consciousness: Exploring the 4-D model. *Journal of Trauma & Dissociation*, *15*(4), 436-456.

Furniss, T., Beyer, T., & Müller, J. (2009). Impact of life events on child mental health before school entry at age six. *European Child & Adolescent Psychiatry, 18*(12), 717-724.

Gambrel, P. A., & Cianci, R. (2003). Maslow's hierarchy of needs: Does it apply in a collectivist culture. *Journal of Applied Management and Entrepreneurship*, *8*(2), 143.

Gambrel, P. A., & Cianci, R. (2003). Maslow's hierarchy of needs: Does it apply in a collectivist culture. *Journal of Applied Management and Entrepreneurship*, *8*(2), 143.

García, J. A., y Olmos, F. C., Matheu, M. L., & Carreño, T. P. (2019). Self-esteem levels vs global scores on the Rosenberg self-esteem scale. *Heliyon*, *5*(3).

Gehrt, T. B., Berntsen, D., Hoyle, R. H., & Rubin, D. C. (2018). Psychological and clinical correlates of the Centrality of Event Scale: A systematic review. *Clinical psychology review*, *65*, 57-80.

Georgieva, I., Lepping, P., Bozev, V., Lickiewicz, J., Pekara, J., Wikman, S., ... & Lantta, T. (2021, June). Prevalence, new incidence, course, and risk factors of PTSD, depression, anxiety, and panic disorder during the COVID-19 pandemic in 11 countries. In *Healthcare* (Vol. 9, No. 6, p. 664). MDPI.

Gergen, K. J. (1971). *The concept of self*. New York: Holt, Rhinehart & Winston.

Gershuny, B. S., & Thayer, J. F. (1999). Relations among psychological trauma, dissociative phenomena, and trauma-related distress: A review and integration. *Clinical psychology review*, *19*(5), 631-657.

Ghose, U., & Mukherjee, T. (2020). The role of autobiographical memories in self perception of middle-aged adults. *International Journal of Indian Psychology*, *8*(3).

Giddens, A. (2020). Modernity and self-identity: Self and society in the late modern age. In *The new social theory reader* (pp. 354-361). Routledge.

Gil-González, I., Martín-Rodríguez, A., Conrad, R., & Pérez-San-Gregorio, M. Á. (2022). Coping Strategies Furthering Post-Traumatic Growth in Multiple Sclerosis: A Longitudinal Study. *International Journal of Environmental Research and Public Health*, *19*(19), 12679.

Ginzburg, K., Ein-Dor, T., & Solomon, Z. (2010). Comorbidity of posttraumatic stress disorder, anxiety and depression: a 20-year longitudinal study of war veterans. *Journal of affective disorders*, *123*(1-3), 249-257.

Gnambs, T., & Schroeders, U. (2020). Cognitive abilities explain wording effects in the Rosenberg Self-Esteem Scale. *Assessment*, *27*(2), 404-418.

Graesser, A. C., Olde, B., & Klettke, B. (2003). 10 How Does the Mind Construct and Represent Stories?. *Narrative impact: Social and cognitive foundations*, 121.

Green, B. L. (2003). Traumatic stress and its consequences. In *Trauma interventions in war and peace: Prevention, practice, and policy* (pp. 17-32). Boston, MA: Springer US.

Greenberg, M. A. (1995). Cognitive Processing of Traumas: the role of intrusive thoughts and reappraisals 1. *Journal of Applied Social Psychology*, *25*(14), 1262-1296.

Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: attitudes, self-esteem, and stereotypes. *Psychological review*, *102*(1), 4.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: the implicit association test. *Journal of personality and social psychology*, *74*(6), 1464.

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the implicit association test: I. An improved scoring algorithm. *Journal of personality and social psychology*, *85*(2), 197.

Greer, T. M., Ricks, J., & Baylor, A. A. (2015). The moderating role of coping strategies in understanding the effects of intragroup race-related stressors on academic performance and overall levels of perceived stress for African American students. *Journal of Black Psychology*, *41*(6), 565-585.

Griffith, J. W., Sumner, J. A., Raes, F., Barnhofer, T., Debeer, E., & Hermans, D. (2012). Current psychometric and methodological issues in the measurement of overgeneral autobiographical memory. *Journal of behavior therapy and experimental psychiatry*, *43*, S21-S31.

Grupe, D. W., & Nitschke, J. B. (2013). Uncertainty and anticipation in anxiety: an integrated neurobiological and psychological perspective. *Nature Reviews Neuroscience*, *14*(7), 488-501.

Grysman, A., & Hudson, J. A. (2013). Gender differences in autobiographical memory: Developmental and methodological considerations. *Developmental Review*, *33*(3), 239-272.

Gutchess, A. H., Welsh, R. C., Boduroĝlu, A., & Park, D. C. (2006). Cultural differences in neural function associated with object processing. *Cognitive, Affective, & Behavioral Neuroscience*, *6*(2), 102-109.

Habermas, T., & Bluck, S. (2000). Getting a life: the emergence of the life story in adolescence. *Psychological bulletin*, *126*(5), 748.

Hagenaars, M. A., & Krans, J. (2011). Trait and state dissociation in the prediction of intrusive images. *International Journal of Cognitive Therapy*, *4*(2), 145-153.

Hall, E. T. (1976). *Beyond Culture*. Garden City, NY.

Hallford, D. J., & Mellor, D. (2017). Autobiographical memory specificity and general symptoms of anxiety: Indirect associations through rumination. *International Journal of Mental Health*, *46*(2), 74-88.

Halligan, S. L., Clark, D. M., & Ehlers, A. (2002). Cognitive processing, memory, and the development of PTSD symptoms: Two experimental analogue studies. *Journal of Behavior therapy and experimental Psychiatry*, *33*(2), 73-89.

Halligan, S. L., Michael, T., Clark, D. M., & Ehlers, A. (2003). Posttraumatic stress disorder following assault: the role of cognitive processing, trauma memory, and appraisals. *Journal of consulting and clinical psychology*, *71*(3), 419.

Hardin, E. E., Leong, F. T., & Bhagwat, A. A. (2004). Factor structure of the self-construal scale revisited: Implications for the multidimensionality of self-construal. *Journal of Cross-Cultural Psychology*, *35*(3), 327-345.

Harkness, K. L., Bruce, A. E., & Lumley, M. N. (2006). The role of childhood abuse and neglect in the sensitization to stressful life events in adolescent depression. *Journal of abnormal psychology*, *115*(4), 730.

Harter, S. (1999). *The construction of the self: A developmental perspective*. Guilford Press.

Harter, S. (2012). The construction of the self. New York, NY: Guildford Press.

Haque, S., & Conway, M. A. (2001). Sampling the process of autobiographical memory construction. *European Journal of Cognitive Psychology*, *13*(4), 529-547.

Hauer, B. J., Wessel, I., Geraerts, E., Merckelbach, H., & Dalgleish, T. (2008). Autobiographical memory specificity after manipulating retrieval cues in adults reporting childhood sexual abuse. *Journal of abnormal psychology*, *117*(2), 444.

Hawes, Z. C., Wellings, K., & Stephenson, J. (2010). First heterosexual intercourse in the United Kingdom: A review of the literature. *Journal of sex research*, *47*(2-3), 137-152.

Heine, S. J. (2001). Self as cultural product: An examination of East Asian and North American selves. *Journal of personality*, *69*(6), 881-905.

Heine, S. J. (2008). *Cultural psychology*. New York: Norton.

Heine, S. J., & Hamamura, T. (2007). In search of East Asian self-enhancement. *Personality and Social Psychology Review*, *11*(1), 4-27.

Heine, S. J., Kitayama, S., Lehman, D. R., Takata, T., Ide, E., Leung, C., & Matsumoto, H. (2001). Divergent consequences of success and failure in japan and north america: an investigation of self-improving motivations and malleable selves. *Journal of personality and social psychology*, *81*(4), 599.

Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard?. *Psychological review*, *106*(4), 766.

Heine, S. J., Lehman, D. R., Peng, K., & Greenholtz, J. (2002). What's wrong with cross-cultural comparisons of subjective Likert scales?: The reference-group effect. *Journal of personality and social psychology*, *82*(6), 903.

Helgeson, V. S., Reynolds, K. A., & Tomich, P. L. (2006). A meta-analytic review of benefit finding and growth. *Journal of consulting and clinical psychology*, *74*(5), 797.

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?. *Behavioral and brain sciences*, *33*(2-3), 61-83.

Henson, C., Truchot, D., & Canevello, A. (2021). What promotes post traumatic growth? A systematic review. *European Journal of Trauma & Dissociation*, *5*(4), 100195.

Heron, J., Crane, C., Gunnell, D., Lewis, G., Evans, J., & Williams, J. M. G. (2012). 40,000 memories in young teenagers: Psychometric properties of the Autobiographical Memory Test in a UK cohort study. *Memory*, *20*(3), 300-320.

Higgins, E. T. (1996). Activation: Accessibility, and salience. *Social psychology: Handbook of basic principles*, 133-168.

Hinton, D. E., & Lewis-Fernández, R. (2011). The cross-cultural validity of posttraumatic stress disorder: implications for DSM-5. *Depression and anxiety*, *28*(9), 783-801.

Hirsch, C., & Mathews, A. (1997). Interpretative inferences when reading about emotional events. *Behaviour Research and Therapy*, *35*(12), 1123-1132.

Ho, S. M., Chan, C. L., & Ho, R. T. (2004). Posttraumatic growth in Chinese cancer survivors. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, *13*(6), 377-389.

Hobfoll, S. E., Hall, B. J., Canetti-Nisim, D., Galea, S., Johnson, R. J., & Palmieri, P. A. (2007). Refining our understanding of traumatic growth in the face of terrorism: Moving from meaning cognitions to doing what is meaningful. *Applied Psychology*, *56*(3), 345-366.

Hobsbawm, E., & Ranger, T. (Eds.). (2012). *The invention of tradition*. Cambridge University Press.

Hofmann, S. G., Asnaani, A., & Hinton, D. E. (2010). Cultural aspects in social anxiety and social anxiety disorder. *Depression and anxiety*, *27*(12), 1117-1127.

Hofmann, S. G., Asnaani, A., Vonk, I. J., Sawyer, A. T., & Fang, A. (2012). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive therapy and research*, *36*, 427-440.

Hofmann, W., Luhmann, M., Fisher, R. R., Vohs, K. D., & Baumeister, R. F. (2014). Yes, but are they happy? Effects of trait self-control on affective well-being and life satisfaction. *Journal of personality*, *82*(4), 265-277.

Hofstede, G. (1980). Culture and organizations. *International studies of management & organization*, *10*(4), 15-41.

Hofstede, G. (1984). *Culture's consequences: International differences in work-related values* (Vol. 5). sage.

Hofstede, G. (1985). The interaction between national and organizational value systems [1]. *Journal of management studies*, *22*(4), 347-357.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. sage.

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online readings in psychology and culture*, *2*(1), 8.

Hofstede, G., & Bond, M. H. (1984). Hofstede's culture dimensions: An independent validation using Rokeach's value survey. *Journal of cross-cultural psychology*, *15*(4), 417-433.

Hofstede, G., & Hofstede, G. J. (2004). *Cultures and Organizations: software of the mind: International cooperation and its importance for survival*. New York: McGraw-Hill.

Hofstede, G., & McCrae, R. R. (2004). Personality and culture revisited: Linking traits and dimensions of culture. *Cross-cultural research*, *38*(1), 52-88.

Hofstra, M. B., Van Der Ende, J. A. N., & Verhulst, F. C. (2001). Adolescents' self-reported problems as predictors of psychopathology in adulthood: 10-year follow-up study. *The British Journal of Psychiatry*, *179*(3), 203-209.

Hoge, C. W., Riviere, L. A., Wilk, J. E., Herrell, R. K., & Weathers, F. W. (2014). The prevalence of post-traumatic stress disorder (PTSD) in US combat soldiers: a head-to-head comparison of DSM-5 versus DSM-IV-TR symptom criteria with the PTSD checklist. *The Lancet Psychiatry*, *1*(4), 269-277.

Holland, A. C., & Kensinger, E. A. (2010). Emotion and autobiographical memory. *Physics of life reviews*, *7*(1), 88-131.

Holmes, E. A., & Bourne, C. (2008). Inducing and modulating intrusive emotional memories: A review of the trauma film paradigm. *Acta psychologica*, *127*(3), 553-566.

Holmes, E. A., Grey, N., & Young, K. A. (2005). Intrusive images and “hotspots” of trauma memories in posttraumatic stress disorder: An exploratory investigation of emotions and cognitive themes. *Journal of behavior therapy and experimental psychiatry*, *36*(1), 3-17.

Hong, Y. Y., Ip, G., Chiu, C. Y., Morris, M. W., & Menon, T. (2001). Cultural identity and dynamic construction of the self: Collective duties and individual

rights in Chinese and American cultures. *Social Cognition*, *19*(3: Special issue), 251-268.

Hong, Y. Y., Morris, M. W., Chiu, C. Y., & Benet-Martinez, V. (2000). Multicultural minds: A dynamic constructivist approach to culture and cognition. *American psychologist*, *55*(7), 709.

Holbrook, T. L., Hoyt, D. B., Stein, M. B., & Sieber, W. J. (2002). Gender differences in long-term posttraumatic stress disorder outcomes after major trauma: women are at higher risk of adverse outcomes than men. *Journal of Trauma and Acute Care Surgery*, *53*(5), 882-888.

Hoover, H., & Nash, G. H. (2016). *American individualism*. Hoover Press.

Hou, W. K., Li, T. W., Liang, L., Liu, H., Ettman, C. K., Hobfoll, S. E., ... & Galea, S. (2022). Trends of depression and anxiety during massive civil unrest and COVID-19 in Hong Kong, 2019–2020. *Journal of psychiatric research*, *145*, 77-84.

Hsu, W-Y. (2003). Relationship between resources loss, coping, social support and psychological symptoms of 921 earthquake victims. *Chinese Journal of Psychology*, *45*(3), 263-277.

Hsu, W-Y., Chen, M-C., Wang, T-H., & Sun, S-H. (2008). Coping strategies in Chinese social context. *Asian Journal of Social Psychology*, *11*, 150-162.

Hu, H. C. (1944). The Chinese concepts of "face". *American anthropologist*, *46*(1), 45-64.

Huang, J., Chen, L., & Zhou, X. (2023). Self-reference modulates the perception of visual apparent motion. *Attention, Perception, & Psychophysics*, *85*(1), 188-195.

Hui, C. H., & Triandis, H. C. (1986). Individualism-collectivism: A study of cross-cultural researchers. *Journal of cross-cultural psychology*, *17*(2), 225-248.

Hui-Chun, Yu, & Miller, P. (2003). The generation gap and cultural influence–a Taiwan empirical investigation. *Cross Cultural Management: An International Journal*, *10*(3), 23-41.

Huitt, W. (2004). Self-concept and self-esteem. *Educational psychology interactive*, *1*, 1-5.

Hull, J. G., Van Treuren, R. R., Ashford, S. J., Propsom, P., & Andrus, B. W. (1988). Self-consciousness and the processing of self-relevant information. *Journal of personality and social psychology*, *54*(3), 452.

Humphries, C., & Jobson, L. (2012). Influence of culture and trauma history on autobiographical memory specificity. *Memory*, *20*(8), 915-922.

Hwang, K. K. (2001). The deep structure of Confucianism: A social psychological approach. *Asian Philosophy*, *11*(3), 179-204.

Inglehart, R., & Oyserman, D. (2004). Individualism, autonomy, self-expression: The human development syndrome. In *Comparing cultures* (pp. 73-96). Brill.

Ingram, R. E. (1990). Self-focused attention in clinical disorders: review and a conceptual model. *Psychological bulletin*, *107*(2), 156.

Ip, G. W. M., & Bond, M. H. (1995). Culture, values, and the spontaneous self-concept. *Asian Journal of Psychology*, *1*(1), 29-35.

Ip, P. K. (2009). Is Confucianism good for business ethics in China?. *Journal of Business Ethics*, *88*, 463-476.

Itai, I. (2008). Self actualisation: For individualistic cultures only?. *International Journal on Humanistic Ideology*, *1*(02), 113-139.

Izard, C. E., & Izard, C. E. (1977). Anger, disgust, and contempt and their relationship to hostility and aggression. *Human emotions*, 329-354.

Jang, H., Reeve, J., Ryan, R. M., & Kim, A. (2009). Can self-determination theory explain what underlies the productive, satisfying learning experiences of collectivistically oriented Korean students?. *Journal of educational Psychology*, *101*(3), 644.

Janoff-Bulman, R. (2010). *Shattered assumptions*. Simon and Schuster.

Jhangiani, R. S., Chiang, I. C. A., Cuttler, C., & Leighton, D. C. (2019). *Research methods in psychology*. Kwantlen Polytechnic University.

Ji, L. J., Guo, T., Zhang, Z., & Messervey, D. (2009). Looking into the past: cultural differences in perception and representation of past information. *Journal of personality and social psychology*, *96*(4), 761.

Ji, L. J., Hong, E. K., Guo, T., Zhang, Z., Su, Y., & Li, Y. (2019). Culture, psychological proximity to the past and future, and self-continuity. *European Journal of Social Psychology*, *49*(4), 735-747.

Ji, L. J., Nisbett, R. E., & Su, Y. (2008). Culture, change, and prediction. *Psychological sciences, 12*(6), 450-456.

Ji, L. J., Zhang, Z., & Guo, T. (2008). To buy or to sell: Cultural differences in stock market decisions based on price trends. *Journal of Behavioral Decision Making*, *21*(4), 399-413.

Jiang, F., Yue, X. D., & Lu, S. (2011). Different attitudes toward humor between Chinese and American students: Evidence from the Implicit Association Test. *Psychological reports*, *109*(1), 99-107.

Jin, Y., Xu, J., & Liu, D. (2014). The relationship between post traumatic stress disorder and post traumatic growth: gender differences in PTG and PTSD subgroups. *Social psychiatry and psychiatric epidemiology*, *49*, 1903-1910.

Jobson, L. (2009a). Cultural differences in specificity of autobiographical memories: Implications for asylum decisions. *Psychiatry, Psychology and Law*, *16*(3), 453-457.

Jobson, L. (2009b). Drawing current posttraumatic stress disorder models into the cultural sphere: The development of the 'threat to the conceptual self'model. *Clinical Psychology Review*, *29*(4), 368-381.

Jobson, L., & O'Kearney, R. (2006). Cultural differences in autobiographical memory of trauma. *Clinical Psychologist*, *10*(3), 89-98.

Jobson, L., & O'Kearney, R. (2008). Cultural differences in personal identity in post-traumatic stress disorder. *British Journal of Clinical Psychology*, *47*(1), 95-109.

Jobson, L., & O'Kearney, R. T. (2009). Impact of cultural differences in self on cognitive appraisals in posttraumatic stress disorder. *Behavioural and Cognitive Psychotherapy*, *37*(3), 249-266.

Jobson, L., Cheraghi, S., & Moradi, A. R. (2016). Brief report: Comparing the autobiographical remembering of Iranian immigrant trauma survivors with that of Iranian and British trauma survivors. *Applied Cognitive Psychology*, *30*(4), 635-642.

Jobson, L., Whittles, N., Tsecoutanis, E., Raj, S., Yew, R. Y., & Haque, S. (2019). Investigating the mediating role of self-construal on the relationship between

cultural group (Malay and Australian) and the characteristics and functional use of autobiographical memory. *Memory, 27*(8), 1054-1062.

Johnson, F. (1985). The Western concept of self. In A.J. Marsella, G. DeVos, & F.L.K Hsu (Eds.), *Culture and self: Asian and Western perspectives* (pp. 91-138). New York: Tavistock Publications.

Jones, G. W. (2007). Delayed marriage and very low fertility in Pacific Asia. *Population and development review*, *33*(3), 453-478.

Joseph, S., & Linley, P. A. (2005). Positive adjustment to threatening events: An organismic valuing theory of growth through adversity. *Review of general psychology*, *9*(3), 262-280.

Joseph, S., & Linley, P. A. (2005). Positive adjustment to threatening events: An organismic valuing theory of growth through adversity. *Review of general psychology*, *9*(3), 262-280.

Joseph, S., & Linley, P. A. (2005). Positive adjustment to threatening events: An organismic valuing theory of growth through adversity. *Review of general psychology*, *9*(3), 262-280.

Kagitcibasi, C. (2003). Autonomy, embeddedness and adaptability in immigration contexts. *Human Development*, *46*(2-3), 145-150.

Kagitcibasi, C. (2005). Autonomy and relatedness in cultural context: Implications for self and family. *Journal of cross-cultural psychology*, *36*(4), 403-422.

Kanagawa, C., Cross, S. E., & Markus, H. R. (2001). “Who am I?” The cultural psychology of the conceptual self. *Personality and Social Psychology Bulletin, 27*(1), 90-103.

Kao, H. S., & Sinha, D. E. (1997). *Asian perspectives on psychology*. Sage Publications, Inc.

Kapoor, S., Hughes, P. C., Baldwin, J. R., & Blue, J. (2003). The relationship of individualism–collectivism and self-construals to communication styles in India and the United States. *International Journal of Intercultural Relations*, *27*(6), 683-700.

Karcher, M. J., & Lee, Y. (2002). Connectedness among Taiwanese middle school students: A validation study of the Hemingway Measure of Adolescent Connectedness. *Asia Pacific Education Review*, *3*, 92-114.

Kashima, Y., & Triandis, H. C. (1986). The self-serving bias in attributions as a coping strategy: A cross-cultural study. *Journal of Cross-Cultural Psychology*, *17*(1), 83-97.

Kawamura, N., Kim, Y., & Asukai, N. (2001). Suppression of cellular immunity in men with a past history of posttraumatic stress disorder. *American Journal of Psychiatry*, *158*(3), 484-486.

Kaye-Kauderer, H., Feingold, J. H., Feder, A., Southwick, S., & Charney, D. (2021). Resilience in the age of COVID-19. *BJPsych Advances*, *27*(3), 166-178.

Kelly, A. E., & Yip, J. J. (2006). Is keeping a secret or being a secretive person linked to psychological symptoms?. *Journal of Personality*, *74*(5), 1349-1370.

Kensinger, E. A., & Schacter, D. L. (2008). Neural processes supporting young and older adults' emotional memories. *Journal of cognitive neuroscience*, *20*(7), 1161-1173.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of general psychiatry*, *62*(6), 593-602.

Kessler, R. C., Rose, S., Koenen, K. C., Karam, E. G., Stang, P. E., Stein, D. J., Heeringa, S. G., Hill, E. D., Liberzon, I., McLaughlin, K. A., McLean, S. A., Pennell, B. E., Petukhova, M., Rosellini, A. J., Ruscio, A.M., Shahly, V., Shalev, A. Y., Silove, D., Zaslavsky, A.M., … & Viana, M. C. (2014). How well can post-traumatic stress disorder be predicted from pre-trauma risk factors? An exploratory study in the WHO World Mental Health Surveys. *World Psychiatry*, *13*(3), 265-274.

Kihlstrom, J. F., Glisky, M. L., & Angiulo, M. J. (1994). Dissociative tendencies and dissociative disorders. *Journal of Abnormal Psychology*, *103*(1), 117.

Kim, H. S., & Sherman, D. K. (2007). "Express yourself": culture and the effect of self-expression on choice. *Journal of personality and social psychology*, *92*(1), 1.

Kim, M. S. (1994). Cross-cultural comparisons of the perceived importance of conversational constraints. *Human communication research*, *21*(1), 128-151.

Kitayama, S., & Cohen, D. (Eds.). (2007). Handbook of cultural psychology. New York, NY: Guilford Press.

Kitayama, S., & Duffy, S. (2004). Cultural competence—tacit yet fundamental: Self, social relations, and cognition in the United States and Japan. In R. Sternberg & E. Grigorenko (Eds.), *Culture and competence: Contexts of life success* (pp. 55–87). Washington, DC: American Psychological Association

Kitayama, S., Conway III, L. G., Pietromonaco, P. R., Park, H., & Plaut, V. C. (2010). Ethos of independence across regions in the United States: the production-adoption model of cultural change. *American Psychologist*, *65*(6), 559.

Kleim, B., & Ehlers, A. (2008). Reduced autobiographical memory specificity predicts depression and posttraumatic stress disorder after recent trauma. *Journal of consulting and clinical psychology*, *76*(2), 231.

Kleim, B., & Ehlers, A. (2009). Evidence for a curvilinear relationship between posttraumatic growth and posttrauma depression and PTSD in assault survivors. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *22*(1), 45-52.

Kleim, B., Ehlers, A., & Glucksman, E. (2012). Investigating cognitive pathways to psychopathology: Predicting depression and posttraumatic stress disorder from early responses after assault. *Psychological trauma: theory, research, practice, and policy*, *4*(5), 527.

Kleinman, A. (1988). Rethinking psychiatry: from cultural category to personal experience The Free Press. *New York City, NY*.

Kluckhohn, C. E., & Murray, H. A. (Eds.). (1961). *Personality in nature, society, and culture*. New York: Knopf.

Koenen, K. C., Ratanatharathorn, A., Ng, L., McLaughlin, K. A., Bromet, E. J., Stein, D. J., ... & Kessler, R. (2017). Posttraumatic stress disorder in the world mental health surveys. *Psychological medicine*, *47*(13), 2260-2274

Kolts, R. L., Robinson, A. M., & Tracy, J. J. (2004). The relationship of sociotropy and autonomy to posttraumatic cognitions and PTSD symptomatology in trauma survivors. *Journal of clinical psychology*, *60*(1), 53-63.

Koolhaas, J. M., Korte, S. M., De Boer, S. F., Van Der Vegt, B. J., Van Reenen, C. G., Hopster, H., De Jong, I. C., Ruis, M. A. W. & Blokhuis, H. J. (1999). Coping styles in animals: current status in behavior and stress-physiology. *Neuroscience & Biobehavioral Reviews*, *23*(7), 925-935.

Kuhn, M. H., & McPartland, T. S. (1954). Twenty Statements Test. *American Sociological Review*.

Kurtines, W. M., & Miranda, L. (1980). Differences in self and family role perception among acculturating Cuban-American college students: Implications for the etiology of family disruption among migrant groups. *International Journal of Intercultural Relations*, *4*(2), 167-184.

Kuyken, W., & Howell, R. (2006). Facets of autobiographical memory in adolescents with major depressive disorder and never-depressed controls. *Cognition and Emotion*, *20*(3-4), 466-487.

Kyung, Y., Yanes-Lukin, P., & Roberts, J. E. (2016). Specificity and detail in autobiographical memory: Same or different constructs?. *Memory*, *24*(2), 272-284.

Lahav, Y., Bellin, E. S., & Solomon, Z. (2016). Posttraumatic growth and shattered world assumptions among ex-POWs: the role of dissociation. *Psychiatry*, *79*(4), 418-432.

Lakhan, R., Agrawal, A., & Sharma, M. (2020). Prevalence of depression, anxiety, and stress during COVID-19 pandemic. *Journal of neurosciences in rural practice*, *11*(04), 519-525.

Laposa, J. M., & Rector, N. A. (2012). The prediction of intrusions following an analogue traumatic event: Peritraumatic cognitive processes and anxiety-focused rumination versus rumination in response to intrusions. *Journal of Behavior Therapy and Experimental Psychiatry*, *43*(3), 877-883.

Larson, D. G., & Chastain, R. L. (1990). Self-concealment: Conceptualization, measurement, and health implications. *Journal of Social and Clinical psychology*, *9*(4), 439-455.

Larson, D. G., Chastain, R. L., Hoyt, W. T., & Ayzenberg, R. (2015). Self-concealment: Integrative review and working model. *Journal of Social and Clinical psychology*, *34*(8), 705-774.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.

Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of personality and social psychology*, *68*(3), 518.

Lee, A., Cheng, C. M. Y., Lee, L. Y., Esposito, G., & Cheon, B. K. (2023). Thanking in the times of the plague: The role of holistic thinking in meaning-making and gratitude. *Social and Personality Psychology Compass*, e12854.

Lee, C. T., Beckert, T. E., & Goodrich, T. R. (2010). The relationship between individualistic, collectivistic, and transitional cultural value orientations and adolescents' autonomy and identity status. *Journal of Youth and Adolescence*, *39*(8), 882-893.

Leichtman, M. D., Wang, Q., & Pillemer, D. B. (2003). Cultural variations in interdependence and autobiographical memory: Lessons from Korea, China, India, and the United States. *Autobiographical memory and the construction of a narrative self: Developmental and cultural perspectives*, *4*, 73-97.

Levine, B., Svoboda, E., Hay, J. F., Winocur, G., & Moscovitch, M. (2002). Aging and autobiographical memory: dissociating episodic from semantic retrieval. *Psychology and aging*, *17*(4), 677.

Levitan, C. A., Ren, J., Woods, A. T., Boesveldt, S., Chan, J. S., McKenzie, K. J., Dodson, M., Levin, J.A., Leong, C.X.R., & Van den Bosch, J. J. (2014). Cross-cultural color-odor associations. *PloS one*, *9*(7), e101651.

Lewis-Fernández, R., Martínez-Taboas, A., Sar, V., Patel, S., & Boatin, A. (2007). The cross-cultural assessment of dissociation. *Cross-cultural assessment of psychological trauma and PTSD*, 279-317.

Li, H. Z. (2002). Culture, gender and self–close-other (s) connectedness in Canadian and Chinese samples. *European Journal of Social Psychology*, *32*(1), 93-104.

Li, H. Z., Zhang, Z., Bhatt, G., & Yum, Y. O. (2006). Rethinking culture and self-construal: China as a middle land. *The Journal of social psychology*, *146*(5), 591-610.

Li, J., Lam, K., & Ping Fu, P. (2000). Family-oriented collectivism and its effect on firm performance: A comparison between overseas Chinese and foreign firms in China. *The International Journal of Organizational Analysis*, *8*(4), 364-379.

Liao, H. W., & Bluck, S. (2022). Recalling self-disruptive events and maintaining self-continuity in adulthood. *Psychology and Aging*, *38*(1), 17.

Liao, H. W., Bluck, S., Alea, N., & Cheng, C. L. (2016). Functions of autobiographical memory in Taiwanese and American emerging adults. *Memory*, *24*(4), 423-436.

Litman, J. A. (2006). The COPE inventory: Dimensionality and relationships with approach-and avoidance-motives and positive and negative traits. *Personality and Individual differences*, *41*(2), 273-284.

Litz, B. T. (1992). Emotional numbing in combat-related post-traumatic stress disorder: A critical review and reformulation. *Clinical Psychology Review*, *12*(4), 417-432.

Liu, D., & Giner-Sorolla, R. (2023). Social-functional characteristics of Chinese terms translated as “shame” or “guilt”: a cross-referencing approach. *Cognition and Emotion*, 1-20.

Liu, M. (2016). Verbal communication styles and culture. In *Oxford research encyclopedia of communication*.

Liu, X., & Flick, R. (2019). The relationship among psychological need satisfaction, class engagement, and academic performance: Evidence from China. *Journal of Education for Business*, *94*(6), 408-417.

Lloyd, G. G., & Lishman, W. A. (1975). Effect of depression on the speed of recall of pleasant and unpleasant experiences. *Psychological medicine*, *5*(2), 173-180.

Lockett, M. (1988). Culture and the problems of Chinese management. *Organization studies*, *9*(4), 475-496.

Lonner, W. (2007). *Handbook of multicultural perspectives on stress and coping*: Springer Science & Business Media.

Lou, C., Cheng, Y., Gao, E., Zuo, X., Emerson, M. R., & Zabin, L. S. (2012). Media's contribution to sexual knowledge, attitudes, and behaviors for adolescents and young adults in three Asian cities. *Journal of adolescent health*, *50*(3), S26-S36.

Lowe, S. (1998). Culture and network institutions in Hong Kong: A hierarchy of perspectives. A response to Wilkinson: 'Culture, institutions and business in East Asia'. *Organization studies*, *19*(2), 321-344.

Luo, Y. (2000). *Guanxi and business*. River Edge, NJ: World Scientific.

Lupien, S. J., Maheu, F., Tu, M., Fiocco, A., & Schramek, T. E. (2007). The effects of stress and stress hormones on human cognition: Implications for the field of brain and cognition. *Brain and cognition*, *65*(3), 209-237.

Lupton, D. (1998). The emotional self. Thousand Oaks, CA: Sage.

Ma, W. F., Liu, Y. C., Chen, Y. F., Lane, H. Y., Lai, T. J., & Huang, L. C. (2013). Evaluation of psychometric properties of the Chinese Mandarin version State-Trait Anxiety Inventory Y form in Taiwanese outpatients with anxiety disorders. *Journal of psychiatric and mental health nursing*, *20*(6), 499-507.

MacMillan, N. A., & Creelman, C. (1991). *Detection theory: a user's guide.* Cambridge, NY: Cambridge University Press.

Maier, S. F., & Seligman, M. E. (1976). Learned helplessness: theory and evidence. *Journal of experimental psychology: general*, *105*(1), 3.

Maner, J. K., & Schmidt, N. B. (2006). The role of risk avoidance in anxiety. Behavior therapy, 37(2), 181-189.

Marcia, J. E., Waterman, A. S., Matteson, D. R., Archer, S. L., & Orlofsky, J. L. (2012). *Ego identity: A handbook for psychosocial research*. Springer Science & Business Media

Markus, H. R. (1977). Self-schemata and processing information about the self. *Journal of personality and social psychology*, *35*(2), 63.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*(2), 224-253.

Markus, H. R., & Kitayama, S. (1994). A Collective Fear of the Collective: Implications for Selves and Theories of Selves. *Personality and Social Psychology Bulletin, 20*, 568-579.

Markus, H. R., & Kitayama, S. (2010). Cultures and selves: A cycle of mutual constitution. *Perspectives on psychological science*, *5*(4), 420-430.

Markus, H. R., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual review of psychology*, *38*(1), 299-337.

Martin, R. A. (2003). Sense of humor. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 313–328). Washington, DC: American Psychological Association.

Martin, R. A. (2007). *The psychology of humor: An integrative approach*. Burlington, MA: Elsevier.

Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal of research in personality*, *37*(1), 48-75.

Martinez, R., & Dukes, R. L. (1991). Ethnic and gender differences in self-esteem. *Youth & Society*, *22*(3), 318-338.

Mason, J. W. (1968). The scope of psychoendocrine research. *Psychosomatic Medicine*, *30*(5), 565-575.

Masuda, A., Anderson, P. L., Wendell, J. W., Chou, Y. Y., Price, M., & Feinstein, A. B. (2011). Psychological flexibility mediates the relations between self-

concealment and negative psychological outcomes. *Personality and Individual Differences*, *50*(2), 243-247.

Masuda, A., Boone, M. S., & Timko, C. A. (2011). The role of psychological flexibility in the relationship between self-concealment and disordered eating symptoms. *Eating behaviors*, *12*(2), 131-135.

Masuda, T., & Nisbett, R. E. (2001). Attending holistically versus analytically: comparing the context sensitivity of Japanese and Americans. *Journal of personality and social psychology*, *81*(5), 922.

Mathews, A. (1990). Why worry? The cognitive function of anxiety. *Behaviour research and therapy*, *28*(6), 455-468.

Matsumoto, D., Kudoh, T., Scherer, K., & Wallbott, H. (1988). Antecedents of and reactions to emotions in the United States and Japan. *Journal of Cross-Cultural Psychology*, *19*(3), 267-286.

Matthews, K. A., Kuller, L. H., Siegel, J. M., Thompson, M., & Varat, M. (1983). Determinants of decisions to seek medical treatment by patients with acute myocardial infarction symptoms. *Journal of Personality and Social Psychology*, *44*(6), 1144.

Mauss, I. B., & Gross, J. J. (2004). Emotion suppression and cardiovascular. *Emotional expression and health: Advances in theory, assessment and clinical applications*, *60*.

McAdams, D. P. (1989a). Unity and purpose in human lives: The emergence of identity as a life story. In A. Rabin, R. Zucker, R. Emmons, & S. Frank (Eds.), *Studying persons and lives* (pp. 148-200). New York: Springer.

McAdams, D. P. (1989b). The development of a narrative identity. In D. Buss & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 160-174). New York: Springer-Verlag.

McCauley, R. N., & Henrich, J. (2006). Susceptibility to the Müller-Lyer illusion, theory-neutral observation, and the diachronic penetrability of the visual input system. *Philosophical Psychology*, *19*(1), 79-101.

McCombs, H. G. (1985). Black self-concept: An individual/collective analysis. *International Journal of Intercultural Relations*, *9*(1), 1-18.

McDaniel, E. D., & Soong, W. (1983). Comparisons of self-concept scores of children in America and in Taiwan. In *Human assessment and cultural factors* (pp. 445-455). Springer, Boston, MA.

McFarlane, A. C., & Bookless, C. (2001). The effect of PTSD on interpersonal relationships: Issues for emergency service workers. *Sexual and Relationship Therapy*, *16*(3), 261-267.

McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2012). Childhood adversities and first onset of psychiatric disorders in a national sample of US adolescents. *Archives of general psychiatry*, *69*(11), 1151-1160.

McLean, C. P., Asnaani, A., Litz, B. T., & Hofmann, S. G. (2011). Gender differences in anxiety disorders: prevalence, course of illness, comorbidity and burden of illness. *Journal of psychiatric research*, *45*(8), 1027-1035.

McNally, R. J., Perlman, C. A., Ristuccia, C. S., & Clancy, S. A. (2006). Clinical characteristics of adults reporting repressed, recovered, or continuous memories of childhood sexual abuse. *Journal of consulting and clinical psychology*, *74*(2), 237.

Meffert, S. M., Metzler, T. J., Henn-Haase, C., McCaslin, S., Inslicht, S., Chemtob, C., ... & Marmar, C. R. (2008). A prospective study of trait anger and PTSD symptoms in police. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *21*(4), 410-416.

Meiser-Stedman, R., Dalgleish, T., Yule, W., & Smith, P. (2012). Intrusive memories and depression following recent non-traumatic negative life events in adolescents. *Journal of affective disorders*, *137*(1-3), 70-78.

Mendoza, H., Goodnight, B. L., Caporino, N. E., & Masuda, A. (2018). Psychological distress among Latina/o college students: The roles of self-concealment and psychological inflexibility. *Current Psychology*, *37*, 172-179.

Mertin, P., & Mohr, P. B. (2001). A follow-up study of posttraumatic stress disorder, anxiety, and depression in Australian victims of domestic violence. *Violence and Victims*, *16*(6), 645.

Mesquita, B. (2001). Emotions in collectivist and individualist contexts. *Journal of personality and social psychology*, *80*(1), 68.

Mesquita, B., & Ellsworth, P. C. (2001). The role of culture in appraisal.

Mesquita, B., & Markus, H. R. (2004, April). Models of Agency as Sources of Cultural. In *Feelings and emotions: The Amsterdam symposium* (p. 341). Cambridge University Press.

Mesquita, B., & Walker, R. (2003). Cultural differences in emotions: A context for interpreting emotional experiences. *Behaviour research and therapy*, *41*(7), 777-793.

Messner, C. M., & Vosgerau, J. (2009). Order effects in the IAT. *Advances in consumer research*, *36*, 38-40.

Michael, T., Halligan, S. L., Clark, D. M., & Ehlers, A. (2007). Rumination in posttraumatic stress disorder. *Depression and anxiety*, *24*(5), 307-317.

Michal, M., Beutel, M. E., Jordan, J., Zimmermann, M., Wolters, S., & Heidenreich, T. (2007). Depersonalization, mindfulness, and childhood trauma. *The Journal of nervous and mental disease*, *195*(8), 693-696.

Mihailova, S., & Jobson, L. (2020). The impact of depression and culture on responses to intrusive autobiographical memories: Cognitive appraisals, cognitive avoidance, and brooding rumination. *British Journal of Clinical Psychology, 59*(1), 66-79.

Markowitsch, H. J., & Staniloiu, A. (2011). Memory, autonoetic consciousness, and the self. *Consciousness and cognition*, *20*(1), 16-39.

Mobini, S., Reynolds, S., & Mackintosh, B. (2013). Clinical implications of cognitive bias modification for interpretative biases in social anxiety: An integrative literature review. *Cognitive Therapy and Research*, *37*, 173-182.

Moffitt, K. H., & Singer, J. A. (1994). Continulty in the life story: Self-defining memories, affect, and approach/avoidance personal strivings. *Journal of personality*, *62*(1), 21-43.

Moffitt, K. H., Singer, J. A., Nelligan, D. W., Carlson, M. A., & Vyse, S. A. (1994). Depression and memory narrative type. *Journal of Abnormal Psychology*, *103*(3), 581.

Monroe, S. M., & Kelley, J. M. (1995). Measurement of stress appraisal. *Measuring stress: A guide for health and social scientists*, 122-147.

Morris, M. W., & Peng, K. (1994). Culture and cause: American and Chinese attributions for social and physical events. *Journal of Personality and Social psychology*, *67*(6), 949.

Moulds, M. L., Bisby, M. A., Wild, J., & Bryant, R. A. (2020). Rumination in posttraumatic stress disorder: A systematic review. *Clinical Psychology Review*, *82*, 101910.

Mullen, M. K. (1994). Earliest recollections of childhood: A demographic analysis. *Cognition*, *52*, 55–79.

Munro, D. J. (1985). Introduction. In D. Munro (Ed.), *Individualism and holism: Studies in Confucian and Taoist values* (pp. 1-34). Ann Arbor: University of Michigan, Center for Chinese Studies.

Murray, J., Ehlers, A., & Mayou, R. A. (2002). Dissociation and post-traumatic stress disorder: Two prospective studies of road traffic accident survivors. *The British Journal of Psychiatry*, *180*(4), 363-368.

Najmi, S., & Wegner, D. M. (2009). Hidden complications of thought suppression. *International Journal of Cognitive Therapy*, *2*(3), 210-223.

Nalipay, M. J. N., King, R. B., & Cai, Y. (2020). Autonomy is equally important across East and West: Testing the cross-cultural universality of self-determination theory. *Journal of Adolescenc*e, *78*, 67-72.

Nam, S. K., Choi, S. I., Lee, J. H., Lee, M. K., Kim, A. R., & Lee, S. M. (2013). Psychological factors in college students' attitudes toward seeking professional psychological help: A meta-analysis. *Professional Psychology: Research and Practice*, *44*(1), 37.

Needham, J. (1962). *Physics and Physical Technology: Physics* (Vol. 4). Cambridge University Press.

Neisser, U. (1988). Time present and time past. In M. M. Gruneberg, P. E. Morris, & R. N. Sykes (Eds.), *Practical aspects of memory: Clinical and educational implications* (Vol. 2, pp. 545–560). Chichester: Wiley.

Neisser, U. (1997). The ecological study of memory. *Philosophical Transactions: Biological Science*, *352*, 1697-1701.

Nelson, K. (2003). Self and social functions: individual autobiographical memory and collective narrative. *Memory, 11*, 125–136.

Nevis, E. C. (1983). Using an American perspective in understanding another culture: Toward a hierarchy of needs for the People's Republic of China. *The Journal of Applied Behavioral Science*, *19*(3), 249-264.

Newby, J. M., & Moulds, M. L. (2011). Do negative appraisals and avoidance of intrusive memories predict depression at six months?. *International Journal of Cognitive Therapy*, *4*(2), 178-186.

Ni, M. Y., Yao, X. I., Leung, K. S., Yau, C., Leung, C. M., Lun, P., ... & Leung, G. M. (2020). Depression and post-traumatic stress during major social unrest in Hong Kong: a 10-year prospective cohort study. *The Lancet*, *395*(10220), 273-284.

Nietzel, M. T., & Harris, M. J. (1990). Relationship of dependency and achievement/autonomy to depression. *Clinical Psychology Review*, *10*(3), 279-297.

Nisbett, R. E. (2003). *The geography of thought: How Asians and Westerners think differently... and why*. Simon and Schuster.

Nisbett, R. E. (1998). Essence and accident. *Attribution processes, person perception, and social interaction: The legacy of Ned Jones*, 169-200.

Nisbett, R. E., & Miyamoto, Y. (2005). The influence of culture: holistic versus analytic perception. *Trends in cognitive sciences*, *9*(10), 467-473.

Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: holistic versus analytic cognition. *Psychological review*, *108*(2), 291.

Nolen-Hoeksema, S. (2012). Emotion regulation and psychopathology: The role of gender. *Annual review of clinical psychology*, *8*(1), 161-187.

Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on psychological science*, *3*(5), 400-424.

O'Connor, D. B., & Shimizu, M. (2002). Sense of personal control, stress and coping style: A cross-cultural study. *Stress and Health: Journal of the International Society for the Investigation of Stress*, *18*(4), 173-183.

Office for National Statistics. (2022). *Divorces in England and Wales: 2021*. Retrieved from September 9, 2023, https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/divorce/bulletins/divorcesinenglandandwales/2021

Office for National Statistics. (2023). *Births in England and Wales: 2022.* Retrieved September 9, 2023, from https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsummarytablesenglandandwales/2022#main-points

Ogińska-Bulik, N., & Kobylarczyk, M. (2016). Association between resiliency and posttraumatic growth in firefighters: the role of stress appraisal. *International journal of occupational safety and ergonomics*, *22*(1), 40-48.

Oishi, S. (2002). The experiencing and remembering of well-being: A cross-cultural analysis. *Personality and Social Psychology Bulletin*, *28*(10), 1398-1406.

Oláh, A. (1995). Coping strategies among adolescents: a cross-cultural study. *Journal of Adolescence*, *18*(4), 491-512.

Olatundun, I. O. (2009). What is cross-cultural research. *International Journal of Psychological Studies*, *1*(2), 82-96.

Ornstein, A. (2013). Trauma, memory, and psychic continuity. *Progress in Self Psychology, V. 10: A Decade of Progress*, *10*, 131.

Orth, U., Robins, R. W., & Roberts, B. W. (2008). Low self-esteem prospectively predicts depression in adolescence and young adulthood. *Journal of personality and social psychology*, *95*(3), 695.

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin, 128*, 3-72.

Ozer, E. J., Best, S. R., Lipsey, T. L., & Weiss, D. S. (2003). Predictors of posttraumatic stress disorder and symptoms in adults: a meta-analysis. *Psychological bulletin*, *129*(1), 52.

Paivio, A. (1990). *Mental representations: A dual coding approach*. Oxford university press.

Panter-Brick, C., Grimon, M. P., & Eggerman, M. (2014). Caregiver—child mental health: a prospective study in conflict and refugee settings. *Journal of Child Psychology and Psychiatry*, *55*(4), 313-327.

Paradise, A. W., & Kernis, M. H. (2002). Self-esteem and psychological well-being: Implications of fragile self-esteem. *Journal of social and clinical psychology*, *21*(4), 345-361.

Park, C. L. (2010). Making sense of the meaning literature: an integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological bulletin*, *136*(2), 257.

Paulhus, D. L. (1991). Measurement and control of response bias. Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17–59). New York: Academic Press.

Peng, K., & Nisbett, R. E. (1999). Culture, dialectics, and reasoning about contradiction. *American psychologist*, *54*(9), 741.

Pennebaker, J. W. (1997). *Opening up: The healing power of expressing emotions*. New York: Guilford Press.

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: review of research. *Psychological bulletin*, *108*(3), 499.

Pohl, R. F., Bender, M., & Lachmann, G. (2005). Autobiographical memory and social skills of men and women. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *19*(6), 745-759.

Ponnamperuma, T., & Nicolson, N. A. (2016). Negative trauma appraisals and PTSD symptoms in Sri Lankan adolescents. *Journal of abnormal child psychology*, *44*, 245-255.

Population Reference Bureau (2022). 2020 World Population Data Sheet. Retrieved 14 November, 2022, from https://www.prb.org/wp-content/uploads/2022/09/2022-World-Population-Data-Sheet-Booklet.pdf

Porges, S. W. (2001). The polyvagal theory: phylogenetic substrates of a social nervous system. *International journal of psychophysiology*, *42*(2), 123-146.

Purkey, W. W. (1988). An Overview of Self-Concept Theory for Counselors. Highlights: An ERIC/CAPS Digest.

Putnam, E W. (1984). The study of multiple personality disorder: General strategies and practical considerations. *Psychiatric Annals*, *14*, 58–62.

Putnam, E W. (1985). Dissociation as an extreme response to trauma. In *R. P. Kluft (Ed.), Childhood antecedents of multiple personality* (pp. 66–97). Washington, DC: American Psychiatric Press.

Quilgars, D., Johnsen, S., Pleace, N., Beecham, J., & Bonin, E. (2011). *Supporting independence? Evaluation of the Teenage Parent Supported Housing pilot.* London: Department for Education.

Raes, F., Hermans, D., Williams, J. M. G., & Eelen, P. (2006). Reduced autobiographical memory specificity and affect regulation. *Cognition and Emotion*, *20*(3-4), 402-429.

Raes, F., Hermans, D., Williams, J. M. G., Demyttenaere, K., Sabbe, B., Pieters, G., & Eelen, P. (2005). Reduced specificity of autobiographical memory: a mediator between rumination and ineffective social problem-solving in major depression?. *Journal of affective disorders*, *87*(2-3), 331-335.

Rasmussen, A. S., & Berntsen, D. (2009). Emotional valence and the functions. *Memory & Cognition*, 37, 477-492.

Reijntjes, A., Thomaes, S., Boelen, P., van der Schoot, M., de Castro, B. O., & Telch, M. J. (2011). Delighted when approved by others, to pieces when rejected: Children's social anxiety magnifies the linkage between self-and other-evaluations. *Journal of child psychology and psychiatry*, *52*(7), 774-781.

Renzhi, H., Shuqiao, Y., Abela, J. R., Leibovitch, F., & Mingfan, L. (2013). Key dimensions and validity of the Chinese version of the individualism-collectivism scale. *Chinese Studies*, *2*(01), 1.

Resick, P. A. (2001). *Stress and trauma*. Psychology Press.

Reynolds, M., & Brewin, C. R. (1998). Intrusive cognitions, coping strategies and emotional responses in depression, post-traumatic stress disorder and a non-clinical population. *Behaviour research and therapy*, *36*(2), 135-147.

Rhee, E., Uleman, J. S., Lee, H. K., & Roman, R. J. (1995). Spontaneous self-descriptions and ethnic identities in individualistic and collectivistic cultures. *Journal of personality and social psychology*, *69*(1), 142.

Ridout, N., Dritschel, B., Matthews, K., & O'Carroll, R. (2016). Autobiographical memory specificity in response to verbal and pictorial cues in clinical depression. *Journal of Behavior Therapy and Experimental Psychiatry*, *51*, 109-115.

Rindfuss, R. R. (1991). The young adult years: Diversity, structural change, and fertility: Population association of America 1991 presidential address. *Demography*, *28*, 493-512.

Riotte, A. L. (2022). The post-Brexit narrative of the British Council, re-engagement through culture. *Comparative European Politics*, *20*(5), 585-603.

Robins, C. J., Ladd, J., Welkowitz, J., Blaney, P. H., Diaz, R., & Kutcher, G. (1994). The Personal Style Inventory: Preliminary validation studies of new measures of sociotropy and autonomy. *Journal of Psychopathology and behavioral assessment*, *16*(4), 277-300.

Robinson, E., Schofield, C., Sutcliffe-Braithwaite, F., & Thomlinson, N. (2017). Telling stories about post-war Britain: Popular individualism and the 'crisis' of the 1970s. *Twentieth Century British History*, *28*(2), 268-304.

Robinson, J. A. (1976). Sampling autobiographical memory. *Cognitive psychology, 8*(4), 578-595.

Robinson, J. A., & Swanson, K. L. (1990). Autobiographical memory: The next phase. *Applied cognitive psychology*, *4*(4), 321-335.

Roediger, H. L. (1990). Implicit memory: Retention without remembering. *American psychologist*, *45*(9), 1043.

Roediger, H. L. (1990). Implicit memory: Retention without remembering. *American psychologist*, *45*(9), 1043.

Rogers, C. R. (1959). A theory of therapy, personality, and interpersonal relationships: as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A study of science. Vol 3: Formulations of the person and the social context* (pp. 184–256). New York: McGraw-Hill.

Rogers, T. B., Kuiper, N. A., & Kirker, W. S. (1977). Self-reference and the encoding of personal information. *Journal of personality and social psychology*, *35*(9), 677.

Rosenberg, M. (1965). *Society and adolescent child*. Princeton, NJ: Prince- 210 ton University Press.

Rosenberg, M. (1979). Conceiving the self. In *Conceiving the self* (pp. 318-318).

Ross, M., Heine, S. J., Wilson, A. E., & Sugimori, S. (2005). Cross-cultural discrepancies in self-appraisals. *Personality and Social Psychology Bulletin*, *31*(9), 1175-1188.

Rossi, A. A., Panzeri, A., Taccini, F., Parola, A., & Mannarini, S. (2022). The rising of the shield hero. Development of the Post-Traumatic Symptom Questionnaire (PTSQ) and assessment of the protective effect of self-esteem from trauma-related anxiety and depression. *Journal of Child & Adolescent Trauma*, 1-19.

Rotter J. B. (1954). *Social learning and clinical psychology*. Englewood Cliffs, NJ: Prentice Hall.

Rusk, N., Tamir, M., & Rothbaum, F. (2011). Performance and learning goals for emotion regulation. *Motivation and Emotion*, *35*, 444-460.

Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: examining reasons for acting in two domains. *Journal of personality and social psychology*, *57*(5), 749.

Ryan, S., & McGuire, B. (2016). Psychological predictors of pain severity, pain interference, depression, and anxiety in rheumatoid arthritis patients with chronic pain. *British journal of health psychology*, *21*(2), 336-350.

Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of personality and social psychology*, *79*(1), 49.

Sadeh, N., & Karniol, R. (2012). The sense of self-continuity as a resource in adaptive coping with job loss. *Journal of Vocational Behavior*, *80*(1), 93-99.

Safdar, S., Friedlmeier, W., Matsumoto, D., Yoo, S. H., Kwantes, C. T., Kakai, H., & Shigemasu, E. (2009). Variations of emotional display rules within and across cultures: A comparison between Canada, USA, and Japan. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, *41*(1), 1.

Sanders, V. (2004). First wave feminism. In *The Routledge companion to feminism and postfeminism* (pp. 15-24). Routledge.

Sani, F. (2008). *Self-continuity: Individual and collective perspectives*. New York, NY: Psychology Press.

Sar, V. (2011). Epidemiology of dissociative disorders: An overview. *Epidemiology research international*, *2011*.

Sasaki, J. Y., & Kim, H. S. (2017). Nature, nurture, and their interplay: A review of cultural neuroscience. *Journal of Cross-Cultural Psychology*, *48*(1), 4-22.

Schäfer, S., & Frings, C. (2019). Understanding self-prioritisation: The prioritisation of self-relevant stimuli and its relation to the individual self-esteem. *Journal of Cognitive Psychology*, *31*(8), 813-824.

Schaubroeck, J., Lam, S. S., & Xie, J. L. (2000). Collective efficacy versus self-efficacy in coping responses to stressors and control: a cross-cultural study. *Journal of Applied Psychology*, *85*(4), 512.

Scherer, K. R. (1997). The role of culture in emotion-antecedent appraisal. *Journal of personality and social psychology*, *73*(5), 902.

Scherman, A. Z., Salgado, S., Shao, Z., & Berntsen, D. (2015). Event centrality of positive and negative autobiographical memories to identity and life story across cultures. *Memory*, *23*(8), 1152-1171.

Schlenker, B. R. (1980). *Impression management* (Vol. 526). Monterey, CA: Brooks/Cole.

Schmitt, D. P., & Allik, J. (2005). Simultaneous administration of the Rosenberg Self-Esteem Scale in 53 nations: exploring the universal and culture-specific features of global self-esteem. *Journal of personality and social psychology*, *89*(4), 623.

Scrignaro, M., Barni, S., & Magrin, M. E. (2011). The combined contribution of social support and coping strategies in predicting post-traumatic growth: a longitudinal study on cancer patients. *Psycho-oncology*, *20*(8), 823-831.

Sedikides, C., Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement. *Journal of personality and social psychology*, *84*(1), 60.

Sedikides, C., Hong, E. K., & Wildschut, T. (2022). Self-continuity. *Annual Review of Psychology*, *74*.

Seidlitz, L., & Diener, E. (1998). Sex differences in the recall of affective experiences. *Journal of personality and social psychology*, *74*(1), 262.

Seiffge-Krenke, I. (2005). Adaptive and maladaptive coping styles: Does intervention change anything?. In *Social Cognition in Adolescence: Its Developmental Significance* (pp. 367-382). Psychology Press.

Selye, H. (1956). *The stress of life*. New York: McGraw-Hill.

Selye, H. (1974). Stress without distress. In *Psycholopathology of human adaptation* (pp.137-146). Boston, MA: Singer US.

Shahar, G. (2015). *Erosion: The psychopathology of self-criticism*. Oxford University Press, USA.

Shakespeare-Finch, J., & Lurie-Beck, J. (2014). A meta-analytic clarification of the relationship between posttraumatic growth and symptoms of posttraumatic distress disorder. *Journal of anxiety disorders*, *28*(2), 223-229.

Sharp, L., Redfearn, D., Timmons, A., Balfe, M., & Patterson, J. (2018). Posttraumatic growth in head and neck cancer survivors: Is it possible and what are the correlates?. *Psycho-Oncology*, *27*(6), 1517-1523.

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of educational research*, *46*(3), 407-44

Shavitt, S., Torelli, C. J., & Riemer, H. (2010). Horizontal and vertical individualism and collectivism. *Advances in culture and psychology*, *1*, 309-350.

Sheldon, K. M., Ryan, R. M., Deci, E. L., & Kasser, T. (2004). The independent effects of goal contents and motives on well-being: It's both what you pursue and why you pursue it. *Personality and social psychology bulletin*, *30*(4), 475-486.

Sherif, M. (1936). The psychology of social norms.

Shevlin, M., McBride, O., Murphy, J., Miller, J. G., Hartman, T. K., Levita, L., ... & Bentall, R. P. (2020). Anxiety, depression, traumatic stress and COVID-19-related anxiety in the UK general population during the COVID-19 pandemic. *BJPsych open*, *6*(6), e125.

Shigemoto, Y., Ashton, M. W., & Robitschek, C. (2016). Predictors of growth in the aftermath of traumatic events: The role of personal growth initiative. *Journal of Loss and Trauma*, *21*(5), 399-409.

Shipherd, J. C., & Beck, J. G. (1999). The effects of suppressing trauma-related thoughts on women with rape-related posttraumatic stress disorder. *Behaviour Research and therapy*, *37*(2), 99-112.

Shipherd, J. C., & Beck, J. G. (2005). The role of thought suppression in posttraumatic stress disorder. *Behavior Therapy*, *36*(3), 277-287.

Shweder, R. A., & Bourne, E. J. (1984). Does the concept of the person vary cross-culturally? In R. A. Shweder & R. A. LeVine (Eds.), *Culture theory: Essays on mind, self, and emotion* (pp. 158–199). New York: Cambridge University Press.

Shweder, R. A., & Miller, J. G. (1985). The social construction of the person: How is it possible?. In *The social construction of the person* (pp. 41-69). New York, NY: Springer New York.

Sica, C., Novara, C., Dorz, S., & Sanavio, E. (1997). Coping strategies: Evidence for cross-cultural differences? A preliminary study with the Italian version of coping orientations to problems experienced (COPE). *Personality and individual differences*, *23*(6), 1025-1029.

Siegel, D. J. (1995). Memory, trauma and psychotherapy: A cognitive science view. *Journal of Psychotherapy Practice and Research, 4*(2), 93–122.

Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and social psychology bulletin*, *20*(5), 580-591.

Singelis, T. M., Triandis, H. C., Bhawuk, D. P., & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-cultural research*, *29*(3), 240-275.

Singer, J. A., & Blagov, P. S. (2000). Classification system and scoring manual for self-defining autobiographical memories. *Unpublished manuscript,* Connecticut College.

Singer, J. A., & Blagov, P. (2004). The integrative function of narrative processing: Autobiographical memory, self-defining memories and the life story of identity. In D. Beike, D. Behrend, & J. Lampinen (Eds.), *Memory and the self* (pp. 117-138). Philadelphia: Psychology Press.

Singer, J. A., & Moffitt, K. H. (1992). An experimental investigation of specificity and generality in memory narratives. *Imagination, Cognition and Personality*, *11*(3), 233- 257.

Singer, J. A., & Salovey, P. (1993). *The remembered self: Emotion and memory in personality.* New York: Free Press.

Smetana, J. G., Campione-Barr, N., & Metzger, A. (2006). Adolescent development in interpersonal and societal contexts. *Annual Review of Psychology, 57*, 255-284.

Smith, P. B., & Bond, M. H. (1999). *Social psychology: Across cultures*. Allyn & Bacon.

Soffer-Dudek, N., & Shahar, G. (2011). Daily stress interacts with trait dissociation to predict sleep-related experiences in young adults. *Journal of Abnormal Psychology*, *120*(3), 719.

Soler, L., Paretilla, C., Kirchner, T., & Forns, M. (2012). Effects of poly-victimization on self-esteem and post-traumatic stress symptoms in Spanish adolescents. *European child & adolescent psychiatry*, *21*, 645-653.

Song, R., & Waters, B. (Eds.). (2015). *The Authority of the Gospel: Explorations in Moral and Political Theology in Honor of Oliver O'Donovan*. Wm. B. Eerdmans Publishing.

Sowislo, J. F., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological bulletin*, *139*(1), 213.

Sparks, S., Cunningham, S. J., & Kritikos, A. (2016). Culture modulates implicit ownership-induced self-bias in memory. *Cognition*, *153*, 89-98.

Spencer-Oatey, H., & Franklin, P. (2012). What is culture. *A compilation of quotations. GlobalPAD Core Concepts*, *1*, 22.

Spiegel, D. (1991). Dissociation and trauma. In A. Tasman, & S. M. Goldfinger, *Annual review of psychiatry, Vol.10* (pp. 261-275). Washington, DC: American Psychiatric Press.

Spielberger C. D. (1983). *State-trait anxiety inventory (Form Y) manual*. Redwood City, CA: Mind Garden.

Spring, J. H. (2008). *Wheels in the head: Educational philosophies of authority, freedom, and culture from Confucianism to human rights*. Routledge.

Steiger, A. E., Allemand, M., Robins, R. W., & Fend, H. A. (2014). Low and decreasing self-esteem during adolescence predict adult depression two decades later. *Journal of personality and social psychology*, *106*(2), 325.

Steil, R., & Ehlers, A. (2000). Dysfunctional meaning of posttraumatic intrusions in chronic PTSD. *Behaviour research and therapy*, *38*(6), 537-558.

Stein, M. B., McQuaid, J. R., Pedrelli, P., Lenox, R., & McCahill, M. E. (2000). Posttraumatic stress disorder in the primary care medical setting. *General hospital psychiatry*, *22*(4), 261-269.

Stein, M. B., Walker, J. R., & Forde, D. R. (2000). Gender differences in susceptibility to posttraumatic stress disorder. *Behaviour research and therapy*, *38*(6), 619-628.

Sternberg, R. J. (2014). The development of adaptive competence: Why cultural psychology is necessary and not just nice. *Developmental Review*, *34*(3), 208-224.

Stigler, J. W., Smith, S., & Mao, L. W. (1985). The self-perception of competence by Chinese children. *Child development*, 1259-1270.

Stockton, H., Hunt, N., & Joseph, S. (2011). Cognitive processing, rumination, and posttraumatic growth. *Journal of traumatic stress*, *24*(1), 85-92.

Su, Y. J. (2018, April). The Chinese version of the Posttraumatic Growth Inventory-Extended (PTGI-X): Psychometric properties and factor structure [Conference presentation]. 12th Annual Meeting of the Taiwanese Association of Clinical Psychology, Kaohsiung, Taiwan.

Su, S. K., Chiu, C., Hong, Y., Leung, K., Peng, K., & Morris, M. W. (1999). Self-organization and social organization: U.S. and Chinese constructions. In T. R. Tyler, R. M. Kramer, & O. P. John (Eds.), The Psychology of the social self (pp. 193-222). Mahwah, NJ: Lawrence Erlbaum Associates.

Sui, J., & Liu, C. H. (2009). Can beauty be ignored? Effects of facial attractiveness on covert attention. *Psychonomic Bulletin & Review*, *16*(2), 276-281.

Sui, J., He, X., & Humphreys, G. W. (2012). Perceptual effects of social salience: evidence from self-prioritization effects on perceptual matching. *Journal of Experimental Psychology: Human perception and performance*, *38*(5), 1105.

Sui, J., Liu, C. H., & Han, S. (2009). Cultural difference in neural mechanisms of self-recognition. *Social Neuroscience*, *4*(5), 402-411.

Suls, J., & Fletcher, B. (1985). The relative efficacy of avoidant and nonavoidant coping strategies: a meta-analysis. *Health psychology*, *4*(3), 249.

Sumner, J. A., Griffith, J. W., & Mineka, S. (2010). Overgeneral autobiographical memory as a predictor of the course of depression: A meta-analysis. *Behaviour research and therapy*, *48*(7), 614-625.

Surrey, J. L. (1985). *The "self-in-relation": A theory of women's development*. Wellesley, MA: Wellesley College, Stone Center for Developmental Services and Studies.

Symons, C. S., & Johnson, B. T. (1997). The self-reference effect in memory: a meta-analysis. *Psychological bulletin*, *121*(3), 371.

Takano, K., Mori, M., Nishiguchi, Y., Moriya, J., & Raes, F. (2017). Psychometric properties of the written version of the autobiographical memory test in a Japanese community sample. *Psychiatry Research*, *248*, 56-63.

Taku, K., Cann, A., Calhoun, L. G., & Tedeschi, R. G. (2008). The factor structure of the Posttraumatic Growth Inventory: A comparison of five models using confirmatory factor analysis. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *21*(2), 158-164.

Talhelm, T., Zhang, X., Oishi, S., Shimin, C., Duan, D., Lan, X., & Kitayama, S. (2014). Large-scale psychological differences within China explained by rice versus wheat agriculture. *Science*, *344*(6184), 603-608.

Tang, K. N., Chan, C. S., Ng, J., & Yip, C. H. (2016). Action type-based factorial structure of Brief COPE among Hong Kong Chinese. *Journal of Psychopathology and Behavioral Assessment*, *38*(4), 631-644.

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: a social psychological perspective on mental health. *Psychological bulletin*, *103*(2), 193.

Tedeschi, R. G., & Calhoun, L. G. (1995). *Trauma & Transformation: Growing in the Aftermath of Suffering.* Sage Publications.

Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: conceptual foundations and empirical evidence. *Psychological inquiry*, *15*(1), 1-18.

Tedeschi, R. G., Cann, A., Taku, K., Senol-Durak, E., & Calhoun, L. G. (2017). The posttraumatic growth inventory: A revision integrating existential and spiritual change. *Journal of Traumatic Stress*, *30*(1), 11-18.

Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (Eds.). (1998). *Posttraumatic growth: Positive changes in the aftermath of crisis*. Routledge.

Tedeschi, R. G., Shakespeare-Finch, J., Taku, K., & Calhoun, L. G. (2018). *Posttraumatic growth: Theory, research, and applications*. Routledge.

Textor, C. (2021, May 12). *Total Population of China 1980-2026.* In Statista – The Statista Portal. Retrieved May 30, 2021, from https://www.statista.com/statistics/263765/total-population-of-china/

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of health and social behavior*, *52*(2), 145-161.

Trafimow, D., Triandis, H. C., & Goto, S. G. (1991). Some tests of the distinction between the private self and the collective self. *Journal of personality and social psychology*, *60*(5), 649.

Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive therapy and research*, *27*, 247-259.

Triandis, H. (1988). Collectivism v. individualism: A reconceptualisation of a basic concept in cross-cultural social psychology. In *Cross-cultural studies of personality, attitudes and cognition* (pp. 60-95). Palgrave Macmillan, London.

Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological review*, *96*(3), 506.

Triandis, H. C. (2018). *Individualism and collectivism*. Routledge.

Triandis, H. C., & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of personality and social psychology*, *74*(1), 118.

Triandis, H. C., Leung, K., Villareal, M. J., & Clack, F. I. (1985). Allocentric versus idiocentric tendencies: Convergent and discriminant validation. *Journal of Research in personality*, *19*(4), 395-415.

Tsai, W., Nguyen, D. J., Weiss, B., Ngo, V., & Lau, A. S. (2017). Cultural differences in the reciprocal relations between emotion suppression coping, depressive symptoms and interpersonal functioning among adolescents. *Journal of abnormal child psychology*, *45*(4), 657-669.

Tseng, H. M., Lu, J. F. R., & Gandek, B. (2003). Cultural issues in using the SF-36 Health Survey in Asia: results from Taiwan. *Health and quality of life outcomes*, *1*(1), 1-9.

Tu, W. (1998). Family, nation, and the world: the global ethic as a modern confucian quest. *Social Semiotics*, *8*(2-3), 283-295.

Tucker, M. E. (1993). Ecological themes in Taoism and Confucianism. *The Bucknell Review*, *37*(2), 150.

Turk, D. J., Cunningham, S. J., & Macrae, C. N. (2008). Self-memory biases in explicit and incidental encoding of trait adjectives. *Consciousness and cognition*, *17*(3), 1040-1045.

Turner, S. M., & Mo, L. (1984). Chinese adolescents' self-concept as measured by the Offer Self-Image Questionnaire. *Journal of Youth and Adolescence*, *13*(2), 131-142.

Tweed, R. G., White, K., & Lehman, D. R. (2004). Culture, stress, and coping: Internally-and externally-targeted control strategies of European Canadians, East Asian Canadians, and Japanese. *Journal of Cross-Cultural Psychology*, *35*(6), 652-668.

Tyrrell, N., Sime, D., Kelly, C., & McMellon, C. (2019). Belonging in Brexit Britain: Central and Eastern European 1.5 generation young people's experiences. *Population, Space and Place*, *25*(1), e2205.

V., Stein, D.J., Petukhova, M., Hill, E., Alonso, J., Atwoli, L., Bunting, B., Bruffaert, R., Caldas-De-Almeida, J.M., De Girolamo, G., Florescu, S., Gureje, O, Huang, Y., . . ., Koenen., K.C. (2016). The epidemiology of traumatic event exposure worldwide: Results from the World Mental Health Survey Consortium. *46*(2), 327-343.

Valentino, K., Cicchetti, D., Rogosch, F. A., & Toth, S. L. (2008). True and false recall and dissociation among maltreated children: The role of self-schema. *Development and psychopathology*, *20*(1), 213-232.

Van De Vijver, F. J. (2009). Types of comparative studies in cross-cultural psychology. *Online Readings in Psychology and Culture*, *2*(2), 2.

Van de Werfhorst, H. G., Sullivan, A., & Cheung, S. Y. (2003). Social class, ability and choice of subject in secondary and tertiary education in Britain. *British educational research journal*, *29*(1), 41-62.

Van der Kolk, B. A. (1998). Trauma and memory. *Psychiatry and Clinical Neurosciences*, *52*(S1), S52-S64.

Vanderveren, E., Bijttebier, P., & Hermans, D. (2017). The importance of memory specificity and memory coherence for the self: Linking two characteristics of autobiographical memory. *Frontiers in psychology*, *8*, 2250.

Vitell, S. J., Nwachukwu, S. L., & Barnes, J. H. (1993). The effects of culture on ethical decision-making: An application of Hofstede's typology. *Journal of business Ethics*, *12*, 753-760.

Wagner, J. A., & Moch, M. K. (1986). Individualism-collectivism: Concept and measure. *Group & organization studies*, *11*(3), 280-304.

Walker, W. R., Skowronski, J., Gibbons, J., Vogl, R., & Thompson, C. (2003). On the emotions that accompany autobiographical memories: Dysphoria disrupts the fading affect bias. *Cognition & Emotion*, *17*(5), 703-723.

Wallace, B. C., & Constantine, M. G. (2005). Africentric cultural values, psychological help-seeking attitudes, and self-concealment in African American college students. *Journal of Black Psychology*, *31*(4), 369-385.

Wang, C. (2002). The factor structure of the Chinese adaptation of the Self-Concealment Scale in middle school students. *Chinese Journal of Applied Psychology*, *8*, 15-17.

Wang, Q. (2001). Culture effects on adults' earliest childhood recollection and self-description: implications for the relation between memory and the self. *Journal of personality and social psychology*, *81*(2), 220.

Wang, Q. (2004). The emergence of cultural self-constructs: autobiographical memory and self-description in European American and Chinese children. *Developmental psychology*, *40*(1), 3.

Wang, Q. (2006). Earliest recollections of self and others in European American and Taiwanese young adults. *Psychological Science*, *17*(8), 708-714.

Wang, Q. (2014). The cultured self and remembering. In P. Bauer & R. Fivush (Eds.), *The Wiley handbook on the development of children's memory* (pp. 605–625). Malden, MA: John Wiley & Sons.

Wang, Q. (2016). Why should we all be cultural psychologists? Lessons from the study of social cognition. *Perspectives on Psychological Science*, *11*(5), 583-596.

Wang, Q., & Brockmeier, J. (2002). Autobiographical remembering as cultural practice: Understanding the interplay between memory, self and culture. *Culture & Psychology*, 8, 45–64.

Wang, Q., & Conway, M. A. (2004). The stories we keep: Autobiographical memory in American and Chinese middle-aged adults. *Journal of personality*, *72*(5), 911-938.

Wang, Q., & Leichtman, M. D. (2000). Same beginnings, different stories: A comparison of American and Chinese children's narratives. *Child development*, *71*(5), 1329-1346.

Wang, Q., & Ross, M. (2005). What we remember and what we tell: Disentangling cultural effects on memory representations and memory narratives. *Memory*, *13*(6), 594-606.

Wang, Q., Shao, Y., & Li, Y. J. (2010). “My way or mom’s way?” The bilingual and bicultural self in Hong Kong Chinese children and adolescents. *Child Development*, *81*(2), 555-567.

Wang, X., Lee, M. Y., & Yates, N. (2019). From past trauma to post-traumatic growth: The role of self in participants with serious mental illnesses. *Social Work in Mental Health*, *17*(2), 149-172.

Wang, Y., & Ollendick, T. H. (2001). A cross-cultural and developmental analysis of self-esteem in Chinese and Western children. *Clinical child and family psychology review*, *4*, 253-271.

Wartella, J. E., Auerbach, S. M., & Ward, K. R. (2009). Emotional distress, coping and adjustment in family members of neuroscience intensive care unit patients. *Journal of psychosomatic research*, *66*(6), 503-509.

Waterman, A. S. (1981). Individualism and interdependence. *American Psychologist*, *36*(7), 762.

Watkins, E. D., & Teasdale, J. D. (2001). Rumination and overgeneral memory in depression: effects of self-focus and analytic thinking. *Journal of abnormal psychology*, *110*(2), 353.

Weathers, F. W., Blake, D. D., Schnurr, P. P., Kaloupek, D. G., Marx, B. P., & Keane, T. M. (2013). *The life events checklist for DSM-5 (LEC-5)*.

Wegner, D. M., Schneider, D. J., Carter, S. R., & White, T. L. (1987). Paradoxical effects of thought suppression. *Journal of personality and social psychology*, *53*(1), 5.

Wegner, D. M., Schneider, D. J., Knutson, B., & McMahon, S. R. (1991). Polluting the stream of consciousness: The effect of thought suppression on the mind's environment. *Cognitive Therapy and Research*, *15*, 141-152.

Wei, M., Su, J. C., Carrera, S., Lin, S. P., & Yi, F. (2013). Suppression and interpersonal harmony: a cross-cultural comparison between Chinese and European Americans. *Journal of counseling psychology*, *60*(4), 625.

Weinreich, P. (1980). *Manual for identity exploration using personal constructs*. Coventry: University of Warwick, Economic and Social Research Council, Centre for Research in Ethnic Relations (2nd ed. 1986, reprinted 1988).

Weinreich, P. (1989). Variations in ethnic identity: Identity structure analysis. *K. Liebkind (Hg.) New Identities in Europe. Immigrant Ancestry and the Ethnic Identity of Youth, Aldershot/Vermont: Gower*, 41-76.

Weinreich, P., Luk, C. L., & Bond, M. H. (1996). Ethnic stereotyping and identification in a multicultural context: “Acculturation”, self-esteem and identity diffusion in Hong Kong Chinese university students. *Psychology and Developing Societies*, *8*(1), 107-169.

Weinstein, N., & Ryan, R. M. (2011). A self-determination theory approach to understanding stress incursion and responses. *Stress and Health*, *27*(1), 4-17.

Weiss, D. S., & Marmar, C. R. (1997). The Impact of Event Scale-Revised. In J. P. Wilson, & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD: A handbook for practitioners* (pp. 399–411). New York: Guilford Press.

Williams, A. D., & Moulds, M. L. (2007). An investigation of the cognitive and experiential features of intrusive memories in depression. *Memory*, *15*(8), 912-920.

Williams, J. M. G. (2006). Capture and rumination, functional avoidance, and executive control (CaRFAX): three processes that underlie overgeneral memory. *Cognition and emotion*, *20*(3-4), 548-568.

Williams, J. M. G., & Broadbent, K. (1986). Autobiographical memory in suicide attempters. *Journal of abnormal psychology*, *95*(2), 144.

Williams, J. M. G., Barnhofer, T., Crane, C., Herman, D., Raes, F., Watkins, E., & Dalgleish, T. (2007). Autobiographical memory specificity and emotional disorder. *Psychological bulletin*, *133*(1), 122.

Wilson, J. P., & Tang, C. C. S. K. (Eds.). (2007). *Cross-cultural assessment of psychological trauma and PTSD*. Springer Science & Business Med

Witkin, H. A., Dyk, R. B., Faterson, H. F., Goodenough, D. R., & Karp, S. A. (1974). *Psychological differentiation*. Potomac, MD: Lawrence Erlbaum.

Wong, Y., & Tsai, J. (2007). Cultural models of shame and guilt. *The self-conscious emotions: Theory and research*, *209*, 223.

Woodruff-Borden, J., Brothers, A. J., & Lister, S. C. (2001). Self-focused attention: Commonalities across psychopathologies and predictors. *Behavioural and Cognitive Psychotherapy*, *29*(2), 169-178.

Wu, K. K., & Chan, K. S. (2003). The development of the Chinese version of Impact of Event Scale–Revised (CIES-R). *Social psychiatry and psychiatric epidemiology*, *38*, 94-98.

Wu, K. K., Tang, C. S., & Leung, E. Y. (2011). *Healing Trauma*.

Yang, S., Jiang, Q., & Sánchez-Barricarte, J. J. (2022). China's fertility change: an analysis with multiple measures. *Population Health Metrics*, *20*(1), 1-14.

Yang, W. Y. (2016). Differences in gender-role attitudes between China and Taiwan. *Asian Women*, *32*(4), 73-95.

Yao, X. (2000). *An introduction to Confucianism*. Cambridge University Press.

Yeh, C. J., Arora, A. K., & Wu, K. A. (2006). A new theoretical model of collectivistic coping. In *Handbook of multicultural perspectives on stress and coping* (pp. 55-72). Springer, Boston, MA.

Yeh, K. H., Bedford, O., & Yang, Y. J. (2009). A cross-cultural comparison of the coexistence and domain superiority of individuating and relating autonomy. *International Journal of Psychology*, *44*(3), 213-221.

Yeh, K. H., Liu, Y. L., Huang, H. S., & Yang, Y. J. (2007). Individuation and relating autonomy in culturally Chinese adolescents. In J. Liu, C. Ward, A. Bernardo, M. Karasawa, & R. Fischer (Eds.), *Casting the individual in societal and cultural contexts* (pp. 123–146). Seoul: Kyoyook-Kwahak-Sa.

Yeung, I. Y., & Tung, R. L. (1996). Achieving business success in Confucian societies: The importance of guanxi (connections). *Organizational dynamics*, *25*(2), 54-65.

Yi, J., & Zhang, J. (2010). The effect of house price on fertility: Evidence from Hong Kong. *Economic Inquiry*, *48*(3), 635-650.

Young, K. D., Erickson, K., & Drevets, W. C. (2012). Match between cue and memory valence during autobiographical memory recall in depression. *Psychological Reports, 111*(1), 129-148.

Zech, E., & Rimé, B. (2005). Is talking about an emotional experience helpful? Effects on emotional recovery and perceived benefits. Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice, 12(4), 270-287.

Zhai, Y. (2017). Values of deference to authority in Japan and China. *International Journal of Comparative Sociology*, *58*(2), 120-139.

Zhang, M., & Cross, S. E. (2011). Emotions in memories of success and failure: A cultural perspective. *Emotion*, *11*(4), 866.

Zhang, L., Pan, R., Cai, Y., & Pan, J. (2021). The prevalence of post-traumatic stress disorder in the general population during the COVID-19 pandemic: a systematic review and single-arm meta-analysis. *Psychiatry investigation*, *18*(5), 426.

Zhou, M., Ma, W. J., & Deci, E. L. (2009). The importance of autonomy for rural Chinese children's motivation for learning. *Learning and individual differences*, *19*(4), 492-498.

Zhu, Y., Zhang, L., Fan, J., & Han, S. (2007). Neural basis of cultural influence on self-representation. *Neuroimage*, *34*(3), 1310-1316.

Zoellner, T., & Maercker, A. (2006). Posttraumatic growth in clinical psychology—A critical review and introduction of a two component model. *Clinical psychology review*, *26*(5), 626-653.

Zoellner, L. A., & Bittenger, J. N. (2004). On the uniqueness of trauma memories in PTSD. *Posttraumatic stress disorder: Issues and controversies*, 147-162.

Zomer, L. (2012). *The relationships among emotional intelligence, gender, coping strategies, and well-being in the management of stress in close interpersonal relationships and the workplace*. University of Toronto (Canada).

Appendices

Appendix A: Ethics Approval Letters

Appendix A1: Ethics Approval Letters (for Study 1) from the Medical Science Interdivisional Research Ethics Committee (IDREC) of the University of Oxford (Reference Number: R52325/ RE001 & R52325/RE002)

MEDICAL SCIENCES INTER-DIVISIONAL RESEARCH ETHICS COMMITTEE

Research Services, University of Oxford, Wellington Square, Oxford, OX1 2JD
Tel: +44(0)1865 616577 Fax: +44(0)1865 280467
ethics@medsci.ox.ac.uk

UNIVERSITY OF OXFORD

CONFIDENTIAL

Ref: R52325/RE001

Professor Anke Ehlers / Lawrence Yu Ho Wing
Department of Experimental Psychology
University of Oxford
South Parks Road
Oxford

15 August 2017

Dear Professor Ehlers and Lawrence,

Research Ethics Approval - CUREC 1

Study title: Cultural Influences on Responses to Stressful Events

The above application has been considered on behalf of the Medical Sciences Inter-divisional Research Ethics Committee (IDREC) in accordance with the procedures laid down by the University for Ethical Approval of all research involving human participants.

I am pleased to inform you that, on the basis of the information provided to the IDREC, the proposed research has been judged as meeting appropriate ethical standards, and approval has been granted for a period of **12 months**, commencing on **15 August 2017.** The reference number for this study is **R52325/RE001**.

This is **subject to:**

a) your following the BPS guidelines for online research

b) your agreeing to follow Approved Procedure 04

c) it is your responsibility to comply with the requirements for administering any tests or questionnaires and, if in doubt, to contact the publisher of those tests or questionnaires.

d) if new research staff are engaged, the PI is responsible for ensuring they are suitably qualified by training and/or experience.

I would like to remind you that your study may be selected for review by the MS IDREC during an annual audit.

Amendments

Should there be any subsequent changes to the study, which raise ethical issues not covered in the original application, you should submit details to the IDREC for consideration and approval. If there are significant alterations then the Committee will require a succinct letter explaining these. If your study received University Sponsorship through CTRG, then the amendment will first need to be submitted to CTRG for approval of continued Sponsorship.

Please do not hesitate to contact me if you have any queries.

Yours Sincerely

H. Barnby-Porritt

Dr. Helen Barnby-Porritt
Research Ethics Manager, Medical Sciences

MEDICAL SCIENCES INTERDIVISIONAL RESEARCH ETHICS COMMITTEE

Research Services, University of Oxford, Wellington Square, Oxford, OX1 2JD
Tel: +44(0)1865 616577 Fax: +44(0)1865 280467
ethics@medsci.ox.ac.uk

CONFIDENTIAL

16th February 2018

Lawrence Yu Ho Wing
Department of Experimental Psychology
University of Oxford
South Parks Road
Oxford

Dear Lawrence

Amendment of Research Ethics Application

Ref No: R52325/RE002

Study Title: Cultural Influences on Responses to Stressful Events

Thank you for submitting a request for an amendment to the above study, which has been reviewed on behalf of the Medical Sciences Interdivisional Research Ethics Committee (IDREC).

I am pleased to inform you that your requests to:

- recruit British participants living in Hong Kong and administer the study there
- schedule British participants into the researchers' Oxford lab and conduct the study via Skype
- extend the ethics approval until 31st December 2018
- change the follow up questionnaires to be completed 6 months later, rather than 1 year later
- change upper age limit to 35 (previously 27)

have been judged as meeting appropriate ethical standards, on the basis of the information provided to the IDREC.

Please do not hesitate to contact me if you have any queries.

Yours Sincerely

H. Barnby-Porritt

Dr. Helen Barnby-Porritt
Research Ethics Manager, Medical Sciences

Appendix A2: Ethics Approval Letters (for Study 2) from the Medical Science Interdivisional Research Ethics Committee (IDREC) of the University of Oxford (Reference Number: R52325/ RE003, R52325/ RE004, R52325/RE005, & R52325/ RE006)

MEDICAL SCIENCES INTERDIVISIONAL RESEARCH ETHICS COMMITTEE

Research Services, University of Oxford, Wellington Square, Oxford, OX1 2JD
Tel: +44(0)1865 616577 Fax: +44(0)1865 280467
ethics@medsci.ox.ac.uk

CONFIDENTIAL

23rd March 2018

Lawrence Yu Ho Wong
Department of Experimental Psychology
University of Oxford
South Parks Road
Oxford

Dear Lawrence

Amendment of Research Ethics Application

Ref No: R52325/RE003

Study Title: Cultural Influences on Responses to Stressful Events

Thank you for submitting a request for an amendment to the above study, which has been reviewed on behalf of the Medical Sciences Interdivisional Research Ethics Committee (IDREC).

I am pleased to inform you that your requests to:

- extend the ethics approval until 31st December 2020
- add new measures for participants to complete (including cultural and self-related measures, Modified Perceptual Matching Task and Autobiographical Memory Test)
- recruit participants from the Department of Psychology, National Taiwan University
- increase the number of participants to 600 (previously 180)
- use audio recording for the Autobiographical Memory Test

have been judged as meeting appropriate ethical standards, on the basis of the information provided to the IDREC.

Please do not hesitate to contact me if you have any queries.

Yours Sincerely

H. Barnby-Porritt

Dr. Helen Barnby-Porritt
Research Ethics Manager, Medical Sciences

R52325/RE004: Cultural Influences on Responses to Stressful Events - Amendment Approval

MSD Ethics <ethics@medsci.ox.ac.uk>
Thu 15/11/2018 13:36
To: ho.yu@psy.ox.ac.uk <ho.yu@psy.ox.ac.uk>

Dear Lawrence,

Thank you for submitting a request for an amendment to project R52325, which has been reviewed on behalf of the Medical Sciences Inter-Divisional Research Ethics Committee (IDREC).

I am pleased to inform you that your request to:

- change the remuneration in Hong Kong and Taiwan from an equivalent amount of the non-UK currency (to £15 and £5 in the UK) to an amount with reference to the local rates
- add a new measure for participants (Parental Bonding Instrument)

has been judged as meeting appropriate ethical standards, on the basis of the information provided to the IDREC, and approval has been granted, under reference R52325/RE004.

Please note that this email is your sole approval.

Best wishes
Leah

Leah Butts
Research Ethics Administrator – Medical Sciences I Research Services

Postal Address: University of Oxford, University Offices, Wellington Square, Oxford, OX1 2JD
T: +44 01865 616575 **E:** ethics@medsci.ox.ac.uk
http://researchsupport.web.ox.ac.uk/governance/ethics/apply/msidrec

My working days are Tuesday – Thursday (9.30pm – 2pm) & Friday (8am – 5pm)

****Please note that only the new version of the CUREC forms will be accepted (CUREC 1: Version 4.1, CUREC 2: 2.1, CUREC 3: 3.1). The forms have been updated to reflect the GDPR requirements regarding personal data.****

MEDICAL SCIENCES INTERDIVISIONAL RESEARCH ETHICS COMMITTEE

Research Services, University of Oxford, Wellington Square, Oxford, OX1 2JD
Tel: +44(0)1865 616577 Fax: +44(0)1865 280467
ethics@medsci.ox.ac.uk

CONFIDENTIAL

9th April 2019

Lawrence Yu Ho Wong
Department of Experimental Psychology
University of Oxford
South Parks Road
Oxford

Dear Lawrence

Amendment of Research Ethics Application

Ref No: R52325/RE005

Study Title: Cultural Influences on Responses to Stressful Events

Thank you for submitting a request for an amendment to the above study, which has been reviewed on behalf of the Medical Sciences Interdivisional Research Ethics Committee (IDREC).

I am pleased to inform you that your requests to:

- change the term 'Ethnically British' to 'White British' in the inclusion criteria
- add a QR code/hyperlink link to access the registration form
- add a new research testing location (Anna Watts Building)

have been judged as meeting appropriate ethical standards, on the basis of the information provided to the IDREC.

Please do not hesitate to contact me if you have any queries.

Yours Sincerely

H. Barnby-Porritt

Dr. Helen Barnby-Porritt
Research Ethics Manager, Medical Sciences

R52325/RE006: Cultural Influence on Responses to Stressful Events - Amendment Approval

MSD Ethics <ethics@medsci.ox.ac.uk>

Wed 13/11/2019 13:57

To: ho.yu@psy.ox.ac.uk <ho.yu@psy.ox.ac.uk>

Dear Lawrence,

Thank you for submitting a request for an amendment to project R52325, which has been reviewed on behalf of the Medical Sciences Inter-Divisional Research Ethics Committee (IDREC).

I am pleased to inform you that your request to:

- aim recruitment towards males, to ensure an even gender balance
- conduct in-class visits to promote and recruit for the study

has been judged as meeting appropriate ethical standards, on the basis of the information provided to the IDREC, and approval has been granted, under reference R52325/RE006.

Please note that this email is your sole approval.

Best wishes

Leah

Leah Butts

Research Ethics Administrator – Medical Sciences | Research Services

Postal Address: University of Oxford, University Offices, Wellington Square, Oxford, OX1 2JD

T: +44 01865 616575 **E:** ethics@medsci.ox.ac.uk

http://researchsupport.web.ox.ac.uk/governance/ethics/apply/msidrec

My normal working days are Tuesday, Thursday & Friday (9.30pm – 2pm) & Wednesday (8am – 5pm)

****The Ethics Team Offices will be closed from 21st December 2019 to 1st January 2020, inclusive.**

Any ethics applications requiring approval to commence research before 6th January 2020, should be submitted to the relevant IDREC/OXTREC team before 1st December 2019**

Please consider the environment before printing this email

Appendix A3: Ethics Approval Letters (for Study 2) from the Human Research Ethics Committee (HREC) of the University of Hong Kong (Reference Number: EA180306)

THE UNIVERSITY OF HONG KONG

香 港 大 學

April 25, 2018

Dr. Tom Barry
Department of Psychology

Dear Dr. Barry,

Application for Ethics Approval
HREC's Reference Number:**EA1803063**

I refer to your application for ethics approval of your project entitled "Cultural Influences on Responses to Stressful Events".

2. I am pleased to inform you that the application has been approved by the Human Research Ethics Committee (HREC) regarding the ethical aspect of the above-mentioned research project, and the expiration date of the ethical approval is April 24, 2022.

3. Starting from April 1, 2015, the HREC's reference number of your project (i.e. EA1803063) has to be shown in all materials sent to potential and actual participants to enable participants to link the materials to an approved project.

4. You are reminded to report to the Committee any amendments and new information on the project. Any deviation from the study protocol or compliance incident that has occurred during a study and may adversely affect the rights, safety or well-being of any participant or breaches of confidentiality should be reported to the HREC within 15 calendar days from the first awareness of the deviation/incident by the PI. Application for amendment(s) of an approved project including project extension should be submitted using a prescribed form which can be downloaded from the Research Services homepage (http://www.rss.hku.hk/integrity/ethics-compliance/hrec). Application for extension should be submitted well before the initially approved expiration date.

Yours sincerely,

Professor J.H. Bacon-Shone
Chairman
Human Research Ethics Committee

c.c. Dr. L.H.W. Yu, Oxford Centre for Anxiety Disorders and Trauma (OxCADAT)

JBS/cw/bw

THE REGISTRY 教 務 處
POKFULAM ROAD, HONG KONG. TEL:(852)2859 2111 FAX:(852)2858 2549

Printed on environmentally friendly paper

THE UNIVERSITY OF HONG KONG

香 港 大 學

December 19, 2018

Mr. Lawrence H.W. Yu
Oxford Centre for Anxiety Disorders & Trauma (OxCADAT)

Dear Mr. Yu,

Application for Amendment of an Approved Project
HREC's Reference Number: **EA1803063**

Thank you for your application for amendment to the project "Cultural Influences on Responses to Stressful Events", which was granted ethics approval by the Human Research Ethics Committee (HREC) in April 2018.

2. I am pleased to inform you that the HREC has approved changes to the following aspects as specified in the application:

(i) investigator (to change the Principal Investigator from Dr. Tom Barry to Mr. Lawrence H.W. Yu; and the Co-Investigator from Mr. Lawrence H.W. Yu to Dr. Tom Barry and Professor Anke Ehlers); and

(ii) supporting documents.

3. The expiration date of the ethics approval on April 24, 2022 remains unchanged.

4. You are reminded that starting from April 1, 2015, the HREC's reference number of your project (i.e. EA1803063) has to be shown in all materials sent to potential and actual participants to enable participants to link the materials to an approved project.

Yours sincerely,

T.S. Veitch

Professor T.S. Veitch
Chairman
Human Research Ethics Committee

c.c. Dr. T.J. Barry, Department of Psychology
Professor A. Ehlers, Oxford Centre for Anxiety Disorders & Trauma (OxCADAT)

TSV/vy/bw

THE REGISTRY 教務處
POKFULAM ROAD, HONG KONG. TEL:(852)2859 2111 FAX:(852)2858 2549

Printed on environmentally friendly paper

Appendix A4: Ethics Approval Letters (for Study 2) from the Research Ethics Committee of the National Taiwan University (Reference Number: 201812ES010)

國立臺灣大學
行為與社會科學研究倫理委員會

Research Ethics Committee
National Taiwan University
No. 1, Sec. 4, Roosevelt Rd., Taipei, Taiwan 10617, R.O.C
Phone: 3366-9956 Fax: 2362-9082

審查核可證明

核可日期：2019 年 1 月 25 日

倫委會案號： 201812ES010
計畫名稱： 文化對壓力事件之回應的影響
校/院/系/計畫主持人： 國立臺灣大學/理學院/心理學系/余浩榮 其他
計畫文件版本日期： 【研究計畫書，2018 年 11 月 27 日】、【知情同意書，2019 年 1 月 20 日】、【問卷，2018 年 11 月 27 日】、【招募文宣，2018 年 11 月 27 日】

上述計畫業經 2019 年 1 月 25 日 國立臺灣大學行為與社會科學研究倫理委員會同意，符合研究倫理規範。本委員會的運作符合本校行為與社會科學研究倫理準則與規範及政府相關法律規章。

本案需經研究經費補助單位核准同意後，該計畫始得執行。

本審查核可證明之有效期限自 2019 年 1 月 25 日 起至 2020 年 1 月 24 日 止。若有需要，計畫主持人最遲應於本核可證明到期前的 6 週，提出持續審查申請表，方可繼續執行。

在計畫執行期間，若有計畫變更或嚴重不良反應事件，計畫主持人須依國內及本校相關法令規定通報本委員會。

行為與社會科學研究倫理委員會主任委員 謝世忠

Ethical Review Approval
National Taiwan University

Date of approval: January 25, 2019

NTU-REC No.: 201812ES010
Title of protocol： Cultural Influences on Responses to Stressful Events
University/ College/ Department/ Principal Investigator： University of Oxford/ Christ Church/ Department of Experimental PsychologyNational Taiwan University / Department of Psychology/ Ho Wing (Lawrence) Yu
Version date of documents： 【Research Protocol, November 27, 2018】、【Informed Consent Form, January 20, 2019】、【Questionnaires, November 27, 2018】、【Recruitment Advertising, November 27, 2018】

The protocol has been approved by Research Ethics Committee of National Taiwan University and has been classified as expedited on January 25, 2019 . The committee is organized under, and operates in accordance with, Social and Behavioral Research Ethical Principles and Regulations of National Taiwan University and governmental laws and regulations.

Approval by funding agency is mandatory before project implementation.

The duration of this approval is from January 25, 2019 to January 24, 2020 . Continuing Review Application should be submit to Research Ethics Committee no later than six weeks before current approval expired.

The investigator is required to report protocol amendment and Serious Adverse Events in accordance with the National Taiwan University and governmental laws and regulations.

Chairperson Shih-chung Hsieh
Research Ethics Committee

國立臺灣大學
行為與社會科學研究倫理委員會

Research Ethics Committee
National Taiwan University
No. 1, Sec. 4, Roosevelt Rd., Taipei, Taiwan 10617, R.O.C
Phone: 3366-9956 Fax: 2362-9082

持續審查 審查核可證明

核可日期：(持續審查) 2020 年 2 月 4 日

倫委會案號： 201812ES010
核可證明有效期限： 2020 年 2 月 4 日 起至 2020 年 12 月 31 日
計畫名稱： 文化對壓力事件之回應的影響
校/院/系/計畫主持人： 牛津大學/基督堂學院/實驗心理學系/余浩榮 博士生
計畫文件版本日期： 【研究計畫書，2019 年 9 月 30 日】、【知情同意書，2019 年 9 月 30 日】、【問卷，2018 年 11 月 27 日】、【招募文宣，2019 年 9 月 30 日】

上述計畫業經 2020 年 2 月 4 日 國立臺灣大學行為與社會科學研究倫理委員會同意，符合研究倫理規範。本委員會的運作符合本校行為與社會科學研究倫理準則與規範及政府相關法律規章。

本案需經研究經費補助單位核准同意後，該計畫始得執行。

計畫主持人最遲應於本核可證明到期前的 6 週，提出持續審查申請表，本案需經持續審查，方可繼續執行。 在計畫執行期間，若有計畫變更或嚴重不良反應事件，計畫主持人須依國內及本校相關法令規定通報本委員會。

行為與社會科學研究倫理委員會主任委員 謝世忠

Ethical Review Approval
National Taiwan University

Date of approval (Continuing Review): February 4, 2020

NTU-REC No.: 201812ES010
Validity of this approval: from February 4, 2020 to December 31, 2020
Title of protocol： Cultural Influences on Responses to Stressful Events
University/ College/ Department/ Principal Investigator： University of Oxford/ Christ Church/ Department of Experimental Psychology /Ho Wing (Lawrence) Yu
Version date of documents： 【Research Protocol, September 30, 2019】，【Informed Consent Form, September 30, 2019】，【Questionnaires, November 27, 2018】，【Recruitment Advertising, September 30, 2019】

The protocol has been approved by Research Ethics Committee of National Taiwan University and has been classified as expedited on February 4, 2020 . The committee is organized under, and operates in accordance with, Social and Behavioral Research Ethical Principles and Regulations of National Taiwan University and governmental laws and regulations.

Approval by funding agency is mandatory before project implementation.

. Continuing Review Application should be submitted to Research Ethics Committee no later than six weeks before current approval expired. The investigator is required to report protocol amendment and Serious Adverse Events in accordance with the National Taiwan University and governmental laws and regulations.

Chairperson Shih-chung Hsieh
Research Ethics Committee

Appendix B: Promotion Materials

Appendix B1: Advertising Poster for Oxford Participants (Study 1)

Department of Experimental Psychology
Oxford Centre for Anxiety Disorders and Trauma
The Old Rectory, Paradise Square, Oxford, OX1 1TW

Experimental Psychology
Medical Sciences Division

UNIVERSITY OF OXFORD

VOLUNTEERS NEEDED FOR A CROSS-CULTURAL STUDY
CULTURAL INFLUENCES ON RESPONSES TO STRESSFUL EVENTS

Ethics Approval Reference: [R52325/RE002]



We are looking for healthy volunteers **aged 18-35** for a study of cultural influences regarding how people respond to stressful events.

If you are either:

- **Ethnically British and have resided in the United Kingdom for at least 8 years**; *OR*
- **Ethnically Chinese and have resided in Taiwan for at least 8 years**; *OR*
- **Ethnically Chinese and have resided in Hong Kong for at least 8 years**.

You are invited to participate in a research session at the Oxford Centre for Anxiety Disorders and Trauma, the Old Rectory, Paradise Square, Oxford. This would take about 2 hours of your time. You would be asked to complete a set of questionnaires, paper-and-pencil tasks and a computer-based task. You would be reimbursed for your travel expenses and time.

If you are interested and would like more information please do not hesitate to contact Lawrence Yu by email: ho.yu@psy.ox.ac.uk. There is no obligation to take part. Thank you!

Poster Advert_Version 2.0 15th February 2018

Appendix B2. Advertising Email for Oxford Participants (Study 1)

Dear [Department/College/Society] members,

Volunteers Needed for a Cross-Cultural Study
Cultural Influences on Responses to Stressful Events
Ethics Approval Reference: [R52325/RE002]

This is Lawrence Yu Ho Wing, a DPhil candidate in Experimental Psychology. We are currently looking for healthy volunteers **aged 18-35** for a study of cultural influences regarding how people respond to stressful events.

If you are either:

- **Ethnically British and have resided in the United Kingdom for at least 8 years**; *OR*
- **Ethnically Chinese and have resided in Taiwan for at least 8 years**; *OR*
- **Ethnically Chinese and have resided in Hong Kong for at least 8 years**.

You are invited to participate in a research session at the OxCADAT which is located in the Old Rectory, Paradise Square, Oxford. This would take about 2 hours of your time. You would be asked to complete a set of questionnaires, paper-and-pencil tasks and a computer-based task. You would be reimbursed for your travel expenses and time.

If you are interested and would like more information please do not hesitate to contact Lawrence Yu on Tel: 07491 924965 or Email: ho.yu@psy.ox.ac.uk. There is no obligation to take part but your participation means a lot to us. Thank you!

Yours sincerely,
Lawrence Yu

Oxford Centre for Anxiety Disorders and Trauma (OxCADAT)
Department of Experimental Psychology
University of Oxford
The Old Rectory
Paradise Square
Oxford OX1 1TW

Tel: (+44) 7491 924965
Email: ho.yu@psy.ox.ac.uk

Appendix B3. Daily Info for Oxford Participants (Study 1)

Department of Experimental Psychology
Oxford Centre for Anxiety Disorders and Trauma
The Old Rectory, Paradise Square, Oxford, OX1 1TW

Experimenta Psychology
Medical Sciences Division

UNIVERSITY OF OXFORD

VOLUNTEERS NEEDED FOR A CROSS-CULTURAL STUDY

CULTURAL INFLUENCES ON RESPONSES TO STRESSFUL EVENTS

Ethics Approval Reference: [R52325/RE002]

We are looking for healthy volunteers **aged 18-35** for a study of cultural influences regarding how people respond to stressful events.

If you are either:

- **Ethnically British and have resided in the United Kingdom for at least 8 years**; *OR*
- **Ethnically Chinese and have resided in Taiwan for at least 8 years**; *OR*
- **Ethnically Chinese and have resided in Hong Kong for at least 8 years**.

You are invited to participate in a research session at the Oxford Centre for Anxiety Disorders and Trauma, the Old Rectory, Paradise Square, Oxford. This would take about 2 hours of your time. You would be asked to complete a set of questionnaires, paper-and-pencil tasks and a computer-based task. You would be reimbursed for your travel expenses and time. There is no obligation to take part. Thank you!

If you are interested and would like more information please do not hesitate to contact Lawrence Yu on **Tel: 07491 924965** or **Email: ho.yu@psy.ox.ac.uk**.

Appendix B4: Advertising Poster for British Participants (Study 2)

Department of Experimental Psychology
Oxford Centre for Anxiety Disorders and Trauma
The Old Rectory, Paradise Square, Oxford, OX1 1TW

Experimenta Psychology
Medical Sciences Division

UNIVERSITY OF OXFORD

VOLUNTEERS NEEDED FOR A CROSS-CULTURAL STUDY
CULTURAL INFLUENCES ON RESPONSES TO STRESSFUL EVENTS

Ethics Approval Reference: [R52325/RE005]



We are looking for healthy volunteers **aged 18-25** for a study of cultural influences regarding how people respond to stressful events.

If you:

- **Are White British;** *AND*
- **Have resided in the United Kingdom for at least 8 years**; *AND*
- **Can understand, read and speak in fluent English,**

You are invited to participate in a research session at Anna Watts Building (Radcliffe Observatory Quarter, Woodstock Road, Oxford OX2 6GG) / the Oxford Centre for Anxiety Disorders and Trauma (Old Rectory, Paradise Square, Oxford OX1 1TW). This would take about 2 hours of your time. You would be asked to complete a set of questionnaires, paper-and-pencil tasks and computer-based tasks. You would be reimbursed for your travel expenses and time.

If you are interested and would like more information please do not hesitate to contact Lawrence Yu on Tel: 07491 924965 or Email: ho.yu@psy.ox.ac.uk. There is no obligation to take part but your participation means a lot to us. Thank you!

Please scan the QR code for registration

Poster Advert_Version 2.0 9th April 2019

Appendix B5: Advertising Email for British Participants (Study 2)

Dear [College] members,

Volunteers Needed for a Cross-Cultural Study
Cultural Influences on Responses to Stressful Events
Ethics Approval Reference: [R52325/RE005]

This is Lawrence Yu Ho Wing, a DPhil student in Experimental Psychology. We are currently looking for healthy volunteers **aged 18-25** for a study of cultural influences regarding how people respond to stressful events.

If you:

- **Are White British**; *AND*
- **Have resided in the United Kingdom for at least 8 years**; *AND*
- **Can understand, read and speak in fluent English,**

You are invited to participate in a research session at Anna Watts Building (Radcliffe Observatory Quarter, Woodstock Road, Oxford OX2 6GG) / the Oxford Centre for Anxiety Disorders and Trauma (Old Rectory, Paradise Square, Oxford OX1 1TW). This would take about 2 hours of your time. You would be asked to complete a set of questionnaires, paper-and-pencil tasks and computer-based tasks. You would be reimbursed for your travel expenses and time.

If you are interested and would like to sign up, please register online at https://bit.ly/2BH5fhY.

If you would like to obtain more information please do not hesitate to contact Lawrence Yu on Tel: 07491 924965 or email psy.uk.lawrenceyu@gmail.com.

There is no obligation to take part but your participation means a lot to us. Thank you!

Yours sincerely,
Lawrence Yu

Oxford Centre for Anxiety Disorders and Trauma (OxCADAT)
Department of Experimental Psychology
University of Oxford
The Old Rectory
Paradise Square
Oxford OX1 1TW

Tel: +852 6371 5632 (Whatsapp)/ +44 7491 924965 (UK phone call)
Email: ho.yu@psy.ox.ac.uk

Appendix B6: Daily Info for British Participants (Study 2)

Department of Experimental Psychology
Oxford Centre for Anxiety Disorders and Trauma
The Old Rectory, Paradise Square, Oxford, OX1 1TW

Experimenta Psychology
Medical Sciences Division

UNIVERSITY OF OXFORD

VOLUNTEERS NEEDED FOR A CROSS-CULTURAL STUDY

CULTURAL INFLUENCES ON RESPONSES TO STRESSFUL EVENTS

Ethics Approval Reference: [R52325/RE005]

We are looking for healthy volunteers **aged 18-25** for a study of cultural influences regarding how people respond to stressful events.

If you:

- **Are White British;** *AND*
- **Have resided in the United Kingdom for at least 8 years**; *AND*
- **Can understand, read and speak in fluent English,**

You are invited to participate in a research session at Anna Watts Building (Radcliffe Observatory Quarter, Woodstock Road, Oxford OX2 6GG) / the Oxford Centre for Anxiety Disorders and Trauma (Old Rectory, Paradise Square, Oxford OX1 1TW). This would take about 2 hours of your time. You would be asked to complete a set of questionnaires, paper-and-pencil tasks and computer-based tasks. You would be reimbursed for your travel expenses and time.

If you are interested and would like to sign up, please register online at https://bit.ly/2BH5fhY.

If you would like more information please do not hesitate to contact Lawrence Yu on **Tel: 07491 924965** or **Email: ho.yu@psy.ox.ac.uk**. There is no obligation to take part but your participation means a lot to us. Thank you!

Appendix B7: Advertising Poster for Hongkongese Participants (Study 2)

Department of Psychology, University of Hong Kong
6/f, Jockey Club Tower, Centennial Campus, The University of Hong Kong,
Pokfulam Road, Hong Kong

VOLUNTEERS NEEDED FOR A CROSS-CULTURAL STUDY
CULTURAL INFLUENCES ON RESPONSES TO STRESSFUL EVENTS

Ethics Approval Reference: [EA1803063]





We are looking for healthy volunteers **aged 18-25** for a study of cultural influences regarding how people respond to stressful events.

If you:

- **Are ethnically Chinese;** *AND*
- **Have been residing in Hong Kong for at least the past 8 years**; *AND*
- **Can understand, read and write in fluent Chinese.**

You are invited to participate in a study session at the Department of Psychology, University of Hong Kong, 6/F, Jockey Club Tower, Centennial Campus, University of Hong Kong. This would take about 2 hours of your time. You would be asked to complete a set of questionnaires, paper-and-pencil tasks and computer-based tasks. You would be reimbursed for your travel expenses and time.

If you are interested and would like more information please do not hesitate to contact Angel Mak on Tel: 9461 1681 or Email: psy.hk.lawrenceyu@gmail.com. There is no obligation to take part. Thank you!

HKD 150 for reward!

Please scan the QR code for registration

Appendix B8: Advertising Poster for Taiwanese Participants (Study 2)

臺大心理系誠徵參與者

本研究包含問卷填寫及行為測試

研究需時：（初次研究 – 實驗室）120 分鐘；（追蹤評估 – 線上）30 分鐘





- 地點：國立臺灣大學心理系館
- 內容：現場填寫問卷及完成行為測試，並於六個月後線上完成問卷
- 需求對象：
  1. 年齡 18 至 25 歲
  2. 華人
  3. 至少近 8 年定居在臺灣
  4. 可流利聽講讀寫中文者
- 參與報酬（現金新台幣）：（初次研究） 300 元；（追蹤評估）75 元

《舉辦單位相關資料》
單位名稱：國立臺灣大學/（英國）牛津大學
聯絡地址：臺北市羅斯福路四段 1 號（心理系館）
負責人：余浩榮先生
指導教授：陳淑惠教授/ Professor Anke Ehlers
所屬系別/科別：心理系

《聯絡資訊》
聯絡人姓氏：余先生
Email: psy.lawrenceyu@gmail.com

如有興趣參與本次研究，請即以下列 QR code 報名：

2018/11/27/Version01

Appendix B9: Advertising Email for Taiwanese Participants (Study 2)

臺大心理系誠徵參與者

本研究包含問卷填寫及行為測試

研究需時：（初次研究 – 實驗室）120 分鐘；（追蹤評估 – 線上）30 分鐘





- 地點：國立臺灣大學心理系館
- 內容：現場填寫問卷及完成行為測試，並於六個月後線上完成問卷
- 需求對象：
  1. 年齡 18 至 25 歲
  2. 華人
  3. 至少近 8 年定居在臺灣
  4. 可流利聽講讀寫中文者
- 參與報酬（現金新台幣）：（初次研究）300 元；（追蹤評估）75 元

《舉辦單位相關資料》
單位名稱：國立臺灣大學/（英國）牛津大學
聯絡地址：臺北市羅斯福路四段 1 號（心理系館）
負責人：余浩榮先生
指導教授：陳淑惠教授/ Professor Anke Ehlers
所屬系別/科別：心理系

《聯絡資訊》
聯絡人姓氏：余先生
Email: psy.lawrenceyu@gmail.com

如有興趣參與本次研究，請即以下列超連結報名：
https://forms.gle/HuHFNXefyozf9FkS6

Appendix C: Participant Information Sheet

Appendix C1: Participant Information Sheet for Oxford Participants (Study 1)

Oxford Centre for Anxiety Disorders and Trauma
Department of Experimental Psychology
The Old Rectory, Paradise Square, Oxford, OX1 1TW

Professor Anke Ehlers (Lead Researcher)
Professor of Experimental Psychopathology and Wellcome Trust Principal Research Fellow
Email: anke.ehlers@psy.ox.ac.uk

Please direct all enquiries to
Lawrence Yu Ho Wing (DPhil Student)
Tel no.: 07491 924965
Email: ho.yu@psy.ox.ac.uk

Cultural Influences on Responses to Stressful Events

PARTICIPANT INFORMATION SHEET

Ethics Approval Reference: [R52325/RE001]

1. ***Background and aims of the study***

Stressful events are common in our lives. In response to these events, some people may develop symptoms of posttraumatic stress disorder (PTSD), depressive and anxiety disorders. Despite their universal prevalence, there is limited evidence on whether the psychological processes underlying the development of these symptoms are culturally similar. However, most of the existing models are derived from Western research and are thus questionable in terms of their cross-cultural applicability. Therefore, we aim to fill in this research gap by taking cultural dimensions into account.

This study is aimed to investigate cultural influences regarding how people respond to stressful events.

This study is funded by the Government of the Hong Kong Special Administrative Region, British Council, International Student Identity Card (ISIC) Association and StudyPortals, and the Wellcome Trust.

2. ***Why have I been invited to take part?***

You have been invited because you are aged 18-27 and currently living in the United Kingdom.

The inclusion criteria are students who are ethnically British and have resided in the United Kingdom for at least 8 years; OR ethnically Chinese and have resided in Taiwan for at least 8 years; OR ethnically Chinese and have resided in Hong Kong for at least 8 years.

3. ***Do I have to take part?***

No. It is up to you to decide whether or not to take part. You can ask questions about the study before deciding whether or not to participate. If you do agree to participate, you will sign a consent form. You can still withdraw from the study at any time, without giving a reason and without any effect on your academic course.

4. ***What will happen in the study?***

If you are happy to take part in the study, you will first be asked to provide some basic demographic information. You will then complete a computer-based task and a paper-and-pencil task about how you see yourself. Then, you will complete another two pencil-and-paper tasks and questionnaires about how you interact with other people and remember events from your life and how you feel in general. You will not need to describe details of your life events.

This should take approximately 2 hours with two 5-minute breaks in between.

The study will take place at the Oxford Centre for Anxiety Disorders and Trauma (OxCADAT), the Old Rectory, Paradise Square, Oxford OX1 1TW.

If you agree, we would also like to contact you again after one year to fill in a few further questionnaires online and we would need to keep your name and email address until then. You can choose not to participate in this follow-up assessment.

5. ***Are there any potential risks in taking part?***

Yes. The study involves answering some standardised questionnaires about memories for positive and negative events. As you are not asked to provide details of the events, we do not expect any of the questionnaires to induce distress. However, if you find the questionnaires or tasks unpleasant, you can stop at any time without having to give a reason, and this would not in any way affect your university course. In the very unlikely case that you become very distressed, the study will be terminated and the senior investigator on the project informed.

6. ***Are there any benefits in taking part?***

Yes. We hope that, by carrying out this research, we can get a better understanding of the cultural influences on stress responses. This, in turn, may help refine psychological treatments for people who suffer from stress.

7. **Expenses and payments**

You will receive a total of £ 15 for your first visit and £ 5 for your participation of the follow-up study one year later.

8. ***What happens to the data provided?***

Your responses will be anonymised with a unique code that will be used in all data files and analyses. The **research data** will be stored confidentially on password-protected computers at the University of Oxford. Only the research team associated with the study will have access to the anonymised data. The **personal data** (e.g., name and email address) will be retained for one year if you agree to be contacted again for the follow-up study. If not, no personal data will be kept after your first visit. All information will be kept strictly confidential except in rare circumstances where it is judged that you are, or someone else is, at immediate risk of serious harm, or where information is requested by a court of law.

All anonymised research data and records will be stored for a retention period of 10 years on the University computers backed up to the server after publication or public release of the work of the research. You will

have the option in the consent form to allow us to share the anonymised data with other researchers who may run additional analyses or combine the results with those of other studies. It is up to you to decide whether you wish to make your anonymised data available. If not, the data will be destroyed after 10 years.

9. ***Will the research be published?***

Yes. If you agree to participate in this study, the research will be written up as part of Lawrence Yu Ho Wing's DPhil thesis. You will not be personally identified in the thesis. On the successful submission of the thesis, it will be deposited both in print and online in the University archives, to facilitate its use in future research. The thesis will be published open access.

The University of Oxford is committed to the dissemination of its research for the benefit of society and the economy and, in support of this commitment, has established an online archive of research materials. This archive includes digital copies of student theses successfully submitted as part of a University of Oxford postgraduate degree programme. Holding the archive online gives easy access for researchers to the full text of freely available theses, thereby increasing the likely impact and use of that research.

The results from this research may also be published in an international journal. You will not be personally identified in any such publication. However, if you give your consent, anonymised quotes may be included in a publication that may arise from this research.

10. ***Who has reviewed this study?***

This study has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee (reference number: to be added).

11. ***Who do I contact if I have a concern about the study or I wish to complain?***

If you have a concern about any aspect of this study, please speak to the research student, Lawrence Yu Ho Wing [Tel: 07491 924965] or his supervisor, Professor Anke Ehlers [Tel: 01865 618602], who will do his/her best to answer your query. The researchers should acknowledge your concern within 10 working days and give you an indication of how they intend to deal with it. If you remain unhappy or wish to make a formal complaint, please contact the relevant chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter in a reasonably expeditious manner:
Chair, **Medical Sciences Inter-Divisional Research Ethics Committee**; Email: ethics@medsci.ox.ac.uk;
Address: Research Services, University of Oxford, Wellington Square, Oxford OX1 2JD

12. ***Further Information and Contact Details***

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

Lawrence Yu Ho Wing
Oxford Centre for Anxiety Disorders and Trauma (OxCADAT)
Department of Experimental Psychology
The Old Rectory, Paradise Square, Oxford, OX1 1TW
Tel: 07491 924965
Email: ho.yu@psy.ox.ac.uk

Appendix C2: Participant Information Sheet for all Participants (Study 2)

Oxford Centre for Anxiety Disorders and Trauma
Department of Experimental Psychology
The Old Rectory, Paradise Square, Oxford, OX1 1TW





Professor Anke Ehlers (Lead Researcher)
Professor of Experimental Psychopathology and Wellcome Trust Principal Research Fellow
Email: anke.ehlers@psy.ox.ac.uk

Please direct all enquiries to
Lawrence Yu Ho Wing (DPhil Student)
Tel no.: +44 7491 924965 (U.K.) / +852 6371 5632 (Hong Kong)/ +886 966716438 (Taiwan)
Email: ho.yu@psy.ox.ac.uk

Cultural Influences on Responses to Stressful Events

PARTICIPANT INFORMATION SHEET

Ethics Approval Reference: [R52325/RE005]

1. ***Background and aims of the study***

Stressful events are common in our lives. In response to these events, some people may develop symptoms of posttraumatic stress disorder (PTSD), depressive and anxiety disorders. Despite their universal prevalence, there is limited evidence on whether the psychological processes underlying the development of these symptoms are culturally similar. However, most of the existing models are derived from Western research and are thus questionable in terms of their cross-cultural applicability. Therefore, we aim to fill in this research gap by taking cultural dimensions into account.

This study is aimed to investigate cultural influences regarding how people respond to stressful events.

This study is funded by the Government of the Hong Kong Special Administrative Region, British Council, International Student Identity Card (ISIC) Association and StudyPortals, and the Wellcome Trust.

2. ***Why have I been invited to take part?***

You have been invited because you are aged 18-25.

The inclusion criteria are students who are White British and have resided in the United Kingdom for at least 8 years; OR ethnically Chinese and have resided in Taiwan for at least 8 years; OR ethnically Chinese and have resided in Hong Kong for at least 8 years.

3. ***Do I have to take part?***

No. It is up to you to decide whether or not to take part. You can ask questions about the study before deciding whether or not to participate. If you do agree to participate, you will sign a consent form. You can still withdraw from the study at any time, without giving a reason and without any effect on your academic course.

4. ***What will happen in the study?***

If you are happy to take part in the study, you will first be asked to provide some basic demographic

information. You will then complete computer-based tasks and a paper-and-pencil task about how you see yourself. Then, you will complete another two pencil-and-paper tasks (one of which involves audio-recordings to be transcribed and coded without any personal identifiers) and questionnaires about how you interact with other people and remember events from your life and how you feel in general. You will not need to describe details of your life events.

This should take approximately 2 hours with two 5-minute breaks in between.

In **United Kingdom**: The study will take place at Anna Watts Building, Radcliffe Observatory Quarter, Woodstock Road, Oxford OX2 6GG; OR the Oxford Centre for Anxiety Disorders and Trauma (OxCADAT), the Old Rectory, Paradise Square, Oxford OX1 1TW.

In **Hong Kong**: The study will take place at the department of Psychology, University of Hong Kong.

In **Taiwan**: The study will take place at the department of Psychology, National Taiwan University.

If you agree, we would also like to contact you again after half a year to fill in a few further questionnaires online and we would need to keep your name and email address until then. You can choose not to participate in this follow-up assessment.

5. ***Are there any potential risks in taking part?***

Yes. The study involves answering some standardised questionnaires about memories for positive and negative events. As you are not asked to provide details of the events, we do not expect any of the questionnaires to induce distress. However, if you find the questionnaires or tasks unpleasant, you can stop at any time without having to give a reason, and this would not in any way affect your university course. In the very unlikely case that you become very distressed, the study will be terminated and the senior investigator on the project informed.

6. ***Are there any benefits in taking part?***

Yes. We hope that, by carrying out this research, we can get a better understanding of the cultural influences on stress responses. This, in turn, may help refine psychological treatments for people who suffer from stress.

7. **Expenses and payments**

You will receive a total of GBP 15 (in the U.K.) / TWD 300 (in Taiwan) / HKD 150 (in Hong Kong) for your first visit and GBP 5 (in the U.K.) / TWD 75 (in Taiwan) / HKD 50 (in Hong Kong) for your participation of the follow-up study half a year later.

8. ***What happens to the data provided?***

Your responses will be anonymised with a unique code that will be used in all data files and analyses. The **research data** (including audio-recordings) will be stored confidentially on password-protected computers at the University of Oxford. Only the research team associated with the study will have access to the anonymised data. The **personal data** (e.g., name, gender and contact details) will be retained for half a year if you agree to be contacted again for the follow-up study. If not, no personal data will be kept after

your first visit. All information will be kept strictly confidential except in rare circumstances where it is judged that you are, or someone else is, at immediate risk of serious harm, or where information is requested by a court of law.

All anonymised research data and records will be stored for a retention period of 10 years on the University computers backed up to the server after publication or public release of the work of the research. You will have the option in the consent form to allow us to share the anonymised data with other researchers who may run additional analyses or combine the results with those of other studies. It is up to you to decide whether you wish to make your anonymised data available. If not, the data will be destroyed after 10 years.

9. ***Data Protection***

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study. The University will process your personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest. Further information about your rights with respect to your personal data is available from http://www.admin.ox.ac.uk/councilsec/compliance/gdpr/individualrights/.

10. ***Will the research be published?***

Yes. If you agree to participate in this study, the research will be written up as part of Lawrence Yu Ho Wing's DPhil thesis. You will not be personally identified in the thesis. On the successful submission of the thesis, it will be deposited both in print and online in the University archives, to facilitate its use in future research. The thesis will be published open access.

The University of Oxford is committed to the dissemination of its research for the benefit of society and the economy and, in support of this commitment, has established an online archive of research materials. This archive includes digital copies of student theses successfully submitted as part of a University of Oxford postgraduate degree programme. Holding the archive online gives easy access for researchers to the full text of freely available theses, thereby increasing the likely impact and use of that research.

The results from this research may also be published in an international journal. You will not be personally identified in any such publication. However, if you give your consent, anonymised quotes may be included in a publication that may arise from this research.

11. ***Who has reviewed this study?***

This study has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee (reference number: R52325/RE005).

12. ***Who do I contact if I have a concern about the study or I wish to complain?***

If you have a concern about any aspect of this study, please speak to the research student, Lawrence Yu Ho Wing [Tel: +44 7491 924965 (UK)/ +852 6371 5632(HK)/ +886 966716438 (Taiwan)] or his supervisor, Professor Anke Ehlers [Tel: 01865 618602], who will do his/her best to answer your query. The researchers should acknowledge your concern within 10 working days and give you an indication of how they intend to deal with it. If you remain unhappy or wish to make a formal complaint, please contact the relevant chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter in a reasonably expeditious manner:
Chair, **Medical Sciences Inter-Divisional Research Ethics Committee**; Email: ethics@medsci.ox.ac.uk;
Address: Research Services, University of Oxford, Wellington Square, Oxford OX1 2JD

13. *Further Information and Contact Details*

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

Lawrence Yu Ho Wing
Oxford Centre for Anxiety Disorders and Trauma (OxCADAT)
Department of Experimental Psychology
The Old Rectory, Paradise Square, Oxford, OX1 1TW
Tel: +852 6371 5632 (Whatapps)/ +44 7491 924965 (UK phone call)/ +852 6758 9949 (HK phone call)
Email: ho.yu@psy.ox.ac.uk

Appendix D: Consent Form

Appendix D1: Consent Form for Oxford Participants (Study 1)

Oxford Centre for Anxiety Disorders and Trauma
Department of Experimental Psychology
The Old Rectory, Paradise Square, Oxford, OX1 1TW





Professor Anke Ehlers (Lead Researcher)
Professor of Experimental Psychopathology and Wellcome Trust Principal Research Fellow
Email: anke.ehlers@psy.ox.ac.uk

Please direct all enquiries to the research student
Lawrence Yu Ho Wing (DPhil Student)
Tel no.: 07491 924965
Email: ho.yu@psy.ox.ac.uk

PARTICIPANT CONSENT FORM

CUREC Approval Reference: [R52325/RE001]

Cultural Influences on Responses to Stressful Events

Study Summary: This study is aimed to investigate the cultural influences regarding how people respond to stressful events. It involves a set of questionnaires, a computer-based task and paper-and-pencil tasks. Participants will be asked to answer some questions about life events that they have experienced and their memories for these events, but they will not need to provide a detailed description.

		Please initial each box
1	I confirm that I have read and understand the information sheet version 1.0 dated 15th August 2017 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without penalty.	☐
3	I understand that research data collected during the study may be looked at by designated individuals from the University of Oxford where it is relevant to my taking part in this study. I give permission for these individuals to have access to this data.	☐
4	I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.	☐
5	I understand that all information will be kept strictly confidential except in rare circumstances in which it is judged that I am, or someone else is, at immediate risk of serious harm, or where information is requested by a court of law.	☐
6	I understand that this project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee.	☐
7	I understand how this research will be written up and published.	☐
8	I understand how to raise a concern or make a complaint.	☐
9	I give permission to be quoted directly in the research publication (without any personal identifiers).	☐
10	I agree to take part in the above study.	☐

Optional: I agree to be contacted again in one year's time, and for the research team to keep my contact details until then. ☐

Optional: I agree for research data collected in this study to be given to researchers, including those working outside of the EU, to be used in other research studies. I understand that any data that leave the research group will be fully anonymised so that I cannot be identified. ☐

Name of Volunteer	Date	Signature
Name of person taking consent	Date	Signature

Appendix D2: Oxford Consent Form for all Participants (Study 2)

Oxford Centre for Anxiety Disorders and Trauma
Department of Experimental Psychology
The Old Rectory, Paradise Square, Oxford, OX1 1TW





Professor Anke Ehlers (Lead Researcher)
Professor of Experimental Psychopathology and Wellcome Trust Principal Research Fellow
Email: anke.ehlers@psy.ox.ac.uk

Please direct all enquiries to the research student
Lawrence Yu Ho Wing (DPhil Student)
Tel no.: +44 7491 924965 (U.K.) / +852 6758 9949 (Hong Kong)
Email: ho.yu@psy.ox.ac.uk

PARTICIPANT CONSENT FORM

CUREC Approval Reference: [R52325/RE006]

Cultural Influences on Responses to Stressful Events

Study Summary: This study is aimed to investigate the cultural influences regarding how people respond to stressful events. It involves a set of questionnaires, computer-based tasks and paper-and-pencil tasks. Participants will be asked to answer some questions about life events that they have experienced and their memories for these events, but they will not need to provide a detailed description.

		Please initial each box
1	I confirm that I have read and understand the information sheet version 6.0 dated _13th November 2019_ for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without penalty.	☐
3	I understand that research data collected during the study may be looked at by designated individuals from the University of Oxford where it is relevant to my taking part in this study. I give permission for these individuals to have access to this data.	☐
4	I understand who will have access to personal data provided, how the data will be stored according to the General Data Protection Regulation (GDPR); and what will happen to the data at the end of the project.	☐
5	I understand that all information will be kept strictly confidential except in rare circumstances in which it is judged that I am, or someone else is, at immediate risk of serious harm, or where information is requested by a court of law.	☐
6	I understand that this project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee.	☐
7	I understand how this research will be written up and published.	☐
8	I understand how to raise a concern or make a complaint.	☐
9	I consent to being audio recorded.	☐

10	I understand how audio recordings will be used in research outputs.	☐
11	I give permission to be quoted directly in the research publication (without any personal identifiers).	☐
12	I agree to take part in the above study.	☐
Optional:	I agree to be contacted again in half a year's time, and for the research team to keep my contact details until then.	☐
Optional:	I agree for research data collected in this study to be given to researchers, including those working outside of the EU, to be used in other research studies. I understand that any data that leave the research group will be fully anonymised so that I cannot be identified.	☐

Name of Volunteer	Date	Signature
Name of person taking consent	Date	Signature

Appendix D3: HKU Consent Form for Hongkongese Participants (Study 2)

Informed Consent Form for Adult

Cultural Influences on Responses to Stressful Events

You are invited to participate in a research study conducted by *Mr. Lawrence Yu*, *Dr. Tom J. Barry* and *Professor Anke Ehlers* in the *Department of Psychology* at the University of Hong Kong.

PURPOSE OF THE STUDY

In this study we hope to gather data on your understanding of yourself, your experience in interacting with people around you, your recollection on some of your past events and their relationship with other variables related to the way that you think, feel and remember, as well as your experience of different symptoms after stress (e.g., anxiety).

PROCEDURES

The study will involve two time points of data collection. In the first visit, you will first be asked to provide some basic demographic information. You will then complete computer-based tasks and a paper-and-pencil task about how you see yourself. After that, you will complete another two paper-and-pencil tasks (one of which involves audio-recordings to be transcribed and coded without any personal identifiers) and questionnaires about how you interact with other people and remember events from your life and how you feel in general. You will not need to describe details of your life events. This should take approximately 2 hours with two 5-minute breaks in between.

You will be invited for a follow-up assessment 6 months later to fill in a few further online questionnaires, which are expected to take you 30 minutes, and we would need to keep your name and email address until then. You can choose not to participate in this follow-up assessment.

POTENTIAL RISKS

The study involves answering some standardised questionnaires about memories for positive and negative events. As you are not asked to provide details of the events, we do not expect any of the questionnaires to induce distress. However, if you find the questionnaires or tasks unpleasant, you can stop at any time without having to give a reason, and this would not in any way affect your university course. In the very unlikely case that you become very distressed, the study will be terminated and the lead researchers on the project informed. We appreciate that some of the information you may give us is particularly personal. We want to assure you that your responses will be entirely anonymous.

1

CONFIDENTIALITY

Your responses will be anonymised with a unique code that will be used in all data files and analyses. The **research data** (including audio-recordings) will be stored confidentially on password-protected computers at the University of Hong Kong and the University of Oxford. Only the research team associated with the study will have access to the anonymised data. The **personal data** (e.g., name and email address) will be retained for half a year if you agree to be contacted again for the follow-up study. If not, no personal data will be kept after your first visit.

COMPENSATION FOR PARTICIPATION

In exchange for your participation you will receive HKD 150 for your first visit and HKD 50 for the follow-up study 6 months later.

POTENTIAL BENEFITS

We hope to use the knowledge that we gain from this study to inform our understanding of cultural influences on stress responses. Hopefully this, in turn, may help refine psychological treatments for people who suffer from stress.

If you would like to participate in future research in this area you will also be given that opportunity at the end of the study.

DATA RETENTION

In accordance with standard procedures, the data that we gather from your experiment performance will be kept for 10 years unless you opt to have your data withdrawn from the study completely. At which point the data will be destroyed.

PARTICIPATION AND WITHDRAWAL

Your participation is voluntary. This means that you can choose to stop at any time without negative consequences.

QUESTIONS AND CONCERNS

If you have any questions about the research, please feel free to contact **Mr. Lawrence Yu (email: ho.yu@psy.ox.ac.uk)** or **Dr Tom J Barry (tel: 3917 8927; email: tjbarry@hku.hk) or Professor Anke Ehlers (email: anke.ehlers@psy.ox.ac.uk)**.

In addition, if, following the experiment, you experience any distress in relation to your participation, or you would like some support regarding anything that you have discussed with us in your questionnaires, then please contact the researcher at any time thereafter.

If you have questions about your rights as a research participant, contact the Human Research

Ethics Committee, HKU (2241-5267).

SIGNATURE

I _____ (Name of Participant) understand the procedures described above and agree to participate in this study.

_____

Signature of Participant Date

Date of Preparation:

HREC Approval Expiration date: April 24, 2022

HREC Reference Number: EA1803063

Appendix D1: NTU Consent Form for Taiwanese Participants (Study 2)

國立臺灣大學研發處版權所有 Copyrights© All rights reserved
2013 年 8 月 30 日國立臺灣大學行為與社會科學研究倫理委員會第 21 次會議通過

國立臺灣大學行為與社會科學研究倫理委員會
研究參與者知情同意書

歡迎您參與本研究！此份文件名為「研究參與者知情同意書」，它將詳述您本研究之相關資訊及您的權利。在研究開始進行及您簽署本同意書之前，研究主持人或研究人員會為您說明研究內容，並回答您的任何疑問。

研究計畫名稱

中文：文化對壓力事件之回應的影響

英文：Cultural Influences on Responses to Stressful Events

研究機構名稱：國立臺灣大學	**經費來源：**Wellcome Trust
研究計畫主持人：余浩榮	**職稱：**訪問研究學生
研究計畫協同主持人：陳淑惠	**職稱：**教授
研究計畫協同主持人：Anke Ehlers	**職稱：**教授

(多位共同/協同主持人之計畫，請將資料填寫完整)

※研究計畫聯絡人：陳品儒	**電話：**0970-618-013

一、研究目的：(請以研究參與者能理解之方式，說明本研究之內容)

壓力事件（例如：創傷）有時會發生在我們的生活之中。面對這些事件，一些人可能會患上與壓力源相關的心理疾病，其中最普遍的一種是創傷後壓力症候群 (PTSD) (e.g., Hoge, Riviere, Wilk, Herrell, & Weathers, 2014)。病徵包括夢魘或創傷性記憶，並導致患者高度苦惱和認知功能受損 (American Psychiatric Association, 2013)。儘管有關疾病在世界各地普遍存在，可是有關這些症狀發展的心理過程在文化上是否相似的證據卻是有限的。最近有研究指出文化差異影響了人們對創傷事件的評估和記憶 (e.g., Jobson & O'Kearney, 2009)，可能從而在 PTSD 和其他與壓力源相關的心理障礙（例如，抑鬱和焦慮障礙）的發展中起作用。然而，目前大部分的心理病理學模型都源於西方研究，其跨文化適用性尚不清楚 (e.g., Hinton & Lewis-Fernández, 2011)。故此，本次研究旨在通過研究文化對處理和應對壓力事件的影響，以填補這一研究缺口。

二、參與研究之條件與限制：(研究參與者之納入或排除條件)

參與者條件：(1) 年齡 18 至 25 歲 (2) 華人 (3) 至少近 8 年定居在臺灣。

同意書版本 2019/01/20/Version02

本研究將排除：無法流利聽講讀寫中文者。

三、研究方法與程序：(含研究方法、研究流程、預計招募之參與者總人數、以及研究參與者所需付出之時間)

本次研究為一個涉及台灣、香港和英國三地的跨文化合作項目，收案分別在國立臺灣大學 (NTU)、香港大學 (HKU) 和牛津大學 (Oxford) 三所學術機構進行。在臺研究的部分先送研究倫理委員會審查，待審查通過後才得以進行。在初次研究中，研究人員將會以面對面施測為收案方法，當參與者簽署知情同意書後，便會進入施測階段，在電腦完成問卷並完成與自我概念和記憶相關的行為實驗，預計整體施測時間約 120 分鐘。整個研究項目三地招募之參與者人數總計有 420 人，其中臺灣參與者人數為 140 人。收案將由計畫主持人和受過培訓的學生研究助理進行。在完成初次研究大約六個月後，事前同意的參與者將會按指示在線上完成追蹤評估（問卷），預計需時約 30 分鐘。

四、參與研究時之禁忌、限制及應以配合事項：(含研究中對參與者的各項限制，及研究參與者可能需自行負擔之相關費用等，若無亦請註明。)

無。

五、研究潛在風險、發生率及救濟措施：(請說明 1. 對研究參與者有潛在之生理、心理、或個人資訊保密上之風險，或可能產生的任何不適；2.風險發生率；3. 降低風險與保護研究參與者之方法；4. 風險發生時之處理措施。)

量表中部分問題可能使參與者回想起壓力事件，而引發少數參與者的負面情緒與不適。若因參與本研究而發生以上不良事件或損害，將由計畫主持人或研究執行人員中止研究流程，提供關於這些身心反應的簡單說明，並視參與者需求給予能提供協助之單位的相關訊息。

六、研究效益與對研究參與者之益處：(1. 研究之科學效益；2 對研究參與者之益處，包含給予之車馬費或禮品，以及參與者中途退出之計算方式等，若無亦請註明。)

1. 研究之科學效益：
   希望能更加了解文化對人們回應壓力事件之影響，從而找出促進與干擾適性因應壓力的因素，以作為臨床評估與介入之參考。
2. 對研究參與者益處：
   參與者在完成初次研究（約 120 分鐘）和追蹤評估（約 30 分鐘）後，將會分別獲取新台幣現金 300 元和 75 元。

七、研究可能衍生的商業利益及其拓展應用之約定：(若無亦請註明。)

無。

八、研究材料保存期限、運用規劃及機密性：(含 1. 研究材料之保存期限、保存方式、運用規劃；2. 涉及可辨識之個人資訊如身分紀錄和隱私資料之機密性，及其保護與處置材料之方式。)

本研究將以量表和行為測試收集相關變項之資料，研究用的量表與實驗資料於收集當時便

會立即給予研究編號來取代您的姓名，並由主持人轉換為電子檔並進行分析，而相關量表及電子檔均存放於有鎖之計畫主持人辦公室、研究助理室及設定密碼之電腦。

研究計畫主持人將依法把任何可辨識您身分之紀錄與您個人隱私之資料視同機密處理，絕對不會公開。將來發表研究結果時，您的身份將被充分保密。凡簽署知情同意書，即表示您同意各項原始紀錄可直接受監測者、稽核者、研究倫理委員會及主管機關檢閱，以確保研究過程與數據，符合相關法律和各種規範要求；上述人員承諾絕對維繫您身分之機密性。

本研究所收集之各項資料將以上述所提及之方式妥善保存於安全之處，並依規定於首次發表有關本次計畫的文獻後保存十年。

九、損害補償或保險：（含研究參與者之法定權益受損時之補償責任，若無亦請註明。）

(一) 本研究依計畫執行，除可預期之不良事件，例如量表中部分問題可能會使參與者回想起壓力事件，而引發部分參與者的負面情緒與不適外，若因參與本研究而發生不良事件或損害，將由計畫主持人或研究執行人員立即中止研究流程，提供關於這些身心反應的簡單說明，並視參與者需求給予能提供協助之單位的相關訊息。除前述之補償原因與方式之外，本研究不提供其他形式之補償。

(二) 您簽署本知情同意書後，在法律上的任何權利不會因此受影響。

十、研究之退出方式及處理：

您可自由決定是否參加本研究，研究過程中不需要任何理由，可隨時撤回同意或退出研究。如果您拒絕參加或退出，將不會引起任何不愉快，或影響日後研究計畫主持人或者協同主持人對您的評分或印象，更不會損及您的任何權利。如果你是協同主持人的學生，本次研究計畫與成績、考評無關，即使退出研究，對有關方面不會造成任何影響。若您決定撤回同意或退出研究，可透過直接告知計畫主持人或研究人員，計畫主持人將會銷毀您的研究相關檔案。研究計畫主持人或研究計畫贊助或監督單位，也可能於必要時中止該研究之進行。

十一、研究參與者權利：

(一) 本研究已經過國立臺灣大學行為與社會科學研究倫理委員會審查，審查內容包含利益與風險評估、研究參與者照護及隱私保護等，並已獲得核准。委員會係依規範運作，並通過中央目的事業主管機構查核認證之審查組織。若您於研究過程中有任何疑問，或認為權利受到影響、傷害，可直接與國立臺灣大學研究倫理中心聯絡，電話號碼為：(02)3366-9956、(02)3366-9980。

(二) 研究計畫主持人或研究人員已經妥善地向您說明了研究內容與相關資訊，並告知可能影響您參與研究意願的所有資訊。若您有任何疑問，可向研究人員詢問，研究人員將具實回答。

同意書版本 2019/01/20/Version02

(三) 研究計畫主持人已將您簽署之一式兩份同意書其中一份交給您留存。

十二、研究計畫主持人/研究人員簽名

研究計畫主持人或研究人員已詳細解釋有關本研究計畫中上述研究方法的性質與目的，以及可能產生的危險與利益。

研究人員簽名：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

日期：□□□□年□□月□□日

十三、研究參與者簽名同意（已滿 20 歲之成年人）

本人已詳細瞭解上述研究方法及其可能的益處與風險，有關本研究計畫的疑問，已獲得詳細說明與解釋。本人同意成為本研究計畫的自願研究參與者。

研究參與者簽名：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

日期：□□□□年□□月□□日

十四、7 歲以上未成年研究參與者及法定代理人簽名同意

(一) 本人已充分瞭解上述研究方法及其可能的益處與風險，有關本研究計畫的疑問，皆已獲得詳細說明與解釋。本人同意成為本研究計畫的自願研究參與者。

研究參與者簽名：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

日期：□□□□年□□月□□日

(二) 本人為研究參與者之法定代理人，已充分瞭解上述研究方法及其可能的益處與風險，有關本研究計畫的疑問，皆已獲得詳細說明與解釋。本人同意法定代理對象成為本研究計畫的研究參與者。

法定代理人簽名：＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

日期：□□□□年□□月□□日

同意書版本 2019/01/20/Version02

Appendix E: Study Procedure

Appendix E1: Study 1A Procedure

Study 1A Procedure (~ 107 min)

- Participants will be given a participation information sheet at least 24 hours before the study to consider before deciding to participate.
- If the participants decide to participate, they will be asked for the availability to the study session at the OxCADAT (Oxford).

First Part (46 min)

1. (5 min) Consent Form + Q & A
2. (1 min) Demographic Questionnaire*
3. ***(10 min) Implicit Association Test (IAT) for Self-Concept – Agency (in MatLab) (Computerised Task)***
4. **(10 min) Twenty-Statement Test**
5. (5 min) Revised Personal Style Inventory (PSI-II)*
6. (1 min) Rosenberg Self-Esteem Scale (RSES)
7. (1 min) Self-Concealment Scale (SCS)
8. (3 min) Analysis-Holism Scale (AHS)
9. **(10 min) Role Variability Task**

Break (5-min)

Second Part (38 min)

10. ***(15 min) Self-Defining Memory Task – block condition***
11. *(2 min) Centrality of Event Scale Short Form (CES-SF) – Positive Event*
12. *(2 min) Memory Questionnaire for Positive Events*
13. *(2 min) Thinking about Life Experience Scale (TALE) – Positive Event*
14. *(2 min) Centrality of Event Scale Short Form (CES-SF) – Stressful Event*
15. *(2 min) Memory Questionnaire for Stressful Events*
16. *(2 min) Thinking about Life Experience Scale (TALE) – Stressful Event*
17. *(2 min) Life Events Checklist*
18. (1 min) State Dissociation Questionnaire (SDQ)*
19. (1 min) Data-Driven Processing Scale (DDPS)*
20. (1 min) Lack of Self-Referent Processing Scale (LSRPS)*
21. (2 min) Public and Communal Self Appraisals Measure (PCSAM)*
22. (4 min) Post-Traumatic Cognition Inventory (PTCI)

Break (5-min)

Third Part (13 min)

23. (2 min) Impact of Events Scale (IES-R)
24. (2 min) State-Trait Anxiety Inventory (Trait) (Form Y)
25. (1 min) Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)
26. (2 min) Response to Intrusions Questionnaire (RIQ)*
27. (1 min) Post-Traumatic Growth Inventory – Short Form (PTGI-SF)
28. (3 min) Brief COPE
29. (2 min) Trait Dissociation Questionnaire Short Form (TDQ-SF)*

Filling in the follow-up details/ remuneration forms

Note

- **Bold – Objective Measure**
- *Red – Counter-Balanced*

*** No existing Chinese version; translated by Lawrence and student interns**

Appendix E2: Study 2A Procedure

Study 2A Procedure (~ 131 min)

- Participants will be given a participation information sheet at least 24 hours before the study to consider before deciding to participate.
- If the participants decide to participate, they will be asked for the availability to the study session at the OxCADAT (Oxford)/ Experimental Psychopathology Lab (HKU)/ Cliniclal Psychology Lab (NTU).

First Part (52 min)

1. (5 min) Consent Form + Q & A
2. (1 min) Demographic Questionnaire*
3. ***(10 min) Implicit Association Test (IAT) for Self-Concept – Agency (in MatLab) (Computerised Task)***
4. (3 min) Individualism and Collectivism Scale (INDCOL)
5. (3 min) Self-Construal Scale (SCS)
6. **(10 min) Modified Twenty-Statement Test**
7. (5 min) Revised Personal Style Inventory (PSI-II)*
8. (1 min) Rosenberg Self-Esteem Scale (RSES)
9. (1 min) Self-Concealment Scale (SCS)
10. (3 min) Analysis-Holism Scale (AHS)
11. ***(10 min) Autobiographical Memory Test (Audio-taped)***

Break (5-min)

Second Part (52 min)

12. ***(10 min) Perceptual Matching Task (in E-Prime) (Computerised Task)***
13. ***(15 min) Self-Defining Memory Task (5 for positive/ 5 for negative) – block condition***
14. *(2 min) Centrality of Event Scale Short Form (CES-SF) – Positive Event*
15. *(2 min) Memory Questionnaire for Positive Events*
16. *(2 min) Thinking about Life Experience Scale (TALE) – Positive Event*
17. *(3 min) Modified Life Events Checklist*
18. *(2 min) Centrality of Event Scale Short Form (CES-SF) – Stressful Event*
19. *(2 min) Memory Questionnaire for Stressful Events*
20. *(2 min) Thinking about Life Experience Scale (TALE) – Stressful Event*
21. (1 min) State Dissociation Questionnaire (SDQ)*
22. (1 min) Data-Driven Processing Scale (DDPS)*
23. (1 min) Lack of Self-Referent Processing Scale (LSRPS)*
24. (2 min) Public and Communal Self Appraisals Measure (PCSAM)*
25. (4 min) Post-Traumatic Cognition Inventory (PTCI)
26. (3 min) Parental Bonding Instrument (PBI)

Break (5-min)

Third Part (17 min)

27. (2 min) Impact of Events Scale (IES-R)
28. (2 min) State-Trait Anxiety Inventory (Trait) (Form Y)
29. (1 min) Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)
30. (2 min) Response to Intrusions Questionnaire (RIQ)*
31. (2 min) Post-Traumatic Growth Inventory - Expanded (PTGI-X)

32. (6 min) COPE Inventory
33. (2 min) Trait Dissociation Questionnaire Short Form (TDQ-SF)*

Filling in the follow-up details/ remuneration forms

Note

- **Bold – Objective Measure**
- *Red – Counter-Balanced*

* No existing Chinese version; translated by Lawrence and student interns

Appendix F: Demographic Questionnaire

Appendix F1: Demographic Questionnaire (Study 1A)

Demographic Questionnaire

Thank you very much for your participation. In the following session, you will be instructed to complete a set of questionnaires.

Please feel free to let the researcher know if you have any questions during the experiment.

Participant No.

Q1. Gender

1. Male
2. Female
3. Other
4. Prefer not to say

Q2. Date of Birth (DD/MM/YYYY)

_____

Q3. Age (on 31st December 2017)

1. 18 years old
2. 19 years old
3. 20 years old
4. 21 years old
5. 22 years old
6. 23 years old
7. 24 years old
8. 25 years old
9. 26 years old
10. 27 years old
11. 28 years old
12. 29 years old
13. 30 years old
14. 31 years old
15. 32 years old
16. 33 years old
17. 34 years old
18. 35 years old

Q4. Ethnicity

1. Hong Kong Chinese
2. Taiwanese
3. White British

Q5. Field of Study

1. Architecture
2. Arts/Humanities
3. Business/Management

4. Agriculture
5. Dentistry/Medicine
6. Education
7. Engineering
8. Law
9. Mathematics/Physics/Chemistry/Life Sciences
10. Social Sciences/Psychology/Economics
11. Other: _____

Q6. Current Educational Level

1. Bachelor Year 1
2. Bachelor Year 2
3. Bachelor Year 3
4. Bachelor Year 4
5. Bachelor Year 5
6. Bachelor Year 6
7. Taught Master Year 1
8. Taught Master Year 2
9. Research Master Year 1
10. Research Master Year 2
11. DPhil/PhD Year 1
12. DPhil/PhD Year 2
13. DPhil/PhD Year 3
14. DPhil/PhD Year 4
15. Other: _____

個人資料問卷

非常多謝你的參與。在以下的環節中，你將會根據指示完成一組問卷。

在進行實驗期間，如有任何問題，請儘管告知研究人員。

參加者編號.

Q1. 性別

1. 男
2. 女
3. 其他
4. 不願透露

Q2. 出生日期 (DD/MM/YYYY)

_____

Q3. 年齡（在 2017 年 12 月 31 日的時候）

1. 18 歲
2. 19 歲
3. 20 歲
4. 21 歲
5. 22 歲
6. 23 歲
7. 24 歲
8. 25 歲
9. 26 歲
10. 27 歲
11. 28 歲
12. 29 歲
13. 30 歲
14. 31 歲
15. 32 歲
16. 33 歲
17. 34 歲
18. 35 歲

Q4. 組別

1. 英國白人
2. 臺灣人
3. 香港人

Q5. 學習領域

1. 建築學
2. 文學／人文學
3. 工商／管理學
4. 農學
5. 牙醫／醫學
6. 教育學
7. 工程學
8. 法律學
9. 數學／物理／化學／生命科學
10. 社會科學／心理學／經濟學
11. 其他：_____

Q6. 教育程度

1. 大學一年級
2. 大學二年級
3. 大學三年級
4. 大學四年級
5. 大學五年級
6. 大學六年級
7. 修課式碩士一年級
8. 修課式碩士二年級
9. 研究式碩士一年級
10. 研究式碩士二年級
11. 博士一年級
12. 博士二年級
13. 博士三年級
14. 博士四年級
15. 其他：_____

Q7. 家庭月平均收入（除稅後）

(臺灣人)

1. NT$ < 30,000
2. NT$ 30,000-69,999
3. NT$ 70,000-99,999
4. NT$ 100,000-129,999
5. NT$ 130,000-159,999
6. NT$ 160,000-189,999
7. NT$ 190,000-219,999
8. NT$ 220,000-249,999
9. NT$ 250,000-279,999
10. NT$ 280,000-309,999
11. NT$ > 309,999
12. 不願透露

Appendix F2: Demographic Questionnaire (Study 1B)

Demographic Questionnaire

Thank you very much for your participation. You will be instructed to complete a set of questionnaires. Please feel free to let the researcher know if you have any questions by email: ho.yu@psy.ox.ac.uk.

Participant No.

Q1. In total, how much time have you spent living in the United Kingdom?

Year(s) _____

Month(s) _____

Q2. What is the highest education level you have achieved so far?

1. Doctoral degree
2. Master's degree
3. Bachelor's degree
4. General Certificate of Education Advanced Level (GCE A-Level)
5. General Certificate of Secondary Education (GCSE)
6. No formal qualification

個人資料問卷

非常感謝你的參與。你將會根據指示完成一組問卷。如有任何問題，請電郵至ho.yu@psy.ox.ac.uk告知研究人員。

Q1. 你在英國總共居住了多長時間？

年 _____

月 _____

Q2. 你目前達到的最高教育程度是什麼？

1. 博士
2. 碩士
3. 學士
4. 高中
5. 初中／國中
6. 沒有正式資歷

Appendix F3: Demographic Questionnaire (Study 2A)

Demographic Questionnaire

Thank you very much for your participation. In the following session, you will be instructed to complete a set of questionnaires.

Please feel free to let the researcher know if you have any questions during the experiment.

Participant No.

Q1. Gender

1. Male
2. Female
3. Other
4. Prefer not to say

Q2. Date of Birth

e.g. If you were born on 1st February 1995, please put down '01', '02' and '1995' in the blanks provided for 'Day (DD)', 'Month (MM)' and 'Year (YYYY)' respectively.

Day (DD) _____

Month (MM) _____

Year (YYYY) _____

Q3. Your Field of Study

1. Architecture
2. Arts/Humanities
3. Business/Management
4. Agriculture
5. Dentistry/Medicine
6. Education
7. Engineering
8. Law
9. Mathematics/Physics/Chemistry/Life Sciences
10. Social Sciences/Psychology/Economics
11. Other: _____

Q4. The highest educational level you have achieved so far (with a certificate of graduation)

1. No formal qualification
2. General Certificate of Secondary Education (GCSE)
3. General Certificate of Education Advanced Level (GCE A-Level)
4. Bachelor's degree
5. Master's degree
6. Doctoral degree

Q5. Your estimate of your family's current household income (per month)

1. £ < 1,000
2. £ 1,000-1,999
3. £ 2,000-2,999
4. £ 3,000-3,999
5. £ 4,000-4,999
6. £ 5,000-5,999
7. £ 6,000-6,999
8. £ 7,000-7,999
9. £ 8,000-8,999
10. £ 9,000-9,999
11. £ > 9,999
12. Prefer not to say

個人資料問卷

非常感謝您的參與。接下來，您將會根據指示完成一些問卷。在進行實驗期間，如有任何問題，請隨時告知研究人員。

參加者編號.

Q1. 性別

1. 男
2. 女
3. 其他
4. 不願透露

Q2. 出生日期

例子：如果你在 1995 年 2 月 1 日出生，請在下列的「日 (DD)」、「月 (MM)」和「年 (YYYY)」分別填上「01」、「02」和「1995」的答案。

年 (DD) _____

月 (MM) _____

日 (YYYY) _____

Q3. 你的主修科目／領域

1. 建築學
2. 文學／人文學
3. 工商／管理學
4. 農學
5. 牙醫／醫學
6. 教育學
7. 工程學
8. 法律學
9. 數學／物理／化學／生命科學
10. 社會科學／心理學／經濟學
11. 其他：_____

Q4. 你目前達到的最高教育程度（以取得畢業證書為準）

1. 沒有正式學歷
2. 初中／國中
3. 高中
4. 學士
5. 碩士
6. 博士

Q5. 你對你的家庭目前平均收入（每月）的估計

(臺灣人)

1. NT$ < 30,000
2. NT$ 30,000-69,999
3. NT$ 70,000-99,999
4. NT$ 100,000-129,999
5. NT$ 130,000-159,999
6. NT$ 160,000-189,999
7. NT$ 190,000-219,999
8. NT$ 220,000-249,999
9. NT$ 250,000-279,999
10. NT$ 280,000-309,999
11. NT$ > 309,999
12. 不願透露

(香港人)

1. HK$ < 10,000
2. HK$ 10,000-19,999
3. HK$ 20,000-29,999
4. HK$ 30,000-39,999
5. HK$ 40,000-49,999
6. HK$ 50,000-59,999
7. HK$ 60,000-69,999
8. HK$ 70,000-79,999
9. HK$ 80,000-89,999
10. HK$ 90,000-99,999
11. HK$ > 99,999
12. 不願透露

Appendix F4: Demographic Questionnaire (Study 2B)

Demographic Questionnaire

Thank you very much for your participation. You will be instructed to complete a set of questionnaires. Please feel free to let the researcher know if you have any questions by email: ho.yu@psy.ox.ac.uk.

Participant No.

Q1. In total, how much time have you spent living in the U.K.?

Year(s) _____

Month(s) _____

個人資料問卷

非常感謝你的參與。你將會根據指示完成一組問卷。如有任何問題，請電郵至 ho.yu@psy.ox.ac.uk 告知研究人員。

參加者編號.

Q1. 你在英國總共居住了多長時間？

年 _____

月 _____

Appendix G: (Modified) Life Events Scale

Appendix G1: Life Events Scale (Study 1A)

Life Events Checklist

Listed below are a number of difficult or stressful things that sometimes happen to people. For each event, check one or more of the boxes to the right to indicate that: (a) **It happened to you personally**, (b) **you witnessed it happen to someone else,** (c) **you learned about it happening to someone close to you**, (d) **you're not sure if it applies to you**, or (e) **it doesn't apply to you**.

Be sure to consider your entire life (growing up, as well as adulthood) as you go through the list of events.

Event	Happened to me	Witnessed it	Learned about it	Not sure	Doesn't apply
1. Natural disaster (for example, flood, hurricane, tornado, earthquake)					
2. Fire or explosion					
3. Transportation accident (for example, car accident, boat accident, train wreck, plane crash)					
4. Serious accident at work, home, or during recreational activity					
5. Exposure to toxic substance (for example, dangerous chemicals, radiation)					
6. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)					
7. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)					
8. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)					
9. Other unwanted or uncomfortable sexual experience					
10. Combat or exposure to a war-zone (in the military or as a civilian)					
11. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)					
12. Life-threatening illness or injury					
13. Severe human suffering					
14. Sudden, violent death (for example, homicide, suicide)	N/A				
15. Sudden, unexpected death of someone close to you	N/A				
16. Serious injury, harm or death you caused to someone else	(Click here if you were directly involved)				
17. Any other stressful event or experience					

人生經歷檢核表

以下是人生歷程中一些有時會發生的困難或壓力事情。請細閱每項事情，並在右邊一個或多個的方格內加上✓號以表示：(a) **這件事曾經發生在你個人身上**，(b) **你曾經目睹這件事發生在別人身上**，(c) **你知道這件事發生在你親近的人身上**，(d) **你不肯定對這件事的答案**或 (e) **這件事在你身上不適用**。

請記著，在你填寫下表時，請你回顧整個人生經驗（包括你童年的成長和長大後各項經歷）來回答。

事件	事件曾經發生在你身上	曾經目睹	知道這件事	不肯定	不適用
1. 大自然的災難（例如：水災，颶風，龍 捲風，地震）					
2. 火災或爆炸					
3. 交通意外（包括車輛，船隻，火車或飛機的意外）					
4. 工作中，娛樂活動中或在家居發生的嚴重意外					
5. 接觸有毒物品（如危險化學物質，幅射等）					
6. 暴力襲擊（如被人毆打，拳打腳踢，猛力掌摑等）					
7. 以武器攻擊（如被槍擊，刺傷，被人持刀，持槍或以炸彈恐嚇等）					
8. 性暴力（如意圖強姦，以武力或恐嚇要脅進行任何與性有關的活動）					
9. 其他不自願情況下的性經驗					
10. 參與戰事或身處發生戰爭的地方（不論是作為平民或參與軍事工作）					
11. 被禁錮（如被綁架，拐走，被脅持作人質，在戰事中被監禁或俘虜等）					
12. 威脅生命的重病或重傷					
13. 重大的人生苦難					
14. 突然涉及暴力的死亡（包括謀殺和自殺）	不適用				
15. 與你親近的人突然死亡	不適用				
16. 你導致別人嚴重受傷或死亡	（如果你直接牽涉在內，請在此打剔號）				
17. 任何其他難以面對和處理，使你有很大壓力的經歷					

Appendix G2: Modified Life Events Scale (Study 1B)

Modified Life Events Checklist

Listed below are a number of distressing things that sometimes happen to people. Please think back to the past months since you first participated in this study (7 months) and remember what distressing events occurred during this time. For each distressing event you experienced, please tick one of the event types in the 'Yes?' Column and indicate how distressing you found the event by giving a number from 0 = not at all to 100 = extremely in the adjacent column.

For some of the event types, please also indicate whether the distressing event (a) **It happened to you personally**, (b) **you witnessed it happen to someone else,** (c) **you learned about it happening to someone close to you**, and/or (d) **you were exposed to it as part of your job** (for example, paramedic, police, military, or other first responder). The shaded part represents the boxes that are not applicable to the particular event type so you can ignore them.

Be sure to consider the past 7 months since you first participated in this study as you go through the list of event types.

Event Type	Happened to me		Witnessed it		Learned about it		Part of my job	
	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)
1. Break-up of relationship								
2. Major argument with partner								
3. Romantic rejection								
4. Problems with pregnancy/ childbirth								
5. Parents separating								
6. Major argument with family or friends								
7. Betrayal by someone important to you								
8. Being excluded from something important to you								
9. Very embarrassing situation								
10. Negative experience at work or school (e.g., failed exam, lost job)								
11. Exams								
12. Applications/ interviews for job or further education								
13. Rejected application								
14. Losing something important to you (e.g., phone, passport, sentimental item)								
15. Serious problem with living situation								
16. Financial problems								

17. Scary situation when traveling (e.g., when swimming, hiking)								
18. Dangerous encounter with animals								
19. Non-violent crime (e.g., victim of fraud or theft)								
20. Natural disaster (for example, flood, hurricane, tornado, earthquake)								
21. Fire or explosion								
22. Transportation accident (for example, car accident, boat accident, train wreck, plane crash)								
23. Serious accident at work, home, or during recreational activity								
24. Exposure to toxic substance (for example, dangerous chemicals, radiation)								
25. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)								
26. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)								
27. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)								
28. Other unwanted or uncomfortable sexual experience								
29. Combat or exposure to a war-zone (in the military or as a civilian)								
30. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)								
31. Serious but not life-threatening illness								
32. Injury (e.g., breaking a bone)								
33. Life-threatening illness or injury								
34. Severe human suffering (e.g., poverty)								
35. Sudden, violent death (for example, homicide, suicide)								
36. Sudden accidental death								

37. Death of someone close to you								
38. Serious injury, harm or death you caused to someone else								
39. Any other very stressful event or experience Please specify: _____								

Reviewing your answers to the questions above, which event of those you experienced did you find the most distressing (i.e., the event with the highest number in the 'Distressing' scale)?

_____

人生事件檢核表修正版

以下是人生歷程中一些有時會發生的困難或壓力事情。請回顧自從你參與第一次研究以來（七個月）並記起有什麼令人苦惱事件曾經在這段時間內發生。對於每項令人苦惱事件，請在**一個事件類型「是？」欄目的方格內**加上✓號，並在旁邊的欄目以數字**由 0 =完全不至100 =非常地**表示你認為該事件有多令人苦惱。

就某些事件類型而言，請亦指出這個令人苦惱的事件： (a) **它曾經發生在你個人身上**；(b) **你曾經目睹它發生在別人身上**；(c) **你知道它發生在你親近的人身上**；或 (d) **你因你工作一部分的緣故（例如：急救護理人員、警察、軍隊或其他急救人員）而經歷它**。陰影部分代表該些方格不適用於某特定的事件類型，你可以忽略。

請記著，在你填寫下表時，請你回顧過去七個月來回答。

事件類型	事件曾經發生在你身上		曾經目睹		知道這件事		你工作的一部分	
	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)
1. 分手								
2. 與伴侶的重大爭論								
3. 告白被拒								
4. 懷孕／分娩的問題								
5. 父母分開								
6. 與家人或朋友的重大爭吵								
7. 被對你重要的人背叛								
8. 被排除於對你重要的事情之外								
9. 令人非常尷尬的情況								
10. 在職場或學校上的負面經驗（例如：考試不及格、失業、申請失敗）								
11. 考試								
12. 有關工作或進修的成功申請／面試								
13. 申請被拒								
14. 失去對你重要的東西（例如：電話、護照、有情感價值的物品)								
15. 居住情況的嚴重問題								
16. 財政問題								
17. 旅行時令人驚恐的情況（例如：游泳、遠足的時候）								
18. 與動物的危險遭遇								
19. 非暴力的罪案（例如：詐騙或者偷竊案的受害者）								

20. 大自然的災難（例如：水災，颶風，龍捲風，地震）								
21. 火災或爆炸								
22. 交通意外（包括車輛、船隻、火車或飛機的意外）								
23. 在工作中、在家中或在娛樂活動中發生的嚴重意外								
24. 接觸有毒物品（例如：危險化學物質、幅射等）								
25. 暴力襲擊（例如：被人攻擊、拳打、腳踢、猛力掌摑、毆打等）								
26. 以武器襲擊（例如：被槍擊、刺傷、被人持刀、持槍或以炸彈恐嚇等）								
27. 性暴力（例如：強姦、意圖強姦、以武力或恐嚇要脅進行任何與性有關的活動）								
28. 其他不自願情況下的性經驗								
29. 參戰或身處戰地（不論參與軍事工作或是作為平民）								
30. 被禁錮（例如：被綁架、拐走、被脅持作人質、在戰事中被監禁或俘虜等）								
31. 嚴重但不致威脅生命的疾病								
32. 受傷（例如：骨折）								
33. 威脅生命的重病或重傷								
34. 重大的人生苦難（例如：貧窮）								
35. 突然涉及暴力的死亡（包括他殺和自殺）								
36. 突然意外的死亡								
37.與你親近的人死亡								
38. 你導致別人嚴重受傷、受損害或死亡								
39. 任何其他難以面對和處理，使你有很大壓力的經歷，請指明: _____								

檢閱你對上列問題的答案，哪一個你經歷過的事件你認為最令人苦惱（即「令人苦惱」數字最高的事件）？

_____

Appendix G3: Modified Life Events Scale (Study 2A)

Modified Life Events Checklist

Listed below are a number of life events that people may find distressing. For each of the experiences below, please indicate whether you have felt distress related to this type of experience during your life. Please consider your entire life (growing up, as well as adulthood). For each of the distressing events you can remember, please select 'Yes?' of only ONE of the experiences below. Please choose the experience that best describes your distressing event and only choose ONE experience for each of your events. For example, if you had an argument with your partner (Experience 2) that resulted in a break-up (Experience 1), you should select 'Yes' for ONLY the experience you found the most distressing. The shaded part represents the boxes that are not applicable to the particular event type so you can ignore them.

Please also indicate how distressing you found the experience(s) you had by giving a number from 0 = not at all to 100 = extremely in the adjacent column.

Event Type	**Happened to me**		**Witnessed it**		**Learned about it**		**Part of my job**	
	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)
1. Break-up of relationship								
2. Major argument with partner								
3. Romantic rejection								
4. Problems with pregnancy/ childbirth								
5. Parents separating								
6. Major argument with family or friends								
7. Betrayal by someone important to you								
8. Being excluded from something important to you								
9. Negative experience at work or school (e.g., failed exam, lost job, unsuccessful application)								
10. Exams								
11. Successful applications/ interviews for job or further education								
12. Serious problem with living situation								
13. Losing something important to you (e.g., phone, passport, sentimental item)								
14. Scary situation when traveling (e.g., when swimming, hiking)								
15. Dangerous encounter with animals								
16. Non-violent crime (e.g., victim of fraud or theft)								

17. Financial problems								
18. Embarrassing situation								

Listed below are a number of distressing things that sometimes happen to people. Please think back to your entire life (growing up, as well as adulthood) and remember what distressing events occurred during this time. For each distressing event you experienced, please select 'Yes' for only ONE of the experiences below. Please choose the experience that best describes your distressing event and only choose ONE experience for each of your events.

For some of the experiences, please also indicate whether the distressing event (a) **It happened to you personally**, (b) **you witnessed it happen to someone else,** (c) **you learned about it happening to someone close to you**, and/or (d) **you were exposed to it as part of your job** (for example, paramedic, police, military, or other first responder). The shaded part represents the boxes that are not applicable to the particular event type so you can ignore them.

Be sure to consider your entire life (growing up, as well as adulthood) as you go through the list of experiences.

Please also indicate how distressing you found the experience(s) you had by giving a number from 0 = not at all to 100 = extremely in the adjacent column.

Event Type	**Happened to me**		**Witnessed it**		**Learned about it**		**Part of my job**	
	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)
19. Natural disaster (for example, flood, hurricane, tornado, earthquake)								
20. Fire or explosion								
21. Transportation accident (for example, car accident, boat accident, train wreck, plane crash)								
22. Serious accident at work, home, or during recreational activity								
23. Exposure to toxic substance (for example, dangerous chemicals, radiation)								
24. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)								
25. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)								
26. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)								
27. Other unwanted or uncomfortable sexual experience								

28. Combat or exposure to a war-zone (in the military or as a civilian)								
29. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)								
30. Serious but not life-threatening illness								
31. Injury (e.g., breaking a bone)								
32. Life-threatening illness or injury								
33. Severe human suffering (e.g., poverty)								
34. Sudden, violent death (for example, homicide, suicide)								
35. Sudden accidental death								
36. Death of someone close to you								
37. Serious injury, harm or death you caused to someone else								
38. Any other very stressful event or experience Please specify: _____								

Reviewing your answers to the questions above, which experience of those you had did you find the most distressing (i.e., the experience with the highest number in the 'Distressing' scale)?

_____

人生事件檢核表修正版

以下是一些人們或者會感到苦惱的人生經歷。對於以下每項經歷，請指出你在人生中是否為這個經歷感到苦惱。請回顧整個人生經驗（包括你童年的成長和長大後各項經歷）。對於你所回想起的每項壓力事件，請在**一個經歷「是」的選項中**點選。請選出最能形容你的壓力事件之經歷，一個經歷只能代表一個壓力事件。例如，你和伴侶有重大爭吵（經歷 2），導致失戀收場（經歷 1），你應該選一個你感到最苦惱的經歷。陰影部分代表該些方格不適用於某特定的事件類型，你可以忽略。

另外，請根據你的經歷，在旁邊的欄位以數字**由 0 =完全不至100 =非常地**表示你認為該經歷有多令人苦惱。

事件類型	**事件曾經發生在你身上**		**曾經目睹**		**知道這件事**		**你工作的一部分**	
	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)
1. 分手								
2. 與伴侶的重大爭論								
3. 告白被拒								
4. 懷孕／分娩的問題								
5. 父母分開								
6. 與家人或朋友的重大爭吵								
7. 被對你重要的人背叛								
8. 被排除於對你重要的事情之外								
9. 令人非常尷尬的情況								
10. 在職場或學校上的負面經驗（例如：考試不及格、失業、申請失敗）								
11. 考試								
12. 有關工作或進修的成功申請／面試								
13. 失去對你重要的東西（例如：電話、護照、有情感價值的物品)								
14. 居住情況的嚴重問題								
15. 財政問題								
16. 旅行時令人驚恐的情況（例如：游泳、遠足的時候）								
17. 與動物的危險遭遇								
18. 非暴力的罪案（例如：詐騙或者偷竊案的受害者）								

以下是人生中一些有時會發生的困難或壓力事件。請回顧整個人生經驗（包括你童年的成長和長大後各項經歷）並回想起有什麼的令人苦惱事件曾經在這段時間內發生。對於每項令人苦惱事件，請在一個經歷「是」的選項中點選。請選出最能形容你的令人苦惱事件之經歷，一個經歷只能代表一個令人苦惱事件。

就某些經歷而言，請亦指出這個令人苦惱的事件： (a)**它曾經發生在你個人身上**；(b)**你曾經目睹它發生在別人身上**；(c)**你知道它發生在你親近的人身上**；或 (d)**你因你工作一部分的緣故**（例如：急救護理人員、警察、軍隊或其他急救人員）**而經歷它**。陰影部分代表該些方格不適用於某特定的事件類型，你可以忽略。

請記得，在你填寫下表時，請你回顧整個人生經驗（包括你童年的成長和長大後各項經歷）來回答。

另外，請根據你的經歷，在旁邊的欄位以數字由 0 = 完全不 至 100 = 非常地表示你認為該經歷有多令人苦惱。

事件類型	**事件曾經發生在你身上**		**曾經目睹**		**知道這件事**		**你工作的一部分**	
	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)
19. 大自然的災難（例如：水災，颶風，龍捲風，地震）								
20. 火災或爆炸								
21. 交通意外（包括車輛、船隻、火車或飛機的意外）								
22. 在工作中、在家中或在娛樂活動中發生的嚴重意外								
23. 接觸有毒物品（例如：危險化學物質、輻射等）								
24. 暴力襲擊（例如：被人攻擊、拳打、腳踢、猛力掌摑、毆打等）								
25. 以武器襲擊（例如：被槍擊、刺傷、被人持刀、持槍或以炸彈恐嚇等）								
26. 性暴力（例如：強姦、意圖強姦、以武力或恐嚇要脅進行任何與性有關的活動）								
27. 其他不自願情況下的性經驗								
28. 參戰或身處戰地（不論參與軍事工作或是作為平民）								

29. 被禁錮（例如：被綁架、拐走、被脅持作人質、在戰事中被監禁或俘虜等）								
30. 嚴重但不致威脅生命的疾病								
31. 受傷（例如：骨折）								
32. 威脅生命的重病或重傷								
33. 重大的人生苦難（例如：貧窮）								
34. 突然涉及暴力的死亡（包括他殺和自殺）								
35. 突然意外的死亡								
36.與你親近的人死亡								
37. 你導致別人嚴重受傷、受損害或死亡								
38. 任何其他難以面對和處理，使你有很大壓力的經歷，請指明: _____								

檢閱你對上列問題的答案，哪一個你經歷過的事件你認為最令人苦惱（即「令人苦惱」數字最高的事件）？

_____

Appendix G4: Modified Life Events Scale (Study 2B)

Modified Life Events Checklist

Listed below are a number of life experiences that people may find distressing. For each of the experiences below, please consider the past months since you first participated in this study (6 months) and indicate whether you have felt distress related to this type of experience. For each of the distressing events you can remember, pleases select 'Yes' of only ONE of the experiences below. Please choose the experience that best describes your distressing event and only choose ONE experience for each of your events. For example, if you had an argument with your partner (Experience 2) that resulted in a break-up (Experience 1), you should select 'Yes' for ONLY the experience you found the most distressing. The shaded part represents the boxes that are not applicable to the particular event type so you can ignore them.

Please also indicate how distressing you found the experience(s) you had by giving a number from 0 = not at all to 100 = extremely in the adjacent column.

Event Type	**Happened to me**		**Witnessed it**		**Learned about it**		**Part of my job**	
	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)
1. Break-up of relationship								
2. Major argument with partner								
3. Romantic rejection								
4. Problems with pregnancy/ childbirth								
5. Parents separating								
6. Major argument with family or friends								
7. Betrayal by someone important to you								
8. Being excluded from something important to you								
9. Negative experience at work or school (e.g., failed exam, lost job, unsuccessful application)								
10. Exams								
11. Successful applications/ interviews for job or further education								
12. Serious problem with living situation								
13. Losing something important to you (e.g., phone, passport, sentimental item)								
14. Scary situation when traveling (e.g., when swimming, hiking)								
15. Dangerous encounter with animals								
16. Non-violent crime (e.g., victim of fraud or theft)								

17. Financial problems								
18. Embarrassing situation								

Listed below are a number of distressing things that sometimes happen to people. Please think back to the past months since you first participated in this study (6 months) and remember what distressing events occurred during this time. For each distressing event you experienced, please select 'Yes' for only ONE of the experiences below. Please choose the experience that best describes your distressing event and only choose ONE experience for each of your events.

For some of the experiences, please also indicate whether the distressing event (a) **It happened to you personally**, (b) **you witnessed it happen to someone else,** (c) **you learned about it happening to someone close to you**, and/or (d) **you were exposed to it as part of your job** (for example, paramedic, police, military, or other first responder). The shaded part represents the boxes that are not applicable to the particular event type so you can ignore them.

Be sure to consider the past months since you first participated in this study (6 months) as you go through the list of experiences.

Please also indicate how distressing you found the experience(s) you had by giving a number from 0 = not at all to 100 = extremely in the adjacent column.

Event Type	**Happened to me**		**Witnessed it**		**Learned about it**		**Part of my job**	
	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)	Yes?	Distressing (0-100)
19. Natural disaster (for example, flood, hurricane, tornado, earthquake)								
20. Fire or explosion								
21. Transportation accident (for example, car accident, boat accident, train wreck, plane crash)								
22. Serious accident at work, home, or during recreational activity								
23. Exposure to toxic substance (for example, dangerous chemicals, radiation)								
24. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)								
25. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)								
26. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)								
27. Other unwanted or uncomfortable sexual experience								

28. Combat or exposure to a war-zone (in the military or as a civilian)								
29. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)								
30. Serious but not life-threatening illness								
31. Injury (e.g., breaking a bone)								
32. Life-threatening illness or injury								
33. Severe human suffering (e.g., poverty)								
34. Sudden, violent death (for example, homicide, suicide)								
35. Sudden accidental death								
36. Death of someone close to you								
37. Serious injury, harm or death you caused to someone else								
38. Any other very stressful event or experience Please specify: _____								

Reviewing your answers to the questions above, which experience of those you had did you find the most distressing (i.e., the experience with the highest number in the 'Distressing' scale)?

_____

人生事件檢核表修正版

以下是一些人們或者會感到苦惱的人生經歷。對於以下每項經歷，請回顧自從你參與第一次研究以來（六個月）和指出是否為這個經歷感到苦惱。對於你所回想起的每項苦惱事件，請在**一個經歷「是」的選項中**點選。請選出最能形容你的令人苦惱事件之經歷，一個經歷只能代表一個令人苦惱的事件。例如，你和伴侶有重大爭吵（經歷 2），導致分手收場（經歷 1），你應該選一個你感到最苦惱的經歷。陰影部分代表該些方格不適用於某特定的事件類型，你可以忽略。

另外，請根據你的經歷，在旁邊的欄位以數字**由 0 =完全不至100 =非常地**表示你認為該經歷有多令人苦惱。

事件類型	**事件曾經發生在你身上**		**曾經目睹**		**知道這件事**		**你工作的一部分**	
	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)
1. 分手								
2. 與伴侶的重大爭論								
3. 告白被拒								
4. 懷孕／分娩的問題								
5. 父母分開								
6. 與家人或朋友的重大爭吵								
7. 被對你重要的人背叛								
8. 被排除於對你重要的事情之外								
9. 令人非常尷尬的情況								
10. 在職場或學校上的負面經驗（例如：考試不及格、失業、申請失敗）								
11. 考試								
12. 有關工作或進修的成功申請／面試								
13. 失去對你重要的東西（例如：電話、護照、有情感價值的物品)								
14. 居住情況的嚴重問題								
15. 財政問題								
16. 旅行時令人驚恐的情況（例如：游泳、遠足的時候）								
17. 與動物的危險遭遇								
18. 非暴力的罪案（例如：詐騙或者偷竊案的受害者）								

以下是人生中一些有時會發生的令人苦惱事件。請回顧自從你參與第一次研究以來（六個月）並回想起有什麼的令人苦惱事件曾經在這段時間內發生。對於每項令人苦惱事件，請在一個經歷「是」的選項中點選。請選出最能形容你的令人苦惱事件之經歷，一個經歷只能代表一個令人苦惱事件。

就某些經歷而言，請亦指出這個令人苦惱的事件： (a)**它曾經發生在你個人身上**；(b)**你曾經目睹它發生在別人身上**；(c)**你知道它發生在你親近的人身上**；或 (d)**你因你工作一部分的緣故**（例如：急救護理人員、警察、軍隊或其他急救人員）**而經歷它**。陰影部分代表該些方格不適用於某特定的事件類型，你可以忽略。

請記得，在你填寫下表時，請你回顧過去六個月來回答。

另外，請根據你的經歷，在旁邊的欄位以數字由 0 = 完全不 至 100 = 非常地表示你認為該經歷有多令人苦惱。

事件類型	**事件曾經發生在你身上**		**曾經目睹**		**知道這件事**		**你工作的一部分**	
	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)	是?	令人困擾 (0-100)
19. 大自然的災難（例如：水災，颶風，龍捲風，地震）								
20. 火災或爆炸								
21. 交通意外（包括車輛、船隻、火車或飛機的意外）								
22. 在工作中、在家中或在娛樂活動中發生的嚴重意外								
23. 接觸有毒物品（例如：危險化學物質、幅射等）								
24. 暴力襲擊（例如：被人攻擊、拳打、腳踢、猛力掌摑、毆打等）								
25. 以武器襲擊（例如：被槍擊、刺傷、被人持刀、持槍或以炸彈恐嚇等）								
26. 性暴力（例如：強姦、意圖強姦、以武力或恐嚇要脅進行任何與性有關的活動）								
27. 其他不自願情況下的性經驗								
28. 參戰或身處戰地（不論參與軍事工作或是作為平民）								

29. 被禁錮（例如：被綁架、拐走、被脅持作人質、在戰事中被監禁或俘虜等）								
30. 嚴重但不致威脅生命的疾病								
31. 受傷（例如：骨折）								
32. 威脅生命的重病或重傷								
33. 重大的人生苦難（例如：貧窮）								
34. 突然涉及暴力的死亡（包括他殺和自殺）								
35. 突然意外的死亡								
36.與你親近的人死亡								
37. 你導致別人嚴重受傷、受損害或死亡								
38. 任何其他難以面對和處理，使你有很大壓力的經歷，請指明: _____								

檢閱你對上列問題的答案，哪一個你經歷過的事件你認為最令人苦惱（即「令人苦惱」數字最高的事件）？

_____

Appendix H: Self-Concepts and Appraisals Questionnaires

Appendix H1: Revised Personal Style Inventory (PSI-II)

Personal Style Inventory II

Here are a number of statements about personal characteristics. Please read each one carefully, and indicate whether you agree or disagree, and to what extent, by circling a number.

		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
1.	I often put other people's needs before my own.	1	2	3	4	5	6
2.	I tend to keep other people at a distance.	1	2	3	4	5	6
3.	I find it difficult to be separated from people I love.	1	2	3	4	5	6
4.	I am easily bothered by other people making demands of me.	1	2	3	4	5	6
5.	I am very sensitive to the effects I have on the feelings of other people.	1	2	3	4	5	6
6.	I don't like relying on others for help.	1	2	3	4	5	6
7.	I am very sensitive to criticism by others.	1	2	3	4	5	6
8.	It bothers me when I feel that I am only average and ordinary.	1	2	3	4	5	6
9.	I worry a lot about hurting or offending other people.	1	2	3	4	5	6
10.	When I'm feeling blue, I don't like to be offered sympathy.	1	2	3	4	5	6
11.	It is hard for me to break off a relationship even if it is making me unhappy.	1	2	3	4	5	6
12.	In relationships, people are often too demanding of one another.	1	2	3	4	5	6
13.	I am easily persuaded by others.	1	2	3	4	5	6
14.	I usually view my performance as either a complete success or a complete failure.	1	2	3	4	5	6
15.	I try to please other people too much.	1	2	3	4	5	6
16.	I don't like people to invade my privacy.	1	2	3	4	5	6
17.	I find it difficult if I have to be alone all day.	1	2	3	4	5	6
18.	It is hard for me to take instructions from people who have authority over me.	1	2	3	4	5	6
19.	I often feel responsible for solving other people's problems.	1	2	3	4	5	6
20.	I often handle big	1	2	3	4	5	6

	decisions without telling anyone else about them.						
21.	It is very hard for me to get over the feeling of loss when a relationship has ended.	1	2	3	4	5	6
22.	It is hard for me to have someone dependent on me.	1	2	3	4	5	6
23.	It is very important to me to be liked or admired by others.	1	2	3	4	5	6
24.	I feel badly about myself when I am not actively accomplishing things.	1	2	3	4	5	6
25.	I feel I have to be nice to other people.	1	2	3	4	5	6
26.	It is hard for me to express admiration or affection.	1	2	3	4	5	6
27.	I like to be certain that there is somebody close I can contact in case something unpleasant happens to me.	1	2	3	4	5	6
28.	It is difficult for me to make a long-term commitment to a relationship.	1	2	3	4	5	6
29.	I am too apologetic to other people.	1	2	3	4	5	6
30.	It is hard for me to open up and talk about my feelings and other personal things.	1	2	3	4	5	6
31.	I am very concerned with how people react to me.	1	2	3	4	5	6
32.	I have a hard time forgiving myself when I feel I haven't worked up to my potential.	1	2	3	4	5	6
33.	I get very uncomfortable when I'm not sure whether or not someone likes me.	1	2	3	4	5	6
34.	When making a big decision, I usually feel that advice from others is intrusive.	1	2	3	4	5	6
35.	It is hard for me to say "no" to other people's requests.	1	2	3	4	5	6
36.	I resent it when people try to direct my behaviour or activities.	1	2	3	4	5	6
37.	I become upset when something happens to me and there's nobody around to talk to.	1	2	3	4	5	6

38.	Personal questions from others usually feel like an invasion of my privacy.	1	2	3	4	5	6
39.	I am most comfortable when I know my behaviour is what others expect of me.	1	2	3	4	5	6
40.	I am very upset when other people or circumstances interfere with my plans.	1	2	3	4	5	6
41.	I often let people take advantage of me.	1	2	3	4	5	6
42.	I rarely trust the advice of others when making a big decision.	1	2	3	4	5	6
43.	I become very upset when a friend breaks a date or forgets to call me as planned.	1	2	3	4	5	6
44.	I become upset more than most people I know when limits are placed on my personal independence and freedom.	1	2	3	4	5	6
45.	I judge myself based on how I think others feel about me.	1	2	3	4	5	6
46.	I become upset when others try to influence my thinking on a problem.	1	2	3	4	5	6
47.	It is hard for me to let people know when I am angry with them.	1	2	3	4	5	6
48.	I feel controlled when others have a say in my plans.	1	2	3	4	5	6

個人特質清單 II

這裡是一些有關個人特質的陳述。請仔細閱讀每句陳述，並圈出適當的數字，指出你同意與否及程度。

		非常不同意	不同意	少許不同意	少許同意	同意	非常同意
1.	我時常把其他人的需要看得比自己的重要。	1	2	3	4	5	6
2.	我傾向與其他人保持一定距離。	1	2	3	4	5	6
3.	我難以與自己喜歡的人分開。	1	2	3	4	5	6
4.	我容易因其他人對我的要求而感到不安。	1	2	3	4	5	6
5.	我對自己在其他人的情感上所帶來的影響很敏感。	1	2	3	4	5	6
6.	我不喜歡依靠別人幫忙。	1	2	3	4	5	6
7.	我對別人的批評很敏感。	1	2	3	4	5	6
8.	當我覺得自己不過是一般和普通的人時，我便會感到不安。	1	2	3	4	5	6
9.	我過分擔心會傷害或冒犯其他人。	1	2	3	4	5	6
10.	當我感到憂鬱時，我不喜歡被人同情。	1	2	3	4	5	6
11.	斷絕一段關係，即使它正在令我不開心，對我來說是困難的。	1	2	3	4	5	6
12.	在人際關係中，人們時常對彼此諸多要求。	1	2	3	4	5	6
13.	我容易被別人說服。	1	2	3	4	5	6
14.	我通常視自己的表現不是完全成功，就是完全失敗。	1	2	3	4	5	6
15.	我過分嘗試討好其他人。	1	2	3	4	5	6
16.	我不喜歡人們侵犯我的私隱。	1	2	3	4	5	6
17.	我難以整天獨處。	1	2	3	4	5	6
18.	接受比我更具權力的人對自己的指令，對我來說是困難的。	1	2	3	4	5	6
19.	我時常覺得對解決其他人的問題負上責任。	1	2	3	4	5	6
20.	我時常在不通知任何人的情況下，處理一些重大的決定。	1	2	3	4	5	6
21.	當一段關係結束時，克服那種失去的感覺，對	1	2	3	4	5	6

	我來說是很困難的。						
22.	讓某人依賴自己，對我來說是困難的。	1	2	3	4	5	6
23.	受別人喜愛或者敬重，對我來說是很重要的。	1	2	3	4	5	6
24.	當我不積極完成事情時，我的自我感覺是差的。	1	2	3	4	5	6
25.	我覺得我必須對其他人友好。	1	2	3	4	5	6
26.	表達對他人的敬重或喜愛之情，對我來說是困難的。	1	2	3	4	5	6
27.	我喜歡被肯定，一旦有令人不快的事情發生時，我可以聯絡到我的親人。	1	2	3	4	5	6
28.	長時間投入一段關係，對我來說是困難的。	1	2	3	4	5	6
29.	我對其他人抱有太多歉意。	1	2	3	4	5	6
30.	坦誠分享自己的感受和其他私人的事情，對我來說是困難的。	1	2	3	4	5	6
31.	我很關心人們如何對我作出反應。	1	2	3	4	5	6
32.	當我覺得自己不努力盡展潛能時，我會難以原諒自己。	1	2	3	4	5	6
33.	當我不確定是否有人喜歡自己時，我會感到很不舒服。	1	2	3	4	5	6
34.	當作出重大的決定時，我通常覺得別人的意見是令人煩擾的。	1	2	3	4	5	6
35.	向其他人的請求說不，對我來說是困難的。	1	2	3	4	5	6
36.	當人們試著指示我的行為或者活動時，我會感到憤恨。	1	2	3	4	5	6
37.	當有些事情發生在我身上，而自己沒有可以傾訴的對象時，我會感到苦惱。	1	2	3	4	5	6
38.	對於其他人對我提出的私人問題，我覺得是侵犯我的私隱。	1	2	3	4	5	6
39.	當我知道別人對我期望什麼時，我便會感到最舒適。	1	2	3	4	5	6
40.	當其他人或情況妨礙我的計劃時，我會感到很	1	2	3	4	5	6

	苦惱。						
41.	我時常讓人們利用自己。	1	2	3	4	5	6
42.	當作出重大的決定時，我很少相信別人的建議。	1	2	3	4	5	6
43.	當朋友失約或者忘記依照計劃致電給我時，我便會感到很苦惱。	1	2	3	4	5	6
44.	當我的個人獨立及自由受到限制時，我會比大部分我認識的人更感到苦惱。	1	2	3	4	5	6
45.	我根據別人對我感覺來評價自己。	1	2	3	4	5	6
46.	當別人試著影響我對某問題的想法時，我感到苦惱。	1	2	3	4	5	6
47.	當我生人們的氣時，讓他們知道，對我來說是困難的。	1	2	3	4	5	6
48.	當別人對我的計劃有意見時，我會感到受人控制。	1	2	3	4	5	6

Appendix H2: Rosenberg Self-Esteem Scale (RSES)

Instructions

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

1. On the whole, I am satisfied with myself.			
Strongly Agree	Agree	Disagree	Strongly Disagree
2. At times I think I am no good at all.			
Strongly Agree	Agree	Disagree	Strongly Disagree
3. I feel that I have a number of good qualities.			
Strongly Agree	Agree	Disagree	Strongly Disagree
4. I am able to do things as well as most other people.			
Strongly Agree	Agree	Disagree	Strongly Disagree
5. I feel I do not have much to be proud of.			
Strongly Agree	Agree	Disagree	Strongly Disagree
6. I certainly feel useless at times.			
Strongly Agree	Agree	Disagree	Strongly Disagree
7. I feel that I'm a person of worth, at least on an equal plane with others.			
Strongly Agree	Agree	Disagree	Strongly Disagree
8. I wish I could have more respect for myself.			
Strongly Agree	Agree	Disagree	Strongly Disagree
9. All in all, I am inclined to feel that I am a failure.			
Strongly Agree	Agree	Disagree	Strongly Disagree
10. I take a positive attitude toward myself.			
Strongly Agree	Agree	Disagree	Strongly Disagree

你在多大程度上同意或不同意下面的每一個陳述？

1. 總括來說，我對自己感到滿意。			
很同意	同意	不同意	很不同意
2. 有時我會覺得自己一無是處。			
很同意	同意	不同意	很不同意
3. 我覺得自己有許多優點。			
很同意	同意	不同意	很不同意
4. 我能夠做到與大部分人的表現一樣好。			
很同意	同意	不同意	很不同意
5. 我認為自己沒有什麼可以值得自豪。			
很同意	同意	不同意	很不同意
6. 有時我真的覺得自己沒有用。			
很同意	同意	不同意	很不同意
7. 我覺得自己是一個有價值的人，至少與別人不相上下。			
很同意	同意	不同意	很不同意
8. 我要是能夠更尊重自己就好了。			
很同意	同意	不同意	很不同意
9. 總括來說，我傾向於覺得自己像一個失敗者。			
很同意	同意	不同意	很不同意
10. 我抱著積極的態度面對自己。			
很同意	同意	不同意	很不同意

Appendix H3: Analysis-Holism Scale (AHS)

Analysis-Holism Scale (AHS)

Please indicate to what extent you agree or disagree on each of the following statements (check the most appropriate number).

Statement		Strongly Disagree	Disagree	Somewhat Disagree	Uncertain	Somewhat Agree	Agree	Strongly Agree
(1)	We should avoid going to extremes.	01	02	03	04	05	06	07
(2)	It is more important to pay attention to the whole context rather than the details.	01	02	03	04	05	06	07
(3)	Future events are predictable based on present situations.*	01	02	03	04	05	06	07
(4)	The whole is greater than the sum of its parts.	01	02	03	04	05	06	07
(5)	Everything in the world is intertwined in a causal relationship.	01	02	03	04	05	06	07
(6)	An individual who is currently honest will stay honest in the future.*	01	02	03	04	05	06	07
(7)	Choosing a middle ground in an argument should be avoided.*	01	02	03	04	05	06	07
(8)	Any phenomenon entails a numerous number of consequences, although some of them may not be known.	01	02	03	04	05	06	07
(9)	A person who is currently living a successful life will continue to stay successful.*	01	02	03	04	05	06	07
(10)	It is more important to find a point of compromise than to debate who is right/wrong, when one's opinions conflict with other's opinions.	01	02	03	04	05	06	07
(11)	Nothing is unrelated.	01	02	03	04	05	06	07
(12)	We should consider the situation a person is faced	01	02	03	04	05	06	07

	with, as well as his/her personality, in order to understand one's behaviour.							
(13)	It is more desirable to take the middle ground than go to extremes.	01	02	03	04	05	06	07
(14)	Current situations can change at any time.	01	02	03	04	05	06	07
(15)	It is more important to pay attention to the whole than its parts.	01	02	03	04	05	06	07
(16)	If an event is moving toward a certain direction, it will continue to move toward that direction.*	01	02	03	04	05	06	07
(17)	Any phenomenon has numerous numbers of causes, although some of the causes are not known.	01	02	03	04	05	06	07
(18)	Every phenomenon in the world moves in predictable directions.*	01	02	03	04	05	06	07
(19)	When disagreement exists among people, they should search for ways to compromise and embrace everyone's opinions.	01	02	03	04	05	06	07
(20)	It is not possible to understand the parts without considering the whole picture.	01	02	03	04	05	06	07
(21)	Even a small change in any element of the universe can lead to significant alterations in other elements.	01	02	03	04	05	06	07
(22)	The whole, rather than its parts, should be considered in order to understand a phenomenon.	01	02	03	04	05	06	07
(23)	It is more desirable to be in harmony, rather than in discord, with others of different opinions than	01	02	03	04	05	06	07

	one's own.							
(24)	Everything in the universe is somehow related to each other.	01	02	03	04	05	06	07

請表明你對以下所給的每個陳述同意或者不同意的程度（選擇最符合的數字打√）

句子		非常不同意	不同意	有點不同意	不確定	有點同意	同意	非常同意
(1)	我們應該避免走極端。	01	02	03	04	05	06	07
(2)	關注全局比關注細節更重要。	01	02	03	04	05	06	07
(3)	根據現有情況可以預測出未來事件。	01	02	03	04	05	06	07
(4)	整體於其各部分之和。	01	02	03	04	05	06	07
(5)	世上的一切都由於因果關係交織在一起。	01	02	03	04	05	06	07
(6)	一個現在誠實的人在將來也會保持誠實。	01	02	03	04	05	06	07
(7)	在辯論時應當避免選擇中間立場。	01	02	03	04	05	06	07
(8)	任何現象都會帶來眾多結果，儘管其中有些可能不為人知。	01	02	03	04	05	06	07
(9)	一個目前生活成功的人會繼續成功下去。	01	02	03	04	05	06	07
(10)	當一個人的意見與其他人衝突時，取得妥協比爭論孰是孰非更重要。	01	02	03	04	05	06	07
(11)	沒有什麼事物是與其他事物毫無關聯的。	01	02	03	04	05	06	07
(12)	為了理解某人的行為，我們要考慮到他所面對的情境以及他的個性。	01	02	03	04	05	06	07
(13)	採取中間立場比走極端更理想。	01	02	03	04	05	06	07
(14)	當前的情況可能隨時發生改變。	01	02	03	04	05	06	07
(15)	關注整體比關注它的部分更重要。	01	02	03	04	05	06	07
(16)	如果某件事正朝着某個方向發展，它會繼續朝這個方向發展下去。	01	02	03	04	05	06	07
(17)	任何現象都有很多原因，儘管其中一些不為人知	01	02	03	04	05	06	07
(18)	世界上的每个現象都朝着可預見的方向推進。	01	02	03	04	05	06	07
(19)	當人們之間存在分歧，他們應該尋找方式去妥協並	01	02	03	04	05	06	07

	接納每一個人的意見。							
(20)	不考慮全局的情況下，是不可能理解局部的。	01	02	03	04	05	06	07
(21)	即使宇宙中任何一个元素發生微小的變化，都可能導致其他元素的顯著改變。	01	02	03	04	05	06	07
(22)	要理解一个現象應該考慮整體而不是部分。	01	02	03	04	05	06	07
(23)	與意見不同的人和諧相處比和他們發生爭執更可取。	01	02	03	04	05	06	07
(24)	宇宙中任何事物都以某種方式與其他事物相關聯。	01	02	03	04	05	06	07

Appendix H4: Public and Communal Self Appraisals Measure (PCSAM)

Public and Communal Self Appraisals Measures (PCSAM)

Task Instructions: In response to the traumatic event you described. Please read each item, and then indicate how much you agree with each statement in regards to the past seven days. Please circle the appropriate response.

	Totally Disagree	Disagree Very Much	Disagree Slightly	Neutral	Agree Slightly	Agree Very Much	Totally Agree
1. Since the event I feel let down by fate/my beliefs/God/ my faith.	1	2	3	4	5	6	7
2. My faith/religion/beliefs have been challenged by the event.	1	2	3	4	5	6	7
3. Since the event I feel let down by the world.	1	2	3	4	5	6	7
4. Since the event I feel I do not have a place in the world.	1	2	3	4	5	6	7
5. Since the event I no longer feel close to others.	1	2	3	4	5	6	7
6. Since the event people have become a priority.	1	2	3	4	5	6	7
7. I do not want anyone to know about the event.	1	2	3	4	5	6	7
8. Since the event I have sacrificed my needs for the needs of significant others.	1	2	3	4	5	6	7
9. Since the event my values have changed.	1	2	3	4	5	6	7
10. Since the event my relationships have been damaged or challenged.	1	2	3	4	5	6	7
11. Since the event I have failed in my roles.	1	2	3	4	5	6	7
12. Since the event I have lost my social role/identity.	1	2	3	4	5	6	7
13. Since the event I have not lived up to social or cultural expectations.	1	2	3	4	5	6	7
14. Since the event I do not feel I am a significant member of my culture/society/community/group.	1	2	3	4	5	6	7

公眾及公共自我評價量表 (PCSAM)

答題指示: 回應你之前形容的創傷事件。請閱讀並根據過去七天內的情況，指出你有多大程度上同意每句陳述。請圈出適當的答案表示。

	完全不同意	非常不同意	少許不同意	中立	少許同意	非常同意	完全同意
1. 自從該次事件以來，我對命運／我的信念／上帝／我的信仰感到失望。	1	2	3	4	5	6	7
2. 我的信仰／宗教／信念受到該次事件的挑戰。	1	2	3	4	5	6	7
3. 自從該次事件以來，我對世界感到失望。	1	2	3	4	5	6	7
4. 自從該次事件之後，我不覺得自己在世上佔一席位。	1	2	3	4	5	6	7
5. 自從該次事件以來，我不再感到與別人親近。	1	2	3	4	5	6	7
6. 自從該次事件以來，其他人成為我的優先考慮。	1	2	3	4	5	6	7
7. 我不想任何人知道該次事件。	1	2	3	4	5	6	7
8. 自從該次事件以來，我為我重要的他人所需，而犧牲自己的需要。	1	2	3	4	5	6	7
9. 自從該次事件以來，我的價值觀已經改變了。	1	2	3	4	5	6	7
10. 自從該次事件以來，我的人際關係受到破壞或者挑戰。	1	2	3	4	5	6	7
11. 自從該次事件以來，我辜負了我的角色。	1	2	3	4	5	6	7
12. 自從該次事件以來，我失去了我的社會角色或者身分。	1	2	3	4	5	6	7
13. 自從該次事件以來，我已經不再依著社會或文化上對我的期望而生活下去。	1	2	3	4	5	6	7
14. 自從該次事件以來，我不覺得自己是我的文化／社會／社區／團體之中的重要一員。	1	2	3	4	5	6	7

Appendix H5: Post-Traumatic Cognitions Inventory (PTCI)

THOUGHTS QUESTIONNAIRE (PTCI2)

This questionnaire lists different thoughts that people may have after a traumatic experience. We are interested in the way that YOU thought, IN THE LAST MONTH, in regard to the trauma that you have experienced.
Please read each statement carefully and choose a number from the scale below which BEST DESCRIBES HOW MUCH YOU AGREED or DISAGREED WITH THE STATEMENT in the last month.
People react in many different ways; there are no right or wrong answers to these statements.

1 Totally Disagree	2 Disagree Very Much	3 Disagree Slightly	4 Neutral/ Neither Agree nor Disagree	5 Agree Slightly	6 Agree Very Much	7 Totally Agree

		Totally Disagree						Totally Agree
1.	My reactions since the event mean that I am going crazy.	1	2	3	4	5	6	7
2.	I have to be on guard all the time.	1	2	3	4	5	6	7
3.	If people knew what happened they would look down on me.	1	2	3	4	5	6	7
4.	I feel different from other people because of my experience.	1	2	3	4	5	6	7
5.	I want to punish the people who did this to me.	1	2	3	4	5	6	7
6.	If I think about the event, I will not be able to handle it.	1	2	3	4	5	6	7
7.	My life has been destroyed by the event.	1	2	3	4	5	6	7
8.	People are not what they seem.	1	2	3	4	5	6	7
9.	I can't deal with even the slightest upset.	1	2	3	4	5	6	7
10.	If I stop being angry, the people who caused the event will get away with it.	1	2	3	4	5	6	7
11.	I will never be able to feel normal emotions again.	1	2	3	4	5	6	7
12.	I disgraced myself during the event.	1	2	3	4	5	6	7
13.	Nobody cares about me.	1	2	3	4	5	6	7
14.	I don't know myself any more.	1	2	3	4	5	6	7
15.	If people knew what happened, they would not respect me.	1	2	3	4	5	6	7

		Totally Disagree						Totally Agree
16.	Nothing good can happen to me anymore.	1	2	3	4	5	6	7
17.	The world is a dangerous place.	1	2	3	4	5	6	7
18.	I will never be able to forgive the people who did this to me.	1	2	3	4	5	6	7
19.	I have permanently changed for the worse.	1	2	3	4	5	6	7
20.	I am inadequate.	1	2	3	4	5	6	7
21.	People can't be trusted.	1	2	3	4	5	6	7
22.	If I stop being angry, what happened to me will be forgotten.	1	2	3	4	5	6	7
23.	Stopping feeling guilty is letting myself off the hook.	1	2	3	4	5	6	7
24.	I have to be especially careful because you never know what can happen next.	1	2	3	4	5	6	7
25.	People do not understand me.	1	2	3	4	5	6	7
26.	There is something wrong with me as a person.	1	2	3	4	5	6	7
27.	I feel dead inside.	1	2	3	4	5	6	7
28.	I will not be able to control my anger and will do something terrible.	1	2	3	4	5	6	7
29.	The way I behaved/thought/felt during the event is unforgivable.	1	2	3	4	5	6	7
30.	I can't rely on myself.	1	2	3	4	5	6	7
31.	I will never be able to feel close to other people again.	1	2	3	4	5	6	7
	If you were injured during the trauma, please also rate the following statements.							
32.	The event has ruined my body/parts of my body.	1	2	3	4	5	6	7
33.	Since the event, I feel like a cripple.	1	2	3	4	5	6	7
34.	I cannot accept the way my body has changed since the event.	1	2	3	4	5	6	7

THOUGHTS QUESTIONNAIRE (PTCI2)

我們想瞭解你在**經歷壓力事件**後可能已經持有的想法。以下列出一些陳述句，它們可能可以代表你的想法，但也可能不一樣。請仔細閱讀每個句子，判斷你對這些句子的同意程度，選擇最能表示你的同意程度之數字（1-7）。人們對壓力事件有很多不同的反應方式，這些句子也沒有對或錯的標準答案。請依你的看法作答。

1 完全 不同意	2 非常 不同意	3 稍微 不同意	4 中性／ 無意見	5 稍微 同意	6 非常 同意	7 完全 同意

		完全不同意						完全同意
1.	我在這個事件發生後的反應表示我快瘋了。	1	2	3	4	5	6	7
2.	我必須所有時刻處於防備。	1	2	3	4	5	6	7
3.	如果人們知道什麼事發生了，他們會看不起我。	1	2	3	4	5	6	7
4.	我因我的經歷而感到與其他人不同。	1	2	3	4	5	6	7
5.	我想懲罰那些曾經對我作出這事的人。	1	2	3	4	5	6	7
6.	如果我思考這個事件，我將不能處理它。	1	2	3	4	5	6	7
7.	我的人生已經被這個創傷摧毀了。	1	2	3	4	5	6	7
8.	人們並不是他們看起來那樣。	1	2	3	4	5	6	7
9.	即使最輕微的心煩意亂，我都不能處理。	1	2	3	4	5	6	7
10.	如果我不再生氣，那些造成這個事件的人將會蒙混過去。	1	2	3	4	5	6	7
11.	我再也不能感受正常的情緒。	1	2	3	4	5	6	7
12.	我在這個事件期間，令自己丟臉。	1	2	3	4	5	6	7
13.	無人關心我。	1	2	3	4	5	6	7
14.	我不再認識我自己。	1	2	3	4	5	6	7
15.	如果人們知道什麼事發生了，他們不會尊重我。	1	2	3	4	5	6	7
16.	再也不會有任何好事發生在我身上。	1	2	3	4	5	6	7

		完全不同意						完全同意
17.	這個世界是危險的地方。	1	2	3	4	5	6	7
18.	我將不能夠原諒那些曾經對我作出這事的人。	1	2	3	4	5	6	7
19.	我已經永遠變得很糟糕了。	1	2	3	4	5	6	7
20.	我是沒有能力的。	1	2	3	4	5	6	7
21.	人們是不能信任的。	1	2	3	4	5	6	7
22.	如果我不再生氣，發生在我身上的事情將會被忘記。	1	2	3	4	5	6	7
23.	不再感到內疚正是放過自己。	1	2	3	4	5	6	7
24.	因為永遠不知道下一刻會發生什麼，我必須格外小心。	1	2	3	4	5	6	7
25.	人們不了解我。	1	2	3	4	5	6	7
26.	就身為人來說，我有些不對勁的地方。	1	2	3	4	5	6	7
27.	我感覺內在死亡。	1	2	3	4	5	6	7
28.	我將不能夠控制我的憤怒，而且會做出可怕的事。	1	2	3	4	5	6	7
29.	我在這個事件期間表現／思考／感受的方式是不能原諒的。	1	2	3	4	5	6	7
30.	我無法倚賴我自己。	1	2	3	4	5	6	7
31.	我將不能夠再次感到與其他人親近。	1	2	3	4	5	6	7
	如果你在這個壓力事件期間受傷了，請亦評估以下的陳述。							
32.	這個事件已經毀壞了我的身體／身體部分。	1	2	3	4	5	6	7
33.	在這個事件發生後，我覺得像一個殘廢的人。	1	2	3	4	5	6	7
34.	我不能接受在這個事件發生後我的身體變化方式。	1	2	3	4	5	6	7

Appendix I: Cognitive Processing Styles and Autobiographical Memory Questionnaires

Appendix I1: State Dissociation Questionnaire (SDQ)

State Dissociation Questionnaire (SDQ)

In this questionnaire, we are interested in WHAT WENT THROUGH YOUR MIND during the traumatic event. Please indicate the extent to which the following statements applied to you DURING THE TRAUMATIC EVENT.

DURING THE TRAUMATIC EVENT...	This applied to me				
	Not at all	**A little**	**Moderately**	**Strongly**	**Very strongly**
1. I felt dazed, unable to take in what was happening.	0	1	2	3	4
2. The world around me seemed strange or unreal.	0	1	2	3	4
3. My body felt as if it was not really mine.	0	1	2	3	4
4. I felt emotionally numb.	0	1	2	3	4
5. I felt as if I was separate to my body and was watching it from outside.	0	1	2	3	4
6. I felt as if time was going faster or slower than it really was.	0	1	2	3	4
7. I felt as if I was living in a dream or a film, rather than in real life.	0	1	2	3	4
8. Things around me seemed too big or too small, or distorted in shape.	0	1	2	3	4
9. I felt distant from my emotions.	0	1	2	3	4

解離狀態量表

在這份問卷中，我們想知道你在經歷該次創傷的事件當時，腦海內出現了什麼事物？
請指出以下陳述在多大程度上適用於你**在該次創傷事件當時**的情況。

在創傷事件當時...	完全不符合	有點符合	中等符合	非常符合	極度符合
1. 我覺得茫然，不能理解正在發生的事情。	0	1	2	3	4
2. 我周遭的世界看起來奇怪或者不真實。	0	1	2	3	4
3. 我的身體感覺上似乎真的不是自己的。	0	1	2	3	4
4. 我覺得情感上麻木。	0	1	2	3	4
5. 我覺得我似乎與自己的身體分開，並且正在從外面看著它。	0	1	2	3	4
6. 我覺得時間似乎正在過得比實際上快了或者慢了。	0	1	2	3	4
7. 我覺得我似乎活在夢中或電影中，而非活在真實的人生中。	0	1	2	3	4
8. 我周遭的事物看起來太大或太小，或是外形扭曲。	0	1	2	3	4
9. 我覺得與自己的情緒有距離。	0	1	2	3	4

Appendix I2: Data-Driven Processing Scale (DDPS)

Data-Driven Processing Scale

In this questionnaire, we are interested in WHAT WENT THROUGH YOUR MIND during the traumatic event. Please indicate the extent to which the following statements applied to you DURING THE TRAUMATIC EVENT.

DURING THE TRAUMATIC EVENT...	This applied to me				
	Not at all	**A little**	**Moderately**	**Strongly**	**Very strongly**
1. I couldn't really take it all in.	0	1	2	3	4
2. I did not fully understand what was going on.	0	1	2	3	4
3. It was just like a stream of unconnected impressions following each other.	0	1	2	3	4
4. I could not think clearly.	0	1	2	3	4
5. I was overwhelmed by sensations and couldn't put everything together.	0	1	2	3	4
6. I was confused and could not fully make sense of what was happening.	0	1	2	3	4
7. My mind was fully occupied with what I saw, heard, smelled, and felt.	0	1	2	3	4
8. My mind was full of impressions and my reactions to them.	0	1	2	3	4

資料驅動歷程量表

在這份問卷中，我們想知道你在經歷該次創傷的事件當時，腦海內出現了什麼事物？
請指出以下陳述在多大程度上適用於你**在該次創傷事件當時**的情況。

在創傷事件當時...	完全不	有點	這____適用於我 一般	很	非常
1. 我真的不能全盤理解。	0	1	2	3	4
2. 我不完全了解正在發生什麼事。	0	1	2	3	4
3. 這就像是一連串互不相關而接連出現的印象。	0	1	2	3	4
4. 我不能清晰地思考。	0	1	2	3	4
5. 感官的刺激大得令我承受不了，而不能整合所有事物。	0	1	2	3	4
6. 我很困惑，不能完全理解正在發生什麼事。	0	1	2	3	4
7. 我的心神完全被我看到的、聽到的、嗅到的，以及感受到的佔據。	0	1	2	3	4
8. 我的腦海中全部都是一些印象和我對它們的反應。	0	1	2	3	4

Appendix I3: Lack of Self-Referent Processing Scale (LSRPS)

Lack of Self-Referent Processing Scale

In this questionnaire, we are interested in WHAT WENT THROUGH YOUR MIND during the traumatic event. Please indicate the extent to which the following statements applied to you DURING THE TRAUMATIC EVENT.

DURING THE TRAUMATIC EVENT...	**This applied to me**				
	Not at all	**A little**	**Moderately**	**Strongly**	**Very strongly**
1. It felt as if the event was happening to someone else.	0	1	2	3	4
2. It felt like I was a different person from the person I used to be.	0	1	2	3	4
3. I was aware that the event was happening, but not so much that it was happening to me.	0	1	2	3	4
4. I felt cut off from my past.	0	1	2	3	4
5. I felt cut off from my future.	0	1	2	3	4
6. I couldn't imagine anything beyond this experience.	0	1	2	3	4
7. Things that had been important to me before did not matter any longer.	0	1	2	3	4
8. I felt there was no way back to my normal life	0	1	2	3	4

缺乏自我參照歷程量表

在這份問卷中，我們想知道你在經歷該次創傷的事件當時，腦海內出現了什麼事物？
請指出以下陳述在多大程度上適用於你**在該次創傷事件當時**的情況。

在創傷事件當時...

		完全不適用	**有點適用**	**一般適用**	**很適用**	**非常適用**
1.	這感覺上該次事件似乎發生在他人身上。	0	1	2	3	4
2.	這感覺上我是一個跟以前自己不同的人。	0	1	2	3	4
3.	我意識到該次事件正在發生，但不太意識到它正在發生在我身上。	0	1	2	3	4
4.	我覺得割裂了自己的過去。	0	1	2	3	4
5.	我覺得割裂了自己的將來。	0	1	2	3	4
6.	我不能想像超出這個經驗的任何事物。	0	1	2	3	4
7.	以前對我來說重要的事物不再重要。	0	1	2	3	4
8.	我覺得沒有辦法重返正常的生活。	0	1	2	3	4

Appendix I4: Centrality of Event Scale-Short Form (CES-SF)

Short Version Centrality of Events Scale

The most positive event in my life was _____

_____

_____.

It happened when I was _____ years old.

Please think back upon this most positive event in your life and answer the following questions in an honest and sincere way, by circling a number from 1 to 5.

1. I feel that this event has become part of my identity.	totally disagree 1 2 3 4 5 totally agree
2. This event has become a reference point for the way I understand myself and the world.	totally disagree 1 2 3 4 5 totally agree
3. I feel that this event has become a central part of my life story.	totally disagree 1 2 3 4 5 totally agree
4. This event has coloured the way I think and feel about other experiences.	totally disagree 1 2 3 4 5 totally agree
5. This event permanently changed my life.	totally disagree 1 2 3 4 5 totally agree
6. I often think about the effects this event will have on my future.	totally disagree 1 2 3 4 5 totally agree
7. This event was a turning point in my life.	totally disagree 1 2 3 4 5 totally agree

Short Version Centrality of Events Scale

The most stressful or traumatic event in my life was _____

_____

_____.

It happened when I was _____ years old.

Please think back upon this most stressful or traumatic event in your life and answer the following questions in an honest and sincere way, by circling a number from 1 to 5.

1. I feel that this event has become part of my identity.	totally disagree	1	2	3	4	5	totally agree
2. This event has become a reference point for the way I understand myself and the world.	totally disagree	1	2	3	4	5	totally agree
3. I feel that this event has become a central part of my life story.	totally disagree	1	2	3	4	5	totally agree
4. This event has coloured the way I think and feel about other experiences.	totally disagree	1	2	3	4	5	totally agree
5. This event permanently changed my life.	totally disagree	1	2	3	4	5	totally agree
6. I often think about the effects this event will have on my future.	totally disagree	1	2	3	4	5	totally agree
7. This event was a turning point in my life.	totally disagree	1	2	3	4	5	totally agree

中心事件量表

在我生活產生積極影響最大的事件是 _____

_____

_____.

它發生在我 _____ 歲的時候.

請回憶這段對你生活產生積極影響最大的事件，然後如實回答下面的問題，在相應的數字 1 至 5 之間畫圈。

1. 我覺得這個事件已經成為我身分的一部分。	完全不同意 1 2 3 4 5 完全同意
2. 這個事件已經成為我認識自己和世界的一個參照點。	完全不同意 1 2 3 4 5 完全同意
3. 我覺得這些事件已經成為我人生故事中的一個核心部分。	完全不同意 1 2 3 4 5 完全同意
4. 這個事件影響我對其他經歷的認識和感覺。	完全不同意 1 2 3 4 5 完全同意
5. 這個事件永久地改變了我的生活。	完全不同意 1 2 3 4 5 完全同意
6. 我常常會考慮這個事件對我今後人生所帶來的影響。	完全不同意 1 2 3 4 5 完全同意
7. 這個事件是我人生的轉捩點。	完全不同意 1 2 3 4 5 完全同意

中心事件量表

在我生活帶來壓力／創傷性最大的事件是 _____

_____

_____.

它發生在我 _____ 歲的時候.

請回憶這段對你生活帶來壓力／創傷性最大的事件，然後如實回答下面的問題，在相應的數字 1 至 5 之間畫圈。

1. 我覺得這個事件已經成為我身分的一部分。	完全不同意 1 2 3 4 5 完全同意
2. 這個事件已經成為我認識自己和世界的一個參照點。	完全不同意 1 2 3 4 5 完全同意
3. 我覺得這些事件已經成為我人生故事中的一個核心部分。	完全不同意 1 2 3 4 5 完全同意
4. 這個事件影響我對其他經歷的認識和感覺。	完全不同意 1 2 3 4 5 完全同意
5. 這個事件永久地改變了我的生活。	完全不同意 1 2 3 4 5 完全同意
6. 我常常會考慮這個事件對我今後人生所帶來的影響。	完全不同意 1 2 3 4 5 完全同意
7. 這個事件是我人生的轉捩點。	完全不同意 1 2 3 4 5 完全同意

Appendix I5: Memory Questionnaire for the Positive/ Stressful Event

REMEMBERING STRESSFUL EVENTS

The following questions are about the ways in which people sometimes describe HOW THEY REMEMBER STRESSFUL EVENTS. Please rate the extent to which these statements applied to how you remembered your stressful event IN THE PAST MONTH by circling the appropriate number. There are no right and wrong answers.

1-4 disorganisation 5-8 disjointedness 2-6 flashback quality

IN THE PAST MONTH ...	Statement applied to me: Not at all	A little	Moderat-ely	Strongly	Very strongly
1. I felt that my memory for the event is incomplete.	0	1	2	3	4
2. I had trouble remembering the order in which things happened during the event.	0	1	2	3	4
3. My memory of the event was muddled.	0	1	2	3	4
4. I could not get what happened during the event straight in my mind.	0	1	2	3	4
5. I remembered different parts of the event like separate experiences.	0	1	2	3	4
6. When I remembered a particularly upsetting part of the event, it was hard to remember that I was OK in the end.	0	1	2	3	4
7. My memories of the worst moments felt disconnected (not joined up with, separate) from what happened beforehand and afterwards.	0	1	2	3	4
8. Some moments from the event kept coming back into my mind, completely unchanged since the event.	0	1	2	3	4

Sometimes memories of a stressful event just pop into our mind even if we do not intend to think about it. The following questions are about such unintentional or unwanted memories of your stressful event:

1. In the LAST MONTH, approximately how often did **unintentional** memories of the stressful event pop into your mind?	Never	Once	Twice	Every other day	Once a day	Several times a day	Many times a day
2. How **distressing** were these memories?	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						
3. To what extent did they seem to be happening **now** instead of being something from the past?	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						
4. To what extent were you **reliving** your experience from the event?	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						
5. To what extent did the memories seem to be *isolated* fragments that were **disconnected** from what happened immediately before and afterwards?	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						
6. Many different things trigger memories of the event *(please rate how strongly this applies to you)*	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						

REMEMBERING POSITIVE EVENTS

The following questions are about the ways in which people sometimes describe HOW THEY REMEMBER POSITIVE EVENTS. Please rate the extent to which these statements applied to how you remembered your positive event IN THE PAST MONTH by circling the appropriate number. There are no right and wrong answers.

		Statement applied to me				
IN THE PAST MONTH ...		**Not at all**	**A little**	**Moderat-ely**	**Strongly**	**Very strongly**
1.	I felt that my memory for the event is incomplete.	0	1	2	3	4
2.	I had trouble remembering the order in which things happened during the event.	0	1	2	3	4
3.	My memory of the event was muddled.	0	1	2	3	4
4.	I could not get what happened during the event straight in my mind.	0	1	2	3	4
5.	I remembered different parts of the event like separate experiences.	0	1	2	3	4
6.	When I remembered a particularly good part of the event, it was hard to remember how it ended.	0	1	2	3	4
7.	My memories of the best moments felt disconnected (not joined up with, separate) from what happened beforehand and afterwards.	0	1	2	3	4
8.	Some moments from the event kept coming back into my mind, completely unchanged since the event.	0	1	2	3	4

Sometimes memories of a positive event just pop into our mind even if we do not intend to think about it. The following questions are about such unintentional memories of your positive event:

1. In the LAST MONTH, approximately how often did **unintentional** memories of the positive event pop into your mind?	Never	Once	Twice	Every other day	Once a day	Several times a day	Many times a day
2. How **happy** did these memories make you feel?	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						
3. To what extent did they seem to be happening **now** instead of being something from the past?	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						
4. To what extent were you **reliving** your experience from the event?	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						
5. To what extent did the memories seem to be *isolated* fragments that were **disconnected** from what happened immediately before and afterwards?	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						
6. Many different things trigger memories of the event *(please rate how strongly this applies to you)*	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 Not at all — Moderately — Very strongly						

回憶壓力事件

下列的問題與人們有時形容**他們如何回憶壓力事件的方式有關。**請圈出適當的數字，以評估這些陳述在多大程度上適用於你**在上個月內**如何回憶壓力事件。答案沒有對錯之分。

		陳述有多大程度適用於我				
在上個月內 ...		**完全不**	**少許**	**一般**	**很**	**非常**
1.	我覺得我對該次事件的記憶是不完整的。	0	1	2	3	4
2.	我難以記起在該次事件中，事物發生的先後次序。	0	1	2	3	4
3.	我對該次事件的記憶是混亂的。	0	1	2	3	4
4.	我不能弄清在該次事件中發生了什麼事。	0	1	2	3	4
5.	該次事件的不同部分，在我的回憶中，似是一些獨立的經歷。	0	1	2	3	4
6.	當我記起某一令人尤其不快的事件部分時，我難以回想起自己最後沒事了。	0	1	2	3	4
7.	在我的回憶中，該次事件的最差時刻，感覺上與其前後發生的事物不連貫（不連接，分開）。	0	1	2	3	4
8.	自該次事件發生以來，事件中的某些時刻以其本來面貌，重現我的腦海中。	0	1	2	3	4

有時一個壓力事件的回憶，即使我們不刻意想起，亦會突然地出現在腦海中。下列的問題與這些非刻意記起的壓力事件回憶有關：

1. 在上個月內，該次壓力事件中**不刻意記起**的回憶，大約有多經常突然地出現在你的腦海中？	從不	一次	兩次	每兩天一次	每天一次	每天數次	每天很多次
2. 這些回憶在多大程度上**令人困擾**？	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						
3. 這些回憶在多大程度上似乎**當時**正在發生，而非過去發生的事件？	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						
4. 你在多大程度上**再體驗**你在該次事件的經歷？	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						
5. 這些回憶在多大程度上似乎是一堆被分割的碎片，與其前後緊接發生的事物**不連貫**？	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						
6. 很多不同事物觸發我對該次事件的回憶（*請評估在多大程度上這適用於你*）	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						

回憶正面事件

下列的問題與人們有時形容**他們如何回憶正面事件的方式有關。**請圈出適當的數字，以評估這些陳述在多大程度上適用於你**在上個月內**如何回憶正面事件。答案沒有對錯之分。

		陳述有多大程度適用於我				
在上個月內 ...		**完全不**	**少許**	**一般**	**很**	**非常**
1.	我覺得我對該次事件的記憶是不完整的。	0	1	2	3	4
2.	我難以記起在該次事件中，事物發生的先後次序。	0	1	2	3	4
3.	我對該次事件的記憶是混亂的。	0	1	2	3	4
4.	我不能弄清在該次事件中發生了什麼事。	0	1	2	3	4
5.	該次事件的不同部分，在我的回憶中，似是一些獨立的經歷。	0	1	2	3	4
6.	當我記起某一令人尤其愉快的事件部分時，我難以回想起它如何結束。	0	1	2	3	4
7.	在我的回憶中，該次事件的最好時刻，感覺上與其前後發生的事物不連貫（不連接，分開）。	0	1	2	3	4
8.	自該次事件發生以來，事件中的某些時刻以其本來面貌，重現我的腦海中。	0	1	2	3	4

有時一個正面事件的回憶，即使我們不刻意想起，亦會突然地出現在腦海中。下列的問題與這些非刻意記起的正面事件回憶有關：

7. 在上個月內，該次事件中**非刻意記起**的回憶，大約有多經常突然地出現在你的腦海中？	從不	一次	兩次	每兩天一次	每天一次	每天數次	每天很多次
8. 這些回憶在多大程度上**令人愉快**？	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						
9. 這些回憶在多大程度上似乎**當時**正在發生，而非過去發生的事件？	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						
10. 你在多大程度上**再體驗**你在該次事件的經歷？	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						
11. 這些回憶在多大程度上似乎是一堆被分割的碎片，與其前後緊接發生的事物**不連貫**？	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						
12. 很多不同事物觸發我對該次事件的回憶（*請評估在多大程度上這適用於你*）	0 -- 10 -- 20 -- 30 -- 40 -- 50 -- 60 -- 70 -- 80 -- 90 -- 100 完全不 一般 非常						

Appendix I6: Thinking about Life Experience Scale (TALE)

Thinking About Life Experiences (TALE) scale

Instructions: Sometimes people think back over their life or talk to other people about their life: it may be about things that happened quite a long time ago or more recently. We are not interested in your memory for a particular event, but more generally in how you bring together and connect the different events and periods of your life. Please circle a response to answer these two questions:

1B. In general, how often do you think back over your life?
Almost never Seldom Occasionally Often Very Frequently

2B. In general, how often do you talk to others about what's happened in your life?
Almost never Seldom Occasionally Often Very Frequently

Next we present a variety of situations. Please circle one response on each scale to indicate **how often, when you think back about or talk about your life, you do it for the reasons given**. There are no right or wrong answers. Do not hesitate to use any of the points on the scale. If you never think back over your life for this reason, circle ''Almost never.'' Please answer every question.

I think back over or talk about my life or certain periods of my life . . .

1. When I want to feel that I am the same person that I was before.
Almost never Seldom Occasionally Often Very Frequently
2. When I want to remember something that someone else said or did that might help me now.
Almost never Seldom Occasionally Often Very Frequently
3. When I hope to also find out what another person is like.
Almost never Seldom Occasionally Often Very Frequently
4. When I am concerned about whether I am still the same type of person that I was earlier.
Almost never Seldom Occasionally Often Very Frequently
5. When I believe that thinking about the past can help guide my future.
Almost never Seldom Occasionally Often Very Frequently
6. When I am concerned about whether my values have changed over time.
Almost never Seldom Occasionally Often Very Frequently
7. When I want to try to learn from my past mistakes.
Almost never Seldom Occasionally Often Very Frequently
8. When I want to develop more intimacy in a relationship.
Almost never Seldom Occasionally Often Very Frequently
9. When I need to make a life choice and I am uncertain which path to take.
Almost never Seldom Occasionally Often Very Frequently
10. When I want to remember a lesson I learned in the past.
Almost never Seldom Occasionally Often Very Frequently
11. When I want to develop a closer relationship with someone.
Almost never Seldom Occasionally Often Very Frequently
12. When I want to maintain a friendship by sharing memories with friends.
Almost never Seldom Occasionally Often Very Frequently
13. When I am concerned about whether my beliefs have changed over time.
Almost never Seldom Occasionally Often Very Frequently
14. When I hope to also learn more about another person's life.
Almost never Seldom Occasionally Often Very Frequently
15. When I want to understand how I have changed from who I was before.
Almost never Seldom Occasionally Often Very Frequently

生活經驗回想

人們常會回顧他們的人生或與談論他們的人生：這些事情或許發生了一段時間或是最近才發生。我們不關心您回憶的是哪一件事情，而是關心您是怎樣拼湊及連繫您生命中的不同事件或人生階段的。請以圈選的方式回答這兩則問題：

1. 一般來說，您有多常回想人生往事？
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

2. 一般來說，您有多常與別人討論您過去生活中曾經發生的事情？
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

以下我們會列舉不同的狀況。請在每一個題目選擇一個選項，以顯示您有多經常會因為下列因素，來回想或談論您的人生。答案沒有對錯之分。不用猶豫選出量表上任何一個選項。如果您從不因為列舉的原因以回想人生，便圈選「幾乎從不」。請回答所有問題。

我回想或談論我的人生或以往的某些階段，當...

1. 當我想感受現在的我還是跟過去的我是一樣的。
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

2. 當我想記得過去某些人所說的話，或所做的事情，或許能幫助現在的我。
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

3. 當我希望能瞭解另一個人是怎麼樣的人。
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

4. 當我想知道我現在是否和過去一樣，還是同類型的人。
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

5. 當我認為回憶往事能幫助指引我的未來。
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

6. 當我關心我的價值觀是否隨時間改變。
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

7. 當我想嘗試從過去的錯誤中學習。
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

8. 當我想發展一段更親密的關係。
① 幾乎從不　② 很少　③ 有時候　④ 經常　⑤ 非常頻繁

9. 當我需要面對人生抉擇而又不確定走哪條路。
① 幾乎從不 ② 很少 ③ 有時候 ④ 經常 ⑤ 非常頻繁

10. 當我想記住我過去所吸取的教訓。
① 幾乎從不 ② 很少 ③ 有時候 ④ 經常 ⑤ 非常頻繁

11. 當我想與某人發展一段較親近的關係。
① 幾乎從不 ② 很少 ③ 有時候 ④ 經常 ⑤ 非常頻繁

12. 當我想透過與朋友分享回憶來維持友誼。
① 幾乎從不 ② 很少 ③ 有時候 ④ 經常 ⑤ 非常頻繁

13. 當我關心我的信念是否已經隨時間改變。
① 幾乎從不 ② 很少 ③ 有時候 ④ 經常 ⑤ 非常頻繁

14. 當我希望能知道更多有關另一個人的人生。
① 幾乎從不 ② 很少 ③ 有時候 ④ 經常 ⑤ 非常頻繁

15. 當我想瞭解我是如何從過去的我改變過來的。
① 幾乎從不 ② 很少 ③ 有時候 ④ 經常 ⑤ 非常頻繁

Appendix J: Coping Strategies Questionnaires

Appendix J1: Self-Concealment Scale

Self-Concealment Scale

Please indicate the extent of your agreement with each of the following statements using the scale below (1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree)

Circle one number of each item.

1.	I have an important secret that I haven't shared with anyone.	1	2	3	4	5
2.	If I shared all secrets with my friends, they'd like me less.	1	2	3	4	5
3.	There are lots of things about me that I keep to myself.	1	2	3	4	5
4.	Some of my secrets have really tormented me.	1	2	3	4	5
5.	When something bad happens to me, I tend to keep it to myself.	1	2	3	4	5
6.	I'm often afraid I'll reveal something I don't want to.	1	2	3	4	5
7.	Telling a secret often backfires and I wish I hadn't told it.	1	2	3	4	5
8.	Telling a secret that is so private I would lie if anybody asked me about it.	1	2	3	4	5
9.	My secrets are too embarrassing to share with others.	1	2	3	4	5
10.	I have negative thoughts about myself that I never share with anyone.	1	2	3	4	5

你在多大程度上同意或不同意下面的每一個陳述？

1. 總括來說，我對自己感到滿意。			
很同意	同意	不同意	很不同意
2. 有時我會覺得自己一無是處。			
很同意	同意	不同意	很不同意
3. 我覺得自己有許多優點。			
很同意	同意	不同意	很不同意
4. 我能夠做到與大部分人的表現一樣好。			
很同意	同意	不同意	很不同意
5. 我認為自己沒有什麼可以值得自豪。			
很同意	同意	不同意	很不同意
6. 有時我真的覺得自己沒有用。			
很同意	同意	不同意	很不同意
7. 我覺得自己是一個有價值的人，至少與別人不相上下。			
很同意	同意	不同意	很不同意
8. 我要是能夠更尊重自己就好了。			
很同意	同意	不同意	很不同意
9. 總括來說，我傾向於覺得自己像一個失敗者。			
很同意	同意	不同意	很不同意
10. 我抱著積極的態度面對自己。			
很同意	同意	不同意	很不同意

Appendix J2: Response to Intrusions Questionnaire (RIQ)

Response to Intrusions Questionnaire (RIQ)

What do you do when memories of the distressing event pop into your mind? Please circle the answer that applied best to you DURING THE PAST WEEK.

1.	I try to push them out of my mind.	Never	Sometimes	Often	Always
2.	I try to erase the memory of the event.	Never	Sometimes	Often	Always
3.	I try hard to control my emotions.	Never	Sometimes	Often	Always
4.	I distract myself with something else.	Never	Sometimes	Often	Always
5.	I think of something else.	Never	Sometimes	Often	Always
6.	I work hard at keeping busy with other things.	Never	Sometimes	Often	Always
7.	I think about how life would have been different if the event had not occurred.	Never	Sometimes	Often	Always
8.	I dwell on how the event could have been prevented.	Never	Sometimes	Often	Always
9.	I think about why the event happened to me.	Never	Sometimes	Often	Always
10.	I dwell on how I used to be before the event.	Never	Sometimes	Often	Always
11.	I dwell on what other people have done to me.	Never	Sometimes	Often	Always
12.	I dwell on what I should have done differently.	Never	Sometimes	Often	Always
13.	I go over what happened again and again.	Never	Sometimes	Often	Always
14.	I worry that something similar will happen to me or my family.	Never	Sometimes	Often	Always
15.	I detach myself from the memories.	Never	Sometimes	Often	Always
16.	I drift off into a world of my own.	Never	Sometimes	Often	Always
17.	I numb my feelings.	Never	Sometimes	Often	Always
18.	I drink alcohol, take medication or use drugs.	Never	Sometimes	Often	Always
19.	I put on loud music or TV.	Never	Sometimes	Often	Always

回應侵入量表 (RIQ)

當該次壓力事件的記憶突然出現你的腦海時，你會做什麼回應？請圈出在過去一星期內最適用於你的答案。

1.	我試著把它們從我的腦海中推出去。	從不	有時	時常	總是
2.	我試著忘卻該次事件的記憶。	從不	有時	時常	總是
3.	我盡力地試著控制自己的情緒。	從不	有時	時常	總是
4.	我轉移自己的注意力到其他事物上。	從不	有時	時常	總是
5.	我思考其他事物。	從不	有時	時常	總是
6.	我盡力保持自己忙於其他事物上。	從不	有時	時常	總是
7.	我想著若然該次事件沒有發生，那麼我的人生會怎樣有所不同。	從不	有時	時常	總是
8.	我老是想著該次事件能如何防止發生。	從不	有時	時常	總是
9.	我回憶為什麼該次事件發生在我的身上。	從不	有時	時常	總是
10.	我老是想著在該次事件發生前，自己是一個怎樣的人。	從不	有時	時常	總是
11.	我老是想著其他人對我做了什麼事情。	從不	有時	時常	總是
12.	我老是想著我應該做什麼不同的事情。	從不	有時	時常	總是
13.	我反覆地回顧發生了什麼事。	從不	有時	時常	總是
14.	我擔憂同類事件將會發生在自己或者家人的身上。	從不	有時	時常	總是
15.	我把自己從有關回憶中抽離出來。	從不	有時	時常	總是
16.	我不知不覺地進入屬於自己的世界。	從不	有時	時常	總是
17.	我使自己的感覺麻木。	從不	有時	時常	總是
18.	我飲酒、服藥或吸毒。	從不	有時	時常	總是
19.	我播放喧鬧的音樂或電視。	從不	有時	時常	總是

Appendix J3: Brief COPE (Carver, 1997)

Brief COPE

These items deal with ways you've been coping with the stress in your life since you found out you were going to have to have this operation. There are many ways to try to deal with problems. These items ask what you've been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

1 = I haven't been doing this at all
2 = I've been doing this a little bit
3 = I've been doing this a medium amount
4 = I've been doing this a lot

1. I've been turning to work or other activities to take my mind off things. (SD)
2. I've been concentrating my efforts on doing something about the situation I'm in. (AC)
3. I've been saying to myself "this isn't real.". (D)
4. I've been using alcohol or other drugs to make myself feel better. (SU)
5. I've been getting emotional support from others. (UES)
6. I've been giving up trying to deal with it. (BD)
7. I've been taking action to try to make the situation better. (AC)
8. I've been refusing to believe that it has happened. (D)
9. I've been saying things to let my unpleasant feelings escape. (V)
10. I've been getting help and advice from other people. (UIS)
11. I've been using alcohol or other drugs to help me get through it. (SU)
12. I've been trying to see it in a different light, to make it seem more positive. (PR)
13. I've been criticizing myself. (SB)
14. I've been trying to come up with a strategy about what to do. (P)
15. I've been getting comfort and understanding from someone. (UES)
16. I've been giving up the attempt to cope. (BD)
17. I've been looking for something good in what is happening. (PR)
18. I've been making jokes about it. (H)
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping. (SD)
20. I've been accepting the reality of the fact that it has happened. (A)
21. I've been expressing my negative feelings. (V)
22. I've been trying to find comfort in my religion or spiritual beliefs. (R)
23. I've been trying to get advice or help from other people about what to do. (UIS)
24. I've been learning to live with it. (A)
25. I've been thinking hard about what steps to take. (P)
26. I've been blaming myself for things that happened. (SB)
27. I've been praying or meditating. (R)
28. I've been making fun of the situation. (H)

問題處理方式調查

這個問卷希望能了解你在面對困境或是壓力事件時，會有什麼樣的反應。

當然，每個人處理事情的方式都不一樣，但我們關心的是你自己如何處理問題。每一個項目都描述著一個特殊的因應方式，我們想了解你會採用這些項目來處理問題的程度有多少或多常。

不要根據你認為該項目適不適合用來處理問題來回答，只要根據你採不採用它來回答就好。使用下列的評分選項，試著在心中對每一個題目分別地評分，盡量越接近『你自己』真實的情況越好。請根據使用頻率圈選符合的數字。

	不會這麼做	很少這麼做	有時這麼做	常常這麼做
1. 我會轉向工作或其他活動以避免去想問題	1	2	3	4
2. 我會盡全力解決我所遇到的問題	1	2	3	4
3. 我會告訴自己『這不是真的』	1	2	3	4
4. 我會使用酒或其他藥物讓自己感覺變好	1	2	3	4
5. 我會從他人身上得到情感支持	1	2	3	4
6. 我會放棄去嘗試解決問題	1	2	3	4
7. 我會採取行動來把情況變好	1	2	3	4
8. 我會拒絕相信這件事已經發生	1	2	3	4
9. 我會訴說以讓不愉快的感覺消失	1	2	3	4
10. 我會去獲取別人的協助與建議	1	2	3	4
11. 我會藉由酒或其他藥物來度過	1	2	3	4
12. 我會試著從不同的角度看待問題，讓問題變得更正向	1	2	3	4
13. 我會批評我自己	1	2	3	4
14. 我會試著想出處理的策略	1	2	3	4

15. 我會尋求他人的安慰與了解.....	1	2	3	4
16. 我會放棄去處理問題.....	1	2	3	4
	不會這麼做	很少這麼做	有時這麼做	常常這麼做
17. 我會從發生的事情當中找出它的正向意義.....	1	2	3	4
18. 我常用開玩笑的方式來處理問題.....	1	2	3	4
19. 我會藉著做一些事以減少去想問題的次數，例如看電影、看電視、閱讀、做白日夢、睡覺或逛街	1	2	3	4
20. 我會接受事情已經發生的事實.....	1	2	3	4
21. 我會表達負向的感覺.....	1	2	3	4
22. 我會試著在我的宗教或信仰中尋求安慰.....	1	2	3	4
23. 我會尋求別人的幫助或建議.....	1	2	3	4
24. 我會學習著與事情（問題）共處.....	1	2	3	4
25. 我很認真地想下一步要怎麼做.....	1	2	3	4
26. 對於那件發生的事情，我會責怪自己.....	1	2	3	4
27. 我會禱告、冥想或拜拜、唸經.....	1	2	3	4
28. 我會讓情況變得更有樂趣.....	1	2	3	4

Appendix J4: COPE Inventory (Carver et al., 1989)

COPE Inventory

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress.

Then respond to each of the following items by blackening one number on your answer sheet for each, using the response choices listed just below. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

1 = I usually don't do this at all
2 = I usually do this a little bit
3 = I usually do this a medium amount
4 = I usually do this a lot

1. I try to grow as a person as a result of the experience.
2. I turn to work or other substitute activities to take my mind off things.
3. I get upset and let my emotions out.
4. I try to get advice from someone about what to do.
5. I concentrate my efforts on doing something about it.
6. I say to myself "this isn't real."
7. I put my trust in God.
8. I laugh about the situation.
9. I admit to myself that I can't deal with it, and quit trying.
10. I restrain myself from doing anything too quickly.

11. I discuss my feelings with someone.
12. I use alcohol or drugs to make myself feel better.
13. I get used to the idea that it happened.
14. I talk to someone to find out more about the situation.
15. I keep myself from getting distracted by other thoughts or activities.
16. I daydream about things other than this.
17. I get upset, and am really aware of it.
18. I seek God's help.
19. I make a plan of action.
20. I make jokes about it.

21. I accept that this has happened and that it can't be changed.
22. I hold off doing anything about it until the situation permits.
23. I try to get emotional support from friends or relatives.
24. I just give up trying to reach my goal.
25. I take additional action to try to get rid of the problem.
26. I try to lose myself for a while by drinking alcohol or taking drugs.
27. I refuse to believe that it has happened.
28. I let my feelings out.
29. I try to see it in a different light, to make it seem more positive.
30. I talk to someone who could do something concrete about the problem.

31. I sleep more than usual.
32. I try to come up with a strategy about what to do.
33. I focus on dealing with this problem, and if necessary let other things slide a little.
34. I get sympathy and understanding from someone.
35. I drink alcohol or take drugs, in order to think about it less.

36. I kid around about it.
37. I give up the attempt to get what I want.
38. I look for something good in what is happening.
39. I think about how I might best handle the problem.
40. I pretend that it hasn't really happened.

41. I make sure not to make matters worse by acting too soon.
42. I try hard to prevent other things from interfering with my efforts at dealing with this.
43. I go to movies or watch TV, to think about it less.
44. I accept the reality of the fact that it happened.
45. I ask people who have had similar experiences what they did.
46. I feel a lot of emotional distress and I find myself expressing those feelings a lot.
47. I take direct action to get around the problem.
48. I try to find comfort in my religion.
49. I force myself to wait for the right time to do something.
50. I make fun of the situation.

51. I reduce the amount of effort I'm putting into solving the problem.
52. I talk to someone about how I feel.
53. I use alcohol or drugs to help me get through it.
54. I learn to live with it.
55. I put aside other activities in order to concentrate on this.
56. I think hard about what steps to take.
57. I act as though it hasn't even happened.
58. I do what has to be done, one step at a time.
59. I learn something from the experience.
60. I pray more than usual.

COPE Inventory

我們希望能了解一般人在面對困境或是壓力事件時，會有什麼樣的反應。面對壓力的方法有千百種。這份問卷希望能了解您在面對壓力事件時，您的感受及因應之道為何。當然隨著事件的不同，您採取的因應行為也會不同，我們希望您能試想當有許多壓力時，您最常見的反應為何來回答。

不要根據你認為該題目適不適合用來處理問題來回答，只要根據你採不採用它來回答就好。使用下列的評分選項，試著在心中對每一個題目分別地評分，盡量越接近『你自己』真實的情況越好。每一個項目都描述著一個特殊的因應方式，我們想了解你會採用這些項目來處理問題的程度有多少或多常。當然，每個人處理事情的方式都不一樣，但我們關心的是你自己如何處理問題。

1 = 從未這樣做過
2 = 偶爾這樣做
3 = 有時這樣做
4 = 常常這樣做

1. 在經歷過這件事情後，我試著讓自己成長。
2. 我轉向工作或是做其他的活動，好避免去想它。
3. 我覺得沮喪，且我會把情緒宣洩出來。
4. 我試著尋找別人的建議以明白該怎麼做。
5. 我集中全力來解決問題。
6. 我告訴自己「這不是真的」。
7. 我相信神會引導我。
8. 我用幽默的方式來面對問題。
9. 我承認我無法處理這些問題，並且放棄去嘗試。
10. 我不讓自己太快地採取行動。

11. 我和別人討論我的感受。
12. 我藉著喝酒或服用藥物讓自己舒服一點。
13. 我逐漸習慣一個事實－這個問題已經發生了。
14. 我試著跟別人討論，希望能更了解這個狀況。
15. 我很努力地讓自己不被其它的想法或活動所分心。
16. 我會做一些白日夢，內容跟這個問題無關。
17. 我覺得沮喪，而且我注意到自己的沮喪感覺。
18. 我尋求神的幫助。
19. 我對於所要做的事訂立計劃。
20. 我會利用這件事情開玩笑。

21. 我接受這件事情已經發生，而且是無法改變的了。
22. 在環境不允許之前，我不會做任何事。
23. 我試著從親友中尋求情感上的支持。
24. 我放棄對目標所做的努力。
25. 為了解決問題我會多採取更多行動。
26. 我會喝酒或服用藥物讓自己稍微放鬆一下。
27. 我不願相信件事已經發生。
28. 我把我的感受直接地表達出來。
29. 我試著從不同的角度來看這件事，找尋它正面積極的意義。
30. 我曾和那些可以把問題處理好的人談過。

31. 我最近睡得比平常多。
32. 我試著對所要處理的問題提出策略。
33. 我專心處理這個問題，必要的話甚至暫時犧牲其它的事物。

34. 我尋求別人的同情與了解。
35. 為了不要常常去想這個問題，我會喝酒或服用藥物。
36. 我用開玩笑的態度面對這個問題。
37. 我放棄對我想要東西的努力。
38. 我在這件事中找尋它的益處。
39. 我盤算著我要怎樣才能夠把問題處理得最好。
40. 我假裝這件事不曾發生過。

41. 我會確保自己不至於太莽撞而使事情變得更糟。
42. 我盡力地防止其它事物干擾我現在處理問題的努力。
43. 我藉著看電影或電視，好避免去想這個問題。
44. 我接受這件事情是已經發生的事實。
45. 我詢問曾和我有相似遭遇的人他當時怎麼做。
46. 我覺得心情非常的低潮，而且我常將這種感受表達出來。
47. 我直接採取行動來解決問題。
48. 我試著在宗教中尋找安慰。
49. 我要求自己要等到時機適當時才能採取行動。
50. 我對這個事情開玩笑。

51. 我對解決問題所花的努力減少了。
52. 我向別人訴說我的感覺。
53. 我藉著喝酒或服用藥物讓自己度過難關。
54. 我學習與問題共處。
55. 為了讓我專注目前的問題，我必須把其他的活動擱置。
56. 我很認真地想每一步要怎麼做。
57. 我表現得彷彿這件事不曾發生過。
58. 我按部就班地做應當做的事。
59. 從這個經驗中我學到了一些功課。
60. 我祈禱（或其從事其他宗教儀式）的次數比平常多。

Appendix J5: Trait Dissociation Questionnaire Short Form (TDQ-SF)

TDQ - SF

Below are some experiences that people may have from time to time. We are interested in to what extent you had such experiences IN THE LAST MONTH. Please read each question carefully, but do not spend too much time on each one. There are no right or wrong answers. We are interested in your personal experience.

This applied to me in the last month

	Not at all	A little	Moderately	Strongly	Very strongly
1. I felt dazed, unable to take in what was happening.	0	1	2	3	4
2. The world around me seemed strange or unreal.	0	1	2	3	4
3. My body felt as if it was not really mine.	0	1	2	3	4
4. I felt emotionally numb.	0	1	2	3	4
5. I felt as if I was separate to my body and was watching it from outside.	0	1	2	3	4
6. I felt as if time was going faster or slower than it really was.	0	1	2	3	4
7. I felt as if I was living in a dream or a film, rather than in real life.	0	1	2	3	4
8. Things around me seemed too big or too small, or distorted in shape.	0	1	2	3	4
9. I felt distant from my emotions.	0	1	2	3	4
10. I found myself doing things without knowing why.	0	1	2	3	4
11. I felt that my personality is split into distinct parts.	0	1	2	3	4
12. I found writings, drawings, or notes among my belongings that I must have done, but cannot remember doing.	0	1	2	3	4
13. My moods could really change.	0	1	2	3	4
14. I found myself in places without knowing how I got there.	0	1	2	3	4
15. I felt as if other people live in a different world.	0	1	2	3	4

解離特徵量表 - 短版

以下是人們或許偶爾有的一些經歷。我們想知道下列陳述**在上個月內**有多大程度上符合你的情況。請仔細閱讀每條問題，但不要花太多時間在每題上。答案沒有對錯之分。我們有興趣的是你的個人經歷。

在上個月內...	完全不符合	有點符合	中等符合	非常符合	極度符合
1. 我覺得茫然，不能理解當時正在發生的事情。	0	1	2	3	4
2. 我周遭的世界看起來異常或者不真實的。	0	1	2	3	4
3. 我的身體感覺上似乎真的不是自己的。	0	1	2	3	4
4. 我覺得情感上麻木。	0	1	2	3	4
5. 我覺得我似乎與自己的身體分開，並且正在從外面看著它。	0	1	2	3	4
6. 我覺得時間似乎正在過得比實際上快了或者慢了。	0	1	2	3	4
7. 我覺得我似乎活在夢中或電影中，而非活在真實的人生中。	0	1	2	3	4
8. 我周遭的事物看起來太大或太小，或是外形扭曲。	0	1	2	3	4
9. 我覺得與自己的情緒有距離。	0	1	2	3	4
10. 我發現自己不知為何地做事情。	0	1	2	3	4
11. 我覺得自己的性格被分割成不同的部分。	0	1	2	3	4
12. 我在我的個人物品中，找到我必須做而不記得做的寫作、畫作或者筆記。	0	1	2	3	4
13. 我的心情真的可以改變。	0	1	2	3	4
14. 我發現自己身處一些我不知如何來到的地方。	0	1	2	3	4
15. 我覺得其他人似乎生活在一個不同的世界。	0	1	2	3	4

Appendix K: Post-Traumatic/Stress Outcomes Questionnaires

Appendix K1: Impact of Event Scale-Revised (IES-R)

Impact of Events Scale – Revised (IES-R)

INSTRUCTIONS: Below is a list of difficulties people sometimes have after distressing life events. Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST SEVEN DAYS with respect to _____(the most distressing event you rated in the previous questionnaire) that occurred on _____ (date). How much have you been distressed or bothered by these difficulties?

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Any reminder brought back feelings about it.	0	1	2	3	4
2. I had trouble staying asleep.	0	1	2	3	4
3. Other things kept making me think about it.	0	1	2	3	4
4. I felt irritable and angry.	0	1	2	3	4
5. I avoided letting myself get upset when I thought about it or was reminded of it.	0	1	2	3	4
6. I thought about it when I didn't mean to.	0	1	2	3	4
7. I felt as if it hadn't happened or wasn't real.	0	1	2	3	4
8. I stayed away from reminders of it.	0	1	2	3	4
9. Pictures about it popped into my mind.	0	1	2	3	4
10. I was jumpy and easily startled.	0	1	2	3	4
11. I tried not to think about it.	0	1	2	3	4
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	0	1	2	3	4
13. My feelings about it were kind of numb.	0	1	2	3	4
14. I found myself acting or feeling like I was back at that time.	0	1	2	3	4
15. I had trouble falling asleep.	0	1	2	3	4
16. I had waves of strong feelings about it.	0	1	2	3	4
17. I tried to remove it from my memory.	0	1	2	3	4
18. I had trouble concentrating.	0	1	2	3	4
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20. I had dreams about it.	0	1	2	3	4
21. I felt watchful and on-guard.	0	1	2	3	4
22. I tried not to talk about it.	0	1	2	3	4

事件影響測量表 — 修定版

以下是一些人經歷過壓力事件後會經驗的困難。請細閱每一項目，並按自己過去七天的經驗選擇最能夠形容每一項困難對你影響的程度。以下提到的 [那件事] 是指：_____ 有關經歷。

	完全沒有	少許	中度	相當大	極度
1. 任何有關那件事的事物也會引起我對那件事的感覺 。	0	1	2	3	4
2. 我難於保持安睡。	0	1	2	3	4
3. 其他事情不停地令我想起那件事。	0	1	2	3	4
4. 我覺得煩躁和忿怒。	0	1	2	3	4
5. 每當我想起那件事或者有其他事物令我想起那件事時，我會盡力避免讓自己心煩意亂 。	0	1	2	3	4
6. 我會無意中想起那件事。	0	1	2	3	4
7. 我覺得那件事好像從未發生過或並非真實。	0	1	2	3	4
8. 我避開一些會令我回憶起那件事的事物。	0	1	2	3	4
9. 關於那件事的影象在我腦海中突然浮現出來。	0	1	2	3	4
10. 我神經過敏及容易被嚇得跳起來。	0	1	2	3	4
11. 我嘗試不想起那件事。	0	1	2	3	4
12. 我察覺到我仍然對那件事有很多感受，但我沒有去處理它們。	0	1	2	3	4
13. 我對那件事的感覺是有點兒麻木。	0	1	2	3	4
14. 我覺得我的行動或者感覺好像回復到那件事發生時的行動和感覺一樣 。	0	1	2	3	4
15. 我難於入睡。	0	1	2	3	4
16. 我對那件事的強烈感覺一陣一陣地湧現出。	0	1	2	3	4
17. 我嘗試忘記那件事。	0	1	2	3	4
18. 我難於集中精神。	0	1	2	3	4
19. 令我想起那件事的事物使我身體產生反應，例如：流汗、呼吸困難、作嘔、或者強烈心跳 。	0	1	2	3	4
20. 我夢到那件事。	0	1	2	3	4
21. 我覺得自己警覺性很高，處處提防。	0	1	2	3	4
22. 我嘗試不談論有關那件事的話題。	0	1	2	3	4

Appendix K2: State-Trait Anxiety Inventory (Trait) (Form Y) (STAI-T)

Trait version of State-Trait Anxiety Inventory
STAI Form Y-2 (Trait)

Directions:

A number of statements which people have used to describe themselves are given below. Read each statement and then write the number in the blank at the end of the statement that indicates **how you generally feel**. There is no right or wrong answer. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

S No.		Almost Never	Sometime	Often	Almost Always
1.	I feel pleasant	1	2	3	4
2.	I feel nervous and restless	1	2	3	4
3.	I feel satisfied with myself	1	2	3	4
4.	I wish I could be as happy as others seem to be	1	2	3	4
5.	I feel like a failure	1	2	3	4
6.	I feel rested	1	2	3	4
7.	I am calm, cool, and collected	1	2	3	4
8.	I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
9.	I worry too much over something that really doesn't matter	1	2	3	4
10.	I am happy	1	2	3	4
11.	I have disturbing thoughts	1	2	3	4
12.	I lack self confidence	1	2	3	4
13.	I feel secure	1	2	3	4
14.	I make decision easily	1	2	3	4
15.	I feel inadequate	1	2	3	4
16.	I am content	1	2	3	4
17.	Some unimportant thoughts run through my mind and bothers me	1	2	3	4
18.	I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
19.	I am a steady person	1	2	3	4
20.	I get in a state of tension or turmoil as I think over my recent concerns and interests	1	2	3	4

情境特質焦慮中文量表 – 特質焦慮部分 (STAI Y-2)

一般人會用以下項目來形容自己的心理狀態。請您針對每一個項目，圈選出符合您**平時一般情形**的心理感受。所有的項目沒有所謂對或錯的答案。請勿花太多時間專注在任何一個項目上，直接圈選出最適合您**平時一般情形的描述**即可。

項目	內容	非常不同意	不同意	同意	非常同意
1.	我常常感到愉悅	1	2	3	4
2.	我常常會緊張與不安	1	2	3	4
3.	我常常對自我感到滿意	1	2	3	4
4.	我常常希望自己能像別人一樣快樂	1	2	3	4
5.	我常常覺得自己是一個失敗者	1	2	3	4
6.	我常常覺得很放心	1	2	3	4
7.	我是冷靜、沉著和穩定的	1	2	3	4
8.	我常常覺得困難很多而且無法克服	1	2	3	4
9.	我常常憂慮很多不重要的事情	1	2	3	4
10.	我常常很快樂	1	2	3	4
11.	我常常會有一些令我困擾的思想	1	2	3	4
12.	我缺乏自信	1	2	3	4
13.	我常常覺得安全	1	2	3	4
14.	我通常容易下決定	1	2	3	4
15.	我常常感到無能為力	1	2	3	4
16.	我常常感到滿足	1	2	3	4
17.	有些不重要的念頭常纏繞在腦中並對我造成困擾	1	2	3	4
18.	我很在乎別人對我的失望，很難不去管它	1	2	3	4
19.	我是一個很穩定的人	1	2	3	4
20.	當我一想到最近我關心或與自己利益有關的事情時，就會緊張或煩惱	1	2	3	4

Appendix K3: Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)

Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

		Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
1.	I was bothered by things that usually don't bother me.	○	○	○	○
2.	I felt that I could not shake off the blues even with the help from my friends or family.	○	○	○	○
3.	I felt that I was just as good as other people.*	○	○	○	○
4.	I had trouble keeping my mind on what I was doing.	○	○	○	○
5.	I felt that everything I did was an effort.	○	○	○	○
6.	I felt hopeful about the future.*	○	○	○	○
7.	I felt my life had been a failure.	○	○	○	○
8.	I felt fearful.	○	○	○	○
9.	I felt lonely.	○	○	○	○
10.	People were unfriendly.	○	○	○	○

Center of Epidemiology Scale of Depression (CESD)

以下是一些你或許曾經感覺或表現的方式。
在最近一星期，你有多少天有以下的情況呢？

		1天以下	1到2天	3到4天	5到7天
1.	我受到事情所困擾。	○	○	○	○
2.	就算家人或朋友幫忙，我也不能擺脫憂愁。	○	○	○	○
3.	我與別人一樣心情好。	○	○	○	○
4.	我難於集中精神做事。	○	○	○	○
5.	我做每件事都很費力。	○	○	○	○
6.	我對將來有信心。	○	○	○	○
7.	我的人生是失敗的。	○	○	○	○
8.	我感到害怕。	○	○	○	○
9.	我感到孤獨。	○	○	○	○
10.	別人並不友善。	○	○	○	○

Appendix K4: Post-Traumatic Growth Inventory Short Form (PTGI-SF)

Posttraumatic Growth Inventory – Short Form

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your distressing event using the following scale.

0 = I did not experience this change as a result of my distressing event.
1 = I experienced this change to a very small degree as a result of my distressing event.
2 = I experienced this change to a small degree as a result of my distressing event.
3 = I experienced this change to a moderate degree as a result of my distressing event.
4 = I experienced this change to a great degree as a result of my distressing event.
5 = I experienced this change to a very great degree as a result of my distressing event.

		Not at all (0)	Very Small (1)	Small (2)	Moderate (3)	Great (4)	Very Great (5)
1.	I changed my priorities about what is important in life.						
2.	I have a greater appreciation for the value of my own life.						
3.	I am able to do better things with my life.						
4.	I have a better understanding of spiritual matters.						
5.	I have a greater sense of closeness with others.						
6.	I established a new path for my life.						
7.	I know better that I can handle difficulties.						
8.	I have a stronger religious faith.						
9.	I discovered that I'm stronger than I thought I was.						
10.	I learned a great deal about how wonderful people are.						

創傷後成長量表短版

下列句子描述你所經歷的危機／創傷對您的生命可能帶來的轉變。請仔細閱讀每一句子，然後根據以下的標準，選擇一個最接近您的感覺的答案。

0 = 我完全沒有因為我的危機／創傷而經歷這個改變。
1 = 我在非常小程度上因為我的危機／創傷而經歷這個改變。
2 = 我在小程度上因為我的危機／創傷而經歷這個改變。
3 = 我在有些程度上因為我的危機／創傷而經歷這個改變。
4 = 我在大程度上因為我的危機／創傷而經歷這個改變。
5 = 我在非常大程度上因為我的危機／創傷而經歷這個改變。

		完全沒有 (0)	非常小 (1)	小 (2)	有些 (3)	大 (4)	非常大 (5)
1.	我生命中重要事物的先後次序。						
2.	對於須要改變的事物，我更傾向於去改變它。						
3.	我能夠以我的生命做更好的事情。						
4.	對於心靈上的事物有更佳的瞭解。						
5.	一種和別人很親近的感覺。						
6.	我建立了生命的新路向。						
7.	知道自己有能力處理困難。						
8.	我有一個更強的宗教信仰。						
9.	我發現我比想像中更強。						
10.	我體會到人是多美好。						

Appendix K5: Post-Traumatic Growth Inventory - Expanded (PTGI-X)

Posttraumatic Growth Inventory—Expanded (PTGI-X)

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your crisis [**or researcher inserts specific descriptor here**], using the following scale.

0= I did not experience this change as a result of my crisis.
1= I experienced this change to a very small degree as a result of my crisis.
2= I experienced this change to a small degree as a result of my crisis.
3= I experienced this change to a moderate degree as a result of my crisis.
4= I experienced this change to a great degree as a result of my crisis.
5= I experienced this change to a very great degree as a result of my crisis.

1. I changed my priorities about what is important in life.
2. I have a greater appreciation for the value of my own life.
3. I developed new interests.
4. I have a greater feeling of self-reliance.
5. I have a better understanding of spiritual matters.
6. I more clearly see that I can count on people in times of trouble.
7. I established a new path for my life.
8. I have a greater sense of closeness with others.
9. I am more willing to express my emotions.
10. I know better that I can handle difficulties.
11. I am able to do better things with my life.
12. I am better able to accept the way things work out.
13. I can better appreciate each day.
14. New opportunities are available which wouldn't have been otherwise.
15. I have more compassion for others.
16. I put more effort into my relationships.
17. I am more likely to try to change things which need changing.
18. I have a stronger religious faith.
19. I discovered that I'm stronger than I thought I was.
20. I learned a great deal about how wonderful people are.
21. I better accept needing others.
22. I have a greater sense of harmony with the world.
23. I feel more connected with all of existence.
24. I feel better able to face questions about life and death.
25. I have greater clarity about life's meaning.

中文版創傷後成長量表（Chinese PTGI-X）

下列句子描述您所經歷的令人苦惱事件對您的生命可能帶來的轉變。請仔細閱讀每一句子，然後根據以下的標準，選擇一個最接近您的感覺的答案。

0 = 我完全沒有因為我的令人苦惱事件而經歷這個改變。

1 = 我在非常小程度上因為我的令人苦惱事件而經歷這個改變。

2 = 我在小程度上因為我的令人苦惱事件而經歷這個改變。

3 = 我在有些程度上因為我的令人苦惱事件而經歷這個改變。

4 = 我在大程度上因為我的令人苦惱事件而經歷這個改變。

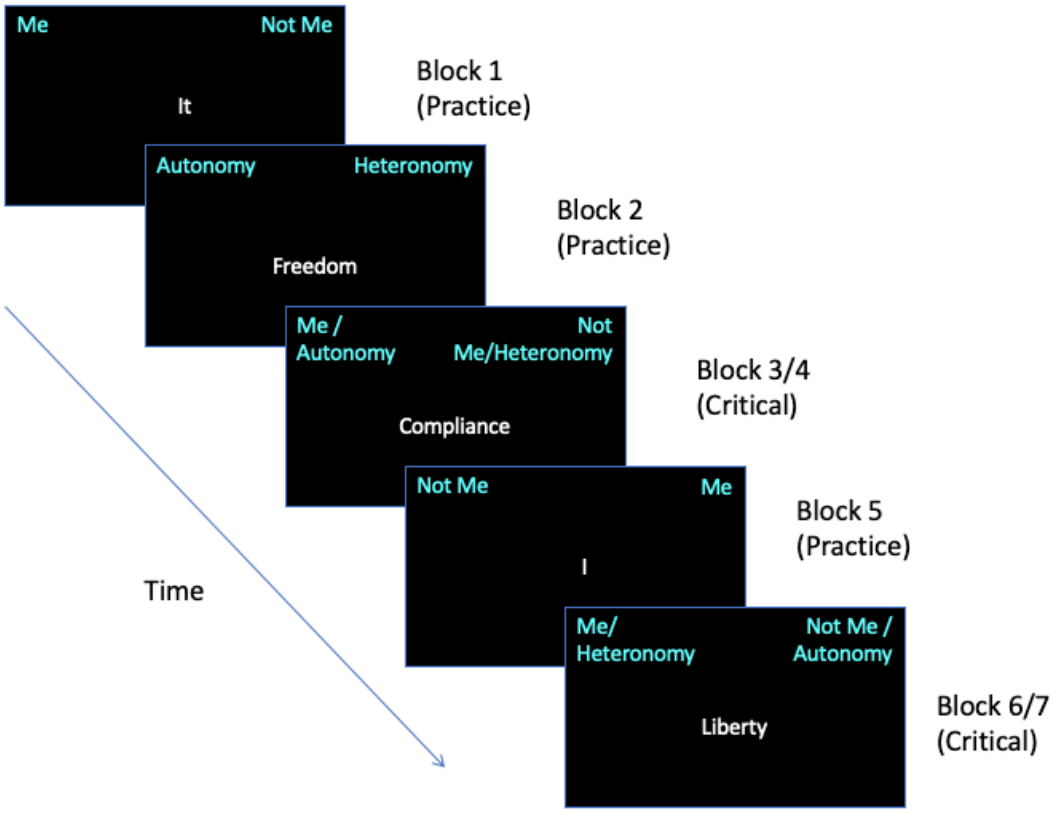
5 = 我在非常大程度上因為我的令人苦惱事件而經歷這個改變。

	完全沒有	非常小	小	有些	大	非常大
1. 我改變人生重要事物的優先順序。	0	1	2	3	4	5
2. 我更珍惜自己生命的價值。	0	1	2	3	4	5
3. 我培養出新的興趣。	0	1	2	3	4	5
4. 我更能依靠自己。	0	1	2	3	4	5
5. 我更了解心靈的事物 。	0	1	2	3	4	5
6. 我更明確了解困難時可以依靠他人。	0	1	2	3	4	5
7. 我替自己的人生建立新的道路。	0	1	2	3	4	5
8. 我感覺與他人更親近。	0	1	2	3	4	5
9. 我更願意表達我的情感。	0	1	2	3	4	5
10. 我更了解我能夠處理困難的事。	0	1	2	3	4	5
11. 我能夠以我的生命做更好的事。	0	1	2	3	4	5
12. 我更能夠接受事情最終成為的樣子。	0	1	2	3	4	5
13. 我更能夠珍惜每一天。	0	1	2	3	4	5
14. 我獲得過去不可得的新機會。	0	1	2	3	4	5
15. 我對他人更加慈悲憐憫。	0	1	2	3	4	5
16. 我對我的關係投注更多心力。	0	1	2	3	4	5
17. 我更可能嘗試改變需要改變的事。	0	1	2	3	4	5
18. 我的宗教信仰更為堅定。	0	1	2	3	4	5
19. 我發現我比原本自認的更堅強。	0	1	2	3	4	5

20. 我瞭解到許多人的美好。	0	1	2	3	4	5
21. 我更接受自己需要他人。	0	1	2	3	4	5
22. 我感到與世界更為和諧共處。	0	1	2	3	4	5
23. 我感覺與所有的存在更為連結。	0	1	2	3	4	5
24. 我更能面對生死的問題。	0	1	2	3	4	5
25. 我更清楚人生的意義。	0	1	2	3	4	5

Appendix L: Implicit Association Test (IAT)

Appendix L1: The Visual Illustration of the IAT (Example: Condition 1)



Appendix L2: The IAT Information Sheet

(Study 1A)

Implicit Association Test (IAT)
Information Sheet

You will complete a computer task related to how you see yourself. This task consists of two rounds and requires less than 30 minutes. In each round of the task, you will be instructed to sort a list of words into different attributes as quickly as possible. The attributes are defined below:

'Autonomy' refers to the state of being self-governing. One's action is motivated by a sense of efficacy and free will towards a desired outcome or subject to one's own rule.

'Heteronomy' refers to the state of being ruled and governed from outside. One's action is influenced by an external force or subject to another's rule.

'Separateness' refers to the state of being kept apart from others. Separate selves are distanced from others with well-defined self-boundaries.

'Relatedness' refers to the state of being connected with others. The boundaries of connected selves may be fused with others.

Please feel free to ask the researcher if you have any questions about the above attributes.

(Study 2A - English)

Implicit Association Test (IAT)
Information Sheet

You will complete a computer task related to how you see yourself. This task will take you less than 15 minutes. You will be instructed to sort a list of words into different categories as quickly as possible. The following categories are designated as 'attribute categories' and defined as below:

'Autonomy' refers to the state of being self-governing. One's action is motivated with a sense of efficacy and free will towards a desired outcome or subject to one's own rule.

'Heteronomy' refers to the state of being ruled and governed from outside. One's action is influenced by a force outside the individuals or subject to another's rule.

Please feel free to ask researcher if you have any questions about the 'attribute categories'.

(Study 2A - Chinese)

內隱聯結測驗
測驗資訊

你將會完成一個關於你如何看待你自己的電腦測驗。這個測驗會在十五分鐘內完成。請依指示盡快把一系列的字詞分類到不同屬性。該些屬性定義如下：

「自律」意指一個自我作主的狀況。一個人的行動由其效能感和自由意志主導，往一個自己渴求的目標推進，或是基於他本人的準則而定。

「他律」意指一個被外界主宰和管制的狀況。一個人的行動受自身以外的力量所影響，或是基於另一人的準則而定。

如果你對上述屬性有任何疑問，歡迎詢問研究人員。

Appendix L3: Word Frequency (Implicit Association Test)

(Study 1A)

Implicit Association Test (IAT)

Target Category: Me vs. Not Me

Me	Lg10CD	**Not Me**	Lg10CD
My	-	They	-
Mine	-	Theirs	-
I	-	It	-
Myself	-	Others	-
Self	-	Its	-
Me	-	Their	-

Attribute Category 1: Agency (Autonomy - Heteronomy) dimension

Autonomy	Lg10CD	**Heteronomy**	Lg10CD
Mean (*SD*)	4.01 (0.63)	*Mean* (*SD*)	3.94 (0.64)
Decide	4.52	Follow	4.96
Voluntary	4.09	Compliance	3.22
Freedom	3.39	Duty	4.61
Liberty	4.03	Loyalty	3.85
Willingly	3.08	Abide	3.45
Choose	4.92	Obey	3.52

Attribute Category 2: Interpersonal Distance (Separateness - Relatedness) dimension

Separateness	Lg10CD	**Relatedness**	Lg10CD
Mean (*SD*)	4.41 (0.73)	*Mean* (*SD*)	4.32 (0.77)
Distinctive	4.02	Collective	3.86
Unique	4.66	Connected	4.30
Individuality	2.94	Solidarity	3.51
Private	5.02	Communal	3.61
Apart	4.92	Together	5.60
Personal	4.89	United	5.06

*Lg10CD: Log10 of the number of films with the word (i.e., W-CD)

(Study 2A)

Implicit Association Test (IAT)

Target Category: Me vs. Not Me

Me	Lg10CD	**我**	Lg10CD	**Not Me**	Lg10CD	**非我**	Lg10CD
My	-	我的	-	They	-	他們	-
Mine	-	我自己的	-	Theirs	-	他們自己的	-
I	-	我／本人	-	It	-	它	-
Myself	-	我自己	-	Others	-	他人	-
Self	-	自身	-	Its	-	它的	-
Me	-	我／本人	-	Their	-	他們的	-

Attribute Category: Agency (Autonomy - Heteronomy) dimension

Autonomy	Lg10CD	**自律**	Lg10CD	**Heteronomy**	Lg10CD	**他律**	Lg10CD
Mean (*SD*)	4.01 (0.63)	*Mean* (*SD*)	3.38 (0.74)	*Mean* (*SD*)	3.94 (0.64)	*Mean* (*SD*)	3.13 (0.41)
Decide	4.52	決定	4.01	Follow	4.96	按照	3.08
Voluntary	4.09	自願	2.79	Compliance	3.22	接受	3.88
Freedom	3.39	自由	3.59	Duty	4.61	責任	3.41
Liberty	4.03	自主	2.00	Loyalty	3.85	忠誠	2.90
Willingly	3.08	願意	3.96	Abide	3.45	遵守	2.88
Choose	4.92	選擇	3.90	Obey	3.52	服從	2.63

*Lg10CD: Log10 of the number of films with the word (i.e., W-CD)

Appendix L4: The IAT Counterbalancing Order

(Study 1A)

Implicit Association Test

Study 1A: 8 conditions (for counterbalancing)

R: Round
B: Block

(Condition 1)
R1 B3-4: Me/Autonomy - Not Me/Heteronmy
R1 B6-7: Not Me/Autonomy - Me/Heteronmy
R2 B3-4: Me/Separateness - Not Me/Relatedness
R2 B6-7: Not Me/Separateness - Me/Relatedness

(Condition 2)
R1 B3-4: Not Me/Autonomy - Me/Heteronmy
R1 B6-7: Me/Autonomy - Not Me/Heteronmy
R2 B3-4: Me/Separateness - Not Me/Relatedness
R2 B6-7: Not Me/Separateness - Me/Relatedness

(Condition 3)
R1 B3-4: Me/Autonomy - Not Me/Heteronmy
R1 B6-7: Not Me/Autonomy - Me/Heteronmy
R2 B3-4: Not Me/Separateness - Me/Relatedness
R2 B6-7: Me/Separateness - Not Me/Relatedness

(Condition 4)
R1 B3-4: Not Me/Autonomy - Me/Heteronmy
R1 B6-7: Me/Autonomy - Not Me/Heteronmy
R2 B3-4: Not Me/Separateness - Me/Relatedness
R2 B6-7: Me/Separateness - Not Me/Relatedness

(Condition 5)
R1 B3-4: Me/Separateness - Not Me/Relatedness
R1 B6-7: Not Me/Separateness - Me/Relatedness
R2 B3-4: Me/Autonomy - Not Me/Heteronmy
R2 B6-7: Not Me/Autonomy - Me/Heteronmy

(Condition 6)
R1 B3-4: Not Me/Separateness - Me/Relatedness
R1 B6-7: Me/Separateness – Not Me/Relatedness
R2 B3-4: Me/Autonomy – Not Me/Heteronmy
R2 B6-7: Not Me/Autonomy - Me/Heteronmy

(Condition 7)
R1 B3-4: Me/Separateness – Not Me/Relatedness
R1 B6-7: Not Me/Separateness - Me/Relatedness
R2 B3-4: Not Me Autonomy - Me/Heteronmy
R2 B6-7: Me/Autonomy – Not Me/Heteronmy

(Condition 8)
R1 B3-4: Not Me/Separateness - Me/Relatedness
R1 B6-7: Me/Separateness - Not Me/Relatedness
R2 B3-4: Not Me/Autonomy - Me/Heteronmy
R2 B6-7: Me/Autonomy - Not Me/Heteronmy

(Study 2A)

Implicit Association Test

Study 2A: 2 conditions (for counterbalancing)

B: Block

(Condition 1)
B3-4: Me/Autonomy - Not Me/Heteronmy
B6-7: Not Me/Autonomy - Me/Heteronmy

(Condition 2)
B3-4: Not Me/Autonomy - Me/Heteronmy
B6-7: Me/Autonomy - Not Me/Heteronmy

Appendix L5: Experimental Procedure of the IAT (Example: Condition 1)

Implicit Association Test
Experimental Procedure

(Study 1A)

Example: Condition 1
Sequence of Trial Blocks of Agency (Autonomy vs. Heteronomy) and Interpersonal Distance (Separateness vs. Relatedness)

Round	Block	No. of trials	Function	Items assigned to left-key response	Items assigned to right-key response
1	1	24	Practice	Me	Not Me
1	2	24	Practice	Autonomy	Heteronomy
1	3	24	Practice	Me + Autonomy	Not Me + Heteronomy
1	4	24	Test	Me + Autonomy	Not Me + Heteronomy
1	5	24	Practice	Not Me	Me
1	6	24	Practice	Not Me + Autonomy	Me + Heteronomy
1	7	24	Test	Not Me + Autonomy	Me + Heteronomy
(Break)					
2	1	24	Practice	Me	Not Me
2	2	24	Practice	Separateness	Relatedness
2	3	24	Practice	Me + Separateness	Not Me + Relatedness
2	4	24	Test	Me + Separateness	Not Me + Relatedness
2	5	24	Practice	Not Me	Me
2	6	24	Practice	Not Me + Separateness	Me + Relatedness
2	7	24	Test	Not Me + Separateness	Me + Relatedness

(Study 2A)

Example: Condition 1
Sequence of Trial Blocks of Agency (Autonomy vs. Heteronomy)

Block	No. of trials	Function	Items assigned to left-key response	Items assigned to right-key response
1	24	Practice	Me	Not Me
2	24	Practice	Autonomy	Heteronomy
3	24	Practice	Me + Autonomy	Not Me + Heteronomy
4	24	Test	Me + Autonomy	Not Me + Heteronomy
5	24	Practice	Not Me	Me
6	24	Practice	Not Me + Autonomy	Me + Heteronomy
7	24	Test	Not Me + Autonomy	Me + Heteronomy

Appendix L6: Experimenter's Instructions of the IAT

(Study 1A)

Implicit Association Test
Experimenter's Instruction (Example)

(C: Condition; B: Block)

(Round 1: Autonomy vs. Heteronomy)

Starting Slide

Welcome to this computer task.

It will take around 30 minutes to complete.

There will be two rounds of the task
with a 5-minute break in between.

Press the space bar to continue.

Instruction Slide 1 (Round 1: C1B1)

You will complete a classification task.

You will identify words and group them into categories
as quickly as possible.

Press the space bar to continue.

Instruction Slide 2 (Round 1: C1B1)

Put your middle or index fingers on the
"E" and "I" keys of your keyboard.

Words representing the categories at the top
will appear one-by-one in the middle of the screen.

When the item belongs to a category on the left,
press the "E" key.

When the item belongs to a category on the right,
press the "I" key.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next item.

Instruction Slide 3 (Round 1: C1B1)

Items belong to only one category.

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 4 (Round 1: C1B1)

Ready?

Press the space bar to start.

Practice Block 1: Me vs. Not Me

12 items x 2 cycles

Instruction Slide 5 (Round 1: C1B2)

The categories above will now change.
The items for sorting have changed as well.
The rules, however, are the same.

When the item belongs to a category on the left,
press the "E" key.

When the item belongs to a category on the right,
press the "I" key.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next item.

Instruction Slide 6 (Round 1: C1B2)

Items belong to only one category.

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 7 (Round 1: C1B2)

Ready?

Press the space bar to start.

Practice Block 2: Autonomy vs. Heteronomy

12 items x 2 cycles

Instruction Slide 8 (Round 1: C1B3)

The four categories you saw separately now appear together.
Remember, each item belongs to only one group.

If the sorting item belongs to EITHER, "Me or "Autonomy",
press the "E" key.
If it belongs to "Not Me" or "Heteronomy",
press the "I" key.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next item.

Instruction 9 (Round 1: C1B3)

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 10 (Round 1: C1B3)

Ready?

Press the space bar to start.

Experimental Block 1: Me / Autonomy vs. Not Me / Heteronomy

24 items

Instruction Slide 11 (Round 1: C1B4)

Please sort the same categories again.

Remember to go as fast as you can
while making as few mistakes as possible.

Instruction Slide 12 (Round 1: C1B4)

Ready?

Press the space bar to start.

Experimental Block 2: Me / Autonomy vs. Not Me / Heteronomy

24 items

Instruction Slide 13 (Round 1: C1B5)

Now there will be only two categories again.
Some you have done before already.

BUT they have changed position.
The concept that was previously on the left is now on the right.

Practise in this new configuration.
Use the "E" and "I" keys to categorise terms left and right.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next item.

Instruction Slide 14 (Round 1: C1B5)

Items belong to only one category.

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors

will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 15 (Round 1: C1B5)

Ready?

Press the space bar to start.

Practice Block 3: Not Me vs. Me

12 items x 2 cycles

Instruction Slide 16 (Round 1: C1B6)

The four categories will now appear together
in a new configuration.

Remember, each item belongs to only one group.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next item.

Instruction Slide 17 (Round 1: C1B6)

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 18 (Round 1: C1B6)

Ready?

Press the space bar to start.

Experimental Block 3: Me / Heteronomy vs. Not Me / Autonomy

24 items

Instruction Slide 19 (Round 1: C1B7)

Please sort the same categories again.

Remember to go as fast as you can
while making as few mistakes as possible.

Instruction Slide 20 (Round 1: C1B7)

Ready?
Press the space bar to start.

Practice Trial Block 4: Me / Heteronomy vs. Not Me / Autonomy

24 items

5-minute break

(Round 2: Separateness vs. Relatedness)

Instruction Slide 21 (Round 2: C2B1)

You will complete another classification task.

You will identify words and group them into categories
as quickly as possible.

Press the space bar to continue.

Instruction Slide 22 (Round 2: C2B1)

Put your middle or index fingers on the
"E" and "I" keys of your keyboard.

Words representing the categories at the top
will appear one-by-one in the middle of the screen.

When the item belongs to a category on the left,
press the "E" key.

When the item belongs to a category on the right,

press the “I” key.

If you press the wrong key, you will see ‘X’.
Press the other key right away to go to the next item.

Instruction Slide 23 (Round 2: C2B1)

Items belong to only one category.

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 24 (Round 2: C2B1)

Ready?

Press the space bar to start.

Practice Block 4: Me vs. Not Me

12 items x 2 cycles

Instruction Slide 25 (Round 2: C2B2)

The categories above will now change.
The items for sorting have changed as well.
The rules, however, are the same.

When the item belongs to a category on the left,
press the “E” key.

When the item belongs to a category on the right,
press the “I” key.

If you press the wrong key, you will see ‘X’.
Press the other key right away to go to the next item.

Instruction Slide 26 (Round 2: C2B2)

Items belong to only one category.

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 27 (Round 2: C2B2)

Ready?

Press the space bar to start.

Practice Block 5: Separateness vs. Relatedness

12 items x 2 cycles

Instruction Slide 28 (Round 2: C2B3)

The four categories you saw separately now appear together.
Remember, each item belongs to only one group.

If the sorting item belongs to EITHER, "Me or "Separateness",
press the "E" key.
If it belongs to "Not Me" or "Relatedness",
press the "I" key.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next item.

Instruction Slide 29 (Round 2: C2B3)

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 30 (Round 2: C2B3)

Ready?

Press the space bar to start.

Experimental Block 5: Me / Separateness vs. Not Me / Relatedness

24 items

Instruction Slide 31 (Round 2: C2B4)

Please sort the same categories again.

Remember to go as fast as you can
while making as few mistakes as possible.

Instruction Slide 32 (Round 2: C2B4)

Ready?

Press the space bar to start.

Experimental Block 6: Me / Separateness vs. Not Me / Relatedness

24 items

Instruction Slide 33 (Round 2: C2B5)

Now there will be only two categories again.
Some you have done before already.

BUT they have changed position.
The concept that was previously on the left is now on the right.

Practise in this new configuration.
Use the "E" and "I" keys to categorise terms left and right.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next item.

Instruction Slide 34 (Round 2: C2B5)

Items belong to only one category.

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 35 (Round 2: C2B5)

Ready?

Press the space bar to start.

Practice Block 6: Not Me vs. Me

12 items x 2 cycles

Instruction Slide 36 (Round 2: C2B6)

The four categories will now appear together
in a new configuration.

Remember, each item belongs to only one group.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next item.

Instruction Slide 37 (Round 2: C2B6)

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

Press the space bar to begin.

Instruction Slide 38 (Round 2: C2B6)

Ready?

Press the space bar to start.

Experimental Block 7: Me / Relatedness vs. Not Me / Separateness

24 items

Instruction Slide 39 (Round 2: C2B7)

Please sort the same categories again.

Remember to go as fast as you can
while making as few mistakes as possible.

Instruction Slide 40 (Round 2: C2B7)

Ready?
Press the space bar to start.

Practice Trial Block 8: Me / Relatedness vs. Not Me / Separateness

24 items

Ending Slide

End of the experiment.
Thank you for taking part.

(Study 2A - English)

Implicit Association Test (IAT)
Experimenter's Instruction (Example)

(C: Condition; B: Block)

Starting Slide

Welcome to this computer task.

It will take around 30 minutes to complete.

Press the space bar to continue.

Instruction Slide 1 (C1B1)

You will complete a classification task.

You will sort words into categories
as quickly as possible.

Press the space bar to continue.

Instruction Slide 2 (C1B1)

Put your middle or index fingers on the
'E' and 'I' keys of your keyboard.

You will see two categories on the top of the screen.
Words representing one of the categories
will appear one-by-one in the middle of the screen.

If the word belongs to a category on the left,
press the 'E' key.

If the word belongs to a category on the right,
press the 'I' key.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next word.

Instruction Slide 3 (C1B1)

Each word belongs to only one category.

This is a timed sorting task.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Going too slow or making too many errors
will result in an uninterpretable score.

You will be able to practise the task.

Press the space bar to begin.

Instruction Slide 4 (C1B1)

Ready?

Press the space bar to start.

Practice Block 1: Me vs. Not Me

12 words x 2 cycles

Instruction Slide 5 (C1B2)

The categories above will now change.
The words for sorting change as well.
The instructions are the same.

If the word belongs to a category on the left,
press the 'E' key.

If the word belongs to a category on the right,
press the 'I' key.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next word.

Instruction Slide 6 (C1B2)

Each word belongs to only one category.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Press the space bar to begin.

Instruction Slide 7 (C1B2)

Ready?

Press the space bar to start.

Practice Block 2: Autonomy vs. Heteronomy

12 words x 2 cycles

Instruction Slide 8 (C1B3)

The four categories you saw separately now appear together.
Remember, each word that you categorise belongs to only one category.

If the word belongs to EITHER, 'Me or 'Autonomy',
press the 'E' key.
If it belongs to 'Not Me' or 'Heteronomy',
press the 'I' key.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next word.

Instruction 9 (C1B3)

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Press the space bar to begin.

Instruction Slide 10 (C1B3)

Ready?

Press the space bar to start.

Experimental Block 1: Me / Autonomy vs. Not Me / Heteronomy

24 words

Instruction Slide 11 (C1B4)

Please sort words into the same categories again.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Press the space bar to begin.

Instruction Slide 12 (C1B4)

Ready?

Press the space bar to start.

Experimental Block 2: Me / Autonomy vs. Not Me / Heteronomy

24 words

Instruction Slide 13 (C1B5)

Now there will be only two categories.

You have done the categories before.
BUT they have changed position.
The category that was previously on the left is now on the right.

Practise sorting words with this new configuration.
Use the 'E' and 'I' keys to categorise the words left and right.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next word.

Instruction Slide 14 (C1B5)

Each word belongs to only one category.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.
.

Press the space bar to begin.

Instruction Slide 15 (C1B5)

Ready?

Press the space bar to start.

Practice Block 3: Not Me vs. Me

12 words x 2 cycles

Instruction Slide 16 (C1B6)

The four categories will now appear in a new configuration.

Remember, each word belongs to only one category.

If you press the wrong key, you will see 'X'.
Press the other key right away to go to the next word.

Instruction Slide 17 (C1B6)

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Press the space bar to begin.

Instruction Slide 18 (C1B6)

Ready?

Press the space bar to start.

Experimental Block 3: Me / Heteronomy vs. Not Me / Autonomy

24 words

Instruction Slide 19 (C1B7)

Please sort words into the same categories again.

GO AS FAST AS YOU CAN
while making as few mistakes as possible.

Press the space bar to begin.

Instruction Slide 20 (C1B7)

Ready?
Press the space bar to start.

Experimental Block 4: Me / Heteronomy vs. Not Me / Autonomy

24 words

Ending Slide

End of the computer task.
Thank you for taking part.

(Study 2A - Chinese)

Implicit Association Test
Experimenter's Instruction (Example)

(C: Condition; B: Block)

Starting Slide

歡迎來到這個電腦測驗。

它會需時大約十五分鐘完成。

按空白鍵繼續。

Instruction Slide 1 (C1B1)

你將會完成一個分類測驗。

請把詞彙盡可能快速地分類。

按空白鍵繼續。

Instruction Slide 2 (C1B1)

把你的中指或者食指放在你的鍵盤
「E」以及「I」鍵之上。

你將會在螢幕的上方看到兩個類別。
代表著其中一個類別的詞彙，
將會一個接一個地出現在螢幕的中間。

如果該詞彙屬於在左邊的類別，
按「E」鍵。

如果該詞彙屬於在右邊的類別，
按「I」鍵。

如果你按了錯誤的鍵，你將會看到「X」。
立刻按另一個鍵後，就會看到下一個詞彙。

Instruction Slide 3 (C1B1)

每個詞彙只屬於一個類別。
這是一個計時的分類測驗。

在盡量減少犯錯的同時，
盡你所能地快速作答 。

做得太慢或是犯下太多失誤，
會導致一個無法解釋的分數。

你將可以練習該測試。

按空白鍵開始。

Instruction Slide 4 (C1B1)

準備好？

按空白鍵開始。

Practice Block 1: Me vs. Not Me

12 words x 2 cycles

Instruction Slide 5 (C1B2)

以上的類別即將改變。
要歸類的詞彙也會改變。
這些指示是相同的。

如果該詞彙屬於在左邊的類別，
按「E」鍵。

如果該詞彙屬於在右邊的類別，
按「I」鍵。

如果你按了錯誤的鍵，你將會看到「X」。
立刻按另一個鍵後，就會看到下一個詞彙。

Instruction Slide 6 (C1B2)

每個詞彙只屬於一個類別。

在盡量減少犯錯的同時，
盡你所能地快速作答 。

按空白鍵開始。

Instruction Slide 7 (C1B2)

準備好？

按空白鍵開始。

Practice Block 2: Autonomy vs. Heteronomy

12 words x 2 cycles

Instruction Slide 8 (C1B3)

你之前分別看到的四個類別，現在會一起出現。
請記得，你分類的每個詞彙只能屬於一個類別。

如果該詞彙屬於「我」或者「自律」，
按「E」鍵。
如果它屬於「非我」或者「他律」，
按「I」鍵。

如果你按了錯誤的鍵，你將會看到「X」。
立刻按另一個鍵後，就會看到下一個詞彙。

Instruction Slide 9 (C1B3)

在盡量減少犯錯的同時，
盡你所能地快速作答 。

按空白鍵開始。

Instruction Slide 10 (C1B3)

準備好？

按空白鍵開始。

Experimental Block 1: Me / Autonomy vs. Not Me / Heteronomy

24 words

Instruction Slide 11 (C1B4)

請再次把詞彙分類到相同的類別。

在盡量減少犯錯的同時，
盡你所能地快速作答 。

按空白鍵開始。

Instruction Slide 12 (C1B4)

準備好？

按空白鍵開始。

Experimental Block 2: Me / Autonomy vs. Not Me / Heteronomy

24 words

Instruction Slide 13 (C1B5)

現在只會有兩個類別。

你之前做過這些類別。
但是它們的位置改變了。
之前在左邊的類別現在會在右邊。

以這個新的配置，練習分類詞彙。
用 「E」 和 「I」 鍵去把詞彙左右分類。

如果你按了錯誤的鍵，你將會看到「X」。
立刻按另一個鍵後，就會看到下一個詞彙。

Instruction Slide 14 (C1B5)

每個詞彙只屬於一個類別。

在盡量減少犯錯的同時，
盡你所能地快速作答 。

按空白鍵開始。

Instruction Slide 15 (C1B5)

準備好？

按空白鍵開始。

Practice Block 3: Not me vs. Me

12 words x 2 cycles

Instruction Slide 16 (C1B6)

這四個類別即將出現在一個新的配置之中。

請記得，每個詞彙只能屬於一個組別。

如果你按了錯誤的鍵，你將會看到「X」。
立刻按另一個鍵後，就會看到下一個詞彙。

Instruction Slide 17 (C1B6)

在盡量減少犯錯的同時，
盡你所能地快速作答 。

按空白鍵開始。

Instruction Slide 18 (C1B6)

準備好？

按空白鍵開始。

Experimental Block 3: Me / Heteronomy vs. Not Me / Autonomy

24 words

Instruction Slide 19 (C1B7)

請再次把詞彙分類到相同的類別。

在盡量減少犯錯的同時，
盡你所能地快速作答 。

按空白鍵開始。

Instruction Slide 20 (C1B7)

準備好？

按空白鍵開始。

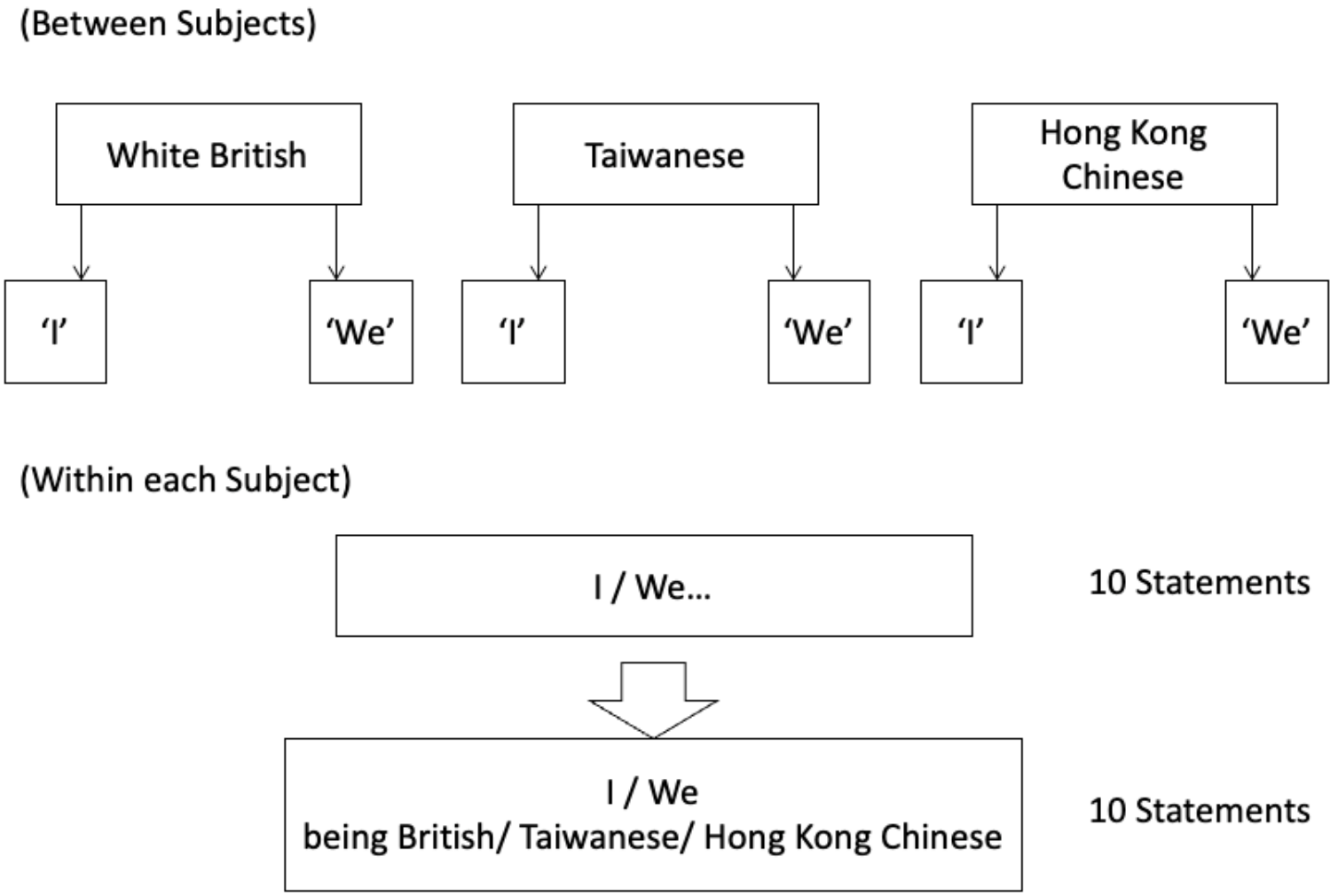
Experimental Block 4: Me / Heteronomy vs. Not Me / Autonomy

24 words

Ending Slide

本次電腦測驗結束。
謝謝你的參與。

Appendix M: Experimental structure of the Modified Twenty Statements Test



Appendix N: Zero-Order Correlations

Appendix N1 Correlations between Self-Concepts, Appraisal, and Post-Traumatic/Stress Outcomes in Study 1A ($N = 128$) – Baseline (Responses to Stressors before the Baseline) and Study 1B ($N = 120$) – Follow-up (Responses to Stressors between T1 and T2)

	(Baseline – T1)								**(Follow-up – T2)**							
Scale	Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory Short Form (PTGI-SF)		Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory Short Form (PTGI-SF)	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
(Baseline – T1)																
Demographics																
Age	-.02	.803	.01	.936	-.12	.185	.10	.244	.01	.931	.09	.349	-.03	.774	.12	.181
Gender	.17	.055	.16	.073	.15	.090	.17	.052	.04	.691	**.21***	.020	**.19***	.035	-.12	.182
Culture	**.23***	.008	**.19***	.036	.04	.624	.17	.056	**.20***	.027	**.24***	.008	.06	.510	**.43***	<.001
Stressors																
Number of traumatic events (T1)	.10	.258	.06	.522	.13	.135	.07	.431	**.20***	.030	.11	.240	.13	.149	.06	.487
Number of traumatic events (T2)	.08	.408	.09	.321	.08	.405	-.04	.680	.11	.219	.18	.053	.18	.055	.14	.134
Number of stressful events (T2)	.15	.098	.16	.080	**.19***	.042	.04	.672	**.24***	.007	**.28***	.002	**.31***	<.001	.10	.273
Stressor severity (T2)	**.24***	.009	**.32***	<.001	**.26***	.004	.08	.405	**.55***	<.001	**.52***	<.001	**.46***	<.001	**.31***	<.001
Revised Personal Style Inventory (PSI-II)																
Sociotropy	.08	.371	**.42***	<.001	**.24***	.005	.01	.918	**.28***	.002	**.31***	<.001	.10	.256	-.09	.321
Autonomy	**.24***	.007	**.34***	<.001	**.33***	<.001	-.04	.684	**.22***	.016	**.27***	.003	**.29***	.001	.06	.526
Rosenberg Self-Esteem Scale (RSES)																
Total	**-.18***	.037	**-.72***	<.001	**-.56***	<.001	**.19***	.033	**-.28***	.002	**-.55***	<.001	**-.46***	<.001	.17	.058
Analysis-Holism Scale (AHS)																
Causality	**.28***	.001	.05	.539	.07	.437	**.23***	.010	**.20***	.029	.03	.730	.06	.524	**.34***	<.001
Attitude Toward Contradictions	-.03	.743	.01	.955	-.12	.180	.11	.220	-.07	.447	-.17	.059	**-.27***	.003	.04	.645
Perception of Change	**.18***	.040	.09	.320	.17	.060	.12	.194	.01	.915	.12	.175	**.19***	.041	-.16	.086

Locus of Attention	.05	.582	-.12	.179	**-.18***	.048	.14	.105	.16	.084	-.06	.517	-.03	.777	**.38***	<.001
Public and Communal Self Appraisals Measure (PCSAM)																
Challenge to Beliefs and Belonging	**.42***	<.001	**.20***	.026	**.30***	<.001	.07	.434	**.21***	.022	.15	.092	.17	.057	.02	.871
Challenge to Communal Aspects of Self	**.34***	<.001	**.19***	.031	**.24***	.006	.14	.125	.18	.051	**.19***	.037	.11	.239	.02	.793
Challenge to Public Roles and Identity	**.34***	<.001	**.35***	<.001	**.35***	<.001	.05	.538	.13	.142	**.24***	.007	**.23***	.011	.01	.919
Revised Post-Traumatic Cognitions Inventory (PTCI2)																
Negative Thoughts about the Self	**.47***	<.001	**.53***	<.001	**.56***	<.001	.07	.418	**.36***	<.001	**.44***	<.001	**.42***	<.001	.08	.407
Self-Blame	**.25***	.005	**.44***	<.001	**.43***	<.001	-.02	.821	**.32***	<.001	**.37***	<.001	**.26***	.003	.07	.458
Overgeneralised Danger	**.41***	<.001	**.53***	<.001	**.51***	<.001	-.01	.953	**.32***	<.001	**.48***	<.001	**.37***	<.001	.04	.683
Preoccupation with Unfairness	**.39***	<.001	**.42***	<.001	**.44***	<.001	-.10	.262	**.30***	<.001	**.36***	<.001	**.34***	<.001	.11	.223
Implicit Association Test (IAT)																
D Score (Heteronomy-Autonomy)	.03	.718	.03	.765	.10	.264	.10	.247	.14	.128	.12	.202	.16	.088	.05	.610
D Score (Relatedness-Separateness)	.03	.712	.15	.092	.16	.064	.03	.742	.01	.878	**.22***	.017	.08	.386	.05	.615
Modified Twenty Statement Test (MTST)																
Duties (Baseline)	.16	.071	.09	.333	.10	.252	.14	.105	.03	.728	-.02	.811	.07	.450	-.07	.457
Duties (Cultural Identity Activation)	.05	.545	.04	.621	.03	.734	.05	.597	-.02	.824	.02	.793	-.11	.253	-.09	.313
Rights (Baseline)	-.06	.474	.04	.679	.01	.886	-.05	.585	.12	.203	.04	.674	.06	.498	-.04	.693
Rights (Cultural Identity Activation)	-.08	.377	.02	.788	-.01	.920	-.06	.516	.07	.475	.07	.421	.18	.055	-.12	.211

Note: Statistics for the above variables derive from a zero-order correlation. * $p < .05$. Gender: 0 = male, 1 = female. Culture: 1 = British, 2 = Hongkongese, 3 = Taiwanese. Stressor severity = Perceived severity of the most distressing event

Appendix N2 Correlations between Self-Concepts, Appraisal, and Post-Traumatic/Stress Outcomes in Study 2A (N = 420) – Baseline (Responses to Stressors before the Baseline) and Study 2B (N = 385) – Follow-up (Responses to Stressors between T1 and T2)

Scale	**(Baseline – T1)**								**(Follow-up – T2)**							
	Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory – Extended (PTGI-X)		Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory – Extended (PTGI-X)	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
(Baseline)																
Demographics																
Age	.05	.301	.07	.138	.04	.433	**.18***	<.001	.10	.056	**.12***	.018	.08	.118	.07	.152
Gender	.01	.807	**-.17***	<.001	-.04	.421	0	.984	.05	.328	**-.13***	.009	-.04	.435	.06	.260
Culture	**.13***	.009	**.28***	<.001	**.21***	<.001	**.15***	.002	**.14***	.008	**.32***	<.001	**.19***	<.001	**.19***	<.001
Stressors																
Number of traumatic events (T1)	**.17***	<.001	.03	.553	**.10***	.032	**.15***	.002	**.20***	<.001	.06	0.267	.08	.141	**.17***	<.001
Number of stressful events (T1)	**.26***	<.001	**.17***	<.001	**.19***	<.001	**.18***	<.001	**.25***	<.001	**.22***	<.001	**.23***	<.001	**.19***	<.001
Stressor severity (T1)	**.24***	<.001	**.16***	<.001	**.17***	<.001	**.19***	<.001	**.21***	<.001	**.18***	<.001	**.20***	<.001	**.12***	.016
Number of traumatic events (T2)	**.27***	<.001	.10	.056	.10	.052	**.18***	<.001	**.34***	<.001	**.17***	<.001	**.18***	<.001	**.28***	<.001
Number of stressful events (T2)	**.32***	<.001	**.22***	<.001	**.23***	<.001	**.19***	<.001	**.37***	<.001	**.30***	<.001	**.29***	<.001	**.33***	<.001
Stressor severity (T2)	**.31***	<.001	**.37***	<.001	**.28***	<.001	**.20***	<.001	**.48***	<.001	**.44***	<.001	**.38***	<.001	**.32***	<.001
Revised Personal Style Inventory (PSI-II)																
Sociotropy	**.23***	<.001	**.42***	<.001	**.33***	<.001	.09	.065	**.22***	<.001	**.30***	<.001	**.27***	<.001	.09	.087
Autonomy	**.36***	<.001	**.45***	<.001	**.43***	<.001	**.12***	.018	**.29***	<.001	**.36***	<.001	**.28***	<.001	**.19***	<.001
Rosenberg Self-Esteem Scale (RSES)																
Total	**-.30***	<.001	**-.73***	<.001	**-.62***	<.001	.08	.082	**-.25***	<.001	**-.58***	<.001	**-.48***	<.001	.01	.833
Analysis-Holism Scale (AHS)																
Causality	.07	.181	**.18***	<.001	**.10***	.044	**.13***	.006	.09	.080	**.20***	<.001	**.13***	.008	**.14***	.007
Attitude Toward Contradictions	**-.12***	.017	.05	.312	-.06	.207	.05	.274	-.03	.497	-.01	.831	.01	.844	-.04	.493
Perception of Change	-.08	.123	.01	.825	-.01	.818	-.08	.104	-.07	.189	.02	.716	0	.957	**-.14***	.005
Locus of Attention	.07	.162	-.01	.866	-.02	.636	**.17***	<.001	.05	.320	-.04	.426	.05	.347	.06	.241

Public and Communal Self Appraisals Measure (PCSAM)																
Challenge to Beliefs and Belonging	**.52***	<.001	**.38***	<.001	**.45***	<.001	**.21***	<.001	**.39***	<.001	**.38***	<.001	**.37***	<.001	**.22***	<.001
Challenge to Communal Aspects of Self	**.41***	<.001	**.19***	<.001	**.23***	<.001	**.27***	<.001	**.30***	<.001	**.16***	.001	**.23***	<.001	**.20***	<.001
Challenge to Public Roles and Identity	**.55***	<.001	**.34***	<.001	**.45***	<.001	**.27***	<.001	**.43***	<.001	**.39***	<.001	**.38***	<.001	**.27***	<.001
Revised Post-Traumatic Cognitions Inventory (PTCI2)																
Negative Thoughts about the Self	**.67***	<.001	**.54***	<.001	**.59***	<.001	**.20***	<.001	**.48***	<.001	**.48***	<.001	**.47***	<.001	**.23***	<.001
Self-Blame	**.53***	<.001	**.40***	<.001	**.40***	<.001	**.20***	<.001	**.35***	<.001	**.40***	<.001	**.37***	<.001	**.21***	<.001
Overgeneralised Danger	**.50***	<.001	**.41***	<.001	**.46***	<.001	**.18***	<.001	**.32***	<.001	**.34***	<.001	**.35***	<.001	**.13***	.009
Preoccupation with Unfairness	**.51***	<.001	**.30***	<.001	**.33***	<.001	**.14***	0.005	**.39***	<.001	**.32***	<.001	**.32***	<.001	**.21***	<.001
Perceptual Matching Task (PMT)																
d' difference (Self vs. Close Other)	0	.974	-.01	.786	-.07	.144	.01	.868	-.01	.919	-.08	.124	-.04	.380	0	.991
Mean Response Time difference (Self vs. Close Other)	-.02	.613	.06	.228	-.01	.874	.01	.781	.01	.844	.01	.839	.05	.301	.01	.803
Implicit Association Test (IAT)																
D Score (Heteronomy – Autonomy)	-.02	.691	-.06	.210	**-.11***	.027	-.02	.619	.01	.871	-0.02	.633	-.03	.520	-.04	.413
Modified Twenty Statement Test (MTST)																
Duties (Baseline)	-.01	.873	-.09	.058	**-.10***	.032	.04	.381	-.09	.063	-.06	.250	-.02	.687	.01	.909
Duties (Cultural Identity Activation)	.03	.475	.02	.710	-.02	.643	.03	.528	.06	.279	.05	.362	.03	.512	**.10***	.045
Rights (Baseline)	.03	.534	0	.931	-.02	.616	.02	.688	.04	.445	.04	.401	.08	.106	-.01	.790
Rights (Cultural Identity Activation)	0	.984	-.02	.650	-.03	.497	**.10***	.049	0	.933	-.01	.913	-.02	.728	-.04	.400

Note: Statistics for the above variables derive from a zero-order correlation. * $p < .05$. Gender: 0 = male, 1 = female. Culture: 1 = British, 2 = Hongkongese, 3 = Taiwanese. Stressor severity = Perceived severity of the most distressing event

Appendix N3 Zero-Order Correlations between Cognitive Processing Styles, Autobiographical Memory, and Post-Traumatic/Stress Outcomes in Study 1A ($N = 128$) – Baseline (Responses to Stressors before the Baseline) and Study 1B ($N = 120$) – Follow-up (Responses to Stressors between T1 and T2)

	(Baseline – T1)								**(Follow-up – T2)**							
Scale	Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory Short Form (PTGI-SF)		Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory Short Form (PTGI-SF)	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
(Baseline – T1)																
Demographics																
Age	-.02	.803	.01	.936	-.12	.185	.10	.244	.01	.931	.09	.349	-.03	.774	.12	.181
Gender	.17	.055	.16	.073	.15	.090	.17	.052	.04	.691	**.21***	.020	**.19***	.035	-.12	.182
Culture	**.23***	.008	**.19***	.036	.04	.624	.17	.056	**.20***	.027	**.24***	.008	.06	.510	**.43***	<.001
Stressors																
Trauma Exposure (T1)	.10	.258	.06	.522	.13	.135	.07	.431	**.20***	.030	.11	.240	.13	.149	.06	.487
Trauma Exposure (T2)	.08	.408	.09	.321	.08	.405	-.04	.680	.11	.219	.18	.053	.18	.055	.14	.134
Stress Exposure (T2)	.15	.098	.16	.080	**.19***	.042	.04	.672	**.24***	.007	**.28***	.002	**.31***	<.001	.10	.273
Stressor severity (T2)	**.24***	.009	**.32***	<.001	**.26***	.004	.08	.405	**.55***	<.001	**.52***	<.001	**.46***	<.001	**.31***	<.001
State Dissociation Questionnaire (SDQ)																
Total	**.24***	.006	.02	.856	.11	.224	**.21***	.015	.13	.142	.05	.581	.14	.131	.01	.929
Data-Driven Processing Scale (DDPS)																
Total	**.25***	.005	.01	.954	.10	.280	**.18***	.046	**.24***	.008	.03	.710	.10	.293	-.07	.444
Lack of Self-Referent Processing Scale (LSRPS)																
Total	**.38***	<.001	.05	.557	.08	.381	**.35***	<.001	**.20***	.033	.05	.608	.12	.188	.07	.469
Centrality of Event Scale (CES-SF)																
Total (Positive)	.09	.332	-.03	.734	-.04	.630	**.22***	.013	.11	.227	.06	.528	-.04	.689	.17	.070
Total (Distressing)	**.41***	<.001	**.32***	<.001	**.20***	.026	**.34***	<.001	.16	.084	**.22***	.018	.14	.118	.09	.325

Memory Questionnaire																
Disorganisation (Positive)	.11	.232	-.01	.936	.03	.700	0	.980	-.05	.588	-.02	.799	.10	.277	-.13	.156
Disorganisation (Distressing)	-.12	.172	-.03	.699	-.02	.862	-.10	.247	.06	.509	-.04	.684	-.08	.371	.09	.323
Disjointedness (Positive)	**.18***	.046	.08	.355	.06	.495	.11	.218	**.19***	.042	-.03	.763	.09	.323	-.05	.552
Disjointedness (Distressing)	**.35***	<.001	.14	.116	.12	.173	0	.964	.11	.248	.09	.344	.11	.234	-.09	.314
Flashback Quality (Positive)	**.25***	.004	-.11	.211	-.05	.569	**.24***	.007	.10	.288	-.15	.092	-.12	.201	**.25***	.006
Flashback Quality (Distressing)	**.58***	<.001	**.29***	<.001	**.34***	<.001	.15	.094	.26*	.005	**.23***	.011	**.26***	.004	.16	.090
Thinking About Life Experiences (TALE) Scale																
Self-Continuity (Positive)	**.21***	.020	.15	.089	.08	.364	**.21***	.016	.26*	.004	**.27***	.003	.17	.059	.10	.282
Self-Continuity (Stressful)	**.28***	.001	.15	.089	.10	.257	**.24***	.006	.17	.061	.16	.075	.10	.271	**.19***	.037
Social Bonding (Positive)	-.02	.857	-.16	.078	-.10	.240	**.22***	.012	.17	.063	-.11	.232	-.05	.615	.01	.946
Social Bonding (Stressful)	.17	.053	.05	.547	0	.999	**.26***	.003	.15	.098	.12	.193	.11	.235	.15	.097
Directing Behaviour (Positive)	.12	.177	-.01	.924	-.10	.282	**.25***	.005	.12	.197	.07	.440	-.03	.740	.10	.262
Directing Behaviour (Stressful)	**.25***	.005	.16	.077	.08	.384	**.22***	.014	.09	.352	.15	.111	.04	.659	.17	.057
Self-Defining Memory Task (SDMT)																
Specific	.05	.589	-.09	.325	0	1.00	**-.21***	.017	-.12	.182	**-.25***	.007	-.07	.458	-.12	.210
Integrative	-.02	.847	0	.987	.01	.916	.10	.256	.09	.330	-.04	.674	-.14	.137	.05	.595
Achievement-related	.10	.245	**.19***	.035	.11	.237	.02	.838	.13	.147	.15	.093	.10	.292	-.03	.760
Relationship-related	**-.18***	.044	-.10	.247	-.15	.096	.09	.313	-.14	.132	-.04	.660	-.06	.512	-.02	.820
Positive	-.12	.184	**-.36***	<.001	**-.34***	<.001	.16	.072	-.06	.529	-.16	.087	-.16	.077	.05	.604
Negative	**.27***	.002	**.43***	<.001	**.42***	<.001	-.08	.364	.14	.120	**.31***	<.001	**.26***	.004	-.02	.804

Note: Statistics for the above variables derive from a zero-order correlation. * $p < .05$. Gender: 0 = male, 1 = female. Culture: 1 = British, 2 = Hongkongese, 3 = Taiwanese. Trauma Exposure = the number of traumatic events. Stress Exposure = the number of stressful events. Stressor Severity = the perceived severity of the most distressing event.

Appendix N4 Zero-Order Correlations between Cognitive Processing Styles, Autobiographical Memory, and Post-Traumatic/Stress Outcomes in Study 2A ($N = 420$) – Baseline (Responses to Stressors before the Baseline) and Study 2B ($N = 385$) – Follow-up (Responses to Stressors between T1 and T2)

	(Baseline – T1)								**(Follow-up – T2)**							
Scale	Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory Short Form (PTGI-SF)		Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory Short Form (PTGI-SF)	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
(Baseline – T1)																
Demographics																
Age	.05	.301	.07	.138	.04	.433	**.18***	<.001	.10	.056	**.12***	.018	.08	.118	.07	.152
Gender	.01	.807	**-.17***	<.001	-.04	.421	0	.984	.05	.328	**-.13***	.009	-.04	.435	.06	.260
Culture	**.13***	.009	**.28***	<.001	**.21***	<.001	**.15***	.002	**.14***	.008	**.32***	<.001	**.19***	<.001	**.19***	<.001
Stressors																
Trauma Exposure (T1)	**.17***	<.001	.03	.553	**.10***	.032	**.15***	0.002	**.20***	<.001	.06	.267	.08	.141	**.17***	<.001
Stress Exposure (T1)	**.26***	<.001	**.17***	<.001	**.19***	<.001	**.18***	<.001	**.25***	<.001	**.22***	<.001	**.23***	<.001	**.19***	<.001
Stressor severity (T1)	**.24***	<.001	**.16***	<.001	**.17***	<.001	**.19***	<.001	**.21***	<.001	**.18***	<.001	**.20***	<.001	**.12***	.016
Trauma Exposure (T2)	**.27***	<.001	.10	.056	.10	.052	**.18***	<.001	**.34***	<.001	**.17***	<.001	**.18***	<.001	**.28***	<.001
Stress Exposure (T2)	**.32***	<.001	**.22***	<.001	**.23***	<.001	**.19***	<.001	**.37***	<.001	**.30***	<.001	**.29***	<.001	**.33***	<.001
Stressor severity (T2)	**.31***	<.001	**.37***	<.001	**.28***	<.001	**.20***	<.001	**.48***	<.001	**.44***	<.001	**.38***	<.001	**.32***	<.001
State Dissociation Questionnaire (SDQ)																
Total	**.46***	<.001	**.20***	<.001	**.28***	<.001	**.31***	<.001	**.36***	<.001	**.20***	<.001	**.25***	<.001	**.26***	<.001
Data-Driven Processing Scale (DDPS)																
Total	**.41***	<.001	**.17***	<.001	**.21***	<.001	**.26***	<.001	**.31***	<.001	**.19***	<.001	**.25***	<.001	**.22***	<.001
Lack of Self-Referent Processing Scale (LSRPS)																
Total	**.53***	<.001	**.21***	<.001	**.29***	<.001	**.35***	<.001	**.37***	<.001	**.19***	<.001	**.24***	<.001	**.24***	<.001
Centrality of Event Scale (CES-SF)																
Total (Positive)	**.19***	<.001	.05	.265	.09	.056	**.25***	<.001	**.21***	<.001	**.11***	.035	.10	.053	**.20***	<.001

Total (Distressing)	**.39***	<.001	**.19***	<.001	**.25***	<.001	**.44***	<.001	**.28***	<.001	**.20***	<.001	**.20***	<.001	**.24***	<.001
Memory Questionnaire																
Disorganisation (Positive)	**.10***	.034	.06	.251	.09	.053	-.09	.082	.04	.388	0	.952	.03	.588	.02	.643
Disorganisation (Distressing)	**.11***	.023	**.14***	.003	**.10***	.044	.05	.274	.06	.240	.09	.077	.07	.187	.09	.089
Disjointedness (Positive)	**.22***	<.001	.09	.059	**.14***	.005	.09	.073	**.19***	<.001	**.11***	.028	**.14***	.007	**.15***	.004
Disjointedness (Distressing)	**.42***	<.001	**.18***	<.001	**.22***	<.001	**.21***	<.001	**.31***	<.001	**.14***	.005	**.21***	<.001	**.23***	<.001
Flashback Quality (Positive)	**.28***	<.001	.03	.563	.08	.088	**.30***	<.001	**.30***	<.001	**.11***	.034	**.18***	<.001	**.29***	<.001
Flashback Quality (Distressing)	**.68***	<.001	**.33***	<.001	**.40***	<.001	**.24***	<.001	**.47***	<.001	**.28***	<.001	**.28***	<.001	**.28***	<.001
Thinking About Life Experiences (TALE) Scale																
Self-Continuity (Positive)	**.15***	.002	**.22***	<.001	**.13***	.008	**.34***	<.001	**.17***	<.001	**.24***	<.001	**.17***	0.001	**.30***	<.001
Self-Continuity (Stressful)	**.30***	<.001	**.31***	<.001	**.24***	<.001	**.41***	<.001	**.29***	<.001	**.33***	<.001	**.25***	<.001	**.38***	<.001
Social Bonding (Positive)	**.12***	.011	.07	.172	.05	.271	**.29***	<.001	**.13***	.010	.07	.148	.04	.404	**.20***	<.001
Social Bonding (Stressful)	**.26***	<.001	**.28***	<.001	**.24***	<.001	**.35***	<.001	**.23***	<.001	**.30***	<.001	**.22***	<.001	**.32***	<.001
Directing Behaviour (Positive)	**.19***	<.001	**.13***	.009	.07	.162	**.38***	<.001	**.20***	<.001	**.17***	<.001	**.13***	.010	**.30***	<.001
Directing Behaviour (Stressful)	**.23***	<.001	**.13***	.009	**.12***	.015	**.43***	<.001	**.24***	<.001	**.14***	.004	**.14***	.006	**.33***	<.001
Autobiographical Memory Test (AMT)																
Specific (Positive)	-.06	.257	**-.10***	.042	**-.14***	.005	.03	.607	-.03	.614	**-.12***	.023	-.06	.224	-.07	.165
Specific (Negative)	-.10	.051	-.09	.062	**-.15***	.002	-.02	.742	-.01	.791	-.08	.099	-.05	.285	-.05	.288
Specific (Neutral)	-.08	.113	**-.15***	.001	**-.18***	<.001	-.05	.262	-.07	.158	**-.19***	<.001	**-.16***	.002	-.08	.097
Self-Defining Memory Task (SDMT)																
Specific (Positive)	-.06	.199	**-.13***	.007	-.09	.069	**-.13***	.008	-.09	.082	**-.13***	.011	-.08	.122	**-.14***	.008
Specific (Negative)	**-.13***	.006	-.05	.292	-.08	.113	-.07	.136	-.09	.072	-.06	.251	-.05	.346	**-.17***	<.001
Integrative (Positive)	-.02	.702	-.01	.860	-.03	.522	.05	.269	.07	.162	.09	.068	.07	.162	-.05	.364
Integrative (Negative)	0	.995	.02	.638	.02	.643	.07	.154	.06	.231	.06	.229	.05	.331	.01	.903
Achievement-related (Positive)	**.14***	.006	.01	.834	.06	.247	**.11***	.025	**.15***	.004	.05	.301	.09	.067	**.12***	.020
Achievement-related (Negative)	.03	.492	.09	.080	.08	.125	-.01	.787	.07	.148	.05	.373	-.01	.817	.02	.672
Relationship-related (Positive)	-.03	.488	-.04	.433	-.04	.390	.04	.437	-.07	.191	-.01	.865	-.04	.380	-.05	.363
Relationship-related (Negative)	.05	.340	.05	.339	.04	.422	-.01	.821	.05	.330	.05	.314	.05	.297	0	.996
Internal Details (Positive)	.03	.483	.04	.427	.04	.438	-.01	.820	.05	.329	.07	.196	.06	.267	-.05	.313
Internal Details (Negative)	.02	.639	**.11***	.030	.06	.202	-.05	.337	.01	.825	**.12***	.019	.09	.069	-.07	.182
External Details (Positive)	.06	.246	0	.998	-.03	.485	**.12***	.015	.06	.253	.06	.252	.04	.397	.06	.274

External Details (Negative)	.02	.658	-.02	.710	-.01	.805	.06	.205	.05	.369	.04	.423	.02	.653	.01	.910

Note: Statistics for the above variables derive from a zero-order correlation. * $p < .05$. Gender: 0 = male, 1 = female. Culture: 1 = British, 2 = Hongkongese, 3 = Taiwanese. Trauma Exposure = the number of traumatic events. Stress Exposure = the number of stressful events. Stressor Severity = the perceived severity of the most distressing event.

Appendix N5 Zero-Order Correlations between Coping Strategies and Post-Traumatic/Stress Outcomes in Study 1A (N = 128) – Baseline (Responses to Stressors before the Baseline) and Study 1B (N = 120) – Follow-up (Responses to Stressors between T1 and T2)

	(Baseline – T1)								**(Follow-up – T2)**							
Scale	Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory Short Form (PTGI-SF)		Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory Short Form (PTGI-SF)	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
(Baseline – T1)																
Demographics																
Age	-.02	.803	.01	.936	-.12	.185	.10	.244	.01	.931	.09	.349	-.03	.774	.12	.181
Gender	.17	.055	.16	.073	.15	.090	.17	.052	.04	.691	**.21***	.020	**.19***	.035	-.12	.182
Culture	**.23***	.008	**.19***	.036	.04	.624	.17	.056	**.20***	.027	**.24***	.008	.06	.510	**.43***	<.001
Stressors																
Number of traumatic events (T1)	.10	.258	.06	.522	.13	.135	.07	.431	**.20***	.030	.11	.240	.13	.149	.06	.487
Self-Concealment Scale (SCS)																
Total	**.20***	.022	**.36***	<.001	**.26***	.003	.06	.489	**.18***	.048	.17	.056	.16	.076	-.13	.155
Responses to Intrusions Questionnaire (RIQ)																
Thought suppression	**.54***	<.001	0.15	.098	**.28***	.002	**.23***	.008	.15	.099	.02	.848	.15	.105	**.21***	.021
Rumination	**.68***	<.001	.29*	<.001	**.34***	<.001	**.32***	<.001	**.19***	.041	**.21***	.025	**.24***	.009	**.19***	.038
Numbing	**.50***	<.001	.18*	.045	**.33***	<.001	**.26***	.003	**.28***	.002	**.22***	.015	**.28***	.002	.05	.562
Brief COPE																
Active coping	**.20***	.025	.08	.350	-.01	.871	**.28***	.001	.04	.695	-.01	.898	-.09	.321	**.23***	.010
Planning	.16	.072	.12	.171	0	.980	**.30***	<.001	.07	.453	.04	.682	-.06	.528	**.28***	.002
Positive reframing	.17	.060	-.15	.083	**-.18***	.039	**.50***	<.001	-.05	.560	-.12	.196	**-.23***	.013	**.31***	<.001
Acceptance	**.34***	<.001	.09	.308	.04	.647	**.41***	<.001	.10	.257	.02	.849	.05	.588	**.25***	.006
Humor	**.26***	.003	.02	.835	.06	.483	**.18***	.046	**.27***	.003	.07	.477	.13	.145	.14	.128
Religion	.05	.603	.09	.334	.02	.797	**.21***	.016	.04	.685	.11	.240	-.05	.567	.14	.138
Using emotional support	**.25***	.004	**.29***	<.001	**.24***	.006	**.18***	.037	**.21***	.023	**.23***	.011	.13	.159	.14	.129
Using instrumental support	**.20***	.025	**.26***	.003	.11	.204	**.26***	.003	**.29***	.001	**.22***	.016	.07	.434	**.26***	.005
Self-distraction	**.36***	<.001	**.24***	.006	**.19***	.034	**.23***	.009	.17	.064	.15	.091	**.20***	.025	.13	.148

Denial	**.32***	<.001	.16	.078	**.23***	.009	.16	.076	**.23***	.012	.17	.072	.15	.098	**.22***	.015
Venting	**.28***	.001	**.32***	<.001	**.20***	.021	**.38***	<.001	**.34***	<.001	**.36***	<.001	.17	.064	**.42***	<.001
Substance use	**.25***	.005	**.38***	<.001	**.36***	<.001	.03	.746	**.28***	.002	**.23***	.011	**.28***	.002	-.01	.955
Behavioural disengagement	**.19***	.030	**.48***	<.001	**.46***	<.001	0	.977	**.21***	.019	**.43***	<.001	**.26***	.005	.03	.743
Self-blame	.13	.152	**.55***	<.001	**.38***	<.001	.02	.834	**.29***	.001	**.38***	<.001	**.29***	.001	.07	.435
Trait Dissociation Questionnaire (TDQ)																
Total	**.47***	<.001	**.34***	<.001	**.48***	<.001	0.16	.068	**.31***	<.001	**.33***	<.001	**.39***	<.001	.17	.068
(Follow-up – T2)																
Stressors																
Number of traumatic events (T2)	.08	.408	.09	.321	.08	.405	-.04	.680	.11	.219	.18	.053	.18	.055	.14	.134
Number of stressful events (T2)	.15	.098	.16	.080	**.19***	.042	.04	.672	**.24***	.007	**.28***	.002	**.31***	<.001	.10	.273
Stressor severity (T2)	**.24***	.009	**.32***	<.001	**.26***	.004	.08	.405	**.55***	<.001	**.52***	<.001	**.46***	<.001	**.31***	<.001
Responses to Intrusions Questionnaire (RIQ)																
Thought suppression	.09	.342	.11	.215	.04	.651	.09	.304	**.48***	<.001	**.20***	.030	**.23***	.011	**.24***	.008
Rumination	**.29***	.001	**.26***	.004	**.23***	.013	.18	.051	**.72***	<.001	**.50***	<.001	**.57***	<.001	**.27***	.003
Numbing	.17	.062	.13	.156	0.18	.055	-.02	.862	**.48***	<.001	**.21***	.020	**.34***	<.001	.13	.168
Brief COPE																
Active coping	-.10	.276	.09	.354	.04	.648	-.13	.147	**.18***	.046	.07	.437	.08	.389	.18	.053
Planning	-.11	.231	.09	.312	.03	.776	0	.973	**.20***	.029	.15	.101	.13	.157	.07	.422
Positive reframing	-.03	.709	-.01	.882	-.03	.727	.05	.596	**.21***	.023	-.03	.721	-.06	.494	**.27***	.003
Acceptance	-.02	.815	.10	.298	.01	.892	.06	.509	**.20***	.026	.13	.159	.13	.163	.05	.618
Humor	-.01	.945	.01	.915	.10	.255	.07	.446	0.14	.121	.12	.177	**.21***	.025	.05	.613
Religion	.02	.793	.02	.869	-.02	.795	.12	.201	0.17	.060	.06	.504	.07	.436	.08	.392
Using emotional support	-.05	.555	.10	.267	.03	.737	.01	.873	**.24***	.007	**.28***	.002	**.19***	.035	.05	.585
Using instrumental support	-.07	.455	.10	.288	.02	.826	0	.976	**.25***	.006	**.22***	.018	**.19***	.035	.09	.347
Self-distraction	-.03	.775	**.28***	.002	**.24***	.009	-.01	.949	**.27***	.003	**.26***	.003	**.24***	.010	-.04	.671
Denial	.14	.120	.04	.684	.11	.218	.07	.425	**.28***	.002	.03	.765	.12	.191	**.27***	.003
Venting	-.07	.455	**.29***	.002	.08	.367	-.03	.721	**.30***	<.001	**.32***	<.001	**.21***	.024	.05	.613
Substance use	.03	.739	**.28***	.002	**.23***	.012	-.04	.678	0.17	.058	**.19***	.042	**.23***	.012	-.05	.601
Behavioural disengagement	-.04	.673	**.22***	.018	.18	.054	-.02	.797	**.29***	.001	**.34***	<.001	**.33***	<.001	.05	.559
Self-blame	-.07	.456	**.24***	.010	**.21***	.021	-.09	.347	**.32***	<.001	**.30***	<.001	**.31***	<.001	-.03	.762
Trait Dissociation Questionnaire (TDQ)	**.33***	<.001	**.35***	<.001	**.32***	<.001	.05	.594	**.57***	<.001	**.53***	<.001	**.55***	<.001	**.30***	.001

| | | |

Appendix N6 Zero-Order Correlations between Coping Strategies and Post-Traumatic/Stress Outcomes in Study 2A (N = 420) – Baseline (Responses to Stressors before the Baseline) and Study 2B (N = 385) – Follow-up (Responses to Stressors between T1 and T2)

Scale	**(Baseline – T1)**								**(Follow-up – T2)**							
	Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory – Extended (PTGI-X)		Impact of Events Scale-Revised (IES-R)		State-Trait Anxiety Inventory – Trait version (STAI-T)		Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF)		Post-Traumatic Growth Inventory – Extended (PTGI-X)	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
(Baseline)																
Demographics																
Age	.05	.301	.07	.138	.04	.433	**.18***	<.001	.10	.056	**.12***	.018	.08	.118	.07	.152
Gender	.01	.807	**-.17***	<.001	-.04	.421	0	.984	.05	.328	**-.13***	.009	-.04	.435	.06	.260
Culture	**.13***	0.009	**.28***	<.001	**.21***	<.001	**.15***	0.002	**.14***	0.008	**.32***	<.001	**.19***	<.001	**.19***	<.001
Stressors																
Number of traumatic events (T1)	**.17***	<.001	.03	.553	**.10***	.032	**.15***	.002	**.20***	<.001	.06	.267	.08	.141	**.17***	<.001
Number of stressful events (T1)	**.26***	<.001	**.17***	<.001	**.19***	<.001	**.18***	<.001	**.25***	<.001	**.22***	<.001	**.23***	<.001	**.19***	<.001
Stressor severity (T1)	**.24***	<.001	**.16***	<.001	**.17***	<.001	**.19***	<.001	**.21***	<.001	**.18***	<.001	**.20***	<.001	**.12***	.016
Self-Concealment Scale (SCS)																
Total	**.27***	<.001	**.38***	<.001	**.35***	<.001	.01	.824	**.27***	<.001	**.32***	<.001	**.25***	<.001	**.14***	.006
Responses to Intrusions Questionnaire (RIQ)																
Thought suppression	**.58***	<.001	**.16***	.001	**.24***	<.001	**.17***	<.001	**.31***	<.001	**.16***	.002	**.22***	<.001	.09	.078
Rumination	**.64***	<.001	**.33***	<.001	**.39***	<.001	**.29***	<.001	**.39***	<.001	**.28***	<.001	**.27***	<.001	**.25***	<.001
Numbing	**.59***	<.001	**.19***	<.001	**.30***	<.001	**.28***	<.001	**.39***	<.001	**.19***	<.001	**.27***	<.001	**.21***	<.001
COPE Inventory																
Active coping	.08	.120	-.06	.213	.02	.695	**.45***	<.001	.10	.057	-.04	.383	0	.986	**.24***	<.001
Planning	.07	.129	-.07	.157	.01	.883	**.41***	<.001	.07	.161	-.08	.133	-.05	.359	**.17***	<.001
Positive reinterpretation & growth	.08	.091	-.07	.150	-.01	.808	**.51***	<.001	.05	.376	-.04	.404	-.04	.451	**.27***	<.001
Acceptance	**.11***	.024	-.03	.537	.03	.575	**.31***	<.001	.07	.160	0	.998	.01	.859	**.17***	.001
Humour	.01	.855	**-.10***	.041	-.05	.335	**.19***	<.001	.05	.327	**-.15***	.003	-.06	.215	.09	.078
Religious coping	.04	.435	.07	.183	.04	.384	**.26***	<.001	**.15***	.003	.06	.279	.10	.059	**.24***	<.001
Use of emotional social support	.08	.094	0	.976	.01	.780	**.35***	<.001	.10	.057	-.06	.213	0	.943	**.16***	.001

Use of instrumental social support	**.10***	.036	.02	.632	.07	.144	**.40***	<.001	**.12***	.021	.01	.824	.04	.415	**.23***	<.001
Mental disengagement	**.33***	<.001	**.25***	<.001	**.26***	<.001	**.29***	<.001	**.25***	<.001	**.15***	.004	**.13***	.009	**.18***	<.001
Denial	**.36***	<.001	**.19***	<.001	**.26***	<.001	**.24***	<.001	**.29***	<.001	**.14***	.005	**.14***	.006	**.28***	<.001
Focus on and venting of emotions	**.29***	<.001	**.30***	<.001	**.26***	<.001	**.38***	<.001	**.26***	<.001	**.24***	<.001	**.23***	<.001	**.26***	<.001
Substance use	**.29***	<.001	**.11***	.026	**.18***	<.001	**.19***	<.001	**.29***	<.001	.10	.055	**.14***	.005	**.17***	<.001
Behavioural disengagement	**.39***	<.001	**.38***	<.001	**.42***	<.001	**.27***	<.001	**.34***	<.001	**.28***	<.001	**.27***	<.001	**.19***	<.001
Restraint	**.28***	<.001	**.13***	0.009	**.18***	<.001	**.40***	<.001	**.22***	<.001	.09	.077	**.16***	.002	**.29***	<.001
Suppression of competing activities	**.27***	<.001	**.13***	0.009	**.19***	<.001	**.39***	<.001	**.22***	<.001	.08	.116	**.10***	.042	**.27***	<.001
Trait Dissociation Questionnaire (TDQ)																
Total	**.54***	<.001	**.44***	<.001	**.57***	<.001	**.23***	<.001	**.42***	<.001	**.33***	<.001	**.38***	<.001	**.28***	<.001
(Follow-up)																
Stressors																
Number of traumatic events (T2)	**.27***	<.001	.10	.056	.10	.052	**.18***	<.001	**.34***	<.001	**.17***	<.001	**.18***	<.001	**.28***	<.001
Number of stressful events (T2)	**.32***	<.001	**.22***	<.001	**.23***	<.001	**.19***	<.001	**.37***	<.001	**.30***	<.001	**.29***	<.001	**.33***	<.001
Stressor severity (T2)	**.31***	<.001	**.37***	<.001	**.28***	<.001	**.20***	<.001	**.48***	<.001	**.44***	<.001	**.38***	<.001	**.32***	<.001
Responses to Intrusions Questionnaire (RIQ)																
Thought suppression	**.34***	<.001	**.22***	<.001	**.25***	<.001	**.22***	<.001	**.57***	<.001	**.29***	<.001	**.36***	<.001	**.29***	<.001
Rumination	**.45***	<.001	**.30***	<.001	**.31***	<.001	**.24***	<.001	**.69***	<.001	**.42***	<.001	**.49***	<.001	**.41***	<.001
Numbing	**.52***	<.001	**.24***	<.001	**.30***	<.001	**.25***	<.001	**.64***	<.001	**.33***	<.001	**.44***	<.001	**.39***	<.001
COPE Inventory																
Active coping	**.18***	<.001	**.16***	.001	**.14***	.006	**.38***	<.001	**.26***	<.001	**.13***	.008	**.13***	.011	**.55***	<.001
Planning	**.18***	<.001	**.15***	.004	**.13***	.013	**.33***	<.001	**.31***	<.001	**.15***	.004	**.17***	.001	**.49***	<.001
Positive reinterpretation & growth	**.16***	.002	**.15***	.003	**.13***	.013	**.35***	<.001	**.30***	<.001	**.11***	.028	**.15***	.003	**.68***	<.001
Acceptance	**.13***	.011	**.16***	.001	**.18***	<.001	**.15***	.002	**.28***	<.001	**.11***	.025	**.14***	.005	**.46***	<.001
Humour	**.12***	.015	.01	.898	.02	0.765	.03	.522	**.20***	<.001	-.05	.352	.05	.301	**.22***	<.001
Religious coping	**.13***	.010	**.11***	.026	.08	0.127	**.27***	<.001	**.27***	<.001	**.11***	.039	**.15***	.003	**.34***	<.001
Use of emotional social support	**.21***	<.001	**.24***	<.001	**.16***	0.002	**.30***	<.001	**.43***	<.001	**.25***	<.001	**.31***	<.001	**.54***	<.001
Use of instrumental social support	**.24***	<.001	**.24***	<.001	**.19***	<.001	**.30***	<.001	**.45***	<.001	**.28***	<.001	**.34***	<.001	**.56***	<.001
Mental disengagement	**.30***	<.001	**.27***	<.001	**.27***	<.001	**.25***	<.001	**.49***	<.001	**.31***	<.001	**.36***	<.001	**.46***	<.001
Denial	**.33***	<.001	**.18***	<.001	**.20***	<.001	**.26***	<.001	**.51***	<.001	**.23***	<.001	**.30***	<.001	**.36***	<.001
Focus on and venting of emotions	**.31***	<.001	**.38***	<.001	**.29***	<.001	**.33***	<.001	**.59***	<.001	**.48***	<.001	**.52***	<.001	**.52***	<.001
Substance use	**.28***	<.001	.09	.075	**.18***	<.001	**.16***	.002	**.41***	<.001	**.14***	.007	**.29***	<.001	**.29***	<.001
Behavioural disengagement	**.38***	<.001	**.34***	<.001	**.36***	<.001	**.26***	<.001	**.55***	<.001	**.45***	<.001	**.50***	<.001	**.37***	<.001

Restraint	**.26***	<.001	**.24***	<.001	**.20***	<.001	**.31***	<.001	**.48***	<.001	**.25***	<.001	**.30***	<.001	**.54***	<.001
Suppression of competing activities	**.26***	<.001	**.24***	<.001	**.24***	<.001	**.34***	<.001	**.48***	<.001	**.28***	<.001	**.33***	<.001	**.55***	<.001
Trait Dissociation Questionnaire (TDQ)																
Total	**.45***	<.001	**.35***	<.001	**.41***	<.001	**.22***	<.001	**.61***	<.001	**.52***	<.001	**.62***	<.001	**.39***	<.001

Note: Statistics for the above variables derive from a zero-order correlation. * $p < .05$. Gender: 0 = male, 1 = female. Culture: 1 = British, 2 = Hongkongese, 3 = Taiwanese. Stressor severity = Perceived severity of the most distressing event