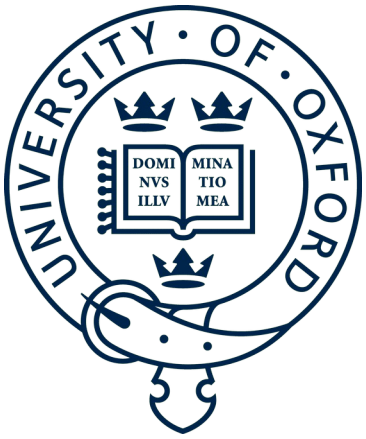
Thesis submitted in partial fulfilment of the degree of Doctor of Clinical Psychology (DClinPsych)

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# Abstracts


## Critical Review of the Literature

**Title:** Identifying factors which facilitate and impede disclosure or non-disclosure of suicidal ideation: a systematic review

**Background:** As identifying suicide risk relies on individuals choosing to disclose their suicidal ideation to others, non-disclosure of suicidal ideation acts as a significant barrier to effective suicide risk assessment and management. We aimed to review the predictors of suicidal ideation disclosure as well as the factors which separate disclosers from non-disclosers, to develop a wider understanding of barriers and facilitators to disclosure, and thereby inform risk assessment and management protocols.

**Methods:** For this systematic review, we reviewed Embase, PsycINFO, Ovid, Scopus and Web of Science in November 2021. All studies which explored predictors of suicidal ideation disclosure or non-disclosure in adults, or the factors which separated adult disclosers and non-disclosers were included without date restriction. A narrative synthesis was conducted. This study is registered on Prospero, number: CRD42021262056.

**Findings:** Of 7448 papers, 26 were eligible for synthesis, where risk of bias was low overall. No individual characteristics (i.e. demographics, mental or physical health or suicidality) conclusively predicted suicidal ideation disclosure or non-disclosure. Tentative links were associated with being female, being of younger age, having a history of psychiatric symptoms and having a history of suicide attempt and disclosure of suicidal ideation. In a small number of studies, individuals' motivations for (non-)disclosure, as well as their relationships with both personal and professional confidants were more consistently identified as being predictive of disclosure.

**Interpretation:** Theoretical conceptualisations of suicidal ideation disclosure, as well as clinical risk assessment and management protocols should consider the inclusion of relationship dynamics between the individual experiencing suicidal ideation and their confidants, in addition to individual characteristics and external contextual factors



*Keywords: suicidal ideation, disclosure, risk assessment*

**Service Improvement Project**

**Title:** Developing integrated mental health care for people experiencing homelessness: an exploration of barriers and facilitators

Research highlights the need for integrated mental health provision for people experiencing homelessness. Examples of such services are currently limited in the UK, and the implementation of current services have encountered several obstacles. Utilising interpretative phenomenological analysis, this project aimed to explore staff perspectives on the barriers and facilitators to integrated mental health provision for homeless people in Berkshire. Semi-structured interviews were conducted with 6 participants from a range of professional backgrounds. Super- and subordinate themes about understanding, clarity, service demands vs. individual needs, and the benefits and challenges of working in homelessness emerged. Recommendations for service development based on these findings were outlined.
*Keywords: homelessness, mental health, IPA*

**Theory Driven Research Project**

**Title:** The roles of cognitive appraisals and self-compassion as predictors of post-traumatic stress symptoms following first episode psychosis

Individuals who experience first episode psychosis (FEP) often develop symptoms of post-psychotic trauma symptoms (PPTS) as a result of their distressing experiences. Although systematic reviews have called for further understanding of the risk factors for PPTS, few studies have examined the psychological underpinnings. This study examined the role of post-traumatic cognitions (negative cognitions about the self and the world, and self-blame) in PPTS, and examined whether self-compassion contributed to this relationship. A quantitative prospective methodology was employed. 34 participants under the care of Early Intervention in Psychosis teams completed measures of post-traumatic cognitions, post-traumatic stress symptoms, depression, symptoms of psychosis, self-compassion and history of trauma. Follow-up measures of post-traumatic stress symptoms, depression and psychosis symptoms were also completed. The study identified that post-traumatic cognitions, and particularly negative cognitions about the self were associated with PPTS at Time 1. Self-blame cognitions, in addition to depression, were found to be predictive of PPTS over time. No relationship was identified between self-

compassion, post-traumatic cognitions and PPTS. Limitations and implications for clinical practice are discussed.
*Keywords: PTSD, psychosis, appraisals, self-compassion*

# Systematic Review of the Literature

## Identifying factors which facilitate and impede disclosure or non-disclosure of suicidal ideation: a systematic review

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Proposed Journal: Clinical Psychology Review

Rationale: This journal publishes substantive reviews relating to clinical psychology and hopes to advance clinical practice which aligns with findings of this review.

Declaration of Interest: None

## Abstract

As identifying suicide risk relies on individuals choosing to disclose suicidal ideation, non-disclosure is a significant barrier to effective risk assessment. We aimed to review the predictors and correlates of suicidal ideation (non-)disclosure, to develop a wider understanding of barriers and facilitators, and thereby inform risk assessment protocols. For this systematic review, we reviewed Embase, PsycINFO, Ovid, Scopus and Web of Science in November 2021. All studies which explored predictors and correlates of suicidal ideation (non-)disclosure in adults were included without date restriction. A narrative synthesis was conducted. This study is registered on Prospero, number: CRD42021262056. Of 7448 papers, 26 were eligible for synthesis. Risk of bias was low overall. No individual characteristics (e.g demographics) conclusively predicted suicidal ideation (non-)disclosure. Tentative factors associated with disclosure included being female, younger, and having a history of psychiatric symptoms or suicide attempt. In a number of studies, individuals' motivations for (non-)disclosure, as well as their relationships with confidants were more consistently identified as being predictive of disclosure. Theoretical conceptualizations of suicidal ideation disclosure, and risk assessment protocols should consider relationship dynamics between the individual experiencing suicidal ideation and their confidants, in addition to individual characteristics and external contextual factors**.**


*Keywords: suicidal ideation, disclosure, risk assessment*


Highlights

- Few individual characteristics predict (non-)disclosure of suicidal ideation
- Relationships between discloser and confidant seem more predictive of disclosure
- Further research is warranted to examine motivation underpinning (non-)disclosure

Suicide remains a prominent global concern (WHO, 2019). In the UK, suicide rates have risen in recent years (Iacobucci, 2020), and emerging research highlights further potential increases in suicidality as a result of the COVID-19 pandemic (Sarchiapone et al., 2021). Effective risk assessment and management is paramount to reduce the prevalence of suicide (Cole-King et al., 2013). These approaches are often focussed on those who have previously or are currently experiencing suicidal ideation (Frey et al., 2016). Indeed, clinicians typically identify suicidal behaviour as being preceded by suicidal ideation, and the denial of suicidal ideation is often a consideration when discharging potentially suicidal individuals from emergency departments or inpatient settings (Berman, 2018). Successful interventions, therefore, are dependent on individuals' willingness to disclose their suicidal ideation (Frey et al., 2016). This seems problematic, given that studies of completed suicides highlight the prevalence of non-disclosure of suicidal ideation and intent (Pompili et al., 2016; Berman et al., 2018). Results of two recent systematic reviews indicate that fewer than half of individuals disclose their suicidal ideation to others (Pompili et al., 2016; Hallford et al, 2023). Indeed, for Berman et al. (2018), who died by suicide, two-thirds of 137 participants denied experiencing suicidal ideation on average two days prior to their deaths. Further research examining the factors which contribute to disclosure and non-disclosure of suicidal ideation is therefore needed, to better inform suicide risk assessment and prevention.

Research exploring the (non-)disclosure of suicidal ideation has been largely atheoretical (Fulginiti et al., 2019), and a cohesive framework of suicidal disclosure has yet to be developed. The disclosure processes model (DPM; Chaudoir & Fisher, 2010), may, in part, explain individuals' motivations for disclosing suicidal ideation. This model posits that disclosure serves as either harmful or beneficial to the discloser, depending on the goals behind disclosure, the

content of disclosure and the response of others to the disclosure. The model suggests that individuals may disclose with approach or avoidance goals in mind, whereby approach goals focus on attaining positive outcomes (e.g. support), while avoidance goals aim to evade negative outcomes (e.g. conflict). Disclosers' goals, in addition to the content and reaction of others, result in a feedback loop, which promotes either greater disclosure or greater secrecy (Sheehan et al., 2019). The outcome of the disclosure process may also be mediated by three additional factors (Love & Morgan, 2021): alleviation of inhibition (the degree to which disclosing can relieve or increase a sense of burden), social support, and changes in social information (the impact of sharing sensitive information on the relationship with the confidant).

In the context of suicidal ideation specifically, approach and avoidance goals may increase or decrease the likelihood of disclosure respectively (Fulginiti & Frey, 2019). Where approach goals include increased social support, access to treatment and opportunity for personal reflection (Sheehan et al., 2019), avoidance goals comprise of such factors as stigma (Hom et al., 2017), threat of hospitalisation (Blanchard, 2017) and loss of autonomy (Richards et al., 2019). In consonance with the DPM, research also highlights the significance of others' reactions to disclosures. Reactions which promote disclosure include responders demonstrating genuineness and empathy, focussing on relationship building, offering a clear rationale for assessment (Ganzini et al., 2013), and providing psychoeducation around triggers for hospitalisation (Blanchard, 2017). This model does not explicitly address individual factors which correlate with non-disclosure, such as sleep problems (Berman, 2018) and significant psychological distress (Mérelle et al., 2018). It is possible, however, that these individual factors influence goal development or the perceived responses of others. For example, greater suicidal ideation has

been identified as reducing the perceived helpfulness of disclosing to a general practitioner (GP) (Calear & Batterham, 2019).

A previous systematic review explored the prevalence of communication of suicidal intent among suicide decedents (Pompili et al., 2016). This review highlighted the correlation between suicidal ideation and behaviour, and challenged the assumption that '*those who talk about killing themselves rarely die by suicide*' (p. 2250). A recent meta-analysis in this area primarily examined prevalence of disclosure (Hallford et al., 2023), and analysed a small number of factors which correlated with disclosure across these papers (i.e. gender, age, history of suicide attempt and psychiatric diagnosis). The present review uses a narrative synthesis to go a step further by focussing on wider individual factors, as well as the interpersonal factors which contribute to the (non-)disclosure of suicidal ideation, to inform suicide risk assessment and prevention protocols. The review aims to identify: (1) individual and interpersonal differences between those who choose to disclose suicidal ideation and those who do not, and (2) individual, interpersonal and contextual factors which predict the disclosure or non-disclosure of suicidal ideation.

## Method

### Eligibility Criteria

We considered all studies which examined the factors relating to (non-)disclosure of suicidal ideation in any context. To be included, studies had to explore variables associated with suicidal ideation (non-)disclosure in adults, or individual reasons for disclosing and concealing suicidal ideation. Studies had to be quantitative and empirical in design, published in peer review

journals, include adults 18 years of age or older and be available in English. Studies were excluded if they included systematic reviews or meta-analyses, or included participants with learning disabilities, or serious cognitive or communication difficulties which pose additional challenges regarding disclosure.

**Information Sources & Search Strategy**

A systematic search was conducted in line with preferred reporting items for systematic review and meta-analysis (PRISMA) protocols (Moher et al., 2015). The search strategy was discussed with the study supervisor, and a university librarian, before initial searches commenced on 11th November 2021. The review protocol was registered on PROSPERO (CRD42021262056). Searches were conducted in the databases Scopus, Web of Science, and Ovid (including Embase and PsycINFO). Terms pertaining to suicidal ideation, disclosure, and factors/characteristics were initially searched individually, and these searches were then combined in an overall search strategy (Appendix A). Limits included identifying only journal articles which were peer-reviewed and available in English.

**Selection Process**

All identified articles were imported into Rayyan (Ouzzani et al., 2016), where duplicate articles were removed, and titles and abstracts were screened for eligibility. Twenty percent of all titles and abstracts were screened by both the first author (EG) and the second author (SP) to ensure the reliability of the screening process. Inter-rater reliability was measured using a kappa coefficient (k; Cohen, 1960). Once agreements had been reached between the two authors, the first author completed screening of the remaining 80% of titles and abstracts. Both authors

screened 50% of the full-text articles to again ensure consistency in the screening process, and the remaining 50% were then screened by the first author.

Two review authors (EG & MH) designed a data extraction form using Microsoft Excel (Appendix B). The categories for extraction included demographic details of participants, measures of (non-)disclosure, any data which compared individuals who disclosed or concealed suicidal ideation, or examined predictors of suicidal ideation (non-)disclosure (including the measures used), and any confounding variables. All measures of disclosure were included. No restrictions were placed on timeframes or other variables included in studies. The first author completed data extraction and risk of bias appraisal in all papers. Risk of bias appraisal of the studies in this review was informed by the standard quality assessment criteria for evaluating primary research papers from a variety of fields (Kmet et al., 2004). Each study was evaluated according to the following criteria: (a) research question, (b) design, (c) subject selection, (d) subject characteristics, (e) random allocation, (f) blinding of investigators, (g) blinding of participants, (h) outcome/exposure measure, (i) sample size, (j) analysis, (k) estimates of variance, (l) confounding variables, (m) results and (n) conclusions. Each paper was afforded a 'summary score' (0.00 – 1.00), where a higher score indicates less risk of bias.

The second author completed data extraction and risk of bias assessment of 50% and 33% of the included full texts, respectively. Initial agreement with regards to data extraction between the two authors was 96.7%. Disagreements between authors were resolved through discussion, and in the absence of resolution, could have been discussed with the third author (MH). Once all data had been extracted, and risk of bias appraisal was complete, the first author conducted a narrative synthesis of this data, to identify themes which illustrate the factors predicting (non-)disclosure

of suicidal ideation, and the characteristics that separate individuals who choose to disclose, or not to disclose.

## Results

### Study Selection

The initial screening process (Fig A.1) across databases identified 9077 papers. Once 2874 duplicates were removed, 6203 papers underwent initial screening. Upon screening all titles and abstracts, the first author included 78 papers, and excluded 6125. The second author screened 20% (1265) of these titles and abstracts, and the two authors agreed in 99% of cases (k = 0.88) and any disagreements were resolved through discussion. Eleven of these titles were excluded, and 10 were included in the final decision.

Upon screening the 78 full texts, the first author included 22 papers and excluded 56. The second author screened 50% (39) of the full texts, and both authors reached an agreement of 92.3% (k = 0.84). Again, disagreements were resolved through discussion, with all papers subsequently excluded. The main reasons for the exclusion of papers were that disclosure was not specifically addressed (n = 17), no predictors or correlates of disclosure were outlined (n = 18), adolescents (under 18) were included in the dataset with adults (n = 10), the designs were qualitative (n = 9), or the papers were conceptual and did not involve analysis (n = 2).

To identify any new published research during this review, the searches were re-run on 6th March 2023. A further 1245 abstracts were identified, of which 36 were duplicates. Following a repeat of the screening process outlined above, 1205 abstracts were excluded, and 5 full-texts were screened. Four additional papers were included in the final analysis, with one being removed due

not including predictors or correlates of disclosure. In total, twenty-six papers (Table A.1) were put forward for systematic review.

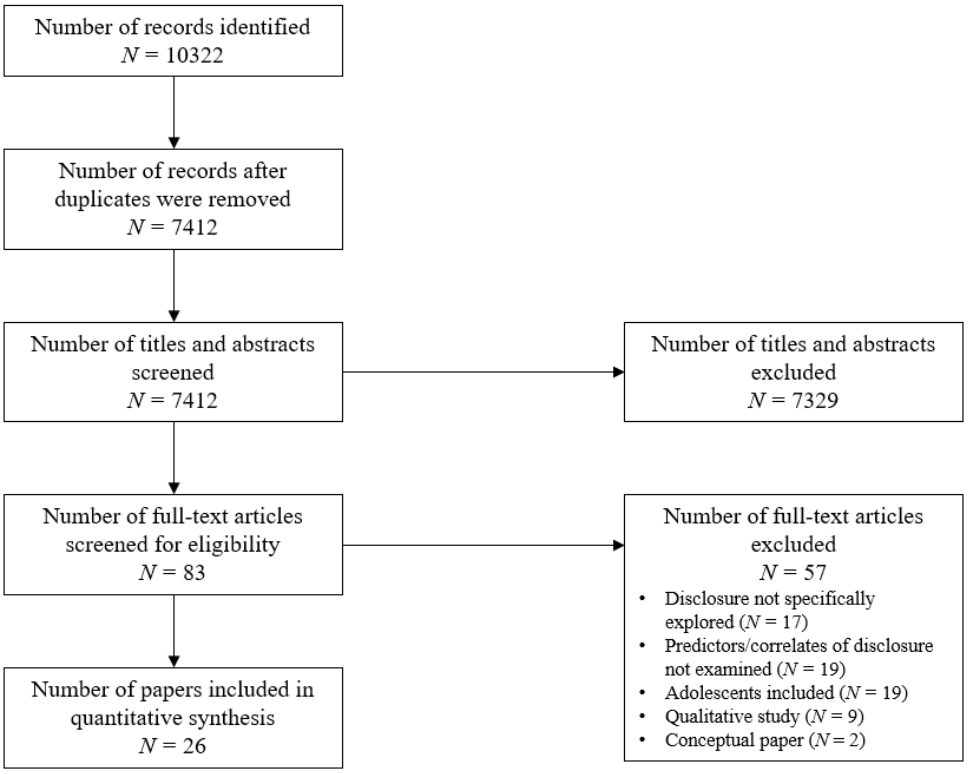


Fig A.1: *Screening Process*

## Study Characteristics

Study characteristics were identified through pooled mean calculations. A total of 93944 participants were included across all papers, 93930 (99.9%) of whom had experienced suicidal ideation. The number of participants recruited in studies ranged from 25 to 46857. Across all papers, 71% participants were male, 28% were female, and 1% identified as a gender minority. Participants (across 20 papers) had a mean age of 37.2. Age range (18 – 105) was reported

sporadically (*n* = 13). Ethnicity was described in 20 papers, although methods of reporting varied considerably between studies. Most participants identified as white or Caucasian (90.5%), where remaining participants predominately identified as being part of black (3.7%), Hispanic/Latinx (2.8%) or Asian (1.6%) communities. In the twelve papers where marital status was documented, 51.8% of participants were married. Across four papers, 1.8% of participants identified as being members of the LGBTQIA+ community.

Most studies were carried out in the USA (19), followed by Australia (3), India (1), the Netherlands (1), France (1) and Germany (1). Data was obtained from a range of settings including mental health services, hospitals, medical/death records, universities and online. All studies employed quantitative methodologies and used predominately cross-sectional designs (24), although two adopted retrospective designs.

Table A.1: *Paper Characteristics*

| Paper | Author(s) | Sample | Demographics | | Design | Setting | KMET Score |
|---|---|---|---|---|---|---|---|
| 1 | Calear & Batterham (2019) | 1616 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 79% Female 21% Male<br>NR*<br>NR | Cross-sectional | General population (online) | 0.86 |
| 2 | Chu et al. (2018) | 73 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 64% Female 34% Male<br>1% Transgender<br>21.59<br>38% Chinese 32% Vietnamese 16% Filipino<br>6% Korean 8% South Asian<br>5% Hawaiian 3% Japanese<br>1% Cambodian | Cross-sectional | University students (community & university Settings) | 1.00 |
| 3 | Deluca et al. (2014) | 1321 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 71% Female 29% Male<br>24<br>77% White 5% Black<br>6% Asian 6% Latinx<br>6% 'Other' | Cross-sectional | From larger research consortium | 0.95 |
| 4 | Fulginiti & Frey (2020) | 41 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 61% Female 39% Male<br>47.34<br>61% White 10% Latinx<br>5% African American<br>24% Multi-racial | Cross-sectional | Community mental health agency | 0.91 |
| 5 | Fulginiti et al. (2019) | 25 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 24% Female 76% Male<br>36.04<br>NR | Cross-sectional | Referrals from community-based psychiatric hospital | 0.86 |
| 6 | Martin et al. (2013) | 100 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 6% Female 94% Male<br>31.6<br>72% White 13% Black<br>8% Hispanic 5% Asian<br>2% 'Other' | Retrospective | Death Record | 0.75 |
| 7 | Choi et al. (2017) | 46857 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 22% Female 78% Male<br>NR<br>92% White 3% Black | Cross-sectional | Death Record | 0.91 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | 2% Hispanic 1% Asian<br>0.5% Native American<br>0.4% 'Other' | | | |
| 8 | Chu et al. (2017) | 169 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 47% Female 41% Male<br>11% Missing<br>28.03<br>61% White 12% Black<br>10% Hispanic 2% Asian/Pacific-Islander<br>1% Native American/Alaskan<br>1% 'Other' 13% NR | Cross-sectional | Outpatient Clinic | 0.86 |
| 9 | Kyron et al. (2020) | 14536 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 47% Female 53% Male<br>NR<br>NR | Cross-sectional | Place of work (emergency services) | 0.86 |
| 10 | Coombs et al. (1992) | 50 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 50% Female 50% Male<br>40 (median)<br>84% White 16% African-American | Cross-sectional | Hospital following admission for suicide attempt | 0.59 |
| 11 | Cukrowicz et al. (2014) | 107 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 64% Female 36% Male<br>70.75<br>74% White 26% 'Ethnic minority' | Cross-sectional | Primary care – baseline data from larger trial | 0.77 |
| 12 | Fulginiti & Frey (2019) | 44 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 59% Female 41% Male<br>46.9<br>60% White 40% NR | Cross-sectional | Outpatient psychiatric care service | 0.73 |
| 13 | Fulginiti et al. (2020) | 527 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 34% Female 55% Male<br>12% Gender Minority<br>21<br>34% Black 23% White<br>18% Latinx 25% 'Other' | Cross-sectional | Homelessness services | 0.91 |
| 14 | McClay et al. (2018) | 128 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 24% Female 76% Male<br>43<br>92% White 6% African-American 1% South Asian<br>1% Biracial | Cross-sectional | General hospital | 0.86 |
| 15 | Fulginiti et al. (2016) | 30 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 57% Female 43% Male<br>47.8<br>46.7% Latinx 37% White<br>7% African American<br>10% Multi-racial | Cross-sectional | Outpatient mental health services | 1.00 |
| 16 | Mérelle et al. (2018) | 719 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 54% Female 46% Male<br>56.3<br>NR | Cross-sectional | Statistics Netherlands - phone | 1.00 |
| 17 | Hom et al. (2017) | 306 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 72% Female 28% Male<br>19.6<br>72% White 12% Hispanic/Latinx 7% Black/African American<br>5% Asian/Pacific-Islander<br>5% 'Other' | Cross-sectional | Research participant pool in university | 0.90 |
| 18 | Husky et al. (2016) | 4156 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 63% Female 37% Male<br>NR<br>NR | Cross-sectional | Random household contacts | 0.91 |
| 19 | Kovacs et al. (1976) | 211 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 55% Female 45% Male<br>29.6<br>51% White 49% 'Non-white' | Cross-sectional | Hospital | 0.73 |
| 20 | McPhedran and De Leo (2013) | 3203 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 0% Female 100% Male<br>43.7<br>100% White | Retrospective | Suicide Register | 0.95 |
| 21 | Orf (2014) | 85 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 66% Female 34% Male<br>29<br>65% White 14% Asian American 12% Hispanic/Latinx<br>6% African American<br>4% 'Other' | Cross-sectional | Online | 0.91 |
| 22 | Schuler et al. (2020) | 224 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 42% Female 58% Male<br>43.43<br>68% White<br>13% African American<br>5% 'Other' | Cross-sectional | Hospital – recruited from larger study | 1.00 |
| 23 | Ammerman et al., (2022) | 50 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 40% Female 60% Male<br>43.43<br>80% White<br>8.6% Black<br>1.8% Native American<br>10.6% Hispanic/Latinx<br>2.6% Asian<br>0.4% Hawaiian/Pacific Islander<br>5.8% 'Other'/Multiracial | Cross-sectional | Online | 0.87 |
| 24 | Choi & Marti (2022) | 17917 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 17% Female 83% Male<br>NR<br>91% White<br>3% Black<br>3% Hispanic<br>2% Asian<br>1% 'Other' | Cross-sectional | Death Record | 0.87 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 25 | Spahn et al. (2022) | 219 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 56% Female 44% Male<br>37.2<br>NR | Cross-sectional | Hospital | 0.87 |
| 26 | Bloch-Elkouby et al. (2023) | 780 | *Gender*<br>*Mean age (years)*<br>*Ethnicity* | 65% Female 35% Male<br>39.3<br>37% White<br>23% Black<br>7% Asian<br>1% Native American<br>4% 'Other' / Mixed race | Cross-sectional | Hospital | 0.87 |

*not reported

## Risk of Bias in Studies

The risk of bias of these papers was, on average, relatively low (mean = 0.87), ranging from 0.59 to 1.00. Thirty-three percent of papers were appraised by the second author. The first and second authors reached 89.7% agreement (k = .824). All disagreements were resolved through discussion. Methodological strengths across studies (i.e. number of studies meeting 'yes' criteria) included having sufficiently described research questions (*n* = 23), clearly outlined study designs *(n* = 23) and data analysis procedures (*n* = 25), and thorough descriptions of participant characteristics (*n* = 22). However, fewer studies received 'yes' scores in terms of having use of reliable and valid measures (*n* = 16) and controlling for confounding variables (*n* = 13). A full overview of risk of bias assessment for each paper may be found in Appendix C.

## Results of Individual Studies

The papers in this review explored a wide range of variables, using both 'comparative' designs, (identifying differences between individuals who disclosed and concealed suicidal ideation), and 'predictive' designs (exploring whether certain variables predict (non-)disclosure of suicidal ideation) (Table A.2). Findings are categorised under the following themes: demographics, factors pertaining to mental and physical health, suicidality, interpersonal dynamics, and the context surrounding (non-)disclosure of suicidal ideation.

Table A.2: *Results of comparative and predictive studies*

| Paper | % of Disclosers & Non-disclosers | Measure of (non-)disclosure | Analysis | Significant Factors | Non-significant Factors |
|---|---|---|---|---|---|
| 1. | 60.5% *D*[a]<br>39.5% *ND*[b] | Disclosure<br>*Suicide Disclosure Items* | Predictive<br>*Logistic Regression* | • Age: $p$ <.001, $p$ = .02 (moderate)<br>• Suicide attempt in past 12 months: $p$ < .001 (weak)<br>• Greater ideation severity: $p$ < .001 (strong)<br>• Greater personal stigma: $p$ = .04 (moderate) | • Gender<br>• Linguistic diversity<br>• Education<br>• Greater personal glorification<br>• Greater self-stigma<br>• Greater self-glorification |
| 2. | 39.7% D<br>60.3% ND | Non-disclosure<br>*Item 19 on Beck Scale for Suicide Ideation* | Comparative<br>*Chi-Square* | | • Difference between D & ND<br>• Gender<br>• Gender & cultural suicide risk<br>• Gender and suicidal ideation severity<br>• Age and cultural suicide risk<br>• Age and suicidal ideation severity |
| | | | Predictive<br>*Logistic Regression* | • Suicidal ideation severity: $p$ < .001 (small)<br>• Cultural risk p < .001 (medium) | |
| | | | *Correlation* | • Suicidal ideation severity and cultural suicide risk: $p$ NR (medium) | |
| 3. | 53.4% D<br>46.6% ND | Disclosure<br>*Idiosyncratic Measure* | Comparative<br>*Chi-Square* | • Ethnicity: $p$ <.05 | |
| | | | Predictive<br>*Logistic regression* | • Ethnicity - female & white: $p$ < .01 (weak)<br>• Partnered & white: $p$ < .01 (weak)<br>• Partnered & 'non- white': $p$ <. 01 (weak)<br>• Financial adversity & white: $p$ <.05 (weak)<br>• Financial adversity & 'non-white': $p$ <.05 (weak)<br>• Multiple adverse precipitating events: $p$ <.05 (weak) | |

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| 4. | % NR | Disclosure to chosen confidants<br>*Idiosyncratic Measure* | Comparative<br>*Chi-Square & T-tests* | • Relationship quality: $p$ <. 001<br>• Relationship duration: $p$ = .039<br>• Relationship type: $p$ <.001<br>• Same race or ethnicity: $p$ = .003<br>• Accessibility of confidant: $p$ = .011<br>• Knowledge of confident: $p$ < .001<br>• Stress management ability of confidant: $p$ < .001<br>• Needs prioritisation of confidant : $p$ <.001 | |
| | | | Predictive<br>*Multivariable regression* | • Relationship quality: $p$ < .05 (small)<br>• Confidant being mental health professional: $p$ < .01 (large)<br>• Preventive attributes (accessibility, knowledge, stress management ability): $p$ < .01 (medium)<br>• Need prioritisation: $p$ < .001 (medium) | • Relationship duration<br>• Relational homophily (age, gender and race/ethnicity)<br>• Source of social support |
| 5. | 72% D<br>28% ND | Future intent to disclose<br>*Idiosyncratic Measure* | Predictive<br>*Univariable regression* | • Psychiatric symptom severity ($p$ < .05, small)<br>• Relationship type: mental health provider $p$ <.05 (small<br>• Relationship type: 'other' $p$ <.01 (small) | • Internalised stigma<br>• Relational homophily<br>• Age<br>• Gender<br>• Relationship status<br>• Social support |
| | | | *Multivariable regression* | • Relationship type: friend $p$ <.01 (large) | |
| 6. | 43% D<br>57% ND | Disclosure<br>*Suicide Death Investigation Template* | Comparative<br>*Chi-square*<br><br>*Mann-Whitney* | • Target of communication: $p$ = .038 (moderate) | • Marital status |
| 7. | 23.4% D<br>76.6% ND | Odd of disclosure<br>*Death record* | Comparative<br>*Chi-Square* | • Age: $p$ <.001<br>• Marital Status: $p$ <.001<br>• Experience in armed forces: $p$ = .002<br>• Previous depressed mood: $p$ <.001<br>• Alcohol/Substance use: $p$ <.001<br>• Physical health problems: $p$ <.001<br>• Other precipitating factors: $p$ <.001 | • Sex<br>• Education<br>• Ethnicity<br>• Region |

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| | | | Predictive<br>*Logistic regression* | • Depressed mood: $p$ <.001 (small)<br>• Health problems: $p$ <.001 (small)<br>• Age groups & depressed mood: $p$ <.001 (small)<br>• Age groups & health problems<br>60 – 69: $p$ =.003 (small)<br>70 – 79, 80+: $p$ <.001 (small)<br>• Suicide Means: Firearm use: $p$ = .001 (small) | • Sex<br>• Education<br>• Ethnicity<br>• Marital status<br>• Region<br>• Experience in armed forces<br>• Previous depressed mood<br>• Alcohol/substance use<br>• Physical health problems<br>• Other precipitating factors |
| 8. | 50% D<br>50% ND<br>(approx.) | Disclosure<br>*Standardised assessment protocol* | Predictive<br>*Logistic Regression* | • History of suicide attempt: $p$ =.001 | • Age<br>• Gender<br>• Timing of risk assessment<br>• Full model |
| 9. | 63.1% D<br>36.9%<br>Prefer not to say | Disclosure<br>*Idiosyncratic measure* | Comparative<br>*Chi-square* | • Gender<br>Male police officers: $p$ = .043<br>• Age<br>Older police officers: $p$ = .002<br>• Sexual Orientation<br>Ambulance: $p$ = .002<br>Fire: $p$ <.001<br>Police: $p$ <.001<br>• Mental Health issues<br>Ambulance: $p$ <.001<br>Fire: $p$ <.001<br>Police: $p$ <.001 | • Total length of service |
| | | | Predictive<br>*Logistic regression* | • Psychological distress: $p$ <.001<br>• Wellbeing: $p$ <.001<br>• PTSD score: $p$ <.001<br>• Perceived stigma: $p$ <.001<br>• Social support: $p$ <.001<br>• Shame: $p$ <.001<br>• Burden: $p$ <.001<br>• Negative Experiences: $p$ <.001 | • Gender<br>• Age<br>• Total service |

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| 10. | 50% D<br>50% ND<br>(approx..) | Disclosure<br>*Idiosyncratic measure* | Comparative<br>*Chi-Square* | • Gender: $p$ <.01 | • Age<br>• Race |
| 11. | NR | Disclosure<br>*Idiosyncratic measure* | Predictive<br>*Logistic Regression* | • Life time therapy: $p$ = .013 (small)<br>• Quality of life: $p$ <.001 (small) | • Age<br>• Gender (male)<br>• Race<br>• Education<br>• Marital status<br>• Disability<br>• Sum of chronic illness<br>• Neuroticism |
| 12. | NR | Disclosure<br>*Idiosyncratic measure* | Predictive<br>*Correlation* | • Approach motivation vs. avoidance motivation: $p$ <.001<br>• Approach goals and disclosure intent: $p$ = .012<br>• Perceived burdensomeness: $p$ =.005 | |
| 13. | 30% D<br>70% ND | Disclosure<br>*Idiosyncratic measure* | Predictive<br>*Multivariate modelling* | Lifetime disclosure<br>• history of unmet mental health need: $p$ <.001<br>• gender minority: $p$ <.001<br>• confidant perceived as source of social support: $p$ <.001<br><br>Concurrent disclosure<br>• history of unmet mental health need: $p$ <.05 (large)<br>• gender minority: $p$ <.001<br>• confidant perceived as source of social support<br>tangible: $p$ <.001 (small)<br>emotional: $p$ <.001 (large) | • Age<br>• Identity<br>• Race/ethnicity<br>• Sexual orientation<br>• Education attainment<br>• Duration of homelessness<br>• Traveller status<br>• History of psychiatric diagnosis<br>• History of adverse childhood experiences<br>• History of discrimination<br>• Help-seeking disposition<br>• History of therapy<br>• History of hospitalisation |
| 14. | 71% D<br>37% ND | Disclosure<br>*Idiosyncratic measure* | Predictive<br>*Logistic Regression* | • Psychiatric diagnosis: $p$ =.03 (small)<br>• Prior suicide attempt: $p$ = .03 (small)<br>• Discharge location<br>Home: $p$ <.001 (large) | • Age<br>• Gender<br>• Race |

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| | | | | Other: $p$ =.02 (medium)<br>• Final model<br>Home: $p$ <.001 (large)<br>Other: $p$ =.02 (medium) | • Education<br>• Employment<br>• Insurance<br>• Marital status<br>• Children at home<br>• History of drug/alcohol use<br>• Current drug use<br>• Current alcohol use<br>• Intoxication at time of attempt<br>• Psychiatric medication<br>• Opiate prescription<br>• Benzo prescription<br>• ICU Stay post GSW<br>• Chronic illness<br>• Chronic pain<br>• Abuse history<br>• Prior psychiatric hospitalisation<br>• Location of GSW |
| 15. | 77% D<br>23% ND | Disclosure<br>*Idiosyncratic measure* | Predictive<br>*Univariable* | • Social support: $p$ <.01 (small)<br>• Stigma: $p$ <.05 (small) | • Age<br>• Female<br>• Not married<br>• Psychiatric symptom severity<br>• Psychosocial functioning |
| | | | *Multivariable* | • People of colour: $p$ <.05 (small)<br>• Social support tangible: $p$ <.05 (medium) emotional: $p$ <.001 (large)<br>• Prior disclosure: $p$ <.001 (large)<br>• Relationship closeness: $p$ <.05 (small)<br>• Relationship type – mental health provider: $p$ <.001 (small) | |
| 16. | 51.6% D<br>48.4% ND | Non-disclosure<br>*Idiosyncratic measure* | Predictive<br>*Logistic Regression* | Bivariate Model<br>• Age: $p$ <.01 (small) | • Gender |

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| | | | | • Health status: $p$ <.001 (small)<br>• Suicidal ideation frequency: $p$ <.001 (small)<br>• Psychological distress: $p$ <.001 (small)<br>Basic Model<br>• Health status: $p$ <.001 (small)<br>• Suicidal ideation frequency: $p$ <.001 (small)<br>• Social Loneliness: $p$ <.001 (small)<br>Final Model<br>• Health status: $p$ <.001 (small)<br>• Suicidal ideation frequency: $p$ <.001 (small)<br>• Social loneliness: $p$ <.001 (small)<br>• Psychological distress: $p$ <.05 (small) | • Educational level<br>• Marital status<br>• Emotional loneliness<br>• Excessive drinking |
| 17. | NR | Accuracy of reporting to different sources<br>*Idiosyncratic measure* | Comparative<br>*ANOVA* | • Psychiatrists vs. family: $p$ =.006<br>• Psychologists vs. family: $p$ =.004 (small to medium) | • Family<br>• Friends<br>• Teachers/Professors<br>• Religious Leaders<br>• Medical doctor<br>• Nurse<br>• Researcher<br>• Other |
| 18. | 51.3% D<br>48.7% ND | Non-disclosure<br>*Idiosyncratic measure* | Comparative<br>*Weighted % and logistic regression* | • Gender: $p$ <.0001<br>• Life time suicide attempts: $p$ <.0001 | • Education<br>• Age<br>• Marital status |
| | | | Predictive<br>*Logistic regression* | • Gender (male) (small)<br>• Age ($p$ NR) (small – medium)<br>• Marital status ($p$ NR) (small)<br>• Education ($p$ NR) (small)<br>• Employment ($p$ NR) (small)<br>• Social support – low number of people to count on ($p$ NR)<br>• Poor connectedness ($p$ NR) | |
| 19. | 33.6% D<br>66.4% ND | Disclosure<br>*Items from Suicide Intent Scale* | Comparative<br>*Correlation* | • Age: $p$ <.05 (small)<br>• Final acts: $p$ <.001 (small) | • Gender<br>• Hopelessness<br>• Depression<br>• Wish to die severity |

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| 20. | 58.4 D<br>41.6% ND (or info missing) | Disclosure<br>*Medical Records* | Comparative<br>*Chi-Square* | • Marital status<br>Divorce: $p$ = .09<br>• Living arrangement<br>Living with friends: $p$ = .03<br>• Employment<br>Unemployed: $p$ = .02<br>Not in labour force: $p$ = .03<br>• Psychiatric history<br>Contact with mental health professional: $p$ = .03<br>Mental health diagnosis: $p$ <.01<br>Mental health treatment: $p$ <.01 | |
| | | | Predictive<br>*Logistic regression* | • Location and single: $p$ <.05<br>• Age and unemployment: $p$ <.01<br>• Location: $p$ <.05<br>• Age: $p$ <.05<br>• Single: $p$ <.05<br>• Mental health treatment: $p$ <.05<br>• Unemployed: $p$ <.05<br>• Evidence of untreated mental health difficulties: $p$ <.05 | |
| 21. | NR | Disclosure<br>*5 items from Suicidal Ideation in Psychotherapy Questionnaire* | Predictive<br>*Hierarchical linear regression* | • Therapeutic alliance: $p$ <.01<br>• Degree to which interpersonal theory risk assessment questions were asked (asking about thwarted belongingness, perceived burdensomeness and desensitisation to fear of suicide): $p$ <.01<br>• Client fear of negative consequences: $p$ <.01<br>• How therapist asked: $p$ <.01 | |
| 22. | 55% D<br>45% ND | Disclosure<br>*Idiosyncratic measure* | Comparative<br>*ANOVA*<br><br>Predictive<br>*Kruskal-Wallis (non-parametric ANOVA)* | • Race: $p$ = .076<br>• History of suicide attempts: $p$ = .078 | • Age<br>• Sex<br>• Marital status<br><br>• Extroversion<br>• Agreeableness<br>• Neuroticism<br>• Openness<br>• Conscientiousness |
| 23 | 74% D<br>26% ND | Non-disclosure<br>*Idiosyncratic measure* | Predictive<br>*Chi Square* | | • Disclosure in veterans vs. |

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| | | | *Correlation* | • Self-stigma in veterans: $p = .03$<br>• Anticipated stigma in veterans: $p = .01$ | civilians<br>• Self-stigma in civilians<br>• Anticipated stigma in civilians |
| 24 | 20% D<br>80% ND | Disclosure<br>*Death Records* | Predictive<br>*Chi Square* | • Age<br>74 – 85 vs. 85+: $p < .001$<br>65 – 74 vs. 85+: $p < .001$ | |
| | | | *Regression* | • History of suicide attempt<br>65 – 74, 75 – 84: $p < .001$<br>• Depression<br>65 – 74, 75 – 84, 85+: $p < .001$<br>• Substance use<br>65 – 74, 75 – 84: $p < .01$<br>• Mental Health<br>65 – 74, 75 – 84: $p < .001$<br>• Physical Health<br>65 – 74, 75 – 84, 85+: $p < .001$<br>• Relationship Problems<br>65 – 74: $p < .001$ 75 – 84: $p < .01$<br>• Recent death of friend/family member<br>65 – 74, 75 – 84: $p < .05$<br>• Male<br>85+: $p < .05$<br>• Ethnicity (Asian)<br>65 – 74: $p < .05$<br>• Widowed<br>85+: $p < .05$ | • History of suicide attempt: 85+<br>• Substance Use – 85+<br>• Relationship difficulties 85+<br>• Death of friend/family member 85%<br>• Gender (except male & 85+)<br>• Ethnicity (except Asian & 65 – 74) |
| 25 | 41% D | Disclosure | Comparative | N/A | • Gender |

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| | 59% ND | *Idiosyncratic measure* | *Chi-Square* | | • Age + Gender |
| 26 | 18% D<br>82% ND | Disclosure to research assistant vs. clinician<br>*Single item from Short Clinical Assessment of Risk for Suicide* | Comparative<br>*Chi Square*<br>*ANOVA* | • Attachment<br>Secure – non-disclosure: $p$ <.001<br>Preoccupied – to RA: $p$ <.012<br>Fearful – to RA: $p$ <.001<br>• Big Five Inventory<br>Extraversion – non-disclosure: $p$ <.001<br>Neuroticism – to RA: $p$ <.00<br>Trait Anxiety – to RA $p$ <.001<br>• Depression<br>To RA $p$ <.001<br>• Anxiety<br>To RA $p$ <.001 | • Conscientiousness<br>• Openness<br>• Agreeableness<br>• Depression – non-disclosure, to both or to clinicians<br>• Anxiety – non- disclosure, to both or to clinicians |
| | | | *Regression* | • Extraversion<br>To RA vs clinician $p$ <.011<br>• Trait Anxiety<br>To RA vs clinician $p$ <.001 | |

¿[a] D = disclosers ¿[b]ND = non-disclosers

## Results of Syntheses

### Demographics

Most papers (n = 19) examined demographic variables in both comparative and predictive studies. Variables examined across multiple studies included age, gender, ethnicity, relationship status, levels of education, occupation and sexual orientation. Findings were largely mixed and inconclusive.

Age was examined in 18 papers. Ten studies (2, 3, 5, 8, 10, 11, 13, 14 22, 25) identified no significant relationships between age and (non-)disclosure. In one study of suicide decedents, those who had disclosed ideation prior to their deaths were significantly more likely to be younger (19), and in another, those who were aged 18 – 49 were more likely to have disclosed than those who were aged 50 - 79 (7). In one non-clinical population, younger age also significantly predicted disclosure (1), and in another, increasing age was associated reduced likelihood of disclosure (16). An additional study, while finding no significance with regards to age more generally, identified older police officers as being less likely to disclose than older fire and rescue workers, and paramedics. In contradiction with this trajectory, two papers examining suicide decedents identified a relationship between older age (80+) and disclosure (7, 24). It must be noted, however, that the risk of bias in these two papers was comparatively lower its counterparts (.75 and .87 respectively), and disclosure was measured through death records, and therefore disclosure to non-medical professionals could not be documented. In a final study of male suicide decedents, age was associated with communicating suicidal intent, but the paper did not elaborate on the relationship (20). These findings are largely inconclusive, but may

tentatively suggest that being younger is associated with increased likelihood of disclosure, which decreases with age, and may again increase later in life.

Gender was explored in 14 studies. No significant relationships were identified in 11 of the studies (1, 2, 3, 5, 7, 8, 11, 14, 19, 22, 25). Two studies identified women as being more likely to disclose than their male counterparts, regardless of whether they had a history of suicide attempt (10, 18), and one associated being in a gender minority with disclosure in young adults experiencing homelessness (13). One study, while finding no significant relationship between gender and disclosure more broadly, identified that male police officers were less likely to disclose compared to men working in fire and rescue or ambulance services (9), while another identified males aged 85+ as more likely to disclose than males aged 65-85 and females aged 65+ (24). These findings suggest that female gender may be minimally predictive of suicidal ideation disclosure. It may be noteworthy that all but three studies utilised a binary measure of gender (i.e. ‘male and female’/‘men and women’), and none of the remaining 23 studies identified whether these binaries included transgender people.

Ethnicity was explored in nine papers, including four comparative studies (3, 7, 10, 22) and six predictive studies (3, 11, 13, 14, 15, 24), and results were mixed. In six studies, no relationship between ethnicity and (non-)disclosure was identified. One study highlighted an increased likelihood of disclosure in individuals from white backgrounds, compared to those from black, Asian, Latinx, native American or ‘other’ backgrounds (7), and another associated being white and female as being more predictive of disclosure than being female and from a minority ethnic background (3). Conversely, one study identified people of colour as being more likely to intend to disclose suicidal ideation (15), although this was one of few studies wherein participants were

primarily from ethnic minority backgrounds rather than a white background. Another found largely no significant relationship between ethnicity and disclosure, other than a slightly increased likelihood of disclosure among people from an Asian background, who were aged 65 – 74 (24). These findings again suggest that ethnicity may not directly influence individuals' decisions to disclose or conceal suicidal ideation. It must be noted, however, that participants' ethnicities were recorded in various ways. While some studies examined very specific nationalities (e.g. Chinese, Hawaiian), others documented ethnicity more broadly (e.g. white, black, Asian) and some studies were notably binary in their measurement of ethnicity (e.g. 'white' and 'non-white'). This heterogeneity may limit the generalisability of conclusions regarding ethnicity in this review.

Relationship status was explored in eight studies. In five of these studies, no association was identified between relationship status and (non-)disclosure of suicidal ideation (5, 6, 11, 14, 22). In two studies, undergraduate students, and adults who had died by suicide were more likely to disclose their suicidal ideation if they had partners than if they were single (3, 7). Married people who had died by suicide were also more likely to have communicated suicidal ideation with a peer or professional (6). However, another study of suicide decedents found that being single was associated with communication of suicidal intent, following the consideration of other demographic details and psychiatric history (20). Although this study demonstrated low risk of bias (.95) disclosure was measured through medical records, potentially excluding informal disclosure to non-professionals.

Education levels were explored in six studies (1, 7, 11, 13, 14, 24). Other than one study of suicide decedents (24) identifying a link between having a Bachelor's degree (and being aged 64

– 74), and disclosure, no studies identified a significant relationship between education and (non)disclosure of suicidal ideation. Occupation was explored in four predictive studies, one of which did not identify any significant relationship between employment status and disclosure (14). In one study, having served in the armed forces was associated with disclosure (7), as was unemployment in a second study (20). The final study found that length of service in the police force was associated with reduced likelihood of disclosure (9). These findings suggest that education levels may not directly impact the likelihood of disclosure or concealment of suicidal ideation, and given the heterogeneity of measures of occupation in these papers, further exploration of this topic is warranted before conclusions can be drawn.

Participants' sexual orientation was explored in three papers. Two studies (3, 13) did not identify a significant relationship between sexual orientation and disclosure, in either college students or young adults experiencing homelessness. The comparative study identified that individuals who were working in emergency services and were members of the LGBTQIA+ community were less likely to disclose than those working in these services who identified as heterosexual (9).

Personality traits were examined in two studies (22, 26), where findings were largely non-significant. One study identified a tentative link between both extroversion and openness and disclosure (22), and in the second, those higher in extroversion and neuroticism were most likely not to disclose, but were more likely to disclose to research assistants than clinicians (26). Attachment styles were also examined in this study, where those with secure attachment were least likely to disclose, and those with preoccupied and fearful attachment styles were more likely to disclose to research assistants than clinicians (26).

A number of further demographic variables were examined in single studies. These studies found no significant relationship between (non-)disclosure of suicidal ideation and language spoken (1), duration of homelessness (13), being of traveller status (13), having health insurance (14), or religious beliefs (3). In one study, living in a rural community increased the likelihood of disclosure compared to living in an urban area (20).

**Mental Health**

Thirteen studies explored the relationship between factors pertaining to current and historical mental health and (non-)disclosure of suicidal ideation. These factors included psychiatric history, current psychiatric symptoms and wellbeing, substance use and mental health treatment.

Four studies explored different aspects of psychiatric history as a potential predictor of suicidal ideation (non-)disclosure. One study found no relationship between psychiatric diagnosis and intent to disclose (5). However, although risk of bias was overall low in this study (.86), the small sample size (n = 25) increases the possibility that a significant relationship between diagnosis and disclosure may have been missed. In one study (18), people with psychiatric diagnoses were more likely to be disclosers than non-disclosers with the exception of those with PTSD and OCD, who were more likely to be non-disclosers One study identified current mental health problems (including depression, anxiety and dependence on substances), and a lifetime history of unmet mental health needs as being associated with higher likelihood of disclosure to close others or to mental health professionals in adults experiencing homelessness (13), while a study of adults hospitalised for self-inflicted gunshot wounds also suggested that a psychiatric diagnosis was associated with increased likelihood of disclosure (14). In a study of individuals

with and without a lifetime history of suicide attempts, having a history of psychiatric disorders was not associated with increased likelihood of non-disclosure (18). Additional factors explored included having a history of adverse childhood experiences (13), discrimination (13), taking psychiatric medication (14), and a history of abuse (14), none of which were found to be associated with disclosure. Having a history of psychiatric symptoms may therefore be tentatively associated with increased likelihood of suicidal ideation disclosure.

Current psychiatric symptoms were explored as potential predictors of (non-)disclosure in seven studies. Again, the findings in these studies were somewhat inconsistent. In three studies, experiencing depressed mood was associated with increased disclosure of suicidal ideation (7, 24, 26), and in a fourth, distress was initially found to be significant, but became non-significant when relational factors were also included in the analysis (5). However, another study identified that distress was associated with non-disclosure of suicidal ideation (16), and a second outlined that having mental health problems rendered emergency services professionals less likely to disclose (9). While the first four studies examined adults experiencing severe mental illness (5, 26), and those who had died by suicide (7, 24), the second two explored non-clinical populations (16, 9) who were less likely to have had previous experiences of mental health difficulties. Studies identify having previous positive experiences of disclosure as facilitating disclosure, which may have mediated decisions to disclose in individuals with severe mental illness who are more likely to have previously discussed their mental health with others (Brohan et al., 2012). For another study, past month quality of life was positively associated with disclosure in older adults experiencing depression (11). One study identified that emergency services workers were more likely to respond ‘yes’ to questionnaire items regarding suicidal ideation (than ‘no’, or ‘prefer not to say’), if they were experiencing more distress, greater levels of wellbeing or PTSD

symptoms (9). Risk of bias was again consistently low across these papers, and did not reflect idiosyncrasies across papers.

Three comparative studies explored the relationship between disclosure and mental health treatment. While two studies identified people with a history of therapy as being more likely to disclose (7, 11), the third study found that history of hospitalisation or therapy were not associated with disclosure (13). The latter study, however, examined only disclosure to friends, whereas the former two studies explored disclosure to a range of sources, and to service providers, respectively.

Lastly, three studies explored the relationship between substance use and disclosure. In two, substance use was associated with increased disclosure in general (7), and specifically in those aged 65 – 74 (24). No significant relationship was identified between denial of suicidal ideation and current or historic substance use in the third study (14). These findings draw a tentative link between having a history of mental health difficulties and increased likelihood of suicidal ideation disclosure. Other factors relating to mental health, however, would benefit from further exploration. All three studies demonstrated comparably low risk of bias (.91 .87 and .86, respectively).

**Physical Health**

Participants' physical health was explored in five studies. In a study of suicide decedents, health problems (including physical illness, pain and functional impairment) were associated with greater odds of disclosure, and older adults were more likely to disclose if they experienced comorbid physical health problems, than if they were physically well (7, 24). In a non-clinical

population, however, self-perceived poor general health was associated with non-disclosure (16). Conversely, two studies found chronic illness, chronic pain and disability to not be predictors of disclosure (11, 14). Data regarding non-disclosure should, however, be interpreted carefully, as in three studies, data was derived from medical notes (7, 11, 24), and in a fourth (16), 2% did not wish to answer questions about suicidal ideation, indication a potential misrepresentation of actual non-disclosure.

**Suicidality**

Eleven studies explored factors pertaining to suicidality and the context of disclosure, as potential factors which influenced (non-)disclosure. These included levels of suicidal ideation, history of suicide attempt and suicide stigma.

One study explored the influence of suicidal ideation severity on decisions to disclose, and identified no significant relationship (2). One study, however, identified that greater ideation severity was predictive of disclosure (1), whereas two studies found it to be predictive of non-disclosure (2, 16).

Five studies explored having a history of suicide attempt as relating to (non-)disclosure. Three predictive studies (1, 8, 14) and one comparative study (24) identified that having a history of suicide attempt was associated with greater likelihood of disclosure where a fifth associated having no history of suicide attempt with a greater likelihood of non-disclosure (18). In this study, however, a relationship was identified between having history of suicide attempt and non-disclosure in individuals with poor social connectedness.

Findings with regards to suicide stigma were similarly mixed. Where one study identified lower stigma predicting disclosure to more sources (1), greater internalised stigma was found to be associated with intent to disclose, before other variables were accounted for (15). Although this paper was of high quality, it had a very small sample size. A second study identified self-stigma and anticipated stigma as reducing intent to disclose in veterans, but not in civilians (23). In a final predictive study of emergency services professionals, all were more likely to respond 'prefer not to say', than 'yes' when being asked about suicidal ideation if their perceived stigma was higher, although it cannot be determined whether all participants who chose 'prefer not to say' were experiencing suicidal ideation (9). Lastly, cultural suicide risk, although explored in only one study, was associated with non-disclosure of suicidal ideation (2).

**Interpersonal Dynamics**

Seven studies explored the relationships between interpersonal factors and (non-)disclosure of suicidal ideation. These factors included social support, and relationships and interactions with confidants.

Social support was explored in four predictive studies. In one study, social support was identified as being predictive of future intent to disclose, before other variables were considered (15). In a second study, social loneliness was associated with non-disclosure of suicidal ideation (16), as was poor social connectedness in another (18). Emergency services professionals were more likely to disclose suicidal ideation in a questionnaire if they perceived themselves as having social support (9).

Individuals' relationships with their confidants were explored in four studies. Several factors were identified as significant for individuals choosing to disclose suicidal ideation. These included the nature of their relationship, including quality (4), duration (4), closeness (5, 15), the confidant being a mental health professional (4, 5, 17), the confidant being a source of social support (5, 15), their being able to manage stress (4) and having previously been a confidant (5). Additional reasons included the confidant not demonstrating stigma (5) and being able to prioritise the needs of the person disclosing (4). It may be noteworthy that no demographic details (i.e. same age, gender, race/ethnicity) were associated with choosing the confidant (4). These four studies were of particularly high quality (.91 .86, 1.00, .91).

The nature of interaction with personal and professional confidants was also explored in three heterogenous studies (8, 19, 21). One study did not identify the timing of asking about suicidal ideation (i.e. at beginning or end of assessment) as being related to disclosure to healthcare professionals (8). In one study, disclosers to friends, family or professionals were more likely to have committed 'final acts' (i.e. getting their affairs in order) (19). The third study identified that therapeutic alliance with a psychotherapist, and the degree to which the therapist asked about thwarted belongingness and perceived burdensomeness predicted disclosure, whereas the therapist asking in a biased or awkward way predicted non-disclosure (21). The findings with regards to interpersonal factors must be interpreted in the context of few papers using heterogenous variables. However, the emerging findings allude to the importance of interpersonal factors, and in particular, social support, the nature of the relationship (whether personal or professional), and the interactions with confidants, in predicting suicidal ideation (non-)disclosure.

### Context

Finally, factors pertaining to individual context were explored in six studies, including motivation behind disclosure, individuals' living arrangements and precipitating events to ideation. With regards to motivation, in one study, individuals were less likely to disclose if they felt as though they were a burden to others (12). In this study, mean approach scores were lower than mean avoidance scores. In another study, psychotherapy patients' fear of negative consequences significantly predicted their non-disclosure (21). Reasons for hiding suicidal ideation included potential impact on work, concerns about confidentiality, being treated differently, being seen as weak, being a burden on others or negatively impacting colleagues.

With regards to precipitating events, there was no relationship between living arrangements and disclosure in two studies (3, 14). One study identified that being discharged home (as opposed to a medical setting) was associated with non-disclosure (14). Disclosure was associated with relationship, housing, financial and legal problems, as well as the recent death or suicide of a friend or family member (7, 24). In another study, individuals were also more likely to disclose if they had experienced financial adversity, or had multiple adverse experiences and were white. Sexual assault was not found to be significantly predictive of disclosure, as was having had no adverse events (3). In two studies, inherent personality traits were not significant of disclosure (11, 22).

## Discussion

### Overview

This review examined the relationships between individual, contextual and interpersonal factors and (non-)disclosure of suicidal ideation. Few individual characteristics were consistently highlighted as correlates or predictors of (non-)disclosure across these papers. With regards to demographics, aside from a tentative association between disclosure and being of younger age, findings were largely non-significant or incongruent with one another. Findings regarding mental and physical health factors were similarly inconsistent, with no coherent association between psychiatric symptoms, treatment history or substance use and (non-)disclosure. Having a history of mental health difficulties was consistently highlighted as increasing the likelihood of disclosure. Similarly, an association was identified between having physical health problems and disclosure more generally, although findings exploring chronic illness, chronic pain or disability specifically elicited non-significant results. Findings pertaining to suicidality were also incoherent, with no consistent relationships identified between suicidal ideation severity or suicide stigma and (non-)disclosure of ideation. Across a small number of studies, a relationship was identified between disclosure and having a previously experienced a suicide attempt. These findings highlight the limitations of relying upon individual characteristics when engaging in or developing risk assessment procedures. Risk of bias in these studies was low overall, and did not usually explain inconsistencies in the findings. Inconsistent findings in this review were, however, likely influenced by significant heterogeneity in participants, variables, measures and settings in studies.

Studies of individual characteristics and their relationship with help-seeking for suicidal ideation, and mental health difficulties more broadly, return similarly inconclusive findings. Research highlights inconsistencies in the relationships between help-seeking and demographics such as

age (e.g. Encrenaz et al., 2012; Batterham et al., 2022; Mackenzie et al., 2006), ethnicity (e.g. Morrison & Downey, 2000; Downs & Eisenberg, 2012; Horesh et al., 2004), occupation and education (Batterham et al., 2019; Ko et al., 2019), and with factors pertaining to mental health (e.g. Mok et al., 2021; Biddle et al., 2004) and suicidality (e.g. Encrenaz et al., 2012; DeLuca et al., 2020). This highlights the need to consider wider factors than individual characteristics alone as being predictive of help-seeking. One factor, however, which varies from this pattern, is that of gender, where studies of help-seeking much more consistently identify a relationship between reduced help-seeking and being male (e.g. Mackenzie et al., 2006; Biddle et al., 2004; Mok et al., 2021). Indeed, a recent meta-analysis of disclosure identified a tentative association with being female and disclosure (Hallford et al., 2023), although this paper utilised the concepts of disclosure and help-seeking synonymously. By definition, help-seeking is an active process which involves not only disclosure itself, but the awareness of one's need to receive help (Pisani et al., 2012), having sufficient resources from which to seek help, and having the willingness to disclose (Rickwood et al., 2005). It may be argued, therefore, that while gender may not influence the disclosure process directly, it may affect individuals' ability to perceive their need for help, and to actively seek it out. Studies consistently identify reduced mental health literacy in males compared to females (e.g. Cotton et al., 2006; Lee et al., 2020), and associate reduced mental health literacy with limited help-seeking (Gorczynski et al., 2017; Bonabi et al., 2016). These findings tentatively highlight that while individual characteristics may not reliably predict (non-)disclosure of suicidal ideation directly, these characteristics may mediate factors which influence disclosure more consistently. In the current review, most participants were asked specifically about their suicidal ideation, which reduced the need for them to independently recognise their potential desire for help and to actively seek help, and implied that they had a

resource from which to seek help, which may have reduced the influence of gender, compared to studies of help-seeking more broadly.

Interpersonal factors, while examined in fewer studies, seemed to elicit more consistent findings. Studies exploring perceptions of disclosers' confidants highlight their being perceived as a source of social support, being able to manage stress, having a close relationship with the discloser, and being a mental health professional as being predictive of disclosure. Therapeutic alliance in psychotherapy also predicted disclosure. Qualitative studies exploring the disclosure of suicidal ideation and distress, similarly emphasise the importance of interpersonal factors in individuals' decisions to disclose. While close therapeutic relationships have been found to increase likelihood of disclosure (Blanchard & Farber, 2020), those deemed weak (Love & Morgan, 2021), or lacking in trust (Ganzini et al., 2013) have the opposite influence. Individuals highlight the quality of friendships (Armiento et al., 2014) and romantic relationships (Love et al., 2021) as being imperative in the disclosure decision-making process. Moreover, professionals emphasise their experiences of being approachable, accessible and building relationships as fostering disclosure of suicidal ideation (Vandewalle et al., 2019). The findings with regards to interpersonal factors in this review must be treated with caution, given the small number of studies and heterogeneity of participants. However, the consistent patterns between papers, in addition to the findings outlined in qualitative research, highlight the importance of further exploring interpersonal influences on disclosure in future research.

**Relationship with disclosure processes model**

The findings of this review may, in part, support the use of the DPM (Chaudoir & Fisher, 2010) in the conceptualisation of suicidal ideation (non-)disclosure. Although findings predominately centred on individual characteristics, rather than motivation or processes of disclosure themselves, the inconclusive findings across these studies highlight that theoretical models centring on intra and inter-personal factors, rather than fixed individual characteristics, are likely to be more beneficial. The few studies which examined approach or avoidance goals for disclosure yielded significant results. Avoidance goals were significantly predictive of non-disclosure in two studies (Fulginiti & Frey, 2019; Orf, 2015).

These findings are supported by extensive qualitative research, which identifies several avoidance goals as being associated with non-disclosure, including unwanted practical impacts such hospitalisation, impact on career, medication (Blanchard & Farber, 2020; Love & Morgan, 2021, Ganzini et al., 2013), and unpleasant emotional experiences such as shame (Blanchard & Farber, 2020; Fulginiti & Frey, 2019), rejection (Vandewalle et al., 2019; Fulginiti & Frey, 2019), and upsetting other people (Levy et al., 2019; Love et al., 2021).

The three aforementioned potential mediators of disclosure outcomes (Love & Morgan, 2021) were also supported in these limited studies. Confidants being perceived as a source of social support predicted disclosure in two studies (Fulginiti & Frey, 2020; Fulginiti et al., 2019). The influence of others' response to sensitive information was also identified as significant, including their being perceived as able to manage stress, prioritise the needs of the discloser, and being non-stigmatising lacking in stigma (Fulginiti et al., 2019). In contrast, assessment of risk deemed to be awkward in one study, was also associated with non-disclosure (Orf, 2015). In line with the influence of potential inhibition alleviation (Love & Morgan, 2021), one study identified that individuals with perceived burdensomeness would be

less likely to disclose (Fulginiti & Frey, 2019), and in a second study confidants addressing perceived burdensomeness in their questioning facilitated disclosure (Orf, 2015). These findings are again supported in qualitative studies, which highlight the importance of response to the disclosure of sensitive information, including not minimising or avoiding the topic (Love & Morgan, 2021), normalising suicidal ideation (Blanchard & Farber, 2020), and being non-judgemental (Bellairs-Walsh et al., 2021).

**Clinical Implications**

Current clinical guidelines highlight the importance of building a collaborative, therapeutic relationship when assessing risk, and of considering individual's values, wishes and preferences (NICE, 2022). Additionally, the importance of asking questions sensitively and carefully is emphasised (Hawton et al., 2012). The findings of this review supports these guidelines, and contribute additional suggestions for developing risk assessment protocols. Firstly, it is imperative, when engaging in suicide risk assessment, that clinicians do not make assumptions about individuals' safety (or lack thereof) based on their characteristics, mental state or previous experiences. While some studies tentatively indicated potential relationships between certain individual factors and (non-)disclosure of suicidal ideation, this review highlighted that most individual characteristics are unlikely to be conclusive predictors of (non-)disclosure, and therefore should be considered with significant caution in risk assessment protocols. Secondly, the findings allude to the importance of individual motivation and interpersonal dynamics in facilitating disclosure. Based on these findings, it is recommended that during risk assessment, clinicians consider asking specifically about individuals' sense of belongingness and burdensomeness, become comfortable in asking sensitive questions clearly and directly, provide

psychoeducation about the potential outcomes of risk assessment (e.g. hospitalisation), and portray confidence in being able to manage clients' needs, and their own stress.

**Research Implications**

This review highlights the over-representation of studies exploring demographic variables in understanding (non-)disclosure of suicidal ideation, and the paucity of quantitative literature examining individuals' motivations and the interpersonal dynamics which may facilitate or impede disclosure. This review highlights the need for further quantitative research in this area, to improve generalisability of the findings already prevalent in qualitative studies (e.g. Blanchard & Farber, 2020; Love & Morgan, 2021). Future studies may benefit from conducting a path analysis to better understand the complex intra- and interpersonal factors which may facilitate disclosure (e.g. approach and avoidance goals, perceived burdensomeness, perceived social support, perceived alleviation of inhibition, relationship with confidant). Given that disclosure is methodologically complex to measure, longitudinal studies may benefit from being retrospective in nature, assessing intra- and inter-personal factors across time in a service (e.g. therapeutic alliance, social support), and measuring non-disclosure retrospectively at discharge, when participants may feel better able to be honest about their experiences (e.g. 'did you conceal suicidal ideation at any time during your care?').

The review highlights the heterogeneity in participant descriptions which also limits generalisability. Future research would benefit from having standardised categorisations for ethnicity, age and gender, which are broader in scope than using only binary categories. This may also reduce the 'white-centricity' that features in multiple studies (e.g. describing participants as 'white' or 'non-white'), and improve inclusivity. Few studies in this review

outlined their use of power analyses, the inclusion of which would greatly increase the quality of the studies, particularly considering the wide range of sample sizes and variables included across these studies.

### Strengths and Limitations of Review

As disclosure of suicidal ideation is critical in suicide prevention efforts (Love & Morgan, 2021), and systematic research in this area has been limited to date (Sheehan et al., 2019), the findings of this review can be utilised to further the theoretical and clinical conceptualisation of suicidal ideation disclosure. Although a recent meta-analysis examined disclosure of suicidal ideation (Hallford et al., 2023), the review centred largely on prevalence of disclosure, and examined correlates with regards to only four variables (age, gender, history of suicide attempt and psychiatric diagnosis), the present review expanded upon these findings to incorporate a wide range of variables associated with (non-)disclosure, across several themes (e.g. demographics, mental and physical health, suicidality). Moreover, Hallford et al. (2023) explored disclosure and help-seeking interchangeably, whereas the present study specifically examined the process of disclosure as a separate (albeit related) construct to help-seeking. Lastly, the present review offered a theoretical understanding of the findings, using the Disclosure Processes Model. Additional strengths of this review include that studies were selected from a wide range of databases, and exclusion criteria were deliberately limited to incorporate a broad range of participants, settings and variables. Including a second author in the screening, extraction and quality assessment processes improved the reliability of the findings of this review.

However, the limitations of this review must also be considered. The studies in this review demonstrated significant heterogeneity with regards to methodology and design, measures of disclosure and characteristics of participants, which led to a wide range of variables being examined in numerous contexts. As such, many variables under review, while potentially promising, were examined in only a small number of studies, and warrant further research in order to be conclusive. The review also excluded qualitative research, in order to allow scope to examine quantitative research in more detail. However, qualitative research in this area has tended towards exploring the interpersonal dynamics, goals for and processes involved in suicidal ideation disclosure, which may lead to a wider understanding of the predictive and correlative factors of (non-disclosure). Many studies did not provide details on their recruitment process, or utilised purposive sampling, which may result in selection bias in study populations, and may limit the generalisability of these findings. It was difficult to determine causation in these studies, given the prevalence of cross-sectional design across papers. This area would greatly benefit from longitudinal research to establish causation.

## Conclusions

Based on these findings, it may be remiss to solely consider individual characteristics, such as demographics, mental and physical health and experiences of suicidality, as being directly predictive of one's likelihood of disclosing or concealing suicidal ideation. Studies indicate that interpersonal factors, such as the role of confidants, the nature and quality of relationships, and the interactions which occur with confidants, may be indicative of the potential for disclosure. Future research should expand on explorations of the relational and interpersonal factors which contribute to disclosure, as well as individuals' motivations to disclose or not to, to develop a

more comprehensive understanding of the disclosure process, and thereby improve suicide prevention efforts.

During the preparation of this work the authors used Rayyan in order to identify duplicate articles, to store abstracts, and to manually include or exclude abstracts. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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## Service Improvement Project

### Developing integrated mental health care for people experiencing homelessness: an exploration of barriers and facilitators

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*I hereby confirm that my work has been deemed suitable for submission by my internal supervisor.*

## Abstract

**Aims:** Research highlights the need for integrated mental health provision for people experiencing homelessness. Examples of such services are currently limited in the UK, and the

implementation of current services have encountered several obstacles. This project aimed to explore staff perspectives on the barriers and facilitators to integrated mental health provision for homeless people in a region of the UK. **Method:** Semi-structured interviews were conducted with 6 participants from a range of professional backgrounds, and analysed utilising interpretative phenomenological analysis. **Results:** Super- and subordinate themes about understanding, clarity, service demands vs. individual needs, and the benefits and challenges of working in homelessness emerged. **Conclusions:** Adaptations to current practice, including flexibility, training, co-location and communication can promote integrated mental health care for people experiencing homelessness.
*Keywords: homelessness, mental health, IPA, accessibility, integration, barriers, facilitators*

While the continued prevalence of homelessness in the UK may be in part attributed to such socio-political factors as housing shortage, increased costs of living and welfare reforms, a significant proportion of people who are homeless experience additional challenges which

contribute to difficulties obtaining or maintaining accommodation (Duffy & Hutchison, 2019). Interventions to reduce repeated homelessness frequently encounter obstacles, not only with the funding of such resources as housing, but also due to psychological factors which impede individuals' abilities to benefit from services (Seager, 2011). Psychologically-informed understanding of these factors may lead to improved accessibility and effectiveness of services for homeless people.

People experiencing homelessness are at significant risk of mental health difficulties which, without intervention, may reduce coping strategies and subsequent engagement with services, thereby perpetuating homelessness (Taylor et al., 2006). Individuals may also experience breakdowns in their accommodation as a result of maladaptive behaviour which often stems from such complex psychological factors as trauma and attachment difficulties (Maguire, 2017). While a cohesive, evidence-based theory outlining the causation and maintenance of homelessness has yet to be developed, Maguire (2017) proposes an overarching model of repeated homelessness (Figure 1), which encompasses several psychological theories, including those of attachment and trauma.

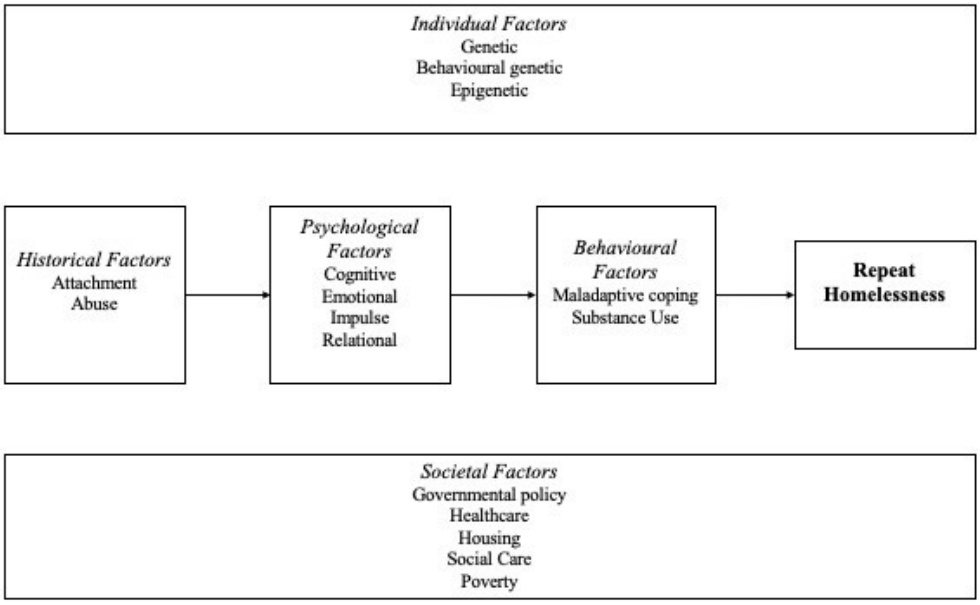


*Figure 1:* A proposed model of repeat homelessness (Maguire, 2017)

Secure attachments are critical in determining a child's ability to regulate their emotions, cope with stress and build supportive relationships, competencies which ultimately promote a sense of trust, security and self-worth (Rodell, et al., 2003). The development of secure attachments, however, may be disrupted in the context of psychological trauma (Van der Kolk, 1987), such as sexual, physical or emotional abuse; experiences which are prevalent among homeless people (Deck & Platt, 2015). Early psychological trauma is often compounded by the process of becoming homeless which, due to the consequent loss of safety, predictability and control, may be traumatic in itself (Goodman et al., 1991). Disrupted attachment and complex trauma often impact mental health and are particularly linked to difficulties with trust, emotional regulation, impulse control and substance use; factors which impede help-seeking and can result in breakdowns in accommodation (Duffy & Hutchison, 2019). Psychologically-informed services should therefore be developed to address such factors as attachment and complex trauma, mental

health difficulties, interpersonal problems and maladaptive coping behaviours, which contribute to repeated homelessness (Maguire, 2017).

Notwithstanding the current paucity of such services, research does highlight examples of successful practice in the UK. These include an outreach NHS psychology service (Timms & Taylor, 2015), clinical psychology provision in hostels (Williamson & Taylor, 2015), and psychotherapy services within homelessness charities (Cockersell, 2011), with each securing measurable improvement in the wellbeing of staff and service users, reduced emergency and criminal justice service use, and increased stability in housing.

Implementing such services, however, is often challenging. Research outlines several obstacles which impede the integration of such services, including a lack of collaboration between services (Canavan et al., 2012) and miscommunication and misunderstanding of agency roles (Williamson and Taylor, 2015). Challenges amongst staff are also highlighted, including turnover (Keats et al., 2012), stress and burnout, and staff prejudices towards working with homeless people (Canavan et al., 2012). Additional considerations include administrative barriers, such as registration with GPs (Khan et al., 2020) and incorporating co-production (Barker, 2021). Integrating services, therefore, requires collaborative inter-agency partnerships to minimise discord between stakeholders, and enable cohesive service provision (Williamson & Taylor, 2015).

**The current project**

This project was developed in response to several concerns regarding the lack of uptake of mental health care provision in Berkshire by people experiencing homelessness, as identified by the local commissioning group. A review by a consultant clinical psychologist highlighted the

paucity of specialist psychological support, difficulties for individuals accessing support through mainstream services (e.g. community mental health teams (CMHTs), drop-in services), and fragmented liaison between relevant services in this locality. The project was created to develop a richer understanding of these complex factors from the perspective of multiple professionals to inform service development and improvement.

The project is particularly timely, given the emphasis on joint working between healthcare, housing and social services, to ensure the safety of people who were homeless during the COVID-19 pandemic (Timms & Drife, 2021). Psychological support for homeless people in the UK remains varied in approach and implementation, and integrated NHS or Public Health England (PHE) initiatives have yet to be evaluated (Timms & Drife, 2021). As such, no guiding principles exist against which to measure the effectiveness of integrated service provision. A recent PHE framework for providing support for people experiencing homelessness in the South East of England, although not specific to mental health support, highlights several principles, the most relevant of which underpin the current project. These include joined-up and localised approaches to working with people experiencing homelessness, multi-agency partnerships, and difficulties accessing services being proactively identified and addressed.

The project aims to identify barriers and facilitators to integrating relevant agencies, to inform the development of integrated mental health provision to homeless people in Berkshire.

## Methods

### Design

This is a single cross-sectional design utilising interpretative phenomenological analysis (IPA) (Smith & Shinebourne, 2012). The IPA approach explores the meaning obtained from

experiences, and the significance of this meaning for each participant **(**Larkin & Thompson, 2012) IPA is therefore an appropriate methodology to encapsulate stakeholders' experiences of service integration and provision for homeless people.

### Participants

Six stakeholders were recruited to this project: four men and two women, all of working age. Three participants were employed by the NHS, two as senior clinicians in the local CMHT, and one as a general practitioner. Two participants worked in senior positions in local homelessness charities, and the final participant worked in social care, as part of Making Every Adult Matter (MEAM). Each participant is referenced using a pseudonym.

### Procedure

This project adopted purposive sampling ensure representation from different stakeholder groups. A semi-structured interview schedule (Appendix E) was developed with supervision, and consultation from a local NHS service lead. The interviews explored participants' experiences of integrated service provision, and their experiences of working with homeless people. As outlined by Larkin and Thompson (2012), all interviews were coded individually, and emerging themes were identified. The interviews were then coded together using the software NVivo, and the subordinate and superordinate themes were outlined (Appendix F). Participants were sent an information sheet and informed consent was obtained prior to conducting interviews. This clinical audit was approved by Berkshire Healthcare NHS Foundation Trust.

## Results

The superordinate and subordinate themes identified from this data are outlined in Table 1. The prevalence of each superordinate and subordinate theme across participants may be found in Appendix G.

Table 1: *Overview of superordinate and subordinate themes*

| Superordinate themes | Subordinate themes |
|---|---|
| 1. ‘***There’s always a story underneath’*** | 1.1.‘*I put myself into their shoes*’: the need for ‘*understanding*’ |
| | 1.2. ‘‘*I've never ever met anyone who enjoys being homeless*: preconceptions as a barrier to care provision |
| 2. ‘***Singing off the same hymn sheet’*** | 2.1. *“What am I expected to do?”*: accountability and responsibility |
| | 2.2. ‘ *There's not a lot you cannot resolve by having a conversation*’: importance of communication |
| | 2.3. *‘it's one document…we all work with’*: continuity in care provision |
| | 2.4. *‘Because they were there’:* presence and co-location |
| ***3. ‘It's being able to meet the client’s rather than the service’s needs’*** | 3.1. *‘This is how we do it and this is how we’ve always done it’*: (in)flexibility in services |
| | 3.2. *‘the client is very much in the middle of this and we adapt to the client’:* person-centred care |
| ***4.* Working in homelessness is *‘heartwarming in some ways and soul-destroying in others’*** | 4.1. *‘I don’t know what can be done’:* hopelessness |

## 4.2. '*it is really worth investing the time':* perseverance

### *1. 'There's always a story underneath'*

This section explores the impact of staff attitudes towards people experiencing homelessness on quality of care.

*1.1.'I put myself into their shoes'*: the need for *'understanding'*

One perspective held by all participants was the importance of understanding the factors which impede individuals' engagement with services, and contribute to persistent homelessness. Each participant endorsed humanising, individualised approaches to this understanding, *'they're not just one batch of people... they've all got their own life stories'* (Jim, line number 317). Some participants demonstrated an empathic perspective on factors which may underpin alcohol or substance use: '*if you were dealing with what this guy goes through on a daily basis… you would have a drink...that's your self-medication'* (David, 597). Mark highlighted the potential causes of behaviour which may be interpreted as antagonistic, '*…they're scared. They don't want you to get to know them because you might not like them'* (460). Alex reflected on the factors underlying perceived lack of engagement with services, *'You can't have that expectation that they will come... a lot of time, those are the people that's been…let down in life… why should they trust somebody new?'* (Alex, 454).

These perspectives position people experiencing homelessness as being victims of circumstance, rather than being at fault, '*they've just had a bad run'* (David, 448). The importance of services adopting this understanding, humanising approach to improve accessibility of mental health services is highlighted: *'If you sat him down...instead of just relying on what you read on the*

*piece of paper, you would see that this guy needs help and you would ask yourself "why [you've] not done this before"* (David, 602).

### *1.1 'I've never ever met anyone who enjoys being homeless'*: preconceptions as a barrier to care provision

Most participants outwardly contradicted societal preconceptions about homeless people, and the blaming attitudes which can arise from such assumptions, '*people would say… "they made that choice". No, they didn't'* (Mark, 552). For these participants, it seemed important that the public challenges their preconceptions, '*they're frightened of them or "they must have done something wrong to be homeless". And these are amongst our most vulnerable people in society*' (Jim, 194). Others' reflections, however, were somewhat more complex, and tended towards assigning partial responsibility to homeless individuals themselves, which, in turn, may relieve care providers of some accountability, '*We can offer them the most... beautiful accommodation that exists, but they won't have it'* (Alex, 339). This depiction contrasts with those of the other participants who acknowledged the challenges faced in new tenancies for people who have been homeless, *'If you're stuck in that environment…I think my mental health would deteriorate massively'* (David, 283). Alex and Clare's comparative lack of direct contact with people experiencing homelessness may have shaped some of these assumptions, given Joan's reflections on the contrasts between her previous perceptions of people experiencing homelessness, '*they're just out for money'* (Joan, 285), to her current views having worked with this population for some time, '*there but for the grace of God go any of us'* (Joan, 301). These findings reflect the potential for negative preconceptions to act as barriers to care provision.

## 2. *'Singing off the same hymn sheet'*

This theme explores the importance of clarity regarding expectations and practice among different services.

*2.1 "What am I expected to do?"*: accountability and responsibility

Five participants outlined the importance of clarity in what services expect of each other, and their respective responsibilities, '*having clear actions, understanding what other people's roles were… people are gonna take that responsibility'* (David, 92). Participants outlined the benefits of having clear mutual expectations on quality of care, citing it as '*amazing'*, when different services are *'around the table…saying "this is what we will do"* (Joan, 106). Clarity in accountability was deemed similarly beneficial when difficulties arise in care provision, '*if something is not working, they know…who is meant to be doing what'* (Alex, 104). Three participants also outlined difficulties in providing integrated care when responsibility is unclear, and is therefore being passed from one team to another, '*there's still 'one foot out' kind of thinking "actually it's a drug and alcohol issue, they need to sort that first"'* (Mark, 41). . Without this accountability, service users can be left '*in limbo'* (Joan, 91), and participants alluded to a sense of frustration, *'we're kind of left there on our own to deal with somebody as complex as this person'* (Alex, 358).

*2.2 'There's not a lot you cannot resolve by having a conversation*': importance of communication

Five participants endorsed clear communication between services, emphasising knowing who to contact, and how to contact them: '*as long as we are able to have the conversation, we know who to speak to… it's fine"* (Alex, 20). Participants reflected on the beneficial impact of clarity in communication on care provision, '*there's been a real pro-active…presence in cooperation and understanding, because… professionals have learned...a lot of information and how other*

*services interlink and work'* (Mark, 99). While participants agreed on the importance of knowing *'who to have the conversation with'* (Alex, 139), views on virtual communication were somewhat mixed. Perspectives ranged from suggesting virtual communication *'works brilliantly'* (Jim, 57), to outlining its potential impact on engagement, '*too often…you can just tell people are looking at their email. Not really paying much attention to what we should be there for'* (David, 98). The latter reflection potentially highlights the impact of competing demands on professionals' capacity to engage in joint working.

In addition to liaison between individual staff members, participants endorsed shared record systems, to facilitate inter-service communication: '*whatever is documented...everybody can access it'* (Alex, 113). Participants whose service could not access these record systems, however, cited frustration at fragmented communication, '*They are very reluctant to release any information they have… which means that you're not really giving an overall help pathway'* (Joan, 47). All participants referenced the MEAM approach as '*fantastic'* (Jim, 242) in facilitating communication between teams.

Several participants highlighted their concerns regarding disjointed communication, predominately with services external to their own. Most frequently cited were challenges with CMHTs, '*they…say "we'll call you back"…sometimes you don't get a call back at all. Other times it's six or seven hours later'* (Joan, 9), and with housing services, '*it took us… a month and a half, maybe two, just to have some conversation.'* (Alex, 217). Most participants acknowledged systemic barriers to communication, largely the demand on services, with responses ranging from understanding: '*they do what they can'* (Clare, 95), to exasperated: *'Everyone's incredibly busy…I know that. But is that…an acceptable excuse? I don't know'* (David, 620). Communication may therefore be an important contributor to integrated service provision.

*2.3 'it's one document…we all work with'*: continuity in care provision

Five participants endorsed continuity among services, regarding protocols, staffing and funding, '[joint working] *has to come together to be able to get a decent end result for people'* (David, 107). Some participants referenced continuity regarding individual care plans between services '*We come up with a plan that all services…follow...if the person presenting A and E on the Saturday evening, that's what they're gonna do. During the day, this is what we do* [sic]*"* (Alex, 37).

Participants, however, predominately focused on the challenges arising from lack of continuity in these areas. Jim, for example, referenced the difficulties for service users when faced with a lack of consistency in staffing, '*what they're much more likely to do is…get completely random people seeing them… that's the worst thing for them'*, (176). Others referenced the challenges of staff turnover on other services, including the lack of communication involved, '*we don't always get told that somebody is leaving, …the only time you know is 'cause there's an email says they no longer work for the council or whatever, so you know, "contact somebody else"'* (Clare, 135). Alex similarly highlighted the distress from fragmented sense of continuity with regards to service users' safety: '*if somebody needs a Mental Health Act assessment, they're sitting on the bridge somewhere... who's responsible?...that used to cause massive arguments'* (172). Lack of continuity at commissioning level was also suggested to contribute to these barriers, '*the funding's there one year and then it's not'* (David, 406).

*2.4 'Because they were there':* presence and co-location

Four participants cited presence and co-location of teams as beneficial in providing integrated support, for several reasons. For Clare, going to residential care settings improved relationships with staff, which in turn improved communication between services, and continuity of care: *"I*

*go over there a lot. So, I've got to know them"* (188). David highlighted the benefits of co-location on the efficiency of care provision, '*to have all of those services in one room, you can imagine how quickly things start to happen.'* (676). Alex emphasised the benefits of being present, in the absence of co-location, to improve service integration, '*our diaries are full, but making an effort to…join meetings'* (189). Four participants endorsed staff presence in making services more accessible, '*There's a captive audience' (*Jim, 173). The enthusiasm with which these participants emphasised presence and co-location contrasts with the frustration of participants when referring to fragmented service provision: '*you just gotta go all round these, these, these areas … it's so frustrating...no wonder clients just switch off. … all this is too much'* (Mark, 402).

### *3. 'It's being able to meet the client's rather than the service's needs'*

This theme explores participants' experiences from the broader perspective of meeting service-wide demands, in conjunction with providing individualised care.

*3.1 'This is how we do it and this is how we've always done it'*: (in)flexibility in services

Each participant identified inflexibility within services as having been a barrier to providing integrated mental health support. Some expressed frustrations about inflexibility of services other than their own,'*… it's great what they've set up, but it's not been set up to manage the people that we're dealing with'* (Mark, 125). Some participants reflected on the difficulties of teams working in silos, '*people normally say… "drug and alcohol get that sorted out first and then we'll look at the rest of it" and it's absolute rubbish. Because it's all entwined'* (Jim, 151). These perspectives may suggest that current ways of working do not reflect an understanding of the needs of people experiencing homelessness.

All participants shared the impact of services struggling to address the needs of individuals. For some participants, services were perceived as dehumanising people who are homeless, '*the fact is, there's an individual there that's crying out for some sort of support. And it will be used in talks...*"*it's a financial element*"*…it's discussed quite openly and you just say well… someone's gotta do something'*. (Mark, 191). Participants reflected predominately on the inflexibility of other services, and contrasted this with their own personal practice, *'if you...get to know them as a person, you can help hugely, so…, that's what I did*' (Jim, 197). Others also reflected on the barriers impinged by the limitations of other services, which may render it difficult to provide care to all service users, '*we can't work with them until they have somewhere to live'* (Alex, 289). Some participants alluded to services potentially creating systemic barriers, rather than simply being dictated by them, *'they'll do their … "that doesn't fit our criteria". Well, who's decided your criteria? "We have"'* (Jim, 19). One participant suggested that services disregard wider guidelines in order to meet their own demands, '*in NICE guidelines that it says actually, if they're using drugs and alcohol that, you know, you can still see them and you can still kind of assess them and it just takes, takes more time. But.. nope, they will not entertain that thought'* (Mark, 430).

*3.2 'The client is very much in the middle of this and we adapt to the client':* person-centred care

In addition to highlighting the barriers imposed by service inflexibility, five participants promoted flexible, person-centred working, with regards to service criteria, and the structure and location of appointments, with *'the patient.*.. [in] *the middle' (*Jim, 30). David reflected on accessibility of his service, and particularly the self-imposed flexible criteria for accessing mental health support, '*we're an open door policy… nothing too formal [break] we've got access to a counsellor where you know the, the threshold is what we want the threshold to be'* (David,

166, 576). This perspective potentially contrasts with Jim and Mark's aforementioned experiences of services creating barriers, and suggests that if services can decide on criteria, they can develop facilitators instead of barriers to accessibility.

Some participants outlined the importance of flexibility regarding timing and location of appointments for service users, '*having the chance to really sit down with somebody where it's not really timed or "you got half an hour", …also where it's not in a clinical setting, where it's in a setting where the client is also comfortable at…it's being able to engage with… the client's life, not the client engaging with the service's life'* (Mark, 325). With regards to location, specifically, several participants emphasised outreach as an important feature of integrated care for this population, '*what can we do to try and go to them rather than them come to us?'* (Alex, 390). For some, the emphasis on services adopting flexible approaches was quite emotive, and alluded to a power imbalance between services and service users, '*Meet them in the middle, meet them half-way, for goodness sake, not in your ivory towers. And they gotta come there*' (Mark, 610).

**4. Working in homelessness is *'heartwarming in some ways and soul-destroying in others'***

***4.1*** *'I don't know what can be done':* hopelessness

All participants seemed to identify with feeling overwhelmed, and in some cases hopeless regarding the provision of mental health support for people experiencing homelessness, *'I don't know what's the answer to this'* (Alex, 404). For some participants, hopelessness regarding engagement of other services was depicted, *'housing is a fun one to try and get through to …we don't even bother calling anymore'* (Joan, 28). Other participants shared reflections around repeated homelessness being a choice, '*There's some people who do not want to be housed',* (Clare, 452). These participants' reflections seemed to coincide with their more notable sense of

hopelessness about the potential for change, *'It's been like that for years…this small cohort of people that doesn't fit anywhere…I don't think we'll be able to change that really'*. (Alex, 403). Two participants also alluded to people who are homeless themselves experiencing hopelessness about accessing services, *'it's almost like…a core belief that they know they're gonna kind of relapse…and they're going to get discharged…what was the point?'* (Mark, 299). Participants identified a reciprocal relationship between services and service users, whereby services feel hopeless about working with homeless people, discouraging them from adapting their practices, which renders service users feeling hopeless about the care which they will be provided, and therefore becoming less likely to engage, resulting in something of a vicious cycle. Addressing this vicious cycle may reduce obstacles of providing integrated, accessible mental health support for people experiencing homelessness.

*4.2 'It is really worth investing the time':* perseverance

All participants reflected on the importance of perseverance in working with people experiencing homelessness, *'you go through…the five stages of emotion…in a week? …the grief, the anger and frustration and then… with a couple of good wins by Friday, it's all worth it'* (David, 204). Perseverance was particularly emphasised with regards to relationship-building, *'It's not an acute thing. It was… building trust'* (Jim, 262). Some emphasised the importance of time and consistency, '*doing that really over the years, just constantly letting them know …we will always be there and we will always help them and, and we've got their back'* (Joan, 221). While all participants identified with challenges in this work, four participants promoted perseverance, *'it's little steps but they're steps in the right direction'* (Mark, 412), with David referring to individuals coming '*full circle, in terms of getting the support and then giving back'* (342). These participants cited personal reward associated with this work, ' *just to see the smile on his face…*

*that…is.. why I'm still doing this... the little things that we do make such a big change in people's lives'* (David, 237).

## Discussion

### Overview

These findings outline the need for a more comprehensive understanding of people experiencing homelessness, in addition to greater clarity in communication, continuity, and accountability among services. Person-centred, flexible working and continued perseverance by services may also be central to the development of an effective, accessible integrated mental health pathway for people experiencing homelessness

### Perceptions of people experiencing homelessness

These findings highlight the benefits of understanding behaviour in context, which aligns with research emphasising attachment and trauma in this population (Duffy & Hutchison, 2019). Indeed, 'realisation': understanding the impact of trauma on behaviour, is a central tenet of trauma-informed care (Bransford & Cole, 2019). Participants who reflected the societal belief that remaining homeless may, in part, be a choice (Parsell & Parsell, 2012), had less direct experience of working with this population, which may explain their reduced understanding of the factors underpinning repeated homelessness. Moreover, a lack of awareness of attachment styles may influence responses from staff. Where individuals with a fearful attachment style are more likely to elicit compassion, those with avoidant attachments styles are likely to be actively excluded, or to fall through the net, due to being perceived as not 'wanting' help (Theodorou et

al., 2021). These findings, therefore, highlight the importance of training for all services in trauma and attachment-informed care.

**Service Organisation**

The findings regarding structural service barriers and facilitators to integrated care are largely reflective of research in this area. Studies examining similar integrated care pathways identify the need for clarity in communication and continuity, through formal agreements, regular meetings and information-sharing between services, and relationship-building across services, with co-location of services where possible (e.g. Cocozza et al., 2000; Gordon et al., 2007; Whiteford & Simpson, 2015).

Participants' perspectives on flexibility in mental health service provision are similarly endorsed in previous studies, emphasising flexibility with timing, location and content of appointments (David et al, 2015; Scott-Gatty & Cant, 2021). Flexibility in funding is also highlighted, particularly integrating commissioning between clinical services and housing to improve outcomes (Albanese et al., 2016).

Participants highlighted the impact of staff burden and turnover on joint working. Research identifies similar themes among professionals working in homelessness (Peters et al., 2022), and promotes the incorporation of psychologically-informed training (Maguire, 2006), team formulations (Buckley et al., 2020), and trauma-informed staff support (Bransford & Cole, 2019). Further recommendations for the retention of staff include developing a positive and support working environment, strong leadership, reduced emotional demands, increased financial compensation and high-quality supervision (Brabson et al., 2020).

Participants' endorsement of accountability in integrated pathways, particularly with regards to dual diagnosis, also aligns with previous research, where unclear accountability led to services 'passing the buck' between mental health and substance use teams, resulting in poorer outcomes and clients 'falling through the net' (Halfpenny-Weir, 2009). Indeed, a sizable systematic review highlighted the limited consideration given to dual diagnosis in clinical guidelines internationally (Alsuhaibani et al., 2021). This is particularly concerning, given that individuals with a dual diagnosis experience greater psychological and physical ill-health, and are less likely to access services, rendering them one of the most vulnerable, and one of most marginalised groups (Schutz et al., 2019). Moreover, Alsuhaibani et al. (2021) highlight the need for expanded guidance for addressing ethnic and cultural diversity in dual diagnosis care, which may further be highlighted by the over-representation of people from minoritised ethnic backgrounds accessing dual diagnosis services in the UK (Carra & Johnson, 2009). Research, however, shows that extensive support with substance use can have similar positive outcomes in those both with and without a dual diagnosis (Gonzalez & Rosenheck, 2002), and that reducing fragmentation between teams is beneficial to this: a single integrated team or multi-agency working can be similarly effective once collaboration, communication and trust is present (Rosenheck et al., 2003).

**Theoretical Implications**

The findings of this study, at least in part, support the integrated model of repeat homelessness, and in particular, emphasise the role of attachment and trauma, and societal factors in perpetuating homelessness (Maguire, 2017). While this model primarily refers to attachment in the context of individuals' early lives, the findings of this study highlight the potential for fragmented and inconsistent systems to reinforce these relational patterns, and perpetuate

individuals' difficulties in building trusting and safe relationships, resulting in further psychological distress. Although systemic factors are mentioned, this model may benefit from emphasising the role of individuals' care team(s) in disrupting or perpetuating some of the cycles which lead to repeat homelessness.

**Clinical Implications**

Based on these findings, the following recommendations are outlined:

- Training and supervision for services, with emphasis on trauma and attachment-informed care (Hopper et al., 2010).
- Formal agreements, to establish clarity regarding the responsibilities of each service.
- Promotion of communication/continuity between services, through regular meetings, information-sharing processes, and co-location of services or professionals where possible.
- Integrated commissioning between services where possible, with development of an integrated care pathway comprising healthcare, social care and voluntary sector organisations
- Flexibility regarding the location, timing and content of appointments .
- Lowered threshold of acceptance to services.
- 'No wrong door' policy – referrals from any service/individual accepted.
- Flexibility regarding engagement/attendance protocols.
- Outreach working where possible

**Limitations**

The finding of this project must be interpreted in the context of its limitations. Firstly, it would have been beneficial to have incorporated perspectives of individuals experiencing homelessness. Unfortunately, financial and time constraints on this project prevented such involvement. Although not specifically addressed by participants, it may also be pertinent to acknowledge the importance of cultural competence (Bransford & Cole, 2019), and the understanding of intersectionality in developing integrated mental health pathways. Stigma, for example, has been identified as increasing distress and reducing engagement with services in people of colour (Weisz & Quinn, 2018) and members of LGBTQIA+ communities (McCann & Brown, 2019) who are also experiencing homelessness. Lastly, the nature of IPA is such that findings may lack generalisability. However, these findings were largely reflective of other research in this area.

### Future Directions

In order to improve generalisability, future research should adopt a quantitative approach using these findings, to include professionals from different regions, and more diverse professional backgrounds (e.g. substance use, housing) to develop a broader understanding of the barriers and facilitators to providing integrated care. Future research may benefit from examining the efficacy of trauma and attachment-informed training for services, and exploring considerations of intersectionality in developing integrated mental health provision for people experiencing homelessness.

## Conclusions

Research identifies homelessness as neither a structural nor individual issue, but rather a combination of both (Duncan et al., 2019). This projects highlights individual and systemic barriers and facilitators to providing an integrated pathway for mental health service provision for homeless people in Berkshire, and outlines potential suggestions to inform the development of such a pathway.

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# Theory Driven Research Project

## The roles of cognitive appraisals and self-compassion as predictors of post-traumatic stress symptoms following first episode psychosis

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Proposed Journal: The British Journal of Clinical Psychology
Rationale: This journal seeks papers which examine aetiology, assessment and treatment of psychological disorders, which pertains to the findings of this study

## Abstract

**Objectives:** Individuals who experience first episode psychosis (FEP) often develop symptoms of post-traumatic stress (PPTS) as a result of their distressing experiences. Although systematic reviews have called for further understanding of the risk factors for PPTS, few studies have examined the psychological underpinnings. This study examined the role of post-traumatic cognitions (negative cognitions about the self and the world, and self-blame) in PPTS, and examined whether self-compassion contributed to this relationship. **Methods:** A quantitative prospective methodology was employed. 34 participants under the care of Early Intervention in Psychosis teams completed measures of post-traumatic cognitions, post-traumatic stress symptoms, depression, symptoms of psychosis, self-compassion and history of trauma. Follow-up measures of post-traumatic stress symptoms, depression and psychosis symptoms were also completed. **Results:** The study identified that post-traumatic cognitions, and particularly negative cognitions about the self were associated with PPTS at Time 1. Aside from self-blame, post-traumatic cognitions were not found to be predictive of PPTS over time. Depression was also found to be predictive of PPTS over time. No relationship was identified between self-compassion, post-traumatic cognitions and PPTS. **Conclusion:** Post-traumatic cognitions contribute to PPTS, but may not predict PPTS over time. Further research is warranted to determine risk factors of persistent PPTS.


*Keywords: PTSD, psychosis, appraisals, self-compassion*


**Practitioner Points**

- Individuals who experiences significant PPTS endorse greater post-traumatic cognitions
- Self-blame cognitions may be predictive of persistent PPTS
- Formulation and intervention for PPTS should address post-traumatic cognitions
- Self-blame should be assessed and addressed as a potential risk factor for PPTS

**Post-Traumatic Stress following First Episode Psychosis**

The relationship between trauma and psychosis has long been examined, with research often centring on the roles of childhood trauma as a risk factor for developing psychosis (e.g. Morrison et al., 2003; Read et al., 2005). The relationship between psychosis and consequential post-traumatic stress is, however, less understood (Buswell et al. 2021). This is somewhat troubling, given that a significant proportion of people who experience first episode psychosis (FEP) subsequently develop symptoms of post-traumatic stress disorder (PTSD) (Jackson et al., 2011). Positive psychotic symptoms, such as auditory hallucinations or delusional beliefs, as well as interactions with health and criminal justice services can feel threatening, and therefore elicit distress (Chisholm et al., 2006). Individuals for whom FEP results in traumatic distress may experience PTSD symptoms, including reexperiencing, hyperarousal and avoidance (Ehlers & Clark, 2000) as well as clinically significant emotional responses, such as anger, sadness, helplessness, and shock (Lu et al., 2011).

Relying on diagnostic criteria alone to determine the severity of traumatic distress following FEP may exclude the significant proportion of individuals who experience clinical levels of distress but do not meet criteria for PTSD (Jackson et al., 2011; Morgan-López et al., 2020). Creamer et al. (2003) suggest that measuring core clinical constructs of traumatic stress (intrusion, avoidance and arousal) may be preferable. Following FEP, those experiencing subthreshold PTSD, where criteria are not fully met, have demonstrated significantly poorer outcomes than those who experience minimal PTSD symptoms (Mueser et al., 2010). Where individuals' presentations following FEP have not met the diagnostic criteria for PTSD, traumatic distress, including feelings of hopelessness, shame, anger, disempowerment and disconnectedness have

been nonetheless reported (Dunkley et al., 2015). Therefore, research exploring traumatic responses to psychosis often explores clinically significant post-traumatic symptoms (e.g. Turner et al., 2013) rather than relying solely on diagnostic criteria. This post-traumatic response to psychosis may be described as *post-psychotic trauma symptoms* (PPTS) (Jackson et al, 2011). PPTS have been associated with a range of negative outcomes, both in terms of recovery from psychosis specifically, and functioning and quality of life more broadly. Individuals with PPTS report greater difficulty with school, work and relationships, and are more likely to experience depression, anxiety and substance use (Mueser et al., 2010). Moreover, PPTS may predict relapses of psychotic symptoms (Alsawy et al., 2015) and people experiencing PPTS are less likely to take up interventions such as medication or psychological therapy (Mueser & Rosenberg, 2003).

Although approximately one in every two people with FEP will experience PPTS, and one in three will meet diagnostic criteria for PTSD (Rodrigues & Anderson, 2017), there is currently no cohesive model or framework of PPTS. Few attempts have been made to integrate research findings about the prevalence of symptoms with current knowledge of mediators and moderators (Jackson et al., 2011), and little research has examined potential risk factors for developing or maintaining PPTS (Rodrigues & Anderson, 2017). A small number of factors have, however, been tentatively identified as increasing risk of PPTS. In two systematic reviews, depression was most consistently associated with PPTS (Roderiques & Anderson, 2017; Buswell et al., 2021). Although previous trauma has been highlighted as a risk factor for developing psychosis, findings examining the relationship between previous trauma and PPTS are somewhat more inconclusive. Across both systematic reviews, a link between childhood trauma and PPTS in two

studies was highlighted, whereas no link was identified between lifetime trauma and PPTS in four further studies. Findings regarding psychosis severity are similarly inconsistent, with symptoms being associated with PPTS in three papers, and not associated in eight papers. While a review of PPTS-related studies (Berry et al., 2013) recommended that researchers explore the psychological processes involved, a more recent systematic review (Buswell et al., 2021) identified that these recommendations remain largely unmet. Moreover, recent research in this area has been predominately cross-sectional, limiting conclusions about causality (Buswell et al., 2021). It seems pertinent, therefore, that the psychological factors underpinning PPTS be examined, in order to facilitate better outcomes for individuals who have experienced FEP.

**The Role of Appraisal in PPTS**

The cognitive model of PTSD (Ehlers & Clark, 2000) posits that a key process of PTSD is the appraisal of trauma or its sequelae. Negative appraisals of trauma lead to a sense of ongoing serious internal or external threat, which, in turn, perpetuates difficult emotional, cognitive and behavioural responses, which further enhance symptoms. Specific types of cognitive appraisal predict the persistence of PTSD symptoms, namely, negative cognitions about the self and the world, and self-blame (Foa et al., 1999). These cognitions have been associated with PTSD from a range of traumatic events in people with psychosis (Lommen & Restifo, 2009). Additionally, Hardy et al. (2017), propose a theoretical model of post-traumatic stress in psychosis, whereby cognitive appraisals influence coping strategies and intrusions, in individuals for whom traumatic experiences have preceded psychosis. Indeed, in a large network path analysis, trauma-related beliefs as measured on the Post-Traumatic Cognitions Inventory (PTCI) (Foa et al.,1999),

together with hypervigilance, were implicated as the shortest direct path from flashbacks to delusions and auditory hallucinations (Hardy et al., 2021).

Research exploring the role of appraisals in PPTS specifically is more limited. Jackson et al. (2004) posited that the appraisal of psychosis or its treatment as 'stressful' predicted the emergence of PTSD symptoms. However, that study did not identify specific cognitions associated with FEP. Chisholm et al. (2006) identified that perceived helplessness and little control, and low perceived social support, were associated with PPTS, but their cross-sectional design rendered it difficult to infer causation. A prospective study (Brunet et al. 2012) outlined that perceived inability to cope and perceived loss of control predicted perpetuating PPTS, whereas appraisals of threat from voices or perceived persecutors did not. However, the researchers suggested that their methodology (assessing appraisals peri-traumatically) may have been less informative than measuring appraisals in the aftermath following psychosis, when participants would have begun to process their experience. Lastly, a qualitative exploration of PPTS suggested that the impact FEP had on individuals' beliefs about themselves, other people and the world seemed to elicit greater traumatic distress than FEP symptoms themselves (Dunkley et al., 2015). While research seems to support the role of appraisal in PPTS, the role of specific post-traumatic cognitions about the self and others has yet to be established.

**Self-Compassion**

Experiences of traumatic events, and associated negative appraisals, often result in feelings of shame (Scoglio et al., 2018). Shame is widely identified as a predictor of PTSD (Saraiya & Lopez-Castro, 2016), and is associated with PPTS in particular (Turner et al., 2013). Trauma-based shame fits with the cognitive model of PTSD, where the sustained, current threat may

relate to one's identity or social status, rather than physical safety (Cunningham, 2020). Several factors relating to psychosis have been associated with shame-based appraisals, including social stigma, content of positive symptoms (e.g. critical voices), and experiences of hospitalisation (Turner et al., 2013).

While shame negatively impacts one's self-identity, self-compassion can act as an antithesis to shame (Scoglio et al., 2018). Self-compassion may be defined as adopting a kind and balanced attitude towards oneself and one's emotional experiences, particularly during times of physical or psychological anguish (Neff, 2012). Low self-compassion is linked with PTSD persistence and severity (Hiraoka et al., 2015), and compassion-based therapy can reduce PTSD symptoms (Au et al., 2017; Hoffart et al., 2015). Self-compassion is also associated with reduced avoidance (Thompson & Waltz, 2008), a coping strategy which perpetuates PTSD symptoms. In the context of psychosis, self-compassion is associated with reduced distress from delusions and hallucinations (Scheunemann et al., 2019) and with post-traumatic growth and recovery (Waite et al., 2015). The role of self-compassion in predicting PPTS specifically however, has yet to be determined. Emerging research has examined the interplay between post-traumatic cognitions and self-compassion, where higher self-compassion has been found to adapt trauma appraisals, and in turn, reduce PTSD severity or improve post-traumatic growth (Barlow et al., 2017; Wong & Yeung, 2017; Hamrick & Owens, 2019). It is important for this to be explored in the context of PPTS, to better inform early intervention practices.

**Rationale**

Although PPTS are prevalent, and predictive of poorer clinical and functional outcomes, the risk factors associated with PPTS remain poorly understood. Cognitive models have identified

negative appraisals about the self and the world, and self-blame as being predictive of persistent PTSD symptoms (i.e. enduring for at least 6 months) (Beierl et al., 2020). Self-compassion has been associated with changes in post-traumatic cognitions, and with reduced self-blame, shame and PTSD severity in clinical populations, as well as with greater post-traumatic growth after psychosis. In this study, we aim to identify whether post-traumatic cognitions regarding FEP are predictive of persistent PPTS, and whether self-compassion moderates this relationship, in a sample of individuals under the care of Early Intervention in Psychosis (EIP) services in the UK. As research tentatively highlights depression, psychosis severity and distress caused by historical trauma as potential risk factors for PPTS, these will act as confounding variables. It is hoped that the findings of this study will better inform potential assessment protocols and therapeutic interventions for individuals under the care of EIP services.

**Research Questions**

1. What is the frequency of PPTS in individuals recruited from EIP services?
2. Do post-traumatic cognitions relating to experiences of FEP predict the severity of PPTS, and does this relationship persist at least 6 months after FEP?
3. Is depression, trauma history and psychosis symptom severity associated with post-traumatic cognitions and PPTS?
4. Does self-compassion moderate the relationship between post-traumatic cognitions and PPTS?

**Hypotheses**

1. Negative post-traumatic cognitions in the months following FEP (T1) will be associated with greater severity of PPTS at T1, when controlling for psychotic symptoms, depression, and trauma history.
2. Negative post-traumatic cognitions at T1 will predict greater severity of PPTS at least 6 months following FEP (T2), when controlling for psychotic symptoms, depression, and trauma history.
3. Self-compassion will moderate the relationship between post-traumatic cognitions and PPTS at Time 1.

### Exploratory analyses

Exploratory analysis will also examine whether specific cognitions (i.e. self-blame, or negative cognitions about the self or the world) individually predict PPTS at T1 and T2.

## Materials and Methods

### Design

This study employed a prospective design with both within-group and between-group analysis.

### Participants

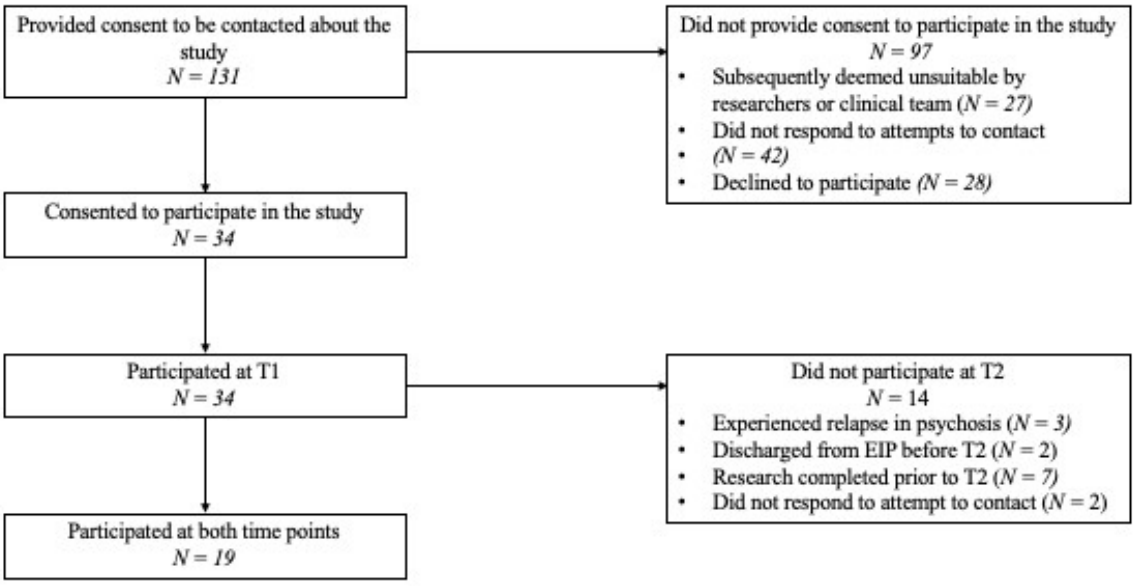
Participants were recruited from six EIP teams across the South East region of the UK. Referrals were sought for individuals who experienced a confirmed FEP, and had been under the care of EIP for at least 30 days. Inclusion criteria were outlined, that participants must:

- be over 18 years of age
- have sufficient English to be able to participate
- have capacity to provide informed consent

Individuals were excluded from participation if they were deemed as lacking capacity to provide informed consent. It was hoped that participants would otherwise be as representative of the clinical caseloads in EIP services as possible, and therefore participants were not excluded based on any co-occurring psychiatric diagnoses or neurodivergence. The researchers endeavoured to avoid recruiting participants who were engaging in psychological therapy during the course of the study but such clients could participate if their therapy had finished at least 90 days before participation. Capacity to consent was initially assessed by care coordinators at T1 and T2, and again by the researchers during testing sessions. To identify suitable participants, the chief investigator attended multiple MDT meetings, contacted individual care coordinators regularly, and attempted to contact potential participants by phone, text and email (following consent to contact). Recruitment began in three EIP teams, across one study site, and one participant identification centre (PIC). To expand the scope of recruitment, three additional PICs were later added. Participants were reimbursed with a £5 voucher for taking part at T1.

One hundred and thirty-one eligible clients consented to be approached about this research (Figure 1) . Twenty-seven were subsequently deemed unsuitable by the researchers or clinical team (e.g. due to decline in mental health), 42 clients did not respond to multiple attempts to contact, and 28 did not wish to participate. Reasons for declining included not wishing to revisit their experiences, or being too busy, although most did not share their reasons. Thirty-four completed measures at T1, 19 of whom completed measures at both time points.

Figure 1: Flowchart of participant recruitment




**Procedure**

For consenting clients, an appointment (face-to-face, phone or video-conferencing) was arranged to complete the consent form and outcome measures (Table 1) and obtain demographic data. A second appointment was arranged for c. two months later (at least 6 months following FEP) to collect repeat measures. For participants who had not yet reached 6 months following FEP (n = 4), T2 was delayed until they had reached this point.

**Ethical Considerations**

Local NHS Trust sponsorship and UK Health Research Authority Research Ethics Committee (REC) approval were obtained (ethical approval IRAS ID 304971. REC reference: 22/WM/0108, 1st June 2022) (Appendix K). Two EIP service users examined the questionnaires, participant information sheet and consent form to ensure they were appropriate and accessible. Care coordinators were encouraged to exclude anyone for whom participation may elicit undue distress, and were informed when testing sessions had taken place. Participants' distress was

monitored throughout testing sessions and 48-hour follow-up calls. Risk concerns (n = 2) were immediately shared with care coordinators.

## Measures

Outcome measures (Appendix L) are listed in Table 1. Demographic data (gender identity, ethnicity and age) was collected at T1.

Table 1: Overview of measures collected at T1 and T2

| Domain | Description | Time Point |
|---|---|---|
| Post-traumatic cognitions | *Post Traumatic Cognitions Inventory (PTCI) (Foa et al., 1999)*<br>The PTCI was utilised to assess participants' appraisals of their most distressing experience in relation to their FEP, The PTCI is a 36-item scale, wherein participants rated statements on a Likert scale from 1 (*totally disagree*) to 7 (*totally agree*). Scale scores for the three subscales show a high degree of intercorrelation (*r*s = .57-.75). In this sample, internal consistency for the total score was high (α =.95), and was examined across subscales (Negative Cognitions About the Self, α = .93; Negative Cognitions About the World, α = .93; Self-Blame, α = .71). Test—retest reliability has been previously demonstrated (1-week interval: .75 to .89; 3-week interval ranged from .80 to .86. (Au et al., 2017).<br><br>Fornells-Ambrojo et al. (2016) highlight the importance of distinguishing between traumatic memories and ongoing distressing experiences associated with psychosis by clearly defining a past, specific traumatic event. As outlined in previous studies (e.g. Turner et al., 2013; Chisholm et al., 2006), participants were asked to recall the memory relating to their first episode of psychosis | T1 |

| | | |
|---|---|---|
| | which stood out to them as most distressing or upsetting, using the participants' chosen phrasing (e.g. 'breakdown', 'being unwell' etc.) | |
| Post-psychotic trauma symptoms (PPTS) | *The Post-Traumatic Stress Disorder Checklist (PCL-5) (Blevins et al., 2015).* The PCL-5 is a 20-item self-report questionnaire, wherein individuals are asked to rate the degree to which they have been affected by post-traumatic stress symptoms in the previous month from 0 ('not at all') to 4 ('extremely'). The PCL-5 has demonstrated good reliability, validity and diagnostic utility in individuals accessing mental health care (Roberts et al., 2021). A clinical cut-off score of 31 was used to establish 'caseness' (Ashbaugh et al., 2016). In this sample, α = .91. As with PTCI, participants were asked to complete this measure holding in mind the memory relating to their FEP which stood out to them as most distressing or upsetting. | T1 & T2 |
| Depression | *Patient Health Questionnaire 9 (PHQ-9) (Kroenke et al., 2001).* The PHQ-9 is a self-report questionnaire wherein items are rated from 0 ('not at all) to 3 ('every day). The PHQ-9 has demonstrated good sensitivity and specificity for clinical depression, and is reliable and valid. α = .84 | T1 & T2 |
| Self-compassion | *Self-Compassion Scale (SCS) (Neff, 2003)* The SCS is a 26-item self-report scale which provides a self-compassion score as well as six sub-scales: self-judgement, isolation, overidentification, self-kindness, common humanity and mindfulness. The SCS has demonstrated reliability and validity. α = | T1 |

| | | |
|---|---|---|
| | .63 | |
| Symptoms of psychosis | *The Psychotic Symptoms Rating Scale (PSYRATS) (Haddock et al., 1999)*<br>The PSYRATS is a semi-structured interview which explores individuals subjective experience of delusions and hallucinations. The PSYRATS has good inter-rater and retest reliability, as well as good internal consistency (Beliefs α =.95, Voices α = .97) and sensitivity to change in individuals with FEP (Drake et al., 2007). | T1 & T2 |
| History of trauma | *Trauma and Life Events Checklist (TALE) (Carr et al., 2018).*<br>The TALE is a trauma screening questionnaire developed specifically for people with psychosis. The TALE demonstrates moderate psychometric acceptability including excellent reliability and convergent validity for sexual abuse. The number of separate traumatic events experienced by participants was calculated using the number of items to which they responded 'yes'. Distress associated with previous trauma was rated on a scale of 0 'not at all distressed', to 10 'extremely distressed'. | T1 |
| Time since FEP | This was determined as the number of weeks between participants' date of acceptance to EIP services, and the date that they completed T1 measures | T1 |

## Statistical Analysis

An a priori power analysis was conducted using G*Power 3.1 (Appendix M), which indicated that for the hierarchical regression analysis, 34 participants were required to have an 80% chance of adequately detecting a moderate – large effect size ($F^2$= 0.25), where $p < .05$.

Statistical analyses were carried out using SPSS (V29) software. The relationship between post-traumatic cognitions and post-traumatic stress symptoms (at both T1 and T2), in addition to depression, psychosis symptom severity and distress associated with previous trauma, was examined using a correlation analysis. The relationship between post-traumatic cognitions and post-traumatic stress symptoms (at both T1 and T2) was examined using a hierarchical regression analysis. A paired-samples t-test examined the relationship between PPTS scores at T1 and T2.

Moderation analysis aimed to analyse a potential indirect effect of self-compassion on the relationship between post-traumatic cognitions and PPTS. This involved a hierarchical regression whereby post-traumatic cognitions and the interaction between post-traumatic cognitions and self-compassion were predictor variables, and PPTS scores at T1 was the criterion variable. Assumptions for all statistical analysis were met. Details for each test can be found in Appendix N.

## Results

### Descriptive Statistics

Thirty-four participants completed T1 measures, 19 of whom completed T2 measures. Reasons for non-completion of measures at T2 included relapse of psychosis (n = 3), being discharged from EIP (n = 2), not having reached two months post-T1 (n = 7), not responding to requests to participate (n = 3). Table 2 provides a descriptive overview of participants' demographics. The

majority of participants identified as male (55.9%), and ranged from 18 to 62 years old (*M* = 32, *SD* = 10.98).

Table 2: *Demographic data of sample (N = 34)*

| | |
|---|---|
| Age (years): | *M* = 32.00, *SD* = 10.98 (Range: 18 – 62) |
| Time since FEP (weeks): | *M* = 56.16, *SD* = 38.42 (Range: 7 – 147) |

| | *N* | Percentage (%) |
|---|---|---|
| Gender Identity | | |
| Male | 19 | 55.9 |
| Female | 14 | 41.2 |
| Non-binary | 1 | 2.9 |
| Ethnicity | | |
| White or White – British background | 24 | 70.6 |
| Asian or British Asian background | 5 | 14.7 |
| Black or Black British background | 2 | 5.9 |
| Mixed background | 3 | 8.2 |

Descriptive statistics for completed measures are outlined in Appendix O. Level of post-traumatic cognitions (PTCI) was relatively high (*M* = 109.85, *SD* = 41.11). Mean PPTS (PCL-5) at T1 fell within the subthreshold range (*M* = 24.00, *SD* = 15.06) and scores were normally distributed (skewness =.483). Frequencies of ratings on T1 PCL-5 items may be found in Appendix P. Twelve participants (35.3%) met the cut-off for clinically significant PPTS. Across this cohort, levels of depression at T1 on average fell in the 'moderate' range (*M* = 8.79, *SD* = 1.12). Prevalence of acute psychotic symptoms was low. At T1, four participants (11.8%)

described experiencing unusual distressing beliefs, and three (8.8%) described hearing voices. At T2, two participants (5.8%) described ongoing unusual beliefs, and two cited voice-hearing (5.8%).

Participants had, on average, experienced nine separate traumatic events prior to their FEP. In addition to symptoms of psychosis (82%) and upsetting experiences of mental health services (64.7%), the most frequently cited prior traumatic experiences included bullying (70.6%), verbal abuse (58.8%) and witnessing violence at home (52.9%). Ongoing distress associated with previous traumatic experiences (range 0 -10) was low overall ($M = 2.63$, $SD = .58$). When asked to briefly describe the most distressing aspect(s) of their FEP, most participants cited symptoms of psychosis (e.g. trouble trusting own thoughts, distressing beliefs, voice-hearing) (n = 16, 47.05%), and experiences of care (e.g. being hospitalised, encounters with police) (n = 15, 41.17%), followed by upsetting interactions with others during their episode (n = 4, 11.11%). One participant described all experiences as pleasurable (2.7%), and another did not name a specific event (2.7%).

A paired samples t-test was run to examine the difference in PPTS scores between T1 and T2. Participants who completed measures at both time points (n = 19) demonstrated fewer PPTS symptoms at T2 ($M = 16.53 \pm 13.669$) compared to T1 ($M = 22.47 \pm 8.75$), a statistically significant decrease of 5.05, $t(18) = 2.460$, $p < .012$, $d = 8.95$.

Both analysis of variance (ANOVA) and eta squared analysis were run to examine the differences between those who completed measures at both time points and those who only completed data at T1 (Appendix Q).

The ANOVA demonstrated no statistically significant difference with regards to outcome measures, age and time since FEP between those who completed both time points and those who only completed measures at T1. With regards to partial eta squared ($\eta^2$), the differences in scores on PTCI (total), PCL-5, PSYRATS(beliefs) and TALE, in addition to number of weeks since FEP met the criteria for medium effect size ($\eta^2$ = .06 - .13). These findings suggest that those who did not complete T2 were more likely to have greater post-traumatic cognitions, post-traumatic stress symptoms, distressing beliefs in the context of psychosis, and distress from previous trauma, than those who completed measures at both time points. Participants who did not complete measures at T2 had, on average, experienced their FEP longer ago than those who completed both time points.

**Associations between Post-Traumatic Cognitions and PPTS (H1)**

The first hypothesis posited that PTCI scores would be associated with PCL-5 scores at T1. A Pearson's correlation was run to assess the relationship between independent variables (PTCI, PHQ-9, TALE (distress) and PSYRATS (beliefs and voices) and the dependent variable (PCL-5). Results of this analysis are outlined in Table 4.

Table 4: Correlation matrix for variables at T1

| | PCL-5 | PTCI – Total | PTCI – Self | PTCI – World | PTCI – Self-Blame | PHQ-9 | PSYRATS-Beliefs | PSYRATS – Voices | TALE |
|---|---|---|---|---|---|---|---|---|---|
| PCL-5 | - | .712** | .772** | .385* | .653* | .769** | .014 | .135 | .566** |
| PTCI - Total | - | - | .966** | .822** | .738** | .641** | -.165 | -.087 | .461** |
| PTCI - Self | - | - | - | .678** | .692** | .708** | -.096 | -.006 | .490** |
| PTCI - World | - | - | - | - | .429* | .339* | -.222 | -.184 | .209 |
| PTCI – Self-Blame | - | - | - | - | - | .500** | -.082 | -.147 | .553** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHQ-9 | - | - | - | - | - | - | -.111 | .227 | .418* |
| PSYRATS - Beliefs | - | - | - | - | - | - | - | -.001 | .130 |
| PSYRATS - Voices | - | - | - | - | - | - | - | - | -.035 |
| TALE | - | - | - | - | - | - | - | - | - |

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Due to the high correlation between scores on PHQ-9 and PCL-5 (r = .769), and the associated risk of multicollinearity, it was decided that PHQ-9 would be removed from the final regression model. Additionally, due to the minimal relationship between PCL-5 and scores on PSYRATS (beliefs and voices), it was decided that they would be removed from the final regression model. Therefore, the full regression model included PTCI and TALE as independent variables, and PCL-5 as the dependent variable.

The hierarchical regression model (Table 5) predicted approximately 58% of the variance in PPTS ($R^2$= .579, F (2, 31) = 21.281, $p$ <.001). Distress from previous trauma ($p$ = .029) was significantly associated with PPTS in Step 1. In Step 2, PTCI total scores were significantly associated with, and accounted for 26% of the variance in, PCL-5 scores (β = 0.57, $p$ <.001).

Table 5: Hierarchical regression predicting scores on PCL-5 at T1

| | Variable | Cumulative | | Simultaneous | |
|---|---|---|---|---|---|
| | | $R^2$ change | $F$ change | $\beta$ | $p$ |
| Step 1 | TALE - distress | .320 | F(1, 32) = 15.051* | .30 | .029 |
| | PTCI | .259 | F(1, 31) = 19.03* | .57 | <.001 |

| |
|---|
| Step 2 |

*$p$<.05

Note: PCL-5 = PPTS, PHQ-9 = depression, TALE = distress caused by historical trauma, PSYRATS = psychosis symptoms, PTCI = post-traumatic cognitions

Hierarchical regression was run to determine whether any individual subscales of the PTCI were associated with PPTS at T1, where TALE was included as a confounding variable (Appendix R). The full model was statistically significant ($R^2$= .67, F (4, 29) = 14.982, $p$ = <.001), although only negative cognitions about the self were specifically associated with post-traumatic stress symptoms at T1 (β = .73, $p$ =.045).

**Post-Traumatic Cognitions as Predictors of Persistent PPTS (H2)**

The second hypothesis was that PTCI scores would predict PCL-5 scores at T2. A second Pearson's correlation was run to determine the relationship between independent and dependent variables (Table 6).

Table 6: Correlation matrix of variables at T2

| | PCL-5 | PTCI – Total | PTCI – Self | PTCI – World | PTCI – Self-Blame | PHQ-9 | PSYRATS-Beliefs | PSYRATS – Voices | TALE |
|---|---|---|---|---|---|---|---|---|---|
| PCL-5 | - | .620** | .599** | .400* | .612* | .663** | .226 | -.043 | .192 |
| PTCI - Total | - | - | .959** | .828** | .614** | .493* | .219 | .048 | .263 |
| PTCI - Self | - | - | - | .681** | .528* | .570* | .202 | .173 | .282 |
| PTCI - World | - | - | - | - | .311 | .304 | .210 | -.073 | .107 |
| PTCI – Self-Blame | - | - | - | - | - | .663** | .226 | -.043 | .192 |
| PHQ-9 | - | - | - | - | - | - | -.034 | .046 | .235 |
| PSYRATS - Beliefs | - | - | - | - | - | - | - | -.108 | .406 |
| PSYRATS - Voices | - | - | - | - | - | - | - | - | -.203 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| TALE | - | - | - | - | - | - | - | - | - |

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

Given the lack of significant associations between PCL-5 and PSYRATS and TALE in the correlation analysis, these variables were excluded from the full regression model. PHQ-9 at T2 was included as a confounding variable.

The full hierarchical regression model (Table 7) was statistically significant ($R^2$= .553, F (2,16) = 9.90, $p$ = .002). Only PHQ-9 ($p$ = .026) significantly predicted PCL-5 at T2. Post-traumatic cognitions did not significantly predict post-psychotic trauma symptoms (β = 0.39, $p$ = 061).

Table 7: Hierarchical regression predicting scores on PCL-5 at T2

| Variable | Cumulative | | Simultaneous | |
|---|---|---|---|---|
| | $R^2$ change | $F$ change | ß | $p$ |
| Step 1 | | | | |
| PHQ-9 | .44 | F(2, 16) = 12.5 | .47 | .026 |
| Step 2 | | | | |
| PTCI | .11 | F(1, 16) = 4.05 | .39 | .061 |

Due to the small sample size at T2, a regression model to examine the relationship between all subscales of PTCI and PPTS at T2 was deemed inappropriate. Given that self-blame was most strongly correlated with PPTS at T2, it was decided that an exploratory hierarchical regression would be run to determine whether the self-blame subscale of PTCI predicted PPTS at T2, when

controlling for depression (Appendix S). The full model was statistically significant ($R^2$= .653, F (2, 16) = 15.027, $p$ = .001). Both depression and self-blame cognitions significantly predicted PPTS at T2 (depression: β = .55, $p$ =.003; self-blame cognitions: β = .48, $p$ =.006).

**Self-Compassion as a Moderator of the Relationship between Post-Traumatic Cognitions and PPTS (H3)**

A hierarchical multiple regression was run to assess any increase in variation explained by the addition of an interaction term between self-compassion and post-traumatic cognitions to a main effects model. There was no evidence that self-compassion moderated the effect of post-traumatic cognitions on trauma symptoms, as the interaction term was not significant ($p$ = .773) and explained only 0.1% additional variation in trauma symptoms.

## Discussion

Previous research highlights the prevalence and detrimental impact of post-psychotic trauma symptoms (PPTS) for people experiencing a first episode of psychosis (FEP). The present study examined whether post-traumatic cognitions predicted PPTS following FEP and whether self-compassion influenced this relationship.

The findings of this study demonstrated a cross-sectional association between post-traumatic cognitions relating to individuals' experiences of FEP and severity of PPTS. Specifically, negative cognitions about the self were independently associated with PPTS severity at T1. These findings are compatible with previous literature examining the relationship between appraisal and PTSD symptoms in individuals having experienced psychosis (e.g. Lommen & Restifo, 2009).

Total post-traumatic cognitions did not significantly predict PPTS over time. The decrease in effect size between total post-traumatic cognitions and PPTS from T1 to T2-highlights the possibility that post-traumatic cognitions are somewhat less predictive of PPTS than findings of cross-sectional studies may suggest. Indeed, a similar prospective study examining appraisals of FEP and subsequent PPTS found non-significant results, and outlined the possibility that the role of appraisals in predicting persistent PPTS has been over-estimated (Brunet et al. 2012). The results emphasise the importance of longitudinal research in this area, and of reducing reliance on cross-sectional research to understand the development and maintenance of PPTS (Buswell et al., 2021).

Self-blame cognitions, however, significantly predicted PPTS at T2 with a medium - large effect size. Previous research similarly highlights the relationship between self-blame and persistent PTSD symptoms (e.g. Alix et al., 2017) and cites changes in self-blame specifically as predictive of recovery from PTSD (Holliday et al., 2018). Research examining self-blame cognitions following FEP is sparse, although studies highlight a relationship between self-blame and PTSD symptoms (Sherrer et al., 2015), depressive symptoms (Liu et al., 2020) and relapse of psychosis (Gumley et al., 2006). Additionally, as outlined in previous research (e.g. Buswell et al., 2021), depression was associated with PPTS at both time points. Distress associated with previous trauma was associated with PPTS at T1, but not T2. While the TALE examines both childhood and lifetime trauma, distress scores did not discern between types of previous trauma. Prior research examining the relationship between trauma and psychosis has highlighted that childhood trauma is potentially more influential than prior trauma in adulthood (Rogerigues & Anderson, 2017), and future research may benefit from examining this relationship further with

regards to PPTS specifically. Symptoms of psychosis were not associated with PPTS at either time point.

Lastly, this study found that self-compassion did not moderate the relationship between post-traumatic cognitions and PPTS. This finding is somewhat surprising, given previous studies highlighting the relationship between self-compassion, trauma appraisals and PTSD (e.g. Barlow et al., 2017). Recent systematic reviews, however, identified that changes in self-compassion did not have a direct impact on PTSD, and it was suggested that the relationships may be mediated by other factors such as mood or social connectedness (Luo et al., 2021). Further examination of the indirect influence of self-compassion on PPTS was beyond the scope of this study.

**Theoretical Implications**

The findings of this study support the use of the cognitive model of PTSD in the conceptualisation of PPTS following FEP, where negative appraisals of individuals' experiences result in an increased sense of threat, which manifests as intrusion, avoidance and/or arousal (Ehlers & Clark, 2000). In particular, self-blame cognitions were identified as predictive of PPTS over time, indicating a potential role for self-blame in the maintenance of PPTS. Further research is needed, however, to elucidate the role of autobiographical memory and maladaptive coping strategies in persistent PPTS. In contrast with previous models examining the relationship between psychosis and trauma (Hardy et al., 2021), post-traumatic cognitions in this sample were not correlated with positive symptoms of psychosis. It must be noted, however, that psychosis symptoms in the present cohort had largely resolved, whereas much of Hardy's work centres on individuals experiencing ongoing symptoms or lifetime diagnoses of psychosis. Future research may benefit from examining PPTS in individuals with enduring symptoms of psychosis.

## Clinical Implications

The findings of this study present several implications for clinical practice. Firstly, they reinforce that a proportion of participants experience clinically significant PPTS, which endorses screening for PPTS as part of assessment and review protocols in EIP services. Secondly, these findings highlight the importance of assessing self-blame cognitions in individuals who have experienced FEP. The significance of self-blame cognitions in predicting persistent PPTS suggests that interventions to address self-blame cognitions may reduce the persistence of PPTS. Lastly, this study highlights the importance of early PPTS as a risk factor for persistent PPTS, and endorses prompt assessment and intervention with regards to PPTS in order to reduce the likelihood of persistent PPTS and its negative impact on recovery.

Individuals under EIP teams are offered immediate support from care coordinators and many go on to engage in psychological therapy (NICE, 2014). Research highlights the benefit of both psychoeducation and demonstrating compassion in reducing self-blame (Ashfield et al., 2021), interventions which could be provided by care coordinators from an early point in individuals' care.

Moreover, psychological interventions are effective in reducing negative appraisals and addressing PTSD symptoms (McLean et al., 2015; Schumm et al., 2015), which could be offered to those experiencing enduring PPTS but not meeting criteria for PTSD. Compassion-focussed therapy (Winders et al., 2020), cognitive behavioural therapy for psychosis (Spencer et al., 2022) and EMDR (Berg et al., 2018) have been effective in reducing self-blame and addressing PTSD symptoms.

## Limitations

There are some limitations that impact on the findings and conclusions of this study. Firstly, time and resource constraints, along with the sensitive nature of the study, resulted in significant difficulties with recruitment to this study, including challenges in identifying suitable participants, obtaining their consent to be contacted, and getting in touch with them once consent had been provided. As a result, there is a possibility of Type II errors, particularly at T2 where the smaller sample size may have resulted in a significant relationship between total cognitions and PPTS being missed.

Secondly, participants' post-traumatic cognitions were assessed at varying time points following their FEP. a consistent approach to the timing of data collection may result in obtaining a more accurate trajectory of PPTS. Participants often reflected that their answers would likely have been different had they completed the PTCI a few months earlier. In this study, it was initially intended that participants would be recruited as close to the psychotic episode as possible (1 – 3 months following their acceptance to EIP teams). However, insufficient numbers of participants met this criterion, as many were either too unwell or unwilling to participate at this stage, citing it as '*too soon*' or '*too upsetting'*. However, with more time available for recruitment, this study would likely have benefitted from recruiting T1 participants during the first 6 months following FEP (Brunet et al., 2012)

Lastly, although participants in this study were demographically representative of the wider EIP caseloads from which they were recruited, very few were experiencing ongoing psychotic symptoms, and almost all were employed or in full-time education. It is possible that service users for whom symptoms of psychosis, or indeed symptoms of PTSD were heightened, found it more difficult to engage with this study, and the findings may therefore under-estimate the frequency of PPTS across the EIP teams.

## Future Directions

Future research would benefit from examining the role of post-traumatic cognitions at specific time points in order to develop a clearer understanding of the trajectory of PPTS, and the role of post-traumatic cognitions therein.

Although self-blame and shame are widely addressed in PTSD research, few studies have examined these factors with regards to FEP. In this study, participants reflected on specific factors which contributed to their self-blame, including stigma, a lack of knowledge about psychosis, and treatment received from care-providers. Additionally, shame has predicted persistent PTSD in other clinical and non-clinical samples (e.g. Brewin et al., 2000; Menke et al., 2018). Future studies may wish to examine shame regarding persistent PPTS.

## Conclusions

Post-traumatic cognitions are associated with post-traumatic stress symptoms following first episode psychosis. Self-blame cognitions in particular, in addition to depression, is predictive of post-traumatic stress symptoms over time.. Self-compassion does not appear to moderate the relationship between post-traumatic cognitions and PPTS. This study supports the cognitive model of PTSD in conceptualising PPTS, and endorses EIP services providing prompt assessment of self-blame cognitions and PPTS.

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## Executive Summary

### Background

Going through a first episode of psychosis can be confusing and frightening, and individuals who experience psychosis often report upsetting experiences. These experiences might relate to symptoms of psychosis itself (e.g. hearing voices), but may also relate to, for example, encounters with health care professionals, police or other individuals also receiving care. These experiences can be so distressing, that some individuals go on to develop symptoms of post-traumatic stress as a result. Post-traumatic stress can involve wanting to avoid thinking about or doing things which remind individuals of their experiences, feeling as though their experiences are happening again, experiencing distressing thoughts and dreams about their experiences, and feeling strong emotions such as anger, fear or sadness. When individuals experience post-traumatic stress, it can have negative impact on their recovery from psychosis, and can make it

more difficult for them to engage in the things that are important to them (e.g. work, education, relationships, hobbies).

Although research has shown that one in every two or three people who have a first episode of psychosis go on to develop symptoms of post-traumatic stress, there have not been many studies examining the factors which make people more likely to experience these symptoms. This study aimed to understand whether post-traumatic cognitions (the thoughts and beliefs people have about themselves and the world after they've been through a distressing experience), make people more likely to develop post-traumatic stress symptoms. Other research has shown that when people are compassionate to themselves, they are more likely to have positive cognitions (or fewer negative cognitions), which reduces their post-traumatic stress symptoms. This study also aimed to examine whether being self-compassionate altered individuals post-traumatic cognitions, and whether that impacted their post-traumatic stress symptoms.

Thirty-four people took part in this research. Each participant had experienced first episode psychosis in the past three years, and were under the care of an Early Intervention in Psychosis NHS team. Participants completed 6 questionnaires, looking at their post-traumatic cognitions, symptoms of post-traumatic stress, mood, history of trauma, psychosis symptoms and self-compassion. They also repeated the questionnaires about post-traumatic stress symptoms, mood and psychosis c. 2 months later (or at least 6 months following their first episode of psychosis).

**Results**

This study showed that about 35% of participants experienced significant post-traumatic stress symptoms, although most participants experienced at least a few symptoms. This study showed that people who experienced substantial post-traumatic stress symptoms strongly endorsed many post-traumatic cognitions, compared to those who did not experience many symptoms. However,

the study showed that having post-traumatic cognitions did not necessarily mean people would experience persistent post-traumatic stress symptoms, although the findings did show that it is likely that people who experience self-blame are more likely to have persistent post-traumatic stress symptoms. The study also showed that self-compassion did not seem to alter post-traumatic cognitions, and did not have a direct effect on post-traumatic stress symptoms. These findings are important, in that they show that many people experience post-traumatic stress symptoms after their first episode of psychosis, and NHS Early Intervention in Psychosis teams should therefore assess people in their care for post-traumatic stress symptoms. In many cases, individuals' post-traumatic stress symptoms will reduce on their own in time, but some might need a little extra support to address these symptoms. When people experience self-blame, it is a little more likely that their post-traumatic stress symptoms may not reduce as much without some support. For people who have post-traumatic stress symptoms, it is important for clinicians to ask about their post-traumatic cognitions, and to support people to change some of these cognitions, to help them to think less critically of themselves, and to blame themselves less, and also to help them feel safer in the world. It is likely that changing these cognitions, will help to reduce post-traumatic stress symptoms.

## Connecting Narrative

**CRL**

My decision to undertake a systematic review exploring suicidal ideation disclosure, stemmed from pre-training clinical experience working in complex mental health settings (including an inpatient setting in CAMHS, a community eating disorders service, and an early intervention in psychosis service), where suicide risk assessment was often central to clinical interactions and team discussions. I was often saddened to hear of clients engaging in suicidal behaviours, despite having denied suicidal ideation in their interactions with members of the teams. This led me to consider the factors which might impede an individual from disclosing suicidal ideation, or indeed, encourage them to be forthcoming. A brief scope of the literature indicated that, although there as a great deal of literature around the correlates of suicidal ideation, studies examining communication or disclosure of suicidal ideation were more sparse, and had not yet been synthesised. I therefore took this opportunity to systematically review this body of literature,

with the hopes of developing a greater understanding of these barriers and facilitators to suicidal ideation disclosure. Although in many respects, this was one of the more straightforward of my research studies, given the lack of circumstantial delays (e.g. ethics applications) which delayed other projects, in some ways I found it the most challenging. This was my first time to undertake a systematic literature review, and given the diffuse topics across papers, I found it challenging to synthesise findings in a coherent and clinically relevant manner. I was very grateful for the support of my supervisor and some fellow trainees in pointing me in the right direction, and was glad of the opportunity to develop new research skills.

**SIP**

When we attended the research fair early in our first year, I was immediately keen to speak to my external SIP supervisor, as homelessness and mental health was a subject of personal interest to me for many years. I was delighted to have the opportunity to carry out my SIP with the various professionals and services working to support people experiencing homelessness in Berkshire, and to hear of their experiences. I was encouraged by my internal supervisor to conduct an interpretative phenomenological analysis, which at first I was reticent to engage in, having never utilised IPA previously, and feeling the pressure of competing course demands at that time. Having completed this analysis, I really grew to understand the importance of the IPA approach in this area; exploring in-depth the meaning behind people's experiences. When the findings of the project were shared with relevant professionals across the homelessness pathway, I was struck by their enthusiasm for the recommendations, and their gratitude for the project having been carried out. This emphasised to me the importance of trainees carrying out service driven research, as qualified front-line professionals benefit from this research, but may not always have the time and resources to carry it out themselves. Furthermore, such was my

enjoyment of this research project, that I opted for a specialist placement in homelessness in my final year, a decision which I am delighted to have taken.

**TDRP**

I was drawn to the topic of my TDRP from pre-training clinical experience in an early intervention in psychosis team. During my role with EIS, I was struck in particular, by the impact hearing voices for the first time had had on one of the clients in my care. Although his symptoms of psychosis had fully resolved, he was troubled by intrusive memories and flashbacks of these experiences, which impacted his mood and self-confidence, despite him not meeting criteria for a diagnosis of PTSD. Discussions with my colleagues identified other such experiences of clients in our service. A scoping review of the literature highlighted that psychosis can result in symptoms of post-traumatic stress, but research examining contributing factors to this post-traumatic stress was limited. I was grateful for the support of both my internal and external supervisors, who are also EI clinicians, and who were keen to support this project in their services. This project did, however, highlight to me the challenges of completing longitudinal quantitative research with clinical populations, within the time and resource constraints of the doctorate course. I initially had wanted to collect data from individuals in the first 3 months of their care with the EIS, and examine prospectively the trajectory of post -traumatic stress symptoms over time. However, the ethics application process, particularly acquiring sponsorship, was greatly delayed by the NHS trust in question, and the cyber-attack on Carenotes meant that once recruitment could finally begin, I no longer had automatic consent to contact participants, and was reliant on already over-subscribed care coordinators and assistant psychologists to help me. Moreover, many clients were reticent to participate in this research, given its sensitive nature, which made recruiting sufficient participants in a limited time frame

very challenging. I was very grateful to those who took part, and to those NHS professionals who took the time to support my recruitment, despite having their own substantial workload. I would be keen to carry out further research in this subject area in future, where time-constraints are more limited, and where access to participants may be more readily available.

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To our amazing 2020 DClin cohort – we started together in the strangest of times, and I feel so lucky to have trained alongside such a wonderful group of people. A particular thank you to Stacey, Ellie, the Emmas, Jade, Fi, Mariann and Madeleine for all the craic (despite our many ups and downs!) and for being such fantastic friends. Without ye, I would probably still be sitting in a Zoom meeting somewhere, wondering what I should be doing next. An additional thank you to Morris, for all the cuddles.

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# Critical Review of the Literature: Appendices

## Appendix A: CRL Search Strategy

( ( ( "suicid* ideation" ) OR ( "suicid* thought*" ) OR ( "suicid* intent" ) ) ) AND ( ( ( ( disclos* ) ( communica* ) OR ( share* ) OR ( report* ) OR tell* ) OR ( describ* ) ) ) OR ( ( ( non-disclos* ) OR ( conceal* ) OR ( hide* ) OR ( withhold* ) OR ( deny* ) OR ( suppress* ) ) ) ) AND ( ( ( ( facilitat* ) OR ( encourag* ) OR ( aid* ) OR ( assist* ) OR ( support* ) OR ( help* ) OR ( promot* ) OR ( further* ) ) ) OR ( (( obstacl* ) OR ( barrier* ) OR ( impede* ) OR ( prevent* ) OR ( hinder* ) OR ( deter* ) OR ( stop* ) OR ( block* ) ) ) ) AND ( ( ( mechanism* ) OR ( predict* ) OR ( correlat* ) OR ( relat* ) OR ( characteristic* ) OR ( trait* ) OR ( instrument* ) OR ( attribut* ) ) ) AND ( ( SRCTYPE , "j" ) ) AND ( ( LANGUAGE , "English" ) ) AND ( ( DOCTYPE , "ar" )

## Appendix B: Data extraction headings

| Demographics | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Number of Participants* | *Number of Ideators* | *Age* | *Ethnicity* | *Gender* | *Sexual Identity* | *Marital Status* | *Education Levels* | *MH Diagnosis* | *Employment Status* | *Country* | *Recruit* | *Setting* | *Other* |

| Disclosure | | |
|---|---|---|
| *To Whom* | *Type of Disclosure* | *% of Disclosers vs Non-Disclosers* |

| Disclosers Vs Non-Disclosers | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Study Design* | *Characteristics* | *Measures of characteristics* | *Dependent variable (disclosure/non-disclosure)* | *Measure of dependent variable* | *Analysis Used* | *Results* | *Effect Size* | *P Value* |

| Predictors of Disclosure | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Predictors of Disclosure* | *Study Design* | *Measure(s) of Predictors* | *Confounding /Control Variables* | *Measure(s) of confounding variables* | *Dependent Variable* | *Measure(s) of DV* | *Analysis Used* | *Results* | *Effect Size(s)* | *P-Values* |

## Appendix C: Risk of Bias Appraisal (KMET scoring)

| Paper | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.** | Yes | Yes | Partial | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Partial | Partial | Yes | Yes |
| **2.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **3.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Partial | Yes | Yes | Yes | Yes |
| **4.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Partial | Partial | Yes | Yes | Yes | Yes | Yes |
| **5.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Partial | Partial | Yes | Yes | Yes | Partial | Yes |
| **6.** | Partial | Yes | Partial | Yes | Partial | N/A | N/A | Partial | Yes | Yes | Partial | Partial | Yes | Yes |
| **7.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | No | Yes | Yes | Yes | Yes | Yes | Yes |
| **8.** | Yes | Yes | Partial | Yes | Yes | Partial | Partial | Partial | Yes | Yes | Yes | Yes | Yes | Yes |
| **9.** | Yes | Partial | Yes | Partial | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Partial | Yes |
| **10.** | Partial | Yes | Yes | Partial | N/A | N/A | N/A | No | Partial | Yes | No | Partial | Partial | Yes |
| **11.** | Partial | Yes | Yes | Yes | N/A | N/A | N/A | Partial | Yes | Yes | Yes | No | Yes | Partial |
| **12.** | Yes | Partial | Yes | Partial | N/A | N/A | N/A | Partial | Partial | Yes | Yes | No | Yes | Yes |
| **13.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Yes | No | Yes | Yes |
| **14.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Partial | Yes | Yes | Yes | No | Yes | Yes |
| **15.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **16.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **17.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Partial | Yes | Yes | N/A | Partial | Yes |
| **18.** | Yes | Yes | Yes | Partial | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Partial | Yes |
| **19.** | Yes | Partial | Partial | Yes | N/A | N/A | N/A | Yes | Yes | Yes | No | Partial | Yes | Partial |
| **20.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Partial | Yes | Yes | Yes | Yes | Yes | Yes |
| **21.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Partial | Yes | Yes | Yes | Partial | Yes | Yes |
| **22.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **23.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **24.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **25.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **26.** | Yes | Yes | Yes | Yes | N/A | N/A | N/A | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

**Appendix D: Clinical Psychology Review – Guide for Authors**

Journal policies detailed in this guide have been reviewed Referee suggestions and contact details provided, based on journal requirements. Ensure manuscripts do not exceed 50 pages, including references and tabular material, unless you have obtained prior approval of the Editor in Chief for an exception Ensure Highlights do not exceed 3 to 5 bullet points with a maximum of 85 characters, including spaces, per bullet point Failure to follow these guidelines may result in your manuscript being returned for reformatting prior to further consideration by the journal.

Declaration of interest All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double anonymized) or the manuscript file (if single anonymized). If there are no interests to declare then please state this: 'Declarations of interest: none'. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches.

Declaration of generative AI in scientific writing The below guidance only refers to the writing process, and not to the use of AI tools to analyse and draw insights from data as part of the

research process. Where authors use generative artificial intelligence (AI) and AI-assisted technologies in the writing process, authors should only use these technologies to improve readability and language. Applying the technology should be done with human oversight and control, and authors should carefully review and edit the result, as AI can generate authoritative-sounding output that can be incorrect, incomplete or biased. AI and AI-assisted technologies should not be listed as an author or co-author, or be cited as an author. Authorship implies responsibilities and tasks that can only be attributed to and performed by humans, as outlined in Elsevier's AI policy for authors. Authors should disclose in their manuscript the use of AI and AI-assisted technologies in the writing process by following the instructions below. A statement will appear in the published work. Please note that authors are ultimately responsible and accountable for the contents of the work.

Use of inclusive language Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns ("clinicians, patients/clients") as default/wherever possible to avoid using "he, she," or "he/she."

Article structure

Manuscripts should be prepared according to the guidelines set forth in the most recent publication manual of the American Psychological Association. Of note, section headings should not be numbered. Manuscripts should ordinarily not exceed 50 pages, including references and tabular material. Exceptions may be made with prior approval of the Editor in Chief. Manuscript length can often be managed through the judicious use of appendices. In general the References section should be limited to citations actually discussed in the text. References to articles solely included in meta-analyses should be included in an appendix, which will appear in the on line version of the paper but not in the print copy. Similarly, extensive Tables describing study characteristics, containing material published elsewhere, or presenting formulas and other technical material should also be included in an appendix. Authors can direct readers to the appendices in appropriate places in the text. It is authors' responsibility to ensure their reviews are comprehensive and as up to date as possible (at least to 3 months within date of submission) so the data are still current at the time of publication. Authors are referred to the PRISMA Guidelines (http://www.prisma-statement.org/) for guidance in conducting reviews and preparing manuscripts. Adherence to the Guidelines is not required, but is recommended to enhance quality of submissions and impact of published papers on the field.

Appendices

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Highlights

Highlights are mandatory for this journal as they help increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights. Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

Authors must disclose the use of generative AI and AI-assisted technologies in the writing process by adding a statement at the end of their manuscript in the core manuscript file, before the References list. The statement should be placed in a new section entitled ‘Declaration of Generative AI and AIassisted technologies in the writing process’. Statement: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

## Service Improvement Project: Appendices

**Appendix E: Semi-Structured Interview Schedule**

A. **Integrated Service Provision**

**1.** Could you describe your experiences of liaising with professionals from other services or organisations regarding service users (e.g. NHS services, councils, voluntary sector)?

2. How has communicating with members of other teams been for you? Can you describe your communication experience? *Prompt: Were any aspects collaborative? Any challenges? How were they overcome? Any approaches which facilitated better collaboration/communication?*

**3.** A. How have you found organising collaboration between your team and other external teams (e.g. NHS, councils, voluntary)? *Prompt: Have there been any practical challenges? What have you found to be helpful in addressing any challenges? Can you speak to any positive experiences you have of joint working between teams?* B. From your experience, would your colleagues share your views?

4. Adjusting after pilot: How have you gone about working with service users who experience multiple disadvantages? Working with service users who experience multiple disadvantages (e.g. mental health, physical health, social care), how have you gone about addressing their needs? What approach did you take in working with those experience multiple disadvantages *Prompt: How do you decide where to start? What challenges have you faced? What do you feel has gone well?*

**B. Working with people who are homeless**

**1.** In what ways does your role involve working with people who are homeless?

**2.** What have your experiences working with people who are homeless been like?

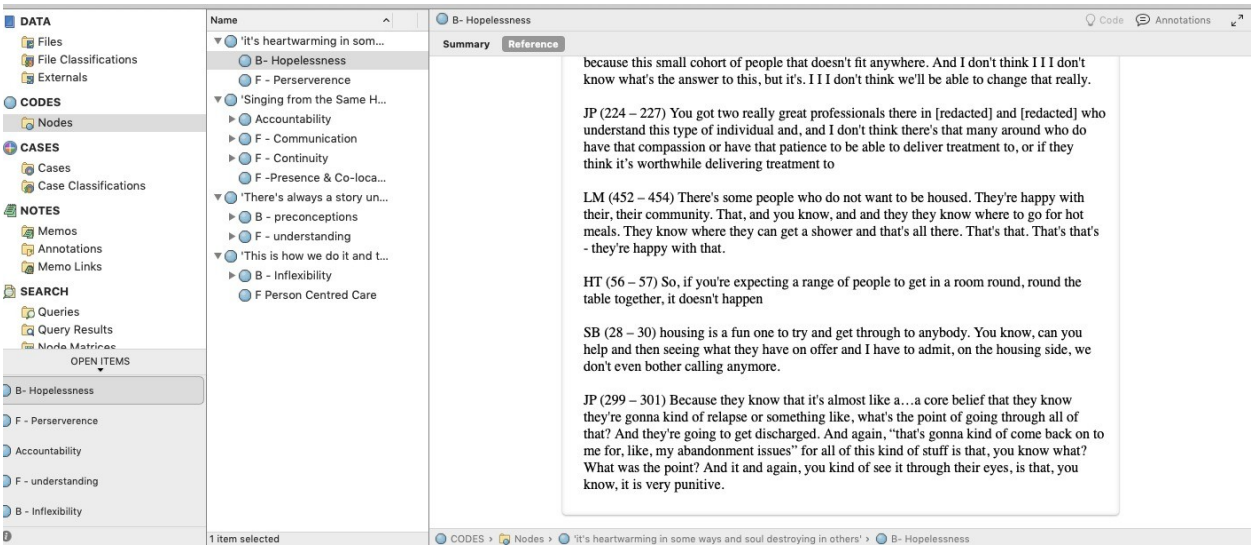
**3.** What have you have learned from your own/your team's work with people who are homeless, and has this changed your views about working with this population? *Prompt: Are your views about people who are homeless similar now to before you began this role?*

**4.** In what ways has working with people who are homeless influenced your professional practice? *Prompt: In what ways has your practice changed? Any (helpful/unhelpful) changes made? How was this put into practice? Barriers?*

**C. Recommendations**

**1.** Based on your experiences, what might be useful to consider in developing integrated service provision to meet mental health needs of people who are homeless? *Prompt: How might the system work in a different way to meet the needs of those who are homeless*.

**Appendix** F: ***Example of coding software used (NVivo 12)***




## **Appendix** G: ***Prevalence of themes across participants***

| | **Mark** | **Jim** | **Alex** | **Clare** | **Joan** | **David** |
|---|---|---|---|---|---|---|
| *1.1 Understanding* | ✶ | ✶ | ✶ | ✶ | ✶ | ✶ |
| *1.2 Preconceptions* | ✶ | ✶ | ✶ | ✶ | ✶ | ✶ |

| | | | | | | |
|---|---|---|---|---|---|---|
| *2.1 Accountability* | ✶ | ✶ | ✶ | | ✶ | ✶ |
| *2.2 Communication* | ✶ | ✶ | ✶ | ✶ | ✶ | ✶ |
| *2.3 Continuity* | ✶ | ✶ | ✶ | ✶ | ✶ | ✶ |
| *2.4 Co-location* | ✶ | ✶ | ✶ | ✶ | ✶ | ✶ |
| *3.1 (In)Flexibility* | ✶ | ✶ | ✶ | ✶ | ✶ | ✶ |
| *3.2 Person-centred* | ✶ | ✶ | ✶ | | ✶ | ✶ |
| *4.1 Hopelessness* | ✶ | ✶ | ✶ | ✶ | ✶ | ✶ |
| *4.2 Perseverance* | ✶ | ✶ | | | ✶ | ✶ |

## Appendix H: Additional quotes to support subordinate themes

### *1.1 .'I put myself into their shoes': the need for 'understanding'*

- *'And there's a lot of me understanding of his kind of behaviours and what that meant. I mean he couldn't communicate me that basically "I need to talk to someone". So he'd go*

*“[redacted], I need a loaf of bread”. “OK. Alright. Can I go get your loaf of bread? Then I'll be there in about an hour or so. Just got a few things to do”. “Oh, OK then”. And he wanted a loaf of bread, but basically behind that, he wanted to know that I was still there and I was still there supporting him’* (Mark, 492)

- *‘It could - It's so easy to end up on the streets and the longer you're on the streets, the easier it is to cope by drinking, taking drugs. And then once you're down that path, you're you're lost during that vicious cycle’* (Joan, 302)

***1.2. ‘‘I've never ever met anyone who enjoys being homeless: preconceptions as a barrier to care provision***

- ‘*Some people are happy being homeless because that's their little community’* (Clare, 435).
- ‘*because he’d been sort of homeless for so long, he couldn't adjust to that. So he gave up that tenancy’* (Clare, 189)
- *‘You wanna do the better, you know, the best you can accommodate them, making sure they have food, drinks, etcetera, but. Often it's not that, not what they want’* (Alex, 366)
- *‘He's happy. For us, we want him accommodated. We want him to be in the warm during the winter months, but that's not what he wants’* (Alex, 374)

***2.1. “What am I expected to do?”: accountability and responsibility***

- *‘if drug and alcohol and mental health teams could work together, that would be fantastic and not say ‘we're not dealing with him because it's drug and alcohol’ and drug and alcohol saying ‘we can't deal with them 'cause it's mental health’* (Jim, 383).

***2.2. ‘ There's not a lot you cannot resolve by having a conversation’: importance of communication***

- *‘if we need urgent information…they give us the information relatively quickly. If they need information, similarly, they do the same and we give them that information’* (Alex 20)
- *‘Virtual working really does facilitate that. So, if you're expecting a range of people to get in a room round, round the table together, it doesn't happen. But with, you know*

*Teams or Zoom or anything like that, it happens really well and people can be in their normal environment, but they're in this virtual table'* (Jim, 56)

***2.3. 'it's one document…we all work with': continuity in care provision***

- *'if there's a change, for example, in management in a, in a service, we would give them the opportunity to come to our team meeting and do like a 5-10 minutes presentation or just a talk to the team just to say who they are. They've taken over. This is all the changes they're bringing and I think that's helped a lot'* (Alex, 185)

***2.4. 'Because they were there': presence and co-location***

- *'You know, working with, for example, back, back before COVID on a Tuesday here we had someone from probation. We had someone from housing, we had someone from the homeless team. We had someone from the job centre. We had someone from NHS. We had us. So it's like a one stop shop'* (David, 668).

***3.1. 'This is how we do it and this is how we've always done it': (in)flexibility in services***

- *They're not gonna turn up at 10:30 for an appointment …they're not going to answer the phone to a triage system'* (Mark, 125)

***3.2. 'the client is very much in the middle of this and we adapt to the client': person-centre care***

- *'I think there is I think it needs to…there needs to be a shift where we, we are at more outreach where we kind of fit with a client rather than them constantly trying to fit within us. And I think that shift these to happen. If you're going to do any really good, good work with this type of individual, you've got it, you've got to go out and you've got a you've got to be… you've got to put the action in as well, not just them*' (Mark, 572)

***4.1. 'I don't know what can be done': hopelessness***

- *'I don't think there's that many around who do have that compassion or have that patience to be able to deliver treatment to, or if they think it's worthwhile delivering treatment to'* (Mark, 224)

- 

### *4.2. 'it is really worth investing the time': perseverance*

- *'You know that Rome wasn't built in a day and certainly your life is not gonna change in, in a matter of days or weeks or, or even months. But…you're on a… steady progression'* (Mark, 412)
- *'I think we have, have a good relationship with them, we, we care and they know that we care and, and you know everything we do, it's not for any purpose other than we want the best for them'* (Joan, 212)

## Appendix I: *Lay Summary*

Homelessness is prevalent across the UK, and the numbers of people experiencing homelessness have risen in recent years. There are lots of complex reasons as to why people become and remain homeless. Some of these reasons may be due to financial factors, such as the increased

cost of living, and shortage of houses. However, there are also psychological factors which might contribute to someone becoming or remaining homeless. One of these factors relates to attachment. Young children require a caring, nurturing relationship with at least one adult, in order for them to develop socially and emotionally – this development is known as secure attachment. However, if a child does not grow up in a nurturing, caring environment, or if they experience trauma, they may not develop a secure attachment, which may make it very hard for them to feel safe and comfortable around other people, and this might be the case throughout their adulthood. Additionally, when people do not have a secure attachment, they are more likely to develop problems with their mental health, with managing their emotions and with their relationships with others. People may resort to strategies such as using drugs or alcohol to cope with these difficulties. Therefore, it is important that homeless people are provided with psychological support, to help them feel comfortable with others, to feel safe in accommodation and to manage their mental health. Because people who are homeless might require help from lots of different services (e.g. healthcare, housing, social care), it is important that these services work together, and work with mental health services so that homeless people do not have to keep telling their story over again, and keep trying to build relationships with new teams. This project was developed to explore the factors which make it easier and more difficult for services to work together, to provide mental health care for people who are homeless. Six people who work in homelessness were interviewed, including people working for the NHS and different voluntary sector organisations. They were asked about their experiences working with homeless people, and working jointly with other services. From these interviews, several themes were identified. These themes included the importance of being empathic and understanding the factors that make it difficult for homeless people to engage with services, or stay in accommodation (e.g. trauma and attachment). Another theme showed that services working together should try and have clarity in terms of their communication, continuity, their expectations of each other, and teams should try and physically work together where they can. The third theme explored the importance of focusing on what individuals need, and being flexible in terms of e.g. appointment times, locations and lengths. The last theme explored the challenges of working in homelessness, because of how complex the work can be, and how busy and often understaffed services might be. The theme also highlighted the importance of persevering with this work, as there can be lots

of positive outcomes given time and consistency . Recommendations for service development and improvement were listed.

## Appendix J: Journal of Community Psychology: Instructions for Authors

### Parts of the Manuscript

The manuscript should be submitted in separate files: title page; main text file; figures.

By submitting a manuscript to or reviewing for this publication, your name, email address, and affiliation, and other contact details the publication might require, will be used for the regular operations of the publication, including, when necessary, sharing with the publisher (Wiley) and partners for production and publication. The publication and the publisher recognize the importance of protecting the personal information collected from users in the operation of these services, and have practices in place to ensure that steps are taken to maintain the security, integrity, and privacy of the personal data collected and processed. You can learn more at **https://authorservices.wiley.com/statements/data-protection-policy.html**.

***Authorship***
Please refer to the journal's authorship policy the Editorial Policies and Ethical Considerations section for details on eligibility for author listing.

***Acknowledgments***
Contributions from anyone who does not meet the criteria for authorship should be listed, with permission from the contributor, in an Acknowledgments section. Financial and material support should also be mentioned. Thanks to anonymous reviewers are not appropriate.

***Conflict of Interest Statement***
You will be asked to provide a conflict of interest statement during the submission process. See the section 'Conflict of Interest' in the Editorial Policies and Ethical Considerations section for details on what to include in this section. Please ensure you liaise with all co-authors to confirm agreement with the final statement.

***Affiliations***
REX will extract listed affiliations from the manuscript and then ask the submitting author to verify each author's affiliated institution(s). Authors should be encouraged to include the complete affiliation addresses in the manuscript (Institution Name, Country, Department Name, Institution City, and Post Code). When verifying their institution, authors are asked to locate their base institution only (not necessarily the department or school).

**Main text**
Manuscripts can be uploaded either as a single document (containing the main text, tables and figures), or with figures and tables provided as separate files. Should your manuscript reach revision stage, figures and tables must be provided as separate files. The main manuscript file can be submitted in Microsoft Word (.doc or .docx) format. As papers are double-blind peer reviewed the main text file should not include any information that might identify the authors.

Your main document file should include:

- A short informative title containing the major key words. The title should not contain abbreviations
- Acknowledgments;
- Abstract structured (aims/methods/results/conclusion)

- Seven keywords;
- Main body: formatted as introduction, materials & methods, results, discussion, conclusion
- References;
- Tables (each table complete with title and footnotes);
- Figures: Figure legends must be added beneath each individual image during upload AND as a complete list in the text.

***Abstract***
The Abstract should be divided into the following sections 'Aims', 'Methods, Results' and 'Conclusion'; it should not exceed 150 words for articles and brief reports.

***Keywords***
Please provide seven keywords. Keywords should be taken from those recommended by the US National Library of Medicine's Medical Subject Headings (MeSH) browser list at **https://www.nlm.nih.gov/mesh/**. REX will attempt to automatically extract keywords from the manuscript.

***Main text***
As papers are double-blind peer reviewed the main text file should not include any information that might identify the authors.
The journal uses British/US spelling, however authors may submit using either option as spelling of accepted papers is converted during the production process.
Footnotes to the text are not allowed and any such material should be incorporated into the text as parenthetical matter.

***References***
References should be prepared according to the *Publication Manual of the American Psychological Association* (7th edition). This means in text citations should follow the author-date method whereby the author's last name and the year of publication for the source should appear in the text, for example, (Jones, 1998). The complete reference list should appear alphabetically by name at the end of the paper.

***Tables***
Tables should be self-contained and complement, but not duplicate, information contained in the text. They should be supplied as editable files, not pasted as images. Legends should be concise but comprehensive – the table, legend and footnotes must be understandable without reference to the text. All abbreviations must be defined in footnotes. Footnote symbols: †, ‡, §, ¶, should be used (in that order) and *, **, *** should be reserved for P-values. Statistical measures such as SD or SEM should be identified in the headings.

***Appendices***
Appendices will be published after the references. For submission they should be supplied as separate files but referred to in the text.

***Supporting Information***

Supporting information is information that is not essential to the article but that provides greater depth and background. It is hosted online, and appears without editing or typesetting. It may include tables, figures, videos, datasets, etc. Click here for Wiley's FAQs on supporting information.

Note: if data, scripts or other artefacts used to generate the analyses presented in the paper are available via a publicly available data repository, authors should include a reference to the location of the material within their paper.

**General Style Points**

The following links provide general advice on formatting and style.

- **Abbreviations:** In general, terms should not be abbreviated unless they are used repeatedly and the abbreviation is helpful to the reader. Initially use the word in full, followed by the abbreviation in parentheses. Thereafter use the abbreviation only.
- **Units of measurement:** Measurements should be given in SI or SI-derived units. Visit the Bureau International des Poids et Mesures (BIPM) website at http://www.bipm.fr for more information about SI units.
- **Numbers:** numbers under 10 are spelled out, except for: measurements with a unit (8mmol/l); age (6 weeks old), or lists with other numbers (11 dogs, 9 cats, 4 gerbils).
- **Trade Names:** Chemical substances should be referred to by the generic name only. Trade names should not be used. Drugs should be referred to by their generic names. If proprietary drugs have been used in the study, refer to these by their generic name, mentioning the proprietary name, and the name and location of the manufacturer, in parentheses.

# Theory Driven Research Project: Appendices

## Appendix K: Evidence of Ethical Approval

Ms Eimear Galvin
Trainee Clinical Psychologist
Oxford Health NHS Foundation Trust
Oxford Institute of Clinical Psychology Training and Research
Isis Education Centre, Warneford Hospital
Oxford
OX3 7JX

Email: approvals@hra.nhs.uk
HCRW.approvals@wales.nhs.uk

01 June 2022

Dear Ms Galvin

**HRA and Health and Care Research Wales (HCRW) Approval Letter**

| | |
|---|---|
| **Study title:** | **Cognitive appraisals and self-compassion as predictors of post-traumatic stress symptoms after first episode psychosis** |
| **IRAS project ID:** | **304971** |
| **Protocol number:** | **00000** |
| **REC reference:** | **22/WM/0108** |
| **Sponsor** | **Oxford Health NHS Foundation Trust** |

I am pleased to confirm that **HRA and Health and Care Research Wales (HCRW) Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

Please now work with participating NHS organisations to confirm capacity and capability, in line with the instructions provided in the "Information to support study set up" section towards the end of this letter.

**How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?**
HRA and HCRW Approval does not apply to NHS/HSC organisations within Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report

NHS
Health Research Authority

**West Midlands - Solihull Research Ethics Committee**
Equinox House
City Link
Nottingham
NG2 4LA

**Please note: This is the favourable opinion of the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval**

01 June 2022

Ms Eimear Galvin
Trainee Clinical Psychologist
Oxford Health NHS Foundation Trust
Oxford Institute of Clinical Psychology Training and Research
Isis Education Centre, Warneford Hospital
Oxford
OX3 7JX

Dear Ms Galvin

| | |
|---|---|
| **Study title:** | **Cognitive appraisals and self-compassion as predictors of post-traumatic stress symptoms after first episode psychosis** |
| **REC reference:** | **22/WM/0108** |
| **Protocol number:** | **00000** |
| **IRAS project ID:** | **304971** |

Thank you for your letter of 23 May 2022, responding to the Research Ethics Committee's (REC) request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair together with Ms Harris.

**Confirmation of ethical opinion**

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above

## Appendix L: Outcome Measures

### *PCL-5*

| *In the past month, how much were you bothered by:* | *Not at all* | *A little bit* | *Moderately* | *Quite a bit* | *Extremely* |
|---|---|---|---|---|---|
| 1. Repeated, disturbing, and unwanted memories of the stressful experience? | 0 | 1 | 2 | 3 | 4 |
| 2. Repeated, disturbing dreams of the stressful experience? | 0 | 1 | 2 | 3 | 4 |
| 3. Suddenly feeling or acting as if the stressful experience were actually happening again *(as if you were actually back there reliving it)*? | 0 | 1 | 2 | 3 | 4 |
| 4. Feeling very upset when something reminded you of the stressful experience? | 0 | 1 | 2 | 3 | 4 |
| 5. Having strong physical reactions when something reminded you of the stressful experience *(for example, heart pounding, trouble breathing, sweating)*? | 0 | 1 | 2 | 3 | 4 |
| 6. Avoiding memories, thoughts, or feelings related to the stressful experience? | 0 | 1 | 2 | 3 | 4 |
| 7. Avoiding external reminders of the stressful experience *(for example, people, places, conversations, activities, objects, or situations)*? | 0 | 1 | 2 | 3 | 4 |
| 8. Trouble remembering important parts of the stressful experience? | 0 | 1 | 2 | 3 | 4 |
| 9. Having strong negative beliefs about yourself, other people, or the world *(for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)*? | 0 | 1 | 2 | 3 | 4 |
| 10. Blaming yourself or someone else for the stressful experience or what happened after it? | 0 | 1 | 2 | 3 | 4 |
| 11. Having strong negative feelings such as fear, horror, anger, guilt, or shame? | 0 | 1 | 2 | 3 | 4 |
| 12. Loss of interest in activities that you used to enjoy? | 0 | 1 | 2 | 3 | 4 |
| 13. Feeling distant or cut off from other people? | 0 | 1 | 2 | 3 | 4 |
| 14. Trouble experiencing positive feelings *(for example, being unable to feel happiness or have loving feelings for people close to you)*? | 0 | 1 | 2 | 3 | 4 |
| 15. Irritable behavior, angry outbursts, or acting aggressively? | 0 | 1 | 2 | 3 | 4 |
| 16. Taking too many risks or doing things that could cause you harm? | 0 | 1 | 2 | 3 | 4 |
| 17. Being "superalert" or watchful or on guard? | 0 | 1 | 2 | 3 | 4 |
| 18. Feeling jumpy or easily startled? | 0 | 1 | 2 | 3 | 4 |
| 19. Having difficulty concentrating? | 0 | 1 | 2 | 3 | 4 |
| 20. Trouble falling or staying asleep? | 0 | 1 | 2 | 3 | 4 |

*PTCI*

| 1<br>Totally<br>Disagree | 2<br>Disagree<br>Very Much | 3<br>Disagree<br>Slightly | 4<br>Neutral | 5<br>Agree<br>Slightly | 6<br>Agree<br>Very Much | 7<br>Totally<br>Agree |
|---|---|---|---|---|---|---|

1. **The event happened because of the way I acted.**
   ① ② ③ ④ ⑤ ⑥ ⑦
2. **I can't trust that I will do the right thing.**
   ① ② ③ ④ ⑤ ⑥ ⑦
3. **I am a weak person.**
   ① ② ③ ④ ⑤ ⑥ ⑦
4. **I will not be able to control my anger and will do something terrible.**
   ① ② ③ ④ ⑤ ⑥ ⑦
5. **I can't deal with even the slightest upset.**
   ① ② ③ ④ ⑤ ⑥ ⑦
6. **I used to be a happy person but now I am always miserable.**
   ① ② ③ ④ ⑤ ⑥ ⑦
7. **People can't be trusted.**
   ① ② ③ ④ ⑤ ⑥ ⑦
8. **I have to be on guard all the time.**
   ① ② ③ ④ ⑤ ⑥ ⑦
9. **I feel dead inside.**
   ① ② ③ ④ ⑤ ⑥ ⑦
10. **You can never know who will harm you.**
    ① ② ③ ④ ⑤ ⑥ ⑦
11. **I have to be especially careful because you never know what can happen next.**
    ① ② ③ ④ ⑤ ⑥ ⑦
12. **I am inadequate.**
    ① ② ③ ④ ⑤ ⑥ ⑦
13. **I will not be able to control my emotions, and something terrible will happen.**
    ① ② ③ ④ ⑤ ⑥ ⑦
14. **If I think about the event, I will not be able to handle it.**
    ① ② ③ ④ ⑤ ⑥ ⑦
15. **The event happened to me because of the sort of person I am.**
    ① ② ③ ④ ⑤ ⑥ ⑦
16. **My reactions since the event mean that I am going crazy.**
    ① ② ③ ④ ⑤ ⑥ ⑦
17. **I will never feel normal emotions again.**
    ① ② ③ ④ ⑤ ⑥ ⑦
18. **The world is a dangerous place.**
    ① ② ③ ④ ⑤ ⑥ ⑦
19. **Somebody else would have stopped the event from happening.**
    ① ② ③ ④ ⑤ ⑥ ⑦
20. **I have permanently changed for the worse.**
    ① ② ③ ④ ⑤ ⑥ ⑦

*PHQ-9*

| Almost never | | | | Almost always |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

_____ 1. I'm disapproving and judgmental about my own flaws and inadequacies.

_____ 2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

_____ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

_____ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.

_____ 5. I try to be loving towards myself when I'm feeling emotional pain.

_____ 6. When I fail at something important to me I become consumed by feelings of inadequacy.

*SCS*

_____ 7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.

_____ 8. When times are really difficult, I tend to be tough on myself.

_____ 9. When something upsets me I try to keep my emotions in balance.

_____ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

_____ 11. I'm intolerant and impatient towards those aspects of my personality I don't like.

_____ 12. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____ 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

_____ 14. When something painful happens I try to take a balanced view of the situation.

_____ 15. I try to see my failings as part of the human condition.

_____ 16. When I see aspects of myself that I don't like, I get down on myself.

_____ 17. When I fail at something important to me I try to keep things in perspective.

*TALE*

For the purpose of this study, participants cited whether they had experienced the events (yes/no).

*PSYRATS*

## A Auditory hallucinations

**1 Frequency**
0 Voices not present or present less than once a week
1 Voices occur for at least once a week
2 Voices occur at least once a day
3 Voices occur at least once a hour
4 Voices occur continuously or almost continuously i.e. stop for only a few seconds or minutes

**2 Duration**
0 Voices not present
1 Voices last for a few seconds, fleeting voices
2 Voices last for several minutes
3 Voices last for at least one hour
4 Voices last for hours at a time

**3 Location**
0 No voices present
1 Voices sound like they are inside head only
2 Voices outside the head, but close to ears or head. Voices inside the head may also be present
3 Voices sound like they are inside or close to ears and outside head away from ears
4 Voices sound like they are from outside the head only

**4 Loudness**
0 Voices not present
1 Quieter than own voice, whispers.
2 About same loudness as own voice
3 Louder than own voice
4 Extremely loud, shouting

**5 Beliefs re-origin of voices**
0 Voices not present
1 Believes voices to be solely internally generated and related to self
2 Holds < 50% conviction that voices originate from external causes
3 Holds ~ 50% conviction (but < 100% ) that voices originate from external causes
4 Believes voices are solely due to external causes (100% conviction)

**6 Amount of negative content of voices**
0 No unpleasant content
1 Occasional unpleasant content ( < 10%)
2 Minority of voice content is unpleasant or negative ( < 50%)
3 Majority of voice content is unpleasant or negative (> 50%)
4 All of voice content is unpleasant or negative

**7 Degree of negative content**
0 Not unpleasant or negative
1 Some degree of negative content, but not personal comments relating to self or family e.g. swear words or comments not directed to self, e.g. 'the milkman's ugly'
2 Personal verbal abuse, comments on behavior e.g. ' shouldn't do that or say that ,
3 Personal verbal abuse relating to self-concept e.g. 'you're lazy, ugly, mad, perverted ,
4 Personal threats to self e.g. threats to harm self or family, extreme instructions or commands to harm self or others

**8 Amount of distress**
0 Voices not distressing at all
1 Voices occasionally distressing, majority not distressing ( < 10%)

2 Minority of voices distressing ( < 50% )
3 Majority of voices distressing, minority not distressing ( ~ 50% )
4 Voices always distressing

**9 Intensity of distress**
0 Voices not distressing at all
1 Voices slightly distressing
2 Voices are distressing to a moderate degree
3 Voices are very distressing, although subject could feel worse
4 Voices are extremely distressing, feel the worst he/she could possibly feel

## B Delusions

**1 Amount of preoccupation with delusions**
0 No delusions, or delusions which the subject thinks about less than once a week
1 Subject thinks about beliefs at least once a week
2 Subject thinks about beliefs at least once a day
3 Subject thinks about beliefs at least once an hour
4 Subject thinks about delusions continuously or almost continuously

**2 Duration of preoccupation with delusions**
0 No delusions
1 Thoughts about beliefs last for a few seconds, fleeting thoughts
2 Thoughts about delusions last for several minutes
3 Thoughts about delusions last for at least 1 hour
4 Thoughts about delusions usually last for hours at a time

**3 Conviction**
0 No conviction at all
1 Very little conviction in reality of beliefs, < 10%
2 Some doubts relating to conviction in beliefs, between 10-49%
3 Conviction in belief is very strong, between 50-99 %
4 Conviction is 100 %

**4 Amount of distress**
0 Beliefs never cause distress
1 Beliefs cause distress on the minority of occasions
2 Beliefs cause distress on < 50% of occasions
3 Beliefs cause distress on the majority of occasions when they occur between 50-99% of time
4 Beliefs always cause distress when they occur

**5 Intensity of distress**
0 No distress
1 Beliefs cause slight distress
2 Beliefs cause moderate distress
3 Beliefs cause marked distress
4 Beliefs cause extreme distress, could not be worse

**6 Disruption to life caused by beliefs**
0 No disruption to life, able to maintain independent living with no problems in daily living skills. Able to maintain social and family relationships (if present)
1 Beliefs cause minimal amount of disruption to life, e.g. interferes with concentration although able to maintain daytime activity and social and family relationships and be able to maintain independent living without support
2 Beliefs cause moderate amount of disruption to life causing some disturbance to daytime activity and/or family or social activities. The patient is not in hospital although may live in supported accommodation or receive additional help with daily living skills
3 Beliefs cause severe disruption to life so that hospitalisation is usually necessary. The patient is able to maintain some daily activities, self-care and relationships while in hospital. The patient may be also be in supported accommodation but experiencing severe disruption of life in terms of activities, daily living skills and/or relationships
4 Beliefs cause complete disruption of daily life requiring hospitalization. The patient is unable to maintain any daily activities and social relationships. Self-care is also severely disrupted

**Appendix M: Results from G*Power (V3) Power Analysis**

**F tests** - Linear multiple regression: Fixed model, $R^2$ increase

| | | | |
|---|---|---|---|
| **Analysis:** | A priori: Compute required sample size | | |
| **Input:** | Effect size $f^2$ | = | 0.25 |
| | $\alpha$ err prob | = | 0.05 |
| | Power (1−$\beta$ err prob) | = | 0.8 |
| | Number of tested predictors | = | 1 |
| | Total number of predictors | = | 7 |
| **Output:** | Noncentrality parameter $\lambda$ | = | 8.5000000 |
| | Critical F | = | 4.2252013 |
| | Numerator df | = | 1 |
| | Denominator df | = | 26 |
| | Total sample size | = | 34 |
| | Actual power | = | 0.8013259 |

**Appendix N: Addressing assumptions for statistical analysis**

*Paired-samples t-test (PCL-5 scores at T1 and T2):* No outliers were present, as identified on a boxplot. The 'difference' score between T1 and T2 were normally distributed, as assessed by a Shapiro-Wilk test ($p$ = .981).

*Hierarchical multiple regression (H1):* Linearity was assessed by partial regression plots, and a plot of studentised residuals against the predicted values. A Durbin-Watson value of 2.223 indicated independence of residuals. Tolerance values greater than .1 indicated an absence of multicollinearity. Residuals were approximately normally distributed, as assessed by a Q-Q plot, and a Shapiro-Wilk test ($p$ = .161)

*Hierarchical multiple regression (H2):* Linearity was assessed by partial regression plots, and a plot of studentised residuals against the predicted values. A Durbin-Watson value of 1.812indicated independence of residuals. Tolerance values greater than .1 indicated an absence of multicollinearity. Residuals were approximately normally distributed, as assessed by a Q-Q plot, and a Shapiro-Wilk test ($p$ = .856)

*Hierarchical multiple regression (subscales of PTCI):* Assumptions for hierarchical regression were met. Linearity was assessed by partial regression plots, and a plot of studentised residuals against the predicted values. A Durbin-Watson value of 2.010 indicated independence of residuals. Tolerance values greater than .1 indicated an absence of multicollinearity. Residuals were normally distributed

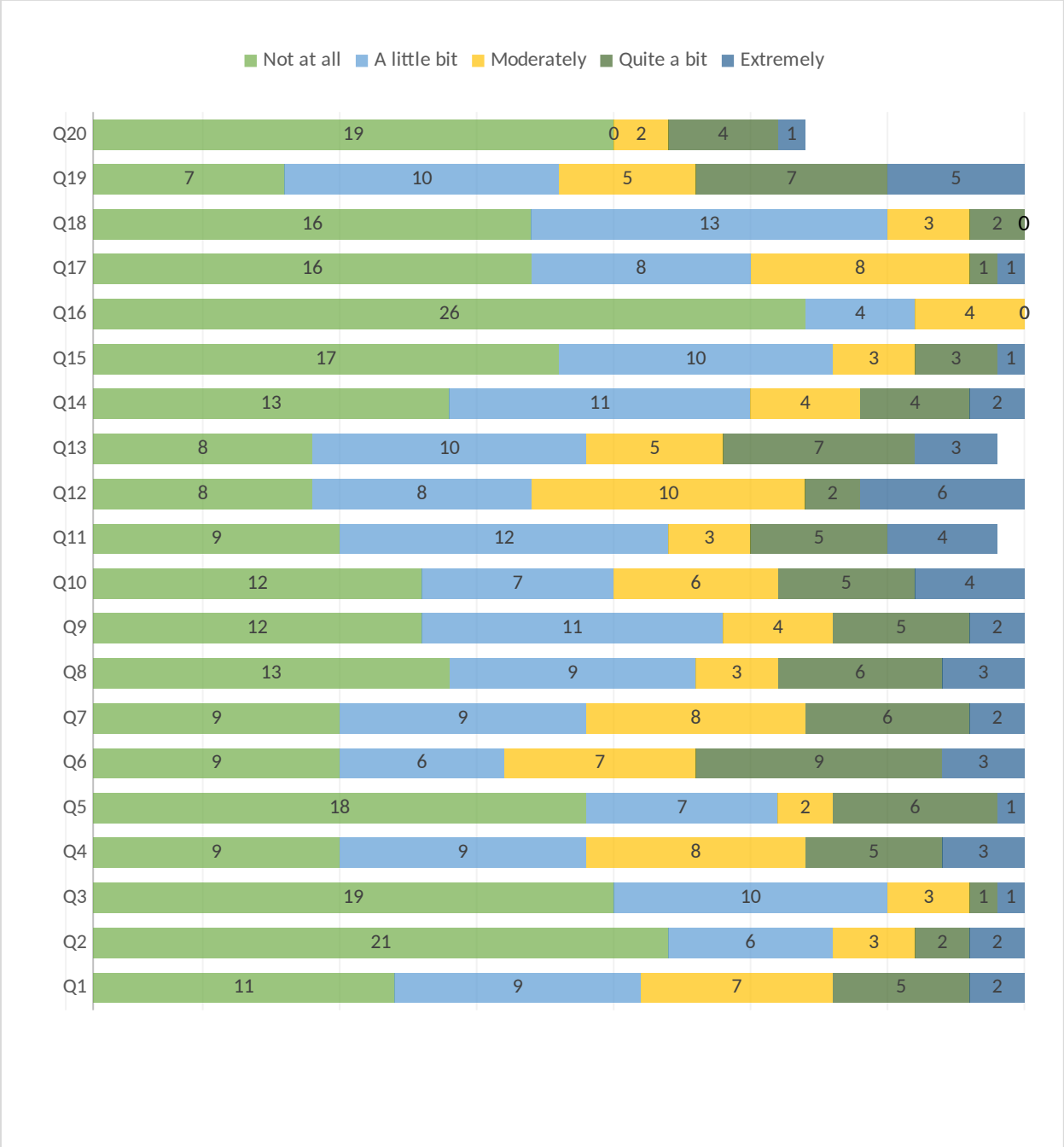
## Appendix O: Descriptive Statistics

| Variable | Range – possible scores on measure | Range – responses in this participant group | *M* | *SD* |
|---|---|---|---|---|
| Time 1 (n = 34) | | | | |
| PCL-5 | 0 - 80 | 2 – 57 | 24.00 | 15.07 |
| PTCI – total score | 36 - 252 | 42 - 215 | 109.85 | 41.11 |
| PTCI - Self | 1 - 7 | 1 – 5.86 | 2.75 | 1.15 |
| PTCI - World | 1 - 7 | 1 – 7.00 | 3.44 | 1.68 |
| PTCI – Self-Blame | 1 - 7 | 1.40 – 6.20 | 3.64 | 1.29 |
| SCS | 1 - 5 | 1.63 - 4.32 | 3.12 | .71 |
| PHQ-9 | 0 - 27 | 0 – 24 | 8.79 | 6.54 |
| TALE – total | 0 - 20 | 1 – 19 | 9 | 2.40 |
| TALE – distress | 0 - 10 | 0 – 10 | 2.51 | 3.37 |
| PSYRATS – beliefs | 0 - 24 | 0 – 5 | .24 | .90 |
| PSYRATS – voices | 0 – 44 | 0 - 31 | 2.09 | 6.97 |
| Time 2 (n = 19) | | | | |
| PCL–5 | 0 - 80 | 0 - 32 | 16.53 | 8.75 |
| PHQ-9 | 0 - 27 | 0 - 21 | 7.8 | 5.24 |
| PSYRATS - beliefs | 0 - 24 | 0 - 11 | 1.42 | 3.65 |
| PSYRATS – voices | 0 - 44 | 0 - 9 | .64 | 2.41 |

**Appendix P: Comparison of T1 scores on outcome measures between those who completed measures at both time points and those who completed at T1 only**

| Variable | T1 only (n = 15) | | Both time points (n = 19) | | ANOVA | Partial eta squared |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *p* | $\eta^2$ |
| PTCI - total | 113.43 | 47.14 | 104.32 | 35.81 | .532 | .013 |
| PTCI - self | 2.91 | 1.37 | 2.58 | .97 | .429 | .020 |
| PTCI - world | 3.32 | 1.62 | 3.38 | 1.68 | .932 | .000 |
| PTCI – self-blame | 3.90 | 1.28 | 3.37 | 1.27 | .246 | .043 |
| PCL-5 | 29.29 | 16.01 | 19.69 | 13.64 | .073 | .100 |
| PHQ-9 | 9.92 | 7.56 | 7.89 | 5.92 | .393 | .024 |
| PSYRATS-beliefs | .50 | 1.35 | .05 | .229 | .163 | .062 |
| PSYRATS – voices | 3.36 | 9.02 | 1.16 | 5.04 | .379 | .025 |
| TALE - distress | 3.50 | 3.86 | 1.79 | 2.86 | .153 | .065 |
| Number of weeks since FEP | 70.77 | 42.09 | 45.39 | 32.51 | .060 | .110 |
| Age | 32.93 | 13.99 | 31.63 | 8.73 | .745 | .003 |

## Appendix Q: Frequencies of T1 scores on individual items of PCL-5



**Appendix R: Hierarchical Multiple Regression – Subscales of PTCI as predictors of T1 PCL-5**

| | Variable | Cumulative | | Simultaneous | |
|---|---|---|---|---|---|
| | | $R^2$ change | *F* change | $\beta$ | *p* |
| Step 1 | TALE | .32 | F(1, 32) = 15.051 | .17 | .199 |
| Step 2 | PTCI - Self | | | .73 | <.001 |
| | PTCI - World | | | -.21 | ..171 |
| | PTCI – Self-Blame | .35 | F(3, 29) = 10.49 | .14 | .376 |

**Appendix S: Hierarchical Multiple Regression – Subscales of PTCI as predictors of T2 PCL-5**

| | Variable | Cumulative | | Simultaneous | |
|---|---|---|---|---|---|
| | | $R^2$ change | *F* change | $\beta$ | *p* |
| Step 1 | PHQ-9 | .44 | F(1, 17) = 13.35 | .54 | .003 |
| Step 2 | PTCI – Self-Blame | .21 | F(1, 16) = 9.80 | ..48 | .006 |

## Appendix T: British Journal of Clinical Psychology: Author Guidelines

### Parts of the Manuscript

The manuscript should be submitted in separate files: title page; main text file; figures/tables; supporting information.

### Title Page

You may like to use **this template** for your title page. The title page should contain**:**

i. A short informative title containing the major key words. The title should not contain abbreviations (see Wiley's best practice SEO tips);
ii. A short running title of less than 40 characters;
iii. The full names of the authors;
iv. The author's institutional affiliations where the work was conducted, with a footnote for the author's present address if different from where the work was conducted;
v. Abstract;
vi. Keywords
vii. Data availability statement (see Data Sharing and Data Accessibility Policy);
viii. Acknowledgments.

### Author Contributions

For all articles, the journal mandates the CRediT (Contribution Roles Taxonomy)—more information is available on our **Author Services** site.

### Abstract

Please provide a structured abstract under the headings: Objectives, Methods, Results, Conclusions. For Articles, the abstract should not exceed 250 words. For Brief Reports, abstracts should not exceed 120 words.

Articles which report original scientific research should also include a heading 'Design' before 'Methods'. The 'Methods' section for systematic reviews and theoretical papers should include, as a minimum, a description of the methods the author(s) used to access the literature they drew upon. That is, the abstract should summarize the databases that were consulted and the search terms that were used.

### Keywords

Provide appropriate keywords.

**Acknowledgments**

Contributions from anyone who does not meet the criteria for authorship should be listed, with permission from the contributor, in an Acknowledgments section. Financial and material support should also be mentioned. Thanks to anonymous reviewers are not appropriate.

**Practitioner Points**

All articles must include Practitioner Points – these are 2-4 bullet points, following the abstract, with the heading 'Practitioner Points'. These should briefly and clearly outline the relevance of your research to professional practice.

**Main Text File**

As papers are double-anonymous peer reviewed, the main text file should not include any information that might identify the authors.
Manuscripts can be uploaded either as a single document (containing the main text, tables and figures), or with figures and tables provided as separate files. Should your manuscript reach revision stage, figures and tables must be provided as separate files. The main manuscript file can be submitted in Microsoft Word (.doc or .docx) or LaTex (.tex) format.

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**References**

This journal uses APA reference style; as the journal offers Free Format submission, however, this is for information only and you do not need to format the references in your article. This will instead be taken care of by the typesetter.

**Tables**

Tables should be self-contained and complement, not duplicate, information contained in the text. They should be supplied as editable files, not pasted as images. Legends should be concise but comprehensive – the table, legend, and footnotes must be understandable without reference to the text. All abbreviations must be defined in footnotes. Footnote symbols: †, ‡, §, ¶, should be used (in that order) and *, **, *** should be reserved for P-values. Statistical measures such as SD or SEM should be identified in the headings.

**Figures**

Although authors are encouraged to send the highest-quality figures possible, for peer-review purposes, a wide variety of formats, sizes, and resolutions are accepted.

**Basic figure requirements** for figures submitted with manuscripts for initial peer review, as well as the more detailed post-acceptance figure requirements.

Legends should be concise but comprehensive – the figure and its legend must be understandable without reference to the text. Include definitions of any symbols used and define/explain all abbreviations and units of measurement.

**Supporting Information**

Supporting information is information that is not essential to the article, but provides greater depth and background. It is hosted online and appears without editing or typesetting. It may include tables, figures, videos, datasets, etc.

**Wiley's FAQs** on supporting information.

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For guidelines on editorial style, please consult the **APA Publication Manual** published by the American Psychological Association. The following points provide general advice on formatting and style.

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- **Abbreviations:** In general, terms should not be abbreviated unless they are used repeatedly and the abbreviation is helpful to the reader. Initially, use the word in full, followed by the abbreviation in parentheses. Thereafter use the abbreviation only.
- **Units of measurement:** Measurements should be given in SI or SI-derived units. Visit the Bureau International des Poids et Mesures (BIPM) website for more information about SI units.
- **Effect size:** In normal circumstances, effect size should be incorporated.
- **Numbers:** numbers under 10 are spelt out, except for: measurements with a unit (8mmol/l); age (6 weeks old), or lists with other numbers (11 dogs, 9 cats, 4 gerbils).