

**Adaptation and Feasibility Pilot of an Evidence-Based Parenting
Intervention Within the Thai Public Health System to
Prevent Violence Against Young Children**

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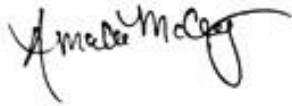
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DECLARATION OF AUTHORSHIP

I, Amalee McCoy, hereby declare that this thesis is my own work, except where otherwise stated.

Signed:

A handwritten signature in black ink, appearing to read 'Amalee McCoy', written in a cursive style.

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- McCoy, A. (2019, March). *Methods for evaluating the effectiveness of parenting programmes*. Presentation to the UNICEF East Asia & Pacific Regional Child Protection Network Meeting, Bangkok, Thailand.
- McCoy, A. (2019, May). *Formative evaluation content findings & process evaluation initial findings*. Presentation to the 4th Parenting Experts Working Group Meeting, Bangkok, Thailand.
- McCoy, A. (2020, February). *Scale-up planning workshop: Update on PLH Thailand project status*. Presentation to the Scale-Up Planning Workshop with government partners, Udon Thani, Thailand.
- McCoy, A. (2020, April). *On-line dissemination meeting: Summary of key findings from mixed methods research on perceived mechanisms of change and programme satisfaction*. Presentation to the On-Line Dissemination Meeting with government partners via Zoom, from Bangkok, Thailand.
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- McCoy, A., Backhaus, S., Lachman, J. M., Gardner, F., Tapanya, S., Ward, C., Cheah, P. (2019, September). *Preliminary findings from a feasibility pilot of Parenting for Lifelong Health for Young Children (PLH Thailand) in Udon Thani*. Presentation to the Inspector General Region 8, Bureau of Inspection, Ministry of Public Health, Bangkok, Thailand.
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ABSTRACT

Background: Social learning theory-based parenting interventions constitute the best evidence for preventing child physical and emotional maltreatment. While such programmes have demonstrated effectiveness in high-income countries, the evidence base in low- and middle-income countries (LMICs) is still nascent. This doctoral thesis focuses on the cultural and contextual adaptation of a parenting programme, Parenting for Lifelong Health for Young Children (PLH-YC), for the purpose of feasibility pilot testing with low-income families with children aged 2-9 years in Udon Thani, Thailand.

Methods: This thesis is comprised of three publishable papers that encompass the development and feasibility/piloting phases of the UK Medical Research Council guidelines on developing and evaluating complex interventions. It utilises an overarching mixed methods evaluation design. The first study, a systematic review and multi-level meta-analysis, aimed to synthesise the evidence base on the effectiveness of parenting interventions to prevent violence against children and associated outcomes in LMICs in East and Southeast Asia. Sources included electronic databases, expert contacts, and reference lists of previous reviews. Inclusion criteria for outcome measures encompassed all forms of violence against children, with studies including non-English language and grey literature. Studies were appraised for risk of bias, while effect size estimates were pooled using random effects multi-level meta-analysis.

The second study used qualitative methods to examine the cultural and contextual relevance of the key programme themes, process, structure, schedule, and logistics of PLH-YC, alongside potential barriers and opportunities for scaling up the programme within the public health system in Thailand. For the purpose of this formative evaluation, individual interviews were conducted with 20 professionals and academics, while three focus group discussions were held with a Parenting Experts Working Group – consisting of six professionals and academics. A hybrid approach to thematic analysis was utilised, combining deductive and inductive approaches.

The third study was a pilot that tested the feasibility of an adapted version of PLH-YC for low-income families in Udon Thani, including suitability of study evaluation approaches, feasibility of delivering the adapted intervention, indicative effects, and perceived key mechanisms of change associated with intervention content. This mixed methods study embedded a qualitative component within a larger, pre-post quantitative evaluation. Parents ($N = 60$) of children aged 2-9 years were recruited into a weekly, 8-session parenting intervention delivered through the local health system. Quantitative parent-report, observational data, and programme implementation measures were collected using standardised instruments, while qualitative data was drawn from individual interviews with participating parents ($n = 11$) and programme facilitators ($n = 8$). Outcomes of interest were rates of physical and emotional maltreatment (primary outcomes) and associated risk factors (secondary outcomes). Analyses utilised Wilcoxon signed-rank tests, paired t-tests, Friedman's ANOVA, Cronbach's alpha, and thematic analysis.

Results: In the first study, the review led to the inclusion of 11 studies representing 2,812 parent, caregiver, and child participants. The multi-level meta-analysis comprised 44 effect sizes spanning five outcome categories, finding a small effect on abusive, harsh, or negative parenting ($n = 3$, $d = -0.42$, 95% CI [- 0.81, -0.02], $p < 0.01$, $I^2 = 72\%$), the primary outcome of interest. Effects on secondary outcomes included a large, non-significant effect on parental knowledge or attitudes ($n = 5$, $d = 1.40$, 95% CI [-0.30, 3.10], $I^2 = 95\%$); a small effect on positive parent-child interactions ($n = 5$, $d = 0.25$, 95% CI [0.19, 0.32], $p < 0.001$, $I^2 = 0$); a small, non-significant effect on parental stress ($n = 2$, $d = -0.13$, 95% CI [-0.38, 0.11], $I^2 = 0$); and a small, non-significant effect on family environment ($n = 3$, $d = 0.21$, 95% CI [-0.12 to 0.53], I^2 of 85%).

The second study found that many of the original aspects of PLH-YC were perceived by participants to be relevant, yet tensions were identified between perceived social norms, practices, and needs. Recommendations concerned programme language of delivery; reflection of local family demographics and material culture; emphasis on positive parent-child relationship building; encouragement of child participation; removal of *time-out* and inclusion of child

development and self-discipline content; provision of 'mini-scripts' as a programme method; weekend programme delivery; utilisation of health workers as facilitators and recruiters; use of inclusive recruitment approaches and incentives to encourage participation; establishment of local primary care centres as programme venues; and adoption of top-down policy implementation, cross-sectoral partnerships, and model delivery centres as scale-up strategies.

The third study found high rates of study retention (98.3%), programme enrolment (96.7%), enrollee attendance (92.5%), and completion (96.6%). Reliability of outcome instruments using Cronbach's alpha showed 16 out of 27 values within acceptable ranges. Analyses of primary outcomes showed parent-reported reductions in overall child physical and emotional abuse ($d = -0.58, p < 0.001$), as well as physical abuse ($d = -0.58, p < 0.001$) and emotional abuse ($d = -0.40, p < 0.001$) subscales. The HOME Inventory, which combines parent report and observations, showed reductions in abusive and harsh parenting ($d = -0.52, p < 0.001$). There were improvements in 22 out of 24 secondary outcomes. In addition, six key programme themes were associated with strengthened parent-child relationships, reduced child behaviour problems, improved attitudes and strategies toward discipline, and improved management of parental stress.

Conclusion: This thesis comprised the first known regional systematic review of parenting interventions for violence prevention, the first known formative evaluation to examine the cultural and contextual relevance of a parenting intervention in Thailand, and the first known feasibility pilot of a parenting intervention aiming to prevent violence against children in Thailand. There is provisional support in the East and Southeast Asian region for the implementation of evidence-based parenting interventions to prevent violence against children; high levels of cultural relevance and suitability of PLH-YC within the Thai implementation context; suitability of pilot study evaluation approaches and intervention delivery, as well as initial effectiveness; and promising prospects for scaling up within the public health system. Further research, through a randomised controlled trial and evaluations after scale-up, will need to assess if such effects are both replicated and sustained over time.

LIST OF ACRONYMS

ASEAN	Association of Southeast Asian Nations
CASI	Computer-Assisted Self-Interviewing
CI	Confidence interval
CTS2S	Revised Conflict Tactics Scale – Short Form
DASS-21	Depression, Anxiety, and Stress Scale – Short Form
ECBI	Eyberg Child Behaviour Inventory
FGD	Focus group discussion
HICs	High-income countries
HOME	Home Observation for Measurement of the Environment
HPH	Health Promotion Hospital
ICAST-P	International Society for the Prevention of Child Abuse and Neglect Child Abuse Screening Tools – Parent Version
ICAST-R	International Society for the Prevention of Child Abuse and Neglect Child Abuse Screening Tools – Retrospective Version
ICAST-T	International Society for the Prevention of Child Abuse and Neglect Child Abuse Screening Tools – Trial Version
IPV	Intimate partner violence
IY	Incredible Years
KPI	Key performance indicator
LMICs	Low- and middle-income countries
MICS	Multiple Indicator Cluster Surveys
MOPH	Ministry of Public Health
MORU	Mahidol-Oxford Tropical Medicine Research Unit
MRC	United Kingdom Medical Research Council
MSDHS	Ministry of Social Development and Human Security

NFP	Nurse Family Partnerships
NGO	Non-governmental organisation
PARYC	Parenting Young Children Scale
PCIT	Parent-Child Interaction Therapy
PDR	Parent Daily Report
PMTO	Parent Management Training Oregon
PLH-YC	Parenting for Lifelong Health – Young Children
RE-AIM	Reach, Effectiveness, Adoption, Implementation, and Maintenance framework
RCT	Randomised controlled trial
TAO	Tambon Administrative Organisation
UNDP	United Nations Development Programme
UNODC	United Nations Office on Drugs and Crime
UNICEF	United Nations Children’s Fund
VAC	Violence against children
VHV	Village Health Volunteer
WHO	World Health Organization

CHAPTER I. INTRODUCTION

1.1 Overview

This doctoral study is focused on the cultural and contextual adaptation and feasibility pilot of an evidence-based parenting programme – Parenting for Lifelong Health for Young Children (PLH-YC) – in order to reduce child maltreatment against children aged 2-9 years living in low-income families in Udon Thani, Thailand. PLH-YC is one of a suite of parenting programmes to prevent violence against children as part of an international initiative led by individuals from the University of Oxford and Bangor University (UK), University of Cape Town and Stellenbosch University (South Africa), the World Health Organization (WHO), and the United Nations Children’s Fund (UNICEF). The programme was initially developed and tested in Cape Town, South Africa (Lachman et al., 2016), as a culturally relevant intervention drawn from core components common to effective social learning theory-based parenting programmes (Kaminski et al., 2008; Leijten et al., 2019), but mainly trialled in high-income country (HIC) contexts such as the United States and United Kingdom. The purpose of the Parenting for Lifelong Health collaboration is to develop, test, and widely disseminate this suite of affordable and freely available programmes in other low- and middle-income countries (LMICs) (Lachman et al., 2016). By emphasising child maltreatment prevention, such efforts may potentially promote child physical and mental health, as well as potential health and socio-economic benefits over the life course, in countries where such evidence-based interventions are largely absent. This study aims to contribute to this endeavour, as well as to add to the growing body of literature on the transportability of evidence-based parenting programmes across countries (Gardner et al., 2015; Leijten et al., 2016). Further, it builds on the findings from the DPhil candidate’s systematic review on evidence-based parenting programmes to prevent violence against children in East and Southeast Asia – extended and synthesised through the first paper of this thesis (Chapter III) – as well as the candidate’s own professional experience in child protection over the past 18 years in Asia.

The outputs from this thesis also form a significant portion of a 26-month long, UNICEF Thailand-funded research project, which aimed to adapt, pilot, and evaluate PLH-YC in Udon Thani, Thailand. This project was initiated by the DPhil candidate following one year of dialogue with the donor and the Thai Ministry of Public Health (MOPH), with on-going guidance and input from academic supervisors at the Department of Social Policy and Intervention, as well as the Mahidol-Oxford Tropical Medicine Research Unit (part of the Nuffield Department of Medicine, Medical Sciences Division) in Bangkok. It also draws from prior studies conducted by the candidate on the demand for participation in, and capacity for delivery of, evidence-based parenting interventions in Thailand (McCoy & Supaporn, 2016a); a mapping of policies and programmes for parenting support in Thailand (McCoy & Supaporn, 2016b); and a consultation facilitated by the candidate with Thai national stakeholders on strategies for developing and testing parenting programmes for violence prevention (McCoy & Supaporn, 2016c). The project underscores the importance of promoting intervention sustainability and scalability by building on existing Thai public health services and infrastructure for programme delivery, oversight, and maintenance (National Academies of Sciences, 2016), as well as by forming a partnership with MOPH, UNICEF, and local policymakers, academics, and practitioners from the outset.

1.2 Role of the candidate

Within this larger, UNICEF-funded project, the DPhil candidate fulfilled the roles of Research Manager and Co-Investigator. First, the candidate wrote the grant, and was the investigator responsible for the design and implementation of the formative evaluation, feasibility pilot, and randomised controlled trial (RCT) phases of the project, under the guidance of the lead co-Principal Investigator (Professor Frances Gardner) and other members of the co-Principal Investigator team (Dr Jamie Lachman, Associate Professor Phaik Yeong Cheah, Professor Catherine Ward, Dr Sombat Tapanya, and Mr Utane Hakaew). This role included initiating contact and acting as the focal point for dialogue with donor and senior government partners; co-developing funding proposals; developing applications for ethical approval at the University of Oxford, Ministry of

Public Health (MOPH), and the Institute for the Development of Human Research Protections (IHRP) in Thailand; convening the Project Steering Committee and the Parenting Experts Working Group; developing qualitative research protocols and co-developing quantitative research protocols; registering the pilot and RCT protocol on ClinicalTrials.gov; designing qualitative data collection tools and interview guides; co-designing quantitative data collection tools and interview guides; adapting the Home Observation for Measurement of the Environment (HOME) Inventory observational assessment tool and developing a manual for the study; developing a translation protocol and managing the review of translated data collection instruments by a review panel; hiring and managing all staff; managing the pre-testing and piloting of data collection tools; designing and co-leading two trainings for research assistants; managing study recruitment through the development of partnerships with local education, social welfare, and public health authorities; conducting all in-depth interviews and either facilitating or co-facilitating focus group discussions (FGDs); supervising quantitative data collectors ($N = 11$) and process monitors ($N = 2$) in the field; conducting regular quality checks on the Computer-Assisted Self-Interviewing (CASI) data collection process; and managing reports and referrals of child protection and social welfare cases during all phases of the project.

Second, the candidate conducted all primary qualitative and quantitative data analyses for the formative evaluation and feasibility pilot phases. Secondary thematic data analyses for a subset of the qualitative data were undertaken by two other independent coders: Dr Amanda Sim (previously a fellow DPhil candidate at the University of Oxford) for the formative evaluation, and Dr Jane Kelly (University of Cape Town) for the feasibility pilot.

Third, the candidate worked with members of the co-Principal Investigator team (Dr Jamie Lachman and Dr Sombat Tapanya) to adapt and deliver the PLH-YC programme at four sites in Thailand. This included recruitment of and supervisory support for the programme facilitators ($N = 9$), drivers ($N = 3$), and Village Health Volunteers (VHVs, $N = 8$); organisation of two trainings for programme facilitators; supervision of illustrated story development by a Thai illustrator; and

input to the adaptation of programme content in the form of a revised PLH-YC Facilitator Manual and Parent Handbook.

Finally, the candidate has taken a leading role in disseminating study findings and collaborating with UNICEF Thailand and government partners in planning the scale-up of PLH-YC. The candidate gave a number of presentations to local and senior government partners for this purpose (see p. 11). Further, the candidate also led the organisation of a Scale-Up Planning Workshop and an On-Line Dissemination Meeting with government officials, local practitioners, and UNICEF staff ($N = 29$ and 63 participants, respectively) to discuss prospects for scale-up in Udon Thani and six other provinces in Public Health Administrative Region Eight.

1.3 Thesis aims and structure

This doctoral thesis is structured around three papers based on the UK Medical Research Council (MRC) guidelines on developing and evaluating complex interventions (Craig et al., 2008). This introductory chapter delineates the main research questions according to each paper, followed by a literature review and presentation of the main theoretical frameworks upon which this thesis is based. Subsequently, the first and second papers (Chapters III and IV) reflect the 'development' stage of the MRC guidelines. The first paper identifies and synthesises the existing evidence base in the East and Southeast Asian region through the conduct of a regional systematic review and multi-level meta-analysis of parenting interventions. The second paper focuses on a formative evaluation to inform the cultural and contextual adaption of PLH-YC. This study involved the gathering and analysis of qualitative data from individual interviews with policymakers, academics, and practitioners, as well as FGDs with the locally established Parenting Experts Working Group. The third paper (Chapter V) reflects the 'feasibility/piloting' stage and uses mixed methods to assess study and intervention feasibility, pre-post indicative effects, and perceived mechanisms of change identified by parents and programme facilitators. Further details on the interrelationships between these three papers are delineated in the methodology chapter (Chapter II), while the final discussion chapter (Chapter VI) further discusses these linkages,

presents the main conclusions from this thesis, and examines their implications for policy, practice, and further research in this field.

1.4 Research questions

The research questions for this doctoral thesis are organised according to the following three papers:

Paper 1 (Chapter III): Systematic review and multi-level meta-analysis

What parenting interventions are effective in preventing violence against children in LMICs in East and Southeast Asia?

Paper 2 (Chapter IV): Formative evaluation

1. What is the cultural and contextual relevance of the key program themes, process, structure, schedule, and logistics of PLH-YC in Thailand?
2. What are the potential barriers and opportunities for scaling up an adapted version of PLH-YC within the public health system?

Paper 3 (Chapter V): Feasibility pilot

1. What is the feasibility of conducting a rigorous evaluation of a parenting program within the public health system in Thailand?
2. What is the feasibility of delivering an adapted version of PLH-YC to low-income parents with children aged 2-9 years, who are likely to be at risk for abusive and harsh parenting?
3. What are the indicative effects of the programme on reducing violence against children (primary outcome) and associated risk factors (secondary outcomes)?
4. What are the perceptions of parents and facilitators of programme content associated with key mechanisms of change?

1.5 Literature review

Prevalence of violence against children

Violence against children can be defined in accordance with Article 19 of the Convention on the Rights of the Child (United Nations General Assembly, 1989), which defines children as below 18 years of age, while also incorporating the definition of child maltreatment adopted by the 2014 World Report on Violence Prevention. *Violence against children* thus broadly comprises all forms of physical or mental violence, injury or abuse, neglect, maltreatment or exploitation, with *child maltreatment* constituting “all types of physical and/or emotional maltreatment, sexual abuse, neglect, negligence and commercial or other exploitation, which results in actual or potential harm to the child’s health, survival, development or dignity in the context of a relationship of responsibility, trust or power” (World Health Organization [WHO] et al., 2014, p. 82).

Variations in prevalence rates exist between particular forms of violence, as well as between male and female victims. Global estimates by Hillis et al. (2016) reveal that prevalence rates of past year violence against children are at least 50%, with more than one billion of the world’s children having experienced such harm. Prior prevalence research compiled by the United Nations indicates that one in four adults have reported experiencing child physical abuse, while slightly more than one in three have been victims of emotional abuse during childhood (WHO et al., 2014). Further, self-reports indicate that one in five women and 5-10% of men have experienced child sexual abuse (WHO et al., 2014); although social stigma, normalisation of boys’ early sexual experiences, and adult expectations of boys’ self-reliance are potential causes of male underreporting of such abuse in comparison with females (Peake, 1989).

While violence against children is widely experienced across all countries, cultures, and ethnicities, estimates of such rates of violence tend to be higher in LMICs than in HICs (Stoltenborgh et al., 2013). Regional estimates of minimum rates of past year violence against

children aged 2-14 years, including 'moderate' physical violence such as spanking and hitting, were highest in Asia at 68.0% (Hillis et al., 2016). With regards to particular forms of violence, one meta-analysis of the prevalence of child sexual abuse in 22 countries found that the highest reported rates were found in Africa (34.4%; 95% CI [21.1, 50.7]) while the lowest were in Europe (9.2%; 95% CI [6.8, 12.3]) (Pereda et al., 2009). In terms of rates of neglect, at least within the East Asia and Pacific region, prevalence estimates between males and females across country income classifications are comparable, with 27.1% of girls and 24.3% of boys experiencing neglect in lower middle-income countries, as opposed to 32.3% of girls and 26.2% of boys in HICs (Fang et al., 2015).

In Thailand, however, few epidemiological studies have been conducted on the prevalence or incidence of violence against children, including child maltreatment. The most recent, population-based study on violent disciplinary practices was conducted during 2015-2016 as part of the Multiple Indicator Cluster Survey (round 5), drawing from a national sample of 28,652 households. The study found, according to adult reports, that household members subjected 75.2% of children aged 1-14 years to at least one form of emotional or physical punishment during the past month, with any form of violent discipline most prevalent in the 3-4 year-old age group at 80.5% (National Statistical Office [NSO] & UNICEF, 2016). A regional systematic review identified only 11 country-specific or multi-country studies that provided estimates of child physical abuse, emotional abuse, sexual abuse, neglect, witnessing of domestic violence, experiences of intimate partner violence, or exploitation in Thailand (UNICEF EAPRO, 2012). Of such studies, only four described rates of violence perpetrated by parents, primary caregivers, or others in the household; an additional hand search by the DPhil candidate unearthed only two more studies. In a survey of 413 grade six students in Bangkok, 66.1% reported experiencing physical aggression by their parents and other primary caregivers, such as punching, hitting with a stick or belt, pinching and slapping (Isaranurug et al., 2001). Further, 64.2% reported experiencing verbal aggression by their parents or caregivers, with 40% disclosing that they had not been provided with appropriate care

and food (Isaranurug et al., 2001) – which could indicate the perpetration of neglect. However, Isaranurug et al. (2001) did not clearly indicate whether such reports reflected lifetime prevalence or a different timeframe. Another study in Amnatcharoen province in the Northeastern region found that 24.5% of 212 grade six students reported experiencing physical violence by their fathers and 42.5% by their mothers in the past six months, most often through beatings by a cane or belt (Isaranurug et al., 2002). A third study, relying on self-reports of 120 parents in Chiang Mai, Northern Thailand, revealed that corporal punishment was meted to 58.0% of girls and 72.0% of boys within the household over the past month (Lansford et al., 2010). Moreover, official incidence data from 72 One Stop Crisis Centres during October 2003 to September 2004, provided by the Ministry of Public Health, showed that 34.0% of the total number of cases of treated assault victims were under age 15, with 71.0% of incidents occurring in the child's home (WHO, 2007). Finally, a population-based cross-sectional survey of 1,052 youth aged 16-25 years living in Northern Bangkok found that 16.6% reported having experienced child physical abuse – but defined in this study as excluding widely accepted forms of corporal punishment (Jirapramukpitak et al., 2011).

Adverse outcomes of violence against children

There is a growing body of research on the association between different forms of violence against children, particularly child maltreatment, and immediate and long term adverse outcomes in relation to physical and mental health, self-harm and suicidality, educational achievement, employment prospects, criminality, engagement in high risk behaviours, and perpetration of child maltreatment and intimate partner violence in adulthood (Arnow, 2004; Fulu et al., 2017; Maas et al., 2008; Maniglio, 2009; Norman et al., 2012). Prospective longitudinal studies have provided the strongest evidence for assessing causality between various forms of abuse and neglect and subsequent adverse outcomes. However, such studies are typically costly endeavours due to the need for a large sample size and long follow-up duration; in addition, there

is no protection against confounding effects of factors that have not been measured, and which may be unrecognised or unknown (Elwood, 2017). A prospective longitudinal study ($N = 574$) in the United States found that children who had been abused during the early years were at greater risk of being arrested as juveniles for violent, non-violent, and status offenses. The same study found that physically abused youth were less likely to have graduated high school and more likely in the past year to be fired from their jobs, become pregnant, or impregnate someone while not married (Lansford et al., 2007). A review that included both prospective and retrospective studies from high-income countries found consistent evidence that both child physical and sexual abuse are associated with doubling the risk of attempted suicide amongst youth who have been followed up into their late 20s, and that the risk of suicide increases with the compounding of multiple adversities (Gilbert et al., 2009). In addition, the experience of maltreatment during early childhood appears to strongly determine child behavioural problems, and is associated with deficits in school performance, school attendance, and ability to remain in employment during adulthood (Gilbert et al., 2009). Moreover, child victims of violence tend to adopt coping behaviours to deal with the psychological repercussions of such experiences, such as smoking, alcohol and drug misuse, and unsafe sexual practices – which render them at increased risk of some of the leading causes of death, including heart disease, stroke, cancer and HIV/AIDS (WHO et al., 2014).

Although the available evidence on the consequences of violence against children in the East and Southeast Asian region is much sparser, a regional systematic review ($N = 364$ studies) which included non-English language and grey literature revealed findings similar to the international body of literature (Fry et al., 2012). The review found associations between the experience of different forms of maltreatment during childhood and immediate and longer-term consequences, such as adverse physical and mental health, engagement in high-risk sexual behaviours, and exposure to future violence, including intimate partner violence as an adult. Children who reported experiencing sexual abuse had a median twofold increased risk of having a

mental health disorder when compared with those who were not child victims of maltreatment; findings were also similar for child victims of physical abuse. Further, adolescents and adults who experienced child sexual or physical abuse had a median fourfold increased risk of suicide ideation and attempts, in comparison to those without such a history. Finally, the review also found an association between experiences of child maltreatment and later tendency to have more sexual partners, more concurrent sexual partners, and unintended pregnancies.

Such harmful short and long-term repercussions for victims culminate in substantial social and economic costs, attributable to greater usage of health, welfare and criminal justice services, as well as losses in educational investments and worker productivity. Given that East and Southeast Asia is home to over one-quarter of the world's children (around 580 million in total) (UNICEF EAPRO, 2020), the sheer number of child victims – as well as the accompanying health, social and economic ramifications – is staggering. For example, a recent estimation of the economic burden of child maltreatment in the region suggested a total economic loss of 1.99% of the region's GDP in 2004, amounting to approximately \$206 billion when updated to 2012 US Dollars (Fang et al., 2015).

Risk and protective factors for child maltreatment by parents

In addition to identifying associations between child maltreatment and adverse outcomes, prospective longitudinal designs also provide the best evidence for determining causal patterns between myriad risk and protective factors and experiences of child maltreatment (Mann, 2003). Given the paucity of such large-scale research, especially in LMICs, methods such as key informant interviews and cross-sectional surveys can shed light on the most prevalent risks within a particular population (Ward et al., 2016). These studies, when viewed within the lens of an ecological framework (Bronfenbrenner, 1979; Sameroff & Chandler, 1975), give prominence to the complex interplay of risks, protective factors, and risk and resilience interactions that take place at the individual, relational, community, and societal levels. Within this framework, *risk factors* can

be defined as those conditions significantly linked with the susceptibility of children and families to maltreatment, while *protective factors* are those which may protect from, mitigate, or prevent the recurrence of such harm (Luthar & Zelazo, 2003). Systematic research on these latter factors is relatively limited, with most studies to date mainly focused on matters of *resilience* – those factors that lessen the impact of abuse on child victims (WHO & International Society for the Prevention of Child Abuse and Neglect [ISPCAN], 2006). However, several challenges exist in the identification of both risk and protective factors, given the considerable heterogeneity among studies in how such factors and forms of child maltreatment are defined and measured, the inclusion of risk factor variables that actually encompass mediating or overlapping variables (i.e., depression, anxiety, and psychopathology), and bias toward including only mothers in study samples (Stith et al., 2009).

Amongst these levels, factors operating at the individual level of the parent are considered of central importance due to the role they play in both buffering and mediating influences on child well-being and development from broader ecological levels (e.g., family and community factors) (Belsky, 1993). While it is difficult to isolate the effects of parent-related characteristics on risks of child maltreatment given that many factors are clustered and inextricable, factors identified in the extant literature include poverty, low-educational achievement, substance abuse, experiences of maltreatment as a child, mental health problems (Gilbert et al., 2009), cumulative exposure to trauma (Cohen et al., 2008), values about corporal punishment (Brayden et al., 1992; Scannapieco & Connell-Carrick, 2005), and maladaptive personality characteristics (Brown et al., 1998), such as hyper-responsivity (Bauer & Twentyman, 1985) and high levels of stress (Lawson & Hays, 1989). In terms of protective factors at the parent level, mothers who were married or who had 12 or more years of education were less likely to be reported for child maltreatment (Li et al., 2011).

Other factors include risks associated with the parent-child relationship level, including how character traits and mental health conditions affect parental perceptions of their children and the parenting strategies they employ. Parents who perpetrate maltreatment tend to exhibit less

supportive and responsive behaviour toward their children; demonstrate fewer positive behaviours and affection toward them; exhibit more behaviours that are angry, stressed, depressed, hostile, controlling, interfering, and hyperactive; as well as perceive the child as a problem and have biased perceptions of their child's negative behaviours (Belsky, 1993; Dopke & Milner, 2000; Reid et al., 1987; Stith et al., 2009). In interactions with their children, such parents tend to become so aroused as to lose control and engage in physically harsh or abusive behaviours that were intended as acts of discipline (Belsky, 1993). At both the parent and parent-child relationship levels, based on present understanding of early child development and resilience, positive parenting and parent-child interaction patterns, secure attachment, parental emotional well-being and regulation, and parental self-sufficiency are all potential protective factors (Glaser, 2000; Luthar & Zelazo, 2003; Masten & Coatsworth, 1998; Meng et al., 2018).

In addition to these two levels, other characteristics and influences can play a cumulative role at the child, family, community, and societal levels in rendering children more vulnerable to or protected from maltreatment. At the level of the individual child, pregnancy and birth complications have been associated with official and self-reports of physical abuse in the US (Brown et al., 1998), while disability (including physical, emotional, behavioural, and cognitive causes) as well as young child age were found by a review to be associated with greater risks of child maltreatment recurrence (White et al., 2015). Other factors include having difficult temperament or conduct disorder, child internalising behaviours, and poor health (Goldson, 1998; Hibbard et al., 2007; Stith et al., 2009; Sullivan & Knutson, 2000), although such findings are inconsistent (Li et al., 2011). At the family level, high family conflict and low family cohesion were found to have some of the strongest effect sizes for child physical abuse in a meta-analytic review of 155 studies (Stith et al., 2009), while longitudinal research in the United States ($N = 405$) has shown that families with high levels of social support were less likely to be reported for child maltreatment (Li et al., 2011). At the community level, risk factors include social isolation, poor housing, and high unemployment (Belsky, 1993). Finally, at the societal level, identified risk factors

for maltreatment include high levels of poverty and inequity, unemployment, alcohol and drug availability, residential instability, and high childcare burden (Aber et al., 1997; Freisthler et al., 2006; Merritt, 2009). Protective factors at this level, according to a review of 25 studies comparing different communities and based on resident interviews, found stronger perceived perceptions of social resources and community networks in neighbourhoods with low rates of child maltreatment (Coulton et al., 2007).

Evidence for preventing child maltreatment through parenting programmes

In the midst of this growing understanding of the influence and interplay of numerous risk and protective factors for child maltreatment, as well as the linkages between poor parenting and negative immediate and long-term outcomes for children, there have been multiple calls for evidence-based strategies to prevent violence against children (Walker et al., 2011; WHO, 2016). One particular strategy, the promotion of parenting training and support in order to reduce harsh and abusive parenting practices and bolster positive parent-child relationships, has a well-established evidence base. Such studies have found that parenting interventions can be effective across a range of outcomes relevant to increased risk of child maltreatment, such as child behaviour problems (Furlong et al., 2012; Piquero et al., 2009), emotional difficulties (Cartwright-Hatton et al., 2011), parenting competence and stress (Gross et al., 2003; Nixon et al., 2003), maternal depression (Sanders & McFarland, 2000), and couple interaction quality (Cowan et al., 2011). Moreover, there is growing evidence that parenting interventions can improve positive parenting, reduce harsh parenting, and diminish actual rates of violence against children (Barlow, Johnston, et al., 2006; Barlow, Simkiss, et al., 2006; Bilukha et al., 2005; Chen & Chan, 2016; Knerr et al., 2013; MacMillan et al., 2009; Vlahovicova et al., 2017).

Effective parenting programmes for reducing rates and risk of violence perpetration can be individual-based, delivered in home or clinical settings, group-based in community settings, or a combination of individual and group-based delivery. Individual-based interventions can include

behavioural parent training or psychotherapeutic models delivered by professionals in clinical settings, as well as those provided by trained health workers or community volunteers through home visitation (MacMillan et al., 2009). *Universal* evidence-based parenting programmes for preventing child maltreatment prior to its occurrence often comprise those that are aimed at groups or the general population, without regard to level of individual risk for violence victimisation, while *selective* interventions target those at elevated risk (Centers for Disease Control and Prevention [CDC], 2004). Such programmes include two of the most evaluated parenting interventions that have assessed child maltreatment outcomes: Nurse Family Partnerships (NFP) and the Triple-P Positive Parenting Program (Triple-P) (MacMillan et al., 2009). NFP, an individual-based home visiting intervention that includes a parenting component, arguably has the strongest evidence of long-term effectiveness in preventing maltreatment amongst low-income first-time parents. Three RCTs of NFP from the United States showed reduced rates of child physical abuse, neglect, and associated outcomes such as child injury, while maintaining high rates of retention across a range of ethnicities and rural-urban populations (MacMillan et al., 2009). During the trial of NFP in Elmira ($N = 300$), there were 48% fewer officially verified incidents of child maltreatment compared to the control group at 15-year follow-up (Olds et al., 1997); however, this effect was absent in homes with moderate-to-high levels of reported intimate partner violence (Eckenrode et al., 2000). On the other hand, group-based interventions are often delivered by trained facilitators in centres or community-based settings, through the holding of regular group sessions (Barlow, Johnston, et al., 2006). Triple-P (Sanders, 1999), Incredible Years (Webster-Stratton & Reid, 2003), and Parent Management Training Oregon (PMTO) (Patterson, 2005) are widely evaluated, group-based parenting interventions with similar content and based on social learning theory principles. Triple-P is a multi-level parenting skills building programme that spans universal and targeted interventions, including group-based formats. While many of the 140 evaluations of Triple-P (Sanders, 2012) have involved the programme developers, raising questions regarding developer bias, several independent outcome

evaluations have shown effectiveness in improving family management techniques, parental confidence in child rearing, and child behavioural outcomes (WHO & ISPCAN, 2006). However, other evaluations have revealed no effects on child behavioural outcomes. These include a cluster RCT of Triple-P and a school-based intervention in Swiss elementary schools ($N = 1,675$ children) at two-year follow-up (Malti et al., 2011), and a RCT of Group Triple-P with parents ($N = 146$) of children aged 4-9 years with social-emotional or behavioural disorders in the United Kingdom at six months follow-up (Little et al., 2012).

Indicated parenting interventions, or those interventions for the prevention of the recurrence of maltreatment, are often classified separately from universal interventions, selective interventions, or interventions for the prevention of child impairment due to maltreatment. A systematic review and meta-analysis ($N = 7$ studies) by Barlow, Johnston, et al. (2006) of individual- and group-based parenting programmes to prevent child physical abuse and neglect recidivism, as well as reduce associated risk factors, found that such programmes show promise in preventing new incidents of child physical abuse. In addition, these programmes were found to be effective in reducing risk factors associated with recurrence of abuse when targeting families with either suspected or substantiated child maltreatment histories. However, the evidence for reducing physical abuse or neglect using objective assessments, such as child abuse reports, was found to be insufficient. A more recent review ($N = 14$ studies) of parenting programmes for the prevention of child physical abuse recurrence found that parenting programmes based on social learning theory reduced recidivism, as measured through referrals to child protective services, by 11% in comparison with those who did not undergo such a programme (Vlahovicova et al., 2017). One of the most effective of the eight parenting programmes included in this review, in comparison with treatment as usual, was Parent Child Interaction Therapy (PCIT), which found at a median follow-up of 850 days that 19% of parents in the PCIT intervention group had a re-report for child physical abuse compared with 49% in the standard community group condition. However,

there was no effect for those in an enhanced PCIT programme, and no difference in re-reports for child neglect in any group (Chaffin et al., 2004).

In terms of the theoretical evidence base, parenting programmes function by emphasising common theories of change that draw on social learning (Bandura, 1977; Patterson et al., 1982) and attachment theories (Bowlby, 1974). These programmes fortify parenting skills by providing practical instruction on positive-parent child interaction and relationship-building, the use of positive encouragement, techniques for non-violent discipline, problem solving, socio-emotional coaching, and developmentally responsive supervision (Dishion & Patterson, 2006; Kaehler et al., 2016; Kaminski et al., 2008; Leijten et al., 2019). Parents and primary caregivers who participate in evidence-based group parenting interventions can experience reductions in stress and maternal ill-health, as well as improvements in parenting confidence and competence in managing difficult child behaviour, and strengthened parental knowledge on child development (Barlow et al., 2010; Hurlburt et al., 2013). Parenting interventions can also teach parents how to interrupt coercive cycles of parent-child interactions that arise through child behaviour problems and dysfunctional parenting skills (Dishion & Patterson, 2006); for these reasons, parenting interventions that target reductions in difficult child behaviours are often similar to those known to effectively prevent parent perpetrated violence against children (Leijten et al., 2019). In comparison with individual-based formats, group-based interventions may provide the added benefit of building support networks amongst parents, decreasing levels of social isolation and social stigma associated with help-seeking, and promoting more active parental participation (Hurlburt et al., 2013).

It should be underscored that the evidence for preventing child maltreatment and associated outcomes through parenting programmes draws mainly from systematic reviews and trials in HICs. The review by Knerr et al. (2013), which included 12 studies from nine countries ($N = 1,580$ parents) on parenting interventions for reducing harsh/abusive parenting, increasing positive parenting practices, strengthening parent-child relationships, or improving attitudes or knowledge about parenting, was the first known review to focus on such interventions from

LMICs. While the high level of study heterogeneity, including in methodological quality, precluded meta-analysis, review findings suggested that studies favoured the intervention group on several outcome measures, such as parent-child interaction, parental attitudes and knowledge, and reductions in harsh parenting. The review also highlighted that the two largest and highest quality trials of an infant attachment intervention from South Africa ($N = 449$; Cooper et al., 2009) and a child development-focused intervention from Pakistan ($N = 163$; Rahman et al., 2009) showed positive effects in maternal sensitivity ($d = 0.26$, 95% CI [0.06, 1.28]), maternal intrusiveness ($d = 0.24$, 95% CI [-3.47, -0.06]), and parental knowledge of child development (95% CI [3.68, 4.89]¹). In addition, the review included a group-based parenting programme for families with children aged 2-9 years in Iran ($N = 224$), which found large effects on dysfunctional parenting ($d = -1.20$) and moderate effects on reductions in child abuse ($d = -0.50$) in comparison to controls (Oveisi et al., 2010).

Parenting policies and programmes in Thailand

Despite Thailand's attainment of upper middle-income status, many children and families still experience an array of challenges and adversities, including rising inequalities in income and wealth, gender discrimination, weakening family structures and significant levels of domestic and out-migration (UNICEF Thailand, 2011). Many families in Thailand are under considerable strain, as demonstrated by sharp rises in divorce rates (United Nations Development Programme [UNDP], 2014), the heading of almost one-third of households by an elderly person, and one in five children living without either biological parent – the highest such ratio out of 40 surveyed LMICs (UNICEF, 2012). In this climate, the Thai Government has made several notable commitments through laws and policies to support parents in their child-rearing responsibilities.

A literature review conducted by the DPhil candidate provides an overview of those key policies, laws, and interventions related to parenting for the prevention of child maltreatment

¹ Effect size not calculated by reviewers nor provided by the original authors.

(McCoy & Supaporn, 2016b), and is further updated in this section. The report indicates that the Thai Government has committed ‘competent officials’ to providing aid and assistance to families to strengthen their capacity to take care of children in need of protection (*Child Protection Act* of 2003), and affirmed that parents are entitled to state support for “knowledge and competencies” in bringing up their children (*National Education Act* of 1999). Several key policies further demonstrate the Government’s dedication to parenting support, including: the 12th National Economic and Social Development Plan 2017-2021, with strategies including the creation of “enabling social environments that can help strengthen family cohesion” (Office of the National Economic and Social Development Board, 2017, p. 89); the National Child Protection Strategy 2017-2021, with measures including the capacity building of families to “provide care for children that are of quality and minimum standards” (National Child Protection Committee, 2017, p. 25); and the Second National Children and Youth Development Plan 2017-2021, which indicates that the Government will promote parental knowledge of child development, build parental capacities in child rearing, and support good family relationship-building and communications (National Commission on the Promotion of Child and Youth Development, 2016). While updated plans have not been issued, previous strategies relating to parenting and maltreatment prevention during early childhood include the Long Term Policy and Strategy for Early Childhood Care and Development 2007-2016, which describes initiatives to reform child-rearing so that parents can raise their children with responsibility, love, warmth, and care (Office of the Education Council, 2008). In addition, the National Strategic Plan for Early Childhood Development 2012-2016 states that parenting knowledge will be provided to the parents of 95% of 1-3 year olds in order to promote child development, while parental education will be delivered on how to avoid “threats, physical punishment, and harm” to children (Office of the Education Council et al., 2012, p. 37).

In practice, however, preliminary qualitative research by the DPhil candidate suggested that such commitments might not have sufficiently materialised in terms of actual services with suitable quality and coverage by the state, with existing services mainly focused on general child

health and development. The MOPH appears to provide the bulk of information and services to parents on childrearing, mainly through home visits by VHV to pregnant and nursing mothers, the establishment of Parent Schools in some Mother and Child Health clinics at public hospitals, and the widespread distribution of Mother and Child Health Booklets following hospital-based births. FGDs with VHVs in Nayong district, Trang province ($n = 7$) and Hang Dong district, Chiang Mai province ($n = 8$) revealed that the workload of many of those working in the maternal and child health area concentrated on infant vaccination schedules, promotion of breastfeeding, following up on prenatal health check-ups, and the provision of practical childcare advice, such as bathing and burping. When prompted, VHVs shared that they did not provide any information to parents relevant to child maltreatment, child behaviour management, managing parental stress, or post-partum depression. The national curriculum for hospital-based Parent Schools also focuses largely on child nutrition and development, but also includes content on attachment, play, and storytelling; however, there is no explicit guidance on child discipline or maltreatment prevention. The format for delivery of Parent School sessions also depends on the local human resource capacity and preferences of the hospital or clinic, with some mandatory training apparently provided to pregnant and nursing mothers over 3-5 sessions. Moreover, an official at the Department of Health Promotion, MOPH, acknowledged that it is unclear how many Parent Schools are in operation across the country, and whether facilities actually follow national guidelines for curriculum content and delivery (McCoy & Supaporn, 2016a).

The Ministry of Social Development and Human Security (MSDHS) and the Ministry of Interior are two other government organs that provide information and support to parents, although such services are irregular and appear to depend on local capacities and demands. The MSDHS maintains oversight of Family Development Centres based at the sub-district level Tambon Administrative Organisations, although parenting support is intermittent and mainly provided through one-off events and by visiting experts (McCoy & Supaporn, 2016a). Early Childhood Development Centres, under the purview of the Ministry of Interior and administered by Tambon

Administrative Organisations, have widespread access to parents of children aged 3-5 years; however, actual provision of parenting education and information appears to be limited and sporadic (McCoy & Supaporn, 2016a, 2016b).

While several non-government organisations in Thailand have implemented parenting interventions either aiming to promote positive parenting or specifically targeting child maltreatment prevention, almost all such programmes provide limited population coverage and have not been rigorously evaluated. International and domestic organisations that have delivered parenting interventions for varied target groups in Bangkok and Northern Thailand include the Thai National Health Foundation, Thai Family Foundation, Family Network Foundation, Plan International Thailand, Step Ahead, Gabfai Community Theatre Group, Foundation for Slum Child Care, Thai Familylink Association, the Life Skills Development Foundation, and Save the Children; however, none of these have been tested (McCoy & Supaporn, 2016b). An exception is a local adaptation of the Strengthening Families Programme for Burmese and Karen migrants and refugees in Tak province, implemented by the International Rescue Committee (IRC). Results from a RCT of this intervention were included in the systematic review and multi-level meta-analysis (see Chapter III) (Puffer et al., 2017; Sim et al., 2014), with additional findings later published in a third paper (Annan et al., 2017). However, despite several positive effects in comparison with controls, including parent reports of decreased harsh discipline ($d = -0.31$, 95% CI [-0.48, -0.14]) and improvements in both parent ($d = 0.36$, 95% CI [0.19, 0.54]) and child reports ($d = 0.42$, 95% CI [0.24, 0.61]) of overall parent-child relationship quality, programme implementation has reportedly not been continued. An ex-IRC staff member has suggested that this was due to lack of funding and government sentiment that the programme duration was overly long at three months (McCoy & Supaporn, 2016b).

In addition to the IRC programme, the review presented in Chapter III identified four other relevant parenting interventions from Thailand that have undergone rigorous evaluation, including three RCTs (Punthmatharith, 2001; Sattasathuchana, 2012; Sawasdipanich et al., 2010) and one

non-randomised controlled trial (Thanasetkorn, 2009). These four studies were evaluations of researcher-delivered interventions, and not of existing, on-going parenting programmes in Thailand. These comprised an Early Kangaroo Care intervention for mothers of new-borns in Hat Yai (Punthmatharith, 2001); a parent mutual support group intervention for parents with children aged 3-5 years in Nakorn Pathom province to encourage parental participation in child development (Sattasathuchana, 2012); individual and group parenting sessions on child discipline and child maltreatment prevention for parents of children aged 1-6 years in an Eastern province (Sawasdipanich et al., 2010); and the 101s Positive Discipline group-based parenting programme for parents of kindergarten age children in Bangkok (Thanasetkorn, 2009). Findings directly related to child maltreatment included results from Sawasdipanich et al. (2010), which revealed a medium effect on parental attitudes toward child rearing ($d = 0.60$, 95% CI [0.23, 0.97]), and a small, non-significant effect on child physical abuse potential ($d = -0.09$, 95% CI [-0.46, 0.27]). In addition, the study by Thanasetkorn (2009) showed large, significant effects on reducing critical/harsh practices ($d = -4.64$, 95% CI [-5.37, -3.90]), verbal punishment practices ($d = -3.61$, 95% CI [-4.23, -2.99]), and physical punishment practices ($d = -3.17$, 95% CI [-3.74, -2.59]). Risk of bias for both of these evaluations, however, was mainly unclear (Sawasdipanich et al., 2010) or high and unclear (Thanasetkorn, 2009).

Since the completion of this review, the DPhil candidate has identified only two other relevant parenting programmes that have been evaluated in Thailand. The first, conducted by Suttho (2013), was an unpublished Master's dissertation using an ex-post facto, post-test only design with non-randomised allocation to treatment ($n = 30$) and control groups ($n = 30$) in order to assess the impact of the 101s Positive Discipline programme on parents of 3-5 year old children in Bangkok. Findings pertaining to child maltreatment-related outcomes indicated that the programme had very large effects in the intervention group on negative parent interaction behaviour subscales in comparison with the control, such as physical punishment ($d = -2.35$, 95% CI [-3.01, -1.70]), critical/harsh interactions ($d = -1.85$, 95% CI [-2.45, -1.24]), and verbal

punishment ($d = -3.16$, 95% CI $[-3.92, -2.40]$).² However, risk of bias for this study was high or unclear, given the absence of randomisation and thus susceptibility to selection differences (selection bias); lack of blinding of assessors (performance bias); exclusion of non-normally distributed data and lack of mention of protocol registration (reporting bias); and insufficient reporting on attrition (attrition bias) (Higgins & Green, 2008).

The second study, a RCT by Rerkswattavorn and Chanprasertpinyo (2019), examined the effects of an author-developed parenting programme on parental knowledge of and attitudes toward violent disciplinary practices in Nakhon Si Thammarat, Southern Thailand. The intervention was structured into three sessions, each comprising lecture, simulation, and role-play. In comparison to the control ($n = 43$), there were medium-large size effects in the intervention group ($n = 42$) on child discipline knowledge at three months ($d = 0.79$) and six months ($d = 0.71$) post-intervention, as well as on attitudes toward child discipline at three months ($d = 0.93$) and six months ($d = 0.85$) post-intervention.³ However, this study did not assess changes in parent or child behaviours, raising questions as to whether improved knowledge and attitudes indeed translated into less violent parenting practices (2019). In addition, risk of bias for this study was unclear, due to lack of reporting on the blinding of assessors (performance bias), lack of reporting on allocation concealment (selection bias), and lack of mention of protocol registration (reporting bias) (Higgins & Green, 2008).

1.6 Theoretical frameworks

This section outlines the various theoretical frameworks that underpin this doctoral thesis. First, it presents the MRC guidelines on developing and evaluating complex interventions, as the aforementioned overarching framework upon which the three thesis papers are structured. Second, this section discusses the existing cultural and contextual adaptation literature and its relevance to parenting interventions, including debates regarding tensions between programme

² Effect sizes calculated by the DPhil candidate using means and standard deviations.

³ Confidence intervals and p-values were unreported.

fidelity and 'fit,' and considerations relevant to the development of home-grown and transported programmes. Third, the five-stage cultural adaptation framework developed by Barrera et al. (2013) and Glasgow et al.'s (1999) Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) model are examined, followed by a proposed conceptual model which integrates these two frameworks. Finally, this section concludes with an overview of PLH-YC and the programme theory of change model for Thailand.

MRC guidelines on developing and evaluating complex interventions (Craig et al., 2008)

The MRC guidelines on developing and evaluating complex interventions comprise four, non-linear phases, with an emphasis on the contribution of academic research and a strong theoretical framework; piloting to test hypothesised theories of change and initial intervention outcomes; process and outcome evaluations; and wider dissemination, monitoring, and long-term follow up (see Figure 1) (Craig et al., 2008). *Complex interventions* are those that have various active ingredients, consolidating various components into one programme that is more than the sum of its parts (Oakley et al., 2006). Such interventions tend to measure several, variable outcomes, while the behaviour changes that are sought are often difficult to measure (Craig et al., 2008). Unlike surgical procedures and drug trials, complex interventions require an iterative yet flexible approach to design and testing, with new information or unexpected findings sometimes requiring further formative research, theory development, intervention adaptation, and additional piloting, prior to an appropriately powered RCT and eventual implementation (Craig et al., 2008).

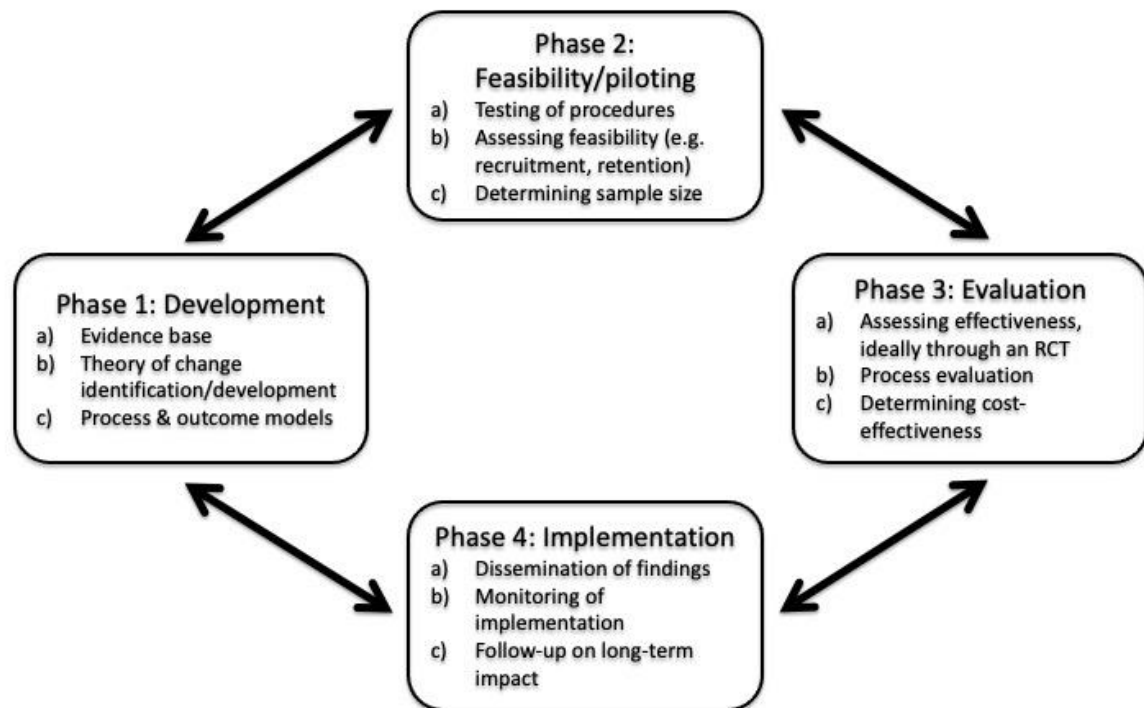


Figure 1. Key elements of the development and evaluation process in the MRC Framework (Craig et al., 2008)

The *development phase* of the MRC framework first involves the identification of the relevant evidence base. This is best accomplished through the conduct of a thorough systematic review, with careful consideration of the broad scope, varied target populations, and myriad methods through which complex interventions are delivered. Such a review requires a theoretically informed recognition of the processes of change underlying the intervention, and the ability to detect and categorise data from different study designs and intervention packages in a way that elucidates what interventions are effective for whom and under what conditions (Craig et al., 2008). This evidence base – along with a solid understanding of the literature regarding a particular problem’s prevalence, incidence, risk and protective factors, moderators and mediators – provides a foundation for the identification or development of the theory of change. *Theory of change* accounts for and explains the relationships between variables, how they work, and the mechanisms involved (Kazdin, 1999). It unpacks how and why an intervention would work by illuminating what variables should be targeted for change and the processes of change that will occur during treatment (Rapport, 2001). Outcome studies should hypothesise and test these

mechanisms of change, ideally allowing researchers to isolate and narrow down those core processes that span several interventions (Kazdin, 2001).

During the development phase, the MRC guidelines also underscore the necessity of examining the context in which a complex intervention would be tested and potentially implemented, including the deliverers, decision makers, population, and setting. This is likely to involve conducting formative research that sheds light on factors that may affect the feasibility piloting, evaluation, and implementation phases, including the community characteristics and needs, the political climate, available funding, and relevant policies; provider characteristics, such as self-efficacy and skill proficiency; and organisational capacity factors, such as appropriate staffing, work practices and processes, and the availability of training and support systems (Durlak & DuPre, 2008; Stith et al., 2006). Further, encouraging local input into new programming at an early stage is also imperative, as evidence-based interventions are more likely to be well implemented and sustainable in a given context when meaningful, collaborative methods have been undertaken to identify what intervention should be selected in the first place (Durlak & DuPre, 2008).

The *feasibility/piloting stage* lays down the critical preparatory work that is needed prior to a full-scale evaluation, and may take the form of a pilot RCT, pre-test and post-test assessment, or comparison control (Campbell et al., 2007). During this phase, the study may pose similar research questions regarding efficacy or effectiveness as an RCT, but on a smaller scale; alternatively, it may focus on asking whether and how an intervention can be conducted by assessing the key uncertainties identified during the development stage (Eldridge et al., 2016). During feasibility/piloting, aspects such as study evaluation approaches, ethical protocols, adverse events, and intervention feasibility and acceptability – including participant enrolment, attendance, and engagement – can be assessed alongside implementation fidelity measures (Andrews & Dowden, 2005; Kazdin, 2000; Thabane et al., 2010). Further, this phase provides an important opportunity to test the hypothesised theory of change, by allowing for exploratory

analyses of intervention effects; however, due to the small sample sizes inherent to pilot studies, these may not represent true effects (Westlund & Stuart, 2017). For this reason, pilot study findings of efficacy or effectiveness should be considered as one set of data points amongst many, including qualitative studies with the target population, robust theoretical models, and pre-trial economic evaluations (Craig et al., 2008; Westlund & Stuart, 2017).

During the *evaluation stage*, an appropriate study design should be selected according to the research questions posed and the context and circumstances in which the study will take place. Assessment of effectiveness usually involves individual or cluster RCTs, but can also include more complex designs such as stepped wedge or propensity score matching (Henry et al., 2017). By virtue of randomisation, robust RCTs can minimise selection and allocation bias, and can balance possible confounding variables by exposing the comparison and treatment groups to the same set of external factors over time (Kendall, 2003). Researchers can thus bolster the *internal validity* of a study by working to ensure that the comparison group closely resembles the true counterfactual (Gertler et al., 2011). Moreover, the evaluation phase is an opportunity to further test theory of change mechanisms and to explore for whom the intervention is effective, thus demonstrating the study's *external validity*, or the extent to which the treatment can be generalised in the real world. In order to examine such factors related to internal and external validity, a variety of tools are available to the researcher, such as using a probability sample, conducting a priori subgroup analyses, and examining mediators and moderators of effects (Flay et al., 2005; Kraemer et al., 2002). Finally, a critical aspect of evaluation design is outcome measure selection. A strong theoretical understanding of the intervention, as developed during the first stage and refined during feasibility/piloting, will guide the selection of outcome measures: ideally a pre-registered single primary outcome and a small number of secondary outcomes (Craig et al., 2008).

Finally, the *implementation phase* involves the translation of the evaluation findings into policy and practice. This sometimes protracted and difficult process requires collaborative and

concerted efforts to promote programme diffusion. Diffusion success often depends on how well information about the availability and benefits of the intervention are disseminated to communities, whether it is adopted by state or non-state service providers, how well it is implemented during a trial period, and how well it is managed over time (Durlak & DuPre, 2008). Strong on-going dialogue with community actors, which have ideally been 'on board' at the outset since the identification and development of the complex intervention, can help to optimise effectiveness during implementation (Stith et al., 2006). Successful implementation, in turn, tends to depend on variables such as organisational capacity, intervention adaptability and compatibility, and the availability of quality and sustained training and technical assistance (Durlak & DuPre, 2008). During this phase, these factors, any adverse events, and long-term impacts should be examined during surveillance, monitoring, and measurement of effects at a pre-specified point in time that is incorporated into the study design (Craig et al., 2008).

However, the MRC framework presents several limitations that stem from an overarching criticism – that the guidelines are overly broad and brief. This lack of detail has incited the issuance of extended guidance on process evaluation (Moore et al., 2015), a systematic methods overview of approaches to intervention development and provision of further guidance in this area (O'Cathain, Croot, Sworn, et al., 2019; O'Cathain, Croot, Duncan, et al. 2019), and a systematic review and extension to the guidance on the feasibility/piloting phase (Hallingberg et al., 2018). In relation to intervention development, Bleijenberg et al. (2018) posit that the MRC framework is missing important guidance on four important elements: problem identification and definition, determination of the needs of intervention recipients and providers, examination of current practice and context, and intervention design. Further, the MRC guidance on the feasibility/piloting stage lacks sufficient attention on determining when to design and conduct exploratory studies, appropriate methods, as well as criteria for whether an evaluation of effectiveness should be pursued (Hallingberg et al., 2018). Finally, the MRC framework does not contain explicit guidance on the potential of theory-driven evaluation approaches. De Silva et al.

(2014) argue that while such approaches are referenced in the framework, there are no specific recommendations regarding which theory-driven approaches to evaluation would be appropriate at certain stages or within particular contexts, as well as how they might be incorporated into the design and evaluation of complex interventions (Anderson, 2008; De Silva et al., 2014).

Despite these limitations, the MRC framework offers a number of advantages over other approaches to intervention development and evaluation. First, it has demonstrated widespread applicability and influence, underlying various approaches for adapting evidence-based social interventions in LMICs (Vellakkal & Patel, 2015; Chowdhary, Jotheeswaran, et al., 2014; Chowdhary, Sikander, et al., 2014; Jordans et al. 2011), and with 4,033 citations to date according to the Web of Science (accessed 11 August 2020) (Craig & Petticrew, 2013). Second, it presents a ‘theory and evidence-based approach to intervention development,’ as categorised by the systematic methods overview by O’Cathain, Croot, Sworn, et al. (2019). Such frameworks focus on progressive, cumulative, and systematic processes, combining published research evidence and formal theories specific to the intervention (O’Cathain, Croot, Sworn, et al., 2019). Similar theory and evidence-based approaches, such as the behaviour change wheel (Michie et al. 2014) and normalisation process theory (Murray et al. 2010), respectively lack emphasis on stakeholder involvement or only focus on one particular aspect of intervention development (O’Cathain, Croot, Sworn, et al., 2019). Finally, the MRC framework encourages a pragmatic and flexible approach to the selection of evaluation methods, including randomised trials and both qualitative and quantitative observational methods, while proposing guidelines to aid researchers in deciding when such choices would be appropriate (Craig & Petticrew, 2013). Conversely, the approach proposed by the Program for Effective Mental Health Interventions in Under-Resourced Health Systems (PREMIUM), which was designed for the development of empirically-supported psychological treatments in LMICs, is relatively prescriptive. The PREMIUM method, which accentuates the value of combining global evidence with local knowledge and practice, proposes

the conduct of in-depth interviews, key informant surveys, workshops, and case series during prescribed steps of the process and with specified stakeholder groups (Vellakkal & Patel, 2015).

Cultural and implementation context adaptation of parenting programmes

The time and high costs associated with adapting and conducting repeated evaluations of parenting programmes raise questions as to whether evidence-based parenting interventions from HICs should indeed be transported to LMIC contexts, rather than developed in situ. The *transportation* of interventions, which implies the transfer of a programme to a new context, often necessitates some level of adaptation. This may include modifications that are intended to reflect sensitivity to a new culture and local 'world views' (i.e., cultural adaptation) (Kumpfer et al., 2002), or adaptations to fit service system needs, priorities, and capacities, such as existing regulatory frameworks, organisational goals, staff knowledge and skills, user expectations, service system coverage and working modalities, as well as available funding (i.e., implementation context adaptation) (Damschroder et al., 2009; Greenhalgh et al., 2004). While the evidence base is still nascent, with the majority of relevant approaches focusing on issues of cultural adaptation in HIC sub-populations, the literature reveals that transportation efforts should strive for relevance, transparency, and compatibility while being scientifically defensible (Lau, 2006).

Empirical evidence from sub-group analyses of participants by ethnicity, as well as systematic reviews and meta-analyses of transported evidence-based parenting programmes, suggest that the successful transportation of such interventions is indeed feasible. Multiple RCTs of the Incredible Years have demonstrated effectiveness across different ethnic groups within the United States, including white, Latino, African-American, and Asian-American populations (Webster-Stratton & Reid, 2003), while parent-child interaction therapy (PCIT) has been effective in reducing abusive parenting across ethnic groups in another United States-based sample ($N = 110$), with no evident intervention by ethnicity interactions (Chaffin et al., 2004). Reviews of studies of interventions transported outside the country of origin have also shown initial positive

findings, as well as some mixed results. A systematic review ($N = 17$ studies) of the effectiveness of transported evidence-based parenting interventions on reducing child problem behaviour showed that 14 out of 17 trials of four programmes for parents of children aged 3-10 years (Incredible Years, PCIT, PMTO, Triple P) in 10 countries had substantial positive effects on child behaviour (random effects model $SMD = -0.71$, 95% CI $[-0.97, -0.44]$). Moreover, these effects appeared even stronger in countries that were culturally more distant from the intervention countries of origin (Gardner et al., 2015). Further, a multilevel meta-regression of 129 randomised trials showed that transported and home-grown parenting interventions were similarly effective, and revealed that these programmes were robust across 'brands' and geographic regions (Leijten et al., 2016). Despite these promising signs, the evidence regarding the effectiveness of transported parenting interventions to LMICs remains limited; the latter review identified only two trials of programmes from HICs transported to a LMIC that showed promising results on reducing disruptive child behaviour (in Iran and Panama), while the effects of another parenting programme transported to Indonesia were not significant (Leijten et al., 2016).

Questions regarding the adaptation of evidence-based parenting interventions often revolve around the tension between fidelity and 'fit'. Adaptation efforts that are overly extensive, perhaps by moving beyond 'surface' level characteristics to modifying the 'deep' core components that mediate intervention effects (Resnicow et al., 1999), may boost appeal to other cultural groups yet mitigate actual effectiveness. This dilemma is illustrated by the results from five studies of the Strengthening Families Programme, which compared a generic version of the programme to one that was culturally adapted. The generic programme produced slightly better outcomes, but recruitment and retention was 41% better with the adapted version (Kumpfer et al., 2002). However, the five studies used quasi-experimental, time lagged designs, which made it difficult to determine whether the effects were reasonably attributed to the programme, as well as what the reasons may be for the lack of stronger effects in the culturally-adapted versions (Kumpfer et al., 2002). Universal family-based prevention programmes, which are arguably largely influenced by

white, middle-class values in HICs (Kumpfer et al., 2002), are potentially less acceptable to ethnic minorities – who may hold different parenting norms and values and have other needs and circumstances. This consideration is relevant to the Thai context, which is characterised by 62 ethnic groups (UN Committee on the Elimination of Racial Discrimination, 2011), large rural-urban divides, pervasive internal and international migration, and with over one in eight children living in poverty (UNICEF Thailand, 2011). More recent research has indicated that surface and more extensive culturally adapted versions of parenting programmes may still both be acceptable to other ethnic groups, as long as participants regard the core parenting components as relevant to their parenting practices (Parra-Cardona et al., 2016). A recent RCT with Latina/o populations in the United States ($N = 103$ families) which compared a surface-level, culturally adapted version of PMTO with a more intensive, culturally adapted version and a waitlisted control resulted in medium to large effects on parenting skills in both adapted interventions at six-month follow-up. Both versions adopted careful adaptation processes while maintaining PMTO's core components, and no significant differences were found in participant satisfaction or retention between interventions (Parra-Cardona et al., 2017).

In addition to challenges regarding cultural fit, the modification of parenting programmes from HIC to LMIC contexts should take into account the likely differences in existing service system infrastructure, availability, accessibility, quality, and provider skill levels. Modifications that are more compatible with the new context, by aligning with organisational missions, capacities, priorities, and existing practices, are more likely to be implemented effectively (Durlak & DuPre, 2008). An RCT of the Incredible Years Teacher Training Programme in Jamaica ($N = 225$) provides an example of such an approach, where the intervention was adapted to include additional training exercises for paraprofessional teachers who lacked formal teacher training, with results indicating significant reductions in observed child conduct problems ($ES = 0.42$, 95% CI [0.12 – 0.71]) (Baker-Henningham et al., 2012).

Even when transported and highly altered evidence-based parenting interventions have

demonstrated effectiveness in LMICs, concerns arise over whether the additional investments involved are worth the accrued benefits. To date, many cultural adaptations have been driven by clinical observations and a desire by programme transporters to respect local cultures, rather than being rooted in empirically-based justifications (Lau, 2006). For this reason, critics such as Elliott and Mihalic (2004) have posited that cultural adaptation efforts are largely unwarranted, due to the existence of various prevention trials in which effects were shown to be robust across ethnicities. The adaptation of the CHAMP South Africa programme exemplifies the large burden of additional time and costs that may be incurred in cultural adaptation efforts. The programme was transported from the United States for the purpose of preventing risky sexual behaviours in youth by strengthening family cohesion and parenting skills. The adaptation process spanned six years of ethnographic research on risk and protective factors, the addition of culturally sensitive components, and altered modes of delivery. Although the programme led to improved outcomes for both parents and children (Bell et al., 2008; Bhana et al., 2010; Bhana et al., 2004; Paruk et al., 2009), it remains unknown as to whether a less extensively adapted version would still have been successful. Given the inconclusive findings from systematic reviews that culturally adapted versions of parenting interventions are more effective in comparison to unmodified versions, and the results from outcome and consumer studies that particular parenting strategies common to evidence-based programmes (such as praise and time-out) may be highly acceptable to diverse cultural groups and contexts (Ward et al., 2016), costly and sweeping changes to transported interventions should be viewed with caution.

The five-stage cultural adaptation framework (Barrera et al., 2013)

Several different models described in the literature can inform a systematic process for the cultural adaptation of a parenting programme for a new LMIC context, such as Thailand (Castro et al., 2010). These models (e.g., Kumpfer et al., 2008; McKleroy et al., 2006; Wingood & DiClemente, 2008) differ slightly in terms of their recommendations for the conduct of etiological

assessments and the sequence of the cultural adaptation process, but share essential elements that are well encapsulated in the five-stage framework developed by Barrera et al. (2013). The validity and usefulness of these models are suggested by the effectiveness of stage-developed culturally adapted programmes, such as the ADAPT-ITT model used with Zulu-speaking adolescents in Africa (Wingood & DiClemente, 2008); the adaptation of the Strengthening Families Program in Spain, the Netherlands, and elsewhere (Kumpfer et al., 2008); and the application of the Barrera et al. (2013) model itself to a lifestyle intervention for Latinas with Type 2 diabetes (Barrera et al., 2011; Toobert et al., 2011).

Similar to the development phase of the MRC framework, the first stage of Barrera's five-stage model (2013) involves information gathering to inform whether adaptation is justified and how components might be subsequently modified. For this purpose, theory- and data-driven approaches may help to determine when such adaptations are necessary for the intended target population (Lau, 2006). One such method is through formative evaluations, which can help to assess the extent to which an original intervention may be suitable to and accepted by a new cultural or subcultural group (Elwy et al., 2020; Stetler et al., 2006). The second, third, and fourth stages overlap with the feasibility/piloting phase of the MRC framework. The second stage pertains to preliminary adaptation design. During this phase, information gathered during the first step informs initial modifications to the original intervention, involving choices between leaving essential components intact, or altering deep structure components which may affect intervention success (Card et al., 2011; Kumpfer et al., 2008). It is important that an awareness of the continuum between fidelity and fit informs careful and deliberate approaches to such adaptation efforts (Resnicow et al., 2000). Nuanced and appropriate translation of programmes materials into the local language, as well as adjustments to the literacy level of the target population, is of critical importance during this phase (Barrera et al., 2013). The third stage focuses on testing the preliminary adaptation design, which provides an opportunity to test study procedures and measures that will be used during a later trial, as well as avenues for obtaining initial feedback

from both participants and those delivering the programme (Barrera et al., 2012; Osuna et al., 2009). During the fourth stage, findings from pilot testing inform adaptation refinement, returning to second stage considerations of the degree to which surface and deep structure are warranted. Barrera et al. (2013) suggest that a 'leadership team' should be involved at this stage, potentially consisting of investigators, programme staff, community level advisors, and members of the subcultural target population. The inclusion of programme developers at this time point may also be essential, as their approval of such modifications may be required prior to a trial, or they may be able to provide specific guidance on how to tailor the intervention without diluting core treatment mechanisms (Cabassa & Baumann, 2013). Finally, stage five involves the cultural adaptation trial, which coincides with the MRC framework evaluation phase. During this period, the effectiveness of the culturally adapted version is assessed. Such evaluations may include two-armed trials in which the adapted programme is compared to no intervention, usual care, or another control condition, while three-armed designs may involve comparisons with the original intervention (e.g., Newton & Perri, 2004) or with minimally adapted and 'fully' adapted versions (Sundell et al., 2014).

The RE-AIM model and implementation context adaptation (Glasgow et al., 1999)

In order to strengthen the ecological validity of a transported intervention, adaptations may also be necessary in order to ensure a better fit with the wider implementation context. The implementation context in this sense refers to the service system in which the intervention is embedded, and which comprises different contextual factors at multiple levels (e.g., client, provider, organisation, and regulatory framework) that will affect how the programme is successfully adopted, delivered, and sustained (Aarons et al., 2011). Such adaptations may take into account the expectations and concerns of clients as service users within this system, which may affect their ability to access and engage with the intervention (Axford et al., 2012). At the provider level, programme alterations may need to consider staff knowledge, skills, and beliefs

regarding the intervention, as such aspects can affect the receptivity of providers toward the programme, weaken or strengthen intervention fidelity, as well as generate either enthusiasm or resistance (Damschroder et al., 2009). At the organisational level, interventions may require modifications in order to suit myriad constraints, such as a lack of infrastructure, materials, qualified staff, technical knowledge, levels of supervision, and managerial oversight (Mangham & Hanson, 2010). In LMIC settings, such constraints can be considerable and highly variable depending on service system levels and sources of funding, integration with other relevant services, and availability of trained and experienced staff (Eaton et al., 2011). Finally, adaptations may need to be tailored to the regulatory framework of the service system. This level pertains to the policy framework for the provision and funding of relevant interventions within the service system, and which are affected by government strategies and commitment, monitoring of service coverage and quality, inter-agency collaboration, and potential for programme scaling up (Furlong & McGilloway, 2015). At this level, particular barriers often faced by LMICs will also need to be assessed and reflected in adaptation efforts, especially with regards to overly centralised or decentralised systems for planning and oversight, weak laws for policy enforcement and protection of vulnerable service users, as well as a potential reliance on donor funding priorities (Mangham & Hanson, 2010).

The RE-AIM model offers a framework which can reflect these varied levels of concerns within the wider implementation context, and which encourages a focus on ‘real world’ implementation factors beyond the efficacy-based research paradigm (Glasgow et al., 1999). In this model, the authors describe programme *reach* as referring to individual-levels of participation – the proportion of those in the target population who are able to utilise or are affected by the intervention. The *effectiveness* dimension pertains to the assessment of both positive and negative outcomes of the programme, with effectiveness trials moving beyond efficacy studies in order to reflect ‘real world’ conditions and yield results that are potentially generalisable to a wider population (Glasgow et al., 2003). The *adoption* domain relates to the proportion of settings

– including communities, organisations, and wider service systems – that adopt an intervention and express a level of commitment to incorporate it within routine service delivery. Within the *implementation* dimension, which concerns the extent to which the intervention is delivered as intended, the authors emphasise that individual level and programme level measures of implementation should be considered. Individual level measures refer to participant adherence to the programme; measures at the programme level comprise the extent to which staff maintain fidelity despite competing organisational demands (Glasgow et al., 2003). Finally, the *maintenance* domain is described as the extent to which an intervention becomes institutionalised within an organisation and broader service system, and is able to follow through on stable, routine programme delivery over time (Glasgow et al., 1999).

Integrated conceptual model for cultural and implementation context adaptation

This thesis proposes an integrated conceptual model (see Figure 2) that takes into account both Barrera et al.'s (2013) five-stage cultural adaptation framework and the RE-AIM model, recognising the importance of bringing together cultural adaptation and implementation science. As discussed in more detail in the methodology chapter (Chapter II), the thesis encompasses the first three cultural adaptation stages within this conceptual model, beginning with information gathering and followed by preliminary adaptation design and testing, in order to prepare for a subsequent full evaluation.

The adoption of an integrated model is necessary for several reasons. First, this new model reflects the importance of taking a careful, stepwise approach to cultural adaptation efforts, while also considering modifications that reflect multi-level and multi-dimensional factors within the broader context that may enable or impede successful implementation. Second, the model suggests that cultural adaptation efforts should not be undertaken in isolation from the wider implementation context. Not only are both aspects interrelated, with cultural patterns, meanings, and values permeating an ecology that encompasses users, providers, organisations,

and broader service systems, but both realms ideally pursue the shared goal of improving programme usage and delivery within usual care settings (Cabassa & Baumann, 2013). Finally, the model demonstrates that cultural issues at client and provider levels should be visible and explicit in implementation efforts. Adaptations that do not sufficiently take into account these cultural aspects may result in the reduced relevance, acceptability, sustainability, and effectiveness of an intervention when adopted as part of usual care (Cabassa & Baumann, 2013; Castro et al., 2004).

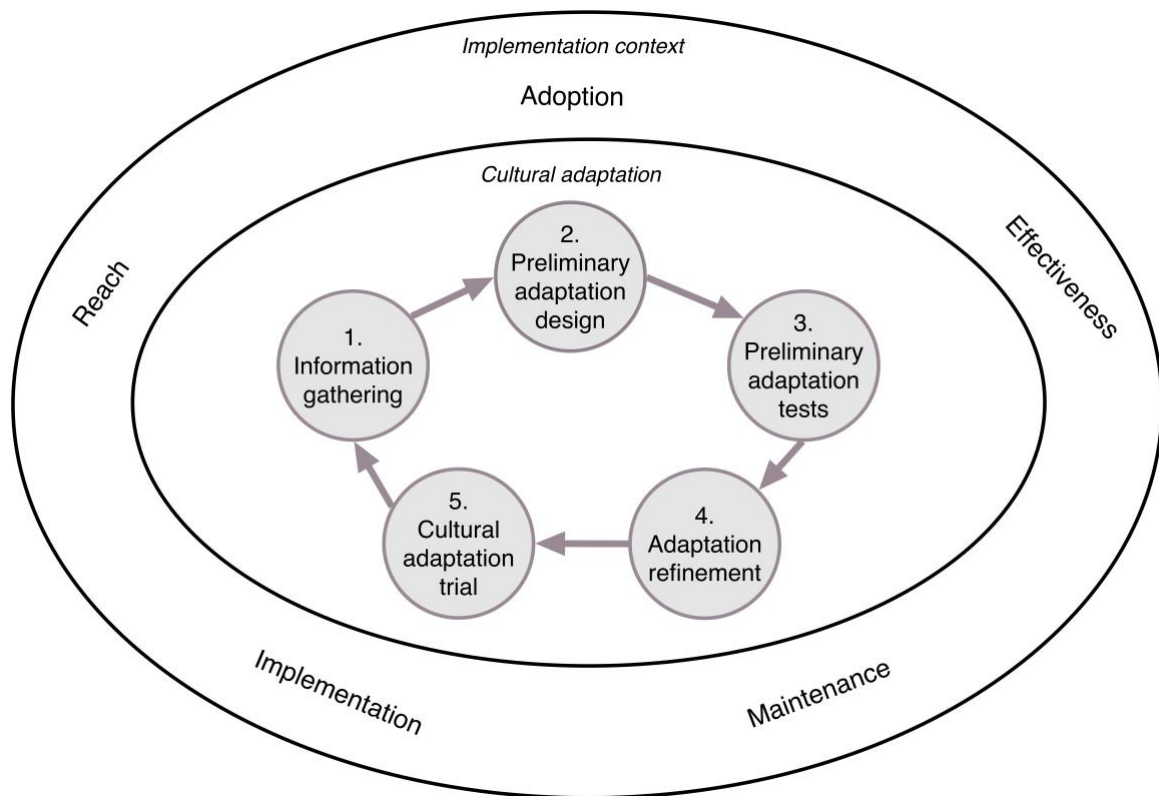


Figure 2. Integrated conceptual model for cultural and implementation context adaptation

This integrated model, in line with the MRC guidelines and similar adaptation frameworks, emphasises a cautious and iterative process that incorporates important feedback loops. These loops constitute multiple points during the adaptation process when researchers seek answers to fill in knowledge gaps on an on-going and non-linear basis, referring to previous and subsequent stages (Richards & Hallberg, 2015). In this manner, intervention development may continuously evolve, with refinement based on emerging knowledge regarding intervention effectiveness,

acceptability, and the potential for adoption and implementation within daily practice (Bleijenberg et al., 2018; O’Cathain, Croot, Duncan, et al., 2019).

Under this model, during the stages of information gathering and preliminary adaptation design, the involvement of clients and providers may help to determine if such partners identify with the intervention and perceive it as beneficial. This may provide early indications as to whether the intervention is likely to be acceptable and accessible by the target community, as well as be adopted and maintained by the implementing organisation following the cultural adaptation trial. Moreover, the establishment of mechanisms for coproduction or consultation between intervention developers, researchers, clients, providers, officials, and local academics on intervention adaptation can facilitate informed decision-making and on-going changes due to shifting community needs, human and financial resources, and political priorities (Cabassa & Baumann, 2013). For this purpose, the conduct of in-depth interviews and focus group discussions with members of the target community, as well as practitioners, administrators, policymakers, and academics who are instrumental to programme implementation, are often necessary during this initial phase. During the stages of preliminary adaptation tests and adaptation refinement, further information and feedback on implementation processes and outcomes is likely to emerge. Intervention piloting should elucidate issues concerning intervention fidelity, and whether non-compliance or non-adherence may be due to a lack of fit with intervention and provider competencies, organisational capacities and support for programme implementation, and wider social norms, practices, and perceived community needs (Marsiglia & Booth, 2015). Providers may also demonstrate spontaneous adaptations to the intervention during piloting, based on clinical judgment or experience with the target group, which should be empirically examined and used to inform further refinements (Lau, 2006). In addition, the implementation context, including the implementing organisation and stakeholders involved, may also experience modifications due to a process of mutual adaptation. Such alterations may include aspects that improve intervention accessibility, responsiveness, and feasibility, such as changing hours of operation or adjustments

to client flow protocols (Cabassa & Baumann, 2013). Such changes also should be carefully captured by researchers, given their implications for improving intervention fit as well as potential for affecting human and financial resourcing during scale-up. Finally, feedback during and after the cultural adaptation trial may lead to even further intervention adaptation. A balance may need to be achieved between client recruitment, retention, and outcomes, particularly if essential ingredients were altered in order to improve programme acceptability (Lau, 2006). Moreover, even after evidence of effectiveness has been generated, intervention “drift” may occur during implementation when the programme is not delivered with fidelity. Factors contributing to these drifts, such as insufficient provider training or poor integration into the usual care setting, should be thoroughly assessed and discussed in collaboration with providers and implementing organisations (Aarons et al., 2012).

Parenting for Lifelong Health for Young Children and programme theory of change model

Following the completion of the systematic review and multi-level meta-analysis (Chapter III), and drawing on findings from a literature review, qualitative study, and consultation process with national stakeholders as described in section 1.1 of this chapter (see p. 19), the PLH-YC programme was identified by the DPhil candidate and the programme developers as a contender for testing within the public health system in Thailand. The original and adapted programme components are described in the introductions of Chapters IV (see p. 197) and V (see p. 260).

Given the potential need for extensive adaptation rooted in scientific data, and balanced with concerns that many ‘branded’ interventions such as Triple-P and the Incredible Years charge significant fees for training packages and copyrighted materials, it is important to consider ‘home-grown’ solutions in LMICs that incorporate core components associated with programme effectiveness (Kaminski et al., 2008). The Parenting for Lifelong Health (PLH) initiative, which comprises a suite of four programmes for parents of children aged 0-6 months (PLH for Babies), 10-60 months (PLH for Toddlers), 2-9 years (PLH-YC), and 10-17 years (PLH for Adolescents), is one

such endeavour (http://www.who.int/violence_injury_prevention/violence/child/plh/). PLH programmes were originally developed, piloted, and trialled with low-income families in South Africa (Cluver et al., 2018; Cooper et al., 2009; Cooper et al., 2013; Lachman et al., 2017; Murray et al., 2016; Vally et al., 2015; Ward et al., 2014), with programme goals including the reduction of child maltreatment and child behaviour problems, as well as the promotion of child development and wellbeing. The overall purpose of the PLH initiative is to develop and disseminate affordable, not-for-profit programmes in LMICs based on rigorous evidence of effectiveness, while providing opportunities for the testing of empirically based adaptations that still preserve core underlying principles and mechanisms of change.

PLH-YC was developed through a staged process that involved the identification of common core intervention components in evidence-based parenting programmes (further described below). A formative evaluation with practitioners and parents in low-income communities of Cape Town subsequently informed the development of the intervention structure, format, and protocols, resulting in a manualised, group-based, 12-session programme (Lachman et al., 2016). A pilot RCT of PLH-YC in Cape Town involved programme delivery by local NGO staff to low-income parents ($N = 68$), with results showing moderate treatment effects on parent-reports of positive parenting ($d = 0.63$, 95% CI [0.14, 1.12]) and observational assessments of parent-child play ($d = 0.57$, 95% CI [0.09, 1.06]); however, there were no significant effects on child maltreatment (Lachman et al., 2017). A subsequent RCT of PLH-YC with parents ($N = 296$) in Cape Town, utilising the same NGO facilitators, showed significant results that included a 10% increase in caregiver-reports of positive parenting, a 39% increase in observed positive parenting, a 11% increase in observed positive child behaviour, and less physical and psychological discipline (28% and 14% less, respectively) at immediate post-intervention. While significant differences between groups were not sustained at one year follow-up on measures of negative discipline, positive effects on both observed positive parenting and observed positive child behaviour (24% and 17%, respectively) were sustained (Ward et al., 2019). Further evaluations have been conducted in the

Philippines (Lachman et al., 2020) and are underway in South-eastern Europe (Lachman et al., 2019), with the former showing significant child maltreatment effects at immediate post-intervention (39% reduced risk, $p = 0.001$) and one-year follow-up (23% reduced risk, $p = 0.027$), as well as significant effects on child problem behaviour at post-intervention (5% reduced risk, $p = 0.049$) but not at follow-up.

Building on the original PLH-YC programme theory of change model (Lachman et al., 2017), as well as mechanisms of change identified in systematic reviews and RCTs of social learning theory and evidence-based parenting interventions designed to reduce child maltreatment, this thesis proposes a slightly modified theory of change model for testing PLH-YC during the feasibility/piloting phase in the Thai context (see Figure 3). During the development of the programme in South Africa, Lachman et al. (2016) identified core intervention components associated with evidence-based parenting programmes with robust evidence for improving parenting behaviour and reducing child behaviour problems, such as the Incredible Years, PCIT, PMTO, and Triple-P. Moreover, the authors examined studies using a distillation and matching model approach to examine the frequency of particular evidence-based behaviour change techniques (Chorpita et al., 2015). They also considered the results from a meta-analysis by Kaminski et al (2008) to synthesise findings from 77 published evaluations of parenting programmes for children aged up to seven years, identifying programme components consistently associated with larger effect sizes. Finally, the authors examined additional delivery methods and other implementation factors that would enhance participation and engagement, as commonly described in the literature. The resulting programme components for PLH-YC, which were adapted for Thailand based on findings from this thesis, are depicted on the left-hand side of the model.

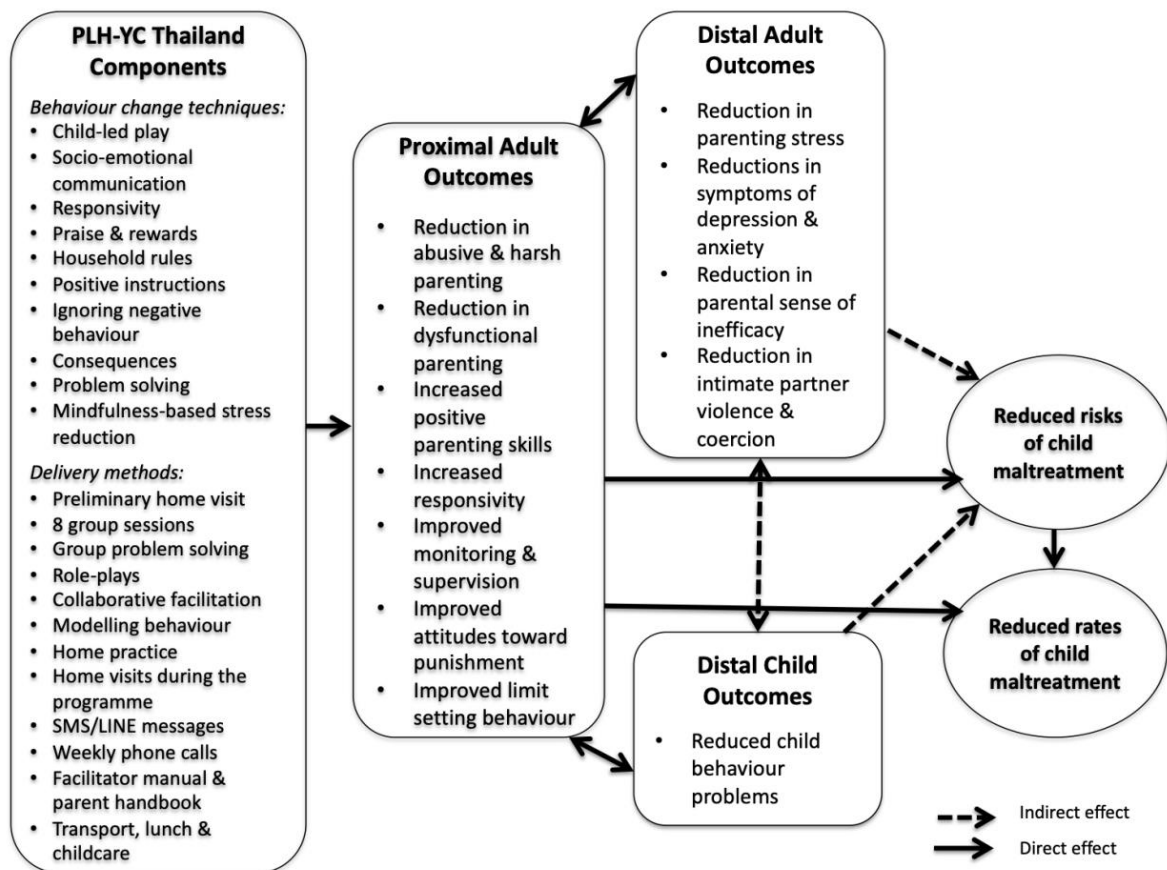


Figure 3. Feasibility/piloting phase theory of change model for Parenting for Lifelong Health for Young Children in Thailand

These programme components affect several proximal adult outcomes described by Lachman et al. (2016) and other trials of similar programmes, including those conducted in LMICs: reductions in abusive and harsh parenting; reductions in dysfunctional parenting; increased positive parenting skills; increased responsivity; improved monitoring and supervision; improved attitudes toward punishment; and improved limit setting behaviour (Chen & Chan, 2016; Furlong et al., 2012; Knerr et al., 2013; Leung et al., 2003; Puffer et al., 2017). These improvements in parenting behaviour can also affect more distal adult outcomes, by reducing parenting stress; reducing symptoms of depression and anxiety; and reducing parental sense of inefficacy (Alampay et al., 2018; Armstrong et al., 2005; Barlow et al., 2002; Bennett et al., 2013; Gardner et al., 2006). As parental sense of inefficacy decreases, parents may be more willing to employ more inductive and positive parenting strategies for responding to child resistance (Strickland & Samp, 2013).

Positive changes in parenting behaviour can directly affect distal child outcomes, such as reducing child behaviour problems and improving socio-emotional regulation (Barlow et al., 2010; Furlong et al., 2012). The bidirectional relationship between child behaviour and parenting practices may result in improvements in child behaviour problems contributing to further reductions in negative parenting practices, such as the use of violent discipline (Lansford et al., 2011; Pardini et al., 2008). Finally, as a direct consequence of reductions in abusive and harsh parenting, rates of child maltreatment are reduced, although the evidence more strongly favours reductions in child physical and emotional abuse over neglect (Chen & Chan, 2016; MacMillan et al., 2009). Further, improved proximal and distal parent outcomes, as well as distal child outcomes, may lead to the reduced potential for child maltreatment (Chen & Chan, 2016).

Two minor changes were made to the original theory of change model for the purpose of the feasibility pilot in Thailand, incorporating emerging evidence from RCTs of PLH-YC as well as the extant literature. First, reducing intimate partner violence was added to the model as a distal adult outcome, based on initial positive effects from the RCT of PLH-YC in the Philippines ($N = 120$). At one month post-test, findings included a 63% reduced risk of intimate partner violence in the intervention group in comparison with the control group ($\beta = -0.99$, $p = 0.021$); however, while a reduced risk between groups was sustained at one-year follow-up, this was no longer significant ($\beta = -0.68$, $p = 0.173$) (Lachman et al., 2020). The related distal adult outcome of reducing intimate partner coercion was also included, given that acts of coercive control often co-occur with intimate partner violence, yet are seldom conceptualised and measured as a separate construct (Dutton & Goodman, 2005). Given that family systems theories suggest that there are reciprocal influences between parent-parent and parent-child dyads, the theorised causal pathway is that improvements in parenting behaviour and subsequent reductions in child behaviour problems may reduce inter-partner conflict (Cui et al., 2007; Erel & Burman, 1995; Krishnakumar & Buehler, 2000). As discussed in Chapter IV, while indicative effects from the feasibility pilot suggested reductions in intimate partner violence, thus strengthening the justification for inclusion of this

outcome in the model, a similar impact on inter-partner coercion was not found and requires further examination during the RCT. Second, increased perceived social support was removed as a distal adult outcome. The model utilised in South Africa originally theorised that improvements in parent-child relationships and collaborative participation in the parenting programme may increase perceptions of social support (Armstrong et al., 2005; Lachman et al., 2017). However, both the feasibility pilot RCT ($N = 68$) (Lachman et al., 2017) and the subsequent full-scale evaluation in South Africa ($N = 296$) (Ward et al., 2019) found no significant differences between groups on this outcome.

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CHAPTER II. METHODOLOGY

2.1 Overview

This chapter presents the overall methodology for this thesis, which is underpinned by a mixed methods evaluation design. The first section reviews the mixed methods design and its constituent components, organised according to the first two phases of the UK Medical Research Council (MRC) framework on developing and evaluating complex interventions: the development stage and the feasibility pilot stage (Craig et al., 2008). The following sections discuss the study setting, participants, ethical and safety considerations, data management, study designs, and measurements for each of the three thesis papers (Chapters III, IV, and V). While these aspects are also covered in the methods sections of each of these papers, this chapter aims to describe the overall mixed methods approach and how each paper is interrelated, draw out particular methodological concerns, and provide more detail on the various methodological steps undertaken.

2.2 Mixed methods approach and paper inter-linkages

The overall objective of a *mixed methods evaluation design* is to evaluate an intervention through a series of steps, with mixed methods used over time and in one or more phases of the intervention development, adaptation, and evaluation process (Creswell & Plano Clark, 2017). Mixed methods approaches have been defined as ways for presenting multiple standpoints to make sense of the social world; they entail the collection and rigorous analysis of both qualitative and quantitative data according to a specific design, which sets forth the study logic and procedures (Creswell, 2014; Greene, 2007). Such approaches capitalise on the strengths of both quantitative and qualitative methods, while attempting to ameliorate their respective weaknesses by mixing, combining, or integrating these strands. This implies building on the limited generalisability of results from qualitative research, while augmenting the limited depth of insight that is characteristic of quantitative research findings (Green et al., 2015).

Within the extant literature on parenting interventions, various evaluations have used mixed methods approaches in order to enrich study findings regarding programme impact on families (e.g., Lachman et al., 2016; Levac et al., 2008; Mejia et al., 2016; Spitzer et al., 1991). These methods offer several notable advantages over quantitative or qualitative methods alone. First, mixed methods approaches can help to speed the translation of a parenting intervention from a trial setting to real world contexts, due to greater opportunities for unearthing complexities in programme implementation and participant experiences (Gallo & Lee, 2015). Second, such methods may illuminate how parenting programme developers and deliverers may be able to adapt an intervention to better address the specific concerns, views, and needs of participants (Holtrop et al., 2014). Finally, these methods can assist in formulating causal hypotheses regarding how the programme works, by identifying potential mediators from the point of view of participants, as well as clarifying why particular groups appear to respond better to an intervention than others (NIH Office of Behavioral and Social Sciences, 2018).

As an umbrella epistemological framework for the mixed methods approach, this thesis uses a pragmatic philosophical assumption. *Pragmatism* is a worldview that is often associated with mixed methods research, given that it is problem-centred, focuses on research consequences, and emphasises pluralism and real world practice (Creswell & Plano Clark, 2017). At the paper level, this worldview is also adopted by the feasibility pilot study (DPhil Paper 3), which in itself employs a mixed methods approach with quantitative and qualitative approaches utilised in close succession. This paper is preceded by a quantitative paper (DPhil Paper 1) that assumes a *post-positivist* worldview, with an emphasis on determinism and causal relationships, reductionism, and detailed measures (Slife & Williams, 1995). Moreover, the qualitative study that follows it (DPhil Paper 2) adopts a *constructivist* worldview, a philosophical assumption commonly associated with qualitative approaches. Constructivism focuses on the understanding of phenomena as informed by the subjective views of participants, with research guided in a ‘bottom up’ manner extending from individual participant viewpoints to broader patterns and insights

(Creswell & Plano Clark, 2017; Denzin, 2012). Based on this philosophical foundation, a mixed methods evaluation design (see Figure 4) was selected as the overall rubric for this thesis. This design is commonly applied to complex evaluation projects that contain multiple objectives and several phases, such as needs assessment, adaptation, intervention development and testing, and assessment of intervention impact.

During stage one, the development phase of this thesis, a quantitative approach was undertaken to conduct the systematic review and multi-level meta-analysis (DPhil Paper 1), with the study design and specific methodological steps described in Section 2.7 of this chapter (p. 105), as well as in Chapter III (p. 145). These results were integrated with the findings from a consultative and strategic planning process with UNICEF Thailand and national stakeholders in 2016 (McCoy, 2016; McCoy & Supaporn, 2016c), as well as two studies – qualitative research on the demand for and interest in parenting interventions by parents and practitioners in Thailand (McCoy & Supaporn, 2016a), as well as a ‘mapping’ of relevant parenting policies and programmes (McCoy & Supaporn, 2016b) – in order to inform the selection of an evidence-based parenting intervention for testing. As discussed further in Chapter VI (p. 305), while these consultations led to the identification of the public health system as the most appropriate platform for programme delivery, the systematic review did not identify a clear, parenting programme candidate for adaptation and piloting. The subsequent selection of Parenting for Lifelong Health for Young Children (PLH-YC), in dialogue with programme developers, was based largely on its suitability for LMIC settings, evidence of effectiveness in two other middle-income countries, as well as free availability (Lachman et al., 2020; Lachman et al., 2017; Ward et al., 2019).

The selection of PLH-YC informed the development of interview and focus group questions for the next component – a formative evaluation conducted using qualitative methods (DPhil Paper 2). The study design and detailed methods undertaken are also described in Section 2.7, as well as in Chapter IV (see p. 107). The results from this evaluation then informed the adaptation of PLH-YC for the Thai context, as well as guided the development of study procedures for the

feasibility pilot. As discussed in more detail in Chapter VI (see p. 312), findings of high levels of relevance and suitability of PLH-YC led to mainly surface structure programme adaptations (e.g., utilisation of health workers as facilitators and recruiters, selection of Health Promotion Hospitals for the programme setting, modifications to illustrated stories), as well as minor modifications to deep structure components (e.g., removal of content on time-out).

During stage two, the feasibility pilot phase, the adapted PLH-YC programme was tested using a *mixed methods experimental design*, with a qualitative component embedded within a larger quantitative study. This design is typically utilised to supplement the scientific testing of an intervention with personal and contextual experiences (Creswell & Plano Clark, 2017). During the feasibility pilot (DPhil Paper 3), the assessment of the effects of the intervention on primary and secondary outcomes was prioritised, while individual interviews with selected participants were conducted to explore perceived mechanisms of impact and complement quantitative findings. The embedded qualitative component was linked to the quantitative strand, as programme attendance data was used to inform the sampling of participants for interview. The design for this study is also discussed in Section 2.7 (see p. 110), with methods explained in Chapter V (see p. 255). Finally, as discussed in Chapter VI, the concluding chapter of this thesis, the combined findings from the first and second phases led to key conclusions based on pre-established theoretical frameworks, and were used to examine implications for policy, practice, and further research.

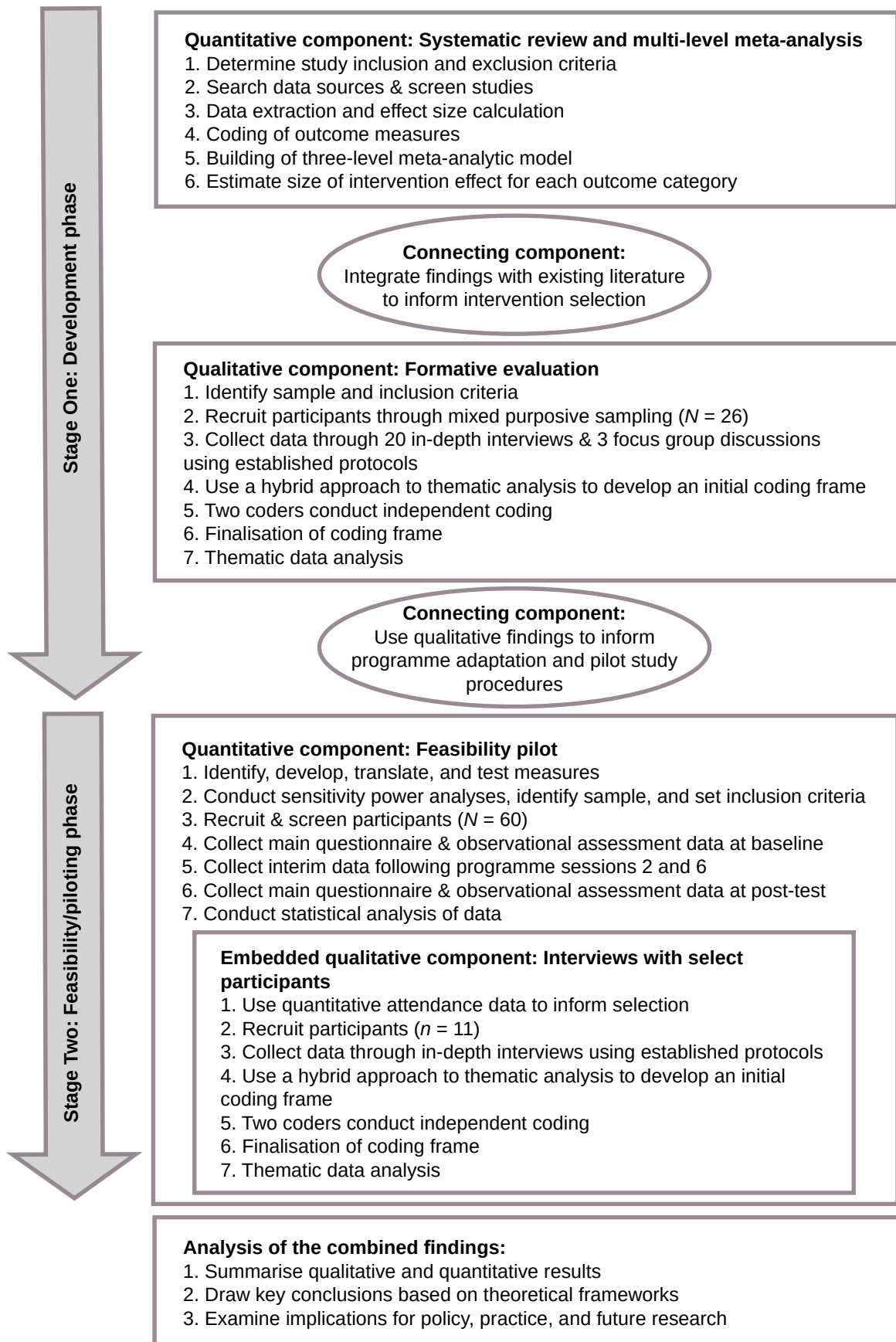


Figure 4. The mixed methods evaluation design adopted by the thesis

2.3 Setting

Thailand is an upper-middle income country located in the Greater Mekong Sub-region of Southeast Asia (The World Bank, 2020). This study was conducted primarily in Udon Thani province in the Northeastern region of Thailand, although some qualitative data was collected in the capital of Bangkok (see Figure 5). The Northeast – also termed *Isan* – is the largest and most populous region of the country, consisting of 20 out of 76 provinces and 19 out of 67.5 million people (United Nations Population Fund [UNFPA] and the Office of the National Economic and Social Development Board [NESDB] of Thailand, 2015). Bordering the Lao People’s Democratic Republic and Cambodia, people of diverse ethnic identifications reside in the region, including Lao (the majority), Thai, Khmer, Suay, Phu Tai, Vietnamese, and Chinese (McCargo & Hongladarom, 2004). Most *khon Isan*, or those native to the Northeast, speak the Isan language at home; however, the Central Thai language is widely understood (Premssirat, 2007).



Figure 5. Map of Thailand with study sites circled (UN, 2009)

There is a widespread perception among *khon Isan* that they belong to a relatively marginalised and disadvantaged group in comparison with the rest of the Thai population (McCargo & Hongladarom, 2004). Survey data appear to confirm this sense of disparity, as represented by high levels of poverty and other risk factors for child maltreatment, including early

marriage and low levels of education. Isan is home to almost half (44.8%) of the country's poor (UN, 2016), which has a poverty incidence of 18% compared to 13% nationwide (United Nations Development Programme [UNDP], 2014). This has compelled many *khon Isan* to seek work in the industrial, construction, agriculture, or service sectors in Bangkok, neighbouring provinces, or overseas, with internal migration studies showing that between 35-70% of Isan workers have relocated to the capital (International Organization for Migration, 2011; Lao et al., 2019). This out-migration of many working age men and women has resulted in a high prevalence of skipped generation households, with nearly half of all such families in Thailand (47.1%) residing in the Northeast (United Nations Population Fund [UNFPA] & Office of the National Economic and Social Development Board [NESDB], 2015). In addition, early marriage (before the age of 18 years) is a growing concern in Isan, with girls being more likely to marry early than those in other regions (UNFPA & NESDB, 2015). Finally, the Northeast is further characterised by low levels of education, with nearly one-third (32.6%) of *khon Isan* aged 15 years and older having attained a lower than primary level of education (UNDP, 2014).

According to a report by UNDP (2014), Udon Thani province fares somewhat better than many neighbouring provinces in the Isan region on poverty, income inequality, and education indicators. The province has a poverty incidence of 11%, with 30.3% of those aged over 15 years having an educational attainment of lower than primary level; income inequality is also akin to the national average, with a Gini coefficient of 0.525 compared to 0.535 nationally. However, it exhibits higher risk factors on several indicators compared with national averages, with 37% of households headed by the elderly (32% nationally), 65% of the population affected by drought (26% nationally), and 24% of the population reporting alcohol consumption (20% nationally). On a more holistic front, according to the same report, the province is ranked 44th out of 76 provinces on the Human Achievement Index, a composite index used to compare provincial level human development and comprising eight indices on health, education, employment, income, housing

and living environment, family and community life, transport and communication, and participation.

Cultural and contextual issues affecting study and programme implementation

Particular sub-national economic development and demographic trends, along with cultural norms and practices regarding the importance of social status, are relevant to the conduct of the study with low-income families in Isan. Two such issues pertain to grandparents as primary caregivers of young children, as well as the pervasive and deeply ingrained social stratification within Thai society.

Firstly, the study involved a large proportion of grandparents who act as primary caregivers for their grandchildren, either with or without the co-residence of their adult children. Thailand's rapidly ageing society, in which 37% of the population is projected to be aged over 60 years in 2050, as well as the high rates of out-migration in Isan (see p. 84), have contributed to the large number of skipped generation households in which 33% of Isan children live with neither biological parent (National Statistical Office [NSO] & UNICEF, 2016). These family structures were also reflected in the feasibility pilot sample, with the majority comprising grandparents and great grandparents (65%) and with neither biological parent living in 27% of participating households (see p. 270).

The role of grandparents as primary or secondary caregivers in Thailand is similar to other Asian contexts, where cultural norms emphasise that older family members should care for those who are younger, with these younger members then expected to demonstrate gratitude and indebtedness (Ingersoll-Dayton et al., 2018; Podisita, 1998). This reciprocal support system is lifelong and underpins the obligation that adult children feel in supporting ageing parents, while these older family members make important contributions through household chores and by caring for grandchildren – even when adult children move elsewhere for employment (Knodel & Teerawichitchainan, 2018).

Although the extant literature in Thailand is sparse, it suggests that primary caregiver grandparents face particular challenges in this context. One such challenge may be the greater likelihood of living in households with relatively lower socio-economic status compared to those who do not undertake such a role. Using data from a nationally representative survey on older persons in Thailand and adjusting for socio-demographic covariates, Knodel and Teerawichitchainan (2018) found that amongst grandparents who cared for grandchildren with absent parents, those in the lowest wealth category had significantly higher odds of caring for a grandchild under the age of 10 years. This association between income status and caregiving was also found in a mixed methods study on grandparent and grandchild relationships in Isan ($N = 1,934$), with grandparents who served as 'replacement parents' for their grandchildren being more likely to have less income than those who did not fulfil such a role (Kamnuansilpa & Wongthanavas, 2005). A second difficulty may be the greater likelihood of mental health problems. In a survey conducted with parents and primary caregivers in rural Thailand ($N = 1,456$), caregivers in households where both adult parents had migrated, and who were mainly grandparents, presented the highest risk of mental health problems (Jampaklay et al., 2012). Finally, a third challenge is posed by limitations to physical health. National survey data on persons aged 60 years and up indicated that 15% and 12%, respectively, cannot see or hear clearly even with glasses or hearing aids; moreover, one-third reported having any functional limitations, including difficulties in walking 200-300 meters and climbing two or three stairs (Knodel et al., 2015). Such limitations are especially prevalent amongst grandparent caregivers, with those providing regular care to grandchildren less than 10 years of age being more likely to report having a functional difficulty (Komonpairsarn & Loichinger, 2019).

Such challenges faced by primary caregiver grandparents have important implications for the conduct of this study in Isan. In high-income countries, low socio-economic status has been identified as a barrier to research and programme participation in Triple P (Heinrichs et al., 2005). Similarly, in South Africa, qualitative research identified that low levels of income inhibited access

to two different group-based parenting programmes, with lack of transport, childcare, and food identified as specific impediments (Wessels et al., 2016). In Thailand, the provision of such services and incentives may be even more critical to grandparents who are primary caregivers, and available transport options may need to include additional support for those with functional limitations. Programme delivery should also take into account visual and hearing impairments, by ensuring that PLH-YC parent handbooks and illustrated story posters utilise sufficiently large font sizes, and facilitators may need to speak at a higher volume. Finally, while 77% of those aged over 60 years in Thailand do own either a feature or smart mobile phone, such rates are lower than for other age groups (NSO, 2018), and are likely to be reduced further still for those with low socio-economic status. This suggests that facilitators may need to find additional ways of boosting grandparent engagement other than through the phone calls and text messages that are part of both the original and adapted PLH-YC programme.

The second issue that affected the conduct of this study was the strong influence of hierarchical social relationships. This cultural system of social stratification, linking together power, social status, and religious virtue, emphasises the importance of knowing one's relative position or status within society, and is commonly perceived as a central feature of Thai culture (Klasnuer, 1993; Mulder, 2002; Vongvipanond, 2003). The historical precedent for this system can be traced to *sakdina*, or 'power over fields,' which was established by King Trailok of Ayutthaya to systematically classify all members of society in descending order of status (Vorng, 2011). Within this system, the accumulation of *bun* (Buddhist merit) from past existences determines the position occupied by all sentient beings - including deities, humans, and even insects – within an elaborate, cosmic hierarchy (Vorng, 2011). Socio-political inequalities and one's present social status is thus justified as a consequence of past karma, and individuals are therefore encouraged to accept and behave according to his or her present position (Alexander & McCargo, 2014; Somboon, 1977). Although the *sakdina* system no longer formally exists, it retains its influence on contemporary inter-personal relations (Muttarak, 2004). In these interactions, individuals are

encouraged to be aware of *kalathesa* ('time and place') and *ruu thi suung thi thum* ('to know what is high and what is low'). Together, these concepts allude to conducting oneself in an appropriate manner given the time, place, and other persons present (Vorng, 2011). Body parts are also given high and low classifications, with the head constituting the highest part and the feet the lowest, with individuals expected to be constantly mindful of how these parts are placed in relation to others (Vongvipanond, 2003). Further, the notion of *krengchai*, or an "attitude of modesty and deference," also plays a role in these dynamics, as individuals strive to avoid disturbing or burdening others (Weisz et al., 1987, p. 720).

This hierarchical system and the social values and norms it promotes had implications for four different types of relationships encountered during the course of this study: Bangkok-Isan, inter-professional, health professional-parent, and parent-child. First, the Bangkok-Isan relationship pertains to the position of the capital as the nexus for modern (*thansamai*) culture and civilised (*kwaam charoen*) lifestyles, while Isan occupies a rural space that is associated with inferiority and intellectual backwardness (Alexander & McCargo, 2014; Gullette, 2014). This high-low dynamic extends to a language divide, with the Isan language, despite its closer association to Lao, framed as a 'dialect' of Central Thai, and with the latter permitted as the sole official medium of instruction and government communications (Alexander & McCargo, 2014). This hierarchical relationship was apparent in the feedback obtained during the formative evaluation regarding the preferred language for programme delivery. All participants emphasised the importance of using Central Thai for programme materials, while indicating that facilitators could individually and informally deliver the programme using the Isan language. The Bangkok-Isan tension also affected the dynamics of the Parenting Experts Working Group during focus group discussions (FGDs), with the sole participant from Isan making only a few, hesitant contributions in the presence of members who mainly hailed from Bangkok. It also contributed to the importance of conducting individual interviews with parents in the Isan language, in order to attempt to lessen the hierarchical divide between myself as interviewer, and the parent as respondent.

Second, the relationships between health professionals affected study and programme implementation. This was attributable to the cohort of eight PLH-YC programme facilitators, who comprised individuals from different levels of professional seniority (see p. 94), social class, income, age, and workplace location within city and rural sub-districts. While the original PLH-YC programme was designed for delivery by pairs peer facilitators, this construct became strained when professionals with different levels of status were partnered in this context. At one programme site, a nurse was paired with a Village Health Volunteer (VHV), with the former frequently deriding the knowledge and skills of the latter, ultimately assuming a dominant role in programme delivery. In addition, the conduct of the FGD with facilitators was also affected, with the VHV and the youngest public health officer demonstrating reluctance to actively contribute to the discussion.

The health professional-parent relationship was the third type of dynamic. Doctors and other health professionals are greatly respected and often perceived as persons of high status who impart crucial information; challenging their advice may imply that they are ‘wrong,’ and may result in loss of face for both professional and patient (Klausner, 1993; Matusitz & Spear, 2015). The notion of *krengchai* may also contribute to reticence on the part of the patient to question the health professional, and encourages emotional distance between the parties (Matusitz & Spear, 2015). The utilisation of health professionals as programme facilitators in this context may thus deviate from the original PLH-YC model in South Africa, in which facilitators were paraprofessional community members and closer in status to parents (Lachman et al., 2017; Ward et al., 2019). This wide disparity between health professionals and low-income parents in Thailand made it challenging for facilitators to adopt a collaborative, non-didactic approach focused on reflective listening, parent-led problem-solving, and the frank discussion of personal and sensitive issues.

Finally, the nature of the parent-child relationship within Thai society also had implications for programme delivery. From a very young age, Thai children are often taught a moral obligation to accept a hierarchical social structure, including within the family, with children expected to

defer to older family members and comply with parental teachings (Keats, 2000; Putnick et al., 2012). However, some of the PLH-YC parenting skills may imply an elevation of the child's status in relation to the parent. Child-led play, socio-emotional communication, and the encouragement of child participation in setting household rules and resolving conflicts may be difficult skills for parents to accept and apply. In particular, the child-led play technique encourages parents to be at the same level of the child. Given that Thai children are taught to keep one's head lower than the head of someone who is older or of higher rank, especially if this senior person is sitting down (Vongvipanond, 2003), this may lead to subtle adaptations by parents in practice.

Study site and interview setting

This DPhil study was mainly conducted in the Muang and Phen districts of Udon Thani (see Figure 6), which have respective populations of 233,849 and 78,844 persons (Community Development Department & Ministry of Interior, 2017). These geographic areas were selected in consultation with the Ministry of Public Health (MOPH) and UNICEF, based on the paucity of social welfare services for families, as well as the existence of good working relationships between government officials and UNICEF in this part of the country. In particular, Muang district was selected due to ease of access to the provincial capital of Udon Thani town, while Phen district was chosen due to recent efforts by UNICEF to bolster community-based child protection networks. The research team was based at the Mahidol-Oxford Tropical Medicine Research Unit satellite office at the Udon Thani Provincial Public Health Hospital in town, while research data collectors were professors, lecturers, and a PhD student from Rajabhat and Ratchathani Universities in Muang district. The parenting programme was delivered in pairs by eight programme facilitators at three sub-district Health Promotion Hospitals (HPH) in Muang district (Chiang Pin, Bahn That, and Khling Kham), and one HPH in Phen district (Na Phu) (see Figure 7).

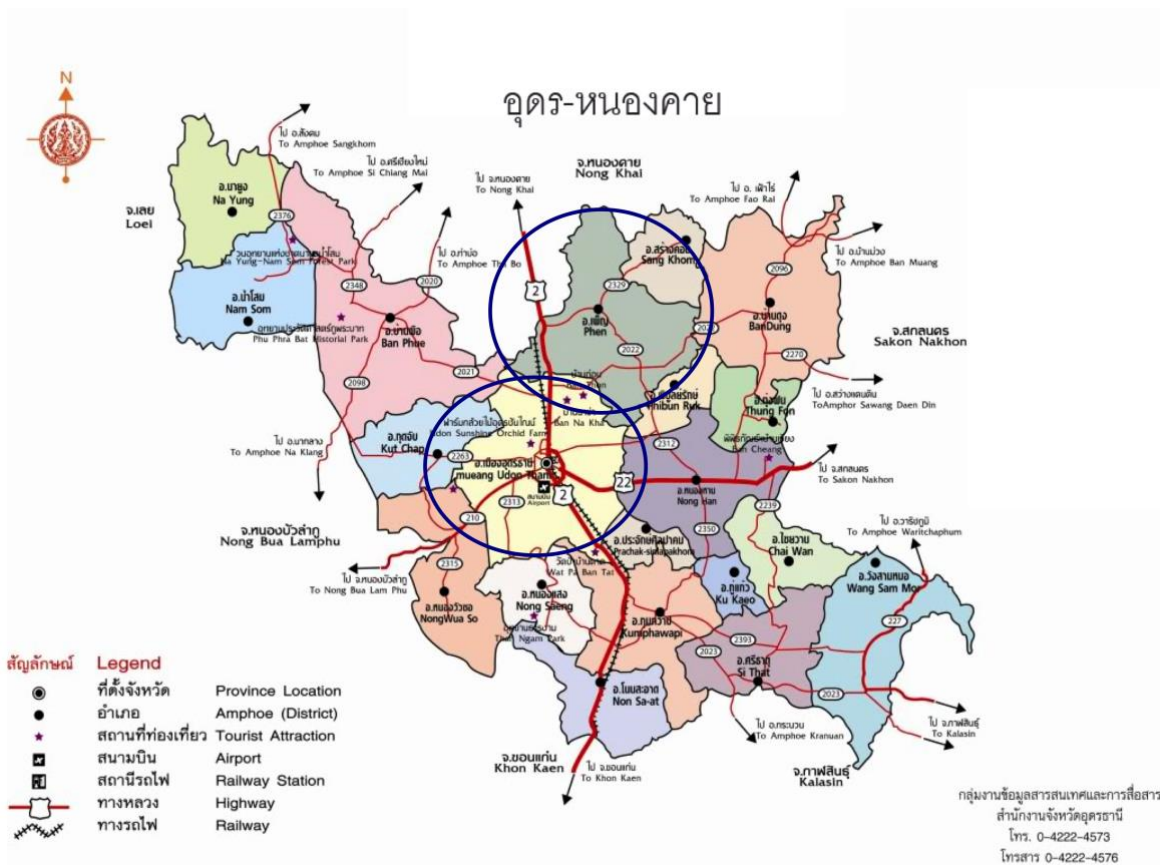


Figure 6. Map of Udon Thani province with study sites circled (Udon Thani Provincial Public Health Office, 2019)



Figure 7. Khling Kham Health Promotion Hospital in Muang district, Udon Thani

During the formative evaluation, 17 out of 20 individual interviews were conducted in government offices, HPHs, and a hotel meeting room in both Muang and Phen districts. The remaining interviews took place at participants' offices in Bangkok, while three FGDs with members of the Parenting Experts Working Group (PEWG) were held at a hotel meeting room in downtown Bangkok. During the feasibility pilot, screening interviews, outcome assessments, and individual interviews with parents were conducted at their homes in the same communities where HPHs were located (see Figure 8). The FGD with facilitators was held at a hotel meeting room in Muang district.



Figure 8. A village in Bahn That sub-district in Muang district, Udon Thani

2.4 Participants

Feasibility pilot

Given that PLH-YC was designed as a selected intervention that targets families at heightened levels of risk for experiencing violence against children (Centers for Disease Control and Prevention [CDC], 2004), targeted sampling was utilised during the pilot to identify parents or primary caregivers of young children who were at particular risk of perpetrating child maltreatment. For this purpose, we used findings from previous reviews, including a meta-analysis

($N = 155$ studies) examining 39 different risk factors for child physical abuse and neglect, which showed small to large effect sizes between child maltreatment and socio-economic status (physical abuse $d = -0.28$, 95% CI $[-0.36, 0.20]$); neglect $d = -0.39$, 95% CI $[-0.51, -0.28]$), parental perceptions of the child as a problem (physical abuse $d = 0.62$, 95% CI $[0.53, 0.71]$; neglect $d = 0.91$, 95% CI $[0.46, 1.36]$) and child externalising behaviours (e.g., disruptive behaviour, non-compliant behaviour, aggression; physical abuse $d = 0.47$, 95% CI $[1.39, 0.54]$; neglect $d = 0.45$, 95% CI $[0.31, 0.58]$) (Stith et al., 2009). A prior review of risk factors for child emotional abuse ($N = 6$ studies) (Black et al., 2001) also found significant associations between child behaviour problems (e.g., child aggression, child delinquency, child interpersonal problems) (Vissing et al., 1991), and low family income (Sedlak, 1997). The latter study controlled for child age, race, gender, family structure, county metropolitan status, and number of children in the household, although effect sizes were not calculated by study or review authors (Black et al., 2001). These risk factors relating to low socio-economic status, parental perceptions of child problem behaviour, and child externalising behaviours were thus incorporated into our sampling strategy for the study. This approach was taken given that the intervention was unlikely to be delivered in Thailand on a universal basis, given financial, human, facility, material, and other resource constraints.

In addition to individual interviews with parent participants ($n = 11$), all programme facilitators who delivered the intervention during the feasibility pilot ($n = 8$) were also included in the study. Based on the findings from the formative evaluation, provincial and community-level health workers employed within the public health system were identified as the most suitable candidates for the role of facilitator. Two Principal Investigators who led a 5-day facilitator training in Udon Thani selected the eight facilitators from a cohort of 20 trainees. Selection criteria comprised achieving a demonstrated level of competency during the training, present employment as a nurse, social worker, VHV or public health officer; experience in working directly with low-income families; availability to deliver the programme and participate in supervisory sessions for two rounds (during both the pilot and RCT); and competency in speaking and writing

Thai and Isan languages. The facilitation team ultimately consisted of three nurses, three public health officers, a social worker, and a VHV who were all employed within the government public health system.

Following delivery of the programme during the feasibility pilot, I facilitated a FGD with all facilitators, with occasional translation provided by the local co-Principal Investigator. Five out of eight programme facilitators were nurses and public health officers based at the three sub-district HPHs in Muang district and the one HPH in Phen district, where the parenting programme sessions were held. The three remaining facilitators were a social worker based at the Udon Thani Provincial Public Health Hospital, and two public health officers from the Region 8 Mental Health Office and Bahn Leum HPH in Muang district. Inclusion criteria for programme facilitators required that they: (a) were aged 18 years or older; (b) were presently employed as a nurse, medical social worker, public health officer, or VHV; (c) had prior knowledge and experience working on issues related to child and maternal health, child development, child maltreatment, violence prevention, child behavioural problems, or mental health problems; (d) had experience working directly with low-income families; (e) completed a 5-day training workshop delivered by PLH trainers; and (f) agreed to deliver the entire 8-session programme during the pilot.

2.5 Ethical and safety considerations

Given the vulnerability of the participants in the study setting, as well as the increased likelihood of observing or receiving reports of children who have been seriously harmed or are at risk of such harm, the development and implementation of child protection, adult welfare, and staff safety protocols was integral to this study. Standards and procedures for informed consent, staff conduct, confidentiality, referrals, and data collection and management were drawn from protocols and guidance from previous studies on self-reported child maltreatment in LMICs, including the recent trial of PLH-YC in the Philippines (CDC, 2017; International Society for the Prevention of Child Abuse and Neglect, 2016; Lachman et al., 2020), as well as the Thai *Child*

Protection Act (2003). The following section describes the ethical and safety considerations taken into account during this thesis.

Training of research staff

The design and implementation of a rigorous and comprehensive training programme for research data collectors was prioritised in this study. Together with two co-Principal Investigators, I led a six-day training for researchers that combined didactic teaching with role-play practice sessions, group discussions, and field practice. Training topics included the study flow, informed consent, and data collection procedures, including scripts; data collection tools, including in-depth discussions on each assessment tool and item; effective and sensitive interview techniques; staff safety protocols; as well as the ethical treatment of study subjects, including protocols on child protection and adult referrals (see Appendices B and D). During the training, researchers were monitored during role-play and field practice in order to determine their levels of competency, with subsequent support and additional guidance provided as necessary.

Informed consent

Study procedures and staff training emphasised that informed consent could only be obtained in a non-coercive manner, with materials and verbal explanations utilising clear, simple layman's terms. Participants were able to consent to participate only after being provided with a written copy of an information sheet in Thai or English according to their preference, and having an opportunity to ask questions prior to the screening interview, individual interview, or first FGD. Information sheets for all participants outlined expectations regarding study involvement, while sheets for parents provided additional information on the intervention content and structure. For potential parent participants, in order to account for varying levels of literacy, all consent procedures and information forms were read aloud by trained research data collectors before both verbal and written consent were obtained. Participants were given the opportunity to consider consent for up to one week, although the majority actively provided immediate consent.

All participants confirmed understanding that they could decline to participate in the study or the parenting programme at any time.

Confidentiality procedures for this study required that no information regarding the identity of participants would be recorded, with the exception of participant age, gender, and professional role. All participants were informed that all information shared during assessment points, individual interviews, or FGDs would remain confidential and only reviewed by the research team. It was explained that the only exceptions were if information was disclosed that a child (person under aged 18) had been seriously harmed or was at risk of serious harm, or if researchers working on future studies requested access to data from this study – in the latter case, all such data would be fully de-identified. Participants were informed that participation in the study would not be related to any future potential funding opportunities from the donor, and that parents who declined to participate would not incur any penalties to the parent or his or her family. Prior to the submission of reports and manuscripts for publication, it was explained to each member of the PEWG that he or she would be consulted as to whether his or her role in the project could be specifically acknowledged by name and affiliation. Members were informed that they also had the option to remain anonymous.

Management of the feasibility pilot recruitment and screening process

The procedures for recruitment and screening posed two major ethical concerns that required careful management during the feasibility pilot study. The first was regarding the description of eligible study participants provided to Village Health Volunteers and teachers, who assisted in the recruitment process by acting as referees, as described in the methods section of Chapter IV (p. 257) and the recruitment guide in Appendix C.2. Although the primary aim of the PLH-YC programme is to prevent child physical and emotional abuse by low-income parents who are theorised to be at higher risk of perpetrating child maltreatment, referees were not asked to identify abusive or potentially abusive parents, but rather to refer parents who they regarded

would benefit from a programme designed to help them manage difficult child behaviours. This approach was undertaken to prevent the stigmatisation of potential parent participants, who may be perceived by referees and other community members as engaged in 'bad' parenting practices (Hutchings et al., 2007). Further, the use of the terms 'child abuse' or 'child maltreatment' in this description were avoided given that they are likely to have different meanings to community members than to researchers applying operational definitions (Kotch, 2000). For this reason, a series of longitudinal studies by the Longitudinal Studies Consortium on Child Abuse and Neglect (LONGSCAN) in the United States and a national study of child discipline in the United Kingdom deliberately avoided such terms during recruitment (Creighton et al., 2003; Runyan et al., 1998).

A second ethical concern was the conduct of the screening interview following participant recruitment (see p. 257 and Appendix C.5). During the informed consent process, the research data collector explained that the study was being undertaken to "help strengthen parent-child relationships and improve child behaviour for families in Thailand," and that several initial questions would be asked to determine if the parent fulfilled the criteria for participation. According to the screening instrument, participants met the cut-off for inclusion if they answered "yes" to one or more of six items concerning past month use of violent discipline, or if they responded "agree" or "strongly agree" to the item on whether physical punishment was necessary for raising a child (NSO & UNICEF, 2016). This partial disclosure of the nature and aims of the research, as well as why they may be selected, was undertaken in order to mitigate sampling bias, which may occur when those who fear detection as perpetrators of abuse decline to participate (Berry, 2009). According to Socolar et al. (1995), giving accurate but incomplete information about a study on child maltreatment is common and at times inevitable, particularly when full disclosure would limit the strength and scope of the study. In such circumstances, as described by Guttman and colleagues (2019), the best interests of the parent (to avoid detection as a perpetrator of maltreatment), the best interests of the child (to be raised in a safe home environment), and the best interests of society (to prevent child maltreatment and protect children from harm), may not

coincide. In order to ensure that the rights of participants were not violated, and that the benefits of the study outweighed the harms of obtaining consent that was not fully informed (Guttmann et al., 2019), the language utilised during both the recruitment and screening procedures were fully disclosed to the research ethics review boards at the University of Oxford and by the Institute for the development of Human Research Protections Ethics Committee in Thailand (see appendices D.5 and D.6).

Risks of participation to participants

Studies on experiences of victimisation or perpetration of violence against children pose inherent risks to respondents, especially vulnerable populations, given potential interview-engendered discomfort, distress, or re-traumatisation, as well as possible safety risks if confidentiality is breached (Child Protection Monitoring & Evaluation Reference Group, 2012). It is thus imperative that researchers are fully aware of these risks and that ethical guidelines are effectively in place to prevent and mitigate such potential harm.

The formative evaluation was a minimal risk study. It was not anticipated that the research would incite any distress to participants, as they were not asked to talk about their own experiences as a parent or child, but rather about their professional experiences with service recipients. However, given the potential for distress due to the discussion topic, participants were asked to confirm they understood that they did not have to answer any questions that made them uncomfortable, and that they could stop the discussion at any time without any negative consequences.

For the purposes of the feasibility pilot, the research team held the position that the overall potential benefits of the research and intervention in reducing the risk of child maltreatment and improving family wellbeing outweighed the potential risks of harm against participants. However, the research team considered two types of potential harm: participation in the study and participation in the parenting programme. During data collection points, it was possible that

participants could become distressed during outcome evaluation assessments, individual interviews, or FGDs. The research team included a qualified, Thai clinical psychologist with a background in developmental psychology and family violence issues, and who was available to discuss or supervise discussion of any issues with participants following interviews. Regardless of whether parents provided informed consent to participate in the study, all parents who were screened were provided with a list of locally available services, including contact details for the 24-hour government social welfare hotline; a 24-hour hotline for non-government organisation-provided, child friendly counselling and support services; the Udon Thani Provincial Hospital; and police and medical emergency services.

The research team also considered the potential risk of harm from participating in the intervention (Lorenc & Oliver, 2014). Participants may recall difficult experiences in their own childhoods and thus experience potential psychological harm. Although the programme was not designed to elicit this information, these experiences may nonetheless occur. While many relevant RCTs in LMICs have not indicated evidence of harm (Knerr et al., 2013), the research study examined the potential benefits and risks of the parenting programme on both children and parents. The statistical analysis plan utilised two-tailed tests for differences between groups to assess potential negative and positive intervention effects. Further, participants were monitored during assessment points and post-programme individual interviews to examine whether they, their children, or other family members experienced any adverse effects.

Mitigation of harm and disclosure of harm or potential harm

Given that the research team would be coming into contact with vulnerable participants, including children, this study emphasised the importance of establishing standards of appropriate staff conduct in order to prevent potential staff perpetration of harm. Also, it was anticipated that research data collectors might observe signs of actual or potential maltreatment, and that participants were likely to disclose maltreatment during assessment points, with some reflecting

potential or actual serious harm to children. In order to mitigate such harm as well as to ensure appropriate reporting of concerns and disclosures, this study recognised the behavioural standards, ethical responsibilities, and mandatory reporting obligations that researchers have under the *Child Protection Act* (2003) and the UN Convention on the Rights of the Child (United Nations General Assembly, 1989).

For this purpose, a Child Protection Protocol was developed for this study (see Appendix E.1, p. 452), which outlined staff values, prohibited conduct, issues of confidentiality, and child protection procedures. When making a report, staff were obligated to immediately complete a referral form for urgent cases, or within 24 hours for non-emergency cases, and to send this to myself (as Research Manager) or to the local co-Principal Investigator. Both persons had prior experience in handling and referring such cases in the Thai context. Cases were then discussed by both persons, and depending on the nature of each case, referred to the Udon Thani Provincial Hospital One Stop Crisis Centre (OSCC) or the Ministry of Social Development and Human Security (MSDHS) Provincial Office.

In addition, the research team anticipated that a research data collector might observe potential or actual inter-personal violence against a parent or other welfare concerns, or that such violence or welfare concerns might be disclosed during an assessment point. For this purpose, procedures were developed as follows:

1. Following the observation of a concern or a disclosure, the researcher would discuss the matter with the respondent at the end of the interview, and indicate that the participant could choose to self-refer (by contacting a service provider on the list of services given to the participant, or another provider of his/her own choosing), or request a direct referral to health, welfare or other services.
2. If the participant requested a direct referral, the researcher would complete an adult referral form (see Appendix E.2, p. 460) together with the participant. If the participant was in immediate danger, or his or her own emotional state was such that it placed their

own or a third party's life at risk, the researcher was obligated to immediately share the form with myself or the local co-Principal Investigator. For non-emergency cases, such forms were required to be shared within 24 hours.

3. The local co-Principal Investigator and I then discussed each case, prior to making appropriate referrals to the OSCC, MSDHS Provincial Office, hospital, or police.

For both child protection and adult direct referrals, I maintained a log of reports as well as any known follow-up actions by service providers. During the study, a total of 10 child protection, child mental health, and adult welfare cases were referred by the research team. These 10 families all continued to participate in the study.

Risks of participation to researchers

Given the nature of the research topic, researchers were exposed to the risk of vicarious traumatisation and compassion fatigue, with symptoms including the re-experience of the interviewee's distress or trauma, the avoidance of or detachment to the trauma, and persistent arousal (Nikischer, 2019). However, given that the formative evaluation was a minimal risk study, it was not anticipated that there would be any particular risks to conducting interviews or holding PEWG meetings in the settings that had been delineated. I held a discussion with the research assistant at the outset, and we agreed that no interviews would be conducted in any situation in which we felt unsafe or uncomfortable.

The feasibility study, however, involved potential risks of harm to researchers, given that some participant homes were located in remote communities and travel to sites often occurred in the evenings, when both parents and research data collectors were available for assessments. Although official reports of "crimes against life, body, property, and sexual crimes" in Udon Thani are relatively low and less than half of national rates (UNDP, 2014), the research team placed a priority on the safety and well-being of all fieldwork staff. A Safety Protocol (see Appendix E.3, p. 462) was developed for this study, outlining guidance for personal safety and interaction with

participants, as well as procedures for raising concerns.

The research team also recognised that research with vulnerable families could result in distress due to listening to personal accounts of experiences of violence or violence perpetration, or other difficult or traumatic events. Moreover, the demands of meeting project deliverables in a timely manner might also lead to elevated levels of stress. Given these risks, I was in regular contact with research staff to discuss any potentially distressing events or experiences that may have occurred during data collection. Researchers were also informed that the local co-Principal Investigator was available either in person or via phone to deliver individualised assistance as and when necessary.

Compensation

During the formative evaluation, no compensation was provided to those participating in the individual interviews. Lunch and refreshments were made available to all FGD participants, who were also reimbursed for transport expenses depending on the distance between their workplace and the FGD venue.

During the feasibility pilot, participants were provided with 150 Thai Baht (3.70 GBP) reimbursement for transportation costs per each parenting programme session attended, as well as lunches and refreshments. In addition to this, the research team recognised that participation in interviews and observational assessments entailed time lost to the participant – an issue that is especially salient for low income households (Guyl et al., 2003). On this basis, minor monetary compensation was provided during each assessment, at rates the research team judged to be fair yet precluding undue inducement (Grady, 2005). Rates of compensation were 50 Thai Baht (1.23 GBP) for completion of the screening, as well as 150 Thai Baht (2.88 GBP) per time for completion of the questionnaire at baseline and post-test. Participants were given 50 Thai Baht (1.23 GBP) for each of two observational assessments, as well as for each of four parent daily report assessments administered via phone. Following programme completion, the parents who participated in the

individual interviews were given 100 Thai Baht (2.46 GBP). The facilitators who participated in the FGD were provided with 200 Thai Baht (4.91 GBP) compensation, along with 150 Thai Baht (3.68 GBP) to cover travel costs.

Benefits

No tangible direct benefits were given to participants in the study. However, FGD participants were provided with the opportunity to have their contributions credited in the adapted parenting programme. Moreover, parents received intangible direct benefits through an opportunity to obtain parenting skills and information, and to engage in group discussions with other parents. Finally, parents were provided with the indirect benefit of having an opportunity to have their views heard and to contribute to the overall objectives of the study.

Ethical approval

The study protocol for the formative evaluation was approved by the Oxford Tropical Research Ethics Committee at the University of Oxford (OxTREC) (ref# 522-17), the Faculty of Humanities Ethics Review Committee at the University of Cape Town (ref# PSY2017-007), the Ethical Review Committee for Research in Human Subjects at the Thai Ministry of Public Health (ref# 10/2561), and the Ethical Review Committee at the Udon Thani Provincial Public Hospital (ref# 0032.1/11102). The feasibility pilot protocol was approved by OxTREC (ref# 8-18) and the Ethics Committee at the Institute for the Development of Human Research Protections in Bangkok (ref# HCR17011). The approval letters are located in Appendix D (see p. 442).

2.6. Data management

In order to promote data security, protect participant confidentiality, and ensure high data quality, data management procedures were incorporated into all study protocols and implemented during the formative evaluation and feasibility pilot. I was the primary researcher responsible for adherence to these protocols, and trained the research assistant and research data

collectors on all data collection and management procedures. During the data collection stages of both studies, I conducted daily debriefings with the research assistant regarding data collection progress. I was also in contact with research data collectors during the feasibility pilot at least several times per week in order to monitor and respond to any concerns.

As briefly discussed in DPhil Paper 3 (Chapter V), research data collectors used Computer-Assisted Self-Interviewing (CASI) methods administered through electronic tablets loaded with the Open Data Kit (ODK) application, which provides free and open-source tools for survey building, mobile data collection, server storage, as well as data extraction (Hartung et al., 2010). ODK was used to administer the screening, main outcome questionnaire, and HOME Inventory assessment during the feasibility pilot. During the course of data collection, I checked all CASI tablet entries to ensure questionnaire completion as well as to identify systematic errors (e.g., illogical responses, skipped items or sections). In these cases, I contacted the research data collectors, who were either able to respond to questions for clarification or contact participants to verify responses.

Procedures for uploading and storing data involved the transmission of encrypted data from CASI tablets via wireless networks to the study ODK server (www.opendatakit.org), housed at a central server managed by Information Technology Services at the University of Oxford. Transmission occurred several times per week from the Mahidol-Oxford Research Unit satellite office or from Health Promotion Hospitals in Udon Thani. The ODK server was password protected, with the password only available to Dr Jamie Lachman as co-Principal Investigator and myself. Local backups of CASI tablets were stored on a password protected external hard drive accessible only by the research assistant and myself, and stored in a locked filing cabinet at the satellite office. Once data was uploaded to the ODK server, data was deleted from all tablets in order to ensure data security in the event of tablet loss. Following the finalisation of the feasibility study, all electronic participant data will be de-identified and stored using United Kingdom Data Archive standards (www.data-archive.ac.uk/create-manage/planning-for-sharing). Access to this data will be controlled and require research team authorisation prior to further use.

All non-electronic data, including transcripts and signed consent forms, were also stored in locked filing cabinets at the satellite office in Udon Thani. Following study completion, this data will be kept at a secure off-site storage facility in Bangkok that is managed through the Mahidol-Oxford Research Unit. This facility will store this data for a period of five years, followed by disposal by the research study team.

2.7 Study design and measurements

DPhil Paper 1: Systematic review and multi-level meta-analysis

The systematic review and multi-level meta-analysis paper, situated within the initial development phase of the MRC framework, synthesised the available evidence base on the effectiveness of parenting interventions for the prevention of violence against children in the East and Southeast Asian region. It also identified both homegrown and transported interventions that may be appropriate for feasibility piloting during the next phase. This section provides further detail on the meta-analytic methods that were used, while other methodological aspects (e.g., data sources, study eligibility criteria, study screening, data extraction, effect size calculation) are presented in Chapter III.

Meta-analytical studies have two key advantages over individual primary or secondary analysis studies. First, they allow for greater generalisability of findings when the included primary studies have diverse sample characteristics. In this manner, they may be more valuable in guiding policy and practice for heterogeneous populations (Card, 2012). Secondly, meta-analyses tend to generate greater statistical power than the individual primary studies they comprise, and thus may be able to demonstrate an effect that is not found in underpowered primary studies (Card, 2012). Utilising a multi-level approach to meta-analyses has the additional benefit of modelling unknown dependence, as most meta-analytic procedures unrealistically assume independence among effect sizes (Cheung, 2014). While traditional meta-analyses can be regarded as two-level models, with participants within studies at level one and treatment-control comparison outcome measures

within each study at level two, three-level meta-analyses correlate effect sizes within a cluster or category (Konstantopoulos, 2011; Van den Noortgate et al., 2013).

I undertook a three-level random-effect meta-analysis given the existence of several effect sizes from independent groups within studies, with separate meta-analyses conducted for each of the five different outcome categories: 1) abusive, harsh, or negative parenting; 2) parental knowledge or attitudes; 3) positive parent-child interactions; 4) parental stress; and 5) family environment. A random effects model was preferred over a fixed effect model since it could not be assumed that the true effect sizes were identical in all studies within each category, as differences in sample characteristics and methods may be related to the size of each effect (Borenstein et al., 2009). A random effects model thus treats effect size parameters as a random sample from a population of effect size parameters (Konstantopoulos, 2011).

I adopted the standard assumptions of multilevel modelling. I assumed that the random effects at all levels as well as the sample error were independent, that effect sizes in the same cluster shared the same covariance, and that effect sizes in different clusters were independent (Cheung, 2014). First, I used the R metafor package to fit the random effects model and calculate the within-study and between-study variance components (Viechtbauer, 2010). The model was based on a combined level three formula, which bundles together the level two and three models as follows:

$$y_{ij} = \beta_0 + u_{(2)ij} + u_{(3)j} + e_{ij}$$

In this equation, y_{ij} is the i th effect size in the j th cluster, while β_0 is the average population effect. The within-study heterogeneity for the i th effect size in the j th cluster is represented by $u_{(2)ij}$, while $u_{(3)j}$ is the between study heterogeneity for the j th cluster. The known sampling variance in the i th effect size in the j th cluster is represented by e_{ij} (Cheung, 2014).

Second, I then assessed heterogeneity at levels two and three, calculating I^2 for level two by dividing the variance component at the within-study level by the sum of the typical effect size

variance, within-study variance component, and the between-study variance component. I^2 for level three was determined by dividing the variance component at the between-study level by the sum of the typical effect size variance, within-study variance component, and the between-study variance component (Cheung, 2014).

Finally, using the R metafor package, the size of the intervention effect was estimated for each of the five outcome categories. I did not conduct meta-regressions given that all models comprised few studies (i.e., ranging from 2-5 studies). Meta-regression, as an extension to subgroup analyses, allows for the examination of the effects of continuous and categorical factors, with multiple factors potentially being investigated at the same time (Higgins & Green, 2008). However, according to the recommendation of Borenstein et al. (2009), meta-regression is appropriate only when each covariate contains at least 10 studies.

DPhil Paper 2: Formative evaluation

Also located within the first phase of the MRC framework, as well as within stage one of Barrera's five-stage cultural adaptation model, DPhil Paper 2 presents an additional 'information gathering' effort. This study specifically involved the conduct of formative research regarding the proposed intervention from key informants experienced in working with the targeted sub-cultural group (Barrera et al., 2013). This section provides further details on the interview themes utilised for this study, while information about the study approach and data analysis procedures is provided in Chapter IV.

Individual interviews.

Individual interviews can provide a powerful method for obtaining nuanced insights into ways for tailoring and improving intervention design, as well as for understanding the contextual circumstances surrounding intervention implementation and evaluation (Jansen et al., 2009). For the formative evaluation phase, I followed an interview guide with an open-ended approach to soliciting views and feedback from officials, experts, and practitioners, in a manner that aimed to

limit interviewer bias. I conducted all interviews according to a pre-established interview guide (see Appendix B.1, p. 379), while simultaneously allowing themes to emerge based on the expertise of the interviewee, as well as the importance the interviewee placed on particular topics (Patton, 2015).

The interview guide was divided into five broad questions that were mainly structured according to the study's main research questions. The first question asked about the interviewee's role in relation to services for parents and primary caregivers of children aged 2-9 years. Additional probing explored the objectives, coverage, and targeting of such services. The second question asked about the key themes and issues that would be useful and culturally relevant to a parenting programme that aimed to strengthen parent-child relationships, help parents manage child behaviours, and use non-violent forms of discipline. Further probing explored the interviewee's understanding of the meaning and applicability of each theme, as well as if such themes and issues were already included in existing services for families. If such themes were already included in existing services, I followed-up with probing questions regarding how the interviewee perceived the utility of each theme. The third question explored the interviewee's views on the most feasible programme structure and schedule for a group-based parenting programme. Probes included the perceived benefit of group-based sessions over one-on-one or seminar formats, whether home visits would be culturally appropriate, as well as issues regarding programme timing and frequency. The fourth question concerned issues regarding programme logistics, including deliverers and setting, as well as participant recruitment, attendance and engagement. Additional probing examined various hospital settings, including the Provincial Public Health Hospital and community-based HPHs; different potential programme deliverers, including nurses, social workers, public health officers, VHV's, and teachers; potential challenges to facilitator workload; views on parent group size; as well as potential obstacles to parent recruitment and attendance. The final question focused on the potential for programme scale-up. Probes explored the interviewee's perceptions of availability and accessibility to the programme in

remote areas of Thailand, as well as whether there was potential for the institutionalisation of the programme within the Thai public health system.

Focus group discussions.

As a qualitative interviewing method, FGDs provide an opportunity to understand the views of a relatively small and homogenous group on a narrowly focused topic, inviting opportunities for participants to hear other's responses and provide additional reflections (Patton, 2015). Three FGDs were convened with a group of six Thai experts who formed the PEWG, established in order in order to inform the various phases of the PLH-YC adaptation process. Through an iterative process and following an interview guide (see Appendix B.2, p. 384), the discussions focused on the appropriateness of programme content, including whether components needed to be altered or excluded, as well as if additional components or aspects should be incorporated (Wainberg et al., 2007). The PEWG also provided recommendations on adaptations to the programme structure, presentation of illustrated stories, and appropriate translation of key concepts into local languages, while the co-moderators and myself helped to promote a balance between intervention fidelity and fit to the target population in Thailand (Kumpfer et al., 2002).

For the first FGD held during April 2018 in Udon Thani, I co-moderated the discussion alongside two PLH-YC developers, who provided an overview of the intervention, including an in-depth presentation on each of the original 12 programme themes. These themes were organised into three main programme 'functions,' including: a) positive parent-child relationship building, b) positive reinforcement, and c) positive discipline (see Figure 13 on p. 199). Explorations of each theme centred on the cultural relevance of each parenting skill for the Thai context, as well as how they could be modified, excluded, or combined as part of a feasible, shortened 8-session programme. The second FGD, held in Bangkok during July 2018, explored four potential reconfigurations of an adapted programme for Thailand, based on views shared by the PEWG at the previous discussion. In discussing each reconfiguration option, I probed participant

perceptions of the potential benefits and challenges to adopting each option. In addition, during this discussion, six illustrated stories from the European and Filipino versions of the PLH-YC facilitator manual were reviewed, with additional probing questions examining the depiction of characters, setting, household items, clothing, and behaviours. Prior to the third FGD, held during October 2018, an adapted and translated draft facilitator manual was developed and shared with the PEWG, incorporating participant recommendations on reconfigured programme content and illustrated stories. During the FGD, the local Principal Investigator and I co-moderated a review and exploration of each adapted programme session. Probing questions focused on the appropriateness of the structure and revised content of the programme; Thai and Isan language terminology for various parenting skills; and the dialogue, characters, and setting of the new illustrated stories.

DPhil Paper 3: Feasibility pilot

As part of the second phase of the MRC framework, feasibility pilots play a vital role in guiding the planning for a full-scale evaluation by addressing the main uncertainties related to the study and intervention. These often pertain to issues concerning likely rates of recruitment, retention, and response; the acceptability of study procedures; levels of treatment fidelity; characteristics of proposed outcome measures; and treatment safety (Leon et al., 2011; Thabane et al., 2010). While the terms ‘feasibility’ and ‘pilot’ are often used interchangeably in the literature, *feasibility* can be regarded as an overarching term for preliminary studies, with *pilots* referring to a specific type of study that resembles the intended trial but maintains its own aims and objectives (Whitehead et al., 2014). DPhil Paper 3 utilised mixed methods approaches, followed MRC guidance on feasibility and piloting methods (Craig et al., 2008), and incorporated key aspects of pilot studies identified by Thabane et al. (2010) in order to: 1) explore the feasibility of study evaluation approaches, 2) assess the feasibility of the adapted intervention; 3) report indicative effects on child maltreatment and related outcomes, and 4) examine intervention

content associated with perceived key mechanisms of change by parents and facilitators. Although a control group and randomisation procedures were planned for the subsequent full evaluation, the pilot utilised a pre-post design for quantitative data collection given time and budgetary constraints. The feasibility pilot also followed a translation protocol and used standardised questionnaires for parent report measures, in addition to combination interview and observational assessments. Qualitative data was collected through individual interviews with a sub-set of parents selected mainly at random and on the basis of programme attendance rates. More detailed information on data collection and analysis are described in Chapter V.

Evaluation feasibility. This study examined the suitability of several study evaluation approaches, including: a) study recruitment and retention rates; b) outcome measurement reliability; c) response rates of self-report outcomes and combination interview/observational assessments; and d) adverse events monitoring. Recruitment rates were based on the number of contacted parents who met eligibility criteria and participated in pre-test data collection, while retention was calculated based on dropout at any stage of the study following the pre-test assessment. Outcome measurement reliability was examined through the calculation of Cronbach's alpha for each scale and sub-scale, with 0.70 to >0.90 pre-determined as an acceptable range (Cronbach, 1951). Further, response rates were determined based on the extent of missing data on all items and outcome variables. Finally, the study monitored adverse events by utilising two-tailed tests of intervention effects.

Intervention feasibility. The pilot also assessed the feasibility of delivering and participating in the adapted intervention, including enrolment, attendance, and dropout. Enrolment rates were based on the proportion of study participants who attended at least one group session, while attendance rates were calculated according to the number of enrolees who attended eight group sessions according to facilitator-maintained records. Completion rates were based on the percentage of enrolled participants who participated in at least 75% of the

programme. Finally, fidelity scores were calculated according to the ratio of activities implemented to the number of manualised activities, according to weekly self-report fidelity checklists maintained by facilitators.

Indicative effects on primary and secondary outcomes. One of the objectives of the feasibility pilot was to examine indicative effects for all measures of interest, in order to estimate potential intervention efficacy (Moore et al., 2011). Given that the pilot was not designed to test causality, and the intervention's effects on outcome measures could only suggest potential impact of the programme, the research team planned from the outset to regard the study findings with caution.

As delineated in Appendix C.1 (see p. 387), a protocol for translation and adaptation of feasibility pilot research instruments was developed and implemented during this study. Despite the importance of following well-established methodological approaches for translating and adapting instruments for use in cross-cultural research, studies suggest a great variation in the use of these approaches, with this step often receiving scant attention in study protocol development (Sousa & Rojjanasrirat, 2011). In line with World Health Organization (WHO) recommendations (World Health Organization, 2016), the screening tool, questionnaires, and interview guides were forward translated into Thai by the local co-Principal Investigator, a bilingual psychologist with experience in the parenting and child maltreatment fields. A professional, independent translator, who was blind to the English language versions of the instruments, then back translated the instruments into English. A trained research assistant then conducted an initial comparative review of the two versions. This initial analysis and both translations were then reviewed by a multi-disciplinary panel consisting of the two translators, a trained research assistant, an independent bilingual expert in the field, and myself in order to ensure the conceptual, semantic, and content equivalence of the instruments, as well as to identify and resolve any discrepancies. The screening tool and questionnaires were then pre-tested by research data collectors with the

study target group in Udon Thani, with subsequent de-briefings informing the finalisation of instruments.

Study outcomes were selected based on the theory of change model for PLH-YC, as depicted in Figure 3 (see p. 59), Chapter I. Primary outcome measures were situated at the proximal level to the parent, comprising rates of child physical and emotional abuse, as well as abusive and harsh parenting. Secondary outcomes were at the proximal and distal levels to the parent and target child, and included child neglect; positive parenting; dysfunctional parenting; parental depression, anxiety, and stress; poor child monitoring and supervision; child behaviour problems; parent daily report on child behaviour and parenting; parent-child relationships; parent sense of inefficacy; attitudes supporting physical punishment; attitudes toward harsh discipline; and intimate partner violence and coercion. Table 1 summarises these outcome measures and respective instruments.

Outcome	Measurement	Timing	Items
Household and family factors			33
Parent, child and family demographics	a) General demographic questions; Multiple Indicator Cluster Survey	Baseline	24
Parent physical health	b) Medical Outcomes Study Short Form – 12 Health Survey	Baseline	3
Parent and child disability	c) Washington Group questions (adapted)	Baseline	2
Parent history of physical abuse, emotional abuse or neglect during childhood	d) ISPCAN Child Abuse Screening Tool-Retrospective Version (ICAST-R) (adapted)	Baseline	4
Socioeconomic factors			16
Household structure	e) Multiple Indicator Cluster Survey	Baseline	3
Household employment	f) Multiple Indicator Cluster Survey	Baseline	2
Household assets	g) Multiple Indicator Cluster Survey	Baseline	2
Food consumption	h) The Hunger Scale Questionnaire	Baseline	5
Income and benefits	i) Multiple Indicator Cluster Survey	Baseline	2
	2015 National Statistical Office Household Socioeconomic Survey	Baseline	1

Health care coverage	j) Categories from 2015 National Statistical Office Survey on Health and Welfare	Baseline	1
Primary outcome			31
Child maltreatment: physical abuse and emotional abuse	1. ISPCAN Child Abuse Screening Tool-Trial Caregiver Version (ICAST-T): overall maltreatment	Baseline; 1 month post-intervention	25
	1.A ISPCAN Child Abuse Screening Tool-Trial Caregiver Version (ICAST-T): Physical abuse subscale	Baseline; 1 month post-intervention	(15)
	1.B ISPCAN Child Abuse Screening Tool-Trial Caregiver Version (ICAST-T): Emotional abuse subscale	Baseline; 1 month post-intervention	(10)
	2. HOME Inventory – Abusive and Harsh Parenting Subscale (interview & observational assessment)	Baseline; 1 month post-intervention	6
Secondary outcomes			200
Positive parenting	3. Parenting Young Children Scale (PARYC) – Total score	Baseline; 1 month post-intervention	21
	3.A Parenting Young Children Scale (PARYC) – Positive parenting subscale	Baseline; 1 month post-intervention	(7)
	3.B Parenting Young Children Scale (PARYC) – Setting limits subscale	Baseline; 1 month post-intervention	(7)
	3.C Parenting Young Children Scale (PARYC) – Proactive parenting subscale	Baseline; 1 month post-intervention	(7)
Dysfunctional parenting	4. Parenting Scale (PS): Over-reactivity Subscale	Baseline; 1 month post-intervention	10
Child monitoring and supervision	5. Alabama Parenting Questionnaire (APQ): Monitoring & supervision subscale	Baseline; 1 month post-intervention	11
Child neglect	6. IPSCAN Child Abuse Screening Tool – Trial Caregiver Version (ICAST-T): neglect subscale	Baseline; 1 month post-intervention	6
Attitudes supporting physical punishment	7. MICS Child Discipline item	Baseline; 1 month post-intervention	1
Attitudes toward harsh discipline	8. IPSCAN Child Abuse Screening Tool – Trial Caregiver Version (ICAST-T): Attitudes subscale	Baseline; 1 month post-intervention	4
Parent sense of inefficacy	9. IPSCAN Child Abuse Screening Tool – Trial Caregiver Version (ICAST-T): Efficacy subscale	Baseline; 1 month post-intervention	2
Parental depression, anxiety and stress	10. Depression, Anxiety, and Stress Scale (DASS)	Baseline; 1 month post-intervention	21

	10.A Depression, Anxiety, and Stress Scale (DASS) – Depression subscale	Baseline; 1 month post-intervention	(7)
	10.B Depression, Anxiety, and Stress Scale (DASS) – Anxiety subscale	Baseline; 1 month post-intervention	(7)
	10.C Depression, Anxiety, and Stress Scale (DASS) – Stress subscale	Baseline; 1 month post-intervention	(7)
Child behaviour problems	11.A Eyberg Child Behavior Inventory (ECBI) – Problem score	Baseline; 1 month post-intervention	36
	11.B Eyberg Child Behavior Inventory (ECBI) – Intensity score	Baseline; 1 month post-intervention	(36)
Parent daily report on child problem behaviour and positive parenting	12.A Parent Daily Report Checklist (PDR) – Child problem behaviour	Baseline; 2 time points post-baseline; 1 month post-intervention	34
	12.B Parent Daily Report Checklist (PDR) – Positive Parenting behaviour	Baseline; 2 time points post-baseline; 1 month post-intervention	9
Parent-child relationships	13. HOME Inventory (interview & observational) – Positive parenting	Baseline; 1 month post-intervention	27
	13.A HOME Inventory (interview & observational) – Responsivity subscale	Baseline; 1 month post-intervention	(16)
	13.B HOME Inventory (interview & observational) – Encouragement of child maturity	Baseline; 1 month post-intervention	(6)
Intimate partner violence	14.A Revised Conflict Tactics Scale Short Form (CTS2S) – Total intimate partner violence	Baseline; 1 month post-intervention	6
	14.B Revised Conflict Tactics Scale Short Form (CTS2S) – Negotiation subscale	Baseline; 1 month post-intervention	2
Intimate partner coercion	15. WHO Multi-Country Study Questionnaire on Women’s Health and Life and Domestic Violence against Women (WHO-coercion)	Baseline; 1 month post-intervention	10
Total items at baseline			280
Total items at 2 time points post-baseline			43
Total items at post-intervention			231

Table 1. Summary of outcome evaluation measurements

Household and family factors. During the feasibility pilot, I assessed household and family factors that were identified as ecological child maltreatment risk and protective factors during the literature review (Chapter I, p. 27). These factors existed at the levels of the child, parent, parent-child relationship, and broader family environment.

a) *Parent, child, family, and household demographics.*

Household and family factors were assessed using general questions as well as items from the Multiple Indicator Cluster Survey (MICS) Survey 4 conducted in Thailand during 2012-2013 (UNICEF & NSO, 2013). MICS are UNICEF-supported household surveys that have been conducted in 108 countries worldwide over the past 21 years, with the purpose of assisting countries in monitoring the situation of children and women (UNICEF, 2010, 2020). Items included: 1) parent/primary caregiver factors (14 items): age, sex, gender, language, ethnicity, citizenship, religion, relationship to head of household, relationship to the child, number of children in his/her care, marital status, education, and literacy level; 2) child factors (4 items): age, sex, school enrolment, and school attendance; 3) family factors (4 items): other caregivers (sex, age, relationship to child, residence), and biological parents (household presence, location); and 4) household factors (2 items): other adults and other children in the household.

b) *Parent physical health.*

Evidence from high-income countries has found that good parental health is a protective factor for child physical and emotional abuse (Stith et al., 2009). During the feasibility pilot, parent physical health was assessed using an adapted version of the Medical Outcomes Study (MOS) Short Form-12 Health Survey (SF-12, 3 items) (Ware et al., 1996). The SF-12 is a shortened version of the MOS SF-34 Health Survey. It examines physical and mental health, with items including difficulties in conducting daily activities (e.g., house cleaning and carrying a child). Responses are based on a 3-point Likert-like scale (1 = yes, limited a lot; 3 = no, not limited at all). An additional item asks respondents to assess their overall health on a 5-point Likert scale (1 = poor; 5 = excellent).

c) *Parent and child physical disability.*

At both the parent and child levels, physical disability has been associated with greater risks of child maltreatment in HICs and LMICs (Meinck et al., 2015; White et al., 2015). During the pilot,

parent and child disability was assessed using two items adapted from the Washington Group short set of questions, which has been used in censuses and surveys according to the Fundamental Principles of Official Statistics (Madans et al., 2011). These questions ask whether the parent/primary caregiver or child has any difficulties “hearing, seeing, communicating, or moving,” and if so, what type of difficulty they have.

d) *Parent history of experiencing child abuse.*

Multiple reviews in HICs have found that parental experience of childhood maltreatment is a key risk factor for perpetration of child abuse (Mulder et al., 2018; Stith et al., 2009; White et al., 2015). Recent meta-analysis has indicated that the odds of child maltreatment in families of parents who experienced childhood maltreatment are nearly three times those in families of parents without such a history (Assink et al., 2018). In this study, parent history of experiencing abuse during childhood was measured through an adapted version of the International Society for the Prevention of Child Abuse and Neglect (ISPCAN) Child Abuse Screening Tools Retrospective version (ICAST-R, 4 items) (Dunne et al., 2009). This scale utilises parental self-reports of maltreatment experiences during childhood (until age 18 years) to assess the history of ever experiencing physical abuse (e.g., “When you were growing up, did your caregiver ever discipline or punish you physically by hitting, spanking, slapping, or kicking you?”) (2 items) and emotional abuse (e.g., “When you were growing up, did any person ever discipline or punish you by insulting or criticising you, to make you feel that you were bad, stupid, or worthless?”) (2 items). In this study, ever experiencing physical or emotional abuse was assessed on a frequency scale (0 = never; 1 = once or twice; 2 = 3-5 times; 3 = more than 5 times). A dichotomous score was also calculated for overall indication of previous child abuse (0 = no abuse; 1 = previous abuse).

Socioeconomic factors. Data on several socioeconomic factors were collected at baseline, including on household structure, employment type and status, health care coverage, household assets, and food consumption. These items were included given that factors pertaining to income

status and financial difficulty have been associated with increased rates of child maltreatment and parental decreased capacity for sensitive childrearing, including parent unemployment (Stith et al., 2009), lower socioeconomic status (Akmatov, 2011), and financial hardship (Conger et al., 1992; Elder et al., 1985).

e) *Household structure.*

Assessments of relative poverty according to household structure will utilise items from the MICS 4 (3 items) (UNICEF & NSO, 2013). The items allow for categorical responses regarding the main materials used in the household's floor, roof, and exterior walls.

f) *Employment.*

Employment was measured utilising two items from the MICS 4 (3 items) (UNICEF & NSO, 2013). These include an item allowing for a categorical response regarding parental type of employment, as well as an item scored using dichotomous variables concerning whether anyone else in the household holds a formal job.

g) *Household assets.*

Assessments of relative poverty according to ownership of parent and household assets utilised two items from the MICS 4 (UNICEF & NSO, 2013). These items allow for categorical responses concerning the collective household ownership of particular goods (e.g., electricity, TV, computer), as well as the ownership of assets by any member of the household of particular goods (e.g., car, smart phone, credit card).

h) *Food consumption.*

Research from high-income countries, as well as three LMICs in South Eastern Europe, has shown that hunger and food insecurity has been associated with higher levels of family violence, including child maltreatment (Jackson et al., 2018; Jansen et al., 2020). In order to include this risk factor, assessments of household food shortage and hunger included five items from the Hunger

Scale Questionnaire (Labadarios et al., 2005). Parents respond positively or negatively regarding whether money was sufficient for food (e.g., “Do you ever run out of money to buy food for your home?”), meals were reduced/skipped, or children went to bed hungry over the past 30 days and whether it occurred more than five times.

i) *Income and benefits.*

Information regarding household income and government payments or benefits was collected through two items from the MICS 4 (UNICEF & NSO, 2013), which allows for categorical responses on household total monthly income and the main source of household income. In addition, one item from the 2015 NSO Household Socioeconomic Survey (NSO, 2016a) permits categorical responses regarding household receipt of any payments or benefits (e.g., welfare, child benefit grant).

j) *Health care coverage.*

Information concerning parent health care coverage was collected using one item based on response options drawn from the 2015 NSO Survey on Health and Welfare (NSO, 2016b). The item examines whether the respondent has health care coverage, and if so, the type of coverage using categorical options (e.g., universal coverage card, civil servant medical benefits scheme).

Primary outcomes. The primary outcome assessed during the study was child maltreatment (physical and emotional abuse) perpetrated by parents, which was examined through both parental self-report as well as a combination interview and observational assessment. The addition of observational coding allowed for an independent view of parent-child interactions that is less subject to bias than parent self-reports, which are more readily influenced by parental moods, poor parental mental health, or expectations regarding the intervention (Aspland & Gardner, 2003; Friedlander et al., 1986).

1. *Child maltreatment: physical and emotional abuse (self-report).*

Child physical and emotional abuse was measured using an adapted and expanded version of the ISPCAN Child Abuse Screening Tool-Trial caregiver version (ICAST-T, 25 items). ICAST-T was psychometrically evaluated and validated in a large cluster RCT using a sample of adolescents and their caregivers in South Africa ($N = 1,104$) (Meinck et al., 2018), and has been successfully used in a RCT of PLH-YC in the Philippines ($N = 120$) (Lachman et al., 2020). The instrument is an adaptation of the consensus-based survey instrument ICAST-Parent version (ICAST-P), which had been validated in studies involving 697 parents in six LMICs worldwide, including one in Southeast Asia (Runyan et al., 2009). An advantage of the ICAST-T over the ICAST-P is its sensitivity to change, with the study in South Africa showing substantial reductions from baseline to post-test for physical abuse, emotional abuse, and neglect sum-scores according to both caregiver and adolescent reports. Further, another advantage of the ICAST-T, in comparison to other measures such as the Parent-Child Conflict Tactics Scale (Straus et al., 1998) and the Child Abuse Potential Inventory (Milner, 1986), is that it is open source and freely available for use. However, a limitation to the use of ICAST-T in this study is that it was designed and validated for use with parents of adolescents, rather than for those with young children.

2. *Child maltreatment (combination interview and observational assessment).*

Child maltreatment (physical and emotional abuse) was also measured through an adapted combination interview and observational assessment tool: the Home Observation for Measurement of the Environment (HOME) Inventory – Abusive and harsh parenting subscale (see Appendix C.10 for the adapted manual). The tool was adapted from the Early Childhood HOME Inventory record form (relevant to children aged 3-6 years) and the Middle Childhood HOME Inventory record form (relevant to children aged 6-10 years) (Caldwell & Bradley, 2003). The HOME combines interview and observation items to measure the quality and quantity of

stimulation and support provided to a child in the home environment. There are four standard versions of the HOME Inventory, according to the child's age: Infant Toddler HOME (0-3 years), Early Childhood HOME (3-6 years), Middle Childhood HOME (6-10 years), and the Early Adolescent HOME (10-15 years). Psychometric tests of the Early Childhood HOME in the US using the Kuder-Richardson Formula 20 resulted in internal consistency coefficients ranging from 0.53 to 0.93 (Bradley & Caldwell, 1979), and ranging from 0.52 to 0.80 for the Middle Childhood HOME (Bradley et al., 1988). The HOME has been used in multiple countries, including LMICs. The Infant Toddler HOME was used to assess mother-toddler dyads in Northeastern Thailand, with an alpha coefficient of 0.81 for the total scale (Williams et al., 2003).

The HOME allows for a trained researcher to systematically observe, ask questions to the parent, and record parent-child interactions in the home environment, utilising a straightforward system of counting specific interactions and a simple checklist in which the behaviour is either observed/affirmed or not during the home visit. The tool does not require post-visit scoring of parent-child interactions through video, and high rates of inter-observer reliability due to the use of binary scores are possible even with minimal training or experience (Caldwell & Bradley, 2003). These attributes suggest that the HOME may be an instrument that is well suited for use in LMIC settings, given the ease of scoring and the potential to avoid expenditures on video equipment and time spent by researchers in scoring videos. However, the use of a binary scale deprives the researcher of using more detailed information to rate nuanced changes to parent-child interactions as well as frequencies. For instance, physical punishment of a child during the past week is scored as 'yes', regardless of punishment frequency (Totsika & Sylva, 2004).

Secondary outcomes. The feasibility pilot also assessed a range of secondary outcomes that were identified through the literature review (Chapter I, p. 27) as risk and protective factors for child maltreatment. These outcomes included positive parenting; dysfunctional parenting; child monitoring and supervision; child neglect; attitudes supporting punishment; attitudes toward

harsh discipline; parental depression, anxiety, and stress; child behaviour problems; parent daily report on child problem behaviour and positive parenting; parent-child relationships; and intimate partner violence and coercion.

3. *Positive parenting (self-report).*

Positive parenting behaviours were assessed using the Parenting Young Children Scale (PARYC, 21 items) (McEachern et al., 2012), which measures the frequency of positive parenting (7 items), setting limits (7 items), and proactive parenting (7 items) by the parent over the previous month on a 7-point Likert scale (0 = never, 6 = always). PARYC has demonstrated strong reliability in the two RCTs of PLH-YC in South Africa, where it was selected due to its specificity concerning the key parenting skills addressed by the programme (Lachman et al., 2017; Ward et al., 2019). PARYC is a relatively new tool with no other published studies demonstrating its use in LMICs; however, the PARYC validation study has shown consistent negative associations with child behaviour problems (McEachern et al., 2012). Positive parenting was measured using items such as “Were you able to invite (the target child) to play a game with you or share an enjoyable activity?” Setting limits was assessed through items such as “Were you able to explain what you wanted (child nickname) to do in clear and simple ways?” In addition, items used to assess proactive parenting included “Were you able to plan ways to prevent problem behaviour (such as limiting contact with certain peers or not leaving [child nickname] unsupervised while they are doing certain activities)?”

4. *Dysfunctional parenting (self-report).*

Dysfunctional parenting behaviour was assessed using the Parenting Scale (PS, 10 items), which examines parental attitudes and beliefs regarding three dysfunctional disciplinary practices: laxness (permissive discipline), verbosity (lengthy reprimands that rely on talking), and over reactivity (authoritarian discipline) (Arnold et al., 1993). PS responses are based on a 7-point Likert scale. Parents are presented with a situation and then given two opposing responses at either side

of the scale. The mid-point represents neither one way or the other, and the three points on either side of the mid-point represent “sometimes,” “generally,” and “very often” as one moves further out from the middle. The PS has been used widely to assess the effectiveness of parenting programs, including in low-resource settings such as Panama (Mejia et al., 2015). Its psychometric properties have been examined in parents of young children aged 2-7 years in Viet Nam, with the three-factor (Rhoades & O’Leary, 2007) and two-factor scoring systems (Reitman et al., 2001) demonstrating acceptable fit indices; however, two items from the Laxness factor were problematic and failed to load (Del Vecchio et al., 2017). This study utilised the over-reactivity subscale (10 items). One such item under this subscale is “When my child misbehaves, I raise my voice or yell...I speak to my child calmly” (7 = I raise my voice or yell; 1 = I speak to my child calmly.)

5. *Child monitoring and supervision (self-report).*

Parental monitoring and supervision practices was measured using the Alabama Parenting Questionnaire (APQ) poor monitoring/supervision subscale (11 items) (Shelton et al., 1996). The APQ is a 42-item measure of parenting characteristics that have been associated with disruptive behaviour disorders in school-age children, although it has also been used with preschool children (Clerkin et al., 2007). Several studies have found the APQ scales to be sensitive to parenting interventions, with acceptable or good reliability and validity in multiple countries and languages (Esposito et al., 2016). The poor monitoring/supervision subscale measures the frequency of negative parent monitoring and supervision practices over the past month through a 5-point Likert scale (0 = Never; 5 = Always), with one such item including “Does (the target child) stay out later than he/she is supposed to and you don’t know it?”

6. *Child maltreatment: neglect (self-report).*

Child neglect was assessed using the ICAST-T Neglect subscale (Meinck et al., 2018). This subscale has 6 items for measuring medical, physical, and educational neglect, including “In the

past month, how often was (child nickname) not taken care of when sick or injured, even when you or another caregiver were able to do so or could afford it?”

7. *Attitudes supporting physical punishment (self-report).*

Attitudes supporting physical punishment were measured using one item from the MICS 4 Child Discipline module (UNICEF & NSO, 2013). The evidence base on the relationship between such attitudes and actual use of corporal punishment is unclear. Studies in the United States and Viet Nam using nationally representative samples have identified parental attitudes toward corporal punishment as a risk factor for violent disciplinary practices (Cappa & Dam, 2013; Jackson et al., 1999); however, a review of child maltreatment risk factors did not identify these attitudes as such (Stith et al., 2009). The item asks the parent: “In order to bring up, raise up, or educate a child properly, the child needs to be physically punished.” Parents report whether they agree or disagree based on a 5-point Likert scale (0 = strongly disagree; 4 = strongly agree).

8. *Attitudes toward harsh discipline (self-report).*

Attitudes toward harsh discipline were assessed using the ICAST-T Attitudes subscale (4 items) (Meinck et al., 2018). These items concern a hypothetical scenario of a child with behavioural problems, and parents report whether various presented disciplinary methods would be effective or ineffective according to a 5-point Likert scale (1 = very ineffective; 5 = very effective). Examples of such disciplinary methods include “hitting or spanking the child” and “not allowing the child to go out and play with friends.”

9. *Parent sense of inefficacy (self-report).*

Parent sense of inefficacy was measured using an adapted version of the ICAST-T Inefficacy subscale (2 items) (Meinck et al., 2018). Parents with a lower sense of competence may be more prone to perpetrating maltreatment by attempting to control child behaviour through assertive means, such as through threats or violent punishment (Strickland & Samp, 2013). The Inefficacy

sub-scale asks parents to report past month incidence, using a frequency score on a scale of 1 to 7, or 8 or more times (e.g., “In the past month, how often did you now know what to do when [child nickname] misbehaved?”).

10. *Parental depression, anxiety, and stress (self-report).*

Several reviews have found that poor mental health, such as depression, anxiety, personal stress, low self-esteem, psychopathology, and high levels of anger/hyper-reactivity are parental characteristics frequently associated with the perpetration of child maltreatment (Mulder et al., 2018; Stith et al., 2009; White et al., 2015). In this study, parental depression, anxiety, and stress was assessed through the Depression, Anxiety, and Stress Scale short form (DASS-21) (21 items) (S. H. Lovibond & P. F. Lovibond, 1995), which maintains an advantage over instruments such as the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977) and the Beck Depression Inventory (BDI) (Beck et al., 1988) by including a wider range of mental health concerns beyond depression alone. The DASS-21 has demonstrated strong internal consistency and ability to distinguish between anxiety and depression, relative to the Beck Depression Inventory (P. F. Lovibond & S. H. Lovibond, 1995). An examination of the psychometric properties and generalisability of DASS-21 was conducted by Oei et al. (2013) across a sample from six Asian countries ($N = 2,630$), including Thailand ($n = 325$), finding acceptable levels of reliability across the total sample for the depression ($\alpha = 0.86$), anxiety ($\alpha = 0.81$), and stress ($\alpha = 0.78$) sub-scales. The DASS-21 has also been translated and validated in various languages including Bahasa Malaysia (Ramli et al., 2009), Turkish (Akin & Cetin, 2007), Chinese (Chan et al., 2012), and Nepali (Tonsing, 2014). The DASS-21 measures parent depression and anxiety using a 4-point Likert scale (0 = never; 3 = always) to measure the frequency of symptoms over the previous week. Items include statements such as “I felt that I had nothing to look forward to.” Total DASS scores range from 0 to 63, with subscales from 0 to 21. The recommended cut-offs that indicate severity of depression are 5-6 (mild), 7-10 (moderate), 11-13 (severe), and 14 and up (extremely severe), while cut-offs

for anxiety are 4-5 (mild), 6-7 (moderate), 8-9 (severe), and 10 and up (extremely severe). Cut-offs for stress are 8-9 (mild), 10-12 (moderate), 13-16 (severe), and 17 and up (extremely severe).

11. *Child behaviour problems (self-report).*

The study assessed child behaviour problems through the Eyberg Child Behaviour Inventory (ECBI) Intensity Scale and Problem Scale (36 items) (Eyberg & Pincus, 1999). The ECBI was selected as an assessment tool over the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 2001) and the Child Behaviour Checklist (CBCL) (Achenbach & Ruffle, 2000) due to its sensitivity to change, high internal consistency ($r = 0.95$), good test-retest reliability ($r = 0.86$) (Eyberg & Pincus, 1999), and extensive use in RCTS in multiple countries to evaluate parenting programmes, including PLH-YC (Bodenmann et al., 2008; Gardner et al., 2007; Hutchings et al., 2007; Lachman et al., 2020; Reid et al., 2001; Sanders, 2008; Ward et al., 2019). The Intensity Scale measures the frequency of child externalising behaviours over the past month (e.g., “How often does [child nickname] refuse to obey until threatened with punishment?”), using a 7-point Likert-like scale (1 = never occurs; 7 = always occurs). The Problem Scale asks whether particular externalising behaviours are currently a problem for the parent/primary caregiver (0 = No; 1 = Yes). The Problem Scale has been repeatedly demonstrated as a reliable tool for discriminating between groups of children with and without conduct disorders (Baden & Howe, 1992; Eyberg & Ross, 1978; Webster-Stratton & Hammond, 1997). Both scales are respectively summed to create a total intensity score and a total problem score, with clinical cut-off scores for disruptive behaviour problems suggested as 131 for the Intensity Score and 15 for the Problem Score in the United States (Eyberg & Pincus, 1999); however, no norms for Thailand are available.

12. *Parent daily report on child problem behaviour and positive parenting (self-report).*

For the purposes of assessing daily child behaviour and parenting, the study used an adapted version of the Parent Daily Report (PDR) (43 items). The PDR was administered at four

time points: baseline, one month post-baseline, two months post-baseline, and three months post-baseline (at post-test). A key strength of the PDR is that by asking parents to recall behaviours over the previous 24 hours, it overcomes the challenges entailed in recalling events over extended time periods, and has been widely used in multiple contexts to assess changes in child and parent behaviours during the course of programme delivery (Chamberlain et al., 2006; Chamberlain & Reid, 1987; Kazdin et al., 1997; Leung et al., 2003). In order to assess child behaviour, the PDR asks parents whether a child externalising behaviour (e.g. destructiveness, lying, hitting others) occurred within the previous 24 hours (34 items). To assess parenting behaviour, the PDR asks parents about their own behaviour (6 items, e.g. yelled or shouted at the child, praised child for doing something well) and self-efficacy (3 items, e.g. had a feeling that I could not cope with parenting). Responses to these items are dichotomous (0 = No; 1 = Yes), with items summed for each subscale on parent and child behaviour. Negative items on the parent subscales are reversed, with total scores indicating more positive parenting behaviour as well as a total PDR parenting score (range: 0-9).

13. *Parent-child relationships (combination interview and observational assessment).*

Parent-child relationships were assessed through the aforementioned HOME Inventory, consisting of both interview and observational items. The instrument uses a combined and adapted version of the Early Childhood HOME Inventory record form (relevant to children aged 3-6 years) and the Middle Childhood HOME Inventory record form (relevant to children aged 6-10 years) (Caldwell & Bradley, 2003). The adapted version contains 16 items on “responsivity,” which describes the emotional and verbal sensitivity as well as responsivity of the parent to the child (e.g., “parent holds child close 10-15 minutes per day”). It also contains 6 items on the “encouragement of maturity” subscale, which describes the extent to which the parent expects the child to exhibit social responsibility and maturity, and conform to family rules (e.g., “parent/primary caregiver sets limits for child and generally enforces them”). In addition, there are 2 items on “emotional climate,” or the extent to which the parent/primary caregiver can accept

the target child's negative expressions of emotion, as well as how well the parent maintains emotional control (e.g., "child can express negative feelings toward parent/primary caregiver without harsh reprisals"). There is also one item on "family integration," relating to the consistency of a primary family group (e.g., "child eats at least one meal per day, on most days, with the parent/primary caregiver and other family members"), and two items on "modelling," or parental communication on desirable and acceptable behaviour (e.g., "some delay of food gratification is expected"). The items are scored dichotomously based on whether each item was observed or reported by the parent during the home visit, with negative items reverse scored.

14. *Intimate partner violence (self-report).*

The meta-analytic review by Stith et al. (2009) found that one of the largest effect sizes between child physical abuse and included risk factors was high family conflict ($d = 0.54$, 95% CI [0.54, 1.15]), representing a more distal adult outcome at the microsystem level. Given this association, intimate partner violence was assessed in this study using an abbreviated version of the Revised Conflict Tactics Scale. As the most widely used instrument for assessing intimate partner violence (IPV), this scale has been used in over 20 different countries as well as translated into at least 15 languages; however, it has not yet been validated in Thailand (Chapman & Gillespie, 2019; Straus, 2004; Straus et al., 1996). The short form of the instrument (CTS2S, 8 items) measures the frequency of physical and emotional violence perpetrated by an intimate partner over the past month (6 items; e.g. "partner pushed, shoved, or slapped me") as well as negotiation (2 items; e.g., "partner suggested a compromise for a disagreement") (Straus & Douglas, 2004). In this study, responses were scored on a frequency scale of 0-8. Indications of past month prevalence of violence are scored dichotomously. Only respondents who have been in a relationship in the past month answered this scale.

15. *Intimate partner coercion (self-report).*

Intimate partner coercion was measured through an adapted version of the WHO Women's Health and Life Experiences Questionnaire (WHO, 10 items) (Garcia-Moreno et al., 2005). This instrument has been tested in multiple LMICs, including Thailand, and has an advantage over similar instruments due to its conceptualisation of IPV across a range of overt and nuanced forms of aggression (Garcia-Moreno et al., 2006; Saddki et al., 2013). The WHO assesses experiences of partner coercion, including restrictions on financial autonomy (e.g., "partner took your earnings or savings from you against your will"). Responses are scored on a frequency scale of 0-8. Indications of past month prevalence of coercion are scored dichotomously. Only respondents who have been in a relationship in the past month answered this scale.

Intervention content associated with perceived key mechanisms of change. The qualitative component embedded within the feasibility study, as mentioned above in Section 2.4 (see p. 93), utilised both individual interviews with parent participants and a FGD with programme facilitators. The adoption of both data collection approaches was integral to this component as it permitted the in-depth exploration of experiences and perspectives of parents who had received varying programme dosages, while also providing an opportunity to facilitators to reflect on the utility and importance of each parenting skill. Other findings from the individual interviews and FGD relating to the acceptability of non-content program components will be reported as part of a separate process evaluation paper (McCoy et al., 2020).

Individual interviews. Similar to the formative evaluation phase, I adopted a structured guide approach (see Appendix C.8, p. 406) that was organised according to four major questions. The first concerned the parent's overall experience in participating in the programme, with probes focused on how the programme affected the parent's relationships with the target child, other children in the household, and other members of the family. The second question asked the interviewee for his or her views on each parenting skill discussed during the programme. Probes for each skill included questions on the relevance of the skill to the parent's interactions with the

target child, the level of difficulty involved in applying the skill, as well as descriptions of particular situations in which the skill was successfully and unsuccessfully applied. The third question focused on parental perspectives on the various methods utilised during program delivery, including home visitation, collaboration and group discussion, role play, weekly phone calls, and illustrated story discussions. Finally, the last question concerned programme logistics, including parental views on the scheduling of group sessions, the suitability of facilities and materials, and the competencies of programme facilitators.

Focus group discussion. I also followed an interview guide approach for the FGD with facilitators (see Appendix C.9, p. 410), with several themes overlapping with the individual interview guide for the purpose of triangulating data across data sources, as well as to confirm or disconfirm themes that emerged from parent interviews (Creswell & Miller, 2000). The FGD guide was tailored to facilitator experiences of delivering the intervention, but also incorporated opportunities for facilitators to reflect on their perceptions of programme impact on parents. The guide was structured by eight major questions. The first question concerned the facilitators' overall experience in delivering the programme. The second question pertained to facilitator views on each parenting skill that formed the core content of the programme, with probes focused on the relevance and importance of each skill, as well as the sharing of particular situations in which parent participants attempted to apply the skill at home. Question three concerned facilitator views on the various methods utilised for program delivery, while the fourth question explored participant attendance and engagement, and the methods used by facilitators to encourage group attendance and engage both young and elderly parents. The fifth question focused on programme logistics and scheduling, with probes including facilitator views on how their various professional backgrounds worked together during programme delivery. The sixth and seventh questions, respectively, concerned facilitator perspectives on the training and support received, as well as how they managed the workload of programme delivery alongside their existing work responsibilities. Finally, the eighth question focused on facilitator views on programme scale up,

with probes including the incorporation of PLH-YC as a regular service within the local health system, as well as whether they would choose to continue to deliver the programme on a regular basis if provided with the opportunity.

2.8 References

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CHAPTER III. PAPER 1: Parenting Interventions to Prevent Violence against Children in Low- and Middle-Income Countries in East and Southeast Asia: A Systematic Review and Multi-level Meta-analysis

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Abstract

Background: Currently, the strongest evidence for preventing violence against children lies with social learning theory-based parenting interventions. An increasing number of experimental studies on such interventions have been conducted in low- and middle-income countries (LMICs) in East and Southeast Asia.

Objective: To conduct a systematic review and meta-analysis on the effectiveness of parenting interventions in preventing violence against children.

Participants and setting: Parents and primary caregivers living in LMICs in East and Southeast Asia.

Methods: Eleven studies were retrieved through electronic databases, expert contacts, and the reference sections of previous reviews. Studies were appraised for risk of bias and effect estimates pooled using random effects multilevel meta-analysis.

Results: Forty-four effect estimates were meta-analyzed based on five outcome category models, finding a small effect on abusive, harsh, or negative parenting ($n = 3$, $d = -0.42$, 95% CI [- 0.81, - 0.02], $p < .01$, $I^2 = 72\%$); a large, non-significant effect on parental knowledge or attitudes ($n = 5$, $d = 1.40$, 95% CI [-0.30, 3.10], $I^2 = 95\%$); a small effect on positive parent-child interactions ($n = 5$, $d = 0.25$, 95% CI [0.19, 0.32], $p < .001$, $I^2 = 0$); a small, non-significant effect on parental stress ($n = 2$, $d = -0.13$, 95% CI [-0.38, 0.11], $I^2 = 0$); and a small, non-significant effect on family environment ($n = 3$, $d = 0.21$, 95% CI [-0.12, 0.53], $I^2 = 85\%$).

Conclusions: The results suggest that parenting interventions can reduce rates of particular forms of violence against children, as well as promote positive parent-child interactions.

Keywords: Parenting, child abuse, child maltreatment, cultural context, mental health, violence

3.1 Introduction

In many low- and middle- income countries (LMICs), prevalence studies indicate that children experience high rates of violence within the context of a relationship of responsibility to the child (Lansford & Deater-Deckard, 2012) with most children having experienced violent discipline in the form of physical or psychological punishment (United Nations Children's Fund [UNICEF], 2010). Indeed, minimum rates of past year violence against children aged 2-14 years were estimated as the highest in Asia at 68%, in comparison to Africa, Europe, Latin America, and North America (Hillis et al., 2016). In the East Asia and Pacific region, amongst those countries for which Multiple Indicator Cluster Survey (MICS) data were available, parents were the most commonly mentioned perpetrators of child physical abuse, with 63% of girls having experienced such abuse by their mothers in Cambodia, 28% by their fathers in the Philippines, and 63% by their mothers in Timor-Leste (UNICEF East Asia and Pacific Regional Office [EAPRO], 2014). Estimates of child emotional abuse amongst lower-middle income countries in the region are also high, affecting 36% of girls and 37% of boys, although these prevalence rates include a range of perpetrators (Fang et al., 2015). Finally, many children in LMICs in the region have been victims of neglect, affecting 27% of girls and 24% of boys (UNICEF EAPRO, 2014). These high rates of victimization persist despite all countries in East and Southeast Asia being legally bound to the provisions of the Convention on the Rights of the Child, the world's most widely ratified human rights treaty. Article 19 of the Convention obligates States Parties to take all appropriate measures to protect the child from all forms of violence, abuse, or maltreatment, including while in the care of parents or legal guardians (United Nations [UN] General Assembly, 1989). In recognition of the widespread nature of this problem and these obligations, the Association of Southeast Asian Nations (ASEAN) recently adopted a multi-sectoral Regional Plan of Action on the Elimination of Violence against Children (ASEAN Secretariat, 2017).

The aetiology of violence against children is best described within an ecological framework (Bronfenbrenner, 1979), taking into account the layered contexts and interactions at the individual

(child and parent), relational (between child and parent), family, community (e.g. neighborhood, school) and societal (e.g. social norms, economic disparities, legal frameworks) levels. Research studies and reviews of such risk factors mainly derive from high-income country contexts. At the child level, potential risk factors for child maltreatment include child social competence, child internalizing behavior, and child externalizing behavior (Stith et al., 2009), with the latter predicting corporal punishment in a longitudinal study in nine countries including China, the Philippines, and Thailand (Lansford et al., 2015). At the level of the parent, factors include adverse life experiences and mental health problems (Chaffin et al., 1996), substance abuse (Tyler et al., 1997), a history of abuse as a child (Kaufman & Zigler, 1987), and values about corporal punishment (Brayden et al., 1992; Scannapieco & Connell-Carrick, 2005). At the parent-child relationship level, parental perception of the child as a problem, anger and hyper-reactivity, and the quality of the relationship have been significantly associated with child physical abuse and neglect (Stith et al., 2009). At the family level, high family conflict and low family cohesion were found to have some of the strongest associations with child physical abuse in a meta-analytic review (Stith et al., 2009), while family-related factors specifically associated with child maltreatment recurrence include an increased number of dependents or children and family poverty (White et al., 2015). At the community level, perceptions of the normativeness of corporal punishment predicted corporal punishment in the study in nine countries that included China, the Philippines, and Thailand (Lansford et al., 2015), while low social and family support, as well as low 'child visibility' within the community, was found to increase the risk of maltreatment recurrence (White et al., 2015). Finally, at the societal level, unemployment, alcohol and drug availability, residential instability, and high childcare burden have been positively associated with child maltreatment rates (Freisthler et al., 2006).

Parents and other primary caregivers, given their proximity to the ecological level of the individual child and their fundamental role in childcare, development and protection, provide the conduit through which children experience their world. Even in families facing chronic adversities,

positive parent-child relationships and consistent parenting can help buffer and mediate the effects of risk factors on child development, and to serve a protective and supportive function (Luthar & Bidwell Zelazo, 2003). Systematic reviews indicate that parenting interventions can be effective across a range of outcomes relevant to child maltreatment, such as child behavior problems (Furlong et al., 2012; Piquero et al., 2009), emotional difficulties (Cartwright-Hatton et al., 2011), parenting competence and stress (Gross et al., 2003; Nixon et al., 2003), maternal depression (Sanders & McFarland, 2000), and couple interaction quality (Cowan et al., 2011). Moreover, there is growing evidence that particular parenting interventions can improve positive parenting, reduce harsh parenting, and diminish actual rates of violence against children (Barlow, Johnston, et al., 2006; Barlow, Simkiss, et al., 2006; Bilukha et al., 2005; Chen & Chan, 2015; Knerr et al., 2013; Vlahovicova et al., 2017).

Effective parenting programs for reducing risks of violence perpetration can be individual-based, delivered in home or clinical settings, group-based in community settings, or a combination of individual- and group-based delivery. Many of these programs draw on common theories of change based on social learning (Bandura, 1977) and attachment theories (Bowlby, 1974). These programs fortify parenting skills and sensitivity by providing practical instruction on positive-parent child interaction, the use of positive encouragement, techniques for non-violent discipline, problem solving, socio-emotional coaching, and developmentally responsive supervision (Dishion & Patterson, 2006; Kaminski et al., 2008). Parents and primary caregivers who participate in evidence-based interventions can experience reductions in stress and maternal ill-health, improvements in parenting competence in managing difficult child behavior, strengthened knowledge of child development, and decreased levels of social isolation when taking part in group sessions (Barlow et al., 2010; Hurlburt et al., 2013). Parenting interventions can also teach parents how to interrupt coercive cycles of parent-child interactions that arise through child behavior problems and dysfunctional parenting skills (Patterson et al., 1982). For these reasons,

parenting interventions that target reductions in difficult child behaviors are often similar to those known to effectively prevent parent-perpetrated violence against children (Knerr et al., 2013).

This systematic review and multi-level meta-analysis is, to our knowledge, the first attempt to undertake a regional synthesis of parenting interventions for the prevention of violence against children. Importantly, it extends beyond similar, international reviews by expanding included outcome measures to all forms of violence against children, identifying non-English language and grey literature, and incorporating multiple regional and country-specific bibliographic databases. Only one other, comparable systematic review is known to have focused on LMICs (Knerr et al., 2013). However, it only reviewed literature published prior to May 2010, did not identify non-English language papers, only included one study from East and Southeast Asia (Jin et al., 2007), and is in need of updating. The current review has been conducted within a context of growing international and regional demand, especially amongst LMICs, to design, transport, adapt, and implement evidence-based parenting programs for the prevention of violence against children.

3.2 Methods

Data sources, inclusion criteria, and study screening

First, we included interventions that aimed to reduce child maltreatment, harsh or dysfunctional parenting, teach positive child behavior management strategies, or improve parent-child attachment and relationships through changes in general parenting knowledge, attitudes or skills, either as primary or secondary outcomes (adapted from Knerr et al., 2013). Interventions were excluded if: 1) they comprised multiple components, of which parenting was only a minor component, and 2) if they targeted specific health concerns (e.g. human immunodeficiency virus [HIV], breastfeeding, malnutrition) or clinical diagnoses (e.g. Attention-Deficit/Hyperactivity Disorder, physical disabilities). Second, the population for this review included parents or other primary caregivers of children (persons under 18 years of age) living in LMICs in East and Southeast

Asia, as defined by the UN Statistics Division (2015). Third, primary outcomes of interest were distal outcome measures of violence against children perpetrated by caregivers, including physical, emotional, or sexual abuse, neglect, and exploitation. Secondary outcomes included one or more of the following proximal outcome measures: harsh or dysfunctional parenting; parenting skills, behavior, attitudes, or knowledge about parenting; and quality of parent-child attachment, sensitivity, and relationships. Finally, included study designs were randomized, quasi-randomized, and non-randomized controlled trials, with a comparison of no intervention, services as usual, waitlisted services, or alternatively specified services.

We searched seven databases, including CINAHL, the Cochrane Central Register of Clinical Controlled Trials, EMBASE, ERIC, Global Health, MEDLINE, and PsycINFO, and nine regional bibliographic databases, including China Academic Journals Full-text Database, Index Medicus for the South-East Asia Region, HERDIN NeON Database, Indonesian Publication Index, Philippine E-Journals, Thai Library Integrated System, East-West Psychological Science Research Center, Pacific Rim International Journal of Nursing Research, Health Systems Research Institute Thailand. Unpublished reports were identified via ProQuest Dissertation and Theses Database, the World Health Organization (WHO) Library Database, Violence Prevention Database of Evidence, WHO Clinical Trials Search Portal, Save the Children's Resource Centre, and the websites of UNICEF Office of Research – Innocenti, Asia Regional Network for Early Childhood (ARNEC), International Society for the Prevention of Child Abuse and Neglect (ISPCAN), and the Asian Development Bank (ADB). Five research databases from major universities in Thailand were also searched. The regional and Thai university databases included studies in several languages such as Chinese, Bahasa Indonesia, and Thai; these databases were selected as they allow for searching in English or Thai. A sensitive yet specific search was conducted through 10 July 2015, with search terms including a combination of entries and synonyms for a) country name (e.g., Philippines, Cambodia), b) parents and parenting (e.g., carer, maternal behavior), and c) evaluation designs

(e.g., trial, randomized). The specific search strings used for each database are listed in Appendix A (see p. 369).

In addition, we contacted 101 experts via e-mail to solicit relevant papers. Once the included studies were identified, we searched by hand all reference lists, as well as reference lists of other relevant publications.

AM and GJM independently reviewed the retrieved papers in three stages: 1) by determining their relevance based on title or abstract, 2) by commissioning translation services for non-English articles, and 3) by reviewing the full text to see if all inclusion criteria were met, or if papers should be excluded based on exclusion criteria. Any disagreements were referred to FG as a third reviewer.

Data extraction and effect size calculation

AM extracted the following data from each included study: descriptive data, including available participant demographics (age, sex, socio-economic status); intervention characteristics (delivery method, goals, components, doses, control conditions); transportability and adaptation of interventions (origin and adaptation process); and primary and secondary outcome measures. Missing data, attrition, and intention-to-treat were assessed for all included studies. AM contacted two corresponding authors (Puffer et al., 2017; Sumargi et al., 2015) to seek clarification on study outcomes and procedures. Raw data were not accessed or analyzed.

Measures of treatment effect were recorded as Cohen's *d*. Where studies recorded effect sizes using other measures, and when the results of chi-square tests, means, standard deviations, and size of intervention and control groups were available, we made conversions to Cohen's *d* using published formulae (Lipsey & Wilson, 2001). We considered magnitude of effects under the following parameters: .20 as small; .50 as medium; and .80 as a large effect size (Cohen, 1988).

Data analysis

We used a multi-level meta-analysis to estimate effects, due to multiple effect sizes per domain from each included study. This approach allows for the estimation of a mean effect of interventions by outcome type, allowing practitioners and policymakers to discern which programs are most effective in targeting an outcome of particular interest. This meta-analysis consisted of three levels with random effects between and within studies, which reflected the within-study clustering of outcomes. Level one is implied, representing participants within effect sizes. Level two lies within studies, and consists of treatment-control comparison outcome measures. Level three, at the level between studies, is composed of each individual study. Three-level meta-analyses are suitable when there are several effect sizes from independent groups within studies, allowing for the correlation of effect sizes within a cluster at the study level (Cheung, 2014; Van den Noortgate et al., 2013).

Meta-analyses were then conducted separately by outcome category. For this purpose, we coded each outcome measure based on broad outcome types and subsequently grouped these into five outcome categories: 1) abusive, harsh, or negative parenting; 2) parental knowledge or attitudes; 3) positive parent-child interactions; 4) parental stress; and 5) family environment. For each of the five models, we used the R metafor package (Viechtbauer, 2010) to calculate the within-study and between-study variance components. We then assessed heterogeneity at levels two and three. For level two, we calculated I^2 by dividing the variance component at the within-study level by the sum of the typical effect size variance, within-study variance component and the between-study variance component. For level three, we divided the variance component at the between-study level by the sum of the typical effect size variance, within-study variance component, and the between-study variance component (Cheung, 2014). Using the R metafor package, we then estimated the size of the intervention effect for each outcome category. Given that each of the five models contained only a limited number of studies, we did not conduct meta-regressions. Further, we created forest plots for all five models using Stata statistical software.

3.3 Results

Results of the search

The electronic database search retrieved 10,378 records, which were imported into EndNote. Responses from expert contacts resulted in an additional 24 records, while hand searching of reference lists led to identifying one further study. After removing duplicates, 10,305 records remained. Following screening, 10,279 studies were excluded for failure to meet inclusion criteria. The full text of 26 remaining studies was then assessed further for eligibility, leading to the exclusion of 15 studies. The search resulted in a pool of 11 studies for inclusion, drawn from 12 records. Of the 12 records, three were unpublished dissertations (Punthmatharith, 2001; Sattasathuchana, 2012; Thanasetkorn, 2009) and one was a grey literature paper by an international NGO (Sim et al., 2014) that was substituted by a published paper of the same study (Puffer et al., 2017). Hand searching of the reference lists of these studies yielded no further results (see Figure 9 for search flow diagram).

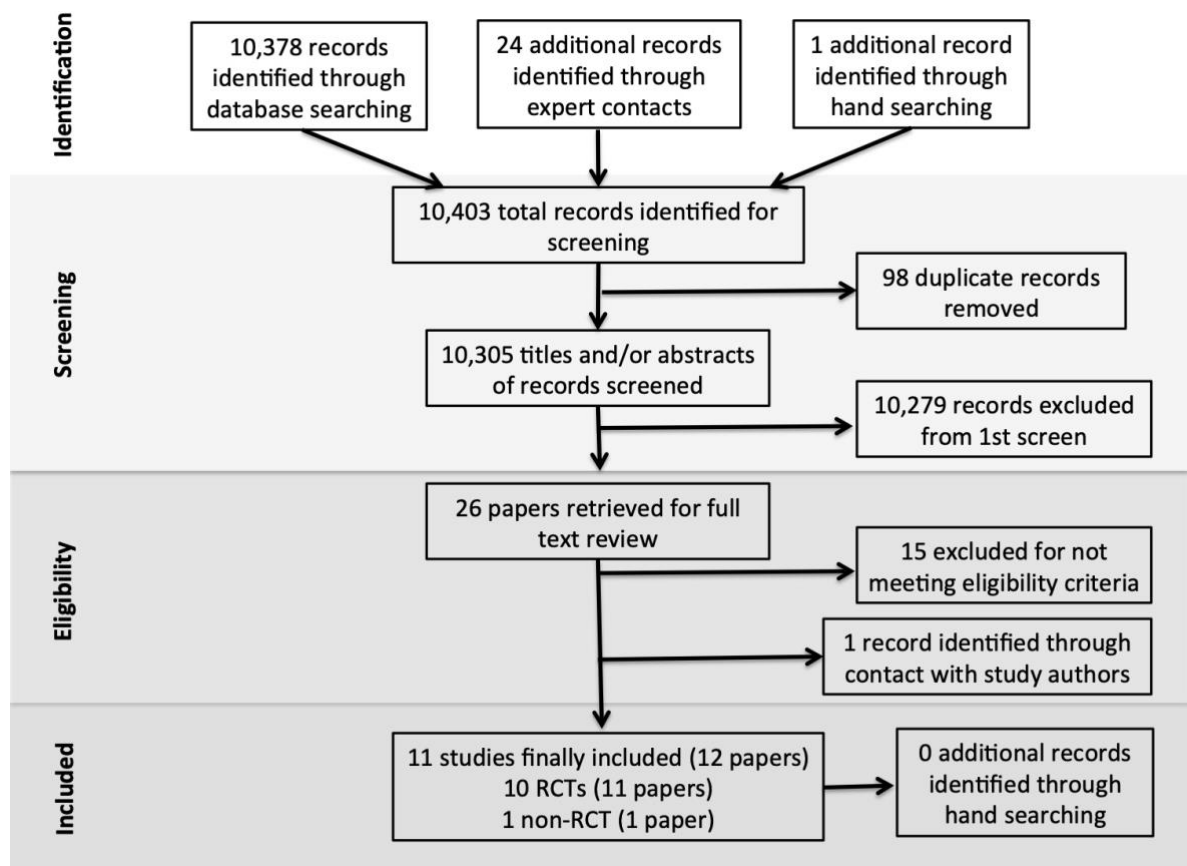


Figure 9. PRISMA search flow diagram

Included studies

The 11 included studies (Table 2) were conducted in three countries: five from China, five from Thailand, and one from Indonesia. Seven studies were published in English, three in Chinese, and one in Thai. With the exception of one non-randomized controlled trial (Thanasetkorn, 2009), all studies were randomized controlled trials (RCTs).

Table 2. Characteristics of the included studies and interventions

Individualized intervention								
First author (year)	Country (language)	Design	Intervention	Setting	Goals	Components	Duration	Control
Gao et al. (2015)	China (English)	RCT	Interpersonal postnatal psychotherapy	Hospital; by phone	To improve social support, maternal role competence, postpartum depressive symptoms	'Psycho-education' session (1 st session); counseling via telephone (2 nd session)	2 sessions over 2 weeks (1 st session is 1 hr.)	TAU (routine postnatal care)
Jin et al. (2007)	China (English)	RCT	Care for Development	Home	To promote child development by improving mother-child play & communication	Counseling; role-play & practice using materials on play & communication (Mother's Card); support for seeking childcare	2 sessions over 6 months (30-60 min. each)	TAU (no further information provided)
Punthmat harith (2001)	Thailand (English)	RCT	Early Kangaroo Care (EKC)	Hospital	To strengthen maternal feelings, mother-child interaction, breastfeeding	Instruction and practice session on EKC; encouragement	1 session (30-minutes) followed by encouragement at hospital discharge	TAU (standard postpartum care)
Group-based intervention								
Study	Country	Design	Intervention	Setting	Goal	Components	Duration	Control
Liu & Liu (2008)	China (Chinese)	RCT	Group-based parenting training	N/A	To strengthen parent-adolescent communication & relationships	Group discussion, role-play, case studies, and parent-child games on parental expectations, communication, sharing of emotions, and education	8 weekly sessions over 2 months	No intervention
Sattasath uchana (2012)	Thailand (Thai)	RCT	Mutual support parenting	Child development	To encourage parents to participate in their children's	Group discussion on child development & parenting experiences; lectures,	12 weekly sessions over 12 weeks (2-3 hrs.	TAU (Further information N/A)

			group	center	development through involvement in a parenting mutual support group	practice sessions on running a mutual support group; print materials on child development	each)	
Puffer et al. (2017)	Thailand (English)	RCT	Happy Families (local adaptation of the Strengthening Families Program)	Community	To strengthen parental knowledge & skills in order to improve parenting practices, family functioning, child behavior, child psychosocial wellbeing, & child resilience	Parallel group sessions for parents/caregivers & children on child development, communication, behavior management, substance abuse; sessions followed by joint activities to practice learned skills	12 sessions over 12 weeks	Waitlist
Sumargi et al. (2015)	Indonesia (English)	RCT	Triple P Seminar Series (local adaptation)	University	To enhance parental knowledge, skills, & confidence in order to prevent child emotional & behavioral problems	Group lectures, case studies, & discussion on positive parenting, parenting strategies, developing children's social skills, helping children manage feelings & develop coping skills	3 sessions over 3 weeks (90 min. each)	Waitlist
Thanasetkorn (2009)	Thailand (English)	Non-RCT	101s Positive Discipline (local adaptation)	School	To increase parental use of positive discipline skills & decrease harsh disciplinary methods	Group session on 10 principles of positive discipline from the '101s' program, with phone & e-mail discussion	1 session over 3 hours, followed by opportunities for phone calls and e-mails	TAU (usual school curriculum & services)
Zhu & Xu (2010)	China (Chinese)	RCT	Group-based parenting education	Hospital	To improve child-parent relationships, attachment, parental competency, & child physical and mental health	Group lectures on child health and development	6 sessions over 1.5 years (one session every 3 months)	TAU (infant health exam)

Combined individualized and group-based intervention								
Study	Country	Design	Intervention	Setting	Goal	Components	Duration	Control
Hao et al. (2006)	China (Chinese)	RCT	Group- and individual based parenting training	N/A	To reduce child behavioral problems by promoting parenting knowledge & skills	Group lectures on parenting concepts & practices, child health and behavior; individual sessions focused on brochures with age-specific parenting guidance	Group lectures & individual sessions provided 7 times to mothers of infants <6 months, once every 3 months for those >6 months to 2 years, once every 6 months for those >2 years	TAU (regular toddler health care service)
Sawasdi-anich et al. (2010)	Thailand (English)	RCT	Parental cognitive adjustment program	Child-care centers; home	To promote four cognitive processes in parents for the purpose of improving parental attitudes toward child rearing & reducing the potential for child physical abuse	Group sessions on the parenting role, parent-child relationships, child development, child abuse, child rights, child disciplinary techniques, child behavior problems, stress reduction, anger management, & community resources; home visits identify child-rearing problems, solutions, & enhance parenting capabilities	2 group sessions (3 hours each) and 2 home visits (one hour each)	TAU (regular child care center services followed by parenting education class & booklet)

Note: TAU = Treatment as usual; N/A = Not available

The 11 trials evaluated 11 different parenting interventions with various goals: three aimed to promote child development through parenting education, mother-child interaction, or parent mutual support (Jin et al., 2007; Sattasathuchana, 2012; Zhu & Xu, 2010) two aimed to promote positive discipline skills and reduce harsh punishment or physical abuse (Sawasdiapanich et al., 2010; Thanasetkorn, 2009); two aimed to strengthen parental knowledge and skills to reduce child behavioral problems (Hao et al., 2006; Sumargi et al., 2015); one aimed to improve social support, maternal role competence, and postpartum depressive symptoms (Gao et al., 2015); one aimed to strengthen parent-child communication and relationships (Liu & Liu, 2008); one aimed to improve mother-child interaction and breastfeeding (Punthmatharith, 2001); and one broadly aimed to improve parenting practices, family functioning, child behavior, child psychosocial well-being, and child resilience (Puffer et al., 2017). Five interventions were adaptations of transported programs, including the US-originated Strengthening Families Program in Thailand (Puffer et al., 2017); the Australian Triple P Seminar Series in Indonesia (Sumargi et al., 2015); the US-originated '101s Positive Discipline' in Thailand (Thanasetkorn, 2009); 'Care for Development' counseling materials in China, used in over 200 countries (Jin et al., 2007); and Early Kangaroo Care in Thailand, first practiced in Colombia (Punthmatharith, 2001). Most interventions targeted parents or primary caregivers of young children, ranging from newborns aged 60-90 minutes to children six years of age, while only three studies included parents or primary caregivers of pre-adolescent and adolescent children (Table 3) (Liu & Liu, 2008; Puffer et al., 2017; Sumargi et al., 2015).

Table 3. Characteristics of participants

Study	Country	Sample size (<i>N</i>)	Parent/ caregiver	Child age	Socio-economic status & ethnicity
Gao et al. (2015)	China	90 INT 90 CTRL	Mothers	2-3 days old	Married and living with their husbands; professional or semi-professional with monthly household income of over 6,000 Yuan (~860 USD); most had a college degree; Chinese*
Hao et al. (2006)	China	310 INT 191 CTRL	Mothers (including pregnant women) & fathers	0-3 years	Chinese*
Jin et al. (2007)	China	50 INT 50 CTRL	Mothers	0-2 years	Most living below the poverty line; Chinese*
Liu & Liu (2008)	China	15 INT 15 CTRL	Parent-child dyads	2 nd grade of secondary school (age unspecified)	Families with both a father and mother; Chinese*
Punthmatharith (2001)	Thailand	97 INT 99 CTRL	Mothers	60-90 min. old	Most were married, with over 12 years of education and a monthly income of less than 10,000 Baht (~311 USD); Thai*
Sattasathuchana (2012)	Thailand	15 INT 15 CTRL	Mothers & fathers	3-5 years	Most were married; average monthly household income of 8,001-10,000 Baht (~265-311 USD); Thai*
Sawasdipanich et al. (2010)	Thailand	53 INT 63 CTRL	Mothers, fathers, & other caregivers	1-6 years	Most were of low to middle socioeconomic status, female, married, employed, and had completed secondary school; Thai
Puffer et al. (2017)	Thailand	240 INT 239 CTRL	Mothers, fathers, other caregivers & children	7-15 years	Most were undocumented migrants or refugees with no or some primary education; 1/3 of caregivers were unemployed; Burman, Karen, and other ethnicities
Sumargi et al. (2015)	Indonesia	72 INT 71 CTRL	Mothers & fathers	2-12 years	Most were married, had a university degree and additional caregivers available to their children; good financial status; 64% were Javanese and 24% were Chinese

Thanasetkorn (2009)	Thailand	50 INT 55 CTRL	Mothers & fathers (INT); mothers, fathers & kindergarten teachers (CTRL)	Kindergarten (age N/A)	Most were upper or middle-class families; Thai
Zhu & Xu (2010)	China	210 INT 210 CTRL	Mothers & fathers	6 months	Chinese*

*Ethnicity not specified by the author(s) but implied given the study setting

N/A = Information not available

INT = intervention group; CTRL = control group

The interventions comprised a range of formats, doses, deliverers, and settings. Formats included one-on-one trainings of short duration (one or two sessions of 30 to 60 minutes each) (Gao et al., 2015; Jin et al., 2007; Punthmatharith, 2001); group-based trainings of variable duration (from one 3-hour session to 12 weekly sessions of two to three hours each) (Liu & Liu, 2008; Puffer et al., 2017; Sattasathuchana, 2012; Sumargi et al., 2015; Thanasetkorn, 2009; Zhu & Xu, 2010); and combination one-on-one and group-based trainings or lectures (such as monthly lectures over 19 months, group sessions of 3-hours each, and 60-minute home visits) (Hao et al., 2006; Sawasdipanich et al., 2010). Five interventions were delivered by health professionals (Gao et al., 2015; Hao et al., 2006; Jin et al., 2007; Punthmatharith, 2001; Sawasdipanich et al., 2010), one by an accredited Triple P practitioner (Sumargi et al., 2015), two by study authors with unknown professional qualifications (Sattasathuchana, 2012; Thanasetkorn, 2009), one by international NGO staff and community-based lay facilitators (Puffer et al., 2017), and two by deliverers who were not described (Liu & Liu, 2008; Zhu & Xu, 2010). Intervention settings included three trials conducted in a hospital setting (Gao et al., 2015; Punthmatharith, 2001; Zhu & Xu, 2010), one in a school (Thanasetkorn, 2009), one in a university (Sumargi et al., 2015), one in a community setting, one in participants' homes (Jin et al., 2007), one in a child care center (Sattasathuchana, 2012), and one in both a child care center and in participants' homes (Sawasdipanich et al., 2010). Two studies also described the provision of additional counseling or encouragement via telephone or e-mail (Gao et al., 2015; Thanasetkorn, 2009), while two studies did not describe the setting for intervention delivery (Hao et al., 2006; Liu & Liu, 2008).

The included studies comprised diverse ethnic populations, including Burman, Chinese, Javanese, Karen, and Thai parents (Table 3). The socio-economic characteristics of participants were also wide ranging. Most participants in three studies (Gao et al., 2015; Sumargi et al., 2015; Thanasetkorn, 2009) were middle-class families, and had completed at least 12 years of education or earned a college degree, while in the majority in three studies (Punthmatharith, 2001; Sattasathuchana, 2012; Sawasdipanich et al., 2010), were of low to middle socio-economic status

with 12 years of education or less. In two studies (Jin et al., 2007; Puffer et al., 2017), most were respectively described as living below the poverty line or were undocumented migrants or refugees with no or some primary education. The remaining three studies (Hao et al., 2006; Liu & Liu, 2008; Zhu & Xu, 2010) did not describe such characteristics. There were substantial variations in the number of participants per study, ranging from 30 to 501.

The included studies described 53 specific outcome measures of relevance to this review, using a variety of instruments; however, sufficient data were only available to calculate 44 effect sizes (Table 4). Three studies (Jin et al., 2007; Sattasathuchana, 2012; Sumargi et al., 2015) contained insufficient data for calculation of some or all effects. Measures of harm were not reported by any studies. The 44 included effect sizes spanned 14 broad outcome measures, which in turn were categorized under the five outcome categories (see Table 5) that formed the models for multi-level meta-analysis. The majority of data collected for the 44 effect sizes were provided by parent or caregiver report, with nine outcome measures assessed by child report in one study (Puffer et al., 2017), and one measure assessed via observation (Punthmatharith, 2001). Data for a total of 27 outcome measures were gathered via interview (Jin et al., 2007; Puffer et al., 2017; Sattasathuchana, 2012; Thanasetkorn, 2009; Zhu & Xu, 2010), while questionnaires were utilized in the collection of data for 13 outcome measures (Gao et al., 2015; Hao et al., 2006; Punthmatharith, 2001; Sumargi et al., 2015). Two studies, comprising three outcome measures, did not clearly indicate whether questionnaires or interviews were administered (Liu & Liu, 2008; Sawasdipanich et al., 2010).

Table 4. Models and respective outcome measures

Model 1: Abusive, harsh, and negative parenting						
First author (year)	Outcome measure (primary, secondary, or N/A)	Instrument	N	Method of report	Time point	Effect size (Cohen's <i>d</i>) [95% CI]
Liu & Liu (2008)	Reduction in negative rejection (N/A)	Parent-Child Relationships Test	30	Unclear if by questionnaire or interview (parent report)	2 months post-baseline	- 1.02 ⁺ [- 0.26, - 1.78]
Puffer et al. (2017)	Negative relationship quality (P)	Parental Acceptance-Rejection Questionnaire	479	Interview (child report)	4 months post-baseline (1 month post-intervention)	- 0.09 ⁺ [- 0.27, 0.09]
			513	Interview (parent report)	4 months post-baseline (1 month post-intervention)	- 0.26 ⁺ [- 0.43, - 0.08]
	Negative discipline (P)	Discipline Interview	479	Interview (child report)	4 months post-baseline (1 month post-intervention)	- 0.09 ⁺ [- 0.27, 0.09]
			513	Interview (parent report)	4 months post-baseline (1 month post-intervention)	- 0.31 ⁺ [-0.48, -0.14]
	Discipline - including severe punishment (P)	Multiple Indicator Cluster Survey (Discipline module)	479	Interview (child report)	4 months post-baseline (1 month post-intervention)	- 0.02 ⁺ [- 0.20, 0.16]
			513	Interview (parent report)	4 months post-baseline (1 month post-intervention)	- 0.11 ⁺ [-0.28, 0.07]
Sumargi et al. (2015)	Dysfunctional parenting practices (S)	Parenting and Family Adjustment Scale	143	Questionnaire (parent report)	1 month post-baseline (2 weeks post-intervention)	- 0.62 ⁺ [- 0.96, - 0.29]
	Parental use of over-reactive or authoritarian discipline (S)	Parenting Scale	143	Questionnaire (parent report)	1 month post-baseline (2 weeks post-intervention)	- 0.33 ⁺ [- 0.66, 0.00]
Thanasetkorn (2009)	Critical/harsh practices (N/A)	101s Parent Interaction Checklist	105	Interview (parent report)	1 month post-intervention	- 4.64 ⁺ [- 5.37, - 3.90]

	Verbal punishment practices (N/A)	101s Parent Interaction Checklist	105	Interview (parent report)	1 month post-intervention	- 3.61 [†] [- 4.23, - 2.99]
	Physical punishment practices (N/A)	101s Parent Interaction Checklist	105	Interview (parent report)	1 month post-intervention	- 3.17 [†] [- 3.74, - 2.59]
Model 2: Parental knowledge and attitudes						
First author (year)	Outcome measure	Instrument	N	Method of report	Time point	Effect size (Cohen's <i>d</i>) [95% CI]
Gao et al. (2015)	Maternal role competence (P)	Parenting Sense of Competence Scale	180	Questionnaire (parent report)	6 weeks post-partum	0.53 [†] [0.24, 0.83]
Jin et al. (2007)	Understanding of child development messages (S)	As presented on the 'Mother's Card'	100	Interview (parent report)	6 months post-baseline	5.10 [†] [3.95, 6.26]
Sawasdipanich et al. (2010)	Parental attitudes toward child rearing (N/A)	Adult-Adolescent Parenting Inventory	116	Unclear if by questionnaire or interview (parent report)	16 weeks post-baseline	0.60 [†] [0.23, 0.97]
Sumargi et al. (2015)	Parental confidence in managing difficult child behaviour (S)	Child Adjustment and Parent Efficacy Scale (CAPES)	143	Questionnaire (parent report)	1 month post-baseline (2 weeks post-intervention)	0.40 [†] [0.07, 0.73]
Zhu & Xu (2010)	Parenting knowledge on child development and capability in providing appropriate guidance (N/A)	Bespoke questionnaire	420	Interview (parent report)	1.5 years post-baseline	0.64 [†] [0.44, 0.84]
Model 3: Positive parent-child interactions						
First author (year)	Outcome measure	Instrument	N	Method of report	Time point	Effect size (Cohen's <i>d</i>) [95% CI]
Hao et al. (2006)	Often talk to toddlers (N/A)	Bespoke questionnaire	501	Questionnaire (parent report)	Information not provided	0.18 [†] [0.00, 0.35]
	Often cuddle toddlers (N/A)	Bespoke questionnaire	501	Questionnaire (parent report)	Information not provided	0.27 [†] [0.09, 0.45]
	Often play with toddlers (N/A)	Bespoke questionnaire	501	Questionnaire (parent report)	Information not provided	0.41 [†] [0.23, 0.59]
Punthmatharith (2001)	Maternal bonding (N/A)	Bonding observation checklist	192	Observation	Day 2 post-partum	0.32 [†] [0.04, 0.60]

	Maternal attention and connection to infant (N/A)	Maternal Infant Bonding questionnaire	192	Questionnaire (parent report)	Day 2 post-partum	0.12 ⁺ [- 0.16, 0.41]
			168	Questionnaire (parent report)	4 weeks post-partum	0.36 ⁺ [0.06, 0.67]
Puffer et al. (2017)	Overall parent-child relationship quality (P)	Parenting Behaviour Inventory	479	Interview (child report)	4 months post-baseline (1 month post-intervention)	0.42 ⁺ [0.24, 0.61]
			513	Interview (parent report)	4 months post-baseline (1 month post-intervention)	0.36 ⁺ [0.19, 0.54]
	Parent-child warmth/affection (P)	Parental Acceptance-Rejection questionnaire	479	Interview (child report)	4 months post-baseline (1 month post-intervention)	0.24 ⁺ [0.06, 0.42]
			513	Interview (parent report)	4 months post-baseline (1 month post-intervention)	0.09 ⁺ [- 0.08, 0.27]
	Positive discipline (P)	Discipline Interview	479	Interview (child report)	4 months post-baseline (1 month post-intervention)	0.11 ⁺ [- 0.07, 0.29]
			513	Interview (parent report)	4 months post-baseline (1 month post-intervention)	0.18 ⁺ [0.01, 0.36]
Sumargi et al. (2015)	Parental use of lax or permissive discipline (S)	Parenting Scale	143	Questionnaire (parent report)	1 month post-baseline (2 weeks post-intervention)	0.33 ⁺ [0.66, 0.00]
Thanasetkorn (2009)	Positive behavioural management skills (N/A)	101s Parent Interaction Checklist	105	Interview (parent report)	1 month post-intervention	4.31 ⁺ [3.61, 5.01]
	Positive emotional support skills (N/A)	101s Parent Interaction Checklist	105	Interview (parent report)	1 month post-intervention	2.47 ⁺ [1.96, 2.98]
Zhu & Xu (2010)	Parental capability in guiding infant behavioural control abilities (N/A)	Bespoke questionnaire	420	Interview (parent report)	1.5 years post-baseline	0.22 ⁺ [0.03, 0.41]

Model 4: Parental stress						
First author (year)	Outcome measure	Instrument	N	Method of report	Time point	Effect size (Cohen's <i>d</i>) [95% CI]
Sumargi et al. (2015)	Parental stress in the context of parenting (S)	Parenting and Family Adjustment Scale	143	Questionnaire (parent report)	1 month post-baseline (2 weeks post-intervention)	- 0.16 ⁺ [- 0.49, 0.16]
Sawasdipanich et al. (2010)	Child physical abuse potential (N/A)	Child Abuse Potential Inventory	116	Unclear if by questionnaire or interview (parent report)	16 weeks post-baseline	- 0.09 ⁺ [- 0.46, 0.27]
Model 5: Family environment						
First author (year)	Outcome measure	Instrument	N	Method of report	Time point	Effect size (Cohen's <i>d</i>) [95% CI]
Puffer et al. (2017)	Family cohesion (P)	Burmese Family Functioning Scale	479	Interview (child report)	4 months post-baseline (1 month post-intervention)	0.31 ⁺ [0.13, 0.49]
			513	Interview (parent report)	4 months post-baseline (1 month post-intervention)	0.27 ⁺ [0.10, 0.45]
	Family communication (P)	Burmese Family Functioning Scale	479	Interview (child report)	4 months post-baseline (1 month post-intervention)	0.32 ⁺ [0.14, 0.50]
			513	Interview (parent report)	4 months post-baseline (1 month post-intervention)	0.20 ⁺ [0.03, 0.37]
	Negative family interactions (P)	Burmese Family Functioning Scale	479	Interview (child report)	4 months post-baseline (1 month post-intervention)	0.16 ⁺ [0.34, - 0.02]
			513	Interview (parent report)	4 months post-baseline (1 month post-intervention)	0.25 ⁺ [0.42, 0.07]

Sumargi et al. (2015)	Quality of family relationships (S)	Parenting and Family Adjustment Scale	143	Questionnaire (parent report)	1 month post-baseline (2 weeks post-intervention)	- 0.08 [†] [- 0.40, 0.25]
	Quality of parental teamwork (S)	Parenting and Family Adjustment Scale	143	Questionnaire (parent report)	1 month post-baseline (2 weeks post-intervention)	- 0.17 [†] [- 0.50, 0.16]
Zhu & Xu (2010)	Harmonious and nurturing family atmosphere (N/A)	Bespoke questionnaire	420	Interview (parent report)	1.5 years post-baseline	0.47 [‡] [0.27, 0.67]

P = primary outcome measure; S = secondary outcome measure; N/A = outcome description not available

n = sample size

CI = confidence interval

[†] Calculated by the reviewers using means and standard deviations.

[‡] Calculated by the reviewers using chi-square and sample size.

Table 5. Number of trials (*k*), number of effect sizes (*n*), mean effect size (*d*), and significance for primary and secondary outcome models

Outcome	<i>k</i> (<i>n</i>)	<i>d</i> (95% CI)	<i>I</i> ² (%) (Level 2, Level 3)
Primary			
Abusive, harsh & negative parenting [†]	3 (9)	-0.42 (-0.81, -0.02)*	4, 72
Secondary			
Parental knowledge & attitudes	5 (5)	1.40 (-0.30, 3.10)	N/A, 95
Positive parent-child interactions [†]	5 (14)	0.25 (0.19, 0.32)**	24, 0
Parental stress	2 (2)	-0.13 (-0.38, 0.11)	N/A, 0
Family environment	3 (9)	0.21 (-0.12, 0.53)	0, 85

[†]Excluding non-RCT (Thanasetkorn, 2009)

** *p*<.001; **p*<.01

Level 2 = within study

Level 3 = between study

N/A = not applicable

Risk of bias for included studies was assessed as high, low, or unclear using the Cochrane Collaboration's Risk of Bias tool (Higgins & Green, 2011). The summary chart (see Figure 10) provides an overview of the quality of evidence as gauged by the reviewers. Overall, risk of bias was unclear or high. Information was not reported or could not be retrieved directly from study authors on the reliability and validity of eight instruments for the study population (Hao et al., 2006; Jin et al., 2007; Liu & Liu, 2008; Punthmatharith, 2001; Sattasathuchana, 2012; Zhu & Xu, 2010); power calculations in six studies (Hao et al., 2006; Jin et al., 2007; Liu & Liu, 2008; Sattasathuchana, 2012; Thanasetkorn, 2009; Zhu & Xu, 2010); statistical baseline equivalence on demographic variables in four studies (Hao et al., 2006; Liu & Liu, 2008; Sattasathuchana, 2012; Thanasetkorn, 2009); sequence generation in 6 studies (Hao et al., 2006; Jin et al., 2007; Liu & Liu, 2008; Sattasathuchana, 2012; Sawasdipanich et al., 2010; Zhu & Xu, 2010); and allocation concealment in eight studies (Hao et al., 2006; Jin et al., 2007; Liu & Liu, 2008; Punthmatharith, 2001; Sattasathuchana, 2012; Sawasdipanich et al., 2010; Thanasetkorn, 2009; Zhu & Xu, 2010). Blinding posed a considerable risk across all studies; only two trials stated that outcome assessors were blinded (Gao et al., 2015; Puffer et al., 2017), although in the latter, authors noted that

treatment status was often disclosed during interviews. Only three trials described intention-to-treat analysis (Gao et al., 2015; Puffer et al., 2017; Sumargi et al., 2015), although one of these reported excluding some families from analyses due to participant intoxication or difficulty in understanding questions (Puffer et al., 2017). Only one study (Gao et al., 2015) was judged to have a relatively low risk of bias, except for performance bias.

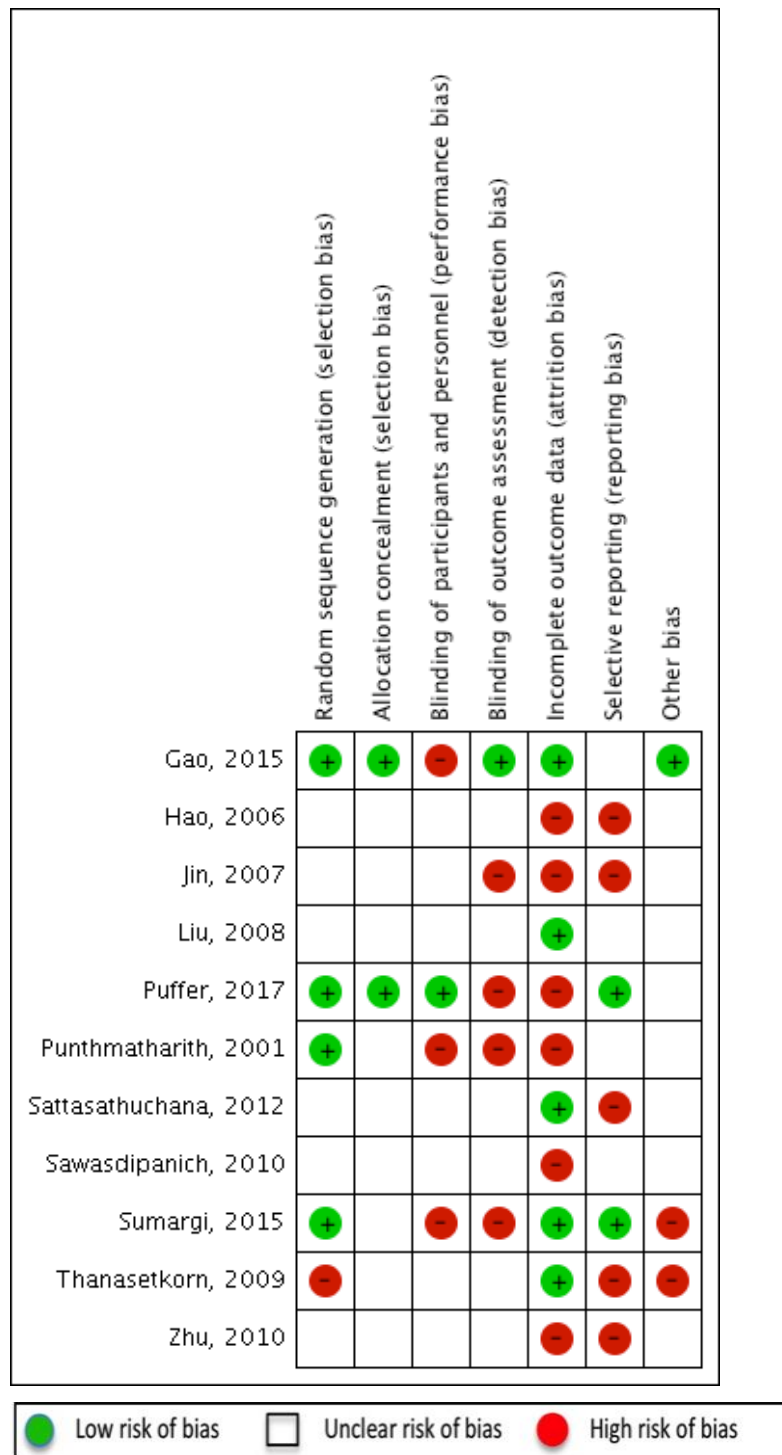


Figure 10. Risk of bias summary chart

Excluded studies

Reasons for the exclusion of 15 studies following full text review included: parenting components comprising a minor part of the intervention, which could not be isolated for determining outcomes or effects; study design was pre-test/post-test with no control condition; control condition was insufficiently described; or target sample population was not parents or primary caregivers.

Intervention effects on primary outcomes

Abusive, harsh, or negative parenting. The four studies included in this model (three RCTs and one non-RCT) measured 12 intervention effects on abusive, harsh or negative parenting, which encompasses but is not limited to the primary outcomes of interest to this review. In most cases, parenting was assessed by parent report. The three RCTs evaluated effects on a range of outcome measures, including parental negative rejection (Liu & Liu, 2008); negative relationship quality, negative discipline, and discipline including severe punishment (Puffer et al., 2017); and dysfunctional parenting practices and parental use of over-reactive or authoritarian discipline (Sumargi et al., 2015). The outcomes assessed by the non-RCT included critical/harsh practices, verbal punishment, and physical punishment (Thanasetkorn, 2009). There were no common instruments for outcome measurement across any studies, and in two studies (Liu & Liu, 2008; Thanasetkorn, 2009) no information was provided regarding the reliability or validity of instruments in their country contexts.

The four studies in this model also slightly differed in terms of the time points for measurement, with two trials collecting data at one month post-intervention (Puffer et al., 2017; Thanasetkorn, 2009), one study at two months post-baseline (Liu & Liu, 2008), and the remaining study at two weeks post-intervention (Sumargi et al., 2015).

Control conditions also varied across studies. Two delivered a waitlisted intervention (Puffer et al., 2017; Sumargi et al., 2015), with the former demonstrating small, significant

treatment effects on two outcomes out of six, including reducing negative relationship quality according to parent/caregiver report ($d = -0.26$, 95% CI [- 0.43, - 0.08]), and negative discipline practices according to parent/caregiver report ($d = -0.31$, 95% CI [- 0.48, - 0.14]). Neither was corroborated with child reports. Sumargi et al. (2015) showed a medium, significant effect on reducing dysfunctional parenting practices ($d = -0.62$, 95% CI [- 0.96, - 0.29]), but not on parental use of over-reactive or authoritarian discipline. One study provided no intervention as a control condition (Liu & Liu, 2008), with large and significant effects on reducing parental negative rejection ($d = -1.02$, 95% CI [- 0.26, - 1.78]). The remaining, non-RCT study (Thanasetkorn, 2009) offered a control condition of treatment-as-usual, with large, significant effects on reducing all three target behaviors: critical/harsh practices ($d = -4.64$, 95% CI [- 5.37, - 3.90]), verbal punishment ($d = -3.61$, 95% CI [- 4.23, - 2.99]), and physical punishment ($d = -3.17$, 95% CI [- 3.74, - 2.59]).

Meta-analysis of abusive, harsh, or negative parenting outcomes excluded the one non-RCT (Thanasetkorn, 2009; $N = 105$), given that the study's absence of randomization appeared to produce effect sizes up to 10 times higher than those normally found in the field, and very wide confidence intervals. The decision to exclude the non-RCT was a post-hoc change given that it was the only non-RCT meeting the inclusion criteria for this review. The resulting meta-analysis of three RCTs revealed a small, statistically significant effect ($d = -0.42$, CI [- 0.81, - 0.02]) (see Table 5 and Figure 11) with substantial heterogeneity at $I^2 = 72\%$ (Higgins & Green, 2011).

Abusive, harsh and negative parenting outcomes

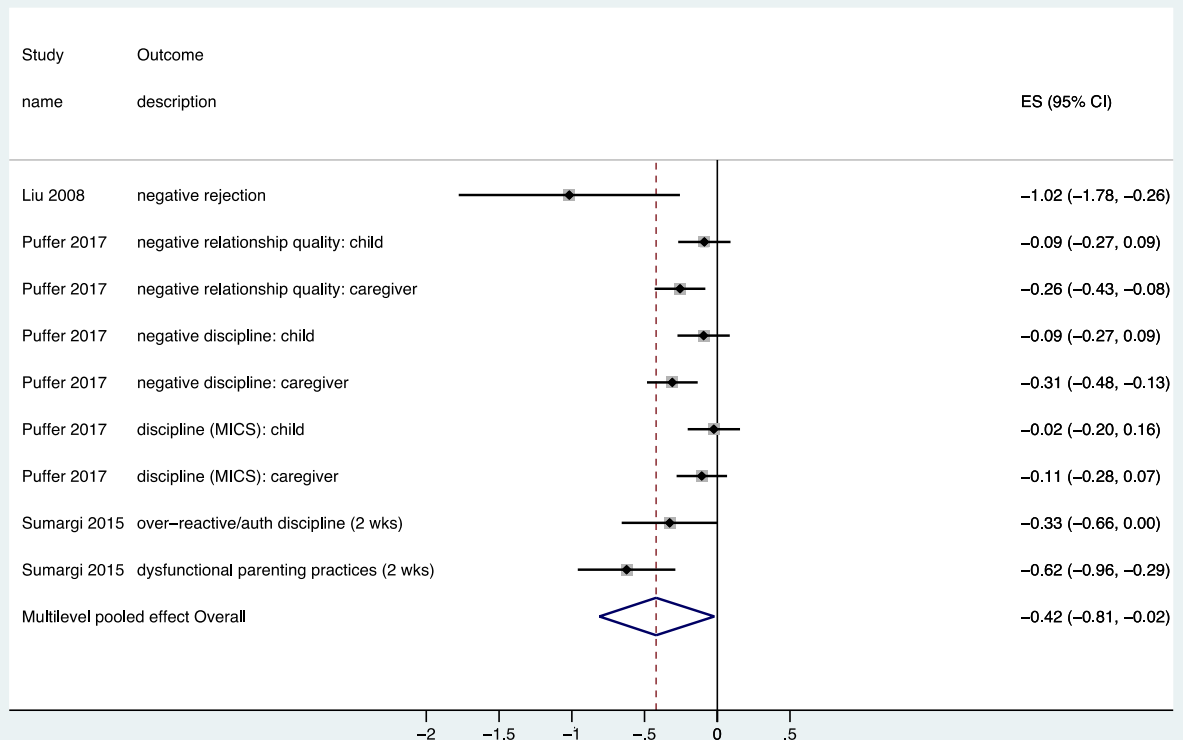


Figure 11. Intervention effects on abusive, harsh, or negative parenting outcomes

Intervention effects on secondary outcomes

Parental knowledge or attitudes. The effects of parenting interventions on parental knowledge or attitudes, regarded as one of the secondary outcomes of interest to this review, was evaluated by five RCTs and five intervention effects in this model. The effects spanned various outcome measures, including maternal role competence (Gao et al., 2015); understanding of child development messages (Jin et al., 2007); parental attitudes toward child rearing (Sawasdiapanich et al., 2010); parental confidence in managing difficult child behavior (Sumargi et al., 2015); and parenting knowledge on child development and capability in providing appropriate guidance (Zhu & Xu, 2010). Study authors did not use any common instruments to measure these effects; further, while most authors provided information on the reliability or validity of these instruments in their respective contexts, one author did not (Zhu & Xu, 2010). The five studies in this model also widely ranged in term of the time points for measurement, with the minimum period

assessed at two weeks post-intervention (Sumargi et al., 2015) to 1.5 years post-baseline (Zhu & Xu, 2010).

All studies had a control condition of treatment-as-usual, except for one (Sumargi, 2015), which provided a waitlisted control. All studies also demonstrated positive and significant treatment effects. Four were medium effects, including on maternal role competence ($d = 0.53$, 95% CI [0.24, 0.83]) (Gao et al., 2015); parental attitudes toward child rearing ($d = 0.60$, 95% CI [0.23, 0.97]) (Sawasdipanich et al., 2010); parental confidence in managing difficult child behavior ($d = 0.40$, 95% CI [0.07, 0.73]) (Sumargi et al., 2015); and parenting knowledge on child development and capability in providing appropriate guidance ($d = 0.64$, 95% CI [0.44, 0.84]) (Zhu & Xu, 2010). The remaining study (Jin et al., 2007) showed a large effect on parental understanding of child development messages ($d = 5.10$, 95% CI [3.95, 6.26]) as presented on the Care for Development (CFD) Mother's Card, in comparison to a control group that had not been exposed to such material.

Meta-analysis of the five studies on parental knowledge or attitudes revealed a large, positive effect ($d = 1.40$) that was statistically non-significant (95% CI [- 0.30, 3.10]) (see Table 4). The model demonstrated considerable heterogeneity with an I^2 of 95% (Higgins & Green, 2011).

Positive parent-child interactions. The model examining outcomes pertaining to positive parent-child interactions was the largest, containing five RCTs and 16 intervention effects, including three effects based on child reports and one assessed via observation. There were a range of outcome measures, including often talking, cuddling, and playing with a toddler (Hao et al., 2006); maternal bonding, attention, and connection to an infant (Punthmatharith, 2001); overall parent-child relationship quality, parent-child warmth/affection, and positive discipline (Puffer et al., 2017); use of lax or permissive discipline (Sumargi et al., 2015); and parental capability in guiding infant behavioral control abilities (Zhu & Xu, 2010). One non-RCT included positive behavioral management skills and positive emotional support skills (Thanasetkorn, 2009), but as before was excluded from the meta-analysis. There were no common instruments for

outcome measurement across any studies; in three studies (Hao et al., 2006; Thanasetkorn, 2009; Zhu & Xu, 2010) no information was provided regarding the reliability or validity of instruments in their country contexts.

There were also large differences between the six studies regarding time points for measurement, ranging from two days post-partum (post-intervention) (Punthmatharith, 2001) to 1.5 years post-baseline (Zhu & Xu, 2010).

Variations in control conditions across studies were also evident. Four offered a control condition of treatment-as-usual (Hao et al., 2006; Punthmatharith, 2001; Thanasetkorn, 2009; Zhu & Xu, 2010), with positive and significant treatment effects on most outcome measures, with the exception of maternal attention and connection to infant measured two days post-partum (Punthmatharith, 2001). Small effect sizes were found for often talking to a toddler ($d = 0.18$, 95% CI [0.0, 0.35]), often cuddling with a toddler ($d = 0.27$, 95% CI [0.09, 0.45]), and playing with a toddler ($d = 0.41$, 95% CI [0.23, 0.59]) (Hao et al., 2006); maternal bonding ($d = 0.32$, 95% CI [0.04, 0.60]) and maternal attention and connection to infant at four weeks post-partum ($d = 0.36$, 95% CI [0.06, 0.67]) (Punthmatharith, 2001); and parenting capability in guiding infant behavioral control abilities ($d = 0.22$, 95% CI [0.03, 0.41]) (Zhu & Xu, 2010). Large effect sizes were found for positive behavioral management skills ($d = 4.31$, 95% CI [3.61, 5.01]) and positive emotional support skills ($d = 2.47$, 95% CI [1.96, 2.98]) (Thanasetkorn, 2009). The two studies in this model that delivered a waitlisted intervention (Puffer et al., 2017; Sumargi et al., 2015) demonstrated small, positive yet non-significant treatment effects on four outcome measures, including parent-child warmth/affection according to caregiver reports and positive discipline according to reports by both children and caregivers (Puffer et al., 2017), as well as parental use of lax or permissive discipline (Sumargi et al., 2015). Small, positive, and significant effects were found for overall parent-child relationship quality according to child reports ($d = 0.42$, 95% CI [0.24, 0.61]) and caregiver reports ($d = 0.36$, 95% CI [0.19, 0.54]), as well as parent-child warmth/affection according to child reports ($d = 0.24$, 95% CI [0.06, 0.42]) (Puffer et al., 2017).

Meta-analysis of positive parent-child interaction outcomes also excluded the one non-RCT (Thanasetkorn, 2009) in this model. Findings from the remaining five RCTs revealed a small, positive, and statistically significant effect ($d = 0.25$, CI [0.19, 0.32]) (see Table 4) with negligible levels of between-study heterogeneity (Higgins & Green, 2011).

Parental stress. Parental stress was examined due to meta-analytic evidence that this is a risk factor strongly related to child neglect, and, to a lesser extent, to child physical abuse (Stith et al., 2009). The model on the effects of parenting interventions on parental stress was assessed by two RCTs and two intervention effects. The studies differed in terms of the scope of studied effects, with Sumargi et al. (2015) examining the effect on parental stress in the context of parenting, and Sawasdipanich et al. (2010) assessing child physical abuse potential, which includes six factor scales on distress, rigidity, unhappiness, problems with child and self, problems with family, and problems with others (Milner, 1986). Study authors did not use common instruments to measure these effects; however, both provided information on reliability or validity of the instruments in their respective contexts.

The two studies in this model also varied regarding data collection time points, with one study collecting data at one month (Sumargi et al., 2015), and the other at four months post-baseline (Sawasdipanich et al., 2010). The former study also conducted an assessment at 7.5 months post-baseline; however, insufficient data was available for calculation of effects.

Control conditions differed between the two studies. One study, with a waitlisted control, demonstrated a small non-significant effect on parental stress in the context of parenting at two weeks post-intervention ($d = -0.16$, 95% CI [-0.49, 0.16]) (Sumargi et al., 2015). The other study used a control condition of treatment-as-usual, resulting in a small non-significant effect on child physical abuse potential ($d = -0.09$, 95% CI [-0.46, 0.27]) (Sawasdipanich et al., 2010).

The results of the meta-analysis revealed a small effect reducing the target behavior ($d = -0.13$) that was statistically non-significant (95% CI [-0.38, 0.11]) (see Table 4). Between-study variance in this model was not large relative to other variance components.

Family environment. While intervention effects on the family environment was not a specified secondary outcome in the inclusion criteria, a dysfunctional family environment – including family conflict and lacking family cohesion - is a key risk factor for child physical abuse (Stith et al., 2009) and was thus included in the review. The effects of parenting interventions evaluated by the three RCTs and nine intervention effects in this model spanned a range of outcome measures, including family cohesion, family communication, and negative family interactions (Puffer et al., 2017); quality of family relationships and parental teamwork (Sumargi et al., 2015); and a harmonious and nurturing family atmosphere (Zhu & Xu, 2010). There were no shared data collection instruments between studies. Information was provided by two authors regarding the reliability of a bespoke instrument in the Thai study context (Puffer et al., 2017) as well as from an Indonesian community in Australia (Sumargi et al., 2015); however, no information was provided regarding reliability or validity in the remaining study (Zhu & Xu, 2010). The three studies in this model also differed in terms of the time points for measurement, ranging from two weeks post-intervention (Sumargi et al., 2015) to 1.5 years post-baseline (Zhu & Xu, 2010).

Two studies established a waitlisted control condition, although only one study showed small, positive and significant effects, specifically on family cohesion according to both child ($d = 0.31$, 95% CI [0.13, 0.49]) and caregiver reports ($d = 0.27$, 95% CI [0.10, 0.45]), family communication according to both child ($d = 0.32$, 95% CI [0.14, 0.50]) and caregiver reports ($d = 0.20$, 95% CI [0.03, 0.37]), and negative family interactions according only to caregiver reports ($d = 0.25$, 95% CI [0.42, 0.07]) (Puffer et al., 2017). The study by Sumargi et al. (2015), on the other hand, did not demonstrate statistically significant effects on the quality of family relationships or the quality of parental teamwork. The remaining study (Zhu & Xu, 2010) used a control condition of treatment-as-usual, resulting in a small, positive, and significant effect on the creation of a harmonious and nurturing family atmosphere ($d = 0.47$, 95% CI [0.27, 0.67]).

Meta-analysis of the three RCTs on the family environment demonstrated a small, positive effect that was statistically non-significant ($d = 0.21$, 95% CI [- 0.12, 0.53]) (see Table 4). The model demonstrated considerable heterogeneity with an I^2 of 85% (Higgins & Green, 2011).

3.4 Discussion

Summary of main results

Findings from the review and multi-level meta-analysis – excluding the one non-RCT study – suggest that parenting interventions in LMICs in East and Southeast Asia may be effective in significantly reducing abusive, harsh, and negative parenting, as well as improving positive parent-child interactions. The impact of these interventions on secondary outcomes, such as parental knowledge or attitudes, parental stress, and the family environment, resulted in effects that ranged from small to very large effect sizes; however, these effects were statistically non-significant in meta-analysis. The overall body of evidence demonstrates that most included studies reported effects that favored the intervention group over control. Our findings thus provisionally support growing efforts by policymakers, practitioners, service commissioners, and international development workers in East and Southeast Asia to advocate for and to implement evidence-based parenting interventions in order to promote positive parenting and prevent parent-perpetrated violence against children.

It should be underscored, however, that the high levels of heterogeneity in three out of the five models, as well as the fact that three models only included treatment effects from two or three trials, mean that some caution is needed regarding the interpretation of the findings from this meta-analysis. While the conduct of a multi-level meta-analysis permitted the grouping of trials that measured similar outcomes (e.g. child abuse), most of these models still encompassed a diversity of target populations, deliverers, doses and intensities, comparators, instruments, and potential biases.

Overall completeness and applicability

The 11 trials included in the review represented diverse country contexts and sample populations. The trials were drawn from three, large middle-income countries: China, Indonesia, and Thailand. This limits the generalizability of the results to the other eight LMICs in the region, especially the low-income country of Cambodia and small lower-middle income nations such as Laos and Timor-Leste. However, one intervention (Puffer et al., 2017) was delivered in a low-resource context on the Thai-Myanmar border, which implies that such interventions might be feasible in similar locations and with comparable funding, infrastructure, and technical capacity. The socio-economic characteristics of participants, including financial status, legal status, and level of education, were also wide ranging. While this may constrain comparisons of results across studies, this also may indicate that such findings could be generalized to contexts with diverse socio-economic populations.

The goals, formats, doses, deliverers, settings, and targeted child age of interventions included in this review were also wide ranging. Six interventions were group-based, while three were individualized, and two offered a combination. Intervention goals included those that were specific and delivered in relatively small dosages, such as to improve mother-infant interaction and breastfeeding, as well as those that were broad and provided over multiple weeks, such as to improve parenting practices, family functioning, and child behavior, well-being, and resilience. Most intervention deliverers were health professionals, with settings for intervention delivery (when specified) including hospitals, schools/universities, childcare centers, homes and community settings. Such varied characteristics likely increased levels of heterogeneity between studies. Further, the ages of children of participating parents ranged from birth to 15 years of age, with most interventions targeting those with children aged five and younger; therefore, this review's findings may be inapplicable to participants with older children. Despite such diversity among the studies included in this review, there appears to be a pattern in relation to program effectiveness. With the exception of one study (Punthmatharith, 2001), most interventions

associated with effective reductions in abusive, harsh, and negative parenting, or positive parent-child interactions, were group-based and multi-session programs with content on improving parent-child communication and relationships, child behavior, and child physical and mental health.

Finally, it is worth highlighting that most included studies did not specifically measure rates of parent-perpetrated violence against children, which constituted the primary outcome of interest for this review. Four studies were included in the model on the effects of parenting interventions on abusive, harsh and negative parenting, but only two measured behaviors that directly related to abuse, such as verbal and physical punishment (Thanasetkorn, 2009) or clearly abusive acts, such as beating a child (Puffer et al., 2017). The latter study demonstrated mixed results, however, with the authors noting that one instrument (Multiple Indicator Cluster Survey) detected no treatment effects, while another (Discipline Interview) showed a small, significant effect ($d = -0.31$, 95% CI [-0.48, -0.14]) on reducing negative discipline one month post intervention as reported by caregivers, but not by children themselves. None of the studies included in the review measured child sexual abuse or exploitation outcomes, or clearly assessed neglectful parental behaviors. Thus, this review provides only some evidence of intervention effects on child emotional and physical abuse, but not on the full range of forms of violence against children.

Overall quality

The findings from this review are derived from 10 RCTs and one non-RCT, with a total of 2,813 parent, caregiver, and child participants. Many aspects reflecting study quality were not reported by authors. Only one study utilized child reported outcome measures (Puffer et al., 2017), leaving 34 out of 44 outcome effects dependent on parental self-reports that could be influenced by social desirability and thus susceptible to reporting bias. Moreover, no observational instruments were used to assess parenting behavior, with the exception of Punthmatharith (2001); even in this case, the assessors were not blinded, suggesting this measure was highly prone to

bias. As a result, there was a lack of objective measures across all studies. In addition, most studies used time points for measurement that were very close to intervention, with the exception of Zhu & Xu (2010) at 1.5 years post-baseline. The stability of outcome effects over time is thus unclear. Overall, such levels of study quality indicate that internal validity across studies was often unclear, and that meta-analyses of such studies should subsequently be interpreted with caution.

We judged that only one study was of relatively high quality (Gao et al., 2015), thus contributing to the cautious findings from this review. The trial demonstrated that a parenting intervention could be effective in improving maternal role competence in LMICs, which may serve as a protective factor in preventing or mitigating child maltreatment.

Potential biases in the review process

Several potential biases in the review process warrant consideration. The first set of biases may have occurred during the literature search, as the search terms that were used specified the region and relevant countries; however, this may have inadvertently excluded countries that did not specify study location. Also, the reviewers may have overlooked studies in which parenting components were not evident in the titles or abstracts of records. Moreover, the reviewers partially relied on the retrieval of unpublished studies from 101 expert contacts in the region, as well as announcements posted on two websites targeting development agencies (ARNEC and the Child Rights Information Network). Finally, this review is susceptible to language bias, as it excluded foreign language databases that were not searchable in English, with the exception of Thai; this ultimately favored Thai language studies over those in other languages.

We also acknowledge a risk of potential bias in interpretation, as three studies were translated from Chinese (Hao et al., 2006; Liu & Liu, 2008; Zhu & Xu, 2010) and one from Thai (Sattasathuchana, 2012). While a non-professional Chinese translator was contracted, and AM as a Thai speaker discussed interpretation of the Thai study with a non-professional translator, some descriptions of outcome measures and intervention content were very brief and were difficult to fully interpret.

Comparisons with other relevant reviews

This was the first known systematic review of parenting interventions for the prevention of violence against children focused on a particular geographic region, and it updated and extended other relevant reviews (Chen & Chan, 2015; Knerr et al., 2013; MacMillan et al., 2009; Mikton & Butchart, 2009). The emphasis on extensive searching of regional bibliographic databases, the inclusion of grey literature, and the identification of non-English language studies allowed for the broader identification of studies from the East Asia and Pacific region that considerably improves on these previous reviews. This review included 10 studies that were not in the Knerr review, including seven that were too recent, and three that were not found by Knerr et al. (2013) (Hao et al., 2006; Liu & Liu, 2008; Punthmatharith, 2001). Further, there was no overlap of studies included in the reviews by MacMillan et al. (2009) or Mikton and Butchart (2009).

This review also concurs with the conclusions made by recent reviews of Leijten et al. (2016) and Gardner et al. (2016), since it provides evidence that programs originating in one country can be effective when transported to other countries, despite differences in culture and service provision. Although these meta-analyses focused on effectiveness in reducing child disruptive behavior, the present review extends their conclusions to interventions focused on reducing child maltreatment and associated risk and protective factors, finding largely positive effects across all outcome categories for all five transported interventions.

3.5 Conclusion

Implications for practice

This review and multi-level meta-analysis suggests that parenting interventions in at least three LMICs in East and Southeast Asia can reduce rates of particular forms of parent or primary caregiver-perpetrated violence against children, such as physical and emotional abuse in the guise of discipline. Such interventions may also promote positive parent-child interactions during both the early childhood and adolescent years, which can strengthen protective factors for child

maltreatment within the family, as well as a range of adversities experienced both within and outside the family unit (Luthar & Bidwell Zelazo, 2003; Stith et al., 2009).

These findings are not only relevant to professionals directly working with parents and primary caregivers, but are also pertinent to international development agencies, civil society organizations, and policymakers in LMICs who are increasingly interested in investing in evidence-based parenting interventions as a means for violence prevention and in achieving relevant Sustainable Development Goals (SDGs 5 and 16) (UN General Assembly, 2015). Such actors should seriously consider transporting and adapting parenting interventions that have demonstrated effectiveness, including but not limited to those mentioned in this review. However, licensed programs such as Triple P require implementers to pay considerable fees for access to its materials, requisite training and technical support - a formidable barrier to those LMICs with limited budgets (Mikton, 2012). Unless license-free and evidence-based programs are pursued, such as the prototypes being tested by the Parenting for Lifelong Health partnership (Lachman et al., 2017) (http://www.who.int/violence_injury_prevention/violence/child/plh/), it may be more cost effective to design and test 'home-grown' parenting interventions that integrate evidence-based components.

Implications for research

This review emphasizes the importance of deliberately seeking out non-English language studies and incorporating regional bibliographic databases in future reviews of parenting interventions. A future, similar regional review should involve searches using terms in the full range of local languages, including Vietnamese, Indonesian, Malay, Lao, Khmer, and Burmese. In addition, given that the majority of countries in East and Southeast Asia are classified as middle income, with policymakers and practitioners often eager to learn from social programs adopted by their high-income neighbors, a future regional review could be expanded across all countries and major languages.

The small number of studies that met the specific yet sensitive inclusion criteria for this review reveals that high-quality evaluations of parenting interventions related to the prevention of violence against children are much needed in the East and Southeast Asia. It is worth noting that almost all excluded studies undertaken by development agencies and described in grey literature were not RCTs or even non-randomized controlled trials, but were pre-post evaluations and qualitative studies based on client opinion; as such, they were not designed to reliably assess intervention effectiveness. Researchers and practitioners in the region should aim to foster closer collaboration and jointly plan robust assessments of the impact of interventions. Further, evaluations of future randomized trials should aim to reduce risks of bias as well as provide clearer reporting on research methodologies in accordance with the Consolidated Standards of Reporting Trials Statement (CONSORT 2010) (Schulz et al., 2010), by including information on randomization, blinding of assessors, allocation concealment, and treatment of missing data. Other issues concern the need for more trials which target the parents of adolescent children; fully assess and report the socio-economic and ethnic backgrounds of parents and caregivers; and utilize instruments for direct observational assessments – regarded as a gold standard in objective evaluations of changes in parent-child interactions. Finally, as a critical aspect of future agenda setting on violence prevention, trials should include specific outcome measures on violence against children and extend follow-up periods, in order to more reliably determine that interventions can effectively reduce rates of violence both in the short and long terms.

3.6 References

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CHAPTER IV. PAPER 2: Fine-Tuning Cultural and Contextual Adaptation: Findings from a Formative Evaluation of an Evidence-Based Parenting Intervention to Prevent Violence Against Young Children in Thailand

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Abstract

There is growing demand by low- and middle-income countries (LMICs) for evidence-based parenting programs to prevent violence against children. One such intervention, Parenting for Lifelong Health for Young Children (PLH-YC), is able to be modified so that it fits local needs and service delivery platforms in LMICs. This formative evaluation examined the cultural and contextual relevance of PLH-YC program themes, process, structure, schedule, and logistics for Udon Thani, Thailand, as well as the potential for scaling up. Twenty-six professionals and academics were consulted through individual interviews and focus group discussions in order to inform adaptation and testing, with an aim of embedding the program within the public health system. Findings from thematic analysis showed that while most participants agreed that many original program aspects were relevant, tensions between perceived social norms, practices, and needs were identified. Specific recommendations included language of delivery; reflection of local family demographics and material culture; emphasis on positive parent-child relationship building; encouragement of child participation; removal of time-out and inclusion of child development and self-discipline content; provision of mini-scripts as a program method; weekend program delivery; utilization of health workers as facilitators and recruiters; use of inclusive recruitment approaches and incentives to encourage participation; establishment of local primary care centers as program venues; and adoption of top-down policy implementation, cross-sectoral partnerships, and model delivery centers as scale-up strategies. These findings guide the implementation of parenting interventions in Thailand, as well as inform efforts to transport and sensitively refine such programs in other LMICs.

Key words (3-5 words): Child maltreatment, cultural adaptation, parenting programs, formative evaluation, Thailand

4.1 Introduction

The 1989 United Nations Convention on the Rights of the Child (CRC), the world's most widely ratified human rights treaty, obligates States parties to protect children from harm and provide assistance to parents and primary caregivers in the performance of their child rearing responsibilities (Tobin, 2016). Given the well-established evidence base that social learning theory-based parenting programs can effectively prevent child maltreatment and promote positive parenting (Chen & Chan, 2016; Furlong et al., 2012; Gardner et al., 2020; Knerr et al., 2013; McCoy et al., 2020), there has been a burgeoning interest in designing, testing, and implementing parenting programs by governments in low- and middle-income countries (LMICs). This momentum has been galvanized further by the inclusion of violence prevention within two Sustainable Development Goals (SDGs 5 and 16), as well as the endorsement of parenting programs as one of seven key strategies for eliminating violence against children (World Health Organization [WHO], 2016).

Evidence-based parenting interventions rooted in social learning theory fortify parenting skills with content on positive parent-child interactions, non-violent discipline techniques, positive encouragement, socio-emotional coaching, problem-solving, and developmentally responsive supervision (Dishion & Patterson, 2006; Melendez-Torres et al., 2019). Such interventions help parents to disrupt coercive cycles of parent-child interactions fueled by child behavior problems and dysfunctional parenting practices (Dishion & Patterson, 2006). Unfortunately, prohibitively expensive licensing fees and program costs for many evidence-based and brand name parenting programs have rendered these out of reach for many LMICs (Mikton, 2012). In response to this need, an international initiative led by the University of Oxford and Bangor University (UK); University of Cape Town and Stellenbosch University (South Africa); WHO; and the United Nations Children's Fund (UNICEF) prompted the development of Parenting for Lifelong Health for Young Children (PLH-YC), one of several evidence-based parenting programs that LMICs are able to freely obtain (Ward et al., 2014). This intervention for parents and primary caregivers of children aged 2-

9 years has demonstrated reductions in violent discipline in comparison to controls in both South Africa ($N = 296$) and the Philippines ($N = 120$) (Lachman et al., 2020; Ward et al., 2019).

A similar endeavor has been initiated to transport PLH-YC to Thailand, through a partnership between the Universities of Oxford and Cape Town, Clowns Without Borders South Africa, UNICEF, and the Thai Ministry of Public Health (MOPH). This effort was instigated in response to high prevalence rates of parent-perpetrated violence during early childhood, as well as to test program delivery through the public health system. A recent national survey of 28,652 households found that adults reported use of psychological or physical punishment against 75% of children aged 1-14 years during the past month, with 48% of respondents reporting that physical punishment is necessary to properly raise or educate a child (National Statistical Office [NSO] & UNICEF, 2016). As a precursor to this formative evaluation, the lead author conducted a qualitative study with parents ($n = 28$) and practitioners ($n = 24$) in Bangkok, Chiang Mai, and Trang in order to explore demand for and interest in delivering parenting programs. This study found considerable support for and interest by health workers to deliver group-based parenting programs at the community level, as a complement to existing hospital-based Parent School sessions that focus on nutrition, vaccinations, and early child development (McCoy & Supaporn, 2016a).

Formative evaluations that take place during the early stages of implementation research are designed to identify potential influences on the likelihood of intervention success (Stetler et al., 2006). The aim of this formative evaluation was to assess the extent to which PLH-YC requires cultural and contextual adaptation prior to delivery to low-income families within the public health system in Udon Thani province, Thailand. *Cultural adaptation* has been defined as “the systematic modification of an evidence-based treatment (EBT) or intervention protocol to consider language, culture, and context in such a way that it is compatible with the client’s cultural patterns, meanings, and values” (Bernal et al., 2009, p. 362). According to several meta-analyses, cultural adaptation can strengthen the appeal, effectiveness and sustainability of an intervention for a

target group (Baumann et al., 2015; Griner & Smith, 2006; Huey & Polo, 2008; Smith et al., 2010). Although definitions are contested, the *implementation context* can be regarded as comprising a set of active and unique characteristics and circumstances in which the implementation of an intervention is embedded, spanning geographical, epidemiological, socio-cultural, socio-economic, ethical, legal, and political determinants (Pfadenhauer et al., 2017). *Contextual adaptations* to fit an implementation context do not necessarily alter content, but may include modifications to delivery strategies, intervention deliverers and other agents, settings, and target populations (Evans et al., 2019). While a recent review found that transported and home-grown parenting interventions do not differ in their level of effectiveness in reducing disruptive child behavior (Leijten et al., 2016), some level of adaptation – between surface- and deep structure (Resnicow et al., 2000) – may be important to promote compatibility with the local culture and implementation context (Hall et al., 2016). Surface structure changes may include the customization of materials and messages, such as linguistic aspects or the depiction of people and places, while deep structure changes modify strategies pertaining to cultural values, beliefs, and normative practices – often the core components of an intervention (Durlak & DuPre, 2008; Kreuter et al., 2003; Resnicow et al., 2000). Fine-tuning through cultural and contextual adaptation should also strike a balance between fit and fidelity, so that the modified intervention maintains the core active ingredients of evidence-based programs (Castro et al., 2004), while both responding to local service capacity and maximizing participant acceptability and engagement (Kumpfer et al., 2002; Violence Prevention Alliance, 2013).

This study followed United Kingdom Medical Research Council (MRC) guidelines on developing and evaluating complex interventions, which emphasizes four, non-linear phases spanning from development to feasibility piloting, evaluation, and implementation (Craig et al., 2008). Our study adhered to the latter portion of the first developmental phase, and is situated within a wider, collaborative research project funded by UNICEF to inform phase 2, the feasibility pilot; phase 3, the randomized controlled trial; and phase 4, wider dissemination. The first portion

of phase one involved a review of the evidence on parenting interventions for violence prevention in the East and Southeast Asian region, providing an opportunity to identify a program for potential transportation to Thailand (McCoy et al., 2020). This review did not identify a clear candidate intervention, given the paucity of the evidence in the region, suggesting that cross-regional transportation should be explored. The demonstrated effectiveness of PLH-YC in two other LMICS (mentioned above), as well as the free availability of the program, indicated that the selection and adaptation of PLH-YC in Thailand may be appropriate. As the next step of this iterative process, this study focused on two main research questions: 1) What is the cultural and contextual relevance of the key program themes, process, structure, schedule, and logistics of PLH-YC; and 2) What are the potential barriers and opportunities for scaling up an adapted version of PLH-YC within the public health system in Thailand? For the purposes of the study, *parents* include biological parents and relatives as well as other non-biological primary caregivers of a child.

Research approach and accompanying theoretical frameworks

We adapted two complementary theoretical frameworks to inform this qualitative study: the five-stage cultural adaptation framework proposed by Barrera, Castro, Strycker, and Toobert (2013), and the RE-AIM framework for evaluating the public health impact of interventions in systems and at scale (Glasgow, Vogt, & Boles, 1999). Barrera et al. (2013) posit that information gathering is a vital first stage to cultural adaptation, which includes formative studies to determine how well an intervention would be suited to the needs and views of a particular cultural group, as well as to gather suggestions for improvements and assess the community capacity for intervention implementation. The RE-AIM framework, which is compatible with community-based public health interventions and systems-thinking perspectives, emphasizes five evaluative dimensions: Reach, Effectiveness, Adoption, Implementation, and Maintenance. For the purposes of the formative evaluation, we considered the potential *reach* of the intervention (factors relating

to the characteristics of participants and barriers to enrolment and attendance); opportunities and impediments to *adoption* and *implementation* by the community and government institutions; and the potential for *maintenance* of the intervention over time through institutionalization and enforcement (Glasgow et al., 1999). We reconfigured these two frameworks so that they could be understood as nested dimensions (see Figure 12), with cultural adaptation operating within a broader implementation context that includes the public health system and relevant organizations, services, and actors. We also incorporated some elements of stakeholder analysis within this approach (Brugha & Varvasovszky, 2000), in order to explore the interrelations, interests, and influence of practitioners across various sectors.

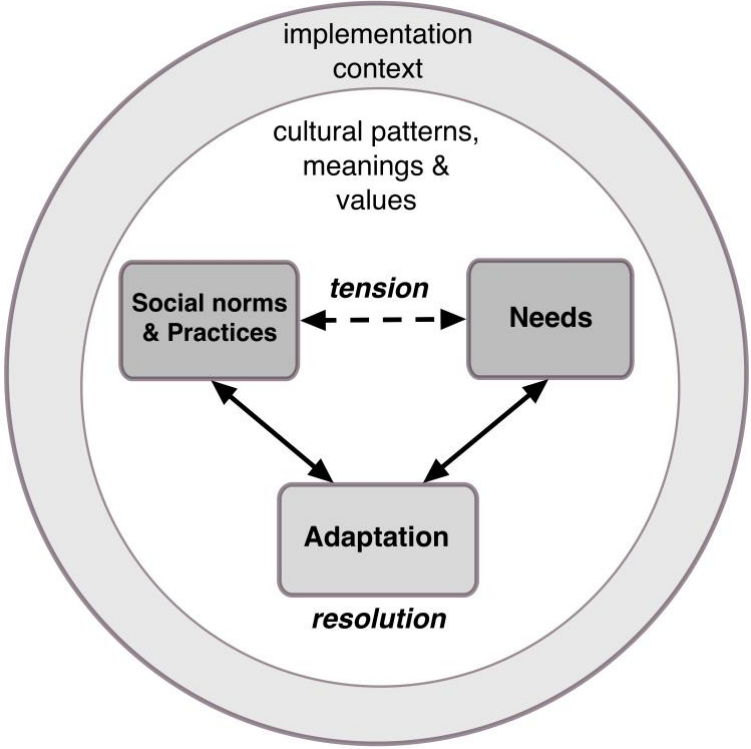


Figure 12. Nested conceptual model of cultural and contextual adaptations as resolutions of tensions between perceived needs, norms, and practices

Intervention description

PLH-YC is a group-based, non-didactic, and collaborative parenting program originally developed in South Africa for low-income Xhosa families (Lachman et al., 2016). It is based on social learning principles derived from over 50 years of research on parenting programs that

emphasize the importance of establishing positive parent-child relationships prior to addressing difficult child behaviors and learning non-violent limit-setting and discipline techniques (Kaehler et al., 2016). Program content includes many of the common components found in evidence-based programs from high-income country contexts (Kaminski et al., 2008; Leijten et al., 2015). The program uses a model of “Building a House of Support for You and Your Child,” in which parents learn and practice new parenting skills over 12 sessions organized into three categories (see Figure 13). The first category involves three sessions focused on building positive parent-child relationships, including spending individualized time with children, using child-led play and descriptions of actions and emotions (McMahon & Forehand, 2003). The second category, positive reinforcement, consists of four sessions on labeled and immediate praise, simple and free rewards, and limit setting through positive instructions and consistent rules and routines. Positive discipline, the final category, comprises non-violent behavior management techniques, including redirecting negative behaviors, ignoring negative attention seeking and demanding behaviors, using appropriate consequences to support compliance, time-out as a consequence for aggressive or destructive behaviors, and involving children in resolving conflicts. The last session provides parents with an opportunity to review and reflect on their experiences, and discuss continued application of the parenting skills learned.

PLH-YC is delivered by a pair of trained facilitators to groups of approximately 12-15 parents who meet on a weekly or fortnightly basis. During each session, facilitators (a) lead participants in mindfulness-based stress reduction techniques, including body relaxation and mindful movement exercises; (b) refer to illustrated stories to help parents identify specific parenting techniques covered in each session; (c) provide coaching support while parents practice these techniques in role-plays; and (d) assign home practice activities to apply these techniques with their children after the session. At the beginning of the following session, parents report back on home practice experiences, and facilitators help them to identify solutions to challenges; these solutions are then practiced before new content is introduced. The facilitators also conduct

individual consultations in each family home prior to group sessions in order to introduce PLH-YC, and make home visits during the course of the program for those parents who miss a session or require additional support. Parent handbooks in the local language, which summarize the core parenting skills, serve as a resource that parents can refer to during home practice or following program completion. Parents also receive personalized weekly phone calls and text message “boosters” to encourage skills practice at home. Lunch, transportation, and childcare serve as incentives to overcome potential challenges to attendance (Heinrichs et al., 2005).

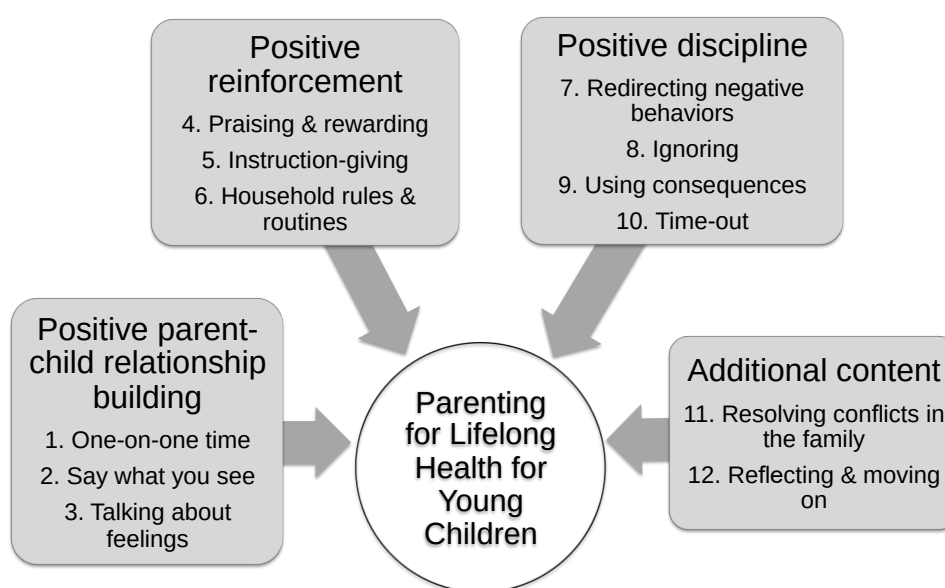


Figure 13. Parenting for Lifelong Health for Young Children (PLH-YC) original program themes

4.2 Methods

Setting

This study was conducted primarily in Udon Thani province after consultation with the MOPH and UNICEF in order to bolster on-going efforts within the province to prevent violence through the public health system and community-based networks. Udon Thani is one of 20 provinces in Northeastern Thailand, the country’s largest and poorest region (United Nations, 2016). It has a population of almost one million (Community Development Department, 2017), in comparison with a total national population of 67.2 million (National Statistical Office, 2016). The

province has a high level of income inequality (Gini coefficient of 0.525) and a low rate of formal education (7.60 mean years of schooling); however, these are close to national averages (Gini of 0.535 and 7.68 years) (UN Development Programme, 2010). The majority of the population speak the Isan language at home, although Central Thai is widely understood, as government policy dictates that only the latter can be used in schools, government offices, and mass media (Premsrirat, 2007). Several participants from Bangkok and Chiang Mai were also interviewed to provide a broader perspective.

Participants

Study participants were recruited from multiple sectors in order to strengthen the validity of narrative accounts regarding the relevance and feasibility of the program, and potential challenges and opportunities for delivery and expansion (Creswell & Miller, 2000). Respondents included policymakers, frontline workers, government officials, academics, and international development sector officials ($N = 26$). Six respondents with a background in child development and child protection were also invited to join a Thai Parenting Experts Working Group, established as a voluntary advisory committee for this study.

Recruitment

Participants were recruited via phone and e-mail through a purposive sampling strategy (Creswell & Miller, 2000). Fifteen interview participants were identified via referrals from the Udon Thani Provincial Public Health Office, five from lists of key informants in two UNICEF reports (McCoy & Supaporn, 2016b, 2016c), four through chain sampling, one as a self-recommended replacement for an absent key informant, and one as a key informant from UNICEF Thailand. In order to participate in individual interviews, respondents had to belong to one of the following three groups: policymakers (i.e., district, provincial, and national officials under the Ministries of Public Health, Social Development and Human Security, Education, or Interior; $n = 8$); practitioners (i.e., frontline health, social welfare, or education providers who deliver services to families; $n = 9$);

and professionals in the fields of public health, child protection, and early childhood education ($n = 4$). Inclusion criteria for membership in the Parenting Experts Working Group required participants to be academics or practitioners who are involved in researching, advising, and/or providing services to families with young children. No persons refused to participate or dropped out of the study.

Data collection procedures

We adopted an iterative process, in which we continued to gather data until reaching 'saturation' – when no new data patterns or themes were emerging. While empirically based guidelines suggest that saturation could be attained within 12 interviews (Guest et al., 2016), we planned to interview up to 20 persons in the event that data widely varied. All data collection instruments were translated into Thai, and individual interviews and focus group discussions (FGDs) were conducted in parallel. Following the receipt of written informed consent, participants completed a short demographic survey in either Thai or English, according to their preference, assessing age, sex, employment type, years of experience in family service provision, monthly income, and level of education. Seventeen of the interviews were conducted in Thai and/or Isan languages by the lead author and a female research assistant trained by the lead author, while three were carried out in English by the lead author. Three FGDs with the Parenting Experts Working Group were conducted in English and Thai, depending on the interview guide topic. Interview duration was 60-120 minutes and took place in interviewees' workplaces, while FGDs lasted 3-5 hours and were conducted in hotel meeting rooms. All interviews and FGDs were audio recorded, while FGDs were also videotaped. These were transcribed verbatim, with Thai language dialogue subsequently translated into English. The lead author and research assistant also took written notes of key points and salient emerging themes. Transcripts and summaries of FGDs were shared with working group members for comment and correction. No compensation was provided to interview participants, while FGD participants were offered refreshments, lunch, and travel

subsidy to the venue. All transcripts were de-identified, unless members of the Parenting Experts Working Group gave explicit permission to be acknowledged by name and affiliation. The study protocol was approved by the ethics committees at the Universities of Oxford (OXTREC Ref# 522-17), Cape Town (Ref# PSY2017-007), the Thai MOPH (Ref# 10/2561), and the Udon Thani Provincial Hospital (Ref# 0032.1/11102).

Interviews and FGDs

Interviews combined a standardized, open-ended format with a structured guide approach, which permitted flexibility to explore particular topics and unanticipated emergent themes in more detail (Patton, 2015). The interview guide was divided into five broad themes: 1) the respondent's role in relation to services for parents of children aged 2-9 years; 2) key issues that would be relevant to the adaptation of PLH-YC; 3) potential program delivery structures and schedules; 4) program logistics, including deliverers and setting, as well as participant recruitment, attendance and engagement; and 5) potential for program scale-up and embedding within the Thai public health system. Prior to the interviews, all respondents were provided with a two-page project brief, which listed the key PLH-YC themes for each session. Following each interview, written transcripts and interviewer notes were examined for additional emergent themes, which were then incorporated into subsequent interviews as probing questions. The interview guide was updated twice through this process.

The FGDs also followed an interview guide approach, with topics specified in outline form (Patton, 2015). The topics were shared in advance of each FGD, with participants also receiving a copy of the original PLH-YC facilitator manual prior to the first meeting (Lachman et al., 2018). FGD moderators during the first FGD included two developers of PLH-YC, who determined a priori that the original 12-session version of the program should be reformulated into an 8-session version that may better accommodate the resource constraints faced in Thailand and many other LMICs. The first discussion provided an overview of PLH-YC, including content, delivery, and structure.

This was followed by an exploration of each of the original 12 program themes, with moderators probing the feasibility and cultural relevance of each one for the Thai context, including whether components should be altered, excluded, or combined (Wainberg et al., 2007). The second discussion centered on a proposed restructuring of the program developed by JML, as well as the review of illustrated stories from the South African and Filipino versions of the program. Before the third discussion, a new draft manual incorporating adapted illustrations by a Thai artist was shared with participants, reflecting their inputs and aiming to ensure a balance between fidelity and fit to the target population (Kumpfer, Alvarado, Smith, & Bellamy, 2002). During this final meeting, the moderators probed the content, structure, and flow of each of the eight sessions, including the cultural relevance of the characters, dialogue, attire, and home environment presented in the final 26 illustrated stories.

Data analysis

We used thematic analysis to examine all qualitative data (Braun & Clarke, 2006). The method of analysis was a hybrid approach, combining deductive methods driven by the theoretical underpinnings of parenting research (Crabtree & Miller, 1999) with an inductive approach, a process that bears some similarity to grounded theory (Boyatzis, 1998). Such an approach has been described by Fereday and Muir-Cochrane (2006) and shown to be rigorous when undertaken through a careful, reflexive, and iterative process. First, the lead author as the lead coder and AS, who was not involved in data collection, met to discuss the approach to the coding, as well as to agree on the steps for establishing inter-rater reliability (IRR), or the reproducibility across coders. We decided on a threshold Cohen's kappa coefficient of 0.70 (Cohen, 1960), a level that indicates substantial agreement (Landis & Koch, 1977). Next, the lead coder developed an initial coding framework based on the semi-structured interview questions and emergent patterns and themes (Patton, 2015). Further, a preliminary coding manual was compiled including coding labels, definitions of what the theme concerned, guidance on when to apply the code, and an example

extract of when the code was appropriately applied. The lead coder then selected two transcripts – one FGD and one individual interview – that included a diversity of perspectives and potential themes. The coders subsequently engaged in an initial exploration of the transcripts, using the qualitative data analysis software, NVivo 12 Pro, to apply the original codes and annotating where relevant. The lead coder then merged the two sets of coded transcripts and ran a coding comparison query to identify those codes with low IRR. The coders discussed the reliability of the coding frame, agreed on new codes that were not anticipated previously, and refined coding definitions, which resulted in a revised frame. The new frame was reapplied to the two transcripts and a third transcript of an individual interview. This was then followed by further discussions to revise the frame, address problems related to unitization (Campbell, Quincy, Osseman, & Pedersen, 2013), and reapply new codes to the text, based on clearer insights about the interview data and further agreement on refined coding labels and definitions. Following the fourth iteration of the coding frame, a test of IRR through NVivo revealed an average kappa of 0.81 across all codes, signifying almost perfect agreement (Landis & Koch, 1977). The lead coder then coded the remaining transcripts, divided one parent code into two, realigned five child codes, and then re-examined the transcripts for patterned responses, their broader meanings and implications, as well as any divergent viewpoints. The final coding frame consisted of 11 parent codes and 50 child codes. Finally, data extracts were selected which succinctly captured the core themes.

4.3 Results

Table 6 summarizes the emergent themes regarding perceived social norms, practices, and needs, along with the adaptations suggested by respondents.

Table 6. Key suggested adaptations to the Parenting for Lifelong Health for Young Children program based on tensions between perceived social norms, practices, and needs

	Tension		Resolution
Feature	Perceived social norms and practices	Perceived needs	Suggested adaptation
Cultural focus	Usage of Central Thai is pervasive across mass media and government institutions, although the local language (Isan) is widely used at home	Local language usage promotes familiarity and within-group communication, yet Central Thai usage is more practical and cost-effective	Central Thai language for written program materials, with spoken delivery in Isan language
	Buddhist mindfulness and meditation practices are common in Northeastern, North, and Central regions	Linkages between stress management program content and Buddhist beliefs and practices may be inappropriate	Avoid the use of religious terms during program delivery in diverse communities
	Many rural low-income families have multi- or skip-generations, and tend to rely on local and traditional materials	Illustrated story characters that represent local family constructs and typical household items will promote familiarity	Illustrated stories that reflect local family demographics and material culture
Program themes	Many parents do not know how to engage in play and dedicate little time to focused relationship building	Parents require knowledge and skills on how to engage in play and incorporate this into daily routines	Emphasis on parents spending individual time with children
	Parents often avoid discussing both their own and children's emotions, and lack self-management of emotions	Parents require knowledge and skills on two-way communication about emotions and emotional management	Emphasis on learning how to communicate and manage emotions
	Many parents regard praising as unnatural and potentially harmful, as it can fuel narcissism in children	Parents need to learn tactics on how to give specific and constructive praise	Emphasis on overcoming reluctance to praise and making linkages with academic achievement
	Instruction-giving and the establishment of household rules and routines are important and compatible with hierarchical and	Children's perspectives and participation should be built into instruction-giving, the development of household rules, and the	Encouragement of child participation in instruction-giving, such as during transition warnings, the creation of at least one household rule, and the

	authoritarian elements of Thai culture	setting of consequences	development of choices for potential consequences
	Time-out can be misused and harmful to children	Parents should encourage voluntary breaks for children that promote self-discipline	Removal of time-out content or careful framing of time-out techniques within contemporary models of self-regulation, learning, and attachment
	Parental expectations of child behavior (e.g., academic performance) are often not in accordance with developmental stages	Parents require basic knowledge on child development to prevent inappropriate expectations and parent-child conflict	Addition of content on stages of child development
	A common goal for Thai parents is for children to self-regulate and become independent	Parents need specific guidance on how to encourage their children to be independent, responsible, and rule-abiding	Addition of content on helping children learn self-discipline techniques
Delivery methods	Parents often struggle in coming up with positively phrased words when communicating with their children	Parents need assistance with initiating positive communication with children, as well as with contributing to group discussions	Provision of “mini-scripts” to participants
Structure & schedule	Home visits are part of the existing health and education services, but place a burden on facilitators and may stigmatize families	Group-based, collaborative formats are efficient and allow for parents to share experiences, while home visits are an opportunity to learn about parent-child dynamics	Combination of group-based parenting sessions and home visitation
	Rural low-income families often have busy work schedules which may act as a barrier to session attendance	Parents need session schedules that work around typical working days	Program delivery on Sundays

Recruitment, attendance, & engagement	Parents perceive professional health workers as competent and trustworthy, yet many have busy schedules and can be condescending; involvement of VHVs, social workers, and teachers may not be appropriate	Parenting groups need to be led by facilitators who are respected professionals, yet encouraged to attend sessions by trusted peers who are aware of child behavioural problems	Health professionals as facilitators, with potential involvement of social workers and teachers, alongside support from VHVs as recruiters
	Grandparents are difficult to reach and influence, while families who engage in harsh or abusive parenting practices will not attend	Supportive recruitment approaches are needed to target grandparents and include parents who perpetrate violence against children	Adoption of targeted, inclusive, and welcoming recruitment procedures
	Incentives such as monetary compensation, travel, meals, and childcare are appropriate but may not be essential	Incentives for recruitment and attendance need to be provided as they make significant differences in rates of participation	Confirmed inclusion of free childcare, lunches, and local transport or travel compensation
Setting for program delivery	Health Promotion Hospitals currently serve as venues for other parent-focused services (i.e. Parent Schools)	Venue needs to be community-based and accessible to parents, yet highly skilled professionals mainly work in the city center	Health Promotion Hospitals as venues, with some facilitators traveling in from the city center
Potential for scaling up	Top down policy-making results in efficient implementation and sustainable programs, but linkages with <i>tambon</i> (sub-district) level bodies open up opportunities for funding and partnerships	Incorporation into ministerial policy will promote uptake by frontline practitioners and inclusion in local job manuals and course curricula, while <i>tambon</i> level collaboration is necessary for local implementation	Emphasis on top-down policy implementation strategies, while also nurturing local level partnerships with hospitals, Tambon Administration Offices, and schools
	Model centers serve as venues for learning across sub-districts, but heavy workloads and an abundance of existing instruments make program adherence difficult	Sub-districts where the program has been well implemented should be established as model centers, which would aid program expansion	Careful development, support, and monitoring of model sub-districts for program delivery

Characteristics of the sample

A total of 26 persons participated in the individual interviews and FGDs (see Table 7). The majority of interview respondents were middle-aged and female, with an average age of 47.9 years. Many were frontline workers in the health, social work, or education fields (42%), possessed 11 or more years of experience (65%), and studied at graduate level (73%).

Table 7. Characteristics of participants (N = 26)

	<i>Individual interview (n = 20)</i>		<i>Focus group discussion (n = 6)</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Participant age, M (SD)	49.5 (7.4)	-	42.7 (12.7)	-
Participant sex, female	14	70	5	83.3
Profession				
- Frontline worker (physical health, mental health, social work, or education)	9	45	2	33.3
- Policymaker or senior government official	9	45	0	0
- Academic	1	5	3	50
- UN official	0	0	1	16.7
- NGO	1	5	0	0
Years of experience				
- 1-4 years	1	5	1	16.7
- 5-8 years	3	15	1	16.7
- 9-10 years	2	10	1	16.7
- 11 or more years	14	70	3	50
Workplace				
- Udon Thani	17	85	1	16.7
- Chiang Mai	0	0	1	16.7
- Bangkok	3	15	4	66.7
Household income (monthly)				
- 10,000 – 29,999 Baht (330 – 990 USD)	3	15	2	33.3
- 30,000 – 49,999 Baht (990 – 1,650 USD)	5	25	1	16.7
- Over 50,000 Baht (1,650 USD)	12	60	3	50

Level of education completed				
- Secondary school	2	10	0	0
- Bachelor's degree	5	25	0	0
- Higher than a bachelor's degree	13	65	6	100

Cultural focus

A key emergent issue was whether and to what extent the content and materials should be based on the local Isan language, social norms, and material culture in Udon Thani, as opposed to a pan-Thai or central Thai orientation. The shared sentiment across all participants was that it would be appropriate for materials to be written in the Central Thai language, given the similarities of many customs and traditions across geographic regions, as well as for practical reasons. A nurse based in Udon Thani (ID#15, interview), who had completed the training as a PLH-YC facilitator, explained:

I think this one can be used all over the country, not only the people in Isan because of the nature of the Thai people – the matter of traditions is not different. Each region also pays attention to gender and places importance on age. It's the same, no difference.

“Cost effectiveness” was also cited by one Bangkok-based psychologist as a reason for developing one national facilitator manual, while one provincial policymaker (ID#3, interview) pointed out the impracticalities of transliterating an Isan language manual using Thai script: “You can't really write out the Isan language, it's just spoken. Even if you write in the local language, it'll be similar to Thai.” Although many shared this perspective, one district-level policymaker in Udon Thani (ID#11, interview) implied that although the Central Thai language was pervasive and somewhat imposed, it was acceptable as long as those who shared the materials were virtuous people with good motives: “...whoever is fine but they have to be good people.... Buddha has a singular purpose regardless of which [geographic] region it is.... But mostly, the people who make the decisions...are people from the central region.”

Alongside this general recommendation for the written materials, many participants also recognized the value of delivering the program in Isan and incorporating some aspects of localization. One reason was due to forging closer ties with participants and promoting familiarity. A nurse in Udon

Thani (ID#15, interview) remarked: “Mostly, Isan people can understand the Thai language. But if we want to teach smoothly...I’ll use Isan, so that it’s like we are closer together.” Further, a provincial level policymaker (ID#3, interview) expressed: “The local language insinuates friendliness, familiarity, siblings...easy to talk and to understand.” One senior policymaker (ID#10, interview) insisted that while the materials should be written in Central Thai, program facilitators should be capable of translating the content into Isan on their own during spoken delivery. Suggestions for localization referred to existing practices by other parenting programs transported to Thailand, with one non-government organization (NGO) worker (ID#1, interview) noting that space could be provided within the manual for facilitators to write their own notes to guide session facilitation.

Several references were made to the potential infusion of religious practices into program content. One Chiang Mai-based psychologist (ID#22, FGD) advised that although the *taking a pause* exercise used throughout the program for stress management could be linked to Buddhist mindfulness and meditation, it would be best to avoid the incorporation of religious terms when PLH-YC is being delivered in diverse communities: “...there might be some Muslims, some Christians, or educated people...[so] maybe not appropriate.” For instance, two respondents cautioned that the program materials would need to be tailored for the Southern Thailand region, given the strong influence of Islam, with one NGO worker (ID#1, interview) cautioning: “Thinking of parents in...the deep South...it’s completely different.... If anything contradicts to their religious teachings, how would you explain that? ...Because they thought that this is what the religion says [and] you have to follow [it].”

Finally, several experts suggested surface-level adaptations of the illustrated stories. Given that many children in Northeast Thailand are looked after by their grandparents, the Parenting Experts Working Group members agreed that it would be important to depict them as story characters. Moreover, local cuisine was emphasized, with a Chiang Mai-based psychologist (ID#22, FGD) advising, “We have to change it to the common local food.” Adaptations to story scenes depicting play were also suggested, in order to better depict toys used by children in low-income families. In reference to one story where a child is playing with building blocks, one Udon Thani-based academic (ID#27, FGD)

proposed an alteration: “They [children in Udon Thani] play with rocks...with leaves, things that you pull off a tree...” (see Figures 14 and 15). Modifications to household items were also suggested, including the illustration of earthen jars instead of sinks, and the removal of beds and tables given rural customs to sleep on bedrolls and to sit on the floor during mealtimes.

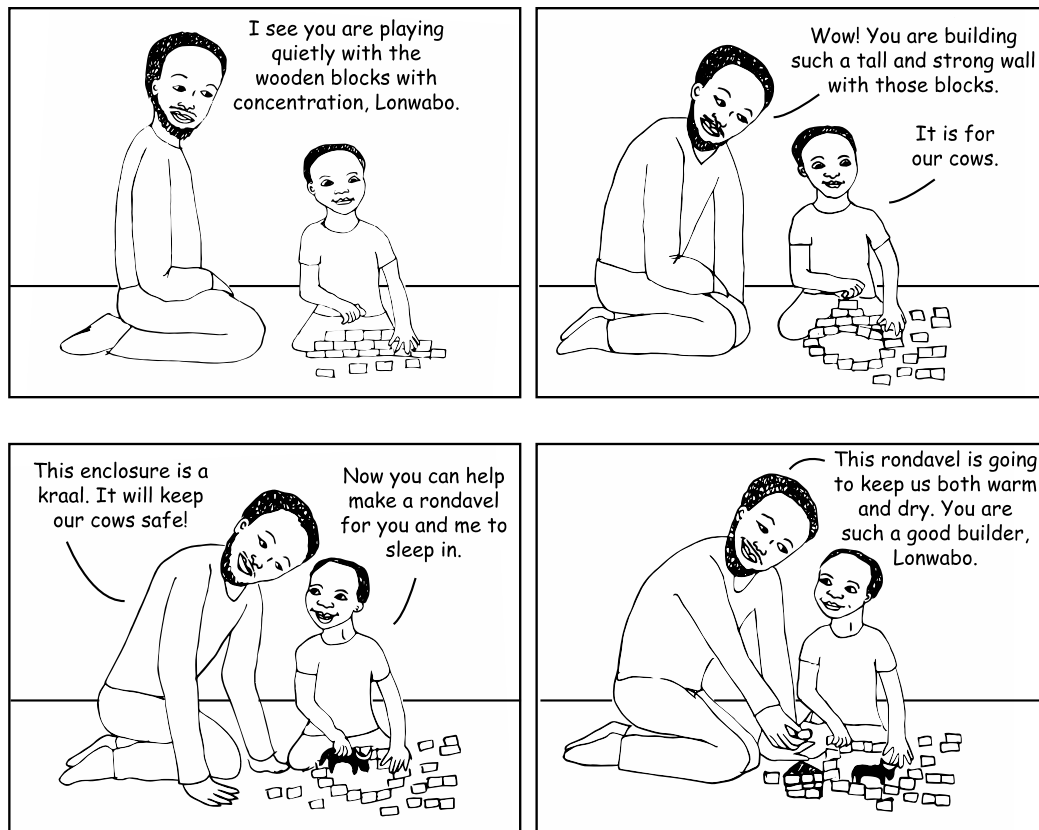


Figure 14. Example of an illustrated story from the original South African program demonstrating individual one-on-one time using child-led play



Figure 15. Example of an illustrated story from the adapted Thai program demonstrating individual one-on-one time using child-led play

Program themes

Respondents had specific views regarding the cultural relevance of the overall program content as well as the core themes. With the exception of *time-out*, the original themes were widely regarded as appropriate and important to maintain in the Thai program. A social worker from Udon Thani (ID#19, interview) remarked, “I think that it [the content] is all included and relevant. It aims to improve the quality of life of children...it covers everything.”

Within the overarching function of positive parent-child relationship building, which encompasses the first three program themes, participants underscored the strong linkages between these themes and the potential for condensation. One Bangkok psychologist (ID#26, FGD) noted, “I feel like those are the times where...we have to give individualized attention to the child anyway.” Participants also underscored the importance of the theme of dedicated one-on-one time, given the

perceived lack of parental devotion to relationship building. A policymaker in Udon Thani (ID#6, interview) described the contrast between modern day parents and those of previous generations, remarking: "...there are no relationships, from what I see. This was the parenting style that we inquired about in the local area." Many participants noted that parents do not have enough time to spend with their children, as they need to prioritize work and income generation. A few pointed out that parents either did not know how or did not want to play with their children. According to one Village Health Volunteer (VHV, i.e., community health worker) (ID#16, interview): "Most of them just don't have enough time for their kids...this is the main issue. They like to just let the child be, and to leave them with their teachers." One academic from Udon Thani (ID#27, FGD) was particularly emphatic in stating: "They do not know how to play."

Participants also supported the inclusion of child-directed speech, yet conveyed doubts as to how parents would apply it in practice. One Bangkok academic questioned (ID#24, FGD), "I'm not sure if it's going to build positive relationships or not?" before offering cautious advice: "...do the 'say what you see,' but tell them to try and focus on more positive things...because parents are so keen on negative behaviors, all the time." Clinician respondents also strongly embraced the value of strengthening communication about emotions, especially given the tendency to avoid such topics in Thai culture. Further, according to a Bangkok academic (ID#23, FGD), emotional self-regulation is a widespread cultural challenge for Thai people: "...it's not normal in Thailand to teach [children] how to manage their own feelings.... We're not taught to be responsible for our emotions."

The second overarching function of positive reinforcement comprises the next three program themes: using praise and simple rewards; giving specific, positive, and realistic instructions; and establishing consistent household rules and routines. Specific and constructive praise was regarded by two Bangkok-based experts as one of the most valuable components of the program, remarking that their research showed that parents only used two particular skills after completing their parenting program: "...the parents use only two techniques...praising, and um, validate the feelings of the children" (ID#23, FGD). However, participants reported that many Thai parents believe that praising

was harmful, as it was perceived to fuel narcissism. A social worker in Udon Thani (ID#19, interview) explained:

The subject of complimenting the child...there are still many that believe that it would go to their head. That's why not many people use it with their child. It shouldn't be like that. It would be good for parents to try and compliment their child in a positive way...

Respondents who had previously delivered parenting programs also contended that praising was 'unnatural,' as Thai parents had never been parented that way themselves during childhood. One academic in Bangkok (ID#24, FGD) pointed out: "They've never been raised that way," and "...they never use it...they never experienced it." At the same time, these respondents offered tactics for overcoming this reluctance, noting that it could be emphasized that such praise would help children "learn...about their responsibility in academia as well" (ID#26, FGD) – regarded as a priority for many Thai parents who tend to emphasize educational achievement.

With regards to instruction-giving, two Bangkok-based academics suggested building in flexibility, the use of timers during transition warnings, and the importance of understanding the child's perspective, noting that they had seen successes with these techniques with Thai parents. Several experts also advocated that child participation in decision-making was a valuable method to integrate into household rules and routines. One Bangkok-based psychologist (ID#26, FGD) advised that it could be incorporated in moderation alongside parental authoritarian tendencies, stating: "...because of how Thai culture is and everything, it's good to be directive, but maybe we could ask them to be part of at least one rule, where they have an agreement with the child." One senior policymaker in Udon Thani (ID#7, interview) was strongly in favor making household rules and routines an integral part of the program. He asserted: "I want the emphasis to be on that. It's an important topic for us Thai people... I want this program to emphasize parents setting a good example and how to do it."

The final overarching function in PLH-YC – positive discipline – is manifested through redirect, ignoring, consequences, and time-out. Parenting experts stressed the inter-linkages between these themes, with *redirecting* and *ignoring* constituting forms of consequences for unwanted or difficult child behaviors. Bangkok-based respondents also advised offering children choices of potential

consequences for negative behavior, with one participant stating (ID#24, FGD): “...the consequences will work very well when the kids know that this is the consequence from their own choice.” However, a psychologist working in Bangkok (ID#26, FGD) pointed out that this tactic may not be acceptable to Thai parents, as “...it can be challenging for some parents to give the children a choice, because they might feel like they’re relinquishing the control over to the children.”

The use of time-out as a consequence for aggressive, destructive, or dangerous behaviors was widely regarded by participants as prone to misuse and potentially harmful to children. Several experts underscored that two parenting programs they had delivered to Thai families – 101 Principles for Positive Discipline and Positive Discipline in Everyday Parenting – did not include time-out. A Chiang Mai-based psychologist (ID#22, FGD) mentioned, “[It’s] not encouraged...because there’s a risk of using it in a punitive manner.” A Bangkok-based practitioner (ID#23, FGD) held the opinion that time-out was not representative of positive discipline, and that a preferential method – which she had used successfully at her child development center – would be to encourage children to enter into a voluntary, untimed, and self-imposed break in order to regain emotional control. This implied the offering of choices to the child, which made them “feel respected.” She explained: “You don’t like, have to...take 5 minutes for time-out. But maybe you say, ‘When you’re ready, you can come back.’ It’s self-discipline.” The NGO worker (ID#1, interview) was in favor of a similar guise, suggesting that time-out could be phrased in Thai as *nang sammathi* (meditation).

The final themes – resolving conflicts in the family and reflecting and moving on – were perceived as not essential as individual sessions. The necessity of parent-child collaboration in this conflict resolution approach, as well as parental instinctiveness to explain and settle problems for children rather than with them, were cited as reasons to potentially de-prioritize this theme. One Bangkok-based psychologist (ID#26, FGD) explained: “Maybe parents would feel like it’s instinctive for them to solve the problem for the child, instead of just asking for the child’s solution.” The final session topic on program reflection was perceived by the same psychologist as an opportunity to discuss the creation of a “support community where they...can help each other with the skills [following program cessation].”

Proposed additional program content

Two additional topics were identified regarding respondents' perceptions of content relevant to the needs of Thai families. First, participants believed that it was essential to integrate information on child development, including stages of physical, cognitive, and social development. One NGO worker (ID#1, interview) remarked that it would be necessary to incorporate this information so that parents can "understand that children...[are at] different development [stages] that can affect their behavior...so they wouldn't try to make children do the things that are the opposite to what they should do for their own development, and not get angry about it." Several of such suggestions were based on practitioner experiences of parents having unrealistic expectations for child academic ability. For example, one local policymaker (ID#5, interview) in the education sector noted: "Nowadays what's missing is parents don't understand child development.... They take them to practice reading, practice writing.... They're still writing the alphabet backwards, and they're still forcing them. It's such a common problem."

A second topic revolved around the issues of child self-discipline, responsibility, and the ability to function independently, which were perceived as typical parental goals in Thailand. Two Bangkok-based parenting experts noted that self-discipline was often prioritized by families as the "ultimate goal": "What do you wish for your child? 'I need for my child to be self-disciplined'...we know that the ultimate goal of positive discipline is to give autonomy for the children to control themselves" (ID#23, FGD). The Thai term used to describe self-discipline – *winay nai ton eng* – was also linked to the concept of responsibility and rule abiding behavior, which resonated with an Udon Thani-based policymaker (ID#11, interview). He asserted: "We would like to emphasize to the parents that they have to realize and know about discipline...to respect traffic laws to prevent future accidents, so that these kids grow up learning how to protect themselves...."

Delivery methods

Participants were asked for their views regarding the appropriateness of non-didactic, collaborative, and group problem solving-based methods, which are an integral part of program

delivery for PLH-YC. All participants extolled the benefits of group discussion and the fostering of exchange and mutual support: “Doing a group workshop is a good thing...It’s about being an example in the group...so they can learn by exchanging stories and that makes it easier to remember” (ID#9, interview). One Bangkok-based child psychiatrist (ID#2, interview) indicated that such methods would provide opportunities to bring relevance to the “problems here and now” that parents were facing. Two participants asserted that in-session practice and homework could help fuel this collaborative process, including a local public health officer (ID#17, interview) who commented: “I think they’ll pay attention when you engage them and let them practice.... They’ll be very interested. But if you just lecture them and ask them to practice at home, it’s likely they wouldn’t be able to do it.”

Several Bangkok-based academics who have facilitated parenting interventions also shared that, in their experience, providing “scripts” to parents was an effective method. They remarked that parents often had trouble communicating in a positive manner with their children, particularly when it came to communicating about their emotions. They recommended using words to initiate the conversation, such as *mae kaojai nu sao* (“Mother understands that you feel sad...”) and *mae dai yin wa nu yaak dai* (“Mother understands that you really want this...”). They also commented that templates for praise worked well with Thai parents: “We said you can praise but you have to have the three key words – the word for praising, then specific behaviors, and the last one is very important – like, the adjective” (ID#23, FGD). One Bangkok-based psychologist (ID#26, FGD) noted that this method also had the benefit of encouraging Thai parents to contribute more during group discussions, as they tended to be reticent to speak out in public settings:

We produce a sentence – so ask them to say...’Do you think this is OK to say it?’ ...[It] would help them, like, participate, and engage more, because...I found that a lot of Thai adults in, like, group situations, if they feel insecure...they’re not going to say anything.”

Structure and schedule

Participants were asked to share their thoughts on the group-based format of PLH-YC in comparison with one-on-one modalities. Most participants expressed that group formats were preferable, and that individualized sessions were more “problematic” and better reserved for those

with particular needs. Resource constraints were also cited as justification for group formats, with one education sector policymaker in Udon Thani (ID#5, interview) asking: “Group-based workshops are beneficial in a sense that we don’t have to use that many facilitators, time, or resources, right?”

At the same time, respondents saw the value of combining group-based sessions with individualized home visits. One VHV in Udon Thani (ID#16, interview) pointed out that both formats were beneficial and could coexist: “One-on-one I think is good in the sense that we can go into more detail about their situation.... I think it’s good in a different way, but you could do both I think, so you would know.” Participants also explained that a home visit would allow facilitators to observe the “truth” concerning how the child and family interact with each other, and convey that the parent is important to the facilitator. One Bangkok-based child psychiatrist (ID#2, interview) remarked: “I think for home visits – that is really a benefit...you can see how they speak and how they talk to the child.” Several participants also pointed out that conducting home visits were already part of regular service delivery by nurses, teachers, and VHVs. Participants also underscored the importance of having a friendly demeanor during such visits, and that visitors should aim to establish close ties. One social worker in Udon Thani (ID#19, interview) advised: “...Establishing a relationship with them as motivators is significant...I think they’ll see the importance...we would visit them like we visit our relatives and care about them.”

Several challenges regarding home visits were raised. Some participants cautioned that such home visits needed to be conducted in a sensitive manner, particularly given the program’s primary aim of preventing violence against children. One nurse in Udon Thani (ID#20, interview) was wary of how other community members would perceive home visits to targeted beneficiaries: “People in the community know that there is a project in their community...I don’t know if it will be risky...? Will they be seen as a family that abuses children?” Further, two respondents were concerned about the potential burden on facilitators, especially nurses. One public health officer (ID#17, interview) noted: “Even if their job is to do visits...not many do it, and most don’t want to. A possible motivator is the compensation they’ll get.”

Respondents were also prompted to advise on the timing and frequency of parenting sessions for low-income families in Udon Thani. Several suggested that delivery should take into account the agricultural seasons, while one VHV did not think this would affect participation. Sundays and mornings were recommended as the most convenient days and times for working parents, although it was noted by several participants that many grandparents may be available at any time as they were less likely to work. However, the lack of facilitator availability during weekends was cited as an obstacle to this. One local teacher (ID#4, interview) remarked: “If there’s going to be a problem it will be with the facilitators, because it’s also their day off.” In contrast, however, some respondents noted that weekend scheduling would be preferable. According to one local policymaker in the public health sector (ID#11, interview): “It would be convenient for the staff also because it’s not during government working hours. For Saturday and Sunday, sometimes they have shift work.” Finally, interviewees had mixed views regarding the frequency of parenting sessions. Several suggested that scheduling sessions twice per month would be more convenient and have less of an impact on their daily income, while others believed weekly meetings would be feasible.

Recruitment, attendance, and engagement

Respondents shared a variety of strategies that they perceived would be effective for program recruitment. Many strongly emphasized the importance of identifying and contacting eligible parents through collaboration with local community actors and institutions. VHVs were widely mentioned as the most relevant and effective partners. One public health officer in Udon Thani (ID#17, interview) stated: “If the VHVs get through to them then they’ll come, because they trust the VHVs...even more than the doctors. They see them as relatives from the same family.” A local VHV (ID#12, interview), however, did not express a similar level of confidence in her own level of influence, claiming that recruitment would be more effective if done directly by health professionals: “Let the doctors and nurses go to the field and invite the farmers, and then it will be 100% certain.” Several other respondents from the education sector pointed out that teachers at Early Childhood Development

Centers and primary schools could also play a key role in recruitment: “They’ll know them all, and know the children well. Let them help recruit the parents to join - it would be beneficial” (ID#5, interview). Announcements through village heads, village public address sound systems, and brochures were also cited as potential recruitment strategies.

In terms of the target population for recruitment, many participants emphasized that most children aged 2-9 years in Udon Thani were taken care of by their grandparents or by young mothers. Several interviewees noted that grandparents did not provide quality care for these children and were difficult to reach and influence. A provincial level policymaker (ID#9, interview) shared: “...parents are at work and only the grandparents are left.... They’re old so sometimes they get it, sometimes they don’t...most of the children live with their grandparents or other relatives, and it caused problems.” Increased risk of abuse was one such problem perceived by a senior level policymaker in Bangkok (ID#10, interview), who noted: “Anyway, the children who stay with their grandparents have more risk of violence, compared to staying with their own parents.”

Some respondents believed that it would be best to recruit two adult caregivers per family in order to promote synergy in parenting approaches and achieve greater impact. One Bangkok-based child psychiatrist (ID#2, interview) suggested: “If you have two of them together...they can bring it into their family.... But if you have only one it goes back to the...same style of parenting.” A provincial level policymaker (ID#7, interview) also emphasized: “Husband and wife won’t see eye-to-eye, and when it’s time to join the program, the one who engages in violence wouldn’t show up.... If you bring in just one person from the family, it’s less likely to be effective.”

Although some saw the value of identifying and recruiting families with known cases of abuse, several participants expressed that this would be counterproductive, and that more supportive approaches were appropriate. One provincial social welfare policymaker (ID#6, interview) stated: “When we invite them, we can’t say ‘high risk families’ or ‘families who use violence.’ Don’t say it like that... They won’t come. Invite them and say this family should join this activity so we can learn as a group.” One nurse in Udon Thani (ID#15, interview) advised: “We need to do a lot of talking...because

we aren't telling them that they are harming their children, like that... But we'll invite them to participate on this issue."

Most respondents believed that it would be appropriate to provide low-income families with incentives such as monetary compensation or services to encourage recruitment and attendance. In line with the original design of PLH-YC, suggested services included childcare during parenting sessions, as well as transporting attendees with vehicles belonging to Health Promotion Hospitals (HPHs) – government health centers located at the sub-district level. One provincial level policymaker (ID#3, interview) stated: "You pick them up, you pay them, then they will definitely come. If a meal is readily provided – free food – and you can bring your children.... They'll be more than happy to come because then they have nothing to lose." However, one education sector official (ID#5, interview) indicated that payment was non-essential, but meals were a useful incentive: "Well, you don't need to pay compensation...but you know, provide lunches and snacks.... A little something here and there. But they don't want the money."

Respondents in Udon Thani were also asked to share their views regarding the types of professions that would be most appropriate to deliver PLH-YC within a public health setting: nurses, VHVs, public health officers, or social workers. Several participants explained that potential beneficiaries perceived and trusted these professions in a hierarchical manner. One local academic in the nursing field (ID#14, interview) stated: "...Doctors would be most believed followed by nurses, public health officers, social workers, and VHVs." Several participants emphasized that the characteristics and skills of the facilitators were more important than the profession, with desirable attributes including being friendly, playful, sensitive, observant, passionate, able to communicate simply and effectively, and able to understand the theory and concepts behind the program. According to one local social worker (ID#19, interview): "First of all, their heart should be in it before it starts."

Nurses – who are colloquially referred to as *maw*, the same Thai term for doctors – were frequently described as competent, trusted, and familiar with families in the areas in which they work. One local social worker (ID#19, interview) noted: "People believe in our society that if the doctor/nurse

said it's good, then it must be." Further, a provincial level education sector official (ID#5, interview) claimed: "They'll be happy that they get to receive knowledge from the doctors/nurses. Health Promotion Hospitals are really important to them. So, they use the services there frequently." However, nurses were also perceived as not ideal facilitators, due to their busy work schedules and tendency to use scolding:

But you do have to choose the nurses that are willing to participate voluntarily, are sociable, and have great relationships in the village. Not the kind of nurses that would just scold patients. There are so many of them at Health Promotion Hospitals these days. (local education sector official, ID#5, interview)

Most participants described VHVs in a very positive light, indicating that they had the potential to become program facilitators as they were often regarded as close to families in the community, had good organizational skills, frequently conducted home visits, and were already important local actors in monitoring child development. One provincial social welfare official (ID#6, interview) explained that "villagers would have high regard for them because they take care of them in sickness and all," while a local teacher (ID#4, interview) explained: "I see the benefits of VHVs.... They have a closer relationship than us." However, several persons pointed out that their capacities were variable: "VHVs are very knowledgeable nowadays.... [But] some are great, some struggle with communication and dissemination" (local education sector official, ID#5, interview).

While respondents expressed that social workers had skills and expertise in dealing directly with issues of violence, many admitted that they had little contact with such professionals and were unfamiliar with their work. Most of those that understood the role of social workers, however, spoke positively about their involvement: "If they meet children that have family problems...if violence occurs, they will be able to help out in this case" (nurse in Udon Thani, ID#15, interview). Alternatively, a sub-district social welfare official (ID#18, interview) was wary that the involvement of social workers could raise suspicions: "Hypothetically, if public health officers or nurses plan to visit a client one-on-one it would be normal.... But if the social workers go in, they'll ask, 'where did you come from?'"

Public health officers were referred to largely in positive terms, and their involvement as facilitators was widely perceived as appropriate. It was noted that they already collaborate with nurses

at HPH Parent Schools, and that they tended to be skilled at working with community members: “I think they would be a good group of facilitators and would be better (than nurses). Nurses work mostly in...treatment, but if it’s community-based then it would be the officers that go into the village” (local hospital director, ID#8, interview).

Finally, teachers were described as possible program facilitators by several participants, who noted they were accustomed to conducting home visits, sometimes assisted in delivering content for Parent Schools at HPHs, and were more familiar with the behaviors of children in the community. One local public health officer (ID#17, interview) explained: “It’s like they’re another parent... I think they’re better than doctors/nurses.” However, one Bangkok-based respondent (ID#23, FGD) posited that the content of PLH-YC may be in juxtaposition with local teaching practices: “The reason they [parents] don’t like teachers is because...they have low education and they use negative discipline, so when they say something that contrast to their behaviors, it’s hard for human [parents] to understand and believe it.”

Setting for program delivery

Participants were asked for their views regarding the proposed hospital setting for the program, as well as their suggestions for any other appropriate venues. While several respondents underscored the expertise of staff at the Provincial Hospital located in the city center, nearly all Udon Thani-based participants regarded this setting as unsuitable due to the crowded facilities, concentration of disease and germs, and remoteness from low-income communities. Most advised selecting a venue close to families in order to maximize attendance. One local social worker (ID#19, interview) remarked:

Oh, it [the Provincial Hospital] is not appropriate due to limited space, and it’s very crowded. All the accessibility and means of travel are somewhat complicated... But, if we want to place our clients at the center [of our efforts], then it should be in their area...

In comparison, many participants underscored that HPHs were accessible, well equipped for workshops, open during weekends, operate shuttles for picking up participants, and already host Parent Schools. According to one local nurse (ID#20, interview): “It is more convenient because,

actually, the Health Promotion Hospital is like a hub of the community.... [It] will have a space for us.” The HPH setting was also perceived as less stigmatizing for participants: “But if we make an appointment at the Health Promotion Hospital, then it seems like we’re prioritizing health and wellness.... People wouldn’t think that a child in this house has a problem, that’s why they’re going to the workshop” (local social worker, ID#19, interview). However, one local mental health official (ID#21, interview) saw the setting as potentially stigmatizing: “Sometimes if we call them to the Health Promotion Hospital, it’s like they are in a problem group. ...There is some stigma to a certain extent.”

Respondents also mentioned primary schools, child development centers, nurseries, sub-district administrative offices, village pavilions, and temples as other possible venues. However, several people expressed doubts about the appropriateness of such places, with one local education official (ID#5, interview) noting that “the village *sala* [pavilion] is too hot, too loud...and it’s disorganized.” One local public health officer (ID#17, interview) pointed out that school-based settings may not be ideal, because “if it’s school hours and then there’s a school holiday, then we have to consider that it could be problematic.”

Potential for scaling up

Participants were prompted to share their views regarding any potential opportunities or obstacles regarding the scaling up and institutionalization of PLH-YC in Thailand, with an emphasis on prospects for integration within the public health system. Overall, interviewees were largely optimistic that such a program could become a regular health service, provided that certain strategies were undertaken. Several participants claimed that one such method was by working through top-down channels, such as by embedding the program within a ministerial policy, along with associated guidelines and Key Performance Indicators (KPIs). One nurse in Udon Thani (ID#20, interview) noted:

There must be a policy...[at] the executive level of the [Public Health] Ministry.... If we bring anything that is not in the policy, it will...not get support...but when it’s executive level policy, it will be successful or will be used as a KPI measure of the ministry...

A provincial level social worker (ID#19, interview) added that research findings demonstrating the program's feasibility and effectiveness would assist in promoting a ministerial level policy, along with the potential for inclusion in job manuals and course curricula:

If research supports it, then we can see its feasibility and request for it to be included in the ministerial level service plan. In terms of the multidisciplinary team on the front lines...it could be included in their manual of job responsibilities...[and] the coursework for nursing colleges or at the department of social work.

Many participants commented on the suitability of situating the program within the public health system. A few interviewees indicated that officials sometimes questioned whether it was appropriate for the MOPH to tackle violence prevention, as this was perceived to fall within the remit of the Ministry of Social Development and Human Security. However, there was acknowledgement that the latter ministry did not have sufficient local level reach to adequately address violence prevention: "I now think that it would really work best at the Ministry of Public Health, even though family issues actually fall under the role of the Ministry of Social Development and Human Security. But this ministry does not have local connections.... They don't have the resources" (provincial level public health officer, ID#9, interview). Several participants pointed out that implementation through the public health system would work well, as they were already delivering parenting programs through the HPHs, which were part of a broader organizational network linked to the provincial and district public health offices. One teacher at a local child development center (ID#4, interview) noted:

Actually, besides the Health Promotion Hospitals, it would be difficult, because the Tambon Administrative Office [sub-district level government office] is quite large and they take care of all aspects, and I fear no one would pick up this project for us. But if it's a Health Promotion Hospital, they'll take care of it directly.

Many participants also highlighted that it would be worthwhile to develop partnerships between the HPHs and the Tambon Administrative Offices, or to simply work directly with the administrative offices themselves. One municipal level official in Udon Thani (ID#3, interview) stated that these offices would be able to host the program for a very clear reason: "Reason number one: they have the money. They have all the 4 M's...Men, Money, Management, Materials." One sub-district level official (ID#18, interview) underscored that sustainability was possible if working in cooperation with

these offices: “The local area must collaborate with Health Promotion Hospitals in every sub-district....It would be sustainable if they [the Tambon Administrative Offices] worked together with the hospital and created a memoranda of understanding.”

Several others perceived that it would be better to work through or involve child development centers and primary schools. A mental health policymaker in Udon Thani (ID#21, interview) noted: “If we can organize it in...nursery and primary school, ...the public health staff can assist the ‘hard core’ [parents that use violence] group. It would be better, more sustainable, and right. It shouldn’t be in hospitals.” However, one local academic (ID#14, interview) cautioned that this may not be appropriate as violence was also perpetrated in schools: “Schools have problems with violence too....I think there is already a policy [against violence], but in practice it’s different.”

Several participants also suggested undertaking a “model” approach, with a particular sub-district demonstrating how PLH-YC could be implemented through various departments and professionals in practice, which then serves as a learning center for other sub-districts prior to expansion. One senior policymaker (ID#7, interview) advised: “We can... make that sub-district a model. A model that collaborates with public health officers and local authorities related to education and health centers.... You could collaborate with...the heads of villages, community leaders, and VHV’s.”

Despite the myriad possibilities, some participants suggested that scaling up PLH-YC would be met with challenges at the senior management level due to the divisions that persist between and within ministries, departments, and administrative geographic regions, as well as in practice due to the overburdening of frontline workers. One provincial level public health officer (ID#9, interview) noted: “If you only do it in Udon Thani...would they [the Ministry of Public Health] accept that? You have to increase the area to different regions for them to believe in the program, that it works, and it is possible.” A mental health sector policymaker (ID#21, interview) suggested that a plethora of programs and approaches already existed without sufficient time and training to fully incorporate them into practice:

There are many instruments in Thailand.... By the time we know how to use the instrument..., it takes too much time...and the new one is coming.... Is there a new instrument? I haven't used the old one to the fullest extent yet. This is an obstacle.

One sub-district level official (ID#18, interview) underscored that the current workload of members on his team would prevent them from fully implementing the program in practice: "We'll take what's suitable for us to use. But we're not going to count from one to 10, we're not going to do weekly home visits, and how many hours per week. We can't really do it, can we?" Finally, one mental health policymaker (ID#21, interview) divulged that challenges with cross-sectoral collaboration would hamper scale-up efforts, therefore requiring careful selection of sites that are truly capable of effective implementation:

It isn't only the responsibility of the Ministry of Public Health....It requires cooperation amongst many sectors, such as the local area, civil society, and community members....Is cooperation smooth in Thailand? It isn't. They still work separately. It will affect expansion. That's why you should work in the areas that are ready...then it will work.

4.4 Discussion

This study aimed to understand the cultural and contextual relevance of the key program themes, process, structure, schedule, and logistics of PLH-YC, as well as explore potential barriers and opportunities for scaling up an adapted version of the program. Emergent themes regarding tensions between existing social norms, practices, and needs, as well as proposed resolutions, provide a useful foundation for program adaptation. To our knowledge, it is the first formative evaluation for a parenting program which aims to reduce violence against children in Thailand, and one among few such evaluations conducted in LMICs, including Panama (Mejia et al., 2014, 2015), the Philippines (Alampay et al., 2018), South Africa (Lachman et al., 2016), and Uganda (Siu et al., 2017). It is also the only one that has specifically targeted integration within the public health system in a LMIC.

Implications for cultural adaptation

Results from this study suggest that most of the original PLH-YC program themes were culturally relevant for practitioners and families in Thailand. These themes included individual one-on-

one time using child-led play, communication about emotions, praise and rewards, positive instruction-giving, consistent rules and routines, redirecting, ignoring, and the use of appropriate consequences. Respondents regarded time-out as potentially harmful, although reasons cited for this stance did not draw from experiences in implementing this technique in a Thai context. These views reflect the ongoing debate in the field on the use of time-out as a strategy (Morawska & Sanders, 2011), and conflict with evidence that it is associated with larger parenting program effects (Kaminski et al., 2008; Leijten et al., 2019). The consistent disapproval of time-out by respondents suggests that it should not be included in the Thai version of PLH-YC; alternatively, it could be carefully framed within contemporary models of self-regulation, learning, and attachment in order to help ameliorate tendencies to use this technique in a punitive manner (Dadds & Tully, 2019). An emphasis in particular on the broader goal of developing children's ability to self-regulate his or her emotions, which is consistent with Buddhist concepts of *sati* (careful awareness of one's thoughts and feelings), as well as the use of meditation to attain calm (Kelly, 2008), may also make this skill more appealing to Thai parents and practitioners. Such an approach may be well embraced in most communities in Udon Thani, where 99.5% identify as Theravada Buddhist (Community Development Department, 2017), but its explicit incorporation into a common, national version of PLH-YC may be perceived as culturally inappropriate in Muslim majority populations in the South. This implies that the inclusion of time-out within the adapted program may require the use of non-religious labels, such as *tham hai jai yen* (calming down), or the development of a separate version that reframes this theme for Muslim families and incorporates Islamic concepts. Besides these considerations, such findings underscore that additional program content on self-discipline and personal responsibility, including explicit linkages to other program themes, may be well received by Thai parents in Udon Thani.

Although respondents indicated that it would be important to include most of the original program components, they expressed varying degrees of concern that parents would struggle to apply certain skills and would dedicate little time to do so, particularly those that focus on positive parent-child relationship building. The low level of awareness or desire to partake in playtime with children

may relate to a poor level of understanding as to how such play is conducive to warm and positive parent-child relationships and supports healthy child development. These findings correspond with other qualitative research with parents and health workers in Pathum Thani, central Thailand ($N = 25$), which found that caregivers had difficulties in managing time for child development activities, possessed limited knowledge on how play benefited child development, and lacked confidence in engaging in stimulation (Morrison et al., 2018). The potential lack of available time outside of employment also corresponds with International Labour Organization reports, which show that Thailand is one of only six countries (amongst a total of 44) with weekly working periods often exceeding 48 hours, and is one of only four countries in Asia that provides for less than a minimum of 10 annual leave days per year (Lee et al., 2007). Given the recommendations to include a child development education component in the program, as well as ethnographic research findings from Eastern Thailand ($N = 22$ families), which suggest that caregivers who were aware of the benefits of early child development were more likely to effectively interact with their children (Chivanon & Wacharasin, 2012), it would be important to incorporate this topic. Finally, the perception that communicating about emotions would be challenging for Thai families given the cultural avoidance of socio-emotional communication is reflected in ethnographic research with nurses and nurse educators ($n = 14$) in Thailand. This study found that not expressing strong feelings might relate to the Buddhist principle of non-attachment to people and objects (Burnard & Naiyapatana, 2004). Thai social norms tend to value emotional neutrality and distance, which must conform to one's "status, power, rank, and seniority" in relation to someone in a more exalted position, such as a parent (Klausner, 1993, p. 381; Weisz et al., 1987). Suggested adaptations that are perceived to overcome this tension thus included an emphasis on socio-emotional communication and self-management of emotions.

Several respondents perceived that Thai parents would struggle to involve children in conflict resolution, which involves child participation in problem solving. This sentiment also stood in contrast with the suggestions by Bangkok-based parenting experts that the program should help parents engage children in the establishment and enforcement of household rules and routines. It is possible that this

approach that may be more feasible with middle-class, university educated urban parents, but perhaps overly aspirational for rural families in Udon Thani. The traditional emphasis on hierarchical relations within Thai families, and on teaching people to obey according to their level of seniority (Auemaneekul, 2013), similarly underscore that such a child participatory process may indeed not be considered appropriate by many Thai parents. This top-down teaching role may correspond with Chinese notions of *guan* (training) – the responsibility to teach children through firm directives and high demands (Wang & Chang, 2010) – as suggested by Chinese parents in a Group Triple-P parenting program, who believed this was an important part of their parenting duties (Crisante & Ng, 2003). Moreover, a multi-country cross-sectional survey including Thai Buddhist participants ($N = 232$) found that Thais were more likely to use indirect, ambiguous, and non-confrontational strategies when faced with conflict; this preference is common to *high-context cultures*, or cultures where individuals are prone to using implicit rather than direct communication codes (Croucher et al., 2012). Such roles and predilections may thus translate to reluctance in involving children in conflict management within Thai families, as well as within the style of program delivery. Nonetheless, the view by several participants that the adapted program should somehow address inter-partner and intra-familial conflict, and even include partners and extended family members as program enrollees, underlines that the issues of conflict resolution and synergistic parenting are critical ones.

Finally, respondents made a number of practical propositions regarding PLH-YC materials. Although the shared view was that the facilitator manual should be written in Central Thai language, actual delivery of the program in Udon Thani should be in Isan; providing space within the manual for facilitators to note down key concepts, explanations, and examples in Isan may thus be a simple yet useful modification. Regarding the parent handbook, lessons can also be learned from recent adaptations to the Developmental Surveillance and Promotion Manual (DSPM) manual for caregivers in Thailand. This revised manual, used by the MOPH to assess child development (Kanpirom & Masena, 2017), aims to improve user accessibility through the simplification of content, inclusion of more pictures, a freely downloadable application, as well as Quick Response Codes that link to videos

(Morrison et al., 2018). The incorporation of internet-linked content may be particularly acceptable to Thai participants, given the high levels of domestic smartphone usage: Thailand was recently ranked third highest in a global survey of time spent online (Kemp, 2019).

Implications for adaptation within the broader implementation context

Findings also demonstrate that respondents regarded many factors pertaining to the program's process, structure, and schedule as relevant and suitable to the context in Udon Thani, as well as in Thailand more broadly. Regular skills practice and homework, the group-based format, the inclusion of home visitation, as well as the timing of weekly sessions over an 8-week period, were perceived by most as appropriate and feasible. However, while the non-didactic and collaborative discussion methods were broadly embraced by participants in both Bangkok and in Udon Thani, this stood in juxtaposition with existing practices for the top-down teaching of parents within the public health system. The lack of sufficient precedent in utilizing such methods, the cultural deference toward doctors and nurses, as well as the value placed on an emotional distance between those of lower- and higher-level status, may present challenges for health professionals in undertaking a PLH-YC facilitator role that relies on open exchange and the sharing of personal challenges. Health professionals in Thailand may thus require focused facilitator training and additional coaching on how to adopt collaborative methods, as well as to avoid the natural gravitation toward didactic instruction that is common in many settings.

Most respondents spoke affirmatively regarding the potential involvement of nurses as facilitators, referring to their community-level presence and the significant trust and respect that they command from villagers. Nurses are fundamental to the Thai health system given their qualifications, geographic distribution, and numbers (180,000 in 2016), with each HPH typically staffed by 3-5 nurses who serve a sub-district population of 3,000-5,000 people (Tangcharoensathien et al., 2018). The predominant perception that nurses would be the most suitable service providers is corroborated by recent qualitative research with parents and caregivers in Bangkok, Chiang Mai, and Trang, which found

that parents indicated that they would trust health professionals over all others for the provision of useful parenting information (McCoy & Supaporn, 2016a). Moreover, a comparative study on doctor-patient communications in several Asian countries, including Thailand, highlighted the great esteem that these professions are afforded within Thai institutions, based on the general sentiment that they are persons of high status who impart important information to patients - who are in a subordinate position (Matusitz & Spear, 2015). The potential for condescension in such a dynamic may have reinforced the perception that nurses known for “scolding” should not be selected as program deliverers, given that they may not exhibit the friendliness, passion, and sensitivity that some participants expressed were vital characteristics of all facilitators.

Findings regarding the potential strengths and challenges of utilizing VHV are reinforced by other qualitative research in central Thailand. Such studies have found that although most (61%) have only a primary level of education, VHVs are able to readily address health problems from the strength of existing, trusted relationships, and that their collaboration with health professionals enhances their credibility within communities (Kowitt et al., 2015; WHO, 2007). This rapport and local level presence mirrors the potential of utilizing community health workers in other LMICS, such as for early childhood development promotion in Pakistan and to address health risks through cognitive-behavioral strategies in South Africa (Rotheram-Borus et al., 2014; Yousafzai et al., 2014). The favorable reputation of VHVs in Thailand has been cultivated since their establishment in the 1960s; during 2010, they numbered over 800,000 active volunteers and provided coverage to 12 million households (Kowitt et al., 2015; WHO, 2007). However, they are burdened by an increasingly heavy workload marked by a growing list of responsibilities, numerous trainings, and reporting requirements (Kowitt et al., 2015). In contrast, there are only an estimated 2,800 government and NGO social workers in Thailand, or one social worker per approximately 24,657 persons (Nontapattamadul, 2016). Most government social workers are under the purview of the Ministry of Social Development and Human Security, with few placed within the public health system; in Udon Thani province, there are only 10 such medical social workers (MOPH, 2019). The limited capacity of the social worker workforce, as well as the lack of professional

licensing and fluid application of the term to other social welfare and charitable roles (Nontapattamadul, 2016), is likely to explain why several interviewees expressed a lack of familiarity or contact with social workers. Despite these obstacles, social workers have a clear legal mandate in relation to child protection, social welfare promotion, support for the elderly, mental health, and domestic violence (Nontapattamadul, 2016), and could play a valuable role in child protection referrals as well as coaching parents on non-violent discipline. The functions, capacities, and social perceptions of both VHVs and social workers thus merit proper consideration as facilitators who could be paired with nurses in PLH-YC delivery.

An important logistical factor was related to the program setting. There was nearly universal agreement that delivery at the Provincial Public Hospital would be inappropriate and hinder accessibility for low-income families, although it would be convenient for urban-based facilitators. Indeed, access to parenting programs has been identified as a factor that is crucial for the successful engagement of low-income families (Axford et al., 2012); at the same time, the employment of nurses, VHVs, and social workers as facilitators would need to address their access barriers as well, in order to encourage their involvement. This is particularly critical given the limited numbers of social workers, as well as the noted workload that nurses face. The latter was cited by Thai health workers as a reason why it was unfeasible for them to telephone caregivers for follow-up visits to child development screenings (Morrison et al., 2018), which may also apply to the weekly phone call component of PLH-YC. In comparison, sub-district HPHs were cited by most participants as a convenient, fully equipped, and community-based alternative where nurses, public health officers, and VHVs were already based.

Finally, another logistics-related factor that will require contextual adaptation concerns the recruitment, attendance, and engagement of participants. Similar to the context in South Africa, interviewees often mentioned that the PLH-YC target population in Udon Thani would potentially include many grandparents. These participants were likely to reside in multi-generational households, in which the child also lives with one or both parents, as well as skip-generation households, consisting of only grandparents and grandchildren. This latter phenomenon is common in rural areas due to

parental rural to urban migration (Knodel, 2014); it is also highly prevalent across Thailand, where one in five children live without either biological parent – the highest such ratio out of 40 surveyed LMICs (UNICEF, 2012). Some participants expressed concerns that grandparents engaged in poor caregiving practices. Such opinions are supported by a cross-sectional study with parents and grandparents ($N = 320$) in Phrae province, Northern Thailand, which found that children reared by grandparents were twice as likely to have delayed development, in comparison with those raised by their parents (Nanthamongkolchai et al., 2009). Other risks to strong grandparent-grandchild relationships and positive parenting behaviors were identified by surveys and in-depth interviews with grandparents and grandchildren ($N = 598$) in Northeastern Thailand, which found that most grandparents regarded full-time childcare as a burden that was fraught with a high level of anxiety and frustration, often due to generational gaps and differing norms and expectations between themselves and their grandchildren (Kamnuansilpa & Wongthanavas, 2005). In addition, the fact that 87% of persons aged over 60 years in Thailand only have a primary level of education (Knodel et al., 2015), and that many participants in our study noted that many grandparents have significant mobility, hearing, and vision impairments, present a range of considerations to be addressed. Transportation arrangements, facilitation styles, recruitment and program materials, group activities, home visitation, and between session communication methods will all need to be attuned to these differing levels of ability, literacy, and inter-generational communication challenges.

Implications for scaling up

Findings also revealed several key opportunities and barriers to scaling up a parenting program such as PLH-YC, which may correspond well with several dimensions of the RE-AIM model (Glasgow et al., 1999). The assumption of a top-down policy implementation approach with delivery at community-based HPHs may enable intervention reach by target families, encourage adoption by local health offices and frontline practitioners, as well as bolster prospects for long-term maintenance. The creation of a ministerial level policy, accompanied by requisite budgets and performance monitoring indicators, was stressed by several respondents as necessary for program expansion and institutionalization. There

is an opportunity to build on the current policy emphasis by the MOPH to promote early childhood development in order to boost lagging child IQ scores in Northeastern provinces, including Udon Thani (Sookatup et al., 2018), as suggested by the promotion of DSPM screenings (Morrison et al., 2018), HPH-based Parent Schools, and the *Kin Kod Len Lao* (Eat, Hug, Play, Storytelling) policy (Rajanukul Institute, 2009). This top-level political prioritization of early childhood development initiatives may constitute a promising base for further policy advocacy, as well as for the integration of PLH-YC within a service package that promotes nurturing care and protection. Indeed, a recent review of early childhood development interventions across multiple sectors found that the creation of intervention packages that utilize existing delivery platforms enhances prospects for sustainability (Britto et al., 2017). However, given the concerns of several respondents that local level senior management may not recognize the value of parenting programs, despite national level emphasis, demonstrates that both top-down and bottom-up policy advocacy is necessary. This is likely to require messaging that draws from the high-quality intervention science literature on parenting, as well as community empowerment and user demand approaches, which parents, local officials, and service providers may find more compelling.

Another opportunity lies with the significant regard and trust placed by communities in Thai health workers, particularly doctors and nurses, but also including public health officers and VHVs. This reliance, combined with the nationwide reach of HPHs as frontline health care facilities (Pagaiya & Noree, 2009), opens the prospect for embedding PLH-YC within primary care units, with health workers serving as some or all of the program facilitators. Health services are often regarded as ideal starting points for the scaling up of early childhood development interventions, including parenting programs, with the United Nations signaling strong support for the health sector to use its access to pregnant women, families, and young children to foster such initiatives (Richter et al., 2017). Moreover, many examples of such health sector delivery platforms exist, with parenting programs in Australia, Canada, Hong Kong, Jamaica, New Zealand, Pakistan, Peru, the United Kingdom, and the United States utilizing health workers, including doctors, nurses, psychologists, and community health workers (Barlow et al.,

2016; Leung et al., 2006; Walker et al., 2018; Yousafzai et al., 2014). Formalized multi-sectoral linkages with nutrition, education, child protection, and social protection may be needed in order to enhance prospects for scaling up and sustainability (Britto et al., 2017). As mentioned by some respondents, it may be acceptable to involve social workers and teachers as co-facilitators, and there are avenues for lateral partnerships between HPHs and Tambon Administrative Offices that can tap into local funding sources. Involvement of teachers as facilitators, however, may first require that they successfully complete a positive teaching program and be assessed on their ability to apply such techniques in their own classrooms.

Finally, results suggest that the establishment of a model sub-district, whereby local officials, practitioners, and community-based networks across health, education, and social welfare sectors work in synergy to embrace and implement PLH-YC, may also be a promising strategy for scaling up. Such an approach may allow for the systematic integration of an intervention within a scalable unit's existing services, followed by further testing, refinement, and evaluation prior to expansion. Local institutions would need to be sufficiently strengthened to ensure that program staff have adequate levels of competency and supervision to deliver a high-quality program alongside strong community demand for such a service, and that system investments correspond with principles of universal coverage (Richter et al., 2017). It would be important to carefully monitor whether PLH-YC can be sustained in such a model, particularly given feedback by a few participants that heavy workloads and an abundance of existing unused instruments may weaken program adherence. Research on key barriers to scale-up found that diminished implementation fidelity is a common threat, whereby delivery of an intervention as originally tested in an efficacy trial cannot be replicated in real world settings. These results can be due to misjudging the readiness of an intervention to go to scale, as well as significant differences in conditions between feasibility pilot and scaled-up contexts (Yamey, 2012).

Study limitations and strengths

This study has a number of limitations. First, we used a small and purposive selection of participants, with 14 persons identified from a list of recommended officials, experts, and practitioners provided by the Udon Thani Provincial Public Health office. Thus, there was an oversampling of government stakeholders and those working in the health sector. Moreover, men were underrepresented in our study, constituting only eight out of 25 participants. We also did not consult with participants outside Udon Thani or Bangkok, with the exception of one Chiang Mai-based expert, although two participants had experience working in both the Northern and Southern regions. The inclusion of a larger and more diverse sample of participants may have resulted in the identification of additional and important themes, especially in terms of wider cultural and contextual relevance. Second, we did not directly interview parents or children, drawing instead on findings from recent qualitative research with families in Thailand. It was determined that parents would be in a better position to provide substantive feedback regarding program feasibility and cultural relevance after directly experiencing the program during subsequent piloting. Likewise, in-depth feedback on the program themes could not be obtained from most respondents, with the exception of the Parenting Experts Working Group and three practitioners who were interviewed after they participated in the PLH-YC facilitator training workshop. While the interviewers provided an overview of the program content through the sharing of a program brochure and a verbal overview of the program, such approaches cannot compensate for a lack of comprehensive exposure to the program materials.

Despite these drawbacks, this study makes a useful contribution to the existing research base on cultural and contextual adaptation of evidence-based parenting programs. The preliminary findings, based on initial explorations of the data, have informed the subsequent adaptation of the program tested in the feasibility pilot ($N = 60$) during December 2018 to April 2019. Findings from this formative evaluation will be combined with those from the pilot study to develop a more refined and relevant version prior to further testing in a randomized controlled trial ($N = 120$). Other parenting interventions being transported to LMICs may also benefit from modeling this systematic approach, given that tested

interventions often fail after scale-up when developers have not undertaken crucial formative work to ensure that they are designed to fit the delivery system (Banerjee et al., 2017). Conducting thorough formative evaluations at the outset for the purpose of guiding careful cultural and contextual adaptation is an essential part of this process. Such changes should cautiously maintain active essential ingredients while allowing modifications to better fit local needs and capacities. There remains a great need for further research in this area, particularly in the field of implementation and translation science. This includes studies that use factorial experiments to examine core components related to intervention delivery and scale-up (Lachman et al., 2019), draw upon mixed-method approaches, and carefully assess cultural and contextual readiness for feasibility piloting, intervention effectiveness, and long-term intervention scale-up and sustainability. Ultimately, these research efforts may contribute to the on-going effort to ensure that States parties fulfill their existing obligations to the CRC by supporting parents and primary caregivers in their child rearing, while also helping them meet SDG benchmarks for the prevention of violence against children.

4.5 References

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CHAPTER V. PAPER 3: Assessing the Potential for Reducing Violence Against Young Children Through an Adapted Parenting Program Embedded Within the Public Health System: Findings from a Pre-Post Trial in Thailand

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Abstract

Background: This pre-post trial of the Parenting for Lifelong Health for Young Children program in Thailand aimed to: 1) explore the feasibility of study evaluation approaches; 2) assess the feasibility of delivering an adapted program; 3) report indicative effects on child maltreatment and related outcomes; and 4) examine intervention content associated with perceived key mechanisms of change by parents and facilitators.

Methods: Sixty parents of children aged 2-9 years were recruited for an 8-week parenting program embedded within the local health system. Mixed-methods approaches included quantitative parent-report and observational data from standardized instruments, and qualitative data from individual and group interviews with participating parents and program facilitators. Analyses involved Wilcoxon signed-rank tests, paired t-tests, Friedman's ANOVA, and thematic analysis.

Results: Participants reported that most (65%) were grandparents or great grandparents. Study (98.3%) and response rates were high, and enrolled parents attended an average of 92.5% of sessions. Primary outcomes showed caregiver reported pre-post reductions in overall child physical and emotional abuse ($d=-0.58$, $p<0.001$), as well as physical abuse ($d=-0.58$, $p<0.001$) and emotional abuse ($d=-0.40$, $p<0.001$) subscales. The HOME Inventory, which combines caregiver report and observations, showed reductions in abusive and harsh parenting ($d=-0.52$, $p<0.001$). Secondary outcomes demonstrated decreases in caregiver reported child neglect; dysfunctional parenting; poor child monitoring and supervision; parental sense of inefficacy; child behavior problems; parent daily report on child problem behavior; parent overall depression, anxiety, and stress; and attitudes supporting physical punishment and harsh discipline. There were also increases in overall positive parenting, daily positive parenting behavior, as well as HOME Inventory assessments on overall parent-child relationships. Thematic analyses from interviews and the focus group identified six key program themes associated with strengthened parent-child relationships, reduced child behavior problems, improved attitudes and strategies toward discipline, and improved management of parental stress.

Conclusions: The study demonstrated the feasibility of program delivery and study evaluation approaches, although reliability of many outcome measurements is uncertain. Findings show preliminary effectiveness in reducing child maltreatment, improvements on 22 out of 24 secondary outcomes, and perceived mechanisms of change that support quantitative findings. Prospects are promising for program scalability, pending RCT results.

Trial registration: 11 January 2019, ClinicalTrials.gov, ID# NCT03539341

Keywords: Child abuse, Child maltreatment, Parenting, Positive parenting, Violence prevention, Abuse prevention, Thailand

5.1 Background

Violence against children (VAC), comprising all types of physical or mental violence, injury or abuse, neglect, maltreatment or exploitation, constitutes serious violations of child rights to protection under several international human rights treaties (United Nations General Assembly, 1979, 1984, 1989). Despite this, VAC is pervasive across countries, cultures, and communities. Estimates of the global prevalence of past year violence, including ‘moderate’ forms such as spanking and hitting, is at least 50% – or exceeding 1 billion of the world’s children (Hillis et al., 2016). Estimates of such rates tend to be higher in low- and middle-income countries (LMICs) than in high-income countries (HICs) (Stoltenborgh et al., 2013), with minimum rates of past-year violence against children aged 2-14 years highest in Asia at 68% (Hillis et al., 2016). The most common perpetrators of VAC are household members (Devries et al., 2017), with this pervasive form of domestic violence similarly reflected in Thailand. Based on a national household survey, adults reported that family members subjected 75% of children aged 1-14 years to at least one form of physical or emotional punishment in the past month (National Statistical Office [NSO] & UNICEF, 2016). The consequences of VAC are both immediate and long lasting, including juvenile delinquency, criminal activity, low educational performance, perpetration and victimization of intimate partner violence, and adverse mental health in childhood and adulthood (Fry et al., 2012; Fulu et al., 2017; Gershoff & Grogan-Kaylor, 2016). In response, violence prevention has been included in two UN Sustainable Development Goals (SDGs 5 and 16), as well as incorporated into global and regional strategies such as INSPIRE (WHO, 2016) and the Association of Southeast Asian Nations Regional Plan of Action on Elimination of VAC (ASEAN Secretariat, 2017).

Although harsh parenting and corporal punishment are often deemed normative in Asian LMICs (Lansford & Deater-Deckard, 2012), surveys reveal that only a minority of adults in many LMICs believe such practices are necessary for childrearing (UNICEF, 2014) – suggesting they may be open to alternative forms of discipline. A well-established evidence base shows that social learning theory-based parenting programs can effectively reduce harsh parenting and prevent child maltreatment

(Chen & Chan, 2016; Furlong et al., 2012; Gardner et al., 2020; Knerr et al., 2013; MacMillan et al., 2009), with child maltreatment defined as the occurrence of VAC within the context of a relationship of responsibility, trust, or power (World Health Organization [WHO], 2014). Such programs augment parenting skills by providing practical instruction on positive-parent child interactions, non-violent discipline techniques, socio-emotional coaching, problem solving, positive encouragement, and responsive supervision (Dishion & Patterson, 2006; Melendez-Torres et al., 2019), and may offer the non-violent methods that Asian parents and primary caregivers are interested in obtaining (Ho et al., 2012; Matsumoto et al., 2010). Interventions targeting difficult child behaviors and parental aggression are often similar to those which aim to prevent child maltreatment, and function by helping to disrupt coercive cycles of parent-child interactions (Dishion & Patterson, 2006; Knerr et al., 2013). Group-based interventions may also provide the additional benefit of fostering parental support networks, reducing social isolation and stigma associated with help-seeking, and encouraging active parental participation (Hurlburt et al., 2013).

International development agencies tend to promote the implementation of evidence-based programs in LMICs using a public health approach, which prioritizes the prevention of VAC and encourages dissemination at scale (Wessels et al., 2013). However, such efforts face a number of challenges. First, many evidence-based and brand name parenting programs from HICs often charge expensive fees for licensing, materials, training, and support, which bar many LMICs from adopting and sustaining such programs (Mikton, 2012). Second, while recent reviews have shown that both transported and homegrown parenting programs can effectively reduce child maltreatment and harsh parenting in LMICs (Knerr et al., 2013; Leijten et al., 2016; McCoy, Melendez-Torres, et al., 2020), some degree of adaptation to imported programs may be necessary while adhering to core evidence-based principles and practices (Kumpfer et al., 2002). Adapted interventions require empirical testing in new contexts, while mechanisms of change need to be examined in order to understand how parents experience the intervention and how this can inform efforts to maximize intervention effectiveness

(Kazdin & Nock, 2003). Finally, many LMICs must confront gaps in institutional ‘readiness,’ including whether there are sufficient human and technical resources for program implementation at scale, adequate institutional linkages and infrastructure, and sufficient funding and political will to assure sustainability (Mikton et al., 2013).

In response to these challenges, the Universities of Oxford, Cape Town, Stellenbosch, and Bangor, together with the WHO and UNICEF, have developed and tested Parenting for Lifelong Health for Young Children (PLH-YC), one of a suite of evidence-based and low-cost parenting programs that is freely available to LMICs (Ward et al., 2014). PLH-YC is a group-based program that targets parents of children aged 2-9 years. It has shown reductions in child maltreatment and child behavior problems in randomized controlled trials (RCTs) in South Africa and the Philippines, along with improvements in positive parenting in the former and sustained child maltreatment effects at one-year follow-up in the latter (Lachman et al., 2020; Ward et al., 2019). Initially developed for low-income families in Cape Town, it is conducive to cultural and contextual adaptation in different LMIC settings (Alampay et al., 2018; Lachman et al., 2016).

In Thailand, the University of Oxford, the Mahidol-Oxford Tropical Medicine Research Unit (MORU), UNICEF, and the Thai Ministry of Public Health (MOPH) developed a partnership to adapt and test PLH-YC through a phased process in accordance with the UK Medical Research Council (MRC) guidelines on developing and evaluating complex interventions (Craig et al., 2008). Such an iterative approach allows for the systematic adaptation of an intervention, designed to examine uncertainties, explore user and deliverer acceptability, and gauge outcomes through piloting prior to more stringent testing. Feasibility pilots may improve the quality of subsequent RCTs by focusing on the processes of the main study, such as recruitment, treatment, and assessments, while also exploring the suitability of outcome measures and the willing involvement of participants and deliverers (Arain et al., 2010). During phase one, a formative evaluation with national and local level government officials, professionals, and academics informed study recruitment and adaptations to PLH-YC, taking into

account potential barriers and opportunities for scaling up (McCoy, Lachman, Sim, et al., 2020). This study reiterated policy framework analyses and previous qualitative research with Thai parents and practitioners on the potential of embedding the program within routine public health services, building on the Thai government's child development priorities and utilizing professional health workers as community-based facilitators (McCoy & Supaporn, 2016a, 2016b). During the second phase and current study, we conducted a single group pre-post feasibility pilot of the adapted PLH-YC program with low-income families in rural Thailand ($N = 60$) through the local public health system. Results from this pilot aim to inform further adaptation and testing in a pragmatic RCT using real-world conditions ($N = 120$) during phase three; if effective, wide-scale dissemination will occur during phase four.

This study represents one of few evaluations to test the feasibility of an evidence-based parenting program embedded within routine public health service delivery in a LMIC. It is also the first known trial of such a program in Northeastern Thailand, a region that is home to nearly half (47%) of the country's 'skipped generation' households – in which grandparents raise grandchildren in the absence of a mother and father (United Nations Population Fund [UNFPA] & Office of the National Economic and Social Development Board [NESDB], 2015). For this purpose, we explored the suitability of study evaluation approaches, outcome measurement reliability, and adverse events monitoring. We also examined programme feasibility, including enrolment, attendance, completion, and dropout, as well as reported the indicative effects from the pilot according to a hypothesized theory of change (see Figure 16). Finally, we identified intervention content perceived by parents and facilitators as enabling mechanisms of change, for the purpose of examining concordance with quantitative results. The key research questions were: 1) What is the feasibility of conducting a rigorous evaluation of a parenting program within the public health system?; 2) What is the feasibility of delivering an adapted version of PLH-YC to low-income parents with children aged 2-9 years, who are likely to be at risk for abusive and harsh parenting?; 3) What are the indicative effects of the program on reducing violence against children (primary outcomes) and associated risk factors (secondary outcomes)?; and 4) What are the perceptions of parents and facilitators of program content associated with key mechanisms of change?

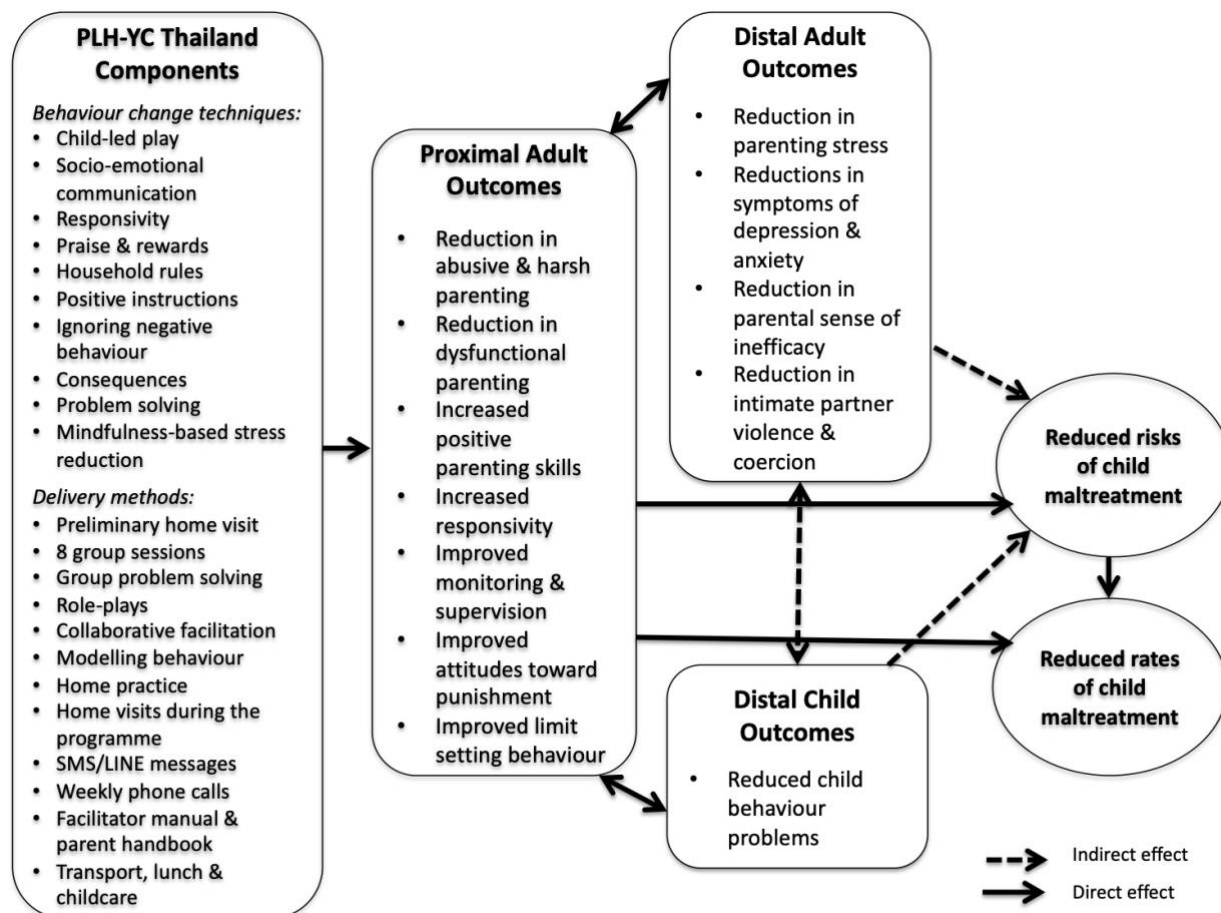


Figure 16. Theory of change model for PLH-YC Thailand

5.2 Methods

This mixed methods feasibility study was pre-registered with ClinicalTrials.gov (NCT03539341), with findings reported in accordance with the CONSORT 2010 extension to randomized pilot and feasibility trials (Eldridge et al., 2016), as well as best practice guidelines on mixed methods research in the health sciences (NIH OBSS, 2018).

We used a mixed-methods intervention design that embeds a qualitative method within a quantitative pre-post trial. While quantitative methods are prioritized in this design, qualitative data provides an enriched understanding of the experimental trial outcomes, and helps to explain why the intervention may or may not have worked (Creswell & Plano Clark, 2017). For this purpose, we collected qualitative and quantitative data in parallel, with analysis for integration beginning after data

collection had been completed (Fetters et al., 2013). Of the four approaches discussed in the literature for data integration – merging, connecting, building, and embedding data – this study utilized merging (NIH OBSS, 2018). This involved the integration of qualitative data with quantitative data by reporting the results together and using each type to support or refute respective findings (Creswell & Plano Clark, 2017). Strategies for resolving discordance between qualitative and quantitative findings included re-analyzing data, identifying possible explanations from theory, and challenging construct validity (Moffatt et al., 2006).

We adopted a pre-post design for quantitative data collection, using standardized questionnaires for parent report measures, as well as an instrument combining interview and observational assessments by trained local researchers. Pre-test data was collected in December 2018, one month prior to intervention delivery, with post-test quantitative and qualitative data collected approximately one month after program completion during late March to April 2019.

Setting

The study was conducted in two districts of Udon Thani province in Northeast Thailand, the poorest and largest geographic region of the country (UN, 2016). Udon Thani has a population of almost one million people (Community Development Department, 2017), with a high level of income inequality (Gini coefficient, 0.525) and a low rate of formal education (7.6 mean years of schooling) (UNDP, 2010). The majority of the population speaks the Isan language at home, although the Central Thai language is widely used in schools and government settings (Premrarat, 2007).

Participants

This study tested the feasibility of a recruitment strategy devised from formative evaluation findings and reflecting a pragmatic approach to service delivery. Such an approach was necessary given

that the program was unlikely to be delivered on a universal basis due to resource constraints. Parent and primary caregiver participants ($N = 60$) were those with primary responsibility for the care of children aged 2-9 years. Given the high rates of children in Thailand who live without either biological parent (NSO & UNICEF, 2016), for the purposes of this study, *parents* refers to biological parents, relatives, or non-relative caregivers, with no restrictions placed on the biological or legal nature of the relationship. Village Health Volunteers and teachers identified parents from low-income households, described as having a total annual income of approximately 100,000 Thai Baht (about 3,310 USD) or less, who they thought would benefit from a program that helps them to manage difficult child behaviors (e.g., frequent tantrums, refusal to follow instructions and rules, and aggressive and disruptive behaviors). Parents were subsequently screened for supporting or engaging in violent discipline (see below). These two strategies were undertaken in order to target a sample that was likely to experience difficult parent-child interactions and be at risk for abusive or harsh forms of discipline. A trained research coordinator subsequently contacted referred parents by phone or home visit and invited them to participate in the study. The intervention was presented as a family support program in order to avoid the potential stigma of participating in a program for those with ‘bad’ parenting practices (Hutchings et al., 2007). Eligibility criteria for parents included being aged 18 years or older and living in the same household as the target child for a minimum of four nights per week, so that there was sufficient time to apply learned parenting skills at home, as well as confirming that they were available and willing to attend group sessions on Sundays over the 8-week period. Adults were excluded if they presented severe mental health problems, or if target children exhibited severe physical or mental disabilities. No adults or children were excluded on this basis.

Prior to final inclusion in the study, we also tested the following screening procedure in participants’ homes to identify parents supportive of or currently using abusive and harsh punishment. Researchers administered a 7-item screening instrument based on the Multiple Indicator Cluster Survey (MICS) child discipline module (NSO & UNICEF, 2016). Participants passed the screening if they answered “yes” to one or more of six items regarding past month use of violent discipline, or

responded “agree” or “strongly agree” regarding whether physical punishment was necessary for child rearing. Parents with multiple children aged 2-9 years were asked to select a target child with the most difficult behavior.

Individual interviews with 11 parents were also conducted. The sole male parent (parent #1) and a parent with moderate cognitive difficulties (parent #21) were purposively selected in order to include their unique perspectives, while high attending ($n = 3$) and low attending ($n = 6$) participants were randomly selected from those who attended either more than six sessions or fewer than seven sessions, respectively. One parent who did not attend any sessions was unavailable for interview despite repeated attempts.

Finally, a focus group discussion (FGD) was conducted with all eight facilitators, including nurses, public health officers, a social worker, and a Village Health Volunteer employed within the government public health system. Seven facilitators had university degrees, while one had a vocational degree. Prior to program delivery, facilitators had to successfully complete a five-day training.

Power calculations

As a feasibility pilot that aimed to test the adapted parenting program content and procedures in preparation for an RCT, this study was not designed to reliably gauge significant intervention effects. Instead, the sample size was limited to 60 participants, which allowed for the formation of four parenting groups, each with 15 members – a group size that will also be reflected in the main study.

Sensitivity power analyses were conducted given the lack of existing studies in Thailand. In order to calculate the minimal detectable Cohen’s d effect size for a pilot with 60 participants, a G*Power 3 calculator was used (Erdfelder et al., 1996). Input parameters included the use of two-tailed paired t-tests based on the study’s primary outcomes: self-report using the ICAST-Trial scale and scores on an observational assessment of positive parenting based on the HOME Inventory acceptance subscale. Assuming a Type I error of $p < 0.05$, 80% power, and with no adjustments for attrition due to

the intention-to-treat design, we calculated that this sample size ($N = 60$) was sufficiently powered to detect a small significant intervention effect of $d = 0.37$ (Cohen, 1988). While a larger sample size would have provided greater sensitivity in detecting even smaller treatment effects, funding constraints prevented an increase in the number of participants.

Ethical procedures

The study protocol was approved by the institutional review board at the University of Oxford (OxTREC reference 8-18) and the Institute for the Development of Human Research Protections in Bangkok (HCR17011). Trained research assistants administered verbal and written informed consent procedures in order to account for varying levels of literacy. Minor monetary compensation was provided at each of seven data collection points, ranging from 50 to 150 Thai Baht (1.65 to 4.95 USD). Snacks, paper, and crayons were also provided to parents and children during assessments. Lunch, coffee and tea breaks, certificates, 150 Thai Baht travel compensation per session, and transport for some participants were provided as part of program delivery. Parents who participated in individual interviews received minor compensation in the form of 100 Thai Baht (about 3.30 USD). FGD participants received 200 Thai Baht (approximately 6.60 USD) in compensation, along with 150 Thai Baht (approximately 4.95 USD) travel cost reimbursement. Parents were notified during the informed consent procedure that researchers or facilitators would immediately report cases of significant harm to children if such information was disclosed or observed. Confidentiality was maintained, except when such child protection concerns were identified and reported, and when participants requested referrals to local social services. A total of 14 child protection, child mental health, and adult welfare cases were referred, all of whom continued to participate in the study.

Adapted intervention

PLH-YC is a group-based non-didactic, active learning-based parenting program, with content based on social learning principles and evidence-based principles and components from high-income

countries (Lachman et al., 2016). The program is derived from the two-stage Hanf-model for parent management training, which focuses on strengthening positive parent-child relationships prior to engaging in behavior management and effective discipline strategies (Kaehler et al., 2016). Core components include child-led play, child-directed speech, socio-emotional communication, praising and rewarding, instruction giving, household rules and routines, using ignore, and consequences for non-compliance (see Figure 16; Lachman et al., 2016). The program is hypothesized (Figure 16) to decrease risks and rates of child maltreatment by directly reducing abusive and dysfunctional parenting, as well as improving positive parenting skills, responsivity, monitoring and supervision, attitudes towards violent punishment, and limit setting behavior. These improved adult outcomes would then diminish parenting stress, depression, and anxiety; parental sense of inefficacy; and intimate partner violence, while also reducing child behavior problems. English versions of the adapted PLH-YC facilitator manual and parent handbook for Thailand are freely available online at: http://www.who.int/violence_injury_prevention/violence/child/PLH-manuals/en/index1.html.

The original 12-session version was reduced to eight sessions following the formative evaluation study in Thailand in order to better meet resource constraints frequently encountered in LMICs (see Table 8) (McCoy, Lachman, Sim, et al., 2020). In order to remain relevant to the local culture and existing public health system, cultural and contextual adaptations were made by removing time-out content and modifying language delivery, illustrated stories, scheduling, logistics, selection of facilitators, and scale-up strategies. In the adapted version, each session includes the following activities: (a) brief mindfulness exercise for stress management (i.e., “taking a pause”), (b) sharing of emotions to “check-in,” (c) physical exercise, (d) discussion on home practice activities from the previous session, (e) core lesson and discussions based on illustrated stories, (f) practicing new parenting skills through role-plays, (g) assignment of home practice activities based on the newly learned skills, (h) a closing mindfulness activity, and (i) sharing of emotions to “check-out.”

Table 8. Overview of Parenting for Lifelong Health – Young Children adapted session content for Thailand

Session	Original 12-session version	Session	Adapted 8-session version
1	Program introduction and spending one-on-one time with your child	1	Program introduction and spending one-on-one time with your child (inclusion of some content on child-directed speech)
2	Child-directed speech during one-on-one time		
3	Talking about feelings	2	Talking about feelings
4	Praising and rewarding	3	Praising and rewarding
5	Instruction-giving	4	Instruction-giving
6	Household rules and daily routines	5	Household rules and daily routines
7	Redirecting negative behaviors	6	Ignoring negative attention seeking and demanding behaviors (inclusion of some content on ignoring)
8	Ignoring negative attention seeking and demanding behaviors		
9	Using consequences to support compliance	7	Using consequences to support compliance
10	Time-out for aggressive and destructive behaviors	8	Problem solving, talking about difficult issues, and reflecting and moving on, followed by community celebration (exclusion of content on time-out)
11	Problem solving and talking about difficult issues		
12	Reflecting and moving on, followed by community celebration		

Delivery

This study also tested the feasibility of delivering the intervention by public health workers. During January to early March 2019, the adapted program was delivered in a mixture of Isan and Thai languages by paired facilitators to four parent groups. Each group consisted of 15 parents who met over eight sessions, with each session lasting 2-3.5 hours. The facilitators conducted 1-hour individual consultations at participants' homes prior to the first session in order to introduce PLH-YC and establish tailored parenting goals. Home visits were also conducted during the course of the program to those parents who missed a session or needed additional support. Participants were provided with parent handbooks, which served as a resource for home practice, and were paired with a partner to foster

peer support. Finally, facilitators made personalized weekly phone calls to each participant, and sent text message “boosters” to encourage skills practice at home.

Measures

Study feasibility outcomes

In order to assess the suitability of study evaluation approaches, we examined: a) study recruitment and retention rates; b) outcome measure reliability; c) response rates of self-report outcomes and HOME Inventory interview/observational assessments; and d) adverse events. *Recruitment rates* were determined at each point based on the number of potential participants who were contacted, met the inclusion criteria, passed the screening, and completed pre-test assessments following informed consent procedures. *Retention rates* were calculated based on the percentage of participants who completed pre-test assessments and then dropped out at any stage during the study prior to completing post-test assessments. In addition, we assessed the reliability and response rates of outcome measures given that most had been validated in the United States and not in Thailand, with the exception of the DASS-21 (Oei et al., 2013). Finally, in order to monitor adverse events, we maintained a log of child protection and adult welfare referrals, as well as utilized two-tailed tests of intervention effects to check for any signs of effects in the direction of harm.

Program feasibility aspects

The *enrollment rate* was based on the percentage of study participants who attended at least one group session. The *attendance rate* was based on the number of enrollees who attended group sessions using facilitator-maintained records, while *dropout* was defined as the percentage of enrolled participants who missed three consecutive sessions and were not available for home visits. *Completion rates* were based on the percentage of enrolled participants who participated in at least 75% of the program. Finally, *fidelity*, or the extent to which the curriculum was delivered as planned (Berkel et al.,

2011), was assessed through weekly self-report fidelity checklists on session content completion. Fidelity scores were based on the ratio of activities implemented to the number of manualized activities, with a standard of 80% regarded as “high treatment fidelity” (Borrelli et al., 2005).

Demographic and socioeconomic measures

Household and family characteristics were measured using general questions as well as items from the MICS Round 5 (NSO & UNICEF, 2016) (e.g., parent/child age, gender, and education; parent marital and relationship to target child; 24 items total). Socioeconomic factors using items from MICS Round 5 and the 2015 National Statistical Office Household Socioeconomic Survey (NSO, 2016) assessed relative poverty and living standards (e.g., income and benefits, household structure and assets, employment, food consumption, health care coverage; 16 items total). An adapted version of the Medical Outcomes Study Short Form-12 Health Survey (3 items) (Ware et al., 1996) was utilized to assess parent physical health. Parent and child disability was measured using 2 items from the Washington Group (Madans et al., 2011). Further, parental history of experiencing childhood abuse was assessed through an adapted version of the International Society for the Prevention for Child Abuse and Neglect (ISPCAN) Child Abuse Screening Tools Retrospective version (ICAST-R, 4 items) (Dunne et al., 2009). Past month food insecurity was measured using 5 items from the Hunger Scale Questionnaire, which were summed to create an overall score (Labadarios et al., 2005).

Primary outcome measures

Child maltreatment (physical and emotional abuse, parent-report) was measured using 25 items from an adapted and expanded version of the ISPCAN Trial caregiver version (ICAST-T) (Meinck et al., 2018). ICAST-T is an adaptation of the multi-national and consensus-based survey instrument ICAST-Parent version (ICAST-P), which has been successfully used in a study of PLH-YC in the Philippines (Lachman et al., 2020). The adapted ICAST-T measures incidence of child physical abuse (15 items) and emotional abuse (10 items) over the past month using a frequency score on a scale of 0-7, or 8 or more

times (e.g., “In the past month, how often did you shake your child?”). Frequency of overall abuse was measured by summing all subscales, as well as by reporting individual subscales for physical and emotional abuse.

Child maltreatment was also measured through the Home Observation for Measurement of the Environment (HOME) Inventory Abusive and Harsh Parenting sub-scale (6 items), which adapts items from the HOME acceptance sub-scale (Caldwell & Bradley, 2003). The sub-scale utilizes dichotomous scoring, with two items assessed via interview regarding whether the parent used physical punishment or yelled at the child during the past week, and four items assessed via observation regarding whether the parent scolded or yelled; used physical restraint; hit, slapped, spanked, or kicked; and pushed, pulled, or pinched the child during the visit. Items were summed to obtain a total score.

Secondary outcome measures

Child neglect was assessed using the ICAST-T (6 items), measuring medical, physical, and educational neglect. Items were summed to create a total score with higher scores indicating more neglect.

Positive parenting was assessed using the Parenting Young Children Scale (PARYC), in which parents reported on the frequency of positive parenting, setting limits, and proactive parenting behaviors over the past month (7 items each; 21 items total score) (McEachern et al., 2012). Items were summed for total scores and subscales with higher scores indicating more positive parenting.

Dysfunctional parenting was measured using the over-reactivity sub-scale of the Parenting Scale (PS; 10 items) (Arnold et al., 1993). Scoring was computed by averaging responses with higher scores indicating more dysfunctional parenting.

Parental depression, anxiety, and stress were assessed using three sub-scales of the Depression, Anxiety, and Stress Scale Short Form with higher scores indicating more mental health problems (DASS-21; 7 items each; 21 items total score) (Lovibond & Lovibond, 1995).

Poor child monitoring and supervision were measured using an adapted version of the Alabama Parenting Questionnaire (APQ) poor monitoring/supervision subscale (11 items) (Shelton et al., 1996), with higher scores indicating worse supervision.

Child behavior problems were assessed using the Eyberg Child Behavior Inventory (ECBI; 36 items) (Eyberg & Pincus, 1999). The ECBI measures how often a specific child behavior occurred in the past month, and whether the parent regarded it as a problem. Scores were summed to create total intensity and problem subscale scores, with higher scores indicating higher levels of child behavior problems.

Parent-child relationships were assessed through parent self-reports and observation of parent-child interactions, using an adaptation of the HOME Inventory (Caldwell & Bradley, 2003). Items were summed to obtain a total score (27 items), as well as for parental responsiveness (16 items) and encouragement of child maturity (6 items) sub-scales, with higher scores indicating more positive parent-child relationships.

Parent sense of inefficacy was assessed using the ICAST-T inefficacy subscale (2 items). The items were summed to create a total score with higher scores indicating a greater sense of inefficacy.

Attitudes supporting physical punishment were measured using the same item from the MICS 5 Child Discipline module administered during screening, with higher scores indicating more support of physical punishment (UNICEF, 2005).

Attitudes toward harsh discipline were measured using the ICAST-T attitudes subscale (4 items). Non-violent discipline items were reverse scored and items were then summed, with higher scores indicating more support for harsh discipline.

Intimate partner violence (IPV) and intimate partner coercion were assessed using an adapted version of the Revised Conflict Tactics Scale Short Form (CTS2S, 8 items) (Straus & Douglas, 2004) and the WHO questionnaire on women's health and life events (10 items) (Garcia-Moreno et al., 2005). The CTS2S measures IPV experiences (6 items) as well as negotiation (2 items) over the past month. The

WHO assesses past month experiences of intimate partner coercion. Items on each instrument were summed to obtain total scores for IPV, coercion, and negotiation.

Parent daily report on child problem behavior and positive parenting was assessed using an adapted version of the Parent Daily Report checklist (PDR; 43 items) (Patterson et al., 1982). Parents reported by phone on whether a child problem behavior (e.g., lying, hitting; 34 items; higher scores indicating more problem behaviors) or a parenting behavior and efficacy (e.g., yell shout, praise; 9 items; higher scores indicating more positive parenting) occurred in the previous 24 hours. Feasibility of conducting this assessment was examined given its administration on a monthly basis, with time points two and three utilizing interviews by phone.

Quantitative data collection and management

Questionnaires were translated into Thai by ST, a bilingual clinical psychologist with a background in parenting and child maltreatment. These were then back translated into English by a professional, independent translator. The lead author, ST, TP, and a second bilingual psychologist then formed a panel that identified and resolved translation discrepancies. Questionnaires were then pre-tested with low-income parents of 2-9 year old children in Udon Thani by research assistants.

Eleven Thai- and Isan-speaking research assistants followed data collection protocols, including scripts, when conducting face-to-face interviews and observational assessments in participants' homes. All had some experience with data collection, and completed a 6-day training led by study investigators. Computer-Assisted Self-Interviewing (CASI) methods with e-tablet technology were used to administer the questionnaires. To accommodate varying levels of literacy, research assistants read aloud each questionnaire item and associated choice options. In addition, audio-CASI was used to administer sensitive items regarding child maltreatment and IPV. Past studies on sensitive issues have reported high acceptability of CASI in rural areas of Thailand (van Griensven et al., 2001), as well as in other

LMICs. Participants had the option to either read or use the audio function with headphones while responding to sensitive questions.

Screening at pre-test took place during December 2018 in participants' homes, with each assessment lasting approximately 10 minutes. In-home pre-test self-report questionnaires and observational assessments had durations of approximately 90 and 30 minutes, respectively. PDR assessments were conducted four times: at pre-test, by phone during the weeks following program session 2 and session 6, and at post-test.

Electronic data was accessible via password known only by two investigators, and were also backed up on an external hard drive. Non-electronic data were stored in a locked filing cabinet at the MORU office in Udon Thani.

Quantitative data analysis

Response rates for each instrument were calculated at each time point. Data analyses of outcome measure reliability and effects were conducted using SPSS 25.0. Cronbach's alpha was used to assess internal consistency and reliability of each scale and subscale (Cronbach, 1951). The distribution of each outcome variable was examined using Shapiro-Wilk tests. Wilcoxon signed-rank tests were conducted for non-normally distributed outcomes and paired t-tests for normally distributed data to compare pre-test and post-test scores (Field, 2013). Friedman's ANOVA was conducted for the outcome on parent daily reports on child behavior and parenting, given its non-normal distribution and the administration of PDR assessments at four time points (Field, 2013). Cohen's *d* effect sizes were calculated for all outcomes using means and standard deviations (small effects $d = 0.20-0.49$; medium effects $d = 0.50-0.79$; large effects $d = 0.80$ or higher) (Cohen, 1988, 1992). Analyses utilized an intention-to-treat approach, with all participants included regardless of program attendance or participation in all assessment points (Hollis & Campbell, 1999). Multiple imputation procedures were conducted in Stata 15.1 at the item level in order to account for missing data, with Little's Missing

Completely at Random (MCAR) test used with an expectation maximization algorithm in order to assess the randomness of missing data (Li, 2013). The Multiple Imputation by Chained Equations (MICE) method was used with a fully conditional specification and Markov Chain Monte Carlo (MCMC) algorithm with 10 maximum iterations. With the assumption that the tolerance for a preventable fall in power will be low, a total of 5-10 multiple imputed datasets were used; 5 datasets were used for dichotomous outcome variables, while 10 were imputed for outcomes utilizing Likert scales and count variables (Graham et al., 2007). In order to support the conclusions based on imputed results, a complete case analysis was also conducted that included only those participants with complete data (Altman, 2009).

Qualitative data collection and management

The first author, an English and Thai speaking female with prior qualitative research experience, and a trained local researcher fluent in Thai and Isan languages, collected data on participant and facilitator experiences through individual interviews with 11 parents and a FGD with the eight facilitators. Interviews were conducted in participants' homes and lasted 1-2 hours, with parent handbooks used as visual aids. Interviews were conducted in Thai, with Isan responses translated into Thai and English by the local researcher. The FGD with facilitators was conducted at a hotel meeting room three weeks post-intervention and lasted approximately three hours. Discussion was led by the first author, with occasional translation by ST into English. Interviews and the FGD were audio recorded, transcribed into Thai, and then translated into English, with written notes as backup. All recordings and de-identified transcripts were stored on a password-protected computer. All non-electronic data was stored in a locked filing cabinet at MORU in Udon Thani.

Individual interviews and the FGD followed a standardized open-ended format with a structured guide approach, allowing for flexibility to probe for unanticipated emergent themes and for in-depth exploration of particular topics (Patton, 2015). Broad questions were posed which examined the following themes: 1) perceived impact of the program on parent-child and family relationships; 2)

engagement with and perceived relevance of parenting skills; 3) acceptability of delivery methods; and 4) acceptability of program scheduling, logistics, and materials. Detailed findings regarding reach, engagement, fidelity, quality, acceptability, and satisfaction will be reported as part of the process evaluation (McCoy, Lachman, Tapanya, et al., 2020).

Qualitative data analysis

A thematic approach within an experiential framework was undertaken in order to analyze all qualitative data (Braun & Clarke, 2006). Based on transcripts of two individual interviews and the FGD, an initial coding framework was developed by the first author as a lead coder and JK as an independent coder using the software NVivo 12 Pro. On an iterative basis, the lead author merged the sets of coded transcripts and ran coding comparison queries to identify those codes with low inter-rater reliability (Cohen's kappa coefficient of < 0.7) (Cohen, 1960; Landis, 1977). The coders then agreed on new codes not anticipated previously and clarified coding definitions, resulting in a revised frame. The final coding frame consisted of three parent codes and 13 child codes. The lead coder then coded the remaining transcripts, consulting with the co-coder on frame revisions and code applications when necessary. The lead coder then re-examined all coded data for patterned responses, broader meanings, and divergent viewpoints, selecting data extracts that represented key themes as well as areas of disagreement.

Trustworthiness. We employed several strategies to strengthen the quality and rigor of our qualitative research (Fassinger, 2005). First, we collected data from both parents and facilitators. Second, nine out of 11 parents were randomly selected for interview in order to reduce selection bias. Third, to limit researcher bias, two persons independently coded three transcripts during the process of developing the coding frame. Finally, we maintained an audit trail to document methodological and analytical decisions, including records of discussions on coding relevance and application, and reflexive notes written by the first author (Morrow, 2005).

Merging of quantitative and qualitative data

We utilized the attendance registries to guide selection of parents for individual interviews, allowing for linkages at the study design stage. After conducting separate analyses of the quantitative and qualitative data in parallel, we matched the qualitative coding with the quantitative outcome data in order to maximize the strengths and minimize the weaknesses of each data type (Fetters et al., 2013). This allowed for a more thorough examination of the indicative effects of the intervention.

5.3 Results

Socio-demographic characteristics and risk factors for child abuse

Family characteristics and risk factors for child abuse at pre-test are summarized in Table 9. Adult respondents were predominantly female ($n = 59$; 98.3%), married ($n = 49$; 81.7%), and grandparents or great grandparents of children targeted in the program ($n = 39$; 65.0%), while others were biological parents ($n = 20$; 33.3%), and one distant relative (1.7%). The mean age was 47.2 years ($SD = 15.4$). Most had not completed secondary school ($n = 51$; 85.0%) and reported being able to read easily ($n = 36$; 60.0%). Slightly fewer target children were female ($n = 28$; 46.7%), with a mean age of 4.9 years ($SD = 2.0$).

Table 9. Socio-demographic characteristics & child abuse risk factors among parents at pre-test

Sociodemographic characteristics and risk factors	Participants ($N = 60$)
Parent/caregiver variables	
Age, M, range (SD)	47.2, 18 – 68, (15.4)
Female gender, n (%)	59 (98.3)
Unemployed, n (%)	25 (41.7)
Secondary school not completed, n (%)	51 (85.0)
Married, n (%)	49 (81.7)
Relationship to target child	
Grandparent, n (%)	36 (60.0)
Biological parent, n (%)	20 (33.3)
Great grandparent, n (%)	3 (5.0)
Other relative, n (%)	1 (1.7)
Mainly speaks Isan language at home, n (%)	47 (78.3)

Can read easily, <i>n</i> (%)	36 (60.0)
Poor health in the past month, <i>n</i> (%)	11 (18.3)
Childhood experience of maltreatment, <i>n</i> (%)	44 (73.3)
Experiencing intimate partner violence, <i>n</i> (%)	24 (40.0)
Child variables	
Age, M, range (SD)	4.9, 2 – 9, (2.0)
Female gender, <i>n</i> (%)	28 (46.7)
Household variables	
Number of adults in the household, M, range (SD)	3.4, 1 – 5 (1.1)
Number of children in the household, M, range (SD)	1.9, 1 – 5, (0.8)
Neither biological parent living in the household, <i>n</i> (%)	16 (26.7)
Parent ran out of money to buy food ≥ 5 days in past 30 days, <i>n</i> (%)	7 (11.7)
Total monthly household income	
$\leq 5,000$ Baht (160 USD), <i>n</i> (%)	8 (13.3)
5,001 – 15,000 Baht (160 – 481 USD), <i>n</i> (%)	37 (61.7)
15,001 – 30,000 Baht (481 – 962 USD), <i>n</i> (%)	14 (23.3)
30,001 – 50,000 Baht (962 – 1,603 USD), <i>n</i> (%)	1 (1.7)
House type	
Cement, brick or stone, <i>n</i> (%)	47 (78.3)
Wood, <i>n</i> (%)	8 (13.3)
Bamboo, plywood, or zinc, <i>n</i> (%)	5 (8.4)

Participants also tended to report low socio-economic status and several risk factors for perpetration of child abuse. Most reported a total monthly household income of 15,000 THB or less (≤ 495 USD; $n = 45$; 75%), with 8.4% living in shack housing ($n = 5$). Nearly one fifth reported experiencing poor health in the past month ($n = 11$; 18.3%), and 11.7% ran out of money to buy food for five or more days in the past month ($n = 7$). Neither biological parent of the target child lived in the household for over one quarter of respondents ($n = 16$; 26.7%). A total of 73.3% had experienced either physical or emotional maltreatment during childhood ($n = 44$), while 40.0% had experienced intimate partner violence in the past month at pre-test ($n = 24$).

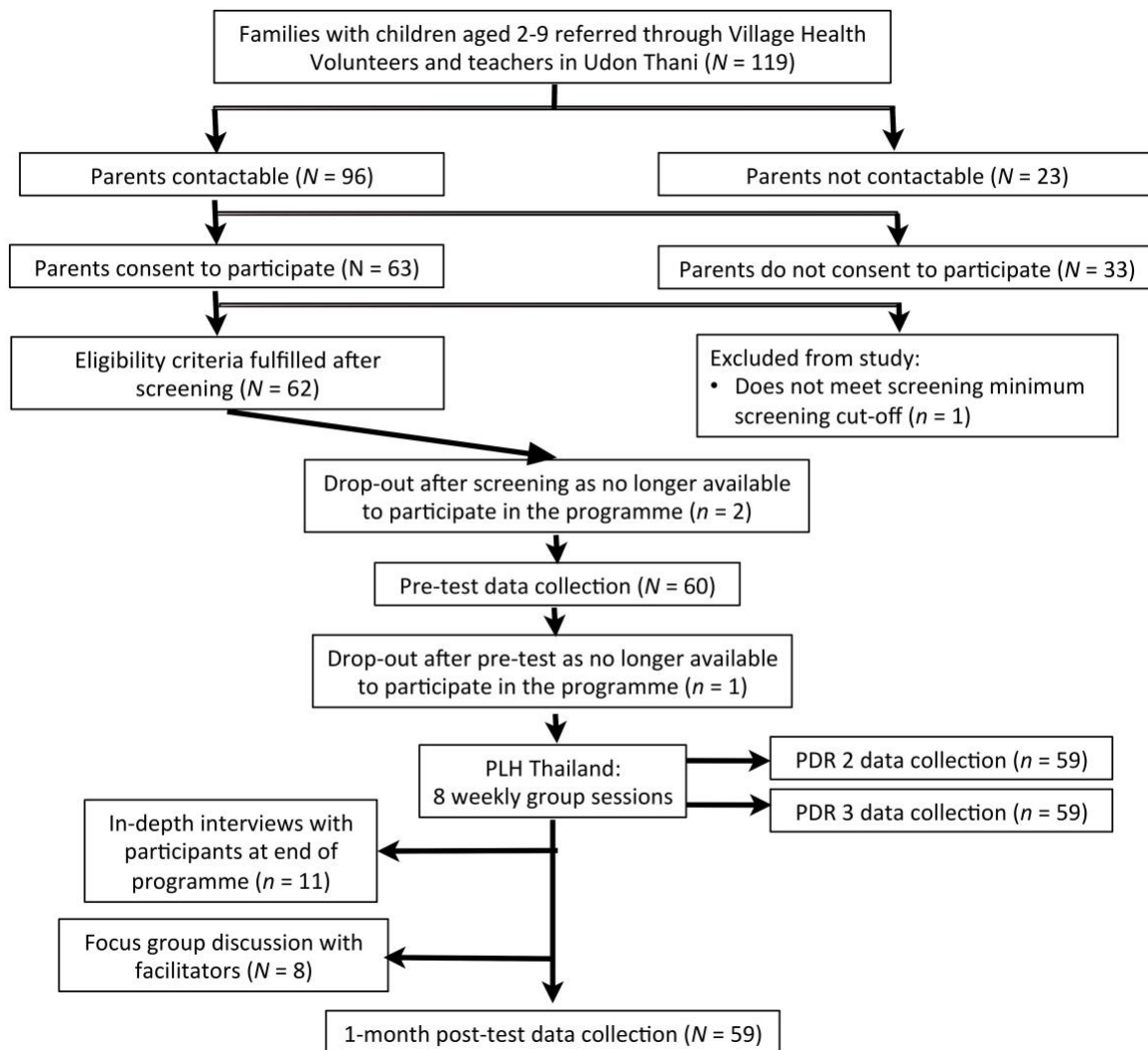


Figure 17. CONSORT study flow diagram

Study feasibility

The study flow diagram is shown in Figure 17. There were moderate-high levels of study recruitment, with 96 out of 119 referred parents (80.7%) successfully contacted, and 63 out of 96 contacted parents (65.6%) consenting to participate. Only four male referrals were provided, with three successfully contacted and one consenting to participate. The predominant reason given for declining to consent was not having enough time to participate. A total of 62 out of 63 parents (98.4%) met eligibility criteria after screening, with 60 out of 62 parents (96.8%) ultimately participating in pre-test data collection. There was only one study dropout after pre-test, resulting in an overall retention rate of 98.3% at post-test. Study retention during HOME Inventory interview and observational assessments

was high (100% at pre-test, 95% at post-test), as well as at PDR 2 and 3 time points (98.3%, both). Incomplete assessments or dropouts were due to the participant no longer meeting study inclusion criteria after becoming unavailable to participate in PLH-YC, loss of contact with the participant, and loss of one HOME Inventory assessment after a research assistant failed to submit electronic data. There were no findings of adverse effects.

Internal consistency of outcome instruments is reported in Table 10. Examinations of each scale using Cronbach's alpha (Cronbach, 1951) showed that only 16 out of 27 values were within acceptable ranges of 0.70 to >0.90 at pre-test (Gliem & Gliem, 2003).

Table 10. Reliability of outcome instruments using pooled imputed datasets

Instrument	Cronbach's alpha		Number of items
	Pre-test	Post-test	
ICAST-T Overall	0.73	0.67	25
Physical abuse	0.54	0.63	15
Emotional abuse	0.70	0.64	10
Neglect subscale	0.45	0.41	6
Attitudes toward harsh discipline	- 0.47	0.26	4
Inefficacy	0.64	0.67	2
HOME Inventory Abusive & harsh parenting	0.50	0.68	6
HOME Inventory Overall parent-child relationships	0.72	0.70	27
Parental responsivity	0.73	0.68	16
Encouragement of child maturity	0.67	0.65	6
PARYC Overall positive parenting	0.88	0.91	21
Supporting positive behavior	0.69	0.83	7
Setting limits	0.86	0.80	7
Proactive parenting	0.73	0.83	7
PS Dysfunctional parenting	0.70	0.74	10
APQ Poor child monitoring & supervision	0.73	0.76	11
DASS Overall	0.92	0.89	21
Depression	0.85	0.78	7
Anxiety	0.78	0.69	7
Stress	0.76	0.76	7
ECBI Intensity	0.91	0.93	36
ECBI Problems	0.96	0.96	36
CTS2S Intimate partner violence	0.14	0.05	6
Negotiation	0.15	0.76	2
WHO Intimate partner coercion	0.62	0.54	10
PDR Child problem behavior	0.87	0.82	34
PDR Positive parenting behavior	0.37	0.43	9

Acceptable levels of reliability (0.70 to >0.90) are in bold

Program feasibility

Rates of program enrolment, attendance, and completion were high. A total of 96.7% of parents recruited into the study attended at least one session, with enrolled parents attending 92.5% of all sessions. Regardless of enrolment status, parents attended an average of 7.15 sessions, or 89.4% of all sessions. There was a 96.6% completion rate, with no program dropouts. Program adherence was also high, with facilitators implementing 95.5% of manualized activities based on self-reported fidelity checklists.

Indicative program effects

Treatment of missing data

Little's MCAR test on outcome variables found that the data was missing completely at random ($\chi^2 = 8.987$, $df = 639$, $p = 1.000$). Analysis showed that 76.0% of outcome variables had at least one instance of missing data, primarily due to dropout of one participant following pre-test, with a total of 1.16% missing values. The highest percentage of missing data was 3.3% on all HOME Inventory variables at post-test. Convergence was not achieved on 25 out of 487 variables, affecting 10 scales. A modified intention to treat approach was thus subsequently undertaken, utilizing all available imputed data in the computation of average scores (Abraha & Montedori, 2010). These results are presented alongside the complete case analyses in Tables 11, 12, and 13. Sensitivity analyses showed no significant differences between the complete cases and imputed datasets.

Table 11. Outcomes at pre- and post-test for complete cases and pooled imputed datasets

Outcome	Complete cases ^a					Multiple imputation				
	Pre-test <i>M (SD)</i>	Post-test <i>M (SD)</i>	Test statistic* (<i>p</i>)	Effect size ^c	<i>N</i>	Pre-test <i>M (SD)</i>	Post-test <i>M (SD)</i>	Test statistic* (<i>p</i>)	Effect size ^c	<i>N</i>
Primary outcome										
Child maltreatment - physical & emotional abuse (ICAST-T), /200 ^{bd}	7.86 (7.07)	3.67 (3.82)	- 4.96 (<0.001)	- 0.59	58	7.68 (7.02)	3.63 (3.81)	- 5.00 (<0.001)	- 0.58	59
Physical abuse subscale, /120 ^d	3.64 (3.97)	1.33 (2.02)	- 4.49 (<0.001)	- 0.58	58	3.58 (3.92)	1.31 (2.01)	- 4.58 (<0.001)	- 0.58	59
Emotional abuse subscale, /80 ^d	4.22 (4.45)	2.35 (2.92)	- 4.22 (<0.001)	- 0.42	58	4.10 (4.43)	2.32 (2.90)	- 4.19 (<0.001)	- 0.40	59
HOME Inventory: Abusive & harsh parenting subscale, /6	1.12 (1.07)	0.51 (0.74)	- 3.99 (<0.001)	- 0.57	57	1.13 (1.05)	0.58 (1.01)	- 3.71 (<0.001)	- 0.52	60
Secondary outcomes										
Overall positive parenting (PARYC), /126	68.78 (17.20)	80.81 (16.40)	- 5.06 ^e (<0.001)	0.70	59	69.00 (17.14)	80.75 (16.27)	- 4.99 ^e (<0.001)	0.69	60
Supporting positive behavior subscale, /42	24.78 (5.64)	28.75 (5.18)	- 5.02 ^e (<0.001)	0.70	59	24.83 (5.60)	28.73 (5.14)	- 5.00 ^e (<0.001)	0.70	60
Setting limits subscale, /42	21.81 (7.93)	27.0 (6.17)	- 5.00 ^e (<0.001)	0.65	59	21.90 (7.89)	26.95 (6.13)	- 4.91 ^e (<0.001)	0.64	60
Proactive parenting subscale, /42	22.19 (6.96)	25.07 (7.35)	- 2.66 ^e (0.010)	0.41	59	22.27 (6.93)	25.07 (7.28)	- 2.62 ^e (0.011)	0.40	60
Dysfunctional parenting (PS), /70	26.29 (9.05)	19.92 (8.20)	-5.16 (<0.001)	- 0.70	59	26.13 (9.06)	19.90 (8.13)	- 5.14 (<0.001)	- 0.69	60

Outcome	Complete cases ^a					Multiple imputation				
	Pre-test <i>M (SD)</i>	Post-test <i>M (SD)</i>	Test statistic* (<i>p</i>)	Effect size ^c	<i>N</i>	Pre-test <i>M (SD)</i>	Post-test <i>M (SD)</i>	Test statistic* (<i>p</i>)	Effect size ^c	<i>N</i>
Poor child monitoring & supervision (APQ), /55	15.93 (4.95)	14.46 (4.17)	- 2.71 (0.007)	- 0.30	59	15.87 (4.94)	14.43 (4.14)	- 2.67 (0.008)	- 0.29	60
Neglect (ICAST-T), /48 ^d	1.33 (2.26)	0.328 (0.76)	- 3.35 (0.001)	- 0.44	58	1.33 (2.22)	0.34 (2.30)	- 3.35 (0.001)	- 0.45	59
Overall depression, anxiety, and stress (DASS), /126	7.88 (7.25)	4.32 (4.85)	- 3.46 (0.001)	- 0.49	59	7.75 (7.26)	4.27 (4.83)	- 3.44 (0.001)	- 0.48	60
Depression subscale, /42	4.78 (5.81)	2.20 (3.56)	- 3.14 (0.001)	- 0.44	59	4.70 (5.80)	2.17 (3.54)	- 3.31 (0.001)	- 0.44	60
Anxiety subscale, /42	4.710.51 (4.95)	2.48 (3.16)	- 3.10 (0.002)	- 0.45	59	4.63 (4.95)	2.43 (3.15)	- 3.11 (0.002)	- 0.45	60
Stress subscale, /42	6.27 (5.04)	3.97 (4.36)	- 2.79 (0.005)	- 0.46	59	6.17 (5.07)	3.93 (4.33)	- 2.74 (0.006)	- 0.44	60
Attitudes supporting physical punishment (MICS), /23	2.02 (1.21)	0.93 (1.03)	- 4.16 (<0.001)	- 0.90	59	1.98 (1.23)	0.93 (1.02)	- 5.13 (<0.001)	- 0.86	60
Attitudes toward harsh discipline (ICAST-T), /20	10.27 (2.02)	8.46 (1.74)	- 5.05 (<0.001)	- 0.90	59	10.30 (2.01)	8.47 (1.72)	- 5.13 (<0.001)	- 0.91	60
Child behavior problems (ECBI) – Intensity subscale, /252	101.41 (28.71)	78.24 (27.61)	- 5.31 (<0.001)	- 0.81	59	100.98 (28.66)	78.28 (27.38)	- 5.28 (<0.001)	- 0.79	60
Child behavior problems (ECBI) – Problems subscale, /36 ^d	7.64 (9.41)	1.80 (4.86)	- 5.20 (<0.001)	- 0.62	59	7.68 (9.34)	1.77 (4.83)	- 5.28 (<0.001)	- 0.63	60
Parent sense of inefficacy subscale (ICAST-T), /16	3.78 (3.45)	1.90 (2.43)	- 3.90 (<0.001)	- 0.54	58	3.82 (3.42)	1.92 (2.42)	- 4.00 (<0.001)	- 0.56	59
HOME Inventory: Overall parent-child relationships, /27	21.11 (3.66)	24.07 (2.73)	- 5.23 (<0.001)	0.81	57	21.17 (3.63)	24.08 (2.66)	- 5.36 (<0.001)	0.80	60

Outcome	Complete cases ^a					Multiple imputation				
	Pre-test <i>M (SD)</i>	Post-test <i>M (SD)</i>	Test statistic* (<i>p</i>)	Effect size ^c	<i>N</i>	Pre-test <i>M (SD)</i>	Post-test <i>M (SD)</i>	Test statistic* (<i>p</i>)	Effect size ^c	<i>N</i>
Parental responsivity subscale, /16 ^d	13.18 (2.59)	14.30 (1.95)	- 3.43 (0.001)	0.43	57	13.17 (2.61)	14.25 (1.91)	- 3.30 (0.001)	0.42	60
Encouragement of child maturity subscale, /6 ^d	4.46 (1.44)	5.56 (0.93)	- 4.80 (<0.001)	0.77	57	4.50 (1.42)	5.58 (0.91)	- 4.93 (<0.001)	0.76	60
Intimate partner violence subscale (CTS2S)/48 ^d	1.05 (1.59)	0.548 (1.11)	- 2.202 (0.028)	- 0.31	42	1.08 (1.60)	0.54 (1.05)	- 2.06 (0.039)	- 0.34	48 ^f
Intimate partner negotiation subscale (CTS2S)/16	3.05 (3.00)	3.36 (4.37)	- 0.24 (0.811)		42	2.81 (2.92)	3.15 (4.17)	- 0.32 (0.975)		48 ^f
Intimate partner coercion (WHO), /80 ^d	3.12 (4.65)	2.19 (3.68)	- 1.41 (0.158)		42	3.50 (5.12)	2.02 (3.50)	- 1.51 (0.132)		48 ^f

Statistically significant differences ($p < 0.05$) between pre- and post-test are in bold

*Unless otherwise noted, standardized test statistics are from Wilcoxon Signed Rank tests

^a*N* for complete cases varies based on the scale, ranging from 42 to 59 parents

^bValue indicates the maximum possible total score

^cCohen's *d*

^dComplete imputations not possible due to lack of convergence

^eTest statistic from paired samples t-test

^fWilcoxon Signed Rank test calculated for 43 participants who were in a relationship at pre- and post-test

Table 12. Outcomes for PDR assessments at four time points for complete cases and pooled imputed datasets

Outcome	Complete cases						Multiple imputation					
	Pre-test <i>M (SD)</i>	PDR#2 <i>M (SD)</i>	PDR #3 <i>M (SD)</i>	Post-test <i>M (SD)</i>	Test statistic (<i>p</i>)	<i>N</i>	Pre-test <i>M (SD)</i>	PDR #2 <i>M (SD)</i>	PDR #3 <i>M (SD)</i>	Post-test <i>M (SD)</i>	Test statistic (<i>p</i>)	<i>N</i>
Parent daily report (PDR) on child problem behavior, /34 ^{ab}	6.93 (5.59)	6.81 (5.23)	4.78 (4.44)	3.73 (3.89)	35.89 (<0.001)	59	6.87 (5.56)	6.72 (5.24)	4.73 (4.42)	3.70 (3.86)	35.22 (<0.001)	60
Parent daily report (PDR) on positive parenting behavior, /9	7.15 (1.42)	7.95 (1.09)	8.25 (0.98)	8.31 (1.00)	44.02 (<0.001)	59	7.17 (1.42)	7.97 (1.09)	8.27 (0.97)	8.32 (1.00)	45.98 (<0.001)	60

Statistically significant differences ($p < 0.05$) between comparisons are in bold

Test statistics are from Friedman's ANOVA

^aValue indicates the maximum possible total score

^bComplete imputations not possible due to lack of convergence

Table 13. PDR assessment outcome comparisons at four time points for complete cases and pooled imputed datasets

Outcome	Comparison	Complete cases				Multiple imputation			
		Test statistic	SE	<i>p</i>	Effect size ^c	Test statistic	SE	<i>p</i>	Effect size ^c
Parent daily report (PDR) on child problem behavior, /34 ^{ab}	Pre-test, PDR#2	-0.07	0.24	0.775		- 0.02	0.24	0.944	
	PDR#2, PDR#3	0.86	0.24	<0.001	- 0.39	0.83	0.24	<0.001	- 0.38
	PDR#3, Post-test	0.24	0.24	0.318		0.23	0.24	0.322	
	Pre-test, Post-test	1.03	0.24	<0.001	- 0.57	1.04	0.24	<0.001	- 0.57
Parent daily report (PDR) on positive parenting behavior, /9	Pre-test, PDR#2	-0.74	0.24	0.002	0.56	- 0.76	0.24	0.001	0.57
	PDR#2, PDR#3	- 0.37	0.24	0.117		- 0.37	0.24	0.120	
	PDR#3, Post-test	- 0.06	0.24	0.803		- 0.06	0.24	0.805	
	Pre-test, Post-test	- 1.17	0.24	<0.001	0.81	- 1.18	0.24	<0.001	0.81

Statistically significant differences ($p < 0.05$) between comparisons are in bold

Test statistics are from Friedman's ANOVA

^aValue indicates the maximum possible total score

^bComplete imputations not possible due to lack of convergence

^cCohen's *d*

Primary outcomes

Tables 11, 12, and 13 summarize the means, standard deviations, test statistics, and p-values for all outcome variables using both complete case and multiple imputation analyses at pre- and post-test, as well as for PDR assessments at four time points. An outlying case at post-test assessment (parent #39) was identified using boxplots; subsequent contact with the participant revealed that responses entered into the tablet using the audio-CASI portion of the questionnaire were incorrect and were thus removed prior to analyses. Analyses showed a medium size effect ($d = -0.58$) on *child maltreatment (physical and emotional abuse)*, with a significant reduction following the intervention ($p < 0.001$), from an average score of 7.68 (SD 7.02) to 3.63 (SD 3.81). Prior to PLH-YC participation, 90% of parents ($n = 54$) reported perpetrating at least one instance of physical or emotional abuse against the target child in the past month, falling to 71.2% post-intervention. Significant reductions ($p < 0.001$) on average scores of *child physical abuse* represented a medium size effect ($d = -0.58$), from 3.58 (SD 3.92) to 1.31 (SD 2.01). There was a significant yet small size effect ($d = -0.40$) on *child emotional abuse* ($p < 0.001$), decreasing from an average score of 4.10 (SD 4.43) to 2.32 (SD 2.90). HOME Inventory assessments found a medium size effect ($d = -0.52$) on *abusive and harsh parenting*, with a significant post-intervention reduction ($p < 0.001$) from an average score of 1.13 (SD 1.05) to 0.58 (1.01).

Secondary outcomes

Child neglect was significantly reduced following the intervention (pre-test M 1.33, SD 2.22; post-test M 0.34, SD 2.30; $p = 0.001$). Parents also reported decreases in *dysfunctional parenting* (pre-test M 26.13, SD 9.06; post-test M 19.90, SD 8.13; $p < 0.001$), *poor child monitoring and supervision* (pre-test M 15.87, SD 4.94; post-test M 14.43, SD 4.14; $p = 0.008$), and *parental sense of inefficacy* (pre-test M 3.82, SD 3.42; post-test M 1.92, SD 2.42; $p < 0.001$). *Child behavior problems* were also significantly reduced, on both the *intensity* subscale (pre-test M 100.98, SD 28.66; post-test M 78.28, SD 27.38; $p < 0.001$) and *problem* subscale (pre-test M 7.68, SD 9.34;

post-test M 1.77, SD 4.83; $p < 0.001$). There were significant reductions ($p = 0.001$) in parent *overall depression, anxiety, and stress*, from an average of 7.75 at pre-test (SD 7.26) to 4.27 at post-test (SD 4.83), as well as across all subscales. These included *depression* (pre-test M 4.70, SD 5.80; post-test M 2.17, SD 3.54; $p = 0.001$), *anxiety* (pre-test M 4.63, SD 4.95; post-test M 2.43, SD 3.15; $p = 0.002$), and *stress* (pre-test M 6.17, SD 5.07; post-test M 3.93, SD 4.33; $p = 0.006$). Average scores of parental attitudes also significantly decreased, including *attitudes supporting physical punishment* (pre-test M 1.98, SD 1.23; post-test M 0.93, SD 1.02; $p < 0.001$), and *attitudes toward harsh discipline* (pre-test M 10.30, SD 2.01; post-test M 8.47, SD 1.72; $p < 0.001$).

There were significant increases in *overall positive parenting* (pre-test M 69.00, SD 17.14; post-test M 80.75, SD 16.27; $p < 0.001$), as well as for the three sub-scales on *supporting positive behavior* (pre-test M 24.83, SD 5.60; post-test M 28.73, SD 5.14; $p < 0.001$), *setting limits* (pre-test M 21.90, SD 7.89; post-test M 26.95, SD 6.13; $p < 0.001$), and *proactive parenting* (pre-test M 22.27, SD 6.93; post-test M 25.07, SD 7.28; $p = 0.011$). HOME Inventory assessments found significant improvements in *overall parent-child relationships* (pre-test M 21.17, SD 3.63; post-test M 24.08, SD 2.66; $p < 0.001$), as well as on the *parental responsivity* subscale (pre-test M 13.17, SD 2.61; post-test M 14.25, SD 1.91; $p = 0.001$) and *encouragement of child maturity* subscale (pre-test M 4.50, SD 1.42; post-test M 5.58, SD 0.91; $p < 0.001$).

In addition, there was a significant decrease in *parent daily reports on child behavior problems* (pre-test M 6.87, SD 5.56; PDR#2 M 6.72, SD 5.24; PDR#3 M 4.73, SD 4.42; post-test M 3.70, SD 3.86; $p < 0.001$). The *parent daily report on positive parenting behavior* also significantly increased (pre-test M 7.17, SD 1.42; PDR#2 M 7.97, SD 1.09; PDR#3 M 8.27, SD 0.97; post-test M 8.32, SD 1.00; $p < 0.001$).

Finally, there was a significant reduction in *intimate partner violence* (pre-test M 1.08, SD 1.60; post-test M 0.54, SD 1.05; $p = 0.039$). However, this was not significant for reports of *intimate partner coercion* (pre-test M 3.50, SD 5.12; post-test M 2.02, SD 3.50; $p = 0.132$), with a

large standard deviation indicating a wide variation in responses. There was also no significant improvement in *intimate partner negotiation* (pre-test M 2.81, SD 2.92; post-test M 3.15, SD 4.17; $p = 0.975$). The outlying case (parent #39) was also removed prior to analyses for these outcomes at post-test, as they required audio-CASI assistance (as discussed above).

Perceived key mechanisms of change

Thematic analyses of parent interviews and the FGD with facilitators identified six program themes as well as four key changes in parent-child relationships and interactions that arose due to program participation. Figure 18 depicts the conceptual model of the interaction between these themes, as part of an overall model of perceived key mechanisms of change.

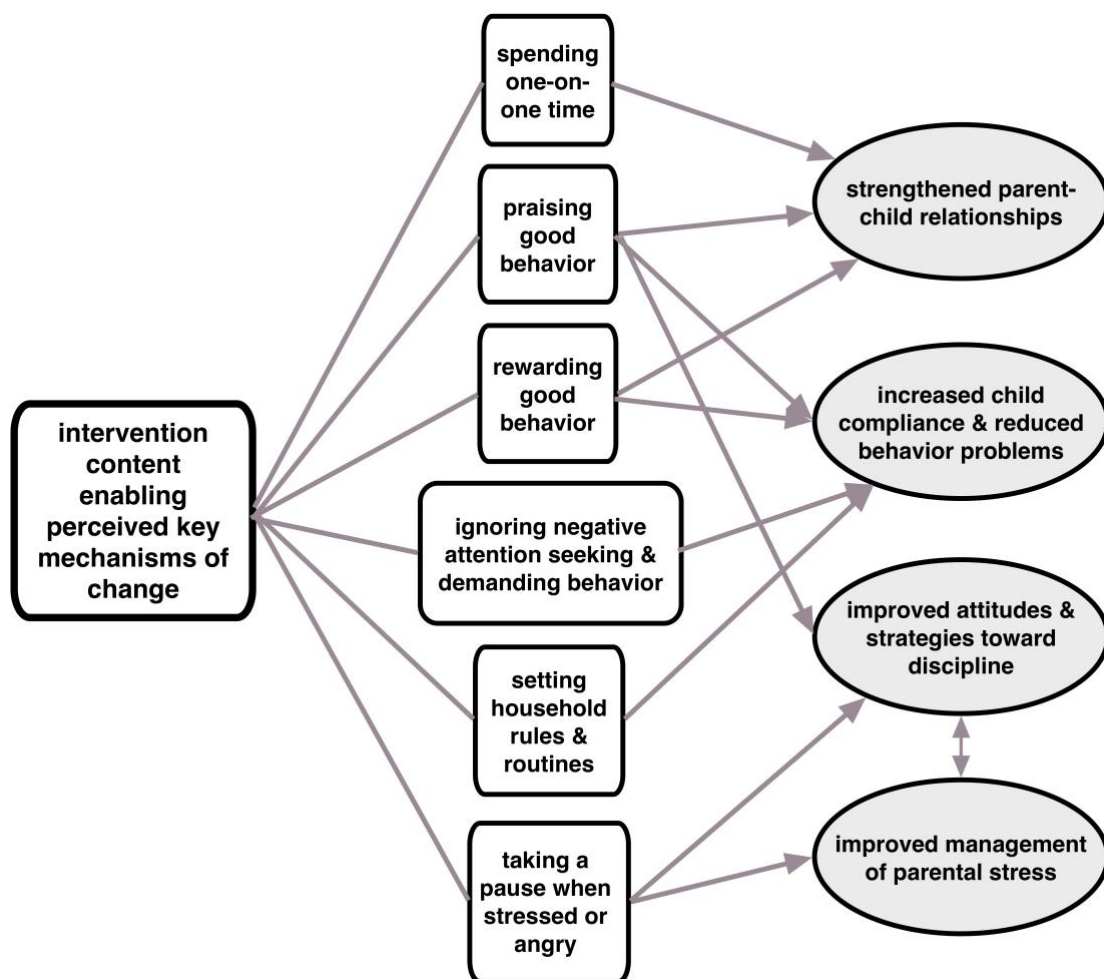


Figure 18. Conceptual model of intervention content enabling perceived key mechanisms of change

Strengthened parent-child relationships

Many parents expressed that their relationships with their children had strengthened due to program participation, and associated the program themes of one-on-one time, as well as praising and rewarding good behaviors, as key factors in this improvement. A grandmother of a 4-year-old girl remarked, “I never got to play with my grandchildren like this [before]. Ever since I went to the training, I spent time playing with them.... It [their relationship] is a lot better than at the start of the workshop” (parent #16, interview). Facilitators noted that many parents shared that they liked the one-on-one time technique the most, as it brought about positive changes. One facilitator stated, “...They can feel that when they spend time with their child, it really is good. The relationships became closer and improved” (facilitator #5, FGD). Two parents, however, struggled with allowing the child to lead or with spending focused time with the child during play, which suggests that the time spent during one-on-one time with the child may be more important than the specific nature of how that time is utilized. According to a mother of a 5 year-old boy, “...He cannot lead.... I have to be the leader for him and lead him to play” (parent #58, interview).

The use of praise and rewards for good behavior were also widely identified by parents. Some parents associated praising with bonding with their children, as shared by one grandparent of an 8-year-old boy: “If I praised him more often, I feel that our relationship as grandmother and grandson – we love each other more” (parent #4, interview). Rewarding positive child behavior through expressions of physical affection, such as hugs and *horm gaem* (sniffing cheeks as a form of a kiss), were also mentioned. A mother of a 4-year-old girl described how she used such displays of affection as a reward 4-5 times per week, which then resulted in reciprocation and a closer relationship: “Now my child likes to hug me, but before I never really did it. I went to the workshop and I came home to hug my child – now my child hugs [me] and sniffs [my cheeks] all the time” (parent #45, interview).

Increased child compliance and reduced behavior problems

Most parents and facilitators also indicated that their children were more compliant and exhibited fewer behavior problems after the program, which mirrored quantitative data trends. Parents associated this decline with four program themes in particular: praising, rewarding, ignoring negative attention seeking and demanding behavior, and setting household rules and routines. One mother of a 3 year-old boy expressed how praise effectively reinforced positive child behavior following an instruction: “I praised him every time.... I asked him to turn on the light...he did it and I said, ‘You are very good.’ He liked it and he was happy.... [Now] he wants me and everybody in the house to praise him” (parent #30, interview). Rewards for compliance were also cited as a means of reinforcing behavior. A facilitator described one situation between a mother and her son: “She said, ‘stop playing on the mobile phone’...[he] stopped. So she gave him a hug. The little one started crying [out of happiness]...we used that as an example.... That was the day the mothers ‘got it’” (facilitator #6, FGD). Parents also highlighted that ignoring negative behaviors, especially demands for toys or snacks in stores, was effective in reducing their occurrence. One grandfather of a 8 year-old boy stated, “I think it [ignoring] is good, the best one that I can do ...when he wants a toy and sometimes we couldn’t afford it...I would walk away.... When I came back he would be better and forgot about it” (#1 parent, interview). In addition, parents mentioned that newly established household rules were successful in reinforcing compliance, with such rules allowing for the clear articulation of expected behavior. A great grandmother of a 4-year-old girl explained why she believed a curfew she instituted during the course of the programme was effective: “She listens well and I don’t really have to repeat myself. If I said you have to be home by...6:00 [p.m.], then she has to come home like I said. I’d say it has changed for the better” (parent #20, interview).

Improved attitudes and strategies toward discipline

Parents expressed that they had altered their views on the appropriateness of corporal punishment to improve child behavior, indicating that ‘taking a pause’ – the mindfulness-based stress reduction technique – helped bring about this change. This strategy reduced the likelihood that parents would resort to violent discipline. One grandmother of a 3-year-old boy noted:

I ‘took a pause’ when I got angry. When [child’s nickname] was fussy and wanted to eat this or that, if I got angry, I would stop first. I’m afraid that if I get angry, I would hit him...I would go outside for a break.... Then I would be cooled down.... [I use it] often, 2-3 times per week. (#51 parent, interview)

Parents also highlighted that their use of praise, which helped to build positive relationships with their children, decreased the necessity of using violent discipline. One grandmother of a 5-year-old boy who aimed to stop his use of cursing explained: “He used to say ‘ay-hah, ay-kwai’ [swear words for ‘damn’ and ‘buffalo’ or an ‘idiot’]. I would’ve just slapped his mouth! ...I kept praising him until he started to change.... ‘Oh, [child’s nickname]! How are you so good?’” (#21 parent, interview). A grandfather who used to hit his 8-year-old grandson noted, “Praising is good because it’s better than using violence with him – using violence is not right, to put it simply” (#1 parent, interview). However, this attitude did not apply to the use of emotional abuse for some parents. A grandparent said that she had “changed from hitting” to threatening her 3 year-old grandson that if he returned home late, “I will run away...if you come home and you don’t see me, [child’s nickname] will live alone” (#51 parent, interview). Facilitators agreed that this remained a concern, noting: “It’s clear that they [still] made threats to not love them” (#1 facilitator, FGD) and “they didn’t think that [hurtful] words mattered that much” (#4 facilitator, FGD).

Improved management of parental stress

Finally, many parents also described their use of ‘taking a pause’ to manage parental stress and to self-regulate their emotions, which was also linked to the avoidance of violent

discipline. One mother of a 3 year-old boy shared, “I use this [‘taking a pause’] most often.... When my child has a tantrum, I remain calm.... I fully control my emotions.... I [used to] scold him. Now, I am much calmer. Before, I was about to kill him” (#30 parent, interview). Another parent, a grandmother of a 4 year-old girl, explained:

I used it [‘taking a pause’] when I’m upset.... The grandchildren would annoy me, so I used it.... I didn’t know how to do it before and I used to cry out loud. Then I remembered...to calm down, and that it works. This [technique] is my favorite. (#16 parent, interview)

Further, parents described the utility of using this skill with their children and other adults in the household, noting that it had also improved their abilities to manage their emotions and strengthened these relationships. A mother of a 3 year-old girl explained, “I use it [‘taking a pause’], my mother uses it, my father uses it, [and] my grandfather uses it because he loves his granddaughter so much.... It’s effective. After the training, it was effective in many ways” (#40 parent, interview).

5.4 Discussion

This feasibility study is one of few trials of parenting programs in Thailand and the wider East and Southeast Asian region that aim to reduce VAC (McCoy, Melendez-Torres, et al., 2020). It is also one of few studies that included grandparents and great grandparents as the majority of participants, and tested feasibility and indicative effects of a parenting intervention embedded within the public health system. The potential for program sustainability and scale up under real world conditions was strengthened by the utilization of existing health system capacities and partnerships, such as health worker facilitators, local and multi-sector recruitment channels, and community-based hospital venues (Aarons et al., 2011; McCoy, Lachman, Sim, et al., 2020).

In order to plan for a RCT, we aimed to explore the feasibility of study evaluation approaches, assess the feasibility of delivering an adapted intervention, report indicative effects on child maltreatment and related outcomes, and examine intervention content associated with

perceived key mechanisms of change. Together with the process evaluation findings, to be reported elsewhere (McCoy, Lachman, Tapanya, et al., 2020), the study highlights several lessons and challenges that will require revisions to the study procedures, as well as potential changes to program methods of delivery. One such issue was the screening instrument. Out of 63 participants screened, only one did not meet the cut-off criteria, suggesting that the threshold was too low. The screening interview should either be eliminated, or the threshold increased to target parents reporting higher rates or more severe forms of maltreatment.

Further, procedures for the recruitment of potential eligible participants should also be carefully revisited. First, the relatively moderate consent rate and rationales given for declining to participate suggest that many working parents were not available to attend the program, even on Sundays. Second, the careful presentation of the program to potential participants was important. During recruitment, a Village Health Volunteer in one area pointed out a parent to research staff as abusive and “needing to participate in the program.” This led to clarification by study researchers that the public shaming of parents during the referral process may contribute to stigmatization, as well as increase the likelihood that parents would decline to participate due to perceptions that the program would be punitive rather than supportive. Third, teachers in one sub-district were important sources of parent referrals, suggesting that Child Development Centers and primary schools should also be included in future recruitment efforts. Fourth, the use of both phone calls and home visits accompanied by Village Health Volunteers were necessary in many cases, as parents contacted via “cold calling” alone were more suspicious of study researchers or simply did not answer calls. Finally, only four male referrals were provided, out of whom three were contacted and one gave consent to participate, perhaps reflecting the social norm that childrearing is a role primarily reserved for women (Yoddumnern-Attig, 1992). Targeted outreach to male primary caregivers should thus be incorporated into RCT study procedures (Mogro-Wilson et al., 2019).

The study also underscored the necessity of combining the program with well-articulated child protection and adult welfare referral procedures. During the course of data collection and program delivery, 14 adults and five children were referred for child protection, social welfare services, or clinical assessments, emphasizing the importance of familiarity with local laws and regulations, utilizing existing service pathways, and working closely with local service providers.

In addition to these lessons learned, the study provided a valuable opportunity to assess outcome measurement reliability and suitability. This was of particular relevance given that most of the outcome measurements had not been psychometrically tested in Thailand. Examinations of Cronbach's alpha, showing that only 59.3% of values fell within acceptable ranges (see Table 10) (Gliem & Gliem, 2003), may reflect weak internal consistency of scales. However, such values do not provide sufficient evidence of instrument quality, and are less informative for scales that measure several constructs at once (Taber, 2017). Despite such considerations, the questionable reliability of these instruments suggests that factor analysis should be conducted prior to the RCT. Furthermore, the pilot allowed for the testing of the suitability of the HOME Inventory as a mixed interview and observational assessment tool. The HOME Inventory was substantially adapted and shortened from its original version, allowing for application to the range of child ages in the sample as well as administration within 30-60 minutes. Although the use of videotaped observations to establish inter-rater reliability between independent assessors would strengthen instrument validity, the study findings suggest that the instrument can sensitively detect observed and reported changes in maltreatment rates and parent-child relationships.

Study findings also support the feasibility of delivering an adapted version of PLH-YC for low-income families in Udon Thani. High rates of program enrolment, attendance, and completion, with no dropouts, suggest that the intervention is relevant and acceptable to participants (Kazdin, 2000). The attainment of a high level of program fidelity also supports the feasibility of delivery by pairs of facilitators, with at least one possessing a university diploma. However, several sample socio-demographic characteristics should be taken into account in further potential revisions to

the program, prior to RCT delivery. Such factors include the large proportion of participants with eyesight and mobility impairments, as well as low levels of education and literacy. Program materials such as illustrated story posters and the parent handbook, the use of mobile text messaging, as well as transport arrangements, will require further review in order to reduce potential obstacles to program accessibility.

Following participation in PLH-YC, parents reported reductions on all primary outcomes of interest, with moderate size effects on overall child maltreatment, moderate size effects on physical abuse, and small size effects on emotional abuse. Combination interview and observational assessments utilizing the HOME Inventory instrument also demonstrated moderate size effects on abusive and harsh parenting. Analyses of secondary outcomes showed promising results across almost all outcome measures (22 out of 24). Parents reported decreases in dysfunctional parenting; poor child monitoring and supervision; neglect; depression, anxiety, and stress; attitudes supporting physical punishment and harsh discipline; daily and past month child behavior problems; parent sense of inefficacy; and intimate partner violence. There were also improvements in parent reports of positive parenting, daily parenting behavior, as well as combination interview and observational assessments of parent-child relationships. Qualitative findings converged with quantitative results, with perceived key mechanisms of change including strengthened parent-child relationships (relating to PARYC data on positive parenting, HOME Inventory assessments of parent-child relationships, and PDR data on positive parenting behavior); reduced child behavior problems (relating to ECBI and PDR data on child problem behavior); improved attitudes and strategies toward discipline (relating to ICAST-T and Home Inventory data on child maltreatment, and MICS and ICAST-T data on attitudes); as well as improved management of parental stress (relating to DASS data on anxiety and stress). There was no evidence of adverse effects.

Although the study lacked a control group and was not designed to test causal impact, indicative findings and perceived mechanisms of change suggest that PLH-YC could lead to an

array of positive effects when tested through a subsequent RCT. The program's overall hypothesized theory of change thus appears viable and complements the mechanisms of change perceived by parents and facilitators. However, the study raises two questions. One is regarding the lesser impact on reported rates of child emotional abuse in comparison to child physical abuse, along with qualitative findings indicating that some parents may still be incorporating such practices into their discipline strategies. This suggests that program content, including collaborative problem-solving, illustrated stories, and home practice, may need to specifically address this form of violence, and that ICAST-T measures should be expanded to encompass a broader range of emotional abuse items (e.g., telling the child "I do not or will not love you"). Another question concerns the impact of the intervention on adult distal outcomes relating to intimate partner relationships, as domestic violence was significantly reduced yet coercion and negotiation did not significantly change. How the intervention affects the parent's relationship with his or her partner, as well as with other family members, requires empirical examinations of potential moderators of impact and possible diffusion effects.

This study has a number of additional limitations. Foremost, findings from a pre-post, non-randomized trial cannot reliably be attributed to the intervention, and can only be indicative of potential program results (Moore et al., 2011). Second, we used a moderate range of data sources. Due to their young age, we did not utilize child reports or interview children, which could have corroborated findings from parents, observers, and facilitators, as well as strengthened study conclusions. The inclusion of other reports and individual interviews, such as with other family members, as well as caregiver report and observational assessments with other children in the household, would have provided yet further data on potential impacts outside the dyadic parent-target child relationship. While we also included observational measures and periodic daily reports, our reliance mainly on self-report measures and a limited set of individual parent interviews therefore raises concerns of recall bias and the influence of social desirability. A third limitation is that post-test assessments and individual interviews were conducted only one month

after intervention; thus, it is uncertain whether effects were sustained, diminished, or delayed over the medium and long term (van Aar et al., 2017). The pairing of participants and encouragement of peer support, as well as the decision by one parenting group to meet regularly even after program cessation, may help to maintain treatment effects over time. Fourth, the study was not designed to explore potential moderators of program effects, such as child sex, child age, adult age, or the nature of the caregiving relationship. Such tests will need to be conducted during the RCT. Fifth, while internal consistency is only one aspect of instrument validity, the low Cronbach's alpha scores for many of the measures suggest cautious interpretation of study findings. Sixth, a large number of outcomes were analyzed, which raises the risks of false positive effects. However, as the outcomes were all hypothesized as part of the program's theory of change model and will be further tested through a RCT, no statistical adjustments for multiple tests were undertaken due to the potential for overcorrection and obscuring of treatment effects (Schulz & Grimes, 2005). Using a conservative Bonferroni correction ($\alpha = 0.05/32$), including different time point comparisons using the PDR, 23 out of 28 effects remained statistically significant, except for proactive parenting, poor child monitoring and supervision, parental anxiety and stress, and IPV. Finally, given the time constraints for this study, we did not target those parents who did and did not do well following program completion based on outcome analyses. This would have yielded deeper insights on underlying mechanisms of change and allowed us to better isolate the parenting techniques perceived as having the most and least utility.

Despite such limitations, the study has many strengths. First, the utilization of a phased process in alignment with MRC guidelines, in tandem with strong support by both high-level public health officials and local practitioners, raises prospects for the scaling up of the intervention beyond the RCT – should positive effects be sustained. Second, the indication by parents through individual interviews that they shared acquired program skills with household members and extended family may engender diffusion effects and public demand that fosters scalability. A third strength was the inclusion of observer ratings, regarded as a “gold standard” in objective

evaluations of changes in parent-child interactions (Hawes & Dadds, 2006), as well as periodic daily reports, which avoid the demands of aggregate recall over multiple days or for estimates of behavior frequency (Chamberlain et al., 2006). Fourth, significant reductions in child maltreatment rates, as reported through the ICAST-T and HOME Inventory, converged with qualitative data from individual interviews and the FGD. This demonstrates the value of adopting mixed methods approaches to feasibility pilots, as it allows for the maximizing of strengths from each type of data. Finally, the inclusion of audio-CASI to administer more sensitive items regarding child maltreatment and IPV assisted in advancing the methodology by potentially encouraging disclosures and reducing risks of social desirability bias.

5.5 Conclusions

This mixed methods study is the first known evaluation of an evidence-based parenting intervention in Northeastern Thailand, with several notable findings. First, it shows the feasibility of study evaluation approaches, including data collection methods and the absence of adverse effects, although the reliability of many outcome measurements is uncertain. Second, it also demonstrates program feasibility and the preliminary effectiveness of a group-based parenting intervention in reducing child physical and emotional violence and other related outcomes within low-income families in LMIC contexts, with perceived key mechanisms of change corroborating some of these effects. Finally, it highlights the value of close collaboration with policymakers and local practitioners from the start, improving prospects for program scalability and sustainability through the utilization of existing routine public health service staff and delivery systems. While further robust empirical and qualitative research will be necessary before such expansion efforts should be undertaken, these initial findings suggest a promising contribution toward violence prevention in Thailand and other LMICs more broadly.

5.6 References

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CHAPTER VI. DISCUSSION

7.1 Overview

The overall objective of this DPhil thesis was to inform the cultural and contextual adaptation of an evidence-based parenting programme – Parenting for Lifelong Health for Young Children (PLH-YC) – for the purpose of pilot testing an adapted and embedded version within the local public health system. The thesis adopted a multi-stage, mixed methods evaluation approach in order to pursue the following specific research aims, resulting in three stand-alone papers:

1. To summarise the evidence base on the effectiveness of parenting interventions in preventing violence against children and associated outcomes in low- and middle-income countries (LMICs) in East and Southeast Asia (DPhil Paper 1, published in *Child Abuse and Neglect*);
2. To examine the cultural and contextual relevance of the key programme themes, process, structure, schedule, and logistics of PLH-YC, alongside potential barriers and opportunities for scaling up the programme within the public health system (DPhil Paper 2, being prepared for submission to *Parenting: Science and Practice*); and
3. To test the feasibility of an adapted version of PLH-YC for low-income families in Udon Thani, including suitability of study evaluation approaches, indicative effects, and perceived key mechanisms of change associated with intervention content (DPhil Paper 3, being prepared for submission to *BMC Public Health*).

This thesis was structured according to the United Kingdom Medical Research Council (MRC) guidelines on developing and evaluating complex interventions (Craig et al., 2008). It also adopted an integrated approach to the five-stage cultural adaptation framework proposed by Barrera et al. (2013), and the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework for evaluating the public health impact of interventions in systems and at scale (Glasgow, Vogt, & Boles, 1999), as discussed in Chapter I (see p. 53).

This section synthesises the results from the development and feasibility pilot stages of the thesis. It harnesses the strengths of both quantitative and qualitative data in order to facilitate a more comprehensive understanding of the relevance of PLH-YC and prospects for further testing and scale-up in Thailand. The succeeding sections discuss the limitations and strengths of the thesis, as well as implications for policy, practice, and future research. Finally, it ends with a summary of recently conducted and planned dissemination activities in order to promote research impact and intervention scale-up.

7.2 Integration of findings

An advantage of a mixed methods evaluation design (as aforementioned in Chapter II, p. 77) is that it embeds the collection, analysis, and integration of both qualitative and quantitative data within a multi-step process, with the ultimate aim of supporting the conduct of an experimental study (Creswell & Plano Clark, 2017). The incorporation of qualitative strands can address the limited depth of quantitative findings and the limited generalisability of qualitative results by capitalising on both approaches (Green et al., 2015). The findings synthesised from this thesis are organised according to the following four conclusions:

- 1) There is provisional support in the East and Southeast Asian region for the implementation of evidence-based parenting interventions to prevent violence against children, although the paucity of robust studies suggests that cross-regional intervention transportation should be considered by policymakers, practitioners, and researchers;
- 2) High levels of cultural relevance and suitability within the implementation context support an emphasis on surface structure programme adaptation, with minor modifications to deep structure components;
- 3) Suitability of most study evaluation approaches and intervention delivery, as well as initial effectiveness, suggest the feasibility of conducting a randomised controlled trial (RCT); and

- 4) Prospects for programme sustainability and scaling up within the public health system will require cross-sectoral as well as bottom-up and top-down approaches.

Conclusion 1. There is provisional support in the East and Southeast Asian region for the implementation of evidence-based parenting interventions to prevent violence against children, although the paucity of robust studies suggests that cross-regional intervention transportation should be considered by policymakers, practitioners, and researchers

The first paper (DPhil Paper 1) was a systematic review and meta-analysis, and comprised the initial quantitative portion of the development stage of this thesis as described by MRC guidance (Craig et al., 2008). This paper reviewed and meta-analysed the effectiveness of parenting interventions in preventing violence against children in LMICs in East and Southeast Asia. The study was the first published effort to conduct a regional systematic review and meta-analysis on this topic, and contributed to the evidence base by expanding outcome measures to include all forms of violence against children, such as child sexual abuse, neglect, and exploitation. It also searched for non-English language and grey literature through multiple regional and country-specific bibliographic databases, allowing for the inclusion of Bahasa Indonesia, Chinese, and Thai language studies. A sensitive yet specific search strategy resulted in an initial retrieval of 10,403 records, eventually culminating in 11 included studies – representing 2,813 parent, caregiver, and child participants. Sources comprised seven databases and nine regional bibliographic databases for published reports, nine databases for unpublished reports, five university databases in Thailand, 101 expert contacts, and systematic review reference lists. A total of 44 effect sizes spanning five outcome categories formed the models for multi-level meta-analysis, finding a small effect on abusive, harsh, or negative parenting ($n = 3$, $d = -0.42$, 95% CI [-0.81, -0.02], $p < 0.01$, $I^2 = 72\%$), the primary outcome of interest. Effects on secondary outcomes included a large, non-significant effect on parental knowledge or attitudes ($n = 5$, $d = 1.40$, 95% CI [-0.30, 3.10], $I^2 = 95\%$); a small effect on positive parent-child interactions ($n = 5$, $d = 0.25$, 95% CI [0.19, 0.32], $p < 0.001$, $I^2 = 0$); a small, non-significant effect on parental stress ($n = 2$, $d = -0.13$,

95% CI [-0.38, 0.11], $I^2 = 0$); and a small, non-significant effect on family environment ($n = 3$, $d = 0.21$, 95% CI = -0.12 to 0.53, I^2 of 85%).

The systematic review and meta-analysis was the first step in the multi-stage, iterative process that characterises this thesis, and was connected to the second paper (DPhil Paper 2) in two important ways. First, it provided a summary and appraisal of the state of the evidence in the region, in which the succeeding papers of the thesis could be situated. Second, it examined the suitability of evaluated home-grown and transported interventions from the region that could potentially be selected for further exploration and testing as part of the thesis.

The study suggested that parenting interventions in LMICs in East and Southeast Asia may be effective in reducing abusive, harsh, and negative parenting, as well as strengthening positive parent-child interactions, with overall effects across models favouring the intervention group over control. However, these models were tenuous as three out of five demonstrated high levels of heterogeneity, with three models including treatment effects from only 2-3 trials. Moreover, the populations, programme deliverers, programme doses and intensities, comparison conditions, and instruments encompassed in these models were very diverse. The generalisability of these results was also limited, as the 11 studies included in the review originated from just three, large middle-income countries (China, Indonesia, and Thailand), with only one study judged to be of relatively high quality – underscoring the cautious interpretation of findings. Nonetheless, these overall results provisionally support efforts to implement evidence-based parenting interventions to prevent violence against children in Thailand and other LMICs in the region, as well as underscore the urgent need for additional high-quality evaluations of such interventions.

The review also served to potentially identify promising interventions from Thailand and the wider region for further testing as part of this thesis. At the outset, it was established through a consultative and strategic planning process with UNICEF Thailand and national stakeholders, led by the DPhil candidate in 2016, that the selection of such an intervention should be informed by evidence of effectiveness. It was also agreed that the service system selected for programme

delivery should have wide, local, and accessible reach throughout Thailand (McCoy, 2016; McCoy & Supaporn, 2016c). This dialogue, informed by two studies – qualitative research with parents and practitioners on the demand for and interest in parenting interventions (McCoy & Supaporn, 2016a), as well as a ‘mapping report’ to identify existing relevant parenting policies and programmes in Thailand (McCoy & Supaporn, 2016b) – culminated in the proposal by the DPhil candidate that the local health system would be the most appropriate platform for delivery of a selective group parenting programme.

The systematic review, however, did not identify a clear candidate intervention for further empirical testing that suited these aims. The studies that assessed abusive, harsh, or negative parenting outcomes did not show consistent effectiveness over parent and child reports (Puffer et al., 2017), or demonstrated some significant effects but with high or unclear risks of bias (Liu & Liu, 2008; Sumargi et al., 2015; Thanasetkorn, 2009). Studies that examined outcomes relating to positive parent-child interactions also presented problems with bias (Hao et al., 2006; Punthmatharith, 2001; Sumargi et al., 2015; Thanasetkorn, 2009; Zhu & Xu, 2010), or showed small, significant effects but were delivered to populations with particular needs (e.g., refugees and migrants) in a non-health setting (Puffer et al., 2017). However, with the exception of one trial (Punthmatharith, 2001), the review did find that most of the interventions associated with significant, positive effects were group-based and multi-session programmes that included content on improving parent-child communication and relationships, child behaviour, and child physical and mental health. This suggested the relevance of selecting a social learning theory-based intervention, and specifically one informed by the Hanf Model. Such interventions focus on bolstering the quality of the parent-child relationship, increasing positive attention for appropriate child behaviour, as well as effective instructions and non-violent consequences for child non-compliance (Kaehler et al., 2016).

The paucity of the evidence base within the East and Southeast Asian region suggests that cross-regional intervention transportation should be explored. Indeed, as underscored in the

literature review for this thesis (Chapter I, see p. 46), there is evidence that transported and home-grown interventions may not differ in their effectiveness to reduce disruptive child behaviour, and that effect sizes are even stronger when interventions are transported to culturally more distant regions (Gardner et al., 2015; Leijten et al., 2016). Transporting a social learning theory-based intervention from outside the region has the benefit of selecting a programme that has already been empirically tested and demonstrated effectiveness on child maltreatment outcomes. Given that coercive parent-child interactions appear to fuel the development of disruptive child behaviour in multiple cultural contexts, and that this cycle can play a significant role in increasing the risk of harsh and abusive discipline strategies, similar techniques may be relevant and work well across country contexts (Leijten et al., 2016). Moreover, many parenting interventions have in-built approaches to flexibility which improve their prospects for relevance and acceptability in new contexts, allowing for the tailoring of parenting strategies to the personal and cultural needs of individual families (Gardner et al., 2015; Mejia, Leijten, et al., 2016).

The selection of PLH-YC as an intervention for transportation was due to several of its strengths, which served to inform the study in Thailand, as well as improve prospects for transporting a 'non-commercial' parenting programme to other LMICs. Foremost, it had demonstrated effectiveness with low-income families in two other countries (see p. 57). It was found to reduce child maltreatment and improve caregiver and observed reports of positive parenting in South Africa (Lachman et al., 2017; Ward et al., 2019); moreover, findings showed reductions in child maltreatment and child behaviour problems in the Philippines, with sustained effects on the former at one-year follow-up (Lachman et al., 2020). Although the feasibility pilot findings in Thailand are only provisional, similar positive effects on child maltreatment measures in this setting suggest that the programme may be effective in different geographic regions and across a range of middle-income countries.

Secondly, it was originally developed for resource-constrained contexts, requiring minimal equipment, low cost materials, and utilising programme facilitators who did not require

professional-level skills or university diplomas. In South Africa and the Philippines, posters of illustrated stories, flip chart paper, markers, local toys, photocopies of facilitator manuals and parent handbooks, and a meeting room in a community-based centre were the only material resources and facility requirements for programme delivery, a level that was maintained in Thailand. Further, in South Africa, facilitators were community-based, non-government organisation staff with secondary school diplomas and basic training in early childhood development (Lachman et al., 2017; Ward et al., 2019). In the Philippines, while facilitators were drawn from a wider range of backgrounds, such as university students and child protection workers, they also included community-based paraprofessionals (Alampay et al., 2018; Lachman et al., 2020). While the feasibility pilot in Thailand only included one paraprofessional facilitator, the successful delivery of a complex programme by paraprofessionals in all three contexts strengthens the scalability potential of PLH-YC in other LMICs.

Thirdly, varying levels of collaboration with government stakeholders in South Africa and the Philippines likely contributed to differences in potential for programme scale-up. While there was minimal partnership with government actors in the design and implementation of PLH-YC in South Africa, with no further implementation efforts taken by government following the RCT, embedding the intervention within the government conditional cash transfer system in the Philippines may have fostered government ownership and contributed to current efforts to expand PLH-YC nationally (Alampay et al., 2018; Lachman et al., 2020). In Thailand, on-going consultations with government stakeholders and the inclusion of government health workers as programme deliverers has also led to plans for scale-up within existing service systems (see below on p. 330).

Finally, the programme is Creative Commons-licensed and freely available to LMICs, sidestepping the expensive fees for licensing, materials, training, and support that are characteristic of many social-learning theory and 'brand name' parenting interventions (Mikton, 2012). This advantage was a key contributing factor in the decision to transport and adapt PLH-YC

in Thailand, where lack of available local funding deterred further roll-out of Happy Families, another group-based and locally evaluated parenting intervention (McCoy & Supaporn, 2016b). Such cost considerations are greater impediments to scalability and sustainability in LMICs than in high-income countries (HICs), given the considerable challenges in boosting human resource capacity, identifying and generating adequate financial resources, as well as linking scale-up to macro-level funding mechanisms (Mangham & Hanson, 2010; WHO & ExpandNet, 2010).

Conclusion 2. High levels of cultural relevance and suitability within the implementation context support an emphasis on surface structure programme adaptation, with minor modifications to deep structure components

In the title of their paper, Asgary-Eden and Lee posed a question that is pertinent to the latter, qualitative portion of the development stage of this thesis: “So now we’ve picked an evidence-based program, what’s next?” (Asgary-Eden & Lee, 2011). DPhil Paper 2 attempted to determine what these next steps should be in relation to programme adaptation. This study was a formative evaluation that examined the cultural and contextual relevance of programme themes, process, structure, schedules, logistics, and potential for scaling up within the public health system, for the purpose of adapting PLH-YC for low-income families in Udon Thani. Data was collected from a total of 26 frontline workers, policymakers, officials, academics, and UN and non-government organisation workers through individual interviews and four focus group discussions (FGDs). The findings were situated within integrated five-stage cultural adaptation (Barrera et al., 2013) and RE-AIM (Glasgow et al., 1999) frameworks, with cultural adaptation operating within a broader implementation context that comprised the public health system and associated organisations, services, and actors. Thematic analysis with a combination of deductive and inductive approaches identified the following key emergent themes, suggesting that programme adaptations could resolve the tensions between perceived social norms/practices and perceived needs: (a) programme cultural focus; (b) programme themes; (c) delivery methods, programme structure, and schedule; (d) recruitment, attendance, and engagement; (e) setting for programme

delivery; and (f) potential for scaling up. Specific adaptation recommendations included: using Central Thai written language for materials while delivering the programme in Isan; reflecting local family demographics and material culture in illustrated stories and recruitment methods; emphasising positive parent-child relationship building; encouraging of child participation in instruction-giving and the establishment of household rules and routines; removing 'time-out' and including child development and self-discipline content; providing 'mini-scripts' as a delivery method to overcome challenges in positive communication; scheduling weekend programme delivery to improve programme access; utilising health professionals as facilitators and community-based volunteers as recruiters; using inclusive recruitment approaches and incentives to encourage attendance; and establishing local primary care centres as programme venues.

At the outset, it is worth distinguishing cultural programme adaptation on the basis of ethnicity or race from adaptations that aim to fit the intervention within the functional constraints of the service delivery system and wider governance structures. Much of the programme adaptation literature regarding domestic cultural adaptation (e.g., within the United States, United Kingdom, or Australia) and the transportation of evidence-based interventions to LMICs focuses on the former. Critics of the need for cultural adaptation on the basis of ethnicity or race argue that the importance of such efforts is exaggerated, particularly if the intervention has an inherent built-in cultural flexibility or sensitivity. In support of this argument, sub-group analyses from trials of the Incredible Years, Head Start, and parent-child interaction therapy (PCIT) in the United States and Europe have demonstrated few differences in outcomes across groups (Chaffin et al., 2004; Gardner et al., 2019; Reid et al., 2001; Webster-Stratton & Reid, 2003). There is also the risk of resorting to stereotyped assumptions about individuals due to their belonging to particular socio-cultural groups, giving rise to false expectations that cultural adaptations can be "one size fits all" (Lau, 2006). Finally, other questions arise whether cultural adaptation should even be prioritised given the importance of maintaining fidelity to essential ingredients of interventions, and the considerable time and resources involved in adapting and testing such adaptations (Baumann et

al., 2015; Lau, 2006). The findings from five studies testing the effectiveness of a generic version of the Strengthening Families Program (SFP) compared to culturally adapted versions (that reduced dosage or eliminated core content for various ethnic minority groups) found that the latter increased retention but resulted in less improvements in positive outcomes (Kumpfer et al., 2002). Such results suggest that cultural adaptation efforts on the basis of ethnicity or race, if deemed necessary, should be undertaken with caution.

In contrast to these claims, proponents argue that cultural adaptation can increase recruitment, engagement, and ecological validity, while also leading to positive effects (Mejia et al., 2015). Several trials in the literature on the effectiveness of mental health and parenting interventions have pointed toward such outcomes. Several meta-analyses have shown that the integration of cultural factors such as language, cultural beliefs, and explanatory models into programmes can improve relevance, acceptability, effectiveness, and intervention sustainability within the target population (Baumann et al., 2015; Griner & Smith, 2006; Huey & Polo, 2008; Smith et al., 2010). Further, of the five studies reviewed in DPhil Paper 1 that were adaptations of transported programmes - SFP, Early Kangaroo Care, and '101s Positive Discipline' in Thailand; 'Care for Development' in China; and the Triple-P Seminar Series in Indonesia – all found positive effects on at least one outcome, although the level of adaptation efforts was only reported by two (Puffer et al., 2017; Sumargi et al., 2015). Finally, cultural adaptation advocates argue that services which are empathetic and responsive to the needs, values, and preferences of individuals is simply representative of good clinical practice, and that attempts to engage particular socio-cultural groups will actually lead to improved standard treatments that are more likely to be generalisable to a wider population (Betancourt, 2004; Lau, 2006).

Given the mixed evidence base in the cultural adaptation field, frameworks for cultural adaptation commonly emphasise the need to strike a balance between fidelity and fit, guided by solid programme theory that specifies the essential ingredients, while taking into account the cultural needs of the local community (Castro et al., 2004; Violence Prevention Alliance, 2013). An

awareness of the continuum between surface structure and deep structure modifications is thus relevant to finding this balance. *Surface level* alterations include peripheral, observable, or linguistic aspects of an intervention, customising materials and messages that enhance face validity and local appeal, such as the use or depiction of people, places, language, food, and clothing (Resnicow et al., 2000). It also includes constituent involving strategies, such as hiring staff drawn from the target group, as well as identifying behaviour patterns, channels, and settings that are relevant and appropriate for programme delivery (Kreuter et al., 2003; Resnicow et al., 2000). Adaptations at the *deep level* end of the spectrum refer to socio-cultural strategies that influence the target health behaviour of the proposed population, and which reflect and reinforce cultural values, beliefs, and normative practices – the “inner workings” of a particular community (Kreuter et al., 2003; Resnicow et al., 2000). The essential ingredients of interventions typically operate at this level, with adaptations to these components potentially modifying an intervention’s internal logic and potential effectiveness. For this reason, researchers should be clear as to what components are being affected when undertaking programme modifications (Durlak & DuPre, 2008).

Although there is mixed evidence regarding the necessity of cultural adaptation, relevant frameworks underscore the need for systematic and evidence-based adaptation approaches, as well as nuanced thinking regarding where modifications occur along the surface-deep continuum. The findings from DPhil Paper 2 suggest that high levels of perceived cultural relevance and suitability of PLH-YC support an emphasis on surface level programme adaptation, with minor revisions to structural aspects and programme content. Many surface level recommendations were linguistic or peripheral. Participants underscored the acceptability of designing one set of materials that could be used in all geographic regions of Thailand, with materials available in the Central Thai language and with verbal facilitation and group discussion by local facilitators in Isan. Participants also suggested that illustrated stories reflect the prevalence of multi- or skip-

generation households in rural areas, as well as depict local food dishes and commonly used household items and toys.

In terms of structural recommendations, findings suggested the utilisation of respected health professionals, particularly nurses, as facilitators, with Village Health Volunteers (VHVs) regarded as ideal recruiters due to their status as trusted peers. Further, the adoption of inclusive recruitment practices was suggested in order to reach grandparents and other potentially abusive family members, while community-based Health Promotion Hospitals (HPHs) were recommended as accessible and acceptable venues for group sessions. Finally, the suggestion to provide 'mini-scripts' to parents during programme sessions as a modification to delivery methods is also a type of surface level adaptation, as long as this method does not impinge on the core delivery method of collaborative facilitation.

Suggested adaptations to PLH-YC programme content included changes that reflected the perceived needs of the target population – with the potential for affecting the intervention's deep structure – as well as one modification that affects a core component. The former group of recommendations included the incorporation of children's perspectives and participation into instruction giving, the development of household rules, and the setting of consequences. These suggestions were made by Bangkok-based professionals who claimed to have successfully used such approaches with urban, middle class parents, but which appear to reflect a perceived need rather than a social norm or pattern of behaviour that would be readily embraced by rural, low-income families in Udon Thani. While the inclusion of child participatory approaches may complement the emphasis on child-led play, regarded as an essential component in parenting programmes (Eyberg, Nelson, & Boggs, 2008), it may also be regarded as inappropriate and culturally irrelevant by more traditional families that adhere to hierarchical relationships (Auemaneekul, 2013). Further, the additional time that may be required by facilitators to incorporate this approach into programme delivery could lead to less time for delivery of other essential ingredients associated with programme effectiveness, such as positive parent-child

interactions, emotional communication, positive reinforcement, non-violent discipline techniques, and parenting consistency (Kaminski et al., 2008; Leijten et al., 2019). The recommendations related to the inclusion of content on child development education are also pertinent to this concern, as it implies potential allocation of time away from core content. This form of psychoeducation has not demonstrated significant differences in effect sizes (albeit, on child problem behaviour) between programmes with ($n = 130$) or without ($n = 256$) this component in meta-analyses (Leijten et al., 2019). Given the programme's in-built flexibilities, which include client-centred approaches through the establishment of tailored parenting goals, feedback on home practice, as well as home visitation, it may be feasible to infuse some child development education into discussions using collaborative facilitation. However, meta-analyses of psychosocial interventions ($N = 70$ studies) during early childhood have found that "less may be more," with the most effective interventions including those with a clear-cut behavioural focus (Bakermans-Kranenburg et al., 2003).

One emergent recommendation from the formative evaluation does directly relate to a PLH-YC core component – the removal of time-out and potential replacement with other voluntary, untimed, child 'self-discipline' techniques. However, this suggestion contextualised time-out within punitive and 'negative' parenting approaches, and was not drawn from experiences of using this technique with Thai parents. While there is evidence from two meta-analyses that time-out is associated with larger parenting programme effects (Kaminski et al., 2008; Leijten et al., 2019), this did not reach levels of significance for the latter review. Additional empirical research is necessary to determine whether time-out is an essential ingredient of parenting programmes aiming to prevent child maltreatment, and the extent to which removal of this component would affect programme effectiveness. Ideally, the conduct of multi-arm trials such as those proposed through the Planned Intervention Adaptation (PIA) model (Sundell et al., 2014), or factorial experiments that test various components in relation to each other (Collins et al., 2005), would lend such insights.

Conclusion 3. Suitability of most study evaluation approaches and intervention delivery, as well as initial effectiveness, suggest the feasibility of conducting a RCT

DPHil Paper 3 focused on the feasibility/piloting and evaluation stages of the development and evaluation process for complex interventions (Craig et al., 2008). Findings were reported in line with the CONSORT 2010 extension to randomised pilot and feasibility trials (Eldridge et al., 2016) and best practice guidelines on mixed methods research in the health sciences (NIH OBSS, 2018). As far as the DPhil candidate is aware, this was the first rigorous feasibility pilot of a parenting programme within the public health system in Thailand. The study assessed the feasibility of conducting a future RCT, by examining the suitability of study evaluation approaches and intervention delivery, reporting indicative effects on child maltreatment and related outcomes, and qualitatively exploring intervention content associated with key mechanisms of change. A mixed-methods intervention design was utilised that embedded a qualitative method within a prioritised, quantitative pre-post study, with qualitative data serving to explain trial outcomes (Creswell & Plano Clark, 2017). Findings showed significant reductions on the primary outcomes of child physical and emotional abuse by caregiver report ($d = -0.58$, $p < 0.001$), and abusive and harsh parenting by combination caregiver report and observational assessments ($d = -0.52$, $p < 0.001$). There were significant positive effects on 22 out of 24 secondary outcomes, with the exception of caregiver reports of intimate partner negotiation and coercion. There was no evidence of harmful effects. However, outcome measurement reliability for many measures was questionable, with only 13 out of 27 scales falling within acceptable ranges (Cronbach's alpha of 0.70 to 0.95) (Cronbach, 1951). In addition, there were moderate-high rates of study recruitment and retention at 65.6% and 98.3% respectively, along with high rates of programme enrolment (96.7%) and enrollee attendance (92.5%). There were no programme dropouts. Programme adherence was high (95.5%); however, this was based on self-reported facilitator fidelity checklists and not on independent ratings. Finally, qualitative analyses identified six programme themes

associated with four key perceived changes in parent-child relationships and interactions, which complemented study outcomes and the programme theory of change. Overall, the study demonstrated the feasibility of most evaluation approaches, with results suggesting preliminary effectiveness on primary and most secondary outcomes. Moreover, perceived mechanisms of change appeared to converge with quantitative findings.

Evaluation and intervention feasibility

In particular, the pilot demonstrated that most of the study evaluation approaches were feasible, and could be maintained during the forthcoming RCT. Most of the recruited parents who were contacted by phone or through a home visit consented to participate in the study ($N = 63$), with almost all fulfilling eligibility criteria ($N = 62$), and only one dropping out after completing baseline assessments. Most parents who declined to participate indicated that they were not available to attend a weekly parenting programme, mainly due to work commitments, while two persons stated that health problems prevented their participation. The moderate levels of recruitment, slightly lower than the rate of 72.3% achieved during a RCT of PLH-YC in South Africa (Lachman et al., 2017), may be attributable to the source of the referrals. As perceived by participants in the formative evaluation (DPhil Paper 2), parents may have trusted referrals being made through VHVs and teachers. Moreover, the DPhil candidate and the project coordinator were able to mitigate potential stigmatisation of eligible families in the recruitment process, by clarifying that the study did not seek to identify abusive parents, but those who would benefit from a programme that aims to help them manage difficult child behaviours. These contributing factors would correspond with findings from a study from the United Kingdom, which found that the way a parenting programme is presented, as well as the confidence parents place in the referrers, can influence decisions by parents to participate in such interventions (Peters et al., 2005).

One particular study procedure – the use of a 7-item screening instrument based on the Multiple Indicator Cluster Survey (MICS) child discipline module (Thailand National Statistical Office [NSO] & UNICEF, 2016) – may not have been effective in identifying those families most at risk of perpetrating child maltreatment. All parents except for one met the cut-off criteria, suggesting that the threshold may have been too low and that RCT procedures should either remove the screening instrument or raise the threshold. Alternatively, the recruitment strategies employed during the pilot may have made this screening tool redundant. Given that scaled-up delivery of PLH-YC in Thailand is unlikely to be feasible as a primary prevention strategy, as few programmes that incorporate home visitation are provided on a universal basis, some aspect of screening to identify families most in need of support is likely to be necessary (National Academies of Sciences, 2016). Implementation of a pragmatic RCT grounded in the realities of scarce service capacity and accessibility should involve further discussions with public health partners as to what proportion of the local population can realistically be reached, and whether a practical screening instrument can most readily identify those in need.

The feasibility study also presented mixed results in terms of suitability and reliability of outcome measures. Examinations of each scale found that Cronbach's alpha values for only 16 out of 27 scales were within 'rule-of-thumb' acceptable ranges of 0.70 to > 0.90 at baseline (Gliem & Gliem, 2003), raising questions about scale reliability. However, Cronbach's alpha has limited usefulness as an indicator of instrument quality, particularly for those instruments that measure several constructs at once (Adams & Wieman, 2010). A high value of alpha indicates that every item in the instrument is measuring something similar to some of the other items, and does not support an inference that all items are indeed measuring the same thing (Taber, 2017). Given that the values of Cronbach's alpha in the feasibility pilot which were lower than 0.70 may reflect weak internal consistency of scales, factor analysis prior to the RCT would be a useful measure of construct validity in order to confirm that items primarily load upon the expected factors (Taherdoost, 2016).

Piloting of the Home Observation for Measurement of the Environment (HOME) Inventory instrument, which utilises both interview and observational measures and was adapted from the original infant/toddler, early childhood, and middle childhood versions, also suggested suitability yet mixed results in terms of reliability. Similar to the self-reported measures, HOME Inventory assessments were successfully completed for all participants, except for two at post-test due to one drop-out (parent ID# 63) and one parent who was unable to be contacted (parent ID# 34). Values of Cronbach's alpha for the HOME Inventory overall parent-child relationships ($\alpha = 0.72$ at baseline; 0.70 at post-test) and parental responsibility ($\alpha = 0.73$ at baseline; 0.68 at post-test) sub-scales suggested acceptable or nearly acceptable reliability of measures. While such values were questionable for the abusive and harsh parenting ($\alpha = 0.50$ at baseline; 0.68 at post-test) and the encouragement of child maturity ($\alpha = 0.67$ at baseline; 0.65 at post-test) sub-scales according to rules-of-thumb (Gliem & Gliem, 2003), such values tend to underestimate the internal consistency of scales with fewer than 10 items (see Briggs & Cheek, 1986; Clark & Watson, 1995).

The study findings also suggested the feasibility of delivering the adapted programme within the public health system to low-income families in Udon Thani. There were high rates of enrolment, attendance, and completion, as well as high levels of programme fidelity. Such results provide initial indications that both parents and facilitators may have perceived the programme as culturally relevant and acceptable, with a study on barriers to intervention acceptability indicating that such perceptions can affect participant attendance and attrition, as well as facilitator adherence to the programme (Kazdin, 2000). In particular, the enrollee attendance rate (92.5%) was notably higher than in the pilot RCT of PLH-YC in South Africa (75.0%) and the RCT in the Philippines (61.8%) (Lachman et al., 2017; Lachman et al., 2020). Given that all three studies addressed similar structural barriers to engagement (e.g., transportation, food, work schedules) (Wessels et al., 2016), this may suggest that the significant level of trust and respect afforded to local health workers by participants in Thailand (as noted by the formative evaluation) played a role in encouraging attendance (see further discussion below on p. 323).

Pilot results also suggested preliminary effectiveness on primary outcomes and 22 out of 24 secondary outcome measures. While it should be emphasised that feasibility studies, including pilots, are not typically designed or powered to test causality and do not have effectiveness or efficacy as a primary focus, these studies can assess potential effectiveness and cautiously report on initial effects (Eldridge et al., 2016). While the inclusion of a control group would have strengthened the feasibility pilot design, the indicative findings suggest potential intervention effectiveness when evaluated through a subsequent RCT. Although parents who practice abusive or harsh parenting may underreport or not exhibit such practices during self-report or observational assessments (Bennett et al., 2006), this study's findings are consistent with evidence that observer presence does not necessarily distort parent-child interactions – especially if the ecological validity of the instrument is strengthened through home setting administration (Gardner, 2000). In addition, there are promising results suggesting initial effects on positive parenting, a protective factor in reducing the risk of child maltreatment (Deater-Deckard et al., 1998), as triangulated through caregiver reports on overall positive parenting ($d = 0.69$; $p < 0.001$), parent daily reports on positive parenting behaviour ($d = 0.81$; $p < 0.001$), and the HOME Inventory combination interview and observational assessment on overall parent-child relationships ($d = 0.80$; $p < 0.001$).

The study did not show initial positive effects on two outcome measures: intimate partner negotiation and intimate partner coercion. While an RCT may determine whether there is a distal impact of the programme on intimate partner relationships, pilot findings raise preliminary questions about the inclusion of these outcomes in the programme's theory of change model. This is particularly relevant given the current lack of sufficient evidence that parenting programmes reduce forms of intimate partner violence without including specific, targeted content on this outcome (Gardner et al., 2020)

Most of the positive initial effects of PLH-YC were complemented by perceived mechanisms of change identified by parents and facilitators, lending further emphasis to

intervention feasibility. Parents and facilitators shared that six particular programme themes led to strengthened parent-child relationships, increased child compliance and reduced behaviour problems, improved attitudes and strategies toward discipline, and improved management of parental stress. These qualitative findings add more nuanced insights regarding how parents experienced the programme, providing a more complete picture of the process of change, as well as aspects of impact that were particularly salient for participants. The results are also in accordance with other similar qualitative studies in LMICs regarding the influence of emotional self-regulation strategies, parent-child ‘focused time,’ and shifts toward non-violent disciplinary techniques (Doubt et al., 2017; Giusto et al., 2017; Mejia, Ulph, et al., 2016). While these qualitative findings address the need to better understand the process of change that parents in LMICs experience (Parra-Cardona, 2019), other programme aspects associated with such mechanisms should be explored. These include the relationships between mechanisms of change and other core components, such as collaborative methods, home practice, role-play, and the nature of the therapeutic relationship (Holtrop et al., 2014; Kaehler et al., 2016). However, qualitative studies in this area may not be sufficient on their own, as mediator analyses of therapeutic change and factorial experiments to test essential programme components are more robust methods for this type of further exploration (Collins et al., 2005; Gardner et al., 2010).

While DPhil Paper 3 examines important questions regarding the feasibility of study evaluation approaches, intervention feasibility, indicative effects, and programme content associated with perceived key mechanisms of change, other critical aspects should be explored in more depth prior to the RCT. These elements include implementation factors such as *reach* (the extent of target population contacted), *engagement* or responsiveness (the level of parent involvement and interest), *fidelity* (the extent to which the curriculum was delivered as planned), and *quality of delivery* (facilitators’ skills in delivery and parent involvement) (Berkel et al., 2011; Glasgow et al., 1999). Another aspect concerns how participants both respond to and interact with the programme, including levels of acceptability (Moore et al., 2014). *Acceptability* can be defined

as the level to which the intervention is perceived as culturally and contextually relevant by participants and facilitators, in terms of language, concepts, methods, and intervention environment (Bernal, 2006; Kazdin, 2000; Lachman et al., 2016). Acceptability is also related to perceptions of programme scalability or maintenance (see section below on RE-AIM) (Glasgow et al., 1999). While not part of this thesis, these aspects of PLH-YC reach, engagement, fidelity, quality, participant acceptability, facilitator acceptability, and perceptions of scalability will be discussed in a forthcoming mixed methods process evaluation paper (McCoy et al., 2020).

Risk of bias

Several steps were taken to minimise various forms of risk of bias due to the pre-post feasibility study design, including those pertaining to selection, detection, attrition, and reporting. First, project staff randomised the list of parents received through referral channels in an effort to limit selection bias. This was undertaken due to speculation that those families most at risk or currently perpetrating maltreatment may have been referred first; randomisation thus aimed to include families at varying levels of risk in the pilot. Second, although outcome assessors could not be blinded due to the single group design, detection bias was minimised through utilisation of both self-report and observational assessments, as well as the addition of qualitative data on mechanisms of change. In particular, the inclusion of observations is a more robust approach than reliance on self-report measures alone, given that self-reports can be influenced by differences in interpretations, memory, social desirability, and measurement construction (Herbers et al., 2017; Morsbach & Prinz, 2006). While funds were not permitting for this study, an additional follow-up assessment would have further minimised detection bias. Third, attrition bias was also minimised. The pilot maintained high levels of study retention at post-test, with a total of 1.16% missing outcome data, which was found to be missing completely at random (MCAR) using Little's MCAR test (Li, 2013). Missing data was attributable primarily to: (a) a dropout (ID# 63) who was no longer available to participate in the intervention; (b) a participant (ID# 34) who was uncontactable at

post-test for the HOME Inventory assessment; (c) outlier data at post-test for one participant who revealed that responses provided during the audio portion of the questionnaire were incorrect (ID# 39); and (d) one missing HOME Inventory form for one participant (ID# 50) at baseline due to research assistant error. Modified intention-to-treat analyses were also used to limit attrition bias, by utilising all available imputed data obtained through multiple imputation procedures (Abraha & Montedori, 2010). Finally, reporting bias was minimised through registration of the study protocol prior to study inception with Clinicaltrials.gov. This increased the transparency and accountability of the study by stating primary and secondary outcomes, data collection procedures, and data analysis strategies in line with the extension to the CONSORT 2010 statement for randomised pilot and feasibility trials (Eldridge et al., 2016).

Despite these efforts, this feasibility pilot was unable to account for all forms of bias, including selection, performance, and detection bias. First, selection bias may have been increased through the recruitment strategy, which relied on referrals from VHV and teachers. This method may have resulted in a list of referred potential participants that is not generalisable to the population of interest, as referees may have recommended friends or those already in regular contact with local health services (Delgado-Rodriguez & Llorca, 2004). An individual interview with one parent indicated that such preferential selection may have occurred, sharing that she approached a VHV in her area and requested that she be referred for participation in the pilot (parent ID# 16). Second, it was not possible to limit performance bias, given that all participants were aware of their exposure to the intervention given the single group design (Mansournia et al., 2017). Finally, the questionable reliability of many outcome measurements may have contributed to measurement bias, a form of detection bias (Mansournia et al., 2017), as indicated by low Cronbach's alpha scores for 14 scales. These measures may have contained too few items to allow for robust sub-scale performance. Moreover, none of the instruments were known to have been validated for the target population, with the exception of the Depression, Anxiety, and Stress Scale short form (DASS-21). For these reasons, research to further develop and test these scales in order

to demonstrate potential cross-cultural validity and optimise psychometric performance would ideally take place prior to the RCT (Hui & Triandis, 1985).

Conclusion 4. Prospects for programme sustainability and scaling up within the public health system will require cross-sectoral as well as bottom-up and top-down approaches

The findings from DPhil Papers 2 and 3 provide some insights on the implementation stage of the MRC framework, during which evidence is translated into policy and routine practice (Craig et al., 2008). Key themes that were identified during the formative evaluation (DPhil Paper 2) were that scaling up of PLH-YC requires top-down policy implementation strategies, the fostering of cross-sectoral partnerships for local level implementation, and the development of ‘model’ sub-districts to promote bottom-up programme learning and expansion efforts. Further, while full process evaluation findings from the pilot are still necessary, initial results regarding programme effectiveness, recruitment, attendance, and fidelity inform considerations for the scaling up process. Although priorities for scale-up within the public health system will need to be tailored to the Thai national and local context (Mangham & Hanson, 2010), many aspects of the process will affect implementation success and prospects for sustainability with high fidelity. These aspects can be organised according to the RE-AIM model dimensions of Reach, Effectiveness, Adoption, Implementation, and Management (Glasgow et al., 1999).

Reach

Programme *reach* refers to the proportion of and risk characteristics of persons who receive an intervention, as well as the extent to which these participants are representative of the target population (Berkel et al., 2011; Glasgow et al., 1999). The high levels of pilot study recruitment (61.9%), study retention (98.3%), programme enrolment (96.7%), and attendance (92.5% of sessions on average) suggest strong participant appeal and programme acceptability, which are important for ensuring a match between parent cultural norms, the intervention, and

the process of implementation (Cabassa & Baumann, 2013). High levels of recruitment and participation may have been due to the elevated status of health workers in Thai society. It may also be attributable to the cross-sectoral collaboration between nurses and VHVs, early childhood development centre (ECDC) teachers, and primary school teachers, who were identified during the formative evaluation as important for successful identification of eligible families. This promising inter-sectoral collaboration, with nurses and VHVs falling under the purview of the local public health system, ECDC teachers under the Tambon (i.e., sub-district) Administrative Authority, and primary school teachers under the local education system (McCoy & Supaporn, 2016b), should be sustained through regular coordinated linkages and communications between systems during scale-up.

The generalisability of the pilot's largely positive effects will depend in part on whether the study sample represents the intended target population (Flay et al., 2005). Demographic and socioeconomic measures of pilot participants showed that parents were mainly women (98.3%), middle-aged ($M = 47.2$ years), and grandparent or great grandparent primary caregivers (65%), with low levels of education (85% had not completed secondary school) and low levels of income (75% had a total monthly household income of ≤ 386 GBP). Further, many had experienced or were in the process of experiencing violence, with 73.3% reporting physical or emotional maltreatment during childhood, and 40.0% reporting intimate partner violence within the past month. Based on discussions during early February 2020 with national and local public health officials at the Ministry of Public Health (MoPH), the Thai government plans to establish a recruitment pathway for PLH-YC through a 'Child-Shield Violence Prevention System,' a case management database which is still in development (UNICEF, 2020). This database would assist healthcare workers in referring high-risk families for enrolment in PLH-YC, which is likely to result in a cohort of programme participants who have already been in contact with hospital-based One Stop Crisis Centres due to the perpetration of severe levels of maltreatment. This likely increase in risk levels from those presented in the pilot study cohort may affect programme effectiveness,

particularly if participation is no longer voluntary but made compulsory (Holt, 2010). Moreover, indicated parenting interventions, while showing promise in preventing new incidents of child physical abuse (Barlow, Johnston, et al., 2006; Vlahovicova et al., 2017), may attach stigma to the access of social services if parents are made to “feel bad” or if they become concerned about how they appear to others (Axford et al., 2012). The potential ramifications of altering the targeting of PLH-YC may need to be carefully considered prior to scale-up, along with plans for further robust evaluations of intervention effectiveness and acceptability should such targeting proceed.

Effectiveness

Programme *effectiveness* in the RE-AIM model refers to the impact of the intervention on specified outcomes, with effectiveness trials designed to represent typical setting conditions (Glasgow et al., 2003). While DPhil Paper 3 suggested indicative effectiveness of the adapted PLH-YC on primary outcomes of interest, as well as on 22 out of 24 secondary outcomes, an RCT would provide the requisite evidence as to whether scaling up should indeed be pursued. However, the development of an effective intervention to prevent violence against children is only an initial step. A review of data from almost 500 quantitative studies of child and adolescent programmes found that well implemented programmes produce mean effect sizes at least 2-3 times greater than those that face serious implementation problems (Durlak & DuPre, 2008). In order to ensure transferability to real world settings, assessments of programme impact should continue during the scale-up process, and are likely to require tightly organised and consistent top-down organisational oversight in order to monitor and evaluate both anticipated and unanticipated intervention effects (Greenhalgh et al., 2004). Such outcome assessments at the parent level are often expensive to administer, and over the long term will require a system of sustained communications through individualised parent support plans, the design of services to promote parent adherence to this plan, the incorporation of regular monitoring and reminders, and feedback mechanisms on parent progress and whether positive outcomes are indeed being

achieved (Raghavan et al., 2008). In addition, assessments of impact should involve intervention providers and be based on a mix of evidence that go beyond expert opinion and empirical evaluations of long-term effects, including stakeholder perceptions of effectiveness and their views on the quality and validity of this evidence of effectiveness (Damschroder et al., 2009).

Adoption

The *adoption* dimension of the RE-AIM framework refers to the willingness of stakeholders to adopt an intervention (Glasgow et al., 1999). The decision to adopt may be made by an organisation in a number of ways: through *contingency* (dependency on an individual decision made by someone else in an organisation), by a *collective* (group decision making), or via *authoritarian* means (individuals within an organisation are directed) (Greenhalgh et al., 2004). Findings from DPhil Paper 2 suggest that the latter, top-down pathway may be more appropriate for the Thai implementation context. Several formative evaluation participants perceived that the creation of a central MOPH policy, along with national level budgetary support and the creation of performance monitoring indicators, would be essential for embedding PLH-YC in the public health system and galvanising local level compliance and support. The hierarchical organisational culture in Thailand, further entrenched by a tendency toward authoritarianism within the Thai government leadership, would favour such an approach (Kanchoochat, 2016). The relevance and contribution of centralised leadership is also supported by the existing literature, with studies on the implementation of evidence-based parenting programmes in Organisation for Economic Co-operation and Development (OECD) countries suggesting that the absence of an overarching policy framework may compromise efforts for quality scale-up (Furlong & McGilloway, 2015).

There are several advantages in pursuing such an adoption strategy. The MoPH has a champion within the Bureau of Inspection who is dedicated to the testing and implementation of PLH-YC in Public Health Administrative Region Eight, which includes Udon Thani and six other surrounding provinces in the Northeast. His support for the collaboration between UNICEF

Thailand and the University of Oxford provided the ‘green light’ that facilitated study access to local public health authorities and HPHs, and removed several bureaucratic barriers. Such champions, at times termed ‘implementation agents’ or ‘opinion leaders’ in the literature, are vital in their ability to exert influence through their status and authority, and can help to overcome indifference or resistance to adoption (Damschroder et al., 2009; Greenhalgh et al., 2004; Pfadenhauer et al., 2017). Another advantage is the existence of various high-level policies that signal support for parenting and family strengthening initiatives, such as the Second National Children and Youth Development Plan (2017-2021) and the National Child Protection Strategy (2017-2021) (McCoy & Supaporn, 2016b). In addition, there is an emphasis in the Northeastern region to implement child development surveillance and the *Kin Kod Len Lao* (Eat, Hug, Play, Storytelling) policy to promote early childhood care and development (Morrison et al., 2018; Rajanukul Institute, 2009; Sookatup et al., 2018). These frameworks provide a supportive context in which high-level promotion of PLH-YC can be justified and pursued.

However, there is a major challenge to relying on central MoPH authorities to adopt and drive this agenda. As noted by several formative evaluation participants, there may be widespread perceptions that the prevention of violence against children does not fall within the public health remit, and that such a role lies with the Ministry of Social Development and Human Security (MSDHS), which has limited local level capacity and relatively low levels of funding (McCoy & Supaporn, 2016b; Nontapattamadul, 2016). This view is reinforced by national policies related to parenting and family support, which are mainly relegated to MSDHS leadership, with no explicit support for parenting mentioned in national public health plans (MOPH, 2018). This may result in a potential discrepancy with the “innovation-system fit,” which requires that the intervention is compatible with organisational, values, norms, strategies, and goals in order to foster assimilation into existing workflows (Damschroder et al., 2009; Greenhalgh et al., 2004).

Implementation

The implementation aspect of RE-AIM pertains to the extent to which a programme is delivered with quality and consistency (Glasgow et al., 2003). The scaling up of an intervention, while delivering it as intended, is a multi-stage, iterative, and dynamic process of operationalisation (Pfadenhauer et al., 2017), which is likely to require top-down, cross-sectoral, and bottom-up support in Thailand. Top-down implementation support will require effective monitoring, as well as sustainable provisions for supervision and training. DPhil Paper 3 indicated that there was a high level of programme fidelity during the feasibility pilot, with facilitators implementing 95.5% of manualised activities based on self-report checklists. Top-down administration of monitoring tools, site visits, and audits, in cooperation with local practitioners, will help to assess whether such rates are sustained during scaling up (Pew-MacArthur Results First Initiative, 2016). In addition, central level and provincial level authorities will need to ensure that strategies and structures for on-going supervision of programme delivery are in place, given that supervisory issues have been flagged as critical for the scaling up of parenting interventions (Walker et al., 2018). In addition, staff may fail to implement an intervention with fidelity without coupling sufficient training with quality assurance oversight (Lester, 2020). While manualisation of PLH-YC will assist in training and standardisation of delivery, a centralised and standardised training and technical assistance process will be needed to support facilitators and administrators across the local public health system (Flay et al., 2005; Marchand et al., 2011).

Cross-sectional and bottom-up support for quality implementation will also be instrumental. Several formative evaluation participants suggested establishing 'model' sub-districts where PLH-YC is implemented with high fidelity, and which then serve as learning centres for other sub-districts seeking to adopt or improve programme delivery. This type of cross-sectional collaboration can assist in fostering local advocacy and peer-based technical support that is not dependent on external partners or organisations, such as the Parenting for Lifelong Health partnership. Such an arrangement may also help create peer pressure for programme adoption,

which can incite healthy competition between sub-districts and HPHs, as well as encourage late-adopting entities to join (Damschroder et al., 2009). It is also essential that bottom-up efforts link up with top-down implementation support. Sub-districts and HPHs delivering PLH-YC will need to provide practical feedback as to whether facilitator and administrative training meets their needs for quality implementation in the real world, as well as whether monitoring tools such as checklists and process data gathering forms accurately track local adaptation processes and how such adaptation decisions are made (Cabassa & Baumann, 2013). As already noted by one sub-district level official (participant ID# 18, interview) during the formative evaluation, PLH-YC is unlikely to be fully implemented in practice given the current workload of his team. Given existing research that agencies often opt to forego programme fidelity rather than alter their own practices (Furlong & McGilloway, 2015), it is important that such adaptations are negotiated with supervisory bodies in order to prevent modifications to core programme components.

Maintenance

The final RE-AIM domain, maintenance, refers to the long-term maintenance of behaviour change, as well as the institutionalisation of an intervention – when it becomes a regular part of routine practice and everyday organisational culture (Glasgow et al., 1999). The routinisation of programme delivery requires maintenance by both organisations and individuals within those organisations (Glasgow et al., 2003), and may necessitate all levels of support within the Thai context, including through top-down, cross-sectoral, and bottom-up channels. Such support is vital for preventing or removing barriers to implementation that may arise at multiple levels of programme delivery. Indeed, many evidence-based interventions struggle to translate into routine practice during this stage, with some estimates indicating that over 60% of all ‘change projects’ by organisations end up in failure (Burnes, 2004).

Top-down support for programme maintenance may need to take into account the shortage of health professionals within public hospitals in Northeastern Thailand. Medical staff

attrition has been cited as a significant cause, with doctors and nurses leaving the Northeast in consistently higher proportions than in other regions (Lao et al., 2019). Human resource restrictions have been found by studies in several countries to impede the scaling up of interventions, especially those that are labour intensive and where qualified staff are in limited supply (Mangham & Hanson, 2010). In this context, policymakers should consider innovative ways to incentivise staff retention and PLH-YC delivery. Policies could be adopted to reduce or forgive the educational debts of health professionals who are trained in PLH-YC and remain in the Northeast, as well as to count participation in PLH-YC facilitator training toward professional licensing credits (Raghavan et al., 2008).

Cross-sectoral support for the maintenance of PLH-YC should also take the form of strong linkages with child protection and welfare authorities, as well as the potential involvement of paraprofessionals in programme delivery. With the planned integration of PLH-YC within the public health-led Child-Shield Violence Prevention System, it will be critical for health professionals to develop stronger relationships with child protection and social welfare officials, in order to facilitate timely referral processes and responsive case management of high-risk families. During scale-up, health workers may become increasingly exposed to abusive parenting practices within their communities, which may lead to an increase in the reporting of maltreatment cases to MSDHS authorities. The safe and ethical usage of such reporting procedures may need to be clarified and encouraged at senior levels in order to ensure that they are properly followed. In addition, the reach and scalability of PLH-YC may be improved by involving other stakeholders in programme delivery, particularly paraprofessionals (McDonald et al., 2012). Findings from the formative evaluation and feasibility pilot suggest that VHVs may be well suited to this role, given their numbers and widespread presence (over 800,000 active volunteers providing support to 12 million households), the considerable level of trust they command in communities, as well as their existing role in conducting regular home visits (Kowitt et al., 2015; WHO, 2007). Indeed, given the severe shortage of professional health workers in many LMICs, several countries have

demonstrated that the utilisation of community health workers can effectively increase the coverage of health services and improve health outcomes for mothers and children (Gilmore & McAuliffe, 2013; Skeen & Tomlinson, 2013). Moreover, a synthesis of qualitative research ($N = 53$) found that many health professionals recognised and appreciated that community health workers can reduce their workload, while many service recipients expressed that their interactions with such workers were more favourable than their experiences with health professionals (Glenton et al., 2013). However, the widespread inclusion of VHVs as programme facilitators would engender its own challenges. A systematic review of reviews on community health workers found that while the integration of such workers can improve programme credibility and sustainability, they require high-quality and supportive supervision, as well as continuous education and adequate logistical support (Scott et al., 2018).

Furthermore, bottom-up support through widespread acceptability of the intervention by practitioners and parents may be vital to the maintenance of PLH-YC over time. Levels of acceptability are not static, and on-going strategies may be necessary to counter potential resistance by practitioners and sustain positive attitudes toward the programme (Moore et al., 2014). Training and on-going supervision may play crucial roles in not just preventing intervention drift, but also in communicating which parts could be appropriately modified in order to bolster provider acceptance of the programme (Cabassa & Baumann, 2013). Providing staff with opportunities to reflect and evaluate progress, including through traditional forms such as reports but also through the sharing of anecdotal success stories, may also increase maintenance (Damschroder et al., 2009). In addition, the acceptability and viability of the programme should be supported through community level engagement. This may help to ensure that parents' needs are appropriately addressed, and that any stigma attached with accessing the intervention is mitigated (Axford et al., 2012). Such exchanges may strengthen the relevance of the intervention, as more families are exposed to and provide constructive feedback on their experiences. Moreover, such

efforts may promote adherence and prevent the dilution of treatment strength due to attrition and reduced levels of participation (Lau, 2006).

Finally, quality programme maintenance will require careful consideration of costs. The preliminary estimated cost for PLH-YC delivery during the feasibility pilot was 5,899 Thai Baht or approximately 152 GBP per family, including high expenses for illustrated story posters. This cost falls to 134 GBP per family if these posters are not taken into account, which would require parents to refer to parent handbooks or liquid-crystal display (LCD) projections to discuss these stories. To place this into context, total government per capita health expenditures in Thailand in 2015 were 167 in 2017 U.S. Dollars (USD), compared to an average of 277 USD in 2017 for upper-middle income countries and 2,021 USD in 2017 for high-income countries (WHO, 2017; WHO, 2019). While such costs may thus appear prohibitively expensive to policymakers, the benefits from evidence-based parenting programmes due to reductions in adverse child and adult outcomes potentially outweigh the costs of investment. In Ireland, the internal rate of return for the Incredible Years based on improved child outcomes was 13.3% (O'Neill et al., 2010), while the estimated return in the United States for the Nurse Family Partnership programme based on improved child, adult, and community-based outcomes was 37.7% (Washington State Institute for Public Policy, 2019). In South Africa, the estimated rate of return for the PLH Adolescents programme was even higher at 92.9%, based on the costs of trial implementation and the estimated incidents of physical and emotional abuse averted if implemented at scale (Redfern et al., 2019). While the outlay of costs for implementing PLH-YC in Thailand may be lower than high-income country contexts due to the cheaper infrastructure, equipment, and human resources required, the scale of potential cost savings (or losses) due to the underfunding of health, social welfare, and justice systems are yet to be determined (Mangham & Hanson, 2010; Ward et al., 2016). Given examples of other group-based parenting programmes in Thailand that were unsustainable once donor funding subsided (e.g. Happy Families, based on the Strengthening

Families Program) (McCoy & Supaporn, 2016b), it will be important to assess the cost savings and cost effectiveness of PLH-YC in order to determine the financial feasibility of scale-up.

7.3 Limitations and strengths

Limitations

In addition to the concerns and risks of bias for DPhil Paper 3 that were discussed above, this thesis has a number of limitations regarding internal and external validity. The selection of an evidence-based and appropriate parenting intervention for testing in Thailand was an early challenge for the DPhil Candidate, given that DPhil Paper 1 did not produce a clear choice with strong prospects for success. While findings suggested the relevance of selecting a social learning theory-based intervention, especially one informed by the Hanf model, only two such programmes had been tested in Thailand (Puffer et al., 2017; Thanasetkorn, 2009). One of the trials was rated by the DPhil Candidate as having a high risk of selection bias through lack of randomisation procedures (Thanasetkorn, 2009). The sample population for the study by Puffer et al. (2017) primarily included Karen and Burman undocumented migrants and refugees, which may not have produced findings that were generalisable to the Thai population. The identification and selection of a programme that had already demonstrated feasibility and evidence of effectiveness in Thailand may have been preferable to importing a newly intervention such as PLH-YC. During the early stages of this thesis, PLH-YC had only shown effectiveness in one LMIC in a different geographic region (Lachman et al., 2017).

Limitations regarding internal validity

The systematic review and multi-level meta-analysis paper presented several limitations. First, a main concern was that most included studies did not aim to target violence against children, nor did they measure changes in rates of such violence – the primary outcomes of interest for the review. The goals of these interventions were varied, and included improvements

in maternal role competence and attachment, strengthening of parent-child communication, and promotion of child development through parental knowledge. Of the four studies in the model regarding intervention effects on abusive, harsh, and negative parenting outcomes, only two measured behaviours directly relating to abuse (Puffer et al., 2017; Thanasetkorn, 2009). The contribution of these findings to the child maltreatment field is thus likely to be modest, given the wider scope of the study inclusion criteria. Second, internal validity for most included studies was questionable. Many aspects related to study quality were judged to be of unclear or high risk of bias by the reviewers. Moreover, 33 out of 44 outcome effects were dependent on parental self-reports, with only one study utilising observational reporting – although assessors were not blinded (Punthmatharith, 2001). Most studies also used time points for measurement close to intervention delivery, with one exception (Zhu & Xu, 2010), rendering it difficult to ascertain if positive intervention effects were sustained. Finally, there were high levels of heterogeneity in three out of the five models (abusive, harsh, and negative parenting, $I^2 = 72\%$; parental knowledge and attitudes, $I^2 = 95\%$; family environment, $I^2 = 85\%$), with three models (abusive, harsh, and negative parenting; parental stress; family environment) each only incorporating treatment effects from 2-3 trials. Although some researchers argue that statistical heterogeneity in meta-analysis is inevitable (Higgins et al., 2003), this necessitates the cautious interpretation of study findings, as significant statistical heterogeneity may indicate that included studies are not all estimating the same effects (Higgins & Green, 2008).

The formative evaluation paper also poses several limitations in relation to internal validity. Although qualitative research is based on very different epistemological and ontological assumptions than quantitative research, with some critics arguing that the use of validity measures is thus inappropriate (Whittemore et al., 2001), it is still useful to discuss methodological rigour in qualitative research. Rigour in this context encompasses issues of *trustworthiness*, which can be strengthened through member checks, peer debriefing, triangulation, audit trails, and prolonged engagement (Tobin & Begley, 2004). During the formative evaluation, the DPhil

Candidate used member checking, otherwise known as respondent validation, following each FGD with the Parenting Experts Working Group by producing summaries of key points and sharing transcriptions of each discussion for review and feedback. However, due to time limitations, this approach was not undertaken following in-depth interviews with the other 20 participants, which would have helped to establish the level of correspondence between the DPhil Candidate's account and those of the research subjects (Mays & Pope, 2000). DPhil Paper 2 also demonstrated limitations in authenticity, another domain of rigour in qualitative research. *Authenticity* refers to the portrayal of a range of 'realities,' along with their corresponding concerns and values (Tobin & Begley, 2004). The study was constrained by a sample that mainly included government stakeholders and healthcare practitioners, as well as those based in Bangkok and Udon Thani. The findings would have been strengthened by incorporating a wider range of perspectives, including parents, children, various community members and professions, and those residing in other regions.

In addition to the different forms of risk of bias described earlier, DPhil Paper 3 on the feasibility pilot outcomes has a range of limitations that should be highlighted. The first type of limitation relates to study design issues. At the forefront, it should be reiterated that the pilot lacked a randomised control group and was otherwise not designed to evaluate effectiveness. Therefore, these are indicative results that require cautious interpretation, and no conclusions can be made regarding causal effects of the intervention without an appropriately designed and well-implemented RCT (Altman & Bland, 1995). In addition, there was only one post-intervention assessment, which was conducted one month after delivery. The lack of longer follow-up assessments is characteristic of many evaluations of parenting interventions that assess rates of violence against children (Barlow, Johnston, et al., 2006; Barlow, Simkiss, et al., 2006; Bilukha et al., 2005; Chen & Chan, 2016; Knerr et al., 2013; Vlahovicova et al., 2017), including those included in the DPhil Paper 1 systematic review. An additional assessment point would have indicated whether or not positive effects were sustained over time, as well as whether there were latent

effects on intimate partner negotiation and coercion, which did not show significant change at post-test. Finally, there was a potential limitation in authenticity of pilot qualitative data, due to the identification of participants on the basis of attendance rates. Although there was insufficient time to do so, the study findings may have been strengthened through the use of a sequential mixed methods model, in which quantitative results were used to identify participants who did and did not report positive effects post-intervention (Creswell & Plano Clark, 2011). This may have led to more diverse views on perceived mechanisms of change, as well as highlighted other programme components associated with positive effects.

Another type of limitation concerns the analysis of feasibility pilot outcomes. A large number of outcomes (i.e., 28 effects) were analysed, increasing the likelihood of detecting false positive effects. While all outcomes were represented in the programme's theory of change model, multiplicity can increase the overall error in significance testing, with most statisticians recommending reducing the number of comparisons or utilising a Bonferroni correction – an adjustment that was made in DPhil Paper 3 which nonetheless reduces statistical power (Schulz & Grimes, 2005). In addition, another limitation was the application of a modified intention-to-treat approach, due to the lack of convergence on 25 out of 487 variables, leading to the utilisation of only available imputed data (Abraha & Montedori, 2010). This represented a slight deviation from the study protocol; however, the proportion of missing values was low at 1.16%, with no significant differences between complete cases and imputed datasets detected during sensitivity analyses.

A third limitation centres on potential detection bias, including the limited range of data sources and questionable instrument reliability. The pilot study utilised self-report and observational assessments, which may both be subject to underreporting due to parents possibly wishing to present themselves in a socially desirable manner (Bennett et al., 2006; Gnambs & Kaspar, 2015). Although the convergence in observational assessments, parent daily reports, and outcome questionnaire data helped to mitigate this bias, the inclusion of child reports and other

reports by family members may further strengthen data triangulation and compensate for weaknesses posited by each source of data (Kern, 2016). However, while there are some efforts to develop age-appropriate child-report instruments, including a picture-based and modularised version of the Parent-Child Conflict Tactics Scale, there is still a dearth of research on the reliability and validity of such measurements (Sierau et al., 2018). Moreover, research on such issues with children raise various ethical concerns and additional questions regarding mandatory reporting requirements (Resnik & Randall, 2018).

Finally, a fourth limitation concerns instrument reliability, with study findings regarding internal consistency and reliability of each scale and sub-scale discussed previously. It should be re-emphasised that examinations of scales using Cronbach's alpha (Cronbach, 1951) resulted in the questionable reliability of some study instruments, including the ISPCAN Trial caregiver version (ICAST-T), the HOME Inventory, the Revised Conflict Tactics Scale Short Form (CTS2S), the World Health Organisation (WHO) questionnaire on women's health and life events, and the Parent Daily Report (PDR). Such concerns may be compounded by the lack of psychometric testing for most outcome measurements, with the exception of the DASS-21. In addition, the HOME Inventory was administered by one assessor per visit and was not videotaped. The use of multiple assessors and the calculation of inter-rater reliability would have helped to strengthen the reliability and concurrent validity of this instrument (Aspland & Gardner, 2003).

Limitations regarding external validity

There were also several limitations regarding the external validity of findings. The formative evaluation, as a naturalistic study, does not represent a single 'true' interpretation and therefore discussions of *transferability* (comparable to external validity in qualitative inquiry) do not provide an appropriate fit as they do with quantitative methods (Tobin & Begley, 2004). However, the systematic review does pose several challenges in relation to the generalisation of results to the broader East Asia and Pacific region. First, most interventions included in the review

targeted the parents of young children, including new-born infants and children up to six years of age; only one study specifically targeted those with adolescents (Liu & Liu, 2008). This is largely consistent with a similar, previous review of parenting interventions in LMICs, in which no studies included parents of children over the age of 12 years (Knerr et al., 2013), and point to a lack of empirical research concerning this target population. The findings from the meta-analysis may thus not be applicable to parents of adolescents, who may have different expectations for their behaviour in the context of adolescent emerging autonomy, engagement in risk-taking behaviours, and emphasis on peer relationships (Medlow et al., 2016).

Second, as mentioned previously, the 11 studies included in the review were conducted in only three countries - China, Indonesia, and Thailand – which are all large, middle-income countries. Findings may thus not be generalisable to other LMICs in the region, especially resource poor countries with low levels of readiness and capacity for delivery of health or social care services on a large scale (Mikton, 2012). Given that the way services are delivered, and by whom, can affect intervention effectiveness and efficiency, such implications are particularly salient for low-income countries where there is weak governance, absent or weak service delivery systems and structures, a reliance on lay or community workers, deficient information systems, and discontinuities in coordination of care (Berry et al., 2004; Hanlon et al., 2014).

The feasibility pilot paper also has two main limitations to external validity, concerning the characteristics of the included population as well as the quality of programme facilitation. First, the sample featured a bias toward female caregivers, with only one grandfather participating in the study. This was likely due to traditional social norms indicating that mothers should control household tasks and childrearing, while fathers should be providers who manage affairs outside the family, and thus remain largely peripheral to early caregiving (Tulananda, 1999; Yoddumnern-Attig, 1992). The lack of male engagement in the study raises questions regarding the generalisability of findings to male caregivers in Thailand, especially fathers. This is a challenge often faced in trials of parenting interventions, which predominantly feature mothers as

participants, even though father involvement in such programmes has been shown to help maintain improvements in child outcomes (Bagner & Eyberg, 2003; Wong et al., 2013). The external validity of programme feasibility and indicative results would have been strengthened if targeted outreach to men was incorporated into study procedures (Mogro-Wilson et al., 2019). In addition, male caregiver involvement may have been more likely if two parents per family were invited to participate – as suggested by two participants (IDs #2 and #7, interview) during the formative evaluation.

Secondly, the intensity of training and supervision support during the pilot presents additional limitations. While the study aimed to represent real world settings for delivery, including facilitators, settings, and materials that would be expected to be utilised upon scale-up, the study was conducted in close cooperation with PLH-YC developers under optimal conditions. Programme facilitators were directly trained by a programme developer for a 5-day period, while a Thai clinical psychologist from Chiang Mai delivered most supervision sessions by taking weekly flights to Udon Thani. Moreover, facilitators were provided with sufficient resources to make weekly phone calls to each parent, as well as to send regular text message “boosters.” This level of staff support and funding may not be tenable when implemented using government public health funds, and when non-developers and those with lower levels of qualifications deliver training and supervision under naturalistic conditions (Flay et al., 2005). The conduct of a ‘realist’ RCT, which aims to more rigorously examine interactions between underlying intervention mechanisms and the implementation context, would help to strengthen external validity of findings by illuminating how and under what conditions PLH-YC is effective (Bonell et al., 2012).

Finally, the overall study did not undertake a co-production approach to programme adaptation, which would have strengthened the external validity of the intervention. In a co-production or co-creation approach, end users are actively involved in various stages of the design and production process, which necessitates power-sharing and the fostering of reciprocal relationships between professionals, end users, and communities (Spencer et al., 2013; Voorberg

et al., 2015). This approach may have facilitated a greater understanding of parenting problems faced by low-income families in Isan by, as well as led to joint decision-making that promotes intervention feasibility, acceptability, and engagement (O’Cathain et al., 2019). Adopting this approach would have required the incorporation of community-based participatory research methods from the start, in order to equitably involve community members, organisational representatives, and researchers in all aspects of the research process (Israel et al., 2012). However, these types of efforts would likely have required additional time, resources, and flexibility for study implementation, given the need to build relationships between parties, develop community capacity for engagement where required, tailor research methods to the needs of each stakeholder, and cultivate genuine shared ownership of the co-production process (O’Cathain et al., 2019; Spencer et al., 2013).

Strengths

Despite these limitations to internal and external validity, this thesis has a number of notable strengths that have been highlighted in each individual paper, but which deserve re-emphasis. At the forefront, the three papers made unique contributions to the evidence base in the parenting field. DPhil Paper 1 was the first known regional synthesis of parenting interventions on violence prevention and deviated from the majority of reviews in this field by aiming to include regional languages, as well as tapping into the body of grey literature that is produced by international development organisations. Further, DPhil Paper 2 was the first known formative evaluation to examine the cultural and contextual relevance of a parenting programme in Thailand, while DPhil Paper 3 was the first known feasibility pilot of a parenting intervention to prevent violence against children in Thailand.

Additional substantive strengths include the adoption of a mixed-methods approach both overall and within DPhil Paper 3, the adherence to a carefully phased process for intervention adaptation and testing, the incorporation of a collaborative approach to stakeholder involvement,

and the implementation of a rigorous feasibility pilot embedded within the public health system. First, the findings from this thesis were considerably strengthened through the utilisation and integration of mixed methods, above and beyond the adoption of qualitative or quantitative methods alone. Mixed-methods approaches are especially useful in facilitating a more comprehensive understanding of *wicked* problems – complex issues highly resistant to resolution, and which are multi-causal and require multi-faceted and innovative solutions (Australian Public Service Commission, 2007; Devaney & Spratt, 2009). Such approaches also open up “an array of methods and opportunities for collecting, triangulating, and analysing information” from various stakeholders, and allow the wider identification of problems, underlying mechanisms, and potential solutions (Green et al., 2015, p. 2).

Second, undertaking an iterative process in line with MRC guidelines permitted a systematic approach to the selection and adaptation of a parenting intervention, utilising the best available evidence and the application of appropriate programme theory (Craig et al., 2008). This approach considered both internal and external validity (Flay et al., 2005), building on stakeholder perceptions of relevance, and informing successive intervention modifications in order to maximise prospects for successful implementation and scale-up.

Third, this thesis placed a strong emphasis on early and consistent collaboration with stakeholders, including policymakers, government officials, public health practitioners, and academics in the parenting field. Although the addition of consultative mechanisms with parents and other community members would have further strengthened this approach, this engagement allowed for the reflection of stakeholder interests and agendas in the adaptation process, as well as aided in the development of a shared vision and intervention ownership (Brugha & Varvasovszky, 2000; Hickey et al., 2018).

Finally, this thesis strove to minimise limitations to external validity by implementing a rigorous feasibility pilot in a real world, public health system setting. The pilot epitomised this approach by incorporating variability in participants and facilitators, delivering the programme in

four different local HPHs, utilising existing community-based recruitment channels, providing realistic incentives to participants, and utilising low-cost materials (Marchand et al., 2011). In these ways, the pilot study was situated on a continuum that more closely represented a pragmatic or 'realist' evaluation, rather than an efficacy study solely fixated on optimal programme delivery (Glasgow et al., 2003).

7.4 Implications for policy and practice

Given the dearth of similar studies that have been conducted in LMICs, the findings from this thesis proffer several key implications for policy and practice. The first points to the feasibility of implementing an evidence-based parenting programme in a LMIC, albeit with considerable staff support and appropriate resourcing. There is an urgent need for evidence-based programmes to prevent violence against children in LMICs, where such rates appear to be higher than high-income countries (HICs) (Stoltenborgh et al., 2013). Although most evidence concerning risk factors comes from the latter, longitudinal research suggests that poverty increases the risks of child maltreatment and emotional and behavioural difficulties in children (Leventhal & Brooks-Gunn, 2011; Slopen et al., 2010; Takeuchi et al., 1991), but that high parenting quality and functional family environments can moderate child conduct problems and buffer children from various chronic adversities (Masten & Powell, 2003; Yates et al., 2003). Despite the demonstrated benefits of ameliorating such risks and bolstering parenting interventions in such contexts, the evidence base for effective interventions in LMICs is still in its nascent stages in comparison to HIC counterparts (Mikton & Butchart, 2009). With limited domestic resources and often a reliance on short-term donor funding, LMICs cannot afford the risk of implementing parenting programmes that have not demonstrated effectiveness. While international organisations have relatively recently issued high level calls to prioritise such efforts (WHO, 2016), LMIC governments are unlikely to implement evidence-based parenting programmes without initial donor support and funding, as well as technical guidance and input by programme developers and international and

local academics. The establishment of meaningful, collaborative, and effective partnerships between LMIC governments, the donor community, and intervention scientists, which this thesis demonstrates in a small-scale manner, can help to fill such gaps in resource poor settings.

A second key implication is the feasibility of implementing an evidence-based parenting programme within a public health system, capitalising on the reach and professional staffing such systems offer in some countries. Such an approach differs from most initiatives to prevent and respond to child protection concerns in ASEAN countries, which mainly rely on the leadership and service capacities of departments of social welfare and women's affairs (ASEAN, 2017). Although utilisation of a public health system for a parenting programme that aims to prevent violence is unusual in Thailand and wider Southeast Asia, there are many examples of parenting programmes with a broad range of goals being implemented through the health sector in both HICs and LMICs (Barlow et al., 2016; Leung et al., 2006; Walker et al., 2018; Yousafzai et al., 2014). Countries can build upon existing parenting education or support initiatives in the maternal and child health domain to justify the inclusion of evidence-based parenting programmes to prevent violence, as has been demonstrated in Thailand through this thesis. Calls by development agencies and academics for health authorities to prioritise child development and mental health policies and programmes – as shown through the Sustainable Development Goals and the Global Strategy for Women's, Children's and Adolescents' Health (2016-2030) – also provide an advocacy platform for promoting such parenting programmes (Every Women Every Child, 2015; Lancet Early Childhood Development Series Steering Committee, 2016; UN General Assembly, 2015). Tapping into the evidence on the increased likelihood and cumulative effect of negative health consequences of child maltreatment in LMICs, such as poor mental health outcomes, suicide ideation and attempts, high-risk sexual behaviours, victimisation and perpetration of intimate partner violence, and unintended pregnancies, may help to rationalise the important role of the sector with government counterparts (Fry et al., 2012).

A third key implication of this thesis for policy and practice is the necessity to take into account the varied ecological levels in which parenting is nested (Bronfenbrenner, 1979), and the corresponding need to fortify linkages between service delivery systems. Interventions such as PLH-YC can only form one part of a broader strategy to prevent child maltreatment, given the multi-dimensional nature of parenting and its associations with expectations, beliefs, practices, and available support within families, peer networks, the larger community, and government institutions (National Academies of Sciences, 2016). As demonstrated by the referral networks established between nurses, VHVs, teachers, social workers, and social welfare officers during the feasibility pilot, it may be beneficial to ensure that parenting interventions are connected to a continuum of services across primary care, mental health, childcare, education, social welfare, juvenile justice, and religious institutions (Prinz, 2016). For this purpose, both informal and formal methods for promoting inter-agency cooperation may be essential. These include clear case management procedures, reporting protocols, technological data exchanges, informal meetings, multi-disciplinary teams, and inter-agency committees (Katz & Hetherington, 2006). Collaborative efforts that go beyond the management of individual children and families will also be needed, including the implementation of population-based prevention interventions. While research is still limited in this field, evidence-based universal media and communication strategies that aim to disseminate parenting information, break down parental isolation, normalise help seeking, and foster community engagement may be cost-efficient ways to reach large segments of the population and change social norms (Eisner, 2014; Prinz & Sanders, 2007; Prinz et al., 2009).

7.5 Recommendations for future research

There are a number of recommendations for future research arising from this thesis, with several of these pertaining to the Thai context. The first recommendation concerns the set of changes that were made to the design of the planned RCT, which was conducted during May 2019 to January 2020. Based on feasibility pilot process data and partner feedback, three amendments

were made to study procedures. The first was the removal of the screening procedure, given that all screening participants – except for one – met the cut-off criteria (see p. 287). Rather than increase the threshold for inclusion, the instrument was omitted due to the on-going development of the government Child-Shield system and lack of clarity regarding whether a revised screening tool would even be relevant upon scale-up. Second, the recruitment process was slightly amended to include teachers as referrers at all sites, rather than only at the Na Phu site. Although there were no significant differences in pilot recruitment rates between sites, this change was due to a desire by partners to increase linkages between the health and education sectors during programme implementation. Third, given the low rate of male recruitment during the pilot, the recruitment process was also amended by specifically informing referrers that male primary caregivers were welcome to participate in PLH-YC. This likely contributed to an increase in referrals of four men during the pilot to 14 during the RCT. In addition to these modifications to study procedures, three minor changes were made to programme content. The first was the addition of an illustrated story on a child who exhibits negative attention-seeking behaviour by hitting his mother, as well as the modification of two illustrated stories to reflect children playing with mobile phones rather than toys. Such amendments were due to observations and feedback from parents during post-pilot interviews that these were issues they still found challenging. Second, additional details were added to the facilitator manual regarding illustrated story discussion points, as programme facilitators were observed by coaches during video-taped sessions to struggle with covering the full range of potential topics. Finally, an illustrated story was removed from the final programme session in an attempt to reduce session length, due to facilitator feedback that it was difficult to deliver this session in less than three hours.

The second major recommendation for future research is the necessity of conducting further mixed-methods research on the acceptability and effectiveness of PLH-YC in Thailand, even following the post-pilot RCT in Udon Thani. Prior to scale-up in the Northern and Southern regions of the country, formative research should be conducted to inform the type and level of

adaptations which may be needed to ensure intervention fit with local social norms, practices, and implementation contexts. One particular area of concern relates to the translation of PLH-YC materials into local languages, an area that has received insufficient attention in existing research on the cultural adaptation of parenting interventions. While the materials are presently written in Central Thai language and using Thai script, similar challenges will be faced in the Northern and Southern regions, where the predominant local Thai languages do not have their own script (Premssirrat, 2007). It will thus be important to carefully identify appropriate local terms for various forms of maltreatment and for the various PLH-YC parenting techniques (e.g., ‘one-on-one time’ and ‘instruction-giving’).

Other areas for further research in Thailand pertain to qualitative studies and quantitative sub-group analyses of intervention effects on grandparents and male caregivers. Given the high proportion of children raised by grandparents, and that cross-sectional research in rural Thailand has found that such children may receive poorer levels of care, it is important to assess whether grandparents experience differential effects and mechanisms of change (Nanthamongkolchai et al., 2009). Additional research with fathers and other male caregivers should also examine such differences, as well as explore whether alternative methods of recruitment or additional content are needed to especially motivate their engagement (Bagner & Eyberg, 2003; Siu et al., 2017).

In addition, further outcome and process evaluation research is recommended on the long-term effects of PLH-YC and quality of delivery at scale-up, in order to determine whether positive effects and programme fidelity are sustained over time and at larger scale. Future multi-arm or factorial trials can help to examine whether additions such as booster sessions or periodic visits with parents, booster training for programme facilitators, and sustained support for peer networking can sustain effects (Collins et al., 2014; Sundell et al., 2014). Such multi-arm trials should also be conducted to compare whether there are differential effects between programme delivery by VHV facilitators, professional health workers, and paraprofessional-professional pair combinations, given the prospects for improving programme scalability due to ‘task-sharing’ and

the more efficient use of available human resources (Glenton et al., 2013; Perry et al., 2017). Finally, as emphasised previously, determinations of the actual costs of programme implementation, as well as cost-benefit and cost-effectiveness, will need to be conducted in Thailand. Cost-benefit analyses will help to evaluate the net benefits of PLH-YC and an alternative intervention in monetary terms, while a cost-effectiveness study would assess value for money, by estimating the ratio of costs per unit of health outcome (Charles et al., 2011; Jamison, 2009). Such costing studies will allow for more effective policy advocacy with the Thai government, and assist them in long-term budgeting and planning for scale-up.

Beyond the context in Thailand, there are several recommendations that relate to future reviews and primary research on parenting interventions in LMICs. While there is a substantive body of over 30 years of empirical evidence on the efficacy or effectiveness of such interventions in HICs, studies in LMICs have until recently been relatively few; moreover, many are of low or unclear quality, and inadequately reviewed (Mejia et al., 2017). Between DPhil Paper 1 and the LMIC-focused review conducted by Knerr et al. (2013), only 22 trials from 11 LMICs were identified. As demonstrated by DPhil Paper 1, as well as a forthcoming global review that will update the study by Knerr et al. (2013) (Gardner et al., 2020), expanding data sources in systematic reviews to include LMIC languages and regional bibliographic databases can help to limit language bias and improve the sensitivity of searches in the review process. In addition to reviews, future trials in LMICS should be adequately funded and staffed, sufficiently powered, robustly conducted, and transparently reported in line with CONSORT guidelines (Moher et al., 2010). Where RCTs are not possible, given inadequate resources or lack of expertise in trial methodologies, propensity score matching and regression discontinuity designs should be considered (Ward et al., 2016). Greater attention should also be paid to strengthening the reliability and validity of instruments used in such studies. The use of multi-method approaches, varied data sources, and observational assessments can limit risks of detection bias that may accrue due to an over-reliance on self-report measures. Observational methods in particular

should be further refined, validated, and more widely used in LMICs, with an emphasis on instruments and inter-rater methods that can better capture the quality of parent-child interactions, as well as sensitively detect potential change over time (Aspland & Gardner, 2003).

Finally, future research is needed specifically on the transportation and cultural adaptation of parenting programmes, in order to improve the fit between interventions and local implementation contexts. While recent meta-analyses show that transported interventions have effects on child problem behaviour comparable to origin countries, and that transported and home-grown interventions are similarly effective (Gardner et al., 2015; Leijten et al., 2016), further comparative research is needed on child maltreatment outcomes, as well as the degree of adaptation of transported programmes. Innovative and efficient trial methodologies should be explored for this purpose. Multi-arm trials would permit the differential examination of minimally and intensively adapted interventions (Sundell et al., 2014). Moreover, randomised factorial trials, such as the multi-country evaluation of PLH-YC currently being conducted in Southeastern Europe, are important for optimising parenting interventions by balancing effectiveness with resource efficiency and scalability (Collins et al., 2015; Lachman et al., 2019).

7.6 Dissemination and impact

The primary motivation behind this thesis was to make a meaningful contribution to the evidence of effectiveness on reducing violence against children and the implementation of parenting programmes in Thailand and the region. This required the development of close partnerships with the Child Protection Section at UNICEF Thailand, which had not previously funded a rigorous pre-post evaluation or RCT, as well as senior policymakers and officials at the MOPH, who were new to the field of child maltreatment prevention and social learning theory-based parenting programmes. It also entailed the fostering of trusted relationships with local academics, civil servants, practitioners, and community members in Udon Thani. It is through

these networks that the implementation of the formative evaluation, feasibility pilot, and subsequent RCT came to fruition.

In order to ensure that this thesis could further inform the on-going work of these partners and other social scientists in this field, the DPhil Candidate disseminated study findings by delivering the following presentations: (a) to the Inspector General at the MOPH (September 2019); (b) to senior officials at the Udon Thani Provincial Public Health Office (September 2019); (c) to the UNICEF Thailand Country Representative and child protection staff (September 2015, May 2019); (d) at the Mahidol-Oxford Tropical Medicine Research Unit (MORU) Science Seminar (September 2019); and (e) to the Society for Prevention Research Annual Meeting (May 2018).

In addition, the DPhil Candidate organised a Scale-Up Planning Workshop on 7 February 2020 in Udon Thani, with 32 participants from government, academic, and UNICEF. At this meeting, MOPH policymakers confirmed their intention to scale-up PLH-YC through HPHs in Udon Thani as well as six other provinces in Administration Region Eight, with the Boromorajonani Nursing College expressing interest in assisting with the roll out of cascade training for programme facilitators. An On-Line Dissemination Meeting was also conducted with 68 participants from the same sectors on 24 April 2020, when the full set of findings from the formative evaluation, feasibility pilot, and RCT were shared. For this meeting, the DPhil Candidate worked with a filmmaker to develop a short promotional video on PLH-YC, including interviews with facilitators and parent programme participants (https://drive.google.com/open?id=1Rr_7ruBY7s1qP3r4fYglZWVCQ6I4ffQs). Various briefing materials that will provide an overview on PLH-YC and study findings, targeting both government officials as well as community members, are also in development. Two major dissemination meetings, originally scheduled during April 2020 in both Bangkok and Udon Thani, were postponed due to the COVID-19 public health crisis but are anticipated to take place later in the year. Finally, English and Thai versions of the PLH-YC programme manual and parent handbook have been finalised and shared with stakeholders, with

the English materials available on the WHO PLH website (https://www.who.int/violence_injury_prevention/violence/child/plh/en/).

7.7 Conclusion

The perpetration of violence against children by those at the most proximal level to the child – parents and primary caregivers – can have severe, adverse immediate and long-term consequences for child health and development. Harsh and abusive parenting may also have bidirectional effects by fuelling parental anger, stress, and feelings of inefficacy. Evidence-based parenting interventions such as PLH-YC have the potential to disrupt coercive parent-child exchanges, reduce physical and emotional maltreatment, and foster warm and supportive parenting practices in diverse LMIC settings. This thesis utilised a mixed-methods approach in order to examine this potential in Udon Thani, Thailand, with policy and practice implications for the entire region. In DPhil Paper 1, findings from the systematic review and multi-level meta-analysis showed provisional evidence in the East and Southeast Asian region that parenting interventions can reduce abusive, harsh, or negative parenting, as well as promote positive parent-child interactions. In DPhil Paper 2, the qualitative formative evaluation suggested high levels of cultural relevance and suitability of the intervention within the Thai implementation context, requiring mainly surface structure programme adaptation and minor changes to deep structure components. Further, results from the mixed-methods pilot discussed in DPhil Paper 3 suggested the feasibility of conducting a RCT, given the appropriateness of most evaluation approaches, high levels of programme participation, and indicative effectiveness on most outcomes of interest. These effects were supported by mechanisms of change perceived by facilitators and parents. Finally, this thesis proposed that there are promising prospects for scaling up PLH-YC within the public health system in Thailand, dependent on cross-sectoral, bottom-up, and top-down approaches.

Overall, this thesis contributed to the growing body of evidence in this field in several novel ways. DPhil Paper 1 was the first known regional systematic review of parenting interventions for violence prevention, while DPhil Paper 2 was the first known formative evaluation to assess the cultural and contextual relevance of a parenting programme in Thailand. In addition, DPhil Paper 3 was the first known feasibility pilot of a parenting intervention that aimed to prevent violence against children in Thailand. Overall, this thesis constitutes one of the very first systematic evaluations in any LMIC that embedded an evidence-based parenting programme in the health sector at community level (Gardner et al., 2020). On-going collaboration with the MOPH and UNICEF Thailand, as well as strong positive feedback from practitioners and parents themselves, will hopefully culminate in a scaled-up intervention that has a demonstrable impact on the lives of thousands of Thai children and their families in the coming years. Should this indeed transpire, Thailand, as a State party to the UN Convention on the Rights of the Child, will have made meaningful strides toward fulfilling its legal obligations to support parents in their child rearing responsibilities, and to protect children from harm.

7.8 References

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APPENDIX A. SYSTEMATIC REVIEW AND META-ANALYSIS: SEARCH TERMS

Published literature search strategy

MEDLINE on Ovid

Search date: 29 June 2015

Search term	Hits
1) randomized controlled trial.pt	404415
2) controlled clinical trial.pt	91176
3) randomized.ti or randomized.ab	318122
4) placebo.ti or placebo.ab	159459
5) randomly.ti or randomly.ab	211127
6) trial.ti or trial.ab	366947
7) evaluat\$.pt	207012
8) #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7	1119773
9) East Asia\$.ti or East Asia\$.ab	7490
10) (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ti OR (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ab	9507
11) Thailand.ti or Thailand.ab	17247
12) China.ti or China.ab	73322
13) Malaysia.ti or Malaysia.ab	8012
14) Lao\$.ti or Lao\$.ab	2480
15) Mongolia.ti or Mongolia.ab	1990
16) Timor\$.ti or Timor\$.ab	490
17) (Vietnam OR Viet Nam).ti OR (Vietnam OR Viet Nam).ab	9003
18) Indonesia.ti or Indonesia.ab	6569
19) Philippines.ti or Philippines.ab	5227
20) Cambodia.ti or Cambodia.ab	2069
21) (Myanmar OR Burma).ti OR (Myanmar OR Burma).ab	1889
22) #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21	129536
23) exp parents/	77306
24) exp carer/ OR exp caregiver/	23403
25) exp mothers/	28179
26) exp fathers/	6590
27) Family relations/ OR exp family conflict/ OR exp parent-child relations/ OR exp parenting/ OR intergenerational relations/ OR maternal behaviour/ OR paternal behaviour/	64661
28) (parent\$ OR mother\$ OR father\$ or family\$).mp	1139009
29) #23 OR #24 OR #25 OR #26 OR #27 OR #28	1151356
30) #8 AND #22 AND #29	1055
Duplicates	49

MEDLINE(R) In-Process & Other Non-Indexed Citations on Ovid

Search date: 29 June 2015

Search term	Hits
1) randomized controlled trial.pt	618
2) controlled clinical trial.pt	36

3) randomized.ti or randomized.ab	32847
4) placebo.ti or placebo.ab	11205
5) randomly.ti or randomly.ab	25682
6) trial.ti or trial.ab	36904
7) evaluat\$.pt	76
8) #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7	77679
9) East Asia\$.ti or East Asia\$.ab	1156
10) (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ti OR (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ab	1180
11) Thailand.ti or Thailand.ab	1497
12) China.ti or China.ab	12850
13) Malaysia.ti or Malaysia.ab	1524
14) Lao\$.ti or Lao\$.ab	480
15) Mongolia.ti or Mongolia.ab	304
16) Timor\$.ti or Timor\$.ab	78
17) (Vietnam OR Viet Nam).ti OR (Vietnam OR Viet Nam).ab	993
18) Indonesia.ti or Indonesia.ab	783
19) Philippines.ti or Philippines.ab	531
20) Cambodia.ti or Cambodia.ab	270
21) (Myanmar OR Burma).ti OR (Myanmar OR Burma).ab	278
22) #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21	19657
23) exp parents/	0
24) exp carer/ OR exp caregiver/	0
25) exp mothers/	0
26) exp fathers/	0
27) Family relations/ OR exp family conflict/ OR exp parent-child relations/ OR exp parenting/ OR intergenerational relations/ OR maternal behaviour/ OR paternal behaviour/	0
28) (parent\$ OR mother\$ OR father\$ or family\$).mp	80799
29) #23 OR #24 OR #25 OR #26 OR #27 OR #28	80779
30) #8 AND #22 AND #29	102
Duplicates	0

EMBASE on OVID 1974 to 2015 July 10

Search date: 29 June 2015

Search term	Hits
1) randomized controlled trial/	379344
2) controlled clinical trial.ti or controlled clinical trial.ab	12168
3) randomized.ti or randomized.ab	220851
4) placebo.ti or placebo.ab	471536
5) randomly.ti or randomly.ab	297717
6) trial.ti or trial.ab	536236
7) evaluat\$.ti or evaluat\$.ab	3204825
8) #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7	3917285
9) child.ti. or child.ab.	315565
10) adolescent.ti. or adolescent.ab	102754
11) infant.ti. or infant.ab.	151943
12) teen\$.ti. or teen\$.ab.	29638

13) #9 or #10 or #11 or #12	555038
14) East Asia\$.ti or East Asia\$.ab	10880
15) (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ti OR (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ab	12676
16) Thailand.ti or Thailand.ab	21370
17) China.ti or China.ab	106091
18) Malaysia.ti or Malaysia.ab	12459
19) Lao\$.ti or Lao\$.ab	3389
20) Mongolia.ti or Mongolia.ab	2775
21) Timor\$.ti or Timor\$.ab	640
22) (Vietnam OR Viet Nam).ti OR (Vietnam OR Viet Nam).ab	11226
23) Indonesia.ti or Indonesia.ab	8673
24) Philippines.ti or Philippines.ab	6187
25) Cambodia.ti or Cambodia.ab	2755
26) (Myanmar OR Burma).ti OR (Myanmar OR Burma).ab	2323
27) #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26	180736
28) exp parents/	176445
29) exp carer/ OR exp caregiver/	46296
30) exp mothers/	97905
31) exp fathers/	17435
32) Family relations/ OR exp family conflict/ OR exp parent-child relations/ OR exp parenting/ OR intergenerational relations/ OR maternal behaviour/ OR paternal behaviour/	152961
33) (parent\$ OR mother\$ OR father\$ or family\$).mp	1384848
34) #28 OR #29 OR #30 OR #31 OR #32 OR #33	1487042
35) #8 AND #13 AND #27 AND #34	496
Duplicates	15

Global Health on Ovid 1973 to 2015 Week 27

Search date: 29 June 2015

Search term	Hits
1) randomized controlled trial/	21497
2) controlled clinical trial.ti or controlled clinical trial.ab	1718
3) placebo.ti or placebo.ab	25789
4) randomized.ti or randomized.ab	53282
5) randomly.ti or randomly.ab	59156
6) trial.ti or trial.ab	56714
7) evaluat\$.ti or evaluat\$.ab	387073
8) #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7	491667
9) East Asia\$.ti or East Asia\$.ab	3879
10) (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ti OR (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ab	5675
11) Thailand.ti or Thailand.ab	13048
12) China.ti or China.ab	52280
13) Malaysia.ti or Malaysia.ab	6871
14) Lao\$.ti or Lao\$.ab	1445
15) Mongolia.ti or Mongolia.ab	1150
16) Timor\$.ti or Timor\$.ab	410

17) (Vietnam OR Viet Nam).ti OR (Vietnam OR Viet Nam).ab	5006
18) Indonesia.ti or Indonesia.ab	5099
19) Philippines.ti or Philippines.ab	3848
20) Cambodia.ti or Cambodia.ab	1701
21) (Myanmar OR Burma).ti OR (Myanmar OR Burma).ab	1943
22) #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21	90473
23) exp parents/	25688
24) exp carer/ OR exp caregiver/	0
25) exp mothers/	19796
26) exp fathers/	1092
27) Family relations/ OR exp family conflict/ OR exp parent-child relations/ OR exp parenting/ OR intergenerational relations/ OR maternal behaviour/ OR paternal behaviour/	294
28) (parent\$ OR mother\$ OR father\$ or family\$).mp	172087
29) #23 OR #24 OR #25 OR #26 OR #27 OR #28	172254
30) #8 AND #22 AND #29	1341
Duplicates	2

PsycINFO on Ovid 1967 to July Week 1 2015

Search date: 29 June 2015

Search term	Hits
1) clinical trials/ or exp experimental design/	49461
2) placebo.ti or placebo.ab	31973
3) randomized.ti or randomized.ab	47356
4) randomly.ti or randomly.ab	54340
5) trial.ti or trial.ab	72655
6) evaluat\$.ti or evaluat\$.ab	375656
7) #1 OR #2 OR #3 OR #4 OR #5 OR #6	536394
8) East Asia\$.ti or East Asia\$.ab	1893
9) (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ti OR (Southeast Asia\$ OR South-east Asia\$ OR South east Asia\$).ab	1534
10) Thailand.ti or Thailand.ab	2587
11) China.ti or China.ab	17083
12) Malaysia.ti or Malaysia.ab	1932
13) Lao\$.ti or Lao\$.ab	568
14) Mongolia.ti or Mongolia.ab	172
15) Timor\$.ti or Timor\$.ab	124
16) (Vietnam OR Viet Nam).ti OR (Vietnam OR Viet Nam).ab	4231
17) Indonesia.ti or Indonesia.ab	1399
18) Philippines.ti or Philippines.ab	1339
19) Cambodia.ti or Cambodia.ab	486
20) (Myanmar OR Burma).ti OR (Myanmar OR Burma).ab	224
21) #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20	30927
22) exp parents/	74305
23) exp carer/ OR exp caregiver/	0
24) exp mothers/	33758
25) exp fathers/	8908

26) Family relations/ OR exp family conflict/ OR exp parent-child relations/ OR exp parenting/ OR intergenerational relations/ OR maternal behaviour/ OR paternal behaviour/	110125
27) (parent\$ OR mother\$ OR father\$ or family\$).mp	459721
28) #22 OR #23 OR #24 OR #25 OR #26 OR #27	463505
29) #7 AND #21 AND #28	627
Duplicates	1

CINAHL on Ebscohost

Search date: 29 June 2015

Search terms:

MW "randomized controlled trial" OR MW "randomised controlled trial" OR MW "controlled trial" OR MW "randomized" OR MW "randomised" OR MW "Placebo" OR MW "randomly" OR MW "Trial" OR MW "evaluat*"

AND

MW "care*" OR MW "mother*" OR MW "father*" OR MW "family*" OR MW "Family relations" OR MW "family conflict" OR MW "parent-child relations" OR MW "parenting" OR MW "intergenerational relations" OR MW "maternal behavior" OR MW "maternal behaviour" OR MW "paternal behavior" OR MW "paternal behaviour" OR MW "parent*"

AND

MW "East Asia*" OR MW "Southeast Asia*" OR MW "South east Asia*" OR MW "South-east Asia*" OR MW "Thailand" OR MW "China" OR MW "Malaysia" OR MW "Lao*" OR MW "Mongolia" OR MW "Timor*" OR MW "Vietnam" OR MW "Viet nam" OR MW "Indonesia" OR MW "Philippines" OR MW "Cambodia" OR MW "Myanmar" OR MW "Burma"

MW = Word in subject heading

* truncation

Hits: 750

Duplicates: 1

Cochrane Central Register of Controlled Trials

Search date: 29 June 2015

Search term	Hits
(parent* or mother* or father* or care* or family) and (China or Timor* or Thailand or Malaysia or Mongolia or Myanmar or Burma or Lao* or Cambodia or Viet Nam or Vietnam or Malaysia or Indonesia or Philippines)	69 (not imported into Endnote)
Duplicates	0

ERIC on EBSCOhost

Search date: 29 June 2015

Search term	Hits
KW = ("parents" or "parent role" or "parent child relationship" or "parenthood	149

education" or "parenting skills" or "parent influence" or "parent counselling" or "parent counseling" or "parent caregiver relationship" or "parent attitudes" or "caregiver" or "foster care" or "family violence" or "family programs" or "family programmes" or "family problems") and ("East Asia" or "South east Asia" or "South-east Asia" or "Southeast Asia" or "China" or "Timor" or "Timor-Leste" or "Mongolia" or "Thailand" or "Malaysia" or "Myanmar" or "Burma" or "Lao" or "Laos" or "Cambodia" or "Viet Nam" or "Vietnam" or "Malaysia" or "Indonesia" or "Philippines")	
Duplicates	1

Regional bibliographic databases

China Academic Journals Full-text Database

Search date: 26 June 2015

Database site:

<http://ezproxy-prd.bodleian.ox.ac.uk:2521/kns55/brief/result.aspx?dbPrefix=CJFD>

Subjects ticked:

Medicine & public health

Education & social sciences

Search terms:

Keyword: randomized controlled trial

OR

Keyword: randomised controlled trial

OR

Keyword: evaluation

AND

Keyword: parenting

OR

Keyword: parent

AND

Keyword: child

Hits: 788

South-East Asia: Index Medicus for the South-East Asia Region (IMSEAR):

Search date: 29 June 2015

Database site:

<http://imsear.li.mahidol.ac.th/>

Search terms:

Keyword: parenting

OR

Keyword: parent

Hits: 260

HERDIN NeON Database

Search date: 29 June 2015

Database site:

www.herdin.ph/

Includes:

- HERDINHealth Research and Development Information Network
- National Health Research Repository of the Philippines

Search terms:

Abstract: parenting

AND

Abstract: randomized controlled trial

OR

Abstract: evaluation

Hits: 647

Indonesian Publication Index

Search date: 29 June 2015

Database site:

<http://portalgaruda.org/?ref=home>

Search term:

Abstract: parenting

Hits: 271

Philippine E-Journals

Search date: 29 June 2015

Database site:

www.ejournals.ph

Search term:

Abstract: parent

Hits: 27

WHOLIS (World Health Organization Library Database):

Search date: 29 June 2015

Database site:

<http://disei.who.int/>

Search terms:

words or phrase "china or Timor or Thailand or Malaysia or Myanmar or Burma or Lao or Cambodia or Viet Nam or Vietnam or Mongolia or Malaysia or Indonesia or Philippines" AND subject "parenting or parent or mother or father or care or family" AND subject "child or

adolescent or infant" AND subject "randomized controlled trial" OR subject "randomised controlled trial" OR subject "controlled trial" OR subject "evaluation"

Hits: 2231

Violence Prevention Database of Evidence

Search date: 29 June 2015

Database site:

<http://www.preventviolence.info/EvidenceBase>

Search under WHO Region: South-East Asia Region:

Hits: 5

Search under WHO Western Pacific Region:

Hits: 56

WHO Clinical Trials Search Portal

Search date: 29 June 2015

Database site:

<http://apps.who.int/trialsearch/>

Search terms and hits:

- Parenting or Parenting and China: 25
- Parenting or Parenting and Cambodia: 0
- Parenting or Parenting and Thailand: 15
- Parenting or Parenting and Lao: 0
- Parenting or Parenting and Vietnam: 0
- Parenting or Parenting and Malaysia: 2
- Parenting or Parenting and Timor: 0
- Parenting or Parenting and Myanmar or Burma: 1
- Parenting or Parenting and Indonesia: 1
- Parenting or Parenting and Philippines: 3
- Parenting or Parenting and Mongolia: 0

Grey literature search strategy

UNICEF Innocenti Research Centre

Search date: 10 July 2015

Search term:

Keyword: Parent

Hits: 37

ISPCAN

Search date: 29 June 2015

Database site:
www.ispcan.org

Search terms and hits:

- Parenting and China: 77
- Parenting and Cambodia: 32
- Parenting and Thailand: 65
- Parenting and Lao: 12
- Parenting and Vietnam: 20
- Parenting and Malaysia: 65
- Parenting and Timor: 2
- Parenting and Myanmar or Burma: 8
- Parenting and Indonesia: 20
- Parenting and Philippines: 68
- Parenting and Mongolia: 18
- For full text review: 0

Save the Children

Search date: 10 July 2015

Database site:
<http://resourcecentre.savethechildren.se/>

Search terms and hits:

- parent* + evaluat*: 41
- Filter: China: 1
- Filter: Cambodia: 1
- Filter: Thailand: 1
- Filter: Malaysia: 0
- Filter: Indonesia: 0
- Filter: Philippines: 0
- Filter: timor: 0
- Filter: Mongolia 0
- Filter: laos: 1
- Filter: Myanmar: 1
- Filter: Vietnam: 0

Asian Development Bank Evaluation Resources

Search date: 10 July 2015

Database site:
<http://www.adb.org/site/evaluation/resources/>

Search term:
Keyword: parenting

Hits: 23

ARNEC-Net

Search date: 10 July 2015

Database site:
www.arnec.net

Categories searched and hits:

- Academic research papers: 15
- Reports: 87
- Parent/Family education/community involvement: 13

ProQuest Dissertation & Theses Database (Global full text plus UK and Ireland abstracts)

Search date: 10 July 2015

Search terms:

ab((parent* OR mother* OR father* OR care*)) AND ab((China OR Timor* OR Thailand OR Malaysia OR Myanmar OR Burma OR Lao* OR Cambodia OR Viet Nam OR Vietnam OR Mongolia OR Malaysia OR Indonesia OR Philippines)) AND ab((trial OR random* OR evaluat*))

Hits: 841

APPENDIX B. FORMATIVE EVALUATION: DATA COLLECTION TOOLS

Appendix B.1 Guide for Individual Interviews with Officials, Experts, and Practitioners

Aim

To learn from officials, experts and practitioners regarding their views on the potential relevance, acceptability and feasibility of a locally adapted parenting programme.

Approach

The interview guide uses an open-ended approach to soliciting views and feedback from officials, experts and practitioners during the formative evaluation phase, in a manner that is unbiased and non-judgmental. The two interviewers should conduct the all interviews according to the below steps, while simultaneously allowing themes to emerge based on the expertise of the interviewee, as well as the importance he/she places on particular topics.

Step 1: Introduction to the interview (estimated time: 10 minutes)

We would like to thank you for taking the time to participate in this interview. We are interviewers working with the University of Oxford on a project funded by UNICEF Thailand. The purpose of the project is to adapt and test a parenting programme to prevent violence against children and strengthen parent-child relationships within low-income families in Thailand, and is led by an international partnership between the University of Oxford, University of Cape Town, Ministry of Public Health, and UNICEF Thailand. We will be piloting the programme in Thailand in Udon Thani province.

We are interviewing you, as well as 12-19 other government officials, experts and practitioners in the public health and social welfare sectors, so that we can learn about your perspectives and experiences on existing support for parents in Thailand, opportunities for improving such support, as well as your thoughts on a parenting programme that is currently being adapted for Thailand. Please note that there are no right or wrong answers or comments during this interview, and that we are interested in having a transparent and open conversation about your views and suggestions.

This interview will take 60-90 minutes. If more time is required, the lead interviewer will ask the interviewee if he or she is willing to be interviewed for an additional 15 minutes; the time will only be extended if he or she is in agreement. The lead interviewer will ask several questions, while the other interviewer will write down a few notes during our discussion.

We will record the interview on an audio recorder. We will destroy this recording when the project is completed. However, if you are not happy with the interview or with parts of the interview, you have the option to request that the recording or parts of the recording be deleted immediately following the interview.

All responses will be confidential and only viewed by the research team. The only exception is if you disclose information that a child (person under aged 18) has been seriously harmed or is at risk of serious harm; in this case the research team will discuss the best course of action to be taken in line with the *Child Protection Act 2003*. Your name and identity will remain private, and will not be mentioned in any published research report.

Please remember that you have the right to not answer any question that you do not want to answer for any reason. If any of the questions asked are unclear, please let us know so that we can explain them in a better way.

Before we begin the interview, are there any questions at all?

Step 2: Role in relation to existing parenting programmes and services

First, we would like to ask about your role in relation to services for parents and primary caregivers of children aged 2-9 years. Can you describe your role and these services?

Probes:

- What is the objective of these services?
- What is the coverage of these services?
- Who did these services target?
- Have there been any evaluations of these services? If so, what were the findings?
- What other professions deliver similar services? What government departments or ministries?
- Triple P programme
 - What was your involvement in the training of facilitators for the Triple P programme in Udon Thani?
 - Did those facilitators eventually deliver the programme to families? If so, in what areas? Has an evaluation of programme delivery been conducted?

Step 3: Key parenting programme themes

Before we ask the next question, I would like to provide you with a short overview of the parenting programme that we will be providing to parents and primary caregivers in Udon Thani.

The parenting programme provides information on improving parent-child relationships to parents and primary caregivers of children aged 2-9 years living in low-income communities. Primary caregivers are those persons who may be relatives or non-relatives who take care of children in this age group, because the child's parents are working elsewhere, are deceased, or for some reason cannot care for the child.

There will be two facilitators from different professions per each group of 15 parents/primary caregivers, possibly from these four professional groups: nurses, Village Health Volunteers, social workers, and public health officers. They will be required to have experience in working with parents of children in this age group. The programme will be delivered on a weekly basis over 8 weeks. After each weekly session, the parents/primary caregivers will have an assignment to practice the new skills that they learned at home with their children. They will talk about their progress at the next week's session.

At the end of the programme, the aim is that parents will use less harmful disciplinary practices, rather than corporal punishment and verbal abuse, and develop a more positive and warm relationship with their child.

This was an overview of the parenting programme that will be provided. Do you have any questions about this information at all?

Next, we would like to ask you about your thoughts regarding what content should be provided in a parenting programme which aims to strengthen parent-child relationships, help parents manage child behaviours, and use non-violent forms of discipline.

- What themes or issues do you think would be useful and culturally relevant to such a programme for families in Udon Thani?
- Do you think this content would be similar or different to programmes for families in other parts of Thailand? Why or why not?
- Are these themes currently being included in existing services? How so?
- If such content is currently not included, do you think service providers would face any difficulties in talking about these themes or issues with parents/primary caregivers? Why or why not?

Step 4: Programme structure and schedule

Next, we would like to ask you about your thoughts on the way that the parenting programme is planned to be structured and scheduled. We are planning that the programme be delivered in weekly, group-based sessions in a hospital setting. The sessions may be delivered on the weekend, with each session lasting about 2 to 2.5 hours.

- What do you think would be the benefit of having group-based sessions, as opposed to one-on-one or seminar formats? What do you think would be a drawback of having group-based sessions?
- What are your thoughts on having a parenting programme delivered on the weekends? What difficulties might this pose for service providers?
- How often do you think would be the best and most feasible way to deliver a parenting programme?
- What are your thoughts on conducting home visits for parents, in addition to the group-based sessions?

Step 5: Programme logistics

We would now like to ask you about the logistics of delivering the programme. We are planning to deliver the programme in a hospital setting, with about 15 parents/primary caregivers per group. Participation in the group will be completely voluntary, but we will target low-income communities for recruiting parent/primary caregiver participants.

Deliverers and Setting

- What do you think about the hospital setting for this programme? Are there any positive or negative factors related to having the programme in this setting?
- Nurses, Village Health Volunteers, social workers, and public health officers may be trained to deliver the programme. What might be the benefits of having these professions as programme deliverers? What would be some of the challenges?
- Programme deliverers may be expected to commit from 1.5 to 2.5 full days for programme delivery. This may include time for preparation, group session, possible home visits for non-attendees, and supervision. Do you envision any challenges with this commitment and if so, what would they be and what could be some possible solutions to these challenges? What would be the maximum amount of time that they could commit? Is it different between these four professions? How so?

Group size, recruitment, attendance and engagement

- What are your views on the size of the parent groups (i.e., 15 participants per group)? Is this adequate, too many, or too few? What would you recommend?
- Based on your expertise and experience, what challenges do you think we may face in recruiting parents and primary caregivers to participate in the programme?
- What challenges do you think parents might experience in attending the sessions?

- What could we do to help overcome some of these challenges?
- What challenges do you think parents might have in practicing skills during the sessions and at home?

Step 6: Potential for programme scale-up

Finally, we would like to ask you about your views regarding the potential for the programme to become a scaled-up and institutionalized service that is delivered to a large number of parents and primary caregivers of 2-9 year olds.

Availability

- What challenges and opportunities might exist in making a parenting programme available in remote parts of Udon Thani or other rural areas in Thailand?
- In what other venues do you think we could deliver parenting sessions? What venues might be easier to attend in more rural areas?

Accessibility

- What challenges and opportunities would prevent or enable more low-income parents/primary caregivers to access the programme?
- What challenges and opportunities would prevent or enable parents with children with behavioural problems to access the programme?
- What challenges and opportunities would prevent or enable parents who are physically abusing, emotionally abusing or neglecting their children to access the programme?

Service system capacity

- Do you think that there is room for incorporation of this programme within the public health system? Why or why not?
- What opportunities and challenges might exist for incorporation of this programme within the public health system?
- What about training and supervision? Who and where would be the most suitable location to train programme facilitators and supervision?

Appendix B.2 Guide for Focus Group Discussions with the Parenting Experts Working Group

Aim

To establish a Parenting Experts Working Group that will advise the PLH-Thailand research team on how the parenting programme prototype should be adapted, considering issues of cultural and contextual relevance and feasibility. The Working Group will review and provide suggestions on programme content, structure and methods of delivery, with a focus on ensuring a balance between fidelity and fit of the intervention to the target population in Thailand.

Approach

The guide for the Parenting Experts Working Group uses an open-ended approach to soliciting views and feedback from Working Group members, in a manner that is unbiased and non-judgmental. The lead facilitator (Co-Investigator Tapanya) and the co-facilitator (Co-Investigator McCoy), will conduct the Working Group discussions according to the below major agenda items, while simultaneously allowing additional items and tasks to emerge based on the importance placed on particular topics of discussion by Working Group members. The major agenda items may shift between Working Group discussions, depending on the flow of discussion and progress made in-between meetings (e.g. via e-mail).

First focus group discussion

Agenda

1. Introduction to the Parenting Experts Working Group (script as below)*
2. Member introductions
3. Review and approval of the Working Group objectives
4. Review and adoption of today's agenda
5. PLH-Thailand programme content
 - a. Short presentation on the core principles and themes of the parenting programme
 - b. Discussion on 12 themes as presented in the Facilitator Manual and Parent Handbook, their cultural relevance, and how concepts and illustrations can be adapted for Thailand
 - i. Spending quality time with children
 - ii. Naming feelings
 - iii. Saying what you see
 - iv. Using words to describe emotions and actions of children

- v. Using praise and rewards to promote positive child behaviour
 - vi. Giving positive, specific, and realistic instructions to promote compliance
 - vii. Setting household rules and routines to keep children safe
 - viii. Distracting and redirecting children from negative to positive behaviours
 - ix. Ignoring negative attention seeking and demanding behaviour
 - x. Using Time-Out for aggressive, destructive, or dangerous behaviour
 - xi. Using consequences to teach children responsibility
 - xii. Involving children in solving problems
6. PLH-Thailand delivery and structure
 - a. Short presentation on delivery and structure based on experiences in South Africa and the Philippines
 - b. Discussion on cultural relevance and potential for adaptation:
 - i. Deliverers and setting
 - ii. Structure and schedule
 - iii. Group size, recruitment, attendance and engagement
 7. Wrap-up and agreement on follow-up actions
 8. Agreement on date/time of next focus group discussion

****Introduction to the Parenting Experts Working Group (estimated time: 10 minutes)***

We would like to thank all of you for taking the time to participate in this Parenting Experts Working Group. We are facilitators working with the University of Oxford on the Parenting for Lifelong Health-Thailand project funded by UNICEF Thailand. The purpose of this Working Group is to act as a technical advisory body for the cultural and contextual adaption of Parenting for Lifelong Health 2-9 for Thailand, bearing in mind that this programme was originally developed in South Africa and will be pilot tested in Udon Thani. We hope that we can benefit from your expertise in the fields of parenting, child, and adolescent mental health, and/or the prevention of violence against children in order to inform how the content, structure and delivery of the programme can be strengthened.

Each of the four Working Group discussions will take about 3 hours; if more time is required, the lead facilitator will ask the Working Group if members are willing to continue meeting for an additional 30 minutes; the time will only be extended if all members are in agreement. The lead facilitator will guide us through the agenda, while the other facilitator will make a record of the key decisions and important points that emerge. We will record the discussion on audio and video recorders, to ensure that we accurately capture the discussions. The

draft record of each focus group discussion will be shared with you via email, and we would welcome any revisions or additions from you to these records.

All points made during these focus group discussions will be confidential and only viewed by the research team. However, any disclosed information regarding a child (person under 18 years) who has been seriously harmed or who is at risk of serious harm will be discussed by the research team, and an appropriate course of action taken in line with the *Child Protection Act* 2003. Your de-identified data may be shared with other researchers in the future. Unless you provide us with permission to identify you as a member of this Working Group in published papers and project reports, we will keep your name and identity private.

Please remember that you have the right not to contribute to any agenda item or to answer any question posed by the facilitator for any reason. If any of the questions asked are unclear, please let us know so that we can explain them in a better way.

Before we begin, are there any questions at all?

Second focus group discussion

Agenda

1. Welcome
2. Any amendments to last meeting's record
3. Review and adoption of today's agenda
4. Update on the formative evaluation
5. Discussion on the proposed restructuring of the 12 session programme into 8 sessions
6. Discussion on adaptations to illustrated stories
7. Wrap-up and agreement on follow-up actions

Third focus group discussion

Agenda

1. Welcome
2. Any amendments to last meeting's record
3. Review and adoption of today's agenda
4. Brief update on study progress
5. Presentation on key changes made to the adapted 8-session PLH Thailand programme
6. Discussion on the adapted Facilitator Manual (Sessions 1-8)
7. Wrap-up and agreement on follow-up actions

APPENDIX C. FEASIBILITY PILOT: DATA COLLECTION TOOLS

Appendix C.1 Protocol for Translation and Adaptation of Feasibility Pilot Research Instruments

Purpose of this protocol

The purpose of this protocol is to delineate a clear procedure for developing Thai language versions of particular English language research instruments to be used during the feasibility pilot and RCT, in the absence of full psychometric testing, adaptation, and validation of such instruments. Such a protocol is necessary given the significant discrepancies in the English and Thai languages lexica, with the English language comprising approximately 250,000 English words (*Oxford Dictionaries Online*, 2012) in comparison to approximately 30,000 words in Thai (Theeramunkong et al., 2009). This presents challenges in identifying Thai words that can convey the same meaning as the original English terms.

This protocol adheres to a symmetrical approach to translation, which promotes conformity of meaning and colloquialism in both the source and target languages. By following a step-by-step process drawing from established methodological approaches for translation in the literature, the aim is to create Thai language versions that have conceptual, semantic, and content equivalency with the original instruments (Sousa & Rojjanasrirat, 2011). Implementation of this method will involve the following steps:

1. Forward translation
2. Back translation
3. Initial comparative review
4. Multi-disciplinary panel
5. Pre-testing
6. Finalization

Applicable research instruments under the PLH 2-9 Thailand research project are as follows:

1. Guide for the interviews with parents and primary caregivers – Feasibility pilot
2. Guide for the FGD with facilitators – Feasibility pilot
3. Screening tool
4. Outcome Evaluation Questionnaire
5. HOME Inventory assessment
6. Participant satisfaction survey

Steps

1. Forward translation

A translator, preferably one who is an expert in the fields of parenting and child maltreatment, will conduct the forward translation from English to Thai. The translator should be bilingual, with a proficiency in English but whose mother tongue is Thai. He/she should also be bicultural, with in-depth experience of both cultures (Sousa & Rojjanasrirat, 2011).

The following guidelines will be followed, largely in line with WHO recommendations on the translation and adaptation of instruments (WHO, 2016):

- The approach to translation will be an emphasis on conceptual rather than literal or word-for-word translations. The translator should consider the meaning behind the original term and strive to translate it into the most relevant, clear, concise, and simple word(s).
- The terms used should generally be common to conversational language, and devoid of jargon. Terms that should be avoided include technical terms, colloquialism, idioms, or vernacular terms that may be unfamiliar or misunderstood by the target audience.
- The translation should appeal to the broadest audience. The translator should consider the target audience for the instrument and what the respondent may understand or interpret when hearing the translated question or information.
- The translator should aim to use as few words as possible, avoiding the use of long sentences with many clauses.
- Issues of gender, age, and ethnicity should be considered during translation, in order to avoid using terms that may be considered offensive by or inappropriate for different demographic groups.

2. Back translation

The forward translation resulting from the first step will then be back translated by an independent translator, who is similarly proficient in English but whose mother tongue is Thai. The back translator will be completely blind to the English language version of the instruments. As in the forward translation, the back translator will emphasize conceptual and cultural equivalence, rather than literal translation.

3. Initial comparative review

Following the completion of both translations, the Project Coordinator will compare the original English version of each instrument with the forward translation and the back translation, and will highlight any inconsistencies in terms or concepts across two or more documents. These

three documents will then be prepared for the purpose of facilitating a review by the multi-disciplinary panel.

4. Multi-disciplinary panel

The Research Manager will then convene a multi-disciplinary panel, consisting of herself, the forward translator, a bilingual expert in the field, and a bilingual non-expert. The purpose of this step is to ensure the conceptual, semantic, and content equivalence of the research instruments, as well as to identify and resolve any key discrepancies or inadequate/inappropriate expressions or concepts between the two translations. If there are any previous translations of the research instruments, the panel will be provided with these translations in order to promote consistency with previous versions.

‘Conceptual equivalence’ refers to the extent to which a concept exists in both the source and target cultures, while ‘semantic equivalence’ refers to the meaning behind sentence structure, colloquialisms, or idioms in both the source and target language instruments. Finally, ‘content equivalence’ involves the relevance of the ideas or terms within the instruments to each culture (Sousa & Rojjanasrirat, 2011).

Any ambiguities and discrepancies concerning cultural meanings and colloquialisms or idioms in words or sentences will be resolved through consensus among members of the panel. Any unresolved disputes will be resolved by a third, independent bilingual expert who is identified and agreed on by the research project Co-Principal Investigators and Co-Investigators.

The result of this process will be a final draft version of the research instruments.

5. Pre-testing

In order to ensure that the instruments are clear and able to be understood by the target population, the screening tool, outcome questionnaire, and HOME Inventory assessment will be pre-tested by trained data collectors with low-income parents of 2-9 year olds living in Udon Thani as part of their initial 6-day training. Each instrument will be tested with two different respondents.

Following each round of field-testing of these instruments, the Research Manager and Co-Principal Investigators present at the training will hold systematic debriefings with the data collectors in order to discuss and refine the instruments. The debriefing will ask the following:

1. Whether questions required further explanation or clarification in the Isan language;
2. What the respondents thought the question was asking;
3. Whether there were any terms that respondents did not clearly understand, and if alternative terms could be identified; and

4. Whether respondents found any terms to be inappropriate or offensive.

This step will omit pre-testing for the interview guides, which target facilitators and families who have participated in the PLH-YC programme and will not make sense to respondents who are unfamiliar with the intervention.

6. Finalization

The Research Manager, in discussion with the Project Coordinator and the local co-Principal Investigator, will then finalize the research instruments based on the findings from the pre-testing exercise. Each version of the translated instruments will be assigned a version number (e.g., 1.0). Further revisions may be undertaken following the feasibility pilot, based on feedback by respondents and data collectors, prior to the RCT.

References

- Oxford University Press (2012). *Oxford Dictionaries Online*. Retrieved from:
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- Theeramunkong, T., Kijisirikul, B., Cercone, N., & Ho, T. B. (2009, April). *Advances in Knowledge Discovery and Data Mining*. Paper presented at the 13th Pacific-Asia Conference, PAKDD 2009, Bangkok, Thailand.

Appendix C.2 Recruitment Guide

Aim

To contact parents/primary caregivers initially identified by the Health Promotion Hospitals and District Public Health Offices as potentially eligible for the study, and to determine their availability and willingness to participate in the screening.

Protocol (see corresponding Flow Chart below)

1a. For families in all sub-districts in muang district and Baan Luang sub-district, Phen district:

- a. The Project Coordinator (PC) receives a list of low-income families (persons with annual income of less than 100,000 THB) aged 18 years or older with children aged 2-9 years from participating Health Promotion Hospitals (HPHs) in muang district.
- b. PC asks Village Health Volunteers (VHVs) working with participating HPHs which families they think would benefit from a programme that helps parents and primary caregivers manage difficult child behaviours, such as frequent tantrums, refusal to follow instructions and rules, and aggressive and disruptive behaviours.
- c. PC collects these names from VHVs over the course of 3 days.

1b. For families in Na Phu sub-district, Phen district:

1. The PC receives a list of low-income families (persons with annual income of less than 100,000 THB) aged 18 years or older with children aged 2-9 years from Na Phu sub-district child protection system stakeholders, who they think would benefit from a programme that helps parents and primary caregivers manage difficult child behaviours, such as frequent tantrums, refusal to follow instructions and rules, and aggressive and disruptive behaviours.
2. PC asks each VHV and child protection network member to inform those parents/primary caregivers who have been referred that they may receive a call or home visit from the PC about the study.
3. PC organizes the names of parents/primary caregivers by village under each participating HPH.
4. The villages with the most numbers of names will be selected first. Each participating HPH should have at least one village selected.
5. The Research Manager will assist the PC is using a random number generator to randomly list the names of parents/primary caregivers.
6. PC will call each parent/primary caregiver in the order on which they appear on the list in each selected village, following the Recruitment Script.

7. PC will record the names and appointment times of those families who agree to a meeting for the screening on the Participant Recruitment Log.
8. PC will record the names and reasons why parents/primary caregivers are not interested in participating on the Participant Recruitment Log, if they agree to share these reasons.

Script

Hello, may I please speak to (insert name of potential participant)?

My name is (name of PC) and I am calling/visiting from the Parenting for Lifelong Health for Young Children in Thailand Research Project. This is a University of Oxford project with funding by UNICEF Thailand. We received your contact information from (insert name here).

We understand that parents and primary caregivers must do a lot of hard work to take care of children, and that it can be difficult sometimes. We are conducting a study to learn more about how we can support parents/primary caregivers in looking after their children in Thailand. Would you be interested in participating in this study?

- [If NO]: We would like to get some feedback from you as to why you are not interested in participating. Would you please tell me why? [PC records the information on the Participant Recruitment Log]. Thank you for your time. Goodbye!
- [If YES]: Thank you for your willingness to participate.

Persons who participate in the study would need to be able to attend a free, weekly group-based parenting programme at the local HPH during the weekend. This programme would be 8 weeks long. Are you able to attend such a programme?

- [If NO]: It would be helpful for us to know why you would not be interested in such a programme. Can you please tell me why? [PC records the information on the Participant Recruitment Log]. Thank you for your time. Goodbye!
- [If YES]: Thank you for this. There are a few more questions that I need to ask to determine whether you are eligible to participate.

Are you aged 18 years or older?

- [If NO]: Thank you for your time, but we are looking for parents/primary caregivers who are aged at least 18 years. Thank you and goodbye!
- [If YES]: *Proceed to next question*

Do you take care of any children between the ages of 2-9 year old in your household?

- [If no children aged 2-9]: Thank you for your time, but we are looking for parents/primary caregivers who look after children aged 2-9 years. Thank you and goodbye!
- [If YES]: How many children do you take care of?

Can you tell me the names, sex, and ages of each child aged 2-9?

[For each child aged 2-9] Has (name of child) lived in your household for at least 4 nights per week for the past 3 months?

- [If NO children aged 2-9 have spent at least 4 nights per week]: Thank you for your time, but we are looking for parents/primary caregivers with children aged 2-9 who spend at least 4 nights per week with them in their home. Thank you and goodbye!
- [For each child aged 2-9 who has lived in the house for at least 4 nights per week for the past 3 months] Are you the main person who takes care of (name of child)?
 - [If YES – and only 1 such child is identified] Thank you. [PC records name].
 - [If YES – and more than 1 such child identified] Thank you. **Can you please tell me which child has presented you with the most difficult behaviour to manage?** [PC records name].
 - [If not primary caregiver for ANY children aged 2-9]: May I please speak to the caregiver that spends the most time with (name of child)? [If not available, find out his/her contact information and call later].

Thank you for this information. We really appreciate that you are interested in participating in this study!

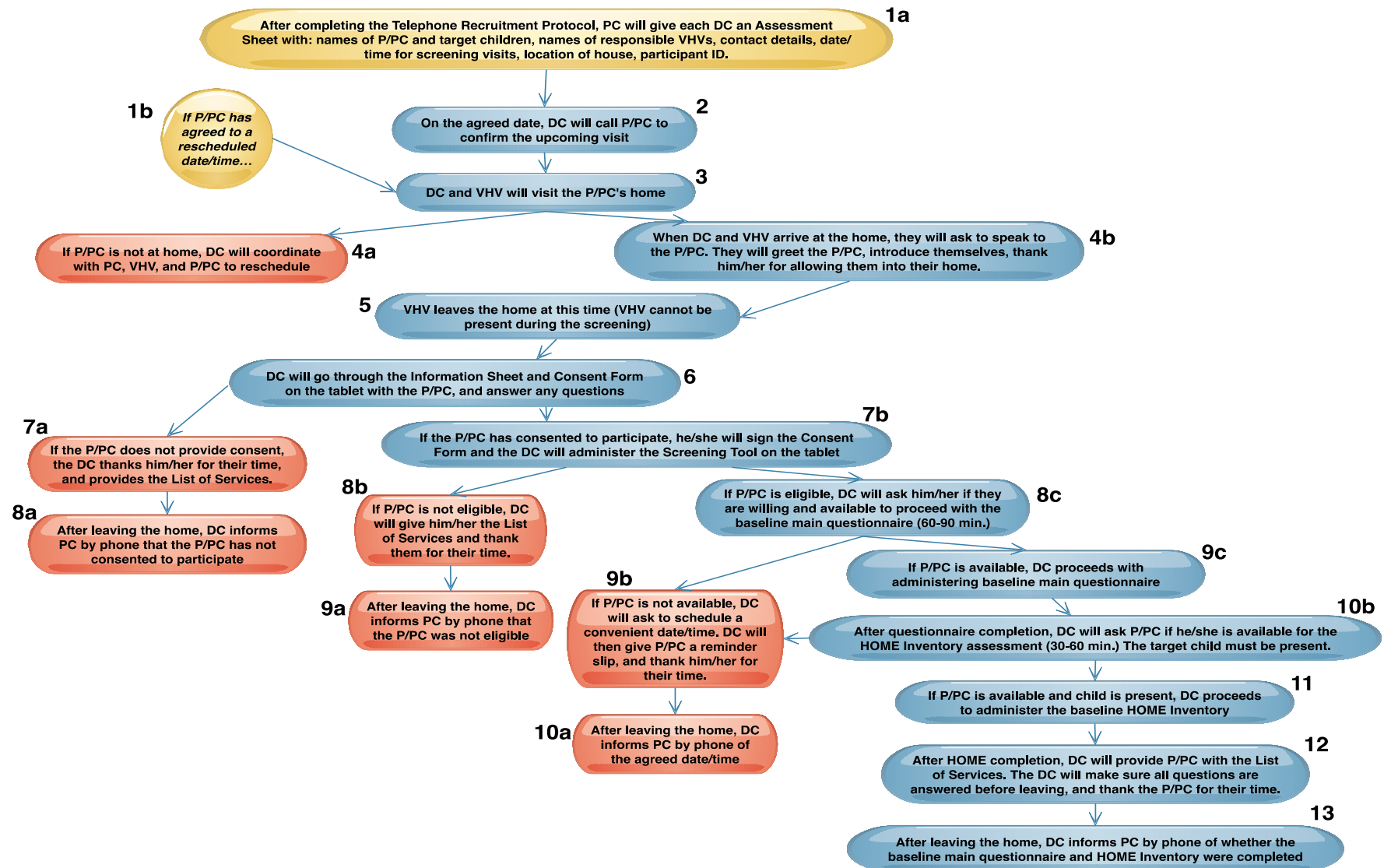
The next would be to schedule a time when we can visit you at your home to give you some more information about the study and to ask you some more questions about your relationship with [INSERT NAME OF CHILD]. These questions will confirm whether you are eligible to participate. The visit will take about 30 minutes.

The persons who would visit you would be a researcher and a Village Health Volunteer responsible for your household (insert name).

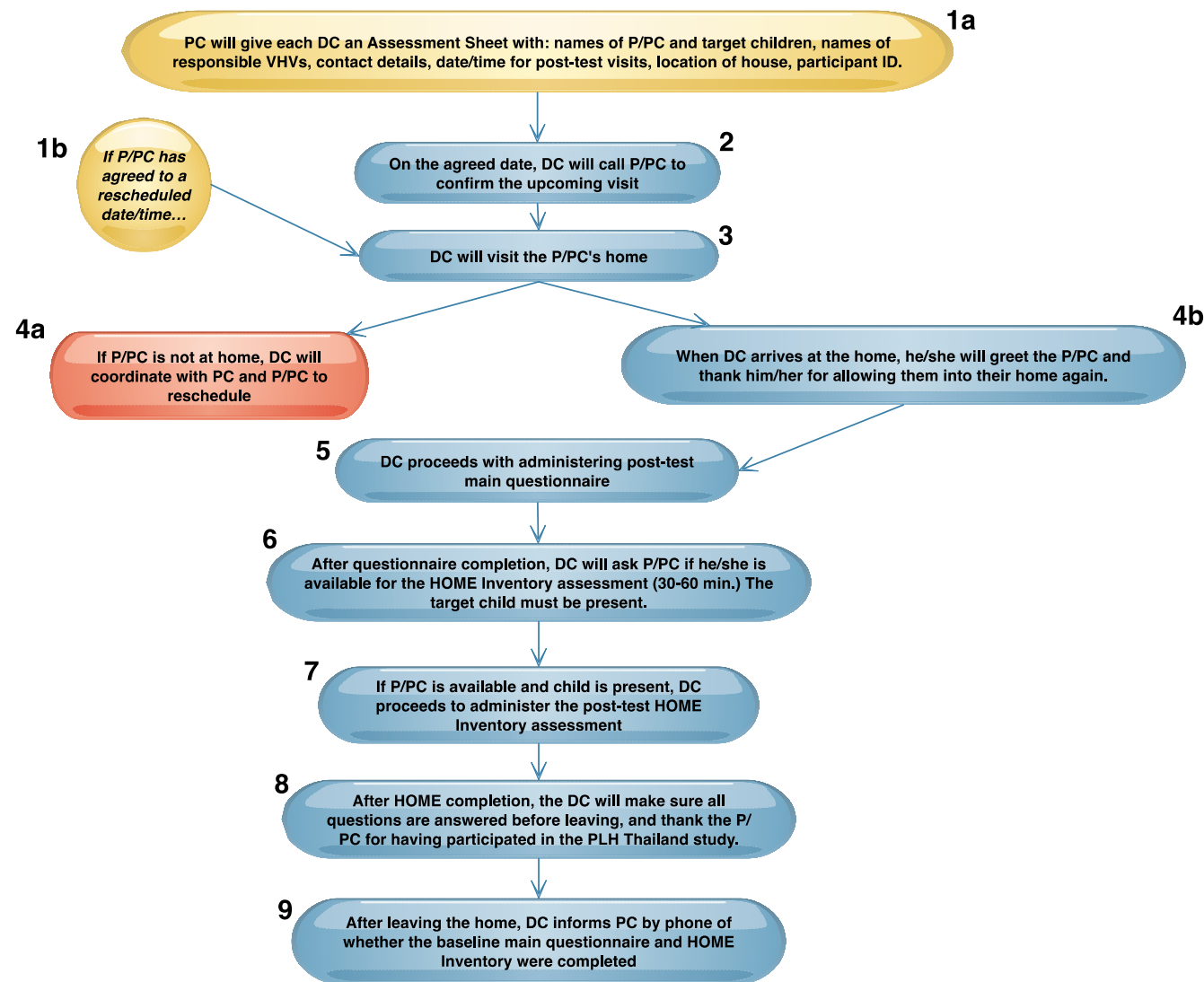
[Schedule a time and confirm the address].

Thank you very much for your time. Once again, we are very happy that you are willing to be part of our study. We look forward to visiting you on (date) at (time)! Goodbye!

Appendix C.3 Flowchart for Administration of the Screening Tool, Baseline Main Questionnaire, and Baseline Home Inventory Assessment



Appendix C.4 Flowchart for Administration of the Post-test Main Questionnaire and Home Inventory Assessment



Appendix C.5 Guide for Administration of the Screening Tool

Key

PC = Project Coordinator

DC = Data Collector

VHV = Village Health Volunteer

HPH = Health Promotion Hospital

P/PC = Parent/Primary Caregiver

Aim

To screen families initially identified through recruitment efforts as potentially eligible to participate in the study, using the MICS Child Discipline module, followed by administration of the baseline main questionnaire and HOME Inventory assessment (dependent on participant availability during the initial visit).

Protocol (see corresponding Flow Chart above)

1. (STEP 1A) After completing the Telephone Recruitment Protocol, the Project Coordinator (PC) will give each Data Collector (DC) an Assessment Sheet with: names of parent/primary caregivers, names of target child, names of responsible Village Health Volunteers (VHV), contact details, date/time for screening visit, location of house, participant ID.
2. (STEP 1B) If the parent/primary caregiver has agreed to a rescheduled date/time...
3. (STEP 2) On the agreed date, the DC will call the parent/primary caregiver to confirm the upcoming visit.
4. (STEP 3) The DC and VHV will visit the parent/primary caregiver's home.
5. (STEP 4A) If the parent/primary caregiver is not home, the DC will coordinate with the PC, VHV, and the parent/primary caregiver to reschedule.
6. (STEP 4B) When the DC and VHV arrive at the home, they will ask to speak to the assigned parent/primary caregiver. They will greet the parent/primary caregiver, introduce themselves, and thank him/her for allowing them into their home.
7. (STEP 5) The VHV leaves the home at this time (VHV cannot be present during the screening)
8. (STEP 6) The DC will go through the information sheet and consent form on the tablet with the parent/primary caregiver, and answer any questions.
9. (STEP 7A) If the parent/primary caregiver does not provide consent, the DC thanks him/her for their time, and provides the list of services.
10. (STEP 7B) If the parent/primary caregiver has consented to participate, he/she will sign the consent form and the DC will administer the screening tool on the tablet.
11. (STEP 8A) After leaving the home, the DC will inform the PC by phone that the parent/primary caregiver has not consented to participate.

12. (STEP 8B) If the parent/primary caregiver is not eligible, the DC will give him/her the list of services and thank them for their time.
13. (STEP9A) After leaving the home, the DC informs PC by phone that the parent/primary caregiver was not eligible.
14. (STEP 8C) If the parent/primary caregiver is eligible, the DC will ask if he/she is willing and available to proceed with the baseline main questionnaire.
15. (STEP 9C) If the parent/primary caregiver is available, the DC proceeds with administering the baseline main questionnaire.
16. (STEP 9B) If the parent/primary caregiver is not available, the DC will ask to schedule a convenient date/time. The DC then gives the parent/primary caregiver a reminder slip, and thank him/her for their time.
17. (STEP 10A) After leaving the home, DC informs PC by phone of the agreed date/time.
18. (STEP 10B) After the completion of the questionnaire, the DC will ask if the parent/primary caregiver is available for the HOME Inventory assessment. The target child must be present.
19. (STEP 11) If the parent/primary caregiver is available and child is present, the DC proceeds with administering the baseline HOME Inventory.
20. (STEP 12) After HOME Inventory completion, the DC will provide the parent/primary caregiver with the list of services. The DC will make sure that any questions the parent/primary caregiver has are answered before leaving, and thank the parent/primary caregiver for their time.
21. (STEP 13) After leaving the home, the DC informs the PC by phone of whether the baseline main questionnaire and HOME Inventory were completed.

Script

The Data Collector (DC) and the Village Health Volunteer (VHV) arrive at the parent/primary caregiver's home for the screening.

VHV: Hello! I have brought a visitor with me: (INSERT NAME). He/she is from the Parenting for Lifelong Health - Thailand Project. May we please speak to [parent of interest]?

(Parent/primary caregiver arrives)

VHV: I would like to introduce you to a visitor: (INSERT NAME). He/she is from the Parenting for Lifelong Health - Thailand Project.

If scheduled appointment: DC: *Thank you very much for letting me into your home to explain more about the study that we are doing to help support parents and their children in Udon Thani.*

If not scheduled appointment: DC: *I would like to talk to you about a study that we are doing to learn how to support parents and their children in Udon Thani.*

(If parent is interested in the programme - DC: *Thank you for your interest in the study, and for letting us give you some more information.*)

DC: *We would like to go through an information sheet with you. This sheet explains the study and what we will be doing. Please feel free to ask any questions as we go along. We want you to understand everything about the study.* [DC: GO THROUGH INFORMATION SHEET ON TABLET]

DC: *Do you have any other questions about the information we have given you so far?*

DC: *If you would like to take part in the study, you will need to sign this consent form on the tablet. We will go through the form with you. Signing the consent form means that you agree to take part in the study. If you would like to, you can take up to 7 days to think about whether or not you will participate.*

CONSENT - DC: *Thank you for giving consent to participate in the study. We are grateful that you are willing to participate in this important study that will help to improve the lives of children and their families in Thailand.*

(If consent has been signed, move on to screening. VHV leaves at this point.)

NO CONSENT - DC: *Thank you for giving us the time to explain the study. We are sorry to hear that you do not want to participate. Could you please tell us why you do not want to participate?*

[DC: Please write down reason why parent does not want to participate.].

WOULD LIKE TO TAKE MORE TIME – DC: *Thank you for giving us the time to explain the study, and we would be happy to give you more time to think about whether or not you would like to participate. Please let us know when we should contact you again regarding your decision.*

[DC: Make a note of the date/time and plan to follow-up. Inform PC of the date/time.].

DC: I will now ask you some questions about you and a child aged 2-9 in your care, to see whether you can take part in the study. You do not have to answer any questions you do not want to answer.

DC: We will go through the questions on this e-tablet [DC shows e-tablet]. We will record your answers in this e-tablet while we speak to you. If you prefer, you are welcome to answer the questions on your own or we can do it with you.

DC: When we have finished going through the questions, your answers will be sent to a secure database that only our research team will have access to.

DC: This means that no one else will ever be able to see the answers to your questions. Your answers will not be written down anywhere – they will only be in the database. You do not have to answer any questions that you are not comfortable answering.

DC: After we go through the questions, we will tell you if you can take part in the study or not.

DC: First of all, please tell me the name of the child aged 2-9 years old in your care. You must be the parent/primary caregiver that spends the most time with this child. Also, the child must live in the same household as you for at least 4 nights per week. If there is more than one child of this age and who meets these conditions, please select the child who you are having the most problems with in managing his/her behaviour. [DC: Please write down the name and nickname of the identified child].

DC: Thank you. We will now start going through the questions.

[DC: Conduct Screening Questionnaire – E-tablet will tell you whether parent is eligible or not.]

Not eligible – DC: Thank you again for answering all the questions. Here is a list of services that we are giving to all parents/primary caregivers that we meet with, whether or not they are eligible for the study, in case they may help you with any challenges that you may be facing.

We appreciate your time, and wish you and your family good health and happiness. Good luck and goodbye!

Eligible – DC: *Thank you again for answering all the questions. We are happy that you are eligible to take part in the study.*

DC: *Here is a letter indicating that you have been invited to participate in the study. [DC: Give parent/primary caregiver the letter].*

DC: *The next step is to determine if you are available for me to conduct the first interview with you now, or if I should come back at a later time? The interview would take 60-90 minutes.*

Not available – DC: *Can I please schedule a time when I can return and administer the first baseline questionnaire? If you are available to also complete the observational assessment, we can do this immediately afterwards. The observational assessment would require that [nickname of identified child] is also present, and would take 30-60 minutes. If you would prefer for me to do the observational assessment at a separate time, this is also fine.. Can you please tell me what would be a convenient date/time for the first baseline questionnaire? [DC: Make a note of the date/time and plan to follow-up, and gives the parent/primary caregiver a completed reminder slip]. Would it be possible to do the observational assessment immediately afterwards? [DC: Make a note of the response and plan to follow-up].*

Available – DC: *Thank you for being willing to proceed with the first interview. We really appreciate your time. [DC: proceed with baseline questionnaire].*

DC: *Also, to make extra sure that we can identify you, please have your Thai ID card or another photo ID ready on my next visit.*

DC: *Thank you very much! Here is a list of services that we are giving to all parents/primary caregivers that we meet with, whether or not they are eligible for the study, in case they may help you with any challenges that you may be facing. Do you have any questions for us before I leave?*

DC: *Thank you for welcoming me into your home. I appreciate your time. We look forward to having you involved in this study.*

[DC: Inform PC immediately after leaving the home of the eligibility status, future appointment dates, and whether baseline questionnaire was administered.]

Appendix C.6 Guide for Administration of the Main Questionnaire

Key

PC = Project Coordinator

DC = Data Collector

VHV = Village Health Volunteer

HPH = Health Promotion Hospital

P/PC = Parent/Primary Caregiver

Aim

To administer the outcome evaluation questionnaire to those parents/primary caregivers who have been screened using the screening tool (Appendix C) and determined to be eligible for participation in the study.

Script (see corresponding flow chart above)

The Data Collector (DC) arrives at the parent/primary caregiver's home at the scheduled time.

If this is the first time the questionnaire is being administered:

DC: Thank you for taking the time to meet with me at your home today. (Introduce yourself to parent/primary caregiver if you were not the person that screened them.) As mentioned during the last visit, I will be administering a questionnaire that will take about 60-90 minutes to complete. Can I please see the invitation letter that we gave you when we came to visit you in your home? Also, if you have one, may I see your Thai ID card or another photo ID card? (If they do not have an ID, verify using photograph taken during screening.)

If this is the second or third time the questionnaire is being administered:

DC: Thank you for taking the time to meet with me at your home today. As discussed, I will be administering the same questionnaire that you completed the last time. If you have one, may I see your Thai ID card? (If they do not have an ID, verify using photograph taken during screening.)

DC: Thank you! I just need to check you off of my list. (Check that the parent's name is on a list of names of parents that were screened for eligibility.)

DC: Today, I would like to ask you some questions about you, [Child's First Name], and your experiences of being a parent. I would like to ask you these questions in an area where it is unlikely that others will overhear us or that we will be disturbed. Is this the best place to ask these questions, or shall we move? (DC and parent/primary caregiver move as necessary).

DC: Before we start, please remember that all the answers that you give me are private.

If this is the first time the questionnaire is being administered:

DC: Just like during the first visit to your home, I will record your answers into this e-tablet after I read you each question. If you would prefer, I can enter them for you. Some of the questions will be sensitive, and a recording will read these questions out to you through this headset.

After we have gone through all the questions, the answers will be sent to a secure server. This means that no one other than the research team will have access to them.

DC: Do you have any questions before we begin?

(Make sure all questions are answered, and that the parent feels comfortable before you start with the questionnaire.)

DC completes the questionnaire with the parent/primary caregiver. Mid-way or at the end of the questionnaire, the DC and the parent/primary caregiver can take a break and share refreshments.

DC: We are finished! Thank you so much for your time and your honesty. Do you have any questions at all?

DC: Please allow me to give you with this envelope and small cash amount as compensation for your time. I will also need you to sign this sheet to acknowledge that you have received it.

DC: We now need to schedule a time when I can come to your home to observe you and [Child's First Name] together. This is the visit where I will be asking you a few further questions, and also observing you and your child engaged in different activities. We would like to see how you would interact as if it was any normal day; you and your child do not need to do anything that you would not normally do. Both you and your child will both need to be at home during the visit. The visit will take 30-60 minutes.

DC: When would be a good time for me to visit? (DC schedules a time for the visit and writes a reminder card for the parent/primary caregiver).

DC: Here is a card to remind you of the date and time when I will be coming to visit you. Someone will call to give you a reminder.

DC: Thank you very much for your time; I really appreciate it. Good luck, and I look forward to our next meeting

Appendix C.7 Guide for administration of the HOME Inventory assessment

Aim

To administer the HOME Inventory combination interview and observational assessment (Appendix E) to those parents/primary caregivers who have been screened using the screening tool (Appendix C) and determined to be eligible for participation in the study. The Data Collector should follow this script in addition to using the manual for administering the HOME Inventory assessment, as provided during training.

Script (see corresponding flow chart above)

[Data Collector (DC): When entering the home, talk to the parent only. Please be polite and friendly, but professional.]

If this is the first time the assessment is being administered:

DC: Thank you for taking the time to meet with me at your home today. (Introduce yourself to parent/primary caregiver if you were not the person that screened them.) As mentioned during the last visit, today I will be administering an interview and observational assessment that will take about 30-60 minutes to complete. During this time, it is important that [Child's First Name] remains with you in the same room during the entire assessment. Please interact with each other as you would on a normal day – you do not have to do or say anything out of the ordinary. (If this is the first time you have met: If you have one, may I please see your Thai ID card? If they do not have an ID, verify using photograph taken during screening.)

If this is the second or third time the assessment is being administered:

DC: Thank you for taking the time to meet with me at your home today. Today, we will go through the same observational assessment exercise that I conducted with you and [Child's First Name] last time. (Verify parent/primary caregiver using photograph taken during screening.)

DC: Thank you! I just need to check you off of my list. (Check that the parent's name is on a list of names of parents that were screened for eligibility.)

DC: Please let me review what we will be doing today. Remember, we will be focusing on [Child's First Name] during this assessment.

DC: It is important that you know that I am only here to do research. Research is about collecting information that can help us to understand something better.

DC: We want to learn more about parents and their children in Udon Thani. I am not able to give you advice on parenting, or to play with the child during this visit.

DC: We will need for the environment to be relatively quiet and free from outside disturbance during our meeting. If the phone rings during this visit, please do not answer or let the caller know that you will call back later - unless it's an emergency, of course. (Check if the room seems appropriate for conducting the assessment – if not, ask if you can move to another room or area. If the TV or radio is on, please ask the parent/primary caregiver to switch it off.)

DC: During this visit, I will ask you several questions, observe [Child's First Name]'s home environment, as well as observe you and [Child's First Name] doing different activities together. Please remember that I will not be able to interact with [Child's First Name] during this time. Do you have any questions before we begin? (Answer any questions that the parent may have about the assessment.)

[DC administers the HOME Inventory Form (Appendix E).]

DC: I have now finished the activity. Thank you for taking the time to be part of this study. It will help us learn to more about the challenges and experiences of parents and primary caregivers in Udon Thani.

DC: Please allow me to provide you with this envelope and small cash amount as compensation for your time. I will also need you to sign this sheet to acknowledge that you have received it.

If this is the first time the assessment is being administered:

DC: We will be contacting you to let you know whether or not you will be participating in the parenting programme. As mentioned previously, selection of participants is conducted at random through a computer programme – similar to a lottery. My colleagues and I do not choose who will be selected to participate.

DC: Thank you again for your time. Good luck and goodbye!

Appendix C.8 Guide for the Individual Interviews with Parents/Primary Caregivers

Aim

To learn from parents and primary caregivers regarding their views and experiences of participating in the parenting programme, including the content, delivery methods, scheduling, and logistics.

Approach

The interview guide uses an open-ended approach to soliciting views and feedback from parents and primary caregivers during the feasibility pilot, in a manner that is unbiased and non-judgmental. The two interviewers should conduct the all interviews according to the below steps, while simultaneously allowing themes to emerge based on feedback from the interviewee, as well as the importance he/she places on particular topics.

Step 1: Introduction to the interview

We would like to thank you for taking the time to participate in this interview. We are interviewers working with the University of Oxford on a project funded by UNICEF Thailand, which is also delivering the parenting programme “PARENTING FOR LIFELONG HEALTH - THAILAND” that you have enrolled in.

We are interviewing you, as well as at least 11 other parents and primary caregivers enrolled in the programme, so that we can learn about your views and experiences. Please note that there are no right or wrong answers or comments during this interview, and that we are interested in learning about your views and suggestions.

This interview will take about 60-90 minutes. If more time is required, the lead interviewer if you are willing to extend the interview for an additional 15 minutes. The time will only be extended if you agree. The lead interviewer will ask several questions, while the other interviewer will write down a few notes during our discussion.

We will record the interview on an audio recorder. We will destroy this recording when the project is completed. However, if you are not happy with the interview or with parts of the interview, you may request that the recording or parts of the recording be deleted immediately following the interview.

All responses will be confidential and only viewed by the research team. The only exception is if you disclose information that a child (person under aged 18) has been seriously harmed or is at risk of serious harm; in this case, the research team will discuss the best course of action to be

taken in line with our Child Protection Protocol and the *Child Protection Act*, B.E. 2546 (2003). Your name and identity will remain private, and will not be mentioned in any published research report.

Please remember that you have the right to not answer any question that you do not want to answer for any reason. If any of the questions asked are unclear, please let us know so that we can explain them in a better way.

Before we begin the interview, are there any questions at all?

Step 2: Overall experience

First, we would like to ask about your overall experience in participating in the programme. Can you please describe what this has been like for you?

Probes:

- How has your participation in the programme affected your relationship with [Child First Name]?
- How has your participation in the programme affected your relationship with any other children in your household?
- How has your participation in the programme affected your family in general?

Step 3: Parenting skills

Next, we would like to ask you about your thoughts on the parenting skills that were discussed during the parenting programme. Overall, what are your views regarding each of these parenting skills? *[To be discussed one at a time.]*

- One-on-One Time with your child
- Say What You See
- Talking about Feelings
- Using praise and rewards
- Giving instructions
- Setting household rules and daily routines
- Ignoring attention seeking and demanding behaviour
- Using consequences
- Problem solving with children and talking about difficult issues
- Taking a pause

Probes for each skill:

- How relevant have you found this skill in your interactions with [Child First Name]? Do you think it is a relevant skill for the culture in Isan?
- How difficult has it been to apply this skill in your interactions with [Child First Name]?
- Can you describe a particular situation when you were able to apply this skill, and it was successful? What about a situation in which you were able to apply this skill, and it was unsuccessful?
- Do you think you will continue to use this skill?

Step 4: Programme delivery

Next, we would like to ask you about your views on the methods used to deliver the parenting programme. We are interested in learning about whether you found these helpful or unhelpful.

- What are your views on the pre-programme home visit that was conducted prior to the start of the parenting programme?
- What are your views on the use of collaboration and group discussion in your parenting group?
- What are your views on the different generations of parents/primary caregivers present in your group?
- [If relevant]: During the programme, you received [insert number] home visits by your group facilitator. What are your thoughts on these home visits?
- What are your thoughts on the SMS/LINE messages that you have received?
- What are your thoughts on the weekly phone calls you received from the facilitators?
- What are your thoughts on the use of roleplay in your parenting group?
- What are your views on the use of illustrated stories during the parenting sessions?
- What are your views on the use of building blocks during the parenting sessions?
- Did you use the Parenting Handbook? If so, when and why did you use it?
- What are your thoughts on the House of Support model? How could it be improved?

Step 5: Programme logistics

We would now like to ask you about your views on the logistics of participating in the programme.

- What are your views on the scheduling of the programme sessions (timing and days of the week)?

- What do you think would have made it easier for you to attend these sessions?
- What are your thoughts on the training room and posters used during the parenting sessions?
- What are your thoughts on the length of each parenting session?
- What are your views on the size of the parent groups (i.e., 15 participants per group)?
- What are your thoughts on the facilitators who delivered the programme?

Appendix C.9 Guide for the Focus Group Discussion with Programme Facilitators

Aim

To learn from facilitators and coaches regarding their views and experiences of delivering the parenting programme - including the content, delivery methods, scheduling, and logistics – as well as their perspectives on the potential for programme scale-up.

Approach

The guide for the focus group discussion uses an open-ended approach to soliciting views and feedback from facilitators and coaches, in a manner that is unbiased and non-judgmental. The facilitators (Co-Investigator Tapanya and Co-Investigator McCoy), will conduct the discussion according to the below major questions, while simultaneously allowing additional issues to emerge based on the importance placed on particular topics of discussion by participants.

Step 1: Introduction to the focus group discussion

We would like to thank all of you for taking the time to participate in this focus group discussion. We are researchers working with the University of Oxford on the “PARENTING FOR LIFELONG HEALTH – THAILAND” project funded by UNICEF Thailand. The purpose of this discussion is to learn about your views and experiences in delivering the “PARENTING FOR LIFELONG HEALTH – THAILAND” programme, so that we can improve the content, delivery methods, scheduling, and logistics of the programme.

This discussion will take about 3 hours. If more time is required, the lead facilitator will ask the group if everyone is willing to continue the discussion for an additional 15 minutes; the time will only be extended if all members are in agreement. The lead facilitator will guide us through a series of key questions, while the other facilitator will make a record of the important points that emerge. We will record the discussion on audio and video recorders, to ensure that we accurately capture everyone’s views.

All points made during the discussion will be confidential and only viewed by the research team. However, any disclosed information regarding a child (person under 18 years) who has been seriously harmed or who is at risk of serious harm will be discussed by the research team, and an appropriate course of action taken in line with our Child Protection Protocol and the *Child Protection Act*, B.E. 2546 (2003). In published papers and project reports, we will keep your name and identity private. Your de-identified data may be shared with other researchers in the future.

Please remember that you have the right not to answer any question posed by the facilitator for any reason. If any of the questions asked are unclear, please let us know so that we can explain them in a better way. Your honest answers will be really appreciated.

Before we begin, are there any questions at all?

Step 2: Overall experience

First, we would like to ask about your overall experience in delivering the programme.

- Overall experience – what has it been like?

Step 3: Parenting skills

Next, we would like to ask you about your views on the parenting skills that have formed the core content of the parenting programme.

- Session 1: One-on-one time and Say What You See
- Session 2: Talking about feelings
- Session 3: Using praise and rewards
- Session 4: Giving instructions
- Session 5: Setting household rules & daily routines
- Session 6: Ignoring attention seeking & demanding behaviours
- Session 7: Using consequences
- Session 8: Problem solving with children and talking about difficult issues

Probes for each skill:

- How easy or difficult was it to engage parents/primary caregivers in using this skill?
- Can you describe a particular situation in which a parent tried to apply this skill at home?
- Do you think that we should keep this skill in the programme?

Step 4: Programme delivery

Next, we would like to ask you about your views on the methods that you used to deliver the parenting programme. We are interested in learning about your perspectives on how effective these methods have been.

- Overall structure – what are your views? Did 8 sessions feel like too many, just enough, or too little?
- Components:
 - Pre-programme home visits
 - Home visits to help those who missed a session

- Weekly phone calls
- SMS/LINE messages
- Collaborative: This programme uses a collaborative method that encourages parents to come up with solutions, rather than a lecture style. What are your views on using this method?
- Role-play: What are your views on using these in the programme?
- Building blocks: What are your views on using these?
- Illustrated stories: What are your views? Could any be improved?
- House of Support model: What are your views?
- Facilitator Manual: How could it be improved?

Step 5: Participant attendance and engagement

Next, we would like to ask you about participant attendance.

- The programme had a very high attendance rate. Can you share the methods you used in order to encourage your group members to attend?
- There were young mothers as well as elderly grandparents and great parents at the sessions. What are your thoughts on engaging both groups?

Step 6: Programme logistics and schedule

We would now like to ask you about the logistics and schedule of delivering the programme.

- Day of the week and time (morning or afternoon)
- Session length
- Size of the parent groups (i.e., 15 participants per group)?
- Nurses, public health officers, a social worker, and a VHV delivered the programme during the pilot. What are your thoughts on these professions working together?

Step 7: Training and coaching

Next, we would like to ask you about the training and support that you received in order to deliver the parenting programme. We are interested in learning about your perspectives on how effective and appropriate these methods have been.

- Overall views on the training
- How well did the training in November prepare you?
- What topics did you wish you had more training on?

- Did you feel like you had enough knowledge and support to make child and adult referrals?
- Coaching: What did you think? How could it be improved?

Step 8: Workload

Next, we would like to ask about the workload for delivering this programme.

- You had to fill out different forms each week (participant case profile, attendance sheet, phone call log, SMS/LINE log, facilitator report). How much time each week did it take you to fill out these forms?
- Managing delivery of the programme with existing job

Step 9: Programme scale-up

Finally, we would like to ask you about your views on the potential for scaling up this programme.

- Views on PLH Thailand being a regular service
- What other professionals or community members do you think could also deliver this programme?
- If you were asked by your supervisor whether you wanted to deliver this programme on a regular basis, would you want to do it? Why or why not?

CHAPTER 1: LEARNING TO USE THE HOME

BASIC CONCEPTS: H-O-M-E

H: Home

The data for the Child HOME Inventory is collected in the child's home. The **HOME** tool subscribes to the philosophy that you can truly appreciate a child's behaviour and development only if you have experienced the child's most intimate and powerful environment first-hand.

O: Observation

Scoring for many of the items is based on what is observed during the visit, so obviously the **HOME** Visitor must be a good observer. Training in the use of the **HOME** will help the Visitor to become a better observer of some of the small transactions between children and their parent or primary caregivers that offer important clues to the nature of the relationship.

M: Measurement

The **HOME** is an instrument designed to provide systematic measurement of the family environment. The measurement philosophy of the **HOME** recognises that skilled observation alone is not enough to allow a procedure to be useful for research purposes where precision of information is essential. In the **HOME** we have used the simplest possible measurement system (counting) and the simplest type of item (binary or yes/no). By observing whether certain events occur ("parent or primary caregiver praises child") and, if so, how often ("at least twice"), and then simply counting up the total number of designated behaviours, the combination of impressions and feelings is translated into a unified measurement system.

E: Environment

This is the environment in which the child and caregiver live. This is assessed by observation and asking questions.

The Interview

An essential skill for persons who will use the **HOME** is good interviewing technique. For all versions of the **HOME** Inventory, it is necessary to obtain some information via an interview in order to score some of the items. Although the interview is an important part of the **HOME**

Inventory procedure, it is not the only part. The Data Collector should regard him or herself as a Visitor - a friendly person *visiting* in the home, talking to a caregiver about his/her child.

Making Arrangements for the Visit

The Inventory is administered by having the Visitor go into the home at a time when the child is awake and engaged in a reasonably representative routine for that time of day.

Advance contact should make certain that the caregiver to be interviewed knows:

1. Whom the Visitor represents and what kind of information is needed
2. That the procedure will take about 30 minutes to one hour
3. That it is important for the child to be present and awake
4. That the parent or primary caregiver will be giving something of value to the Visitor and the group the Visitor represents.

If, after an appointment has been carefully arranged, the Visitor makes a trip to the home and finds that the child has just gone to sleep or has left the house, it is best to not do that visit and make another appointment. This is necessary, as scoring on many items depends on interaction between the caregiver and the child during the visit.

If the child is asleep when the Visitor arrives but is expected by the caregiver to awaken at any moment, it is all right to go ahead and begin the visit. Save all items that require observation of the caregiver and child together and go on to the items that rely on the interview.

ADMINISTRATION OF THE HOME

HOME Inventory items are sometimes based on information provided by the caregiver and sometimes on direct observation of what happens during the visit. The Visitor will be observing and interviewing at the same time.

The HOME Interview

It is important that Visitors are good interviewers. A good interviewer is a person who can put the caregiver at ease, can easily adjust subsequent questions to responses of the caregiver, and can ask questions in such a way as to avoid putting him/her on the defensive and thereby causing them to second guess the Visitor as to what is the "right" or "expected" response.

The Visitor's goal is to be objective and accepting as opposed to approving or disapproving. This is essential if she is to find out how the caregiver feels and what he/she does with her child rather than what the caregiver thinks the Visitor wants him/her to say.

Before actually trying to conduct an interview, it is essential that the Visitor is completely familiar with all items and the glossary terms.

Warming up

The Visitor should spend a little time at the beginning just getting acquainted with the caregiver and with the target child. If there are other adults present (e.g., the father, a grandparent or primary caregiver), the Visitor should make them feel comfortable as well. The conversation might be about common things that any two persons might talk about. This will allow the Visitor to get some sense of who lives in the house and what their roles are in the family. The general tone of the interview should be that of two friendly people who like to talk about children sitting down together. This warm-up period offers a good opportunity to say something nice about the child (refer to the child's appearance or behaviour, whatever comes easily and can be done honestly). Not only will the compliment help break the ice, but observation of the caregiver's response may enable you to score one of the items (Item 6).

General style

The Visitor must be careful not to ask questions in a threatening or judgmental manner. For example, rather than ask, *"Do you ever read stories to your child?"* It is preferable to ask, *"Do you ever manage to find time to sit down and read to her?"* If the caregiver answers affirmatively, the Visitor can explore further by inquiring, *"How often does she like you to do that?"* You will note here that the question of frequency is put on the child, not the parent or primary caregiver. However, in her answer she will inevitably describe her own behaviour, e.g., "He would like me to sit and read to him all day, but I can't do that. I tell him, 'I've already read to you, and one book a day is enough!'"

A good technique for beginning the interview, and for helping the caregiver to relax, is to ask him/her to describe a typical day in the home, using something like the following statement:

You will remember that we are interested in knowing the kinds of things the child does when he/she is at home. A good way to get a picture of what his/her days are like is to have you think of one particular day - like yesterday - and tell me everything that happened to him/her as well

as you can remember it. Start with the things that happened when he/she first woke up. It is usually easy to remember the main events once you get started.

If, when you suggest "yesterday," the caregiver should say something like, "Yesterday was unlike any day we ever had! My caregiver broke her wrist, and we spent most of the day in the hospital with her." Then ask the caregiver to think of the most recent day that was fairly typical for the family.

If the caregiver cannot get started, help with questions like, "Was she the first one to wake up?" The Visitor should jot down notes during the interview. If the caregiver asks why the Visitor is taking notes, reassure him/her that it is being done "to help my memory" or "to keep me from losing track." Most caregivers run through the day's events in about five minutes. Although this procedure is designed more to warm up the caregiver than to provide specific information, he/she may provide spontaneously the information needed to help score several items, e.g., "We went over to my parents' house and I had to hit him twice for spilling a drink all over the floor."

Aim for a comfortable interchange: one, which is not artificial, ritualized, or like a teacher asking students a series of questions with right or wrong answers.

Most of the information necessary to score the HOME Inventory will flow forth fairly smoothly. If the caregiver provides information via a spontaneous remark, accept it and score the appropriate item.

Do not ask the question unnecessarily when it surfaces in your interview schedule. This becomes easy once you are completely familiar with all the items.

It is important to check that you have the necessary information to score all items before leaving the home. It is very easy to think that you have done so, when actually you neglected to observe or inquire about some items.

The single most common mistake made in using the HOME Inventory is that the Visitor does not get enough information to score every item.

Wrapping up

It is important that you complete the coding of the HOME Inventory before leaving the home. **Do not trust your memory.** The Visitor should check all items that are based on observation and interview. Before leaving the home, the Visitor should score either a “yes” or “no” alongside every item contained in the Inventory.

The Observations

Throughout the session, the Visitor will be observing the behaviours of the caregiver. However, it is not a good idea to wait until the interview is completed to try and make a decision as to whether the behaviour has actually occurred. Familiarity with the items helps the Visitor know what behaviours to look for during the interview. ***Make a note that this behaviour happened as quickly as possible.***

The recommended review of the individual items at the end of the interview provides an opportunity to make certain that you have indeed paid careful attention to the kinds of behaviour referred to in the observation items. The Visitor may have forgotten to praise the child in order to note the caregiver's response (Item 6). If so, quickly check the Scoring Sheet, noting which items are not checked, so that the caregiver's response can be observed.

What should the Visitor do if he/she senses that the caregiver is trying to report what he/she *thinks* is supposed to be done with the child rather than what he/she actually does?

A good sign that this has occurred will be frequent questions such as, "What do you think about that? Am I doing the right thing?" It is important that the Visitor is honest. The Visitor should try to convince the parent or primary caregiver that the knowledge he/she supplies is helpful to our attempts to understand the relationships between children and their parents/primary caregivers. It should always be remembered that the intent of the procedure is to get information rather than express opinions or make suggestions. The Visitor should reassure any caregiver who is concerned about her response to a particular item that there are no right or wrong answers.

What should the Visitor do if the caregiver reveals personal problems?

Occasionally when you go into a home to conduct an interview, you will find a caregiver who, in his/her eagerness to talk, is making an implied or direct appeal for help with his/her own personal problems (e.g. marital problems, welfare assistance, etc.). The Visitor need not try to stop him/her from talking about these problems but does not need to feel that he/she must handle them if not qualified to do so. Also, there is the danger that the caregiver will talk so long about his/her

problems that there will not be, in the allotted time, an opportunity to get all the information necessary to score the HOME. The Visitor might say something like:

I can understand your being upset (or concerned) about that. When we finish discussing the things that take place in your daily life, we can talk about it more. Perhaps I can make some suggestions of places you can go for further information or help.

SCORING

As discussed in Chapter 2, all items on all forms of the Inventory receive a binary YES or NO score. Stick to the content of each item. The HOME Inventory is a standardized procedure. Like most other measuring devices, it contains a sampling of items from a much broader domain. Nonetheless, it is that particular sample that forms the "standard" of comparison. If the item says "Child has been praised at least twice during the past week for doing something," only one instance of praise does not count.

CHAPTER 2: ADMINISTERING THE CHILD HOME INVENTORY (2-9 years)

In Chapter 1, basic procedures for administering the HOME Inventory were given. In this chapter and the ones to follow, specific instructions pertaining to administering the HOME Inventory are provided. However, until a potential user is completely familiar with the procedure, some explanation of precisely what is intended by each item is necessary. Such explanation for all items in the HOME Inventory is provided in the glossary at the end of this chapter.

OBSERVING AND INTERVIEWING

There should be flexibility in observing and interviewing during the home visit in order to obtain valid information about the child's current home environment. Real homes are alive and dynamic, and most parents or primary caregivers are spontaneous and animated when they talk about their children. In such instances, you will get a better picture of the environment if you allow the parent or primary caregiver to lead, accommodating information provided to the wording of your items, and probe only when necessary. With other parents or primary caregivers, of course, getting information is much more difficult. In such instances, you will need to check your interview prompts, note (if you have not already memorised it) the exact wording of the items, and make certain that you get all the needed information. Even in such homes, flexibility and informality on the part of the Visitor are needed to avoid creating an interaction that is intrusive, formal, and business like.

For all items on the scoring sheet, “I” indicates an item that should be assessed based on Interview, while “O” indicates an item that should be based on Observation. Fifteen items on the sheet are assessed based on Interview, while 17 are based upon Observation.

Observations

What the Visitor needs to observe is the nature of the interaction between the parent or primary caregiver and the child. Even though the items are binary (YES/NO), they manage to communicate the tone of the interaction: Is it warm and loving or distant and possibly hostile? Is there mutual pleasure in the relationship or annoyance and frustration? Are the needs of the child recognised and accepted, or is the household run primarily according to the parent or primary caregiver's needs?

Knowing the items in advance of the visit and being familiar with the exact cutting points chosen for the binary items (e.g., once, twice) will help the Visitor remain alert throughout the visit for the requisite number of occurrences. During the wrap-up moments of the visit, it is crucial to **check and record** in case you need to "stage" something you might have forgotten (e.g., praising the child to note the caregiver's response) in order to be able to score all the observation items.

Child HOME Inventory (2-9 years)
SCORING SHEET

All items are scored with either a 'yes' or a 'no'. If the behaviour is observed during the visit, or if the parent/primary caregiver reports that the condition or event is characteristic of the home environment, score it as a 'yes.' If not, score it as a 'no.' All items should be scored before you leave the home. **Observation (O), or Interview (I) is indicated for each item.**

I. RESPONSIVITY	Yes/ No
1. I: Family has fairly regular & predictable daily schedule for child (meals, day care/school, bedtime hour, how much TV, homework, etc.).	
2. I: Parent/primary caregiver sometimes yields to child's fears or assists with routines to make them feel less fearful or uncomfortable (allows night light, accompanies child to new experiences, etc.).	
3. I: Parent/primary caregiver has praised the child at least twice during past week for doing something.	
4. I: Parent/primary caregiver holds child close 10-15 minutes per day.	
5. O: Parent/primary caregiver encourages child to interact with the Visitor.	
6. O: Parent/primary caregiver shows some positive emotional response to praise of child by Visitor.	
7. O: When speaking of or to child, parent's or primary caregiver's voice conveys positive feelings.	
8. O: Parent/primary caregiver converses with child at least twice during visit.	
9. O: Parent/primary caregiver answers child's questions or requests verbally.	
10. O: Parent/primary caregiver usually responds verbally to child's speech.	
11. O: Parent/primary caregiver praises child's qualities during visit.	
12. O: Parent/primary caregiver shows physical affection to child (e.g. caress, kiss, or cuddle) during visit.	
13. O: Parent/primary caregiver helps child demonstrate some achievement during visit.	
14. O: Parent/primary caregiver initiates verbal interchanges with Visitor, asks questions, makes spontaneous comments.	
15. O: Parent/primary caregiver uses child's name or nickname when talking to the child.	
16. O: Parent/primary caregiver gives instructions using positive words to describe actions.	
II. ENCOURAGEMENT OF MATURITY	
17. I: Parent/primary caregiver encourages child to carry out or help with certain self-care routines, e.g., feed oneself, make bed, clean room, clean up after spills, bathe self.	
18. I: Parent/primary caregiver encourages child to keep living and play area reasonably clean and straight.	
19. I: Parent/primary caregiver encourages child to put own outdoor clothing, dirty clothes, night clothes in special place.	
20. I: Parent/primary caregiver sets limits for child and generally enforces them.	
21. I: Parent/primary caregiver is consistent in establishing or applying household rules.	
22. O: Parent/primary caregiver follows rules of common courtesy during visit.	

III. EMOTIONAL CLIMATE	
23. I: Parent/primary caregiver lost temper with child during previous week.	
24. I: Child can express negative feelings toward parent/primary caregiver without harsh reprisals.	
IV. FAMILY INTEGRATION	
25. I: Child eats at least 1 meal per day, on most days, with the parent/primary caregiver and other family members.	
V. MODELING	
26. I: Some delay of food gratification is expected.	
27. I: Screen time (e.g. TV, smart phone, tablet) is used judiciously.	
VI. ACCEPTANCE	
28. I: One or more instances of physical punishment by the parent/primary caregiver during the past week.	
29. I: One or more instances of yelling at the child by the parent/primary caregiver during the past week.	
30. O: Parent/primary caregiver yells at or derogates child during visit.	
31. O: Parent/primary caregiver uses physical restraint during visit.	
32. O: Parent/primary caregiver hits, slaps, spansks, or kicks child during visit.	
33. O: Parent/primary caregiver pushes, pulls, or pinches child during visit.	

GLOSSARY

I. RESPONSIVITY

This factor is defined as describing the extent to which the parent or primary caregiver responds to the child's behaviour, offering verbal, tactile, and emotional reinforcement for desired behaviour and communicating freely through words and actions. Some of the items are based on responsivity of the parent or primary caregiver to the Visitor rather than directly to the child. Such items are based on the assumption that the parent or primary caregiver's style of responding to the Visitor will reflect regular patterns of social response and will predict interaction modes between caregiver and child.

Item 1) I: Family has a fairly regular and predictable daily schedule for child (meals, day care, bedtime, how much TV, homework, etc.). The emphasis of this item is on “fairly regular and predictable.” It is not necessary that the family have the same schedule every day of the week, but that the home be fairly predictable in the child’s eyes.

Item 2) I: Parent sometimes yields to child’s fears or assists with routines to make them feel less fearful or uncomfortable (allows night light, accompanies child to new experiences, etc.). This requires information as to whether there is anything the child is uncomfortable with or fears. If the caregiver says that there is nothing the child fears, determine what she would do if he had any. If she shows tolerance (“Oh, I’d let him have a night light, I suppose”), score “yes”. If she indicates intolerance (“I don’t believe in coddling a kid that way”), score “no”.

Item 3) I: Parent/primary caregiver has praised the child at least twice during past week for doing something. The praise may be for anything the child has done which the caregiver recognizes — carrying out a household chore, playing nicely with a sibling, sharing a toy, etc. In order to score this item, the interviewer may need to ask the parent how he/she encourages her child to take on new responsibilities.

Item 4) I: Parent/primary caregiver holds child close 10-15 minutes per day. This may not be possible at one sitting, especially if the caregiver has several children wanting his/her attention. A couple of minutes several times a day will receive credit. The caregiver may find time to hold the child and talk when he/she comes home from work or they may sit down and watch TV or look at a book together.

Item 5) O: Parent/primary caregiver encourages child to interact with the Visitor. This item should be scored “yes” if the caregiver actively encourages the child to meet, “wai,” say hello, or to say something else to the Visitor, or if the parent allows the child to input into the conversation without discouraging or correcting him/her.

Item 6) O: Parent shows some positive emotional response to praise of child by Visitor. In order for the parent to earn credit on this item, the interviewer must remember to offer some praise of the child. Make certain that your praise is genuine - do not try to fake it. Usually you will have no trouble deciding how to score this, as a caregiver might agree with you, add more facts to encourage you further, beam, etc. However, sometimes you will get little more than a “thank you” said without feeling or an embarrassed smile. If so, find more than one occasion to praise the child. If you consistently get a response that shows no feeling or pleasure, or one that communicates “I don’t know what makes you think that,” then score “no”. Be alert to observe the caregiver’s facial expression when you offer a remark.

Item 7) O: When speaking of or to child, parent’s or primary caregiver’s voice conveys positive feelings. What you are looking for here is evidence that the caregiver feels good about the child—sounds animated when speaking about him/her, does not use a flat or querulous tone of voice, etc. The intent of this item is to capture the feeling tone conveyed by the caregiver toward the child. Does the caregiver feel good about his/her child? Does he/she enjoy the child and talk about him/her in a pleasant, joyful manner rather than talk in a flat tone, which communicates, “She’s here, so I’ll put up with her.” Generally, comments that convey positive feelings will be accompanied by positive facial expressions.

Item 8) O: Parent/primary caregiver converses with child at least twice during visit. This item involves real conversation, not just vocalization or a disinterested grunt. Scolding and accusatory comments are not counted. The caregiver must make an effort to converse with the child and ask questions, talk about things, or engage in verbal interchanges other than scolding or degrading comments.

Item 9) O: Parent/primary caregiver answers child’s questions or requests verbally. In order to receive credit for this item the caregiver must make an effort to answer some question asked by the child. If he/she doesn’t know the answer, the caregiver may tell the child he/she doesn’t know but that they will look up the answer later. Responses such as “Shhhh! I’m talking,” or “Don’t bother me now” do not receive credit.

Item 10) O: Parent/primary caregiver usually responds verbally to child's speech. The key here is that the caregiver recognizes and acknowledges the child's vocalizations and does not ignore them. For a "yes" score, the response may be only a word or series of words or sounds such as, "Uh huh," "Um" or "Sure." If the child does not vocalize in any way during the interview, thereby giving no opportunity for response, the score would still be a "no".

Item 11) O: Parent/primary caregiver praises child's qualities during visit. A key element here is the spontaneity of the praise. Since most caregivers enjoy talking about and are proud of their children, this is not too hard to observe. Frequently a caregiver will speak with pride about how well his/her child throws a ball, plays sports, dresses him or herself, or does at school. Any of these would earn credit.

Item 12) O: Parent/primary caregiver shows physical affection to child (e.g. caress, kiss, or cuddle) during visit. This need not be a wild burst of showy affection. Simple signs of concern such as a mother gently tucking the child's shirt in, holding him on her lap, holding a hand, or a gentle pat on the shoulder would all receive a "yes". There must be at least one such incident.

Item 13) O: Parent/primary caregiver helps child demonstrate some achievement during visit. Note whether the caregiver consciously gets the child to sing a song, count, show how a toy works, or do anything that allows him/her to do something to impress the Visitor. All that is important is the caregiver's attempt to get the child to demonstrate something, not whether the child actually does it.

Item 14) O: Parent/primary caregiver initiates verbal interchanges with Visitor, asks questions, makes spontaneous comments. The key word in this item is initiates. In order to score "yes", the caregiver should carry on a two-way conversation rather than only participating in a question and answer situation.

Item 15) O: Parent/primary caregiver uses child's name or nickname when talking to the child. In order to score "yes", the caregiver must use the child's first name or nickname at least once when speaking with him/her. Saying 'noo' or 'meung' does not count.

Item 16) O: Parent/primary caregiver gives instructions using positive words to describe actions. In order to score a "yes", the parent/primary caregiver must give at least one positive instruction to the child. For example, he/she says, " Please speak more softly" or "Please slow down and walk," rather than "Stop shouting" or "Stop running in the house."

II. Encouragement of maturity

This subscale deals with the extent to which caregivers expect the child to demonstrate socially responsible and mature behavior and conform to family rules. Individual items reflect caregiver actions designed to foster the acquisition of these indicators of maturity.

Item 17) I: Parent/primary caregiver encourages child to carry out or help with certain self-care routines, e.g., feed oneself, make bed, clean room, cleans up after spills, bathes self. (A “yes” requires 3 out of 4 items.) Self-care may be interpreted rather broadly to include whatever self-care routines are appropriate for the child’s level of competence. The caregiver should provide encouragement aimed at developing these skills on a regular basis. Success in the training is not critical for the score; what is being assessed is the caregiver’s efforts to encourage such behavior. If the parent says something like, “He just does that on his own,” do not automatically give credit. Find out what the caregiver has specifically done to foster or reinforce the behavior.

Item 18) I: Parent/primary caregiver encourages requires child to keep living and play area reasonably clean and straight. In scoring this item, determine if the caregiver encourages the child to be responsible for picking up after him or herself, i.e., toys, books, etc. The areas involved include the living area, play area, or the child’s own sleeping area. In order to determine just how the caregiver encourages the behavior, it may be necessary to inquire about what they do when the child forgets. Success in the training is not critical for the score; what is being assessed is the caregiver’s efforts.

Item 19) I: Parent/primary caregiver encourages child to put own outdoor clothing, dirty clothes, night clothes in special place. The intent of the item is to determine whether the caregiver is encouraging the child to learn to take responsibility for his/her clothing. Success in the training is not critical for the score; what is being assessed is the caregiver’s efforts. For a “yes” score, the caregiver should encourage the child to routinely do these things.

Item 20) I: Parent/primary caregiver sets limits for child and generally enforce them. This includes things like curfew, homework before TV, or other regulations that fit a family pattern. For a “yes” score, clear limits regarding one or more activities must be established and enforced.

Item 21) I: Parent/primary caregiver is consistent in establishing or applying household rules. What is critical here is to know whether the caregiver shows consistency in enforcing rules established for the child’s behavior. It will be relevant to learn whether the caregiver is strict or

lenient in applying rules and to know what happens when the child fails to carry out his responsibilities. If there are no family rules, score a “no”.

Item 22) O: Parent/primary caregiver follows rules of common courtesy during visit. The intent of this item is to determine whether the caregiver models courteous social behavior. Does he/she turn the TV volume down or off when the interviewer arrives? Does he/she come to the door or simply yell, “Come in!” while continuing to lounge on the floor or in a chair? Does he/she offer the interviewer a seat? In cases where there are many people or children living in the same dwelling, does the caregiver arrange for some relative peace and quiet during the interview?

III. Emotional climate

This group encompasses the extent to which the caregiver can accept negative emotional expressions from the child and also the caregiver’s emotional composure.

Item 23) I: Parent/primary caregiver has lost temper with child during previous week. Losing temper means expressing anger to the child in a way that is physically or emotionally hurtful. It should involve shouting, denigrating, or harsh discipline.

Item 24) I: Child can express negative feelings toward parent/primary caregiver without harsh reprisals. This item is designed to determine if the caregiver can handle the child’s negative feelings and comments in a mature manner. “Harsh” is the key word here. Harsh reprisals mean physical or verbal punishment, and other harsh consequences, such as “no food for dinner” or “no presents for your birthday this year.” Examples of negative feelings would include, “I hate you!,” “I hate eggplant and I won’t eat it!” or a temper tantrum.

IV. Family integration

This subscale assesses the availability to the child of a consistent primary family group.

Item 25) I: Child eats at least 1 meal per day, on most days, with the parent/primary caregiver and other family members (such as the caregiver’s partner, the child’s siblings or cousins, and other relatives). This can be any meal during the day. The child must eat together with the family on the floor or at the table.

V. Modelling

This group assesses modeling by the parents of desirable and acceptable behavior, thereby communicating those expectations to the child.

Item 26) I: Some delay of food gratification is expected. One indication of increasing maturity is a lengthening of one's ability to delay gratification. One indication of a home environment that could foster maturity is the expectation, somehow communicated to the young child, that he/she should be able to delay gratification. One operational indication of this expectation would be a refusal to tolerate whining during the last 30 minutes of meal preparation (sending child out of the room, etc.). It is possible that this item can be scored during a broad discussion of food and eating habits. However, if not, the Visitor should inquire directly as to whether the child eats snacks any time he/she is hungry or whether household rules require for the child to wait until family meal time.

Item 27) I: Screen time (e.g. TV, smart phone, tablet) is used judiciously. The key word here is "judiciously." If the family does not have a TV, smart phone or tablet - though this would be rare in even the most impoverished homes - the score would be "no". Likewise, almost any attempt by the caregiver at regulating or scheduling will receive a positive score. If the TV is turned on in the morning and left on all during the day and night, regardless of what is on, a "no" is given. If the TV is left on during most of the child's waking hours, score "no". If no reasonable limitations are placed on the child's smart phone or tablet use, score "no".

VI. ACCEPTANCE

This group looks at the caregiver's acceptance of how he/she responds to difficult behaviour from the child and the avoidance of undue restriction and punishment.

Item 28) I: At least one or more instances of physical punishment by the parent/primary caregiver during the past week. In this case, the Visitor must rely on what the caregiver says. Even if the caregiver states that this week was most unusual and the child was spanked, the item should receive a "yes". Definitions of "physical punishment" seem to vary considerably. Many caregivers consider it to be a spanking of any sort whereas others would consider restraint and shaking a child as physical punishment. If in doubt, take the caregiver's definition.

Item 29) I: At least one or more instances of yelling at the child by the parent/primary caregiver during the past week. In this case, the Visitor must rely on what the caregiver says. Even if he/she states that this week was most unusual and the child was yelled at, the item should receive a "yes". The caregiver must have raised his/her voice and shouted at the child for doing or not doing something that was expected of him/her.

Item 30) O: Parent/primary caregiver yells at or derogates child during visit. This is an observation item, and the time period referenced is the duration of the visit. The caregiver must have yelled at or made a derogatory comment directly to the child. For example, if the caregiver tells the child directly that he is a bad boy, score a “yes”. If the caregiver does not yell at or derogate the child during the visit, but simply tells the Visitor that the child is bad, score a “no”.

Item 31) O: Parent/primary caregiver uses physical restraint during visit. This is an observation item, and the time period referenced is the duration of the visit. In a younger child, physical restraint might take the form of holding the child in the lap even though the child struggles to get down. Restraint for an older child might mean requiring him/her to sit in a chair to keep him/her out of the way, or jerking him/her back from handling items on a table. A “yes” score means that the caregiver has used physical restraint during the visit.

Item 32) O: Parent/primary caregiver hits, slaps, spansks, or kicks child during visit. This is an observation item, and the time period referenced is the duration of the visit. In this item the hit, slap, spank or kick must be in anger or as a reprimand for misbehaviour. An affectionate pat on the bottom as the caregiver sends the child out to play does not mean the item should receive an “yes” score. A “yes” score means the caregiver has hit, slapped, spanked, or kicked the child during the visit.

Item 33) O: Parent/primary caregiver pushes, pulls or pinches child during visit. This is an observation item, and the time period referenced is the duration of the visit. In this item the push, pull, or pinch must be in anger or as a reprimand for misbehavior. An affectionate pinch on the cheek does not mean the item should receive an “yes” score. A “yes” score means the caregiver has pushed, pulled, or pinched the child during the visit.

CHAPTER 3: CHILD HOME INVENTORY PROTOCOL

Introduction

This interview schedule provides a guide to doing an assessment of a child aged 2-9 years using the HOME Inventory.

The interview schedule provides a simple outline for conducting a HOME Inventory assessment based on taking the main caregiver through a **specific day** for the child. If possible, this should be the day that preceded the interview, since memories are likely to be more accurate. If the child is old enough to go to nursery, a Child Development Center, or school, it would be preferable to

select a weekday, as it will allow you to discuss getting the child ready for school and when he/she comes home and (potentially) needs to complete homework.

In the interview script, the day has been broken down into key events or periods (for example, **'Getting Up'**). Guidance and suggested questions are provided to help with discussing each part of the day.

Prompts/directions to the interviewer are in 'plain type' and suggested questions to be spoken to the caregiver are in **bold**.

Reported items scored over more extended time periods can usually be obtained while going through the specific day.

Since observed items are continuously assessed, they are listed towards the end of this introduction, and not listed in the script.

Before leaving the interview, check that all items have been scored!!!

General Guidance

The following are important to consider while conducting a HOME Inventory interview:

1. Throughout the interview, it is important that the interaction between the caregiver and child can be carefully observed. Make sure that the caregiver and child are present and in the same area/room.
2. Many observation items are scored on the basis of the whole assessment.
3. Always focus on the detailed moment-to-moment descriptions of the child's behaviour and the response of the caregiver and others in the home.
4. To obtain examples of behaviour, start with 'open' questions, keeping 'closed' questions for specific details when necessary.
5. When seeking detailed descriptions or example of events or behaviours, ask where other family or household members were, what they were doing, and how they responded to each other.
6. Where frequency of events of a time period is required, obtain a description of the most recent example. Then ask for the last previous occurrence. Use the time gap as a basis for finding out the frequency.
7. Look out for opportunities to make a few approving/positive remarks about the child or his/her activities and note the caregiver's response.
8. Remember to ask about the level of conversation between the caregiver and the child.

9. When given a description of regular daily activities such as dressing, eating, and bedtimes, check that this is normal for the child and the family.
10. When a caregiver describes a behaviour or event as atypical or unusual, find out how it differs from what they consider normal by getting a specific example. Then discover how often the unusual behaviour happens.
11. Even if it is not considered a particularly normal day by the caregiver, a description of a recent day when events and behaviour are well remembered gives a more accurate picture of a child's experiences than a day that is considered normal but is more distant in time. It is only when the day before the assessment is *very* unusual, for example because a family member died or was admitted to hospital, that another day should be chosen.

IMPORTANT NOTES ON USING THE HOME INVENTORY DURING THE VISIT

It is the observer's responsibility to set the stage for the proper mood - one in which the caregiver is at ease. Remember you are trying to get a good picture of what the caregiver-child interaction is like in a normal day-to-day situation.

The observer must be completely objective - It is important that the observer never shows approval or disapproval of anything the caregiver says or does. The observer should also not convey his/her feelings about anything the caregiver says or does.

Observers must be thoroughly familiar with the HOME Inventory items so that this will ensure that he/she will be aware of the actions and events that can be scored from observation alone.

There may sometimes be a conflict between what you observe and what the caregiver tells you about what normally happens at home (for example, the caregiver says he/she never smacks the child but you observe this). If this happens, point out the contradiction (in a non-judgemental way) and clarify the situation.

Sometimes you cannot observe one of the things you need to score on the HOME. If this happens, you need to discuss the issue with the caregiver and then score the item.

1. Where do you observe?

The observations must be undertaken during the course of a visit to the home.

2. How long is the procedure?

The visit / observation may take between 30 minutes to 1 hour.

3. The child must be present during most of the interview

This is so you can observe his/her interactions with the carer.

You can ask the child questions if necessary – particularly if you need clarification. But do not overdo the approach of asking the child questions rather than the adult. It is best to direct most of the questions to the caregiver.

4. Who to observe?

Remember that for this evaluation we will be assessing the same target child and the same caregiver over time.

5. How do we avoid bias?

During the randomized controlled trial, the Visitor should *not be aware* of whether the child and caregiver are members of the experimental or comparison groups so that this knowledge does not bias their report. If he/she knows which group the child and caregiver are in, this can lead to an expectation that the caregiver who has participated in the PLH programme should do better than one who has not. It is therefore best that the Visitor is '*blind*' to the family's group assignment.

Remember: The HOME is designed to look at the caregiving environment from the child's point of view--what the environment offers the child. That is really important!

6. Everyone should score items in the same manner!

All those who will be using the HOME Inventory must use it in the same way. It is essential that all those who administer the instrument understand these definitions and practice the tool three times before using it during the study. This should be done in pairs.

So, in order to check that Data Collectors are recording their observations in the same manner, two people should observe an interview during practice sessions. Do not discuss your observations during this time - just record.

When you are finished, check the degree of agreement and disagreement on how the HOME Inventory was scored. Where there is disagreement on an item, examine the definition and make

sure you understand it the same way. Discuss why you may have differed and see if this can be resolved.

Do two other observations and repeat this procedure. By the end of three rounds, if there is disagreement on more than 20% of the items (i.e. 6 items), then do the following:

- Place each of these staff with a member of another pair who *has* arrived at the same approach to scoring. For example, there are two pairs who have worked together for three trial rounds – persons A & B and persons C & D. Pair A & B have reached agreement while C & D have not.
- Swap so A & C and B & D are now paired. They should then do another practice observation.
- Check the degree of agreement in these pairs. This is likely to reveal that one observer is consistently disagreeing on scoring. That person may need some assistance in order to get it right.

7. Scoring the Interview

It is very important that you complete the scoring of the interview before leaving the house.

All items are scored with either a ‘yes’ or a ‘no’. If an item occurs, score it as a ‘yes’. If it does not occur, score it as a ‘no’.

It is important that you make a note of the information that informed your score. This is especially important for the observational items. That way, if there are any questions later, you can discuss it with the rest of the research team.

Scoring of individual items should always be guided by the definitions in the glossary.

In situations where you are unclear about how to score an item, you should always ask yourself: ‘What is the child’s experience?’ The purpose of this interview is not to assess the caregiving capabilities of the caregiver, but to understand the child’s world from the perspective of the child. Applying this principle will make scoring easier.

If you score items during the interview, go back through all items at the end of your visit to ensure that you have not learned new information that would change your score on particular items.

CHAPTER 4: CHILD HOME INVENTORY SCRIPT

NOTE TO INTERVIEWER: ALL PARTS IN **BOLD** ARE SUGGESTED SPEECH.

1. Before starting the interview

Make sure that you confirm that you have the correct caregiver and the child aged 2-9 years that was indicated during the administration of the baseline main questionnaire.

Confirm the nickname and age of the caregiver and child.

2. Explaining how the interview will be conducted

To help make the caregiver comfortable at the beginning of the interview, show an interest in the children or home. For example, ask:

How long have you lived here?

Find out how many home changes there have been in the last 2 years and whether the child has remained with the family group all his/her life

As a reminder, take time to explain how the interview will be conducted. This should have been explained during the baseline questionnaire but often the caregiver will have forgotten. The following is one way of explaining:

Thank you for taking the time today to do this observational assessment with you and your child at your home today.

As mentioned during the last visit, today I will be administering an interview and observational assessment that will take about 30-60 minutes to complete.

During this time, it is important that (CHILD NICKNAME) remains with you in the same room during the entire assessment.

Please interact with each other as you would on a normal day – you do not have to do or say anything out of the ordinary.

Please let me review what we will be doing today. Remember, we will be focusing on (CHILD NICKNAME) during this assessment.

It is important that you know that I am only here to do research. Research is about collecting information that can help us to understand something better.

We want to learn more about parents and their children in Udon Thani. I am not able to give you advice on parenting, or to play with the child during this visit.

We will need for the environment to be relatively quiet and free from outside disturbance during our meeting.

If the phone rings during this visit, please do not answer or let the caller know that you will call back later - unless it's an emergency, of course.

During this visit, I will ask you several questions, observe (CHILD NICKNAME)'s home environment, as well as observe you and (CHILD NICKNAME) together.

Please remember that I will not be able to interact with (CHILD NICKNAME) very much during this time.

Do you have any questions before we begin?

Check if the room seems appropriate for conducting the assessment – if not, ask if you can move to another room or area. If the TV or radio is on, please ask the parent/primary caregiver to switch it off.

3. Starting the interview

I am going to ask you some questions about daily life in your household:

Things the whole family might do together, household routines that you have, what (CHILD NICKNAME) likes to do, and how you take care of and discipline (CHILD NICKNAME).

I would like to focus on a particular, recent day in the child's life, which is a good way for me to learn more about (CHILD NICKNAME).

Ask the parent about the most recent day in the child's life. It is preferable to talk about yesterday if yesterday was a normal day. If the child goes to school, please ask about a recent day when he/she went to school.

Look out for opportunities to make an approving remark about the child or his/her activities. This requires you to offer some praise of the child in order to observe the parent/primary caregiver's

response. You can repeat your praise up to three times during the interview (at different times), if you do not get a response at first.

4. Waking up

How did the day start?

Who woke up first?

What happened next?

When did (CHILD NICKNAME) wake up? What about you?

Where was (CHILD NICKNAME) when s/he woke up?

Discover where (CHILD NICKNAME) slept, whether by his/herself or with others, and whether (CHILD NICKNAME) changed position in the night. For example, whether (CHILD NICKNAME) moved from own sleeping place to the parent/primary caregiver. Explore whether all family members have a specific place to sleep.

5. In the morning

What happened next?

Discover whether (CHILD NICKNAME) was woken by someone else or woke up on his/her own and what s/he did once awake.

The aim here is to go through the morning events in careful detail to orient the caregiver to go through behaviours and events in the way that is most helpful for the interview.

If you are able to get the caregiver to talk in detail, it should be clear whether there is difficulty or conflict between the caregiver and the target child.

This is best obtained by getting a detailed account of the day's events – not by asking whether it was difficult for the caregiver, which you can decide once you know what happened.

During this time, you are looking for information to help answer ITEMS 1, 17,* 18, 19, and 20.

*Remember that in order for Item 17 to score a "yes," the caregiver must encourage the child to carry out or help with 3 out of 4 self-care routines.

6. Washing and dressing

Take the caregiver through washing, dressing, and eating in the same way, in whatever order they occurred during the day.

What about washing? – Get a description. (ITEM 17*)

What about dressing? – Get a description. (ITEM 17*)

Does (CHILD NICKNAME) have a special place to put his/her night clothes? What do you expect him/her to do? (ITEM 19)

What help did he/she need? What do you expect him/her to do for him/herself? (ITEM 17*)

Who else has been involved with washing and dressing (CHILD NICKNAME) in the past month? (ITEM 17*)

What about tidying up his/her sleeping area? (ITEM 18)

Note who was involved and ask if this was normal. Note whether the caregiver's partner or others were involved and how often.

*Remember that in order for Item 17 to score a "yes," the caregiver must encourage the child to carry out or help with 3 out of 4 self-care routines.

7. First meal

Did (CHILD NICKNAME) have anything to eat?

When was that? What is the usual time?

What happened next?

Where was (CHILD NICKNAME) when s/he was eating? Where did s/he sit? Did s/he get her/his own food or eat on his/her own? (ITEM 17*)

*Remember that in order for Item 17 to score a "yes," the caregiver must encourage the child to carry out or help with 3 out of 4 self-care routines.

Who else was involved during the meal? Did anyone else eat at the same time?

What did (CHILD NICKNAME) eat?

Does (CHILD NICKNAME) willing to eat what you prepare, or does he/she tell you what he/she wants?

How was he/she about eating? - if difficulty expressed, get a detailed description and how the parent felt about it. (ITEMS 27, 28)

- If no difficulty expressed: Can you describe what happened the last time s/he refused to eat? Get a detailed description and how the parent felt about it.

How often does this happen?

Determine whether the daily schedule for breakfast is fairly regular and predictable (ITEM 1)

8. School (only if target child attends nursery, child development centre, or primary school)

What happened after (CHILD NICKNAME) finished breakfast?

When did (CHILD NICKNAME) leave for school? How did he/she get there?

Discover who accompanied the child to school, and whether they arrived on time.

Was that typical?

How is (CHILD NICKNAME) doing at school? - Get a description of any difficulties, including academic, behavioural, or social.

When did he/she get home from school? How did he/she get home?

Was that typical?

Determine whether the school routine (going to and returning from school) is fairly regular and predictable. (ITEM 1)

9. After school and home activities (homework questions only relevant if target child attends school)

What did (CHILD NICKNAME) do when he/she got home from school? - Talk about play or homework, whichever is done first

What does he/she like to do when playing? Where does he/she play?

What did you do while he/she was playing?

Is that typical?

Did (CHILD NICKNAME) have any homework?

When did he/she do it? What usually happens? (ITEMS 1, 21)

Did you or someone else in the household help him/her?

Is that typical?

What about TV? Did (CHILD NICKNAME) watch any TV or use a smartphone or tablet yesterday?

Can he/she watch or use these as much as he/she likes? (ITEMS 1, 20, 21, 26)

Did you watch or use these together? How did you do this (e.g. sit closely together and cuddle, watch TV from different parts of the room) (ITEM 4)

Were there any times when you switched off the TV or put away the smartphone or tablet?

What usually happens?

What does (CHILD NICKNAME) eat after school/outside of meal times? Does he/she have snacks whenever he/she is hungry? (ITEM 20, 25)

Look out for any household rules, limits set for the child, and enforcement of these limits (ITEMS 1, 20, 21, 25).

10. Housework and tidying up

Did you do any housework when (CHILD NICKNAME) was at home?

What was s/he doing while you were doing housework? Was he/she in the same room?

Did he/she help you do any housework?

Get a description of what happened.

When are (CHILD NICKNAME)'s belongings (such as toys, school bag, school clothes) put away?

Does he/she have a place for his/her own things? Where is that?

Does (CHILD NICKNAME) ever do that by him or herself? (ITEM 18)

What usually happens?

11. Spending time with the child

Were you able to spend any time with (CHILD NICKNAME)?

What did you do together?

Get description. For example, whether the parent/primary caregiver played with toys, watched TV with him/her, or included the child in housework.

Did you have time for cuddling/holding (CHILD NICKNAME) close? When was that?

Did that happen at other times during the day?

Establish whether this happens every day for at least 10-15 minutes. (ITEM 7)

12. Midday meal and nap (only relevant if the child was not at school)

Did (CHILD NICKNAME) eat in the middle of the day?

When was that? What happened?

What did s/he have to eat?

Where were you? Did you have anything to eat? Did you eat together?

What is the usual pattern? (ITEM 1)

Did (CHILD NICKNAME) have a nap during the day? When was that?

Where did s/he sleep?

What is the usual pattern? (ITEM 1)

13. Outings

Did you leave the house yesterday with (CHILD NICKNAME) (besides school)?

Where did you go? Could you describe what happened?

Tell me about some of the other places you go and take (CHILD NICKNAME) with you.

Where else have you been together in the last week? (ITEM 1)

14. Difficult behaviour

Was (CHILD NICKNAME)'s behaviour difficult during the day?

If there was no difficulty, ask:

When was the last time (CHILD NICKNAME) was difficult during the day? What happened?

What about when the child loses control of her/his behaviour, like a temper tantrum?

Get a description of the child's behaviour and the caregiver's response. Ask how that affected the caregiver and the other family members. Ask about whether the caregiver lost his/her temper and what did he/she did.

How did you feel when this happened? Did you get angry? What did you do? (ITEM 23)

Did you raise your voice? Did you shout?

How often did that happen? How often in the past day? How often in the past week? (ITEM 23, 28)

Did you feel like hitting (CHILD NICKNAME)?

Many parents smack their children at some time. Did you think s/he needed a smack? Did you hit (CHILD NICKNAME)?

How often does that happen? How often in the past day? How often in the past week? (ITEM 27).

Is (CHILD NICKNAME) ever demanding? Does s/he ask over and over about things s/he wants?

When was the last time? Can you describe what happened? (ITEM 24).

When did you last have to stop him/her from doing something? What was it? What did that involve? (ITEM 24).

Has (CHILD NICKNAME) done anything in the last week that you were particularly pleased about? What happened? What did you do? Is there anything else? (ITEM 3)

15. Evening meal and bath

Did (CHILD NICKNAME) have something to eat before going to bed?

When was that? What did (CHILD NICKNAME) eat? Did he/she eat with the rest of the family? (ITEM 1)

Was (CHILD NICKNAME) fussy about food or did he/she refuse to eat? What happened? What did you do? How often has that happened in the last week? Is that the usual pattern?

What happened after dinner/in the evening?

Did (CHILD NICKNAME) have a bath or wash before bed?

Did he/she need any help? Does he/she usually need help?

What do you expect her/him to do for him/herself? Get a description. (ITEM 17*)

***Remember that in order for Item 17 to score a "yes," the caregiver must encourage the child to carry out or help with 3 out of 4 self-care routines.**

What about changing into bed clothes? What help did he/she need?

What about putting away dirty clothes? Does (CHILD NICKNAME) put them in a special place?

What do you expect him/her to do? (ITEM 19)

16. Bedtime

When did (CHILD NICKNAME) go to bed? What happened? Is this typical? What about the day before? How much does it vary? (ITEM 1)

Who prepared (CHILD NICKNAME) for bed? What happened? Did (CHILD NICKNAME) not want to go to bed? How did you resolve that?

Did you or anyone else in the house do anything with (CHILD NICKNAME) once he/she was in bed? (examples include reading a story, singing a song) (ITEMS 1, 2)

Does (CHILD NICKNAME) have any fears or anything he/she is uncomfortable with, either during the daytime or nighttime? How did you resolve this? Is this typical? (ITEM 2)

If no fears are expressed, ask the parent/primary caregiver what he/she would do if the child had any fears (e.g. such as being afraid of ghosts, the dark, going someplace new). (ITEM 2)

Get a description of the sequence of events, how the child is prepared for bed, washed, undressed, settled down.

17. Thank you and closing

I have now finished the activity.

Thank you for taking the time to be part of this study. It will help us learn to more about the challenges and experiences of parents and primary caregivers in Udon Thani.

Please allow me to provide you with this envelope and small cash amount as compensation for your time. I will also need you to sign this sheet to acknowledge that you have received it.

Thank you again for your time. Good luck and goodbye!

This is the end of the HOME Assessment with the caregiver and child. Please remember to thank the caregiver for his or her time.

Please remind the parent that we will be visiting the family again in (INSERT TIME) to do another round of assessments.

APPENDIX D. ETHICAL APPROVALS

Appendix D.1 Formative Evaluation: Oxford Tropic Research Ethics Committee (OxTREC), University of Oxford

Oxford Tropical Research Ethics Committee

University of Oxford
Research Services, University Offices
Wellington Square, Oxford OX1 2JD
Tel. +44 (0)1865 (2)82106
E-mail: oxtrece@admin.ox.ac.uk



Professor Frances Gardner
Centre for Evidence-Based Intervention
Department of Social Policy and Intervention
University of Oxford

23 May 2017

Dear Professor Gardner

Full Title of Study: Feasibility study of an evidence-informed parenting intervention to prevent violence against young children by parents and primary caregivers in Thailand: Phase One

OxTREC Reference: 522-17

Thank you for your email of the 17 May 2017, and for your minimal risk application form.

I am pleased to confirm that approval has now been granted for this study. This is valid for the first five years and is subject to receiving the local ethical approval (if this approval has not yet been received).

The documents approved for this study are as follows:

Documents:	Version:	Date:
Protocol	V2.0	10/05/17
PIS/ICF – Parenting Experts Working Group	V2.0	10/05/17
PIS/ICF – Officials/Experts/Practitioners	V2.0	10/05/17
Parenting Experts Working Group Guide	V2.0	10/05/17
Individual Interview Guide – Officials/Experts/Practitioners	V2.0	10/05/17
Demographic Survey – Officials/Experts/Practitioners	V2.0	10/05/17

Any subsequent changes to the application must be submitted to the Committee as an Amendment. This should include a letter to give the reasons for the proposed modifications and all revised documents with changes tracked.

Please ensure that you submit a completed Annual Report form on every anniversary of this approval and a final End of Study Report. The relevant forms can be found on the OxTREC website: <https://www.admin.ox.ac.uk/curec/apply/oxtrece-process/>

Yours sincerely

A handwritten signature in black ink, appearing to read 'Rebecca Bryant'.

Dr Rebecca Bryant
Research Ethics Manager, OxTREC

Tel: +44 (0)1865 (2)82106
Email: oxtrece@admin.ox.ac.uk
Web: www.admin.ox.ac.uk/rso/

Appendix D.2 Formative Evaluation: Ethical Review Committee for Research in Human Subjects, Ministry of Public Health (MOPH), Thailand



Document No. 27 /2018

The Ethical Review Committee for Research in Human Subjects Ministry of Public Health, Thailand

Title of Project : Feasibility study of parenting intervention to prevent violence against young children by parents and primary caregivers in Thailand: Phase One.

Protocol Number : Ref. no. 10/2561

Principle Investigator : Asst. Professor Sombat Tapanya

Place of proposed study : Bangkok (Save the Children Thailand Country Office)
Nonthaburi (Ministry of Public Health)
Udon Thani (Udon Thani hospitals, local community centres, or government offices
(Primary Educational Service Area Office Region 1, Nakhon Udon Thani Municipality
Office, Udon Thani Provincial Public Health Office, as well as District Public Health
Offices and Health Promotion Hospitals)

Project Time line : 1 year

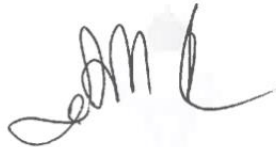
Biomedical sample for future use/ Time : not collect

Document Approved :

1. Full Protocol in Thai and English Version 4.0 dated 17 Aug 2018
2. Appendix A: Guide for individual interviews with officials, experts and practitioners in Thai and English Version 4.0 dated 17 Aug 2018
3. Appendix B: Participation information sheet and consent form for officials, experts and practitioners in Thai and English Version 4.0 dated 17 Aug 2018
4. Appendix C: Guide for working group in Thai and English Version 4.0 dated 17 Aug 2018
5. Appendix D: Participation information sheet and consent form for members of the Parenting Experts Working Group in Thai and English Version 4.0 dated 17 Aug 2018
6. Appendix E: Demographic Survey in Thai and English Version 4.0 dated 17 Aug 2018
7. Curriculum vitae

We also confirm that we are an ethics committee constituted in agreement and in accordance with the ICH-GCP.

The Ethical Review Committee for Research in Human Subjects Ministry of Public Health, Thailand had reviewed mainly Thai protocol. In ethical concern, the committee has reviewed and approved for implementation of the research study as above mention, therefore the Thai protocol will be mainly conduct. The protocol must be approved by continuation review for the duration of one year until expired.



..... Chairman
(Mr. Somsak Akksilp)



..... Secretary
(Mr. Attasit Srisubut)

Date of Approval 22 August 2018 Date of Expired 21 August 2019

Appendix D.3 Formative Evaluation: Udon Thani Provincial Hospital Ethics Committee, Thailand



เรื่อง ส่งเอกสารตอบรับการขอรับการพิจารณาด้านจริยธรรมการวิจัยในมนุษย์

เรียน ผู้อำนวยการหน่วยวิจัยโรคเขตร้อนมหิตล-อ็อกฟอร์ด

อ้างถึง หนังสือที่ MO/๐๐๒.๑๘/๑๘๔ ลงวันที่ ๑๘ ตุลาคม ๒๕๖๑

จำนวน ๑ ชุด

สิ่งที่ส่งมาด้วย ๑.หนังสือตอบรับการขอรับการพิจารณาด้านจริยธรรมการวิจัยในมนุษย์ จำนวน ๑ ชุด

๒.หนังสือรับรองจริยธรรมการวิจัยในมนุษย์ จำนวน ๑ ชุด

ตามหนังสือที่อ้างถึง ผศ.ดร.สมบัติ ตาปัญญา หน่วยวิจัยโรคเขตร้อนมหิตล-อ็อกฟอร์ด คณะเวชศาสตร์เขตร้อน มหาวิทยาลัยมหิตล ได้ส่งเอกสารการขอรับการพิจารณาด้านจริยธรรมการวิจัยในมนุษย์ การศึกษาวิจัยเรื่อง “การศึกษาความเป็นไปได้ของการใช้หลักสูตรอบรมเรื่องการเลี้ยงดูเด็ก เพื่อป้องกันความรุนแรงต่อเด็กเล็กโดยพ่อแม่และผู้ดูแลหลักในประเทศไทย : ระยะที่หนึ่ง (Feasibility study of parenting intervention to prevent violence against young children by parents and primary caregivers in Thailand : Phase One)” ตามหนังสือที่ MO/๐๐๒.๑๘/๑๘๔ ลงวันที่ ๑๘ ตุลาคม ๒๕๖๑ เพื่อขอรับการพิจารณาจริยธรรมการวิจัยในมนุษย์ รายละเอียดแจ้งแล้วนั้น

ในการนี้โรงพยาบาลอุดรธานี โดยการพิจารณาของคณะกรรมการจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลอุดรธานี ได้พิจารณารับรองแล้วจึงขอส่งหนังสือตอบรับการขอรับการพิจารณาด้านจริยธรรมการวิจัยในมนุษย์ ตามหนังสือที่ อุด ๐๐๓๒.๑๐๒/๖๑๓ ลงวันที่ ๓๐ พฤศจิกายน ๒๕๖๑ และหนังสือรับรองจริยธรรมการวิจัยในมนุษย์ โรงพยาบาลอุดรธานี เลขที่รับรอง EC ที่ ๕๒/๒๕๖๑ ลงวันที่ ๓๐ พฤศจิกายน ๒๕๖๑ มาพร้อมนี้

จึงเรียนมาเพื่อโปรดทราบ

ขอแสดงความนับถือ

(นายณรงค์ ธาตาเดช)
ผู้อำนวยการโรงพยาบาลอุดรธานี

กลุ่มงานพัฒนาทรัพยากรบุคคล

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ไปรษณีย์อิเล็กทรอนิกส์ : phh๔๑๐๑@health๒.moph.go.th

สำเนาเรียน : ผศ.ดร.สมบัติ ตาปัญญา

Appendix D.4 Formative Evaluation: Ethics Review Committee, Department of Psychology, University of Cape Town, South Africa

UNIVERSITY OF CAPE TOWN



Department of Psychology

University of Cape Town Rondebosch 7701 South Africa
Telephone (021) 650 3417
Fax No. (021) 650 4104

9 May 2017

A/Prof. C. Ward
Department of Psychology
University of Cape Town
Rondebosch 7701

Dear Prof. Ward

I am pleased to inform you that ethical clearance has been given by an Ethics Review Committee of the Faculty of Humanities for your study, *Feasibility study of an evidence-informed parenting intervention to prevent violence against young children by parents and primary caregivers in Thailand: Phase One*. The reference number is PSY2017-007.

I wish you all the best for your study.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Lauren Wild'.

Lauren Wild (PhD)
Associate Professor
Chair: Ethics Review Committee

Appendix D.5 Feasibility Pilot: Oxford Tropic Research Ethics Committee (OxTREC), University of Oxford

Oxford Tropical Research Ethics Committee

University of Oxford
Research Services, University Offices
Wellington Square, Oxford OX1 2JD
Tel. +44 (0) 1865 (2)82106
E-mail: oxtrece@admin.ox.ac.uk



Professor Frances Gardner
University of Oxford
Department of Social Policy and Intervention
Barnett House, Wellington Square
Oxford OX1 2ER

6 June 2018

Dear Professor Gardner

Full Title of Study: Randomized controlled trial of an evidence-informed parenting intervention to prevent violence against young children by parents and primary caregivers in Thailand

OxTREC Reference: 8-18

Thank you for your letter of 28 May 2018 in which you have responded to the Committee's request for further clarification.

I am pleased to confirm that approval has now been granted for this study. This is valid for the first five years and is subject to receiving the local ethical approval (if this approval has not yet been received).

The documents approved for this study are as follows:

Documents:	Version:	Date:
OxTREC application form		
Protocol	V2.0	28/04/18
PIS – facilitators and coaches	V2.0	28/04/18
PIS – parents and primary caregivers (feasibility pilot)	V2.0	28/04/18
PIS – parents and primary caregivers (RCT)	V2.0	28/04/18
ICF – facilitators and coaches	V2.0	28/04/18
ICF – parents and primary caregivers (feasibility pilot)	V2.0	28/04/18
ICF – parents and primary caregivers (RCT)	V2.0	28/04/18
Confidentiality agreement for research team members	V2.0	28/04/18
List of services handout for parents/primary caregivers	V2.0	28/04/18
Adult referral form	V2.0	28/04/18
Child protection protocol	V2.0	28/04/18
Safety protocol	V2.0	28/04/18
Participant satisfaction survey	V2.0	28/04/18
Parent home practice checklist	V2.0	28/04/18
Facilitator assessment tool	V2.0	28/04/18
Facilitator fidelity checklist	V2.0	28/04/18
Observational assessment home inventory	V2.0	28/04/18
Outcome evaluation questionnaire	V2.0	28/04/18
Screening tool	V2.0	28/04/18

Tel: +44 (0)1865 (2)82106
Email: oxtrece@admin.ox.ac.uk
Web: <https://researchsupport.admin.ox.ac.uk/governance/ethics>



FGD guide – facilitators and coaches	V2.0	28/04/18
Parents/primary caregivers' interview guide	V2.0	28/04/18
Guide for administration of home inventory assessment	V2.0	28/04/18
Guide for administration of participant satisfaction survey	V2.0	28/04/18
Guide for administration of screening tool	V2.0	28/04/18
Peer Review Form		
PI Signature Form		

Any subsequent changes to the application must be submitted to the Committee as an Amendment. This should include a letter to give the reasons for the proposed modifications and all revised documents with changes tracked.

Please ensure that you submit a completed Annual Report form on every anniversary of this approval and a final End of Study Report. The relevant forms can be found on the OxTREC website: <https://researchsupport.admin.ox.ac.uk/governance/ethics/apply/oxtrec>.

Finally, for any study that will involve storing human tissue samples in Oxford, please note the following important information:

As you are planning to import the samples into England, you will need to make arrangements before the samples are transferred to store them under the governance of a Human Tissue Authority (HTA) licence. It is a legal requirement that any tissue or fluid made up of or containing human cells to be used for the purpose of research is stored on premises licensed by the HTA unless covered by an exemption. OxTREC approval is not a recognised exemption. Further information may be found on the University's human tissue governance web pages: <https://researchsupport.admin.ox.ac.uk/governance/human-tissue>.

Yours sincerely

Dr Rebecca Bryant
Research Ethics Manager, OxTREC

Appendix D.6 Feasibility Pilot: Institute for the Development of Human Research Protections (IHRP) Ethics Committee, Thailand



Ethics Committee

Institute for the Development of Human Research Protections (IHRP)

Building 8 Floor 7 Room 702 Department of Medical Science Ministry Public Health Nonthaburi Thailand 11000

Certificate of Approval

Title of Project: Randomized controlled trial of an evidence-informed parenting intervention to prevent violence against young children by parents and primary caregivers in Thailand

Study Code: HCR17011

Principal Investigator: 1. Asst. Prof. Sombat Tapanya, Ph.D.
2. Prof. Frances Gardner

Responsible Organization: The Mahidol Oxford Tropical Medicine Research Unit (MORU)

Document Reviewed:

1. Initial Review Submission Form
2. Project summary Based on Protocol v3.0 dated 8 Aug 2018
3. Full Protocol in Thai and English Version 3.0 dated 8 August 2018
4. Appendix A: Guide for administration of the screening tool (MICS Child Discipline) in Thai and English Version 3.0 dated 8 August 2018
5. Appendix A2: Guide for administration of the outcome evaluation questionnaire in Thai and English Version 3.0 dated 8 August 2018
6. Appendix A3: Guide for administration of the HOME Inventory assessment in Thai and English Version 3.0 dated 8 August 2018
7. Appendix A4: Guide for administration of the participant satisfaction survey (RCT) in Thai and English Version 3.0 dated 8 August 2018
8. Appendix A5: Guide for the individual interviews with parents/primary caregivers (feasibility pilot) in Thai and English Version 3.0 dated 8 August 2018
9. Appendix A6: Guide for the focus group discussion with facilitators and coaches (feasibility pilot) in Thai and English Version 3.0 dated 8 August 2018
10. Appendix B1a: Participant information sheet for parents and primary caregivers (feasibility pilot) in Thai and English Version 3.0 dated 8 August 2018



Ethics Committee

Institute for the Development of Human Research Protections (IHRP)

Building 8 Floor 7 Room 702 Department of Medical Science Ministry Public Health Nonthaburi Thailand 11000

-
11. Appendix B1b: Participant consent form for parents and primary caregivers (feasibility pilot) in Thai and English Version 3.0 dated 8 August 2018
 12. Appendix B2a: Participant information sheet for parents and primary caregivers (RCT) in Thai and English Version 3.0 dated 8 August 2018
 13. Appendix B2b: Participant consent form for parents and primary caregivers (RCT) in Thai and English Version 3.0 dated 8 August 2018
 14. Appendix B3a: Participant information sheet for facilitators and coaches (feasibility pilot and RCT) in Thai and English Version 3.0 dated 8 August 2018
 15. Appendix B3b: Participant consent form for facilitators and coaches (feasibility pilot and RCT) in Thai and English Version 3.0 dated 8 August 2018
 16. Appendix C: Screening Tool in Thai and English Version 3.0 dated 8 August 2018
 17. Appendix D: PLH-Thailand Outcome Evaluation Questionnaire in Thai and English Version 3.0 dated 8 August 2018
 18. Appendix E: Observational assessment: HOME Inventory in Thai and English Version 3.0 dated 8 August 2018
 19. Appendix F: Facilitator fidelity checklist (example) in Thai and English Version 3.0 dated 8 August 2018
 20. Appendix G: Facilitator assessment tool in Thai and English Version 3.0 dated 8 August 2018
 21. Appendix H: Parent home practice checklist (example) in Thai and English Version 3.0 dated 8 August 2018
 22. Appendix I: Participant satisfaction survey in Thai and English Version 3.0 dated 8 August 2018
 23. Appendix J: Safety protocol in Thai and English Version 3.0 dated 8 August 2018
 24. Appendix K: Child protection protocol in Thai and English Version 3.0 dated 8 August 2018
 25. Appendix L: Adult direct referral form in Thai and English Version 3.0 dated 8 August 2018
 26. Appendix M: List of services hand-out for parents and primary caregivers in Thai and English Version 3.0 dated 8 August 2018
 27. Appendix N: Confidentiality Agreement for Research Team Members in Thai and English Version 3.0 dated 8 August 2018



Ethics Committee

Institute for the Development of Human Research Protections (IHRP)

Building 8 Floor 7 Room 702 Department of Medical Science Ministry Public Health Nonthaburi Thailand 11000

-
- 28. Parenting for Lifelong Health Young Children Thailand programme in Thai and English
 - 29. CVs and GCP certificates of principal investigators and co-investigators

The Ethics Committee of Institute for the Development of Human Research Protections (IHRP) had reviewed the research proposal. Concerning on scientific, ICH-GCP and ethical issues, the committee has approved for the implementation of the research study mentioned above.

(Dr.Vichai Chokevivat)
Chairman

(Dr.Pramote Stienrut)
Committee and Secretary

Date of First Meeting: September 26, 2018

Date of Approval: September 26, 2018

APPENDIX E. ETHICAL AND SAFETY CONSIDERATIONS

Appendix E.1 Child Protection Protocol

Overview

PLH-Thailand will be conducting research with families and children (defined as those under 18 years) in Udon Thani, who may be particularly at risk of child maltreatment, financial stress, and other adversities. Given these circumstances, staff are expected to uphold certain values, to refrain from prohibited behaviour when interacting with children, and to follow the below procedure if he or she observes or receives information that a child has been significantly harmed or is at risk of significant harm. In order to be in compliance with Article 29 of the *Child Protection Act*, B.E. 2546 (2003), as well as to meet international standards for upholding child rights to protection, all staff will follow this Child Protection Protocol while they are employed under the project.

Values based on the 1989 United Nations Convention on the Rights of the Child

All staff must uphold the following values:

1. **Best interests of the child:** The best interests of the child is our primary concern.
2. **Respect:** All adults and children with whom we interact must be treated with respect.
3. **Non-discrimination:** Children have a right to be protected from discrimination on the basis of ethnicity, legal status, class, age, gender, sexual orientation, ability, religion, or expressed opinions or beliefs.
4. **Privacy:** Children should not be subjected to arbitrary or unlawful interference into their lives, including any attacks on their reputation.
5. **Right to participation:** Children have a right to meaningfully participate in decisions that affect their lives.

Prohibited conduct when interacting with children

1. **Physical abuse:** Hit, pinch, kick, slap or otherwise physically harm children, including threatening to physically harm them.
2. **Sexual abuse:** Make sexual comments to children, share sexually explicit images with children, develop sexual relationships with children, or otherwise interact with children in ways that may be deemed sexually abusive or exploitative.
3. **Emotional abuse:** Shout at or threaten children, or otherwise act in ways intended to frighten, shame, humiliate, or belittle children.

4. **Inappropriate language:** Use language, make suggestions or offer advice that would be deemed inappropriate, offensive or abusive.
5. **Compromising safety:** Condone or participate in the behaviour of children that is illegal or unsafe.
6. **Discrimination:** Discriminate against, show differential treatment to, or favour particular children to the exclusion of others.
7. **Exposure to harmful substances:** Smoke, consume alcohol or use other addictive substances while working with children and families.
8. **Inappropriate proximity or contact:** Taking a child participating in the project to your home or another location, or spending excessive time alone with children away from others.

Confidentiality

As communicated with adults during the process of obtaining informed consent for their participation in the project, confidentiality will be maintained except when the staff member observes or otherwise receives information that a child has been significantly harmed or is at risk of significant harm.

If the staff member observes or information is disclosed that suggests that significant harm has been perpetrated to the child by someone other than the child's parent or primary caregiver, the staff member will discuss this directly with Co-PI Tapanya, who will then make a judgment in cooperation with local social workers or law enforcement, as appropriate, in order to determine how best to protect the child from further harm. However, if the parent or caregiver has allegedly perpetrated the significant harm, or is likely to cause significant harm to the child, the staff member will follow the procedures below.

The staff member, Principal Investigator and Research Manager should ensure that any information regarding the child protection concern, especially the child's identity, is shared strictly on a "need to know" basis, and that these details are not shared with any other staff.

Child protection procedures

Child Protection Act, B.E. 2546 (2003)

All staff must be aware of the mandatory reporting provision of the *Child Protection Act*, and be able to refer cases in consultation with the Research Manager and local Co-Principal Investigator. According to Article 29 of the *Child Protection Act*:

“Upon finding a child in circumstances which warrant welfare assistance or safety protection as stipulated under Chapters 3 and 4, a person shall provide basic assistance and notify a competent official, administrative official or police officer or person having the duty to protect a child's safety according to Article 24 without delay.”

Under Chapters 3 and 4 of the *Child Protection Act*, such children who “warrant welfare assistance or safety protection” include abandoned or lost children; children whose guardians are unable to care for them for whatever reasons; children whose guardians have inappropriate behaviours or occupations, which might affect the physical or mental development of the children under their guardianship; and children who have been unlawfully brought up, exploited, abused or subjected to any other conditions which are likely to cause them to behave in an immoral manner or suffer physical or mental harm.

Significant harm

For the purpose of this Child Protection Protocol, all of the circumstances described under Chapters 3 and 4 of the *Child Protection Act* constitute “significant harm” to the child.

The following definitions further elaborate on the types of abuse that children may have experienced, or be at risk of experiencing:

- **Physical abuse:** Abuse that results in actual or potential physical harm from an interaction or lack of an interaction, which is reasonably within the control of a parent or person in a position of responsibility, power or trust.
- **Sexual abuse:** Involving a child in sexual activity that he or she does not fully understand, is unable to give informed consent to, or for which the child is not developmentally prepared and cannot give consent. Child sexual abuse may occur between a child and an adult or another child who by age or development is in a relationship of responsibility, trust or power.
- **Neglect:** Failing to provide for the development of the child in terms of health, education, emotional development, nutrition, shelter, and safe living conditions, when such provisions are reasonably available to the family or caretakers, and which has a high probability of causing harm to the child’s health or physical, mental, spiritual, moral or social development. This includes the failure to properly supervise and protect children from harm as much as is feasible.
- **Emotional abuse:** Acts toward a child that have a high probability of causing harm to the child’s health or physical, mental, spiritual, moral or social development. These acts are reasonably within the control of a person in a relationship of responsibility, trust or power.

Such acts may include threats, discrimination, ridicule, and other non-physical forms of hostile or rejecting treatment.

Staff Member: Process for internal reporting and making a referral

A staff member who observes, receives information regarding, or legitimately suspects that a child has been significantly harmed or is at risk of significant harm is required to undertake the following:

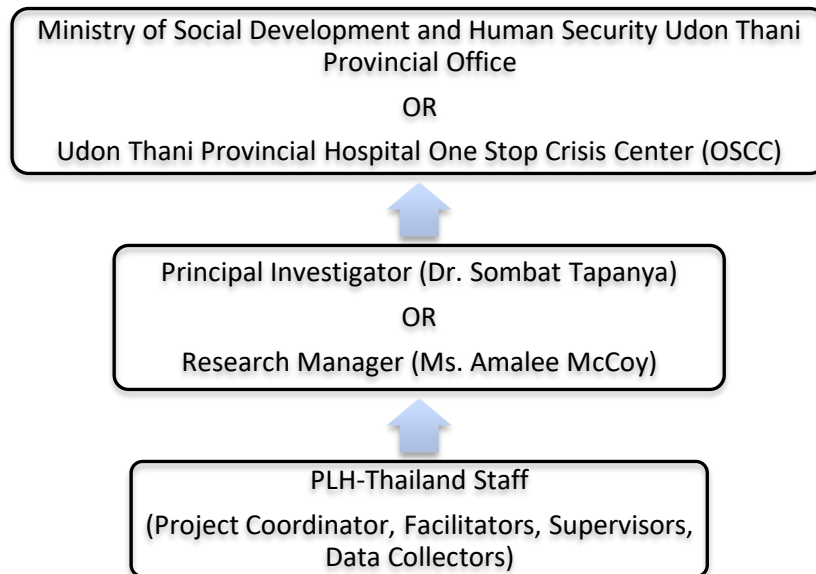
1. **Collect basic information:** Gather basic information regarding what may have taken place for the purpose of providing a report.
2. **Address the child's immediate needs if appropriate:** Before reporting, ensure that the child is safe and that any urgent medical needs are addressed. Dial 191 for emergency medical assistance if needed. If the child is in immediate danger, make arrangements for the child to move to a temporary place of safety in consultation with Co-PI Tapanya.
3. **Contact the local Principal Investigator or the Research Manager:** Verbal reports regarding a child protection concern should be made immediately if the case is urgent, or at least within 24 hours in non-emergency cases. The Principal Investigator and Research Manager will then work with the staff member to complete the Child Protection Referral Form.

Principal Investigator and Research Manager: Process for making a referral

1. **Completing the Child Protection Referral Form:** The Principal Investigator and Research Manager will complete the Child Protection Referral Form consultation with the reporting staff member.
2. **Contacting the appropriate 'competent official':** Depending on the nature of the reported case, the Principal Investigator will share the completed Child Protection Referral Form in confidence with the Udon Thani Provincial Hospital One Stop Crisis Center (OSCC) or a social worker at the Udon Thani Provincial Office for Social Development and Human Security. Urgent cases must be responded to immediately, while non-emergency cases must be referred within 24 hours.
3. **If the alleged abuse concerns a staff member:** The Principal Investigator will immediately suspend the staff member, pending further investigation, in cooperation with the Regional Health Center 8. If the actions or allegations indicate a possible criminal offence, referrals will be made to the local police. The Principal Investigator will subsequently call an urgent meeting with the other Principal Investigators and the Research Manager to update them on the situation and to discuss steps for any internal investigation and either termination

or reinstatement of the staff member in question, as well as steps to prevent the actual or alleged abuse from reoccurring.

Flow chart for making an internal report and referral



DECLARATION

Name of staff member (Print): _____

I understand:

- ☐ I have received the Child Protection Protocol, and have read its contents.
- ☐ All questions I have regarding the Child Protection Protocol have been answered to my satisfaction.
- ☐ I understand that I'm required to comply with the Child Protection Protocol and will follow the described procedure in the event that I have any child protection concerns during the course of my work on the PLH-Thailand project.

Date: _____

Signature: _____

**PARENTING FOR LIFELONG HEALTH THAILAND (PLH-THAILAND)
CHILD PROTECTION REFERRAL FORM**

Date concern raised: _____

Date this form completed: _____

Dear Sir or Madam,

Parenting for Lifelong Health (PLH-Thailand) is a project being undertaken in Udon Thani province by the University of Oxford (United Kingdom) and the University of Cape Town (South Africa), in partnership with the Ministry of Public Health Regional Health Center 8 and UNICEF Thailand.

During the course of an activity under this project, our staff became aware of a child (under 18 years of age) who has either recently experienced significant harm or is at risk of experiencing significant harm.

We request that your office follows up on this matter directly with the child in question. For our own records, we will follow-up with your office to find out the date on which the child was met by your staff and provided with assistance.

The following particulars of the case were recorded:

Staff member reporting the concern:

Case appears to be acute and requiring an urgent response: Yes/No/Unsure

Name of the child:

Sex:

Age:

Child's address:

Name of caregiver and relationship to child:

Details regarding the child protection concern:

We appreciate your attention to this concern; if you need any further information, please do not hesitate to contact us using the details below.

Sincerely,

Dr. Sombat Tapanya
Co-Principal Investigator
E-mail: sombat.tapanya@gmail.com
Mobile: +66 81 531 9336

Ms. Amalee McCoy
Research Manager
E-mail: amalee.mccoy@gmail.com
Mobile: +66 81 778 6143

PLH Thailand Contact Details

Principal Investigators

Prof. Frances Gardner
Email: frances.gardner@spi.ox.ac.uk
Mobile: +441865 270325

Dr. Jamie Lachman
Email: jamie.lachman@spi.ox.ac.uk; jamie.lachman@gmail.com
Mobile: +2782 424 5691

Dr. Phaik Yeong Cheah
Email: phaikyeong@tropmedres.ac
Mobile: +6684 324 4534

Dr. Sombat Tapanya
Email: sombat.tapanya@gmail.com
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Investigator

Prof. Catherine Ward
Email: catherine.ward@uct.ac.za; cathy.ward.sa@gmail.com
Mobile: +27 84 601 2244

*Research Manager/
Investigator*

Ms. Amalee McCoy
Email: amalee.mccoy@gtc.ox.ac.uk; amalee.mccoy@gmail.com
Mobile: +66 81 778 6143

Appendix E.2. Adult Referral Form

PARENTING FOR LIFELONG HEALTH THAILAND (PLH-THAILAND) ADULT REFERRAL FORM

Information for the adult (person 18 years or older) requesting referral:

There are services available if you require immediate help, or if you would like to talk to someone more about violence or other problems that affect your safety. If you require immediate assistance, we can refer you to a One Stop Crisis Centre, hospital, or police station. If you are feeling upset about the things we have talked about, we can put you in touch with a social worker.

In order to make this referral, we will need to have your contact information, including your name and a way for the service provider to contact you. This can be an address or your mobile phone. However, we would not give any of the information you have shared with us during any of the interviews. There is no way for you to be connected with this interview. We will share only the information you feel comfortable giving us permission to pass on.

Contact information:

Name:

Sex:

Age:

Case details:

Do you require immediate assistance? (circle one) Yes / No / Unsure

What service provider would you like us to refer your information to (e.g., police station, One Stop Crisis Centre, hospital, social worker)?

What is the best and safest way for the service provider to contact you?

Information to be shared:

To be completed by the research team member:

I CERTIFY THAT I HAVE READ THE INFORMATION AT THE TOP OF THIS FORM TO THE ADULT STUDY PARTICIPANT REGARDING THE PROVISION OF A DIRECT REFERRAL TO AN APPROPRIATE SERVICE PROVIDER. THE PARTICIPANT HAS GIVEN ME PERMISSION TO SHARE THE ABOVE CONTACT INFORMATION AND DETAILS WITH THE SERVICE PROVIDER MENTIONED ABOVE.

Name of the research team member: _____

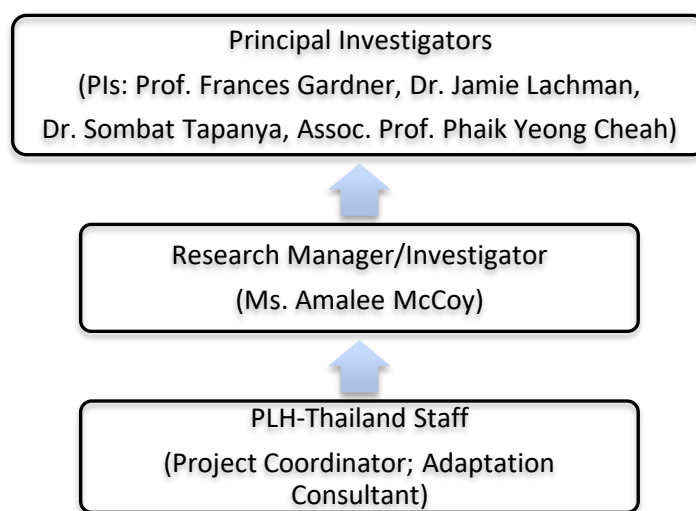
Signature: _____

Date: _____

Appendix E.3 Safety Protocol

Overview

This protocol provides an overview of general procedures for the prevention and mitigation of harm to all PLH-Thailand staff; further, it indicates what steps should be taken for the reporting and documentation of any safety concerns that arise. All members of the research team should read this protocol and sign the Declaration below. The flow chart for reporting and documentation any safety concerns is depicted below, with contact details for the Principal Investigators, Investigator, and Research Manager/Investigator included at the end of this document.



Overall procedure

1. Any staff safety concerns should be raised directly and immediately with the Research Manager. The Research Manager will then make a decision regarding whether the concern should be addressed immediately, discussed with the Principal Investigators, or raised at the regular staff meeting with field staff.
2. The Research Manager and field staff should discuss how to address the safety concern and whether any possible safety procedures can be implemented.
3. If a safety procedure is agreed on, the initial concern and agreed procedure should be documented using the Safety Concern Documentation and Response Form. The form should be shared with the Principal Investigators, who can raise any concerns or recommendations with the Research Manager.
4. If a safety procedure cannot be agreed on between the Research Manager and field staff, the Principal Investigators and Research Manager will hold a conference call to discuss the matter.

5. Once the safety procedure has been approved by the Principal Investigators, the Safety Concern Documentation and Response Form should be appended to the office copy of the Safety Protocol (this document), so that a record of all concerns and staff responses is maintained.

PLH Thailand Safety Procedures

A) Personal safety:

- Staff must carry a well-charged mobile phone at all times in case of accident or emergency.
- If there is an immediate emergency as the Research Manager is not easily contactable, staff should inform the Project Coordinator, who will inform the Research Manager.
- Always inform another staff member about your destination and estimated time of return.
- Staff should carry their ID cards with them at all times.
- Staff should be aware of the closest location of local authorities and hospitals/clinics in case they are in need of emergency assistance.
- Staff should work in teams of two and within viewing distance of each other.
- If possible, never leave a team member behind when on field visits. Travel together as a team when possible.
- If interviewing in a community in which you feel unsafe:
 - Inform the Research Manager.
 - Form 'Interviewer Groups' (and include a male interviewer when possible)
 - If necessary, the Project Coordinator can act as an escort.
- Staff should carry maps of the areas in which they work to facilitate orientation and giving directions.

B) Dealing with participants:

- If a participant should become violent:
 - Do not solve the matter independently.
 - Do not respond violently (so as to prevent the escalation of conflict).
 - Do not confront a mob.
 - Walk away and ignore any accusations.
 - Inform the Research Manager as soon as possible.

- If violent confrontations result in any physical harm, the Research Manager should open an assault case at the police station in cooperation with Ministry of Public Health staff.
- If a participant is visibly unhappy:
 - Be aware of escalating emotions, stay calm and be empathetic to the participant.
 - When possible, restate the study objectives, remind the participant that the service list is available to him/her for self-referral, and reconfirm that a referral to a relevant service can be facilitated.
 - If this reiteration does not help the situation, offer to make an appointment with the Research Manager. Ensure the participant that his/her concerns will be addressed and contact the Research Manager regarding the encounter.

C) Driving safely:

- Staff should be cautious at all times while driving, and all driving rules and regulations should be followed.
- If requested, any person driving a car rented under the project will be provided with defensive driving training.
- Do not use a mobile phone while driving; if absolutely necessary, use a hands-free device.
- Always get enough rest before driving in order to avoid falling asleep behind the wheel.
- When using the project rental car, another member of the team should always be informed of your destination and estimated time of return.
- Do not leave any valuables behind in the car.
- Your personal safety is always more important than the car.

D) Climate:

- Field staff will be provided with water bottles in order to keep hydrated while out in the heat. Staff should bring hats or umbrellas and wear sunscreen on sunny days.
- During the rainy season, staff should bring umbrellas or rain jackets with them.

E) Fire, floods and natural disasters

- In any case of environmental hazard, consider your own safety and that of your team first.
- The Research Manager and Principal Investigators will make a decision, in consultation with the fieldwork team, on how best to deal with such incidents.

F) Medical conditions of staff members

- All staff with chronic medical conditions (such as epilepsy or diabetes) are requested to wear medical alert bracelets.
- All staff are responsible for carrying their medication with them at all times and to show their team members where it is kept and how to administer it in an emergency.

G) Political violence

- In the event of political violence, discuss any safety issues with the Research Manager. In any case where there are risks to staff, fieldwork will be suspended or moved to another area.

H) Miscellaneous

- All staff are requested to register a phone number of a relative or friend with the Project Coordinator, so that he/she can be contacted in case the member of staff is involved in an accident at work.

I) For the Research Manager

- The Research Manager should ensure all staff have a copy of the Safety Protocol and ask staff to sign the Declaration, to confirm that they have read and will adhere to them. Staff should be encouraged to provide suggestions or highlight guidelines that are not working at team meetings.
 - In the case of a violent participant:
 - Inform the relevant government counterpart at the Regional Health Center 8 Office and request support in liaising with the local *phuyai bahn* and the Tambon Administrative Office, as appropriate.
 - Patiently address the issues raised by the participant. If concerns were raised about the nature of the questions asked, explain the reason for each question.
 - Become familiar with local information on safety and culture, in order to better mitigate risks beforehand.
 - Monitor staff who have encountered violent participants, as these incidents can be disturbing or traumatic. Offer counselling through the local Co-PI as needed.
 - If necessary, given staff crisis prevention training or safety training.
-

DECLARATION

Name of staff member (Print): _____

I understand:

- ☐ I have received the Safety Protocol, and have read its contents.
- ☐ All questions I have regarding the Safety Protocol have been answered to my satisfaction.
- ☐ I understand that I'm required to comply with the Safety Protocol and will raise any safety concerns that arise through the described procedure.

Date: _____

Signature: _____

Safety Concern: Documentation and Response Form

Date concern raised: _____

Safety concern:

Proposed response:

Response approved by PI: Yes / No

Signed by Research Manager: _____

Date approved: _____

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Appendix E.4 Risk Assessment

Description of travel and work to be undertaken: I will be conducting fieldwork for approximately 10 months in Udon Thani, one of the four major cities located in Northeastern Thailand. The Mahidol Oxford Medical Research Unit (MORU) has office space available to me, which will be located at the Udon Thani Regional Hospital. My accommodation will be at a local hotel, and I will be renting a car during some of this time. Most field research will take place in relatively close proximity to the hospital, where the intervention for my study will be delivered. I will also be conducting some research and holding some meetings in Bangkok with policymakers and experts over a 4 month period. I should note that I am a Thai citizen, am proficient in Thai, and that Bangkok is my hometown; I have also travelled to Udon Thani several times, but have not previously worked there.			
Hazard	Risks involved	Estimated risk level	Control measure
Personal (e.g., theft, violence, crime, personal heath) Security of accommodation/documents	Risk of personal theft or health emergency.	Low	The research staff and I will be required to carry well-charged mobile phones at all times, and will work in teams of two when traveling in the field. All staff will be made aware of the nearest hospital and the local ambulance number. Other provisions regarding personal safety are listed in the Safety Procedures (attached). I will seek accommodation in Udon Thani that offers 24 hour security, as well as restricted access to guest rooms. I will use the hotel room safe if available, and will not be leaving any valuable belongings behind in the hotel room or at the office. All project documents, external hard drive, and tablets will be kept in a locked cabinet at the MORU office.

Travel / transfers (e.g., remote location, driving, arrivals/travel at night, public transport – availability/reliability)	Travel to/from Udon Thani: Risk of unsafe air travel between Bangkok and Udon. Travel within Udon: Risk of vehicle break down or accident while driving the rental car. Risk of an accident or otherwise unsafe travel while using public transport.	Low	Travel to/from Udon Thani: Myself and the Project Coordinator will be flying a low budget carrier between Bangkok and Udon (either Nok Air or Air Asia), both of which have good safety records. Travel within Udon: I will be renting a car, and staying at a hotel relatively close to the local MORU office. I will ensure that the rented car also comes with insurance, and that I have the rental company telephone number, health insurance details, and emergency services number with me at all times. I have a valid driver's license and have driven in both urban and rural locations in Thailand. While using public transport in Udon, I will ensure that I wear a helmet while using motorbike taxis and that I will use seatbelts (if available) in taxi cars. Travel by bus or tuk-tuk will be done with caution. Research staff will be advised during the training to also follow these precautions.
Location (e.g., extreme weather, temperatures, welfare requirements, additional equipment/supplies)	Risk of intense humidity and high temperatures of approximately 30 degrees Celsius on average during the hot season (March-June). Risk of heavy rain and flooding during rainy season (June-October).	Low	Myself and members of the research team will be prepared for the high temperatures during the hot season by carrying a hat, sunblock, and water during those times when we need to be outdoors. In the event of intense floods, we will stay tuned to local flood warnings and forecasts and will avoid travel.
Work environment (e.g., lone working, cultural differences, communications)	Risks of difficulties regarding project expectations and timelines with local government partners. Risks of theft or financial mismanagement of project funds.	Low	I will be working closely with the Thai Principal Investigator, Project Coordinator and MORU staff to ensure that partner expectations are appropriately managed and that there are regular and open communication channels. The Project Coordinator and myself will be meeting with the MORU finance team to discuss procedures for managing project funds and for minimizing risks to mismanagement.

Interviewing Where conducted? – public places, offices, residences, institutions? With whom? – e.g., high profile political targets which may make the traveller vulnerable by extension, or any other high risk groups? Daily itinerary – this is left with whom? What will they do in event of a no-show?	Interviews with experts and policymakers in private offices: Personal safety risks. Interviews with practitioners in hospital meeting rooms: Personal safety risks. Interviews with parent/primary caregiver participants in hospital meeting rooms: Personal safety risks; risk of distress. Interviews with parent/primary caregiver participants in private homes: Personal safety risks; risk of distress. Daily itinerary, to be managed by the Project Coordinator and myself: Risk of disruption to daily schedules.	Low	For all interviews with experts, policymakers, and practitioners, I will be accompanied by the Project Coordinator. We will ensure that no interview is conducted in a secluded or closed-off area of the building. The entire research team will be trained on the contents of the Safety Protocol (attached), with includes information on how to deal with participants as well as what steps to take if a participant is distressed.
Other (e.g. manual lifting, sanitation, diet, hazardous substances, water-borne diseases)	Risk of political violence.	Low	If any political violence arises, safety concerns will be discussed within the research team and fieldwork will be suspended or moved to another location as appropriate.