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Psychologically Informed Environments: A Systematic Review of Qualitative Studies of Staff Experiences

and

Recalled Early Adversity and Post Traumatic Stress Disorder in a Youth Homeless Population

Thesis submitted in partial fulfilment of the requirement for the degree of:

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Contents

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Preface

This thesis is made up of two papers: a systematic review and an empirical study. The systematic review aimed to synthesise the evidence regarding staff experiences of Psychologically Informed Environments (PIEs), which is an initiative that aims to transform services for homeless people and enable service providers to engage them in a more psychologically informed way.

It is well documented that people who are homeless often have comorbid mental health difficulties, a higher rate of engagement with the criminal justice system and can display behaviours considered challenging, such as emotional dysregulation or the use of illicit substances. It is also recognised that working with this client group can have an emotional toll on staff members who are often exposed to stories of trauma and are expected to manage high risk behaviours. PIEs were introduced in 2012 as a more informal way of working with homeless people with the aim of improving the engagement of this hard-to-reach group, but there exists no current review of its effectiveness. This systematic review aimed to synthesise research regarding staff experiences of working in a PIE. Searches were conducted using the databases Scopus, Psycinfo, Web of Science and Medline, alongside additional searches of reference lists, Google Scholar and citation searches. Articles were screened and assessed for quality by the first author.

Nine papers were included in the review, consisting of both published research and service reports, which ranged in quality. As such little evidence exists on this topic, all papers were included in order to be as thorough as possible. Thematic synthesis allowed for new interpretations to be drawn from the collation of the data. Seven analytical themes were developed, and the findings were generally positive, though the barriers and challenges to

implementing a PIE were identified as a key theme. The review synthesises the current evidence base for the use of PIEs, but the service user voice was noticeably absent from the analysis, as is a common shortcoming in research with the homeless population. More robust studies are needed in order to draw more conclusions regarding the effectiveness of PIEs.

The empirical paper is a quantitative study that aimed to explore the relationships between adverse childhood experiences (ACEs) and PTSD symptoms in a young homeless sample. This study used archival data and built upon research already resulting from the same dataset, which had noted high rates of loneliness and low rates of self-mastery among those in this sample who also scored highly on a measure of PTSD symptoms. A moderation analysis was conducted to explore whether these two variables were acting as a moderator on the relationship between ACEs and PTSD symptoms.

Statistical analyses showed that experiencing multiple types of adverse childhood adversity was a predictor of higher scores on the PTSD symptom measure, with each additional type of adversity showing a dose-response effect. An odds ratio analysis demonstrated that the experience of sexual abuse particularly increased the risk of meeting the clinical cut off score on the PTSD symptom measure. A hierarchical regression, where adversities were entered as sexual abuse, childhood maltreatment or household dysfunction, showed that sexual abuse had the greatest predictive effect, followed by household dysfunction, of scores on the PTSD symptom measure. Several categories of childhood adversities were correlated with self-mastery and PTSD symptoms. Of a larger dataset, only 84 participants had completed the PTSD symptom measure, which meant that the moderation analysis was underpowered, perhaps explaining why no significant effects were detected.

This study adds to the understanding of the effects of ACEs on young homeless people, especially in terms of identifying which types of abuse make young people particularly vulnerable to post-traumatic symptoms. This could be beneficial to third sector support services working with this population, in informing how they screen for different types of abuse and thus tailor psychological interventions.

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This systematic review has been prepared for submission to *Health and Social Care in the Community* (author guidelines can be found in appendix a)

Abstract

Psychologically Informed Environments (PIEs) were introduced as a new way of working in the homeless sector, yet little empirical research exists regarding their effectiveness or how they are experienced by those working in them or receiving the services of one. The aim of this systematic review was to bring together qualitative research that has sought to understand the experiences of staff working in a PIE for homeless people. A systematic search was conducted across four databases (Scopus, Psycinfo, Web of Science and Medline) from the introduction of the term 'Psychologically Informed Environment' in 2010. An extensive set of journal titles were screened, resulting in 83 papers requiring full screening. Nine papers met all inclusion criteria and were included in the thematic synthesis. Seven analytical themes were drawn from 33 descriptive themes: Features of PIE; working with people experiencing homelessness; staff outcomes; service user outcomes; is PIE all that different; barriers and challenges to implementing a PIE; and organisational and service buy-in. The psychological framework of a PIE helped staff to not only feel that they better understood service users, but also provided a sense that their own wellbeing was better supported. However, some staff felt that the PIE framework simply gave a name to what they had already been doing. Regardless of this it was evident that establishing a PIE requires long term commitment and there were several barriers to implementation that this an under-resourced sector need to be aware of.

Introduction

The concept of 'Psychologically Informed Environments' or PIEs was introduced in 2010 (Department for Communities and Local Government & National Mental Health Development Unit [CLG, NMHDU] 2010) and further defined in the PIE guidance (Keats et al., 2012), as a way of meeting the needs of homeless people. PIEs have continued to evolve since their initial conception and are currently in their second iteration, known as PIES 2.0 (http://PIElink.net). There are five key elements to a PIE, which will be described below, and whilst one of these originally focused on evaluation there has been limited research investigating the experience of providing PIEs. Therefore, this review sets out to systematically identify and appraise qualitative literature that has examined staff experiences of implementing and working within a psychologically informed environment.

Homeless adults are more likely than the general population to have experienced multiple adverse childhood experiences, have comorbid mental health difficulties and involvement with the criminal justice system (Anderson et al., 2013; Cockersell, 2016). It is estimated that between 60-80% of adults who are homeless or living in homeless hostels have a diagnosable personality disorder, which can often also be understood as a history of complex trauma (CLG, NMHDU, 2010; Keats et al., 2012; Homeless link, 2017). Complex trauma presents in numerous behaviours that may be seen as 'challenging' to the system, such as emotional dysregulation, impulsivity, and the use of illicit substances as way of managing distress (Homeless Link, 2017).

It has long been recognised that homeless people face additional barriers to accessing health services and have poorer physical and mental health outcomes (Brown, 2011; Homeless Link, 2017). Three quarters of homeless people report mental health problems and

of these, 56% use drugs or alcohol (Brown, 2011). Traditionally, mainstream mental health services have required people to be clean of drugs or alcohol before they are able to engage with treatment (Public Health England, 2017), further stigmatising them and potentially replicating patterns of rejection they have experienced in other services. Where homeless people do engage with services, they can often find it difficult to comply with traditional NHS systems that require them to meet certain requirements, or face exclusion. Brown (2011) argued that services needed a new way of working that was tailored to the needs of homeless people, that allowed staff to offer more holistic, personalised support that also served to empower service users in the long term.

Working in the homeless sector often involves working with large caseloads, hearing accounts of trauma and working in a system that is under-resourced (Schneider et al., 2021; Wirth et al., 2019). A review of fourteen studies into staff wellbeing found that rates of mental health difficulties were high, and that staff were asking for more support, training and supervision (Wirth et al., 2019). Schneider et al. (2021) found high rates of secondary traumatic stress among staff in the homeless sector which was also a significant predictor for burnout rates. Conversely, rates of compassion satisfaction remained high, suggesting that staff retained their compassion despite the challenges of working with this complex client group. A systematic review of staff experiences of working with homeless people identified emotional burden as a key theme, with staff talking about the impact that the work had on them, especially in terms of hearing stories of trauma (Peters et al., 2021). The emotional effects of being indirectly exposed to trauma through helping others are complex and inter-related; vicarious trauma, burnout, compassion fatigue are overlapping concepts, and staff in the helping professions require support to manage the resulting physical and emotional exhaustion that results from working with such complexity (Miller, 2022).

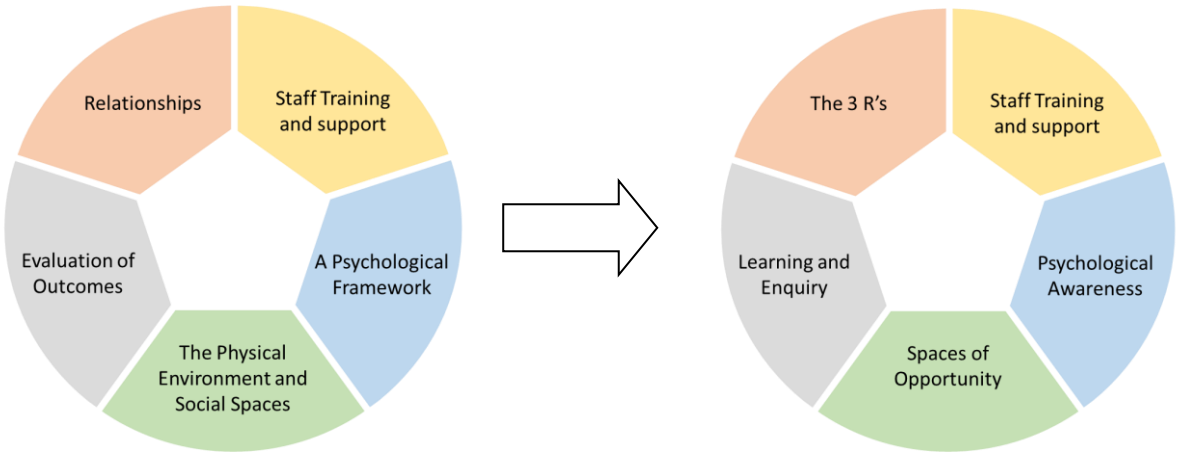
A 2010 publication by the CLG and NMHDU introduced the concept of the Psychologically Informed Environment, or PIE, setting out a framework that could be applied within services supporting those who were homeless. In establishing themselves as a PIE, services recognise that they have a unique opportunity to engage those populations most at risk of exclusion in a more informal way, offering something that mainstream mental health services have found difficult to provide (Johnson & Haigh, 2010). There are numerous aims and desired outcomes of a PIE described in a Good Practice Guide published by Keats et al. (2012). These include using evidence from psychology to break the cycle of chronic homelessness, to help staff to understand and work effectively with challenging behaviours, thus reducing the rates of eviction and rough sleeping.

The idea of a PIE is not for staff to engage service users in formal therapy, but for them to be supported in applying psychological thinking in their work, helping them to understand service users better and thus empower them to make meaningful changes (Cockersell, 2011; Johnson & Haigh, 2010; Keats et al., 2012). It also recognises the psychological impact of working with this client group can have on staff (Johnson & Haigh, 2010). Five key aspects of a PIE were identified in the original guidance (Keats et al., 2012) which have been further refined in the ten years since its initial implementation (see figure 1).

Relationships was a key element of the initial PIEs approach, recognising that relationships underpinned all the other elements. PIEs 2.0 removed relationships as a separate element, as way to recognise that relationships are at the core of all work with service users but are not an activity in themselves. Relationships are something that exist, rather than something to be done (http://pielink.net/relationships-in-the-2.0-framework/).

Figure 1

The evolution of the 5 key elements of a Psychologically Informed Environment



A review of the literature into what approaches are effective with homeless people being discharged from hospital noted that engaging service users and building rapport underpins collaborative processes (Cornes et al., 2018). The updated element 'rules, roles and responsiveness' considers how to encourage relationships by examining how services can engage service users (http://pielink.net/relationships-in-the-2.0-framework/).

For many services, introducing a PIE will mean a large-scale change that will require support at every level of the service: managers must ring fence time for staff to receive appropriate supervision and reflective practice, as well as making sure staff access consistent training (Breedvelt, 2016; Cockersell, 2011; Johnson & Haigh, 2010; Scanlon & Adlam, 2012, Westminster City Council, 2015). A study by Maguire (2012) found that many staff feared being expected to work as psychotherapists but training them in simple psychological techniques was enough to increase their confidence in working with their clients. They were also able to develop skills to manage both their own distress and that of the people they were

supporting. Prestidge (2014) found that training in psychological approaches helped staff to take things less personally and understand that their job was not to 'fix' the person, but rather provide a consistent and safe relationship. The framework should be chosen dependent on the type of service offered and a programme of staff training developed to support this (Westminster City Council, 2015). Services being able to work in a trauma informed way is especially important considering the high rates of trauma and PTSD in the homeless population (Hopper et al., 2010; Bassuk & Beardslee, 2014; Prestidge, 2014).

In 2006, the UK government acknowledged that many hostels or temporary housing for homeless people were not environments that motivated service users to change and were not conducive to helping them transition into stable housing (Homes and Communities Agency, 2011). Boex and Boex (2012) stated the importance of considering the user's experience of entry into the building, the use of colour and good lighting to achieve the desired welcoming atmosphere; a shift away from traditional institutionalised buildings (Johnson & Haigh, 2010). A review by St. Mungo's found that many PIE pilots refurbished their physical spaces to signify the introduction of a psychologically informed environment (Breedvelt, 2016).

Whilst the initial PIE guidance set out levels of evaluation for organisations operating as PIEs, it was later recognised that producing formal research was not an achievable hallmark for all PIEs. The newer principle of learning and enquiry instead refers to developing a culture of enquiry through reflective practice and a willingness to learn from action, rather than a culture of blame (http://pielink.net/learning-and-enquiry). Thus, formal research in the field of PIEs remains scant and the evidence base is small. Though work is ongoing on the development of a self-assessment tool, the PIES Assessment and Self Development for

Services, also known as 'The Pizazz' (http://pielink.net/pizazz/), the variation in frameworks applied across PIEs means that evaluation remains challenging.

Reported Quantitative Outcomes

Whilst formal evaluation remains rare, a small number of studies have reported quantitative findings from PIE implementation periods. The Psychology in Hostels (PiH) Lambeth project conducted a two-year review of its psychologically informed environment and noted reductions in drug and alcohol use as well as reductions in aggression, self-harm, inpatient and emergency service use (Williamson, 2020). The PiH project also reported a 58% reduction in A&E admission for those engaging in 1:1 therapy, a reduction in contact with the criminal justice system, including an 87% reduction in prison use, a major reduction in repeat homelessness and reduced staff burnout (Williamson, 2020). Cockersell (2016) presented a narrative review of both published and unpublished evidence from services implementing PIEs, focusing particularly on the intended outcomes stated in the guidance and data presented by homeless services across the UK and Ireland. Cockersell (2016) concluded that PIEs were effective in achieving the intended outcomes. Findings from PIE pilots at St Mungos demonstrated that services users were far less likely to be evicted than those in non-PIE services and they also had a higher rate of positive move-on outcomes (Cockersell, 2016). Like the PiH findings, St Mungos also reported a reduction in incidents including aggression and emergency service contact, finding that these were approximately 20% lower than in a non-PIE setting (Cockersell, 2016). Cockersell (2016) reports that initial data emerging from a three-year review by the University of Southampton suggests that the PIE has led to significantly reduced mental distress across several measures.

Aims and Objectives for Systematic Review

The flexibility in the framework used for the development of PIEs means that services are free to interpret them to suit their needs, making evaluation difficult. Cockersell (2016) stated that most of the literature pertaining to PIEs was practice-based and lacked any empirical element so as to enable any consideration as to the evidence for PIEs effectiveness. As described above, very little research exists in the form of published quantitative studies, there are several qualitative studies and service reports regarding the experiences of PIEs, primarily from a staff member perspective.

As yet, there exists no systematic review of the literature in this area, possibly due to the heterogeneity of evaluations. Therefore, this review systematically synthesises the qualitative evidence exploring the experience of staff members working in a PIE. Thematic synthesis, as described by Thomas and Harden (2008) is widely used in reviewing qualitative literature as it allows new interpretations to be drawn from synthesising multiple studies. Implications for PIE practice and future research in this area will be considered.

Methodology

Search strategy

Between May 2020 and February 2022, the databases Scopus, PsycInfo, Web of Science and Medline were searched. Due to a low number of returns on a scoping search, broad terms of "psychologically informed", psychologically adj2 environment*, "trauma informed environment*" and "trauma informed service*" were used. Reference lists of relevant papers were screened, and citation searches were conducted. Google searches and searches using Google scholar were used to ensure that all relevant papers, including grey literature such as

service reports (excluding theses and dissertations), had been identified. The search returned 1,982 results.

Table 1

Inclusion and exclusion criteria- based on the PICO tool

	Inclusion	Exclusion
Population	Staff members working in any of the following settings: Homelessness service, temporary accommodation, refuge	Physical health, criminal justice or education settings
Intervention	Explicitly stated that the environment was a PIE	Anything prior to 2010 i.e. prior to the framework for 'PIE' first being used
Comparison	All study types using qualitative approach	Evaluations with quantitative approaches
Outcome	Staff experiences of working in a PIE	

Selection of Relevant Research

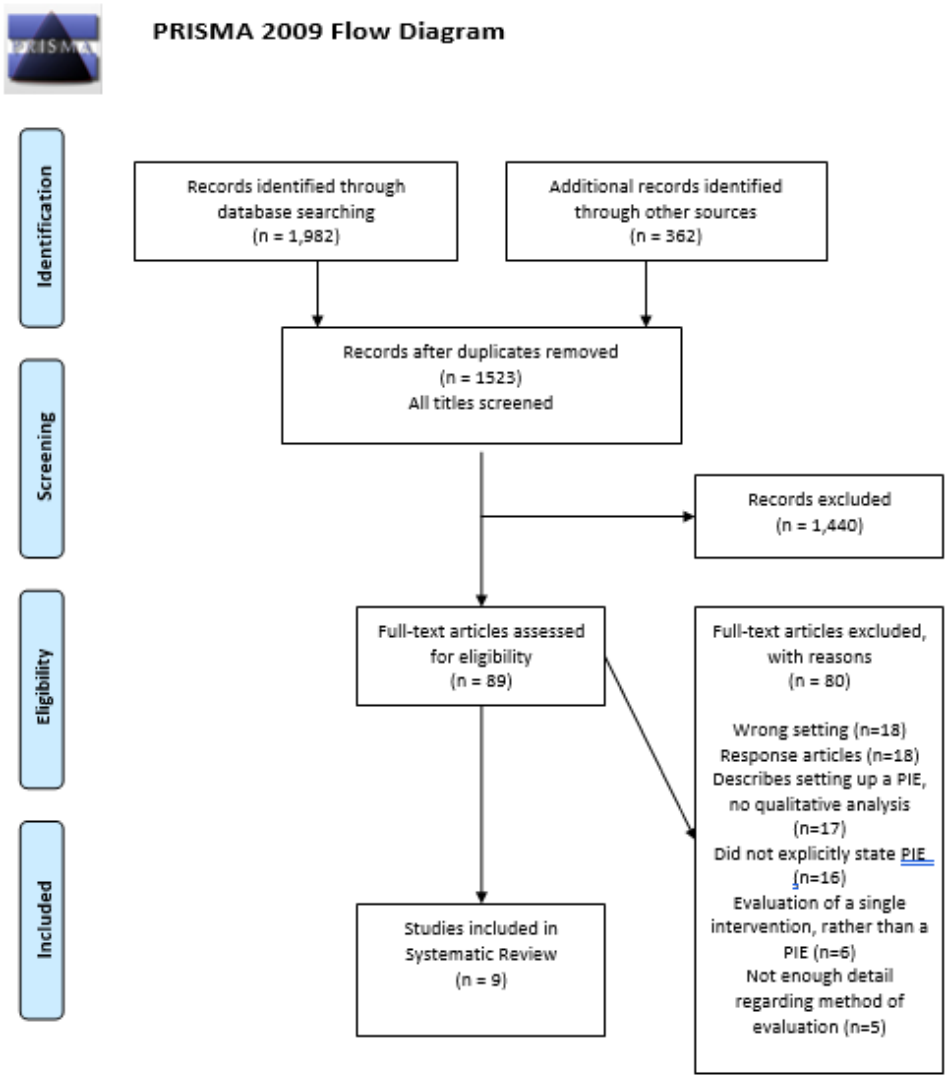
Titles and abstracts of all search returns were screened by the first author. Full text articles were screened by the first author according to the eligibility criteria, then identified papers were reviewed by the project supervisor. Selection and exclusion of papers followed the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA: Moher et al., 2020) guidance and a flowchart detailing the process is presented in figure 1. Some third sector organisations have published their own evaluations of PIEs. These were identified through reference lists and Google searches and were included in the review where they met the inclusion criteria. Papers were included if they met the following criteria: a) they were based in services for people experiencing homelessness; b) they stated that the setting operated as a PIE or was based on the principles of PIE; c) they investigated staff experiences

of working in a PIE; c) they used qualitative methods for data collection and analysis; d) they were published after 2010 when the term 'PIE' was first used; e) they were written in English.

Results are shown in Figure 2. Eighty-nine papers were screened in full, with 80 being excluded based on eligibility criteria. Nine papers met the eligibility criteria and are included in this review. Information on the setting, design, sample, outcome measures, analysis and findings were extracted from each study and collated in table 4.

Figure 2

PRISMA Flow diagram of study selection process



Description of Papers

Seven of the nine papers included in the review used a cross-sectional post intervention survey design (Benson & Brennan, 2018; Boobis, 2016; Fieldhouse & Greatorex, 2020; Housing LIN, 2017; Phipps et al., 2017; Revolving Doors, 2019; Watson et al., 2019). The remaining two papers used a survey design with both pre- and post-measures (Buckley et al., 2020; Ward, 2014). Evaluations took place in a range of homelessness settings (mainly hostels, supported housing and day centres). None of the evaluations included a comparison to another type of approach or used a control group.

Seven of the included papers looked only at staff outcomes and two papers involved both staff and service user outcomes. Responses from a total of 63 staff members and six service users were included across all evaluations, with sample sizes ranging from five to 24 participants. Two papers did not provide information on number of participants (Boobis, 2016; Housing LIN, 2017). Staff members ranged from support workers and prison officers to therapists and service managers.

Semi-structured interviews were used in six of the nine papers with two using focus groups to attain additional information. Watson et al. (2019) solely used a focus group, with Revolving Doors (2019) using focus groups and surveys. Ward et al. (2014) used a questionnaire with Likert scales and open-ended questions. Five of the papers used thematic analysis and one study arranged themes using a grounded theory approach. One of the papers organised themes under pre-identified objectives or domains (Boobis, 2016). Housing LIN (2017) and Revolving Doors (2017) presented their findings in a narrative way and did not refer to any analysis of themes.

Quality assessment

All papers included in the thematic synthesis were assessed for quality using the Critical Appraisal Skills Programme checklist (CASP, 2018), not with the intention of excluding any based on quality, but rather to offer comment on quality and inform consideration of how these issues may be addressed in future research. The CASP requires the reviewer to consider whether the research is valid, if the aims and results are presented clearly and how valuable the research is in terms of how it contributes to the existing evidence base. Though the CASP itself does not provide a scoring framework, papers were awarded 1 point for each question where they achieved a 'Yes' on the checklist, 0.5 where they partially met the requirements and 0 where suggested quality measures were not met or not mentioned. Each paper was reviewed by the author and assigned a score out of a possible 10. Total CASP scores are included in table 4 (a full breakdown of CASP scores can be found in appendix b). Four of the final papers were inter-rated by a reviewer independent to the research. Where there was disagreement, this was discussed until a consensus was reached and rating were adjusted accordingly, giving a good level of inter-rater reliability (K = .738). All papers were included, though two papers were rated as low quality (Boobis, 2016; Housing LIN, 2017); scoring 4/10 due to lack of description of recruitment method, little consideration of ethical issues and lack of rigour in analysis. These were both third sector service reports and included a statement of aims and clear presentation of findings which was deemed sufficient to contribute to the meta-synthesis. Four of the remaining evaluations were of high quality, scoring 7.5/10 or over. Two further papers achieved a moderate score of 6.5/10 (Fieldhouse & Greatorex, 2020; Ward, 2014) as a qualitative methodology was not deemed to be the most appropriate to meet their stated research aims and the relationship between researcher and participants was not adequately considered.

Data Extraction and Thematic Synthesis

As the papers varied in quality and content, with some providing richer data than others in terms of direct quotes, a thematic synthesis was deemed the most appropriate form of synthesis. This allows for all text presented under 'results' or 'findings' headings to be included in the synthesis, not just verbatim quotes. Any quotes or interpretations mentioned elsewhere in the papers were not included. The papers were read and re-read to ensure familiarity and then uploaded into Nvivo software for coding (Version 12, QSR, released March 2020).

Thematic synthesis, as described by Thomas and Harden (2008), uses thematic analysis techniques to allow researchers to collate qualitative data in such a way that goes beyond describing commonalities and contradictions between multiple studies and allows for new interpretations to be drawn.

There are three stages to thematic synthesis: 1) line-by-line coding; 2) developing descriptive themes; and 3) generating analytical themes. Following this framework, the results section of each paper was coded line by line in NVivo (QSR, 2020) using free codes that captured the content and meaning of each line of data. New codes were created where needed, as the process was repeated for each paper. Codes were checked continuously to ensure consistency and were streamlined where needed. The initial codes were developed into descriptive themes which then informed the analytical themes. All coding and development of themes was completed by the first author only.

Table 2

Data Extraction Table

Study	Setting	Design	Total sample size (N)	Sample characteristics	Variables measured; outcomes measured; outcome tools	Primary findings	CASP Rating
Benson & Brennan (2018)	Homelessness; supportive housing and an emergency hostel UK	Cross-sectional post intervention survey design	6 (staff responses)	Female staff members, aged between 27 and 42 years. All had a minimum of 5 years' and maximum of 13 years' experience.	Semi-structured interviews to understand staff members' experiences of working with homeless people; using psychological approaches; how effective/ineffective they found implementing psychological approaches. Analysed using a thematic framework.	4 key themes were identified: keyworkers' experience of working with homeless people; psychological approaches/awareness; attitudes and perceptions and training and education. They also commented that clients appreciated the change of approach and it had improved the overall atmosphere	7.5/10
Boobis (2016)	3 settings: A drop-in homeless day centre and 2 residential mental health rehab and recovery units UK	Cross-sectional post intervention survey design	Not specified	Service managers, staff members and dedicated facilitators. NO further details given.	Semi-structured interviews and focus groups aimed to answer two key questions: 1. What was the impact of the PIE pilots on the three services? 2. What are the implications for the wider multiple complex needs system? Analysed using grounded theory approach	Findings presented under headings of the principles of PIE: Relationships; Staff support and training; The physical environment and social spaces; A psychological framework	4/10
Buckley et al. (2020)	Homelessness: two 'complex needs' hostels	Pre-post intervention	9 staff members	7 female and 2 male staff members	Semi structured interviews to explore staff members' understanding of service users	Four main themes: Increasing psychological awareness and understanding of service users;	8/10

Study	Setting	Design	Total sample size (N)	Sample characteristics	Variables measured; outcomes measured; outcome tools	Primary findings	CASP Rating
	UK	survey design		from across 2 services. In current role between 1 and 7 years.	before and after attending team formulation meetings Thematic Analysis	Stopping, thinking and doing something different; A constraining context; and Recognizing and reinforcing good practice	
Housing Learning & Improvement Network (2017)	Supported accommodation UK	Cross-sectional post intervention survey design	Not specified	No details provided	Used surveys and focus groups to get staff feedback on working in a PIE. No mention of formal analysis.	A narrative summary of lessons learned: Quality of relationships matters; takes time and confidence for staff to use PIE approaches; managers need to buy-in to the concept and act as role models	4/10
Fieldhouse & Greatorex (2020)	Homelessness: Third sector organisation delivering skills training in the context of a PIE UK	Cross-sectional post intervention survey design	10 participants	6 service users, 4 programme workers Service users had completed the Cash Pointers programme. No further details provided	Semi structured interviews to explore how the Cash Pointers programme had achieved positive outcomes for service users Thematic analysis Focus groups to explore how programme workers felt their work had benefitted service users	5 themes from service user interviews: Having basic living needs met; Feeling validated; Feeling safe and secure; Greater confidence; Improved relationships. Also identified features of the programme service users found most helpful 7 themes emerging from focus groups: A strong supportive team ethos; Autonomy in casework; Therapeutic use of self; In-house PIE training; Alignment of values; Supportive	6.5/10

Study	Setting	Design	Total sample size (N)	Sample characteristics	Variables measured; outcomes measured; outcome tools	Primary findings	CASP Rating
						management; A culture of reflective practice	
Phipps et al. (2017)	Homelessness: two supported housing projects	Cross-sectional post intervention survey design	24 participants	9 Hostel residents: 8 males & 1 female, had lived in the hostel for at least one month 10 staff members: 8 males, 2 females. Aged between 26-46. Had worked in the hostel for at least 3 months	Semi structured interviews focusing on experiences and perspectives of residents and staff living and working in a PIE. Explored the differences between PIE and standard hostels. Thematic analysis	18 Themes falling into 5 domains: What makes a home?; Impact of client needs; Managing relationships; Reflective practice; Theory vs practice	8/10
Revolving Doors (2019)	NWD: No Wrong Door Network-services for homeless people	Cross-sectional post intervention survey design	18 participants	18 staff members working across 3 services	Used semi-structured interviews and ethnographic observation to obtain staff views on PIE training and reflective practice within a PIE	8 themes presented: Understanding PIE; Applying PIE; Psychologically informed relationships and communication; Wellbeing of staff; Training delivery; Reflective practice; Limitations	6.5/10

Study	Setting	Design	Total sample size (N)	Sample characteristics	Variables measured; outcomes measured; outcome tools	Primary findings	CASP Rating
						of physical space; Challenges, barriers & recommendations for improvement	
Ward (2014)	Homelessness	Pre-post intervention survey design	15 participants	15 staff members; 14 involved in directly supporting clients and one service support	Survey consisting of 10 domains with likert scales and open-ended questions.	Themes organised under 10 domains: Belonging, boundaries, communication, development, involvement, containment, structure, empowerment, leadership, openness	6.5/10
Watson et al. (2019)	Homelessness: Supported accommodation hostels, 6 projects	Cross-sectional post intervention survey design	22 participants	22 Project workers, 14 females, 8 males. Aged 25-53. Time working in the sector ranged from 4 months to 22 years.	Focus groups with workers from each project exploring staff experiences of building relationships with service users and how they were supported to do so. Thematic analysis	Three main themes: Working hard to build connection; Supporting each other in an unsupportive context; Draining but sustaining	7.5/10

Results

An initial 49 codes were developed at the first stage of coding. From these codes, 33 descriptive themes were derived, which were further refined into seven analytical themes. See figure 3 for full list of themes. Analytical themes will now be described, supported by appropriate evidence from the papers.

Figure 3

Themes derived from thematic synthesis

Descriptive Themes	Analytical Themes
Psychological Framework Reflective Practice Relationships Training Physical Space	Features of PIE
Hearing accounts of trauma The impact of working with complex clients Draining but sustaining Leaving work at work Working with risk	Working with people experiencing homelessness
Improved communication Staff confidence and competence Staff wellbeing Understanding service users in a different way A supportive environment for the staff Staff have more motivation and hope	Staff outcomes
Outcomes achieved for service users Increased service user engagement Service user involvement Consistency for service users A focus on service user's strengths	Service user Outcomes
A change in approach Not much different to what we did before Does PIE work A move away from reactive or punitive approaches	Is PIE all that different? [to standard service delivery]
Unrealistic expectations A constraining context Sustainability Time taken to establish a PIE Feeling powerless	Barriers and challenges to implementing a PIE
Collaboration with other professionals The role of management A whole organisation approach	Organisational and service buy-in

Features of a PIE

Unsurprisingly, the core features of a psychologically informed environment were discussed regularly across all the papers. Relationships was the most coded theme, which is congruent with previous findings that relationships are the key element that underpin PIEs (Keats et al., 2012). There was a recognition that building a good relationship with service users was the foundation of what could be an emotionally demanding job:

> *"They [staff] are dealing with terrible things [...] The PIE training encouraged that relationship building before anything else." (Revolving Doors, 2019)*

By putting relationships at the forefront of their work staff reported that the way they interacted with service users felt different and less formal:

> *"Alongside the room for spontaneity is an element of fun and laughter that did not exist before. Staff and residents are observed to be much more at ease with each other and enjoy each other's company" (Ward, 2014).*

There was also mention of the importance of peer relationships among the staff; being able to turn to their colleagues for advice and support and how this helped them manage the demands of their roles:

> *"Peer support is recognised, valued, and encouraged because it improves development for all and can create new ways to practice for a fast-changing environment which at times can be quite demanding. By peer support being recognised, valued and supported, I believe it boosts my morale". (Ward, 2014)*

The importance of peer support was also evident in the discussions regarding reflective practice. Overall, staff were appreciative of a space to talk openly about the work and think about the impact that it had on them. Staff talked about how reflective practice gave them space to process what they were dealing with and made them feel more resilient.

> *"Anyone who is working with human distress and pain – it has a toll, it has an effect on you […] I would want everybody […], to have some form of reflective practice so they can at least talk about the effect of what's happening on them as a team" (Phipps et al., 2017).*

However, there were some staff who commented that reflective practice took too much time away from the day-to-day running of the service: an "unnecessary luxury" (Phipps et al., 2017, p35). There were others that found reflective practice too personal or exposing and opted out where they could:

> *"I felt I was put really on the spot in the sessions and almost forced to speak about something that I didn't want to speak about […] so, I actually didn't find it very PIE ironically[…] and it put me going off any more and I didn't go to anymore after that" (Revolving Doors, 2019).*

The importance of the physical environment was recognised with staff acknowledging that a welcoming environment has an important part to play in a service users' sense of physical and emotional safety:

> *"It's important for our clients that they actually feel safe and they feel someone cares for them and they belong somewhere" (Phipps et al., 2017)*

This consideration of how the environment is experienced also represented a shift away from traditionally held views of people experiencing homelessness and acknowledged the importance of involving service users so that they had some investment in their environment:

> *"The reason that nothing had happened previously was because the view was that if you make it nice, they'll just ruin it […] if people aren't involved, what value do they hold for the thing?" (Phipps et al., 2017).*

Staff were overwhelmingly positive about the skills they had learned and implemented as part of the psychological framework. Many talked about how this helped them to engage with service users in a different way, by coming alongside them and working with them rather than 'doing to' or 'doing for' them. Staff talked about how practising empathy, asking questions in a different way and really listening, without needing to act, had helped them in their work with service users.

> *" I was with somebody yesterday, he was bringing a problem but what he really wanted was to be understood. Practising empathy really helped […] I could see by the end of the session he had actually come to a decision himself about what he was going to do" (Benson & Brennan, 2018)*

Working with people experiencing homelessness

Many participants talked about the emotional impact of working this complex client group, whilst also feeling that their roles were not valued by wider society. Staff experienced aggression and risky behaviour from service users, whereas others talked about the impact of hearing stories of abuse:

> *"It used to affect me, because when I first read a [referral form] and it was a lot of abuse […] I can almost live it do you know what I mean?" (Phipps et al., 2017).*

The psychological framework used in a PIE enabled staff to understand the impact of this abuse on their service users and how this manifested in their behaviour, allowing them to bring a more empathetic and compassionate approach to their work. They also developed a greater understanding of the impact on their own wellbeing and felt validated in their own emotional responses:

> *"And for me I like that space recognises that actually we are human and as much as most of the time we are fine and we have a really thick skin there are times that it's going to affect you, and that's fine because it is a really hard job we are doing" (Watson et al., 2019).*

Peer relationships and reflective practice were noted to be extremely important in maintaining staff wellbeing.

Staff Outcomes

Improved staff wellbeing was one of the outcomes of working in a PIE for staff, along with improved motivation and feelings of hope. Staff felt that PIEs were a supportive environment to work in and that there was a more even playing field between management and support staff. Several staff talked about feeling that they functioned well as a team and felt that they could be vulnerable both with their peers and with management. This was also reflected in interviews with service managers:

> *"I certainly have a very relaxed management style now that I didn't have before [PIE] and I am very comfortable with all members of my team and feel like I know them […] it gives me assurance as a manager that we actually are all working as a collective. And we are a genuine team" (Revolving doors, 2019).*

There was sense of appreciation of having a space to talk through difficult cases with other staff and generating solutions together:

> *"but it's about discussing it, you've got more chance of finding the answers the more people you've got involved. And even if they're not answers, it's new approaches, new ideas that you can try to solve a problem." (Boobis, 2016).*

Some staff were able to recognise that prior to their service becoming a PIE they were struggling to have empathy for the people they were working with, but that the training they received as part of PIE helped them to understand service users better and work with a renewed energy:

> *"Before PIE, I was settled in routine I think. I did not put that much of attention anymore and I've recognised that PIE opened my eyes to it. After it, I completely changed my attitude and now every story counts." (Revolving Doors, 2019).*

Service user outcomes

Many staff commented on how outcomes for service users were considered in a different way in a PIE, than in traditional services. Rather than focusing on targets regarding recovery or service users moving on, the sense was more that service user engagement and building trusting relationships was the goal. As one member of staff explained, taking the time to build those relationships sometimes meant more to service users than housing outcomes:

> *"his engagement started coming up and like, you know, as soon as I got that fixed for him and he saw us as not as just a support service, he saw us as someone he could go to when he had like, issues with other things. And to me, that makes a lot more of an impact than it does on just being able to house someone or get someone's benefits done. Doing something to show that you're not just their support worker but you're also a human. That can mean a lot to the clients. More than anything else" (Revolving Doors, 2019).*

There was also a feeling that service users were able to become more involved in the service, both in terms of contributing to the physical environment but that they also had more involvement in decision making:

> *"I also think that as our relationships with our residents have improved, they also feel more empowered and encouraged to challenge decisions and ask questions. I think there is a greater respect for all residents and their opinions" (Ward, 2014).*

However, in some services it was felt that residents were still encouraged to "keep themselves to themselves" (Ward, 2014, p.55) and were not as active in their participation as the staff would like, which was felt to be due to them lacking the skills needed.

Is PIE all that different? [to standard service delivery]

Though there was evidence in every study that staff members felt positively about PIE, and that there were clear benefits, there were also many questions regarding whether it was a new approach at all. As summarised by one staff member in Phipps et al.'s (2017) study:

> *"PIEs is like a loose […] term to try and capture what has possibly been going on for years"*

Other staff members echoed this sentiment, feeling that the team formulation meetings they had as part of their PIE just highlighted that they were already working in this way, though maybe they did not spend enough time acknowledging that:

> *"You don't really get feedback for positive things very often; people are more likely to*

come…when you've done something crap. So that was quite nice, I was just surprised sitting there talking that we are already doing a lot of the things, not that we don't need to get better at them, but a lot of the things we're already doing" (Buckley et al., 2020).

Despite some scepticism, 'A change in approach' was one of the most coded themes. Staff frequently talked about how PIE training had changed the way they interacted with service users and that they were seeing different outcomes. Many staff members acknowledged that PIE felt like a less reactive or punitive approach:

"I think other environments and other workplaces that I've been, they will look at a situation if it is challenging and it's managed in terms of you've broken a rule so it's a warning, or there's an issue with staff, so it's maybe mediated and that's it." (Housing LIN, 2017).

Many of the papers mentioned the change in atmosphere, the ability to work more flexibly, listening to clients more, not rushing to warnings and restrictions and making their services feel more like a home for service users.

Barriers and challenges to implementing a PIE

One thing that was clear across the papers was that staff were questioning how sustainable this approach is in an area that is stretched and under resourced. Establishing a PIE takes time, the Revolving Doors report estimated that it took approximately four years to have a PIE up and running. Training and reflective practice need to be continuous to make sure that all staff are working consistently. Establishing a PIE means thinking long term, and as one member of staff pointed out; long-term goals do not meet the demands of a tendering process that requires short-term outcomes:

"we have to be realistic […] [if] we're not hitting the tender targets …we're not going to have a service and that's bad for the (service users) and the staff […] as much as it would be nice to focus on the longer term […] realistically […] we need to be looking at them more shorter-term goals." (Buckley et al., 2020).

Two staff members (Phipps et al., 2017) talked about how working to targets set by people outside of the service did not fit with the values of the PIE and could be damaging to their relationships with service users:

S10: "Funders and commissioners seem to think it's like a factory where you come in as a rough sleeper, go through the process, you engage with the service and at the end of it you come out ready for independent accommodation. Now it doesn't quite work like that"

S9 "You think, 'Oh god, I have to do this and that' but your client is not ready and you're pushing the client and […] that breaks the relationship. Your client is seeing you as a worker, not a human being"

Though staff felt motivated to work with service users in a new way, they felt constrained by existing policies and procedures which prevented them from doing so.

Organisational and Service buy-in

Managers were considered critical to the success of a PIE, as was organisational support. Staff felt better able to do their jobs when they perceived management support:

"If the manager buys into the concept then they sell that concept, that's what a manager does. They orchestrate change and they orchestrate how people buy into things, how they can use that and, like you say, it isn't extra work, it's just another addition to support which is brilliant." (Housing LIN, 2017)

Staff talked more positively of management where they were seen to be more involved in the service and had open communication both with their staff and service users, rather than being detached from the day-to day running of the service. The staff in the Housing LIN (2017) study talked about how managers had their own reflective practice groups and used the techniques they had learned in PIE training in their interactions with staff, bringing a more empathetic management style. In services described as 'less receptive' it was evident that not all staff members had bought into the concept of PIE (Boobis, 2016). The Revolving Doors (2019) report explains:

"It was strong leadership over a long period of time that allowed the organisation to become a PIE organisation."

Discussion

This review offers the first attempt at synthesising what qualitative research exists regarding staff members' experiences of working in psychologically informed environments for people experiencing homelessness. The synthesis created seven analytical themes, generated from 33 descriptive themes. The analytical themes were: 1) Features of a PIE; 2) Working with people experiencing homelessness; 3) Staff outcomes; 4) Service user outcomes; 5) Is PIE all that different? [to standard service delivery]; 6) Barriers and challenges to implementing a PIE; 6) Organisational and service buy-in. Any conclusions drawn from this synthesis should be considered tentatively, as

only a small number of evaluations were included in this review, including those of low quality.

Overall, working in a Psychologically Informed Environment was viewed positively by staff members who felt that this was a move away from traditional, restrictive approaches and an approach that allowed them to put relationship building at the heart of their work. For others, it was a way of recognising good practice and formalising what they were already doing. This may be due to the existing nature of services; for some PIE simply added a framework and a language to what already existed (Westminster City Council, 2015), likely those that were already founded on the principles of therapeutic communities and enabling environments.

The difficulty of delivering a fully psychologically informed environment with limited resources was recognised in several papers. Cockersell (2011) talked about how a PIE was a way of delivering more for less, in a time of austerity where services were seeing cuts to funding and staffing levels, whilst demand for their services was increasing. However, establishing a PIE takes a considerable amount of time, it is not a case of redecorating the physical environment and offering a one-off training day to staff; a PIE represents an entire cultural shift that can take many years to fully implement and refine.

Scanlon and Adlam (2012) also acknowledged the difficult position that staff can find themselves in, caught between the demands of a complex client group and the need to meet organisational targets. They explain that in these circumstances activities such as supervision, training and reflective practice can become sources of tension, which may explain some of the discontent with reflective practice that were expressed by some of the staff members; these activities become too stressful in an unsupportive, target driven context. However, Scanlon and Adlam (2012) explain that rather than alleviating stress, non-attendance can lead to increased stress levels and staff absence.

Whilst some staff members felt that PIEs allowed them to move away from traditional targets and work more flexibly and creatively with service users, others noted the difficulty in

needing to meet targets set by individuals outside of their organisation. Keats et al. (2012) acknowledged that services would need to demonstrate what difference a PIE was making, in terms of reduced evictions for example. However, the service user outcomes that were most salient in the review related to concepts that are more difficult to measure including quality of relationships and increased service user involvement.

The role of strong leadership is key in managing this conflict or targets versus values. Those staff members who felt that they worked in a supportive environment were the same ones who reported that their managers were fully invested in the principles of a PIE and supportive of reflective practice. Scanlon and Adlam (2012) explained that creating a successful PIE was reliant on an organisation's ability to implement structures that supported the development of reflective practice and the ongoing development of its staff team. Homeless Link (2017) emphasized the importance of training all staff, both front-line and management, in the chosen psychological framework and ensuring that reflective practice was available to all, with an external facilitator if possible.

Strengths and Limitations

As there is no one prescribed way of creating a PIE it is very difficult to draw comparisons across evaluations, yet many clear, overlapping themes emerged from the synthesis. The homelessness sector is very diverse, and each organisation may implement a PIE differently, from the psychological frameworks chosen, the training provided to staff, how they run reflective practice or the type of physical environment they provide. This diversity is reflected in the range of outcomes measured by services.

The search in this systematic review was as broad and thorough as possible to ensure that all existing data was included in the synthesis. The inclusion of grey literature in the review meant that not all included papers detailed a rigorous methodology or were high quality, but due to the

dearth of research in this area all findings were considered valuable. The first author was also solely responsible for all three stages of thematic synthesis. The review may have benefitted from further discussion of derived themes with the research supervisor, to improve reliability.

One must consider whether there are services who would meet the requirements to be considered a PIE but may not recognise themselves as such and thus would have been excluded in this review. Many services consider themselves as 'trauma-informed' and the trauma informed approach has many similarities with PIE. Some papers captured in the searches seemed to describe trauma informed settings that could be considered a PIE but were not included unless they explicitly stated that they were. Cockersell (2016) noted this difficulty in evaluating PIE research when he questioned whether a service could be considered a PIE if it implemented only two or three of the key aspects and queried at what point a service could be considered a PIE after initial implementation.

A shortcoming of this review was that it was not able to consider service user perspective of PIEs. Initial scoping searches revealed that there are even fewer papers that attempt to gain an understanding of service user outcomes from a service user perspective. Improvements for service users was at the forefront of PIE thinking from its origination but, as yet this has not translated into the evidence base. Walton and Walton (2012) noted that data on the impact on service users, even in terms of their stories, was missing from the early evaluations and it seems that little has changed in this area. The lack of service user voice in the research potentially reflects the transient nature of this group and the difficulties in engaging complex and vulnerable people in research.

Implications for Clinical Practice

The evidence presented in this review suggests that, where fully supported at an organisational level, psychologically informed environments are seen as supportive, nurturing environments for

staff members who are working within a complex system. However, as an approach that takes many years to implement it remains to be seen how PIEs can be sustained within a context of often time and financially limited procuring of services to support people with experiences of homelessness.

The length of time needed to fully establish a PIE may be a contributing factor to the shortage of research in this area. As PIE continues to gather momentum and an increasing number of services come under the PIE umbrella, the potential for more formal research opportunities may present themselves.

Conclusion

This paper is the first systematic review and synthesis of the evidence pertaining to staff experiences of working in psychologically informed environments. Whilst staff tended to view PIEs as a nurturing and supportive space for both themselves and the clients they served, there was recognition that delivery of PIEs was hindered by organisational constraints and limited resources. As PIEs continue to gain prominence in the homeless sector more robust research is needed to expand the evidence base, especially in terms of service user experience where voices are still not being heard.

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Recalled Early Adversity and Post Traumatic Stress Disorder in a Youth Homeless Population

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Abstract

The relationship between childhood adversity and poor mental health outcomes is well documented, but far less is known about the relationship between adversity and post-traumatic stress symptoms in the young homeless population, a group that is particularly vulnerable to histories of abuse and household dysfunction. Homeless youth have rates of PTSD that are far higher than the general population and more vulnerable to associated outcomes such as suicidal ideation, substance abuse and suicidality.

This study built on previous research using the same dataset, which had noted a high incidence rate of maltreatment, as well as high rates of loneliness and low rates of self-mastery among those who scored highly on a measure of PTSD symptoms. The aims of this study were to explore the relationships between specific types of childhood adversity and PTSD symptoms, both considering types of adversity individually and grouped into childhood maltreatment and household dysfunction. This study also set out to examine whether loneliness and self-mastery would have a moderating effect on the relationship between childhood adversity and PTSD symptoms.

A final sample of 84 participants, extracted from an archival dataset, was used. Participants took part in a semi-structured interview that asked about experiences of abuse and included measures of PTSD symptoms (IES-R), loneliness (UCLA) and self-mastery (Pearlin's self-mastery scale). A significant positive correlation was found between number of categories of adversity reported and scores on the IES-R, with each additional category of adversity predicting an approximately 3-point increase in IES-R score. A hierarchical regression identified that PTSD symptom severity was best predicted by the experience of sexual abuse. A moderation analysis was conducted to explore the moderating effects of self-mastery and loneliness on the relationship between ACEs and PTSD but was underpowered to detect any significant effect.

Being able to identify those most at risk of developing post-traumatic stress symptoms could inform the use of targeted trauma interventions in this population.

Introduction

From 2020-2021 there were 13,161 households assessed as homeless in Wales, an increase of 6% on the previous year (Welsh Government, 2021). Of these, 65% were helped to secure accommodation for at least 6 months, but at the end of March 2021 there were 3,729 households in temporary accommodation, the highest figure since 2015 (Welsh Government, 2021). The Covid-19 pandemic saw a significant increase in the numbers of households temporarily housed in bed and breakfasts and a slight decrease in the use of hostels and refuges (Welsh Government, 2020). The Guardian reported on January 9th 2021, that between April and November 2020, an additional 70,000 households were made homeless in the UK due to the pandemic. In the year 2017-2018, 3,153 people between the ages of 16-24 years were considered homeless (i.e.: having no accommodation that they had a right to occupy) in Wales (Wales Audit Office, 2019) and in 2020 the Welsh government committed £3.7 million to tackling youth homelessness.

Studies estimate between 48% and 98% of young homeless people meet the diagnostic criteria for at least one psychiatric disorder, with psychopathology being both a cause and an effect of homelessness (Hodgson *et al.*, 2014). Young people may leave, or be forced out of home, for several reasons but evidence shows that in the majority of cases they have experienced one, if not multiple types of adversity. Abuse by parents is one of the most cited reasons for young people leaving home, with estimates ranging from between 50% to 83% having experienced physical or sexual abuse at the hands of a parent (Ferguson, 2009).

At least half of the youth homeless population have experienced abuse as a child (Kim et al., 2018), with some studies estimating that as many as 98% have had one Adverse Childhood Experience (ACE), and 50-77% reporting four or more (Edalati et al., 2017; Dawson-Rose et al., 2019) compared to 13% in the general adult population (Hughes et al*.,* 2017). Felitti et al. (1998) divided ACEs into seven categories and found that for each additional category of abuse experienced the

risk for substance abuse, mental health problems and suicide increased, with those who had experienced four or more having a 4- to 12- fold increase in health risks. In an early study of ACEs in a large general population sample, more than half of respondents had experienced one category of abuse and 6.2% reported more than four. A similar cumulative effect has been demonstrated for ACEs in the homeless population, with a significant effect found for the impact of cumulative adverse experiences on criminal justice involvement; victimisation once homeless and psychological symptoms (Bender et al., 2015; Edalati et al., 2017; Higgins & McCabe, 2001). The effects of ACEs are not thought to be equivalent, with sexual abuse and co-occurring abuse potentially having a stronger association with poor mental health outcomes (Negriff, 2020).

Some authors have grouped ACEs into childhood maltreatment and household dysfunction (Higgins & McCabe, 2003; Ryan et al., 2020). Maltreatment consists of physical, emotional and sexual abuse, and neglect. Household dysfunction includes experiences such as parental incarceration, witnessing domestic violence and parental substance abuse (Negriff, 2020). Though research has demonstrated the cumulative effects of ACEs on outcomes such as depression, mood and anxiety, there is a lack of consensus about a cut-off score for ACEs, as to use one assumes an equivalence between categories of abuse (Negriff, 2020). Childhood maltreatment has been shown to be a stronger predictor of psychopathology, whereas household dysfunction was a better predictor of adjustment problems, such as behavioural issues, aggression, and difficulties in relationships (Higgins & McCabe, 2003). There was significant overlap between the adversities that make up maltreatment variables and these were also significantly predicted by household dysfunction variables (Higgins & McCabe, 2003).

For each additional type of abuse experienced in childhood the odds of meeting the criteria for a Post-Traumatic Stress Disorder (PTSD) diagnosis have been found to double (Bender et al., 2015). PTSD is defined by the DSM-5 (APA, 2013) as symptoms that develop following exposure to

one or more traumatic events. Most people who are exposed to a trauma will recover over time, but a sizable minority will go on to develop PTSD (Foa et al., 2004). The disorder is characterised by intrusions; either by means of recurrent, distressing memories, nightmares or re-experiencing, hypervigilance, and avoidance. To escape painful reminders of the traumatic event people may avoid any reminders of their trauma or attempt to numb emotional responses with alcohol or other substances. People with PTSD may isolate themselves from others, detach from activities and experience persistent low mood or a negative emotional state. Experiencing an adverse event in childhood increases vulnerability to PTSD, through heightened emotional and physiological reactivity to subsequent adverse experiences, especially in the presence of other psychological disorders following exposure to earlier events (McLaughlin et al., 2013; Nooner et al., 2012).

Experiencing multiple ACEs has also been shown to be a factor in developing complex PTSD (CPTSD; Hyland et al., 2017a) which was added to the 11th International Classification of Diseases (ICD-11) as a trauma response that is related to, but distinct from, PTSD in that the traumas preceding CPTSD tend to be repeated, prolonged experiences often perpetrated in childhood by someone known to the child. Complex PTSD is associated with emotion regulation difficulties, risky behaviours such as drug or alcohol use and difficulties with anger and aggression (Cloitre et al., 2009). The finding that multiple exposures to abuse were more likely to lead to a CTPSD profile did not hold true when ACEs were reduced to a categorical variable (Hyland et al., 2017b). One would expect that young homeless people would be more vulnerable to CPTSD considering the evidence base that they have often experienced multiple forms of abuse, however, as yet no research exists distinguishing between the two types of PTSD in this population.

Repeated traumas lead to more complex trauma symptoms which can be more difficult to treat than discrete traumas. A study by van der Kolk et al (2007) found that adults with PTSD that resulted from childhood trauma required more sessions of Eye Movement Desensitisation and

Reprocessing (EMDR) therapy and were less likely at 6-month follow up to be symptom free compared to an adult-onset group (33% compared to 75%). A potential explanation for this is that a higher number of traumatic events earlier in life can lead to attachment disorders, psychological defences and dissociation into different parts of personality (Knipe, 2014). Whereas EMDR therapy for a single trauma can target one dysfunctionally stored memory, therapy for multiple traumas must also target pathological defences and avoidance that result from years of repeated exposure. The Adaptive Information Processing (AIP) model, which is the foundation of EMDR, builds on the cognitive theory of how trauma shatters one's assumptions about the world being a just and safe place, by acknowledging that the experience of abuse in childhood is also intrinsically linked to shame. Children raised in abusive households may display defensive shame, where they develop the belief that they must be bad children to be abused or neglected and become highly self-critical, whilst being unable to acknowledge the reality of their environment (Knipe, 2014).

Emotional Processing theory posits that PTSD is the result of a person developing a pathological fear structure following a traumatic event (Foa et al, 2004). When faced with an event perceived as genuinely dangerous this is stored within the memory network as a template for how to respond in the future when faced with a threat. Those with more rigidly held beliefs appear to be more vulnerable to developing PTSD (Brewin & Holmes, 2003), especially in terms of beliefs about the self and the world- a traumatic event either challenges or confirms these beliefs. Ehlers & Clark (2000) also emphasized that appraisals made at the time of the event, often related to how they behaved at that time, are key in maintaining distress. Thus, a person abused or neglected in childhood may be more likely to attribute subsequent traumas to some inherent shortcoming or see it as further confirmation that the world is an unsafe place.

Homelessness is itself traumatic and carries with it the additional risk of further trauma through victimisation once homeless, as young people are vulnerable to further abuse or

exploitation (Kim et al., 2018; Edalati et al., 2017). Several studies have examined the prevalence of PTSD in the youth homeless population, with estimates varying from 27.38% to 80% (Ayano et al., 2020; Dawson-Rose et al., 2019). This variation may be explained by differences in assessment tools, sample sizes and study designs. Multiple abuses in childhood, coupled with victimisation once homeless, is a strong predictor of PTSD symptoms (Bender et al., 2010; Bender et al., 2014a; Kim et al., 2018; Whitbeck et al., 2007). Experiencing sexual abuse in childhood, combined with other forms of abuse, leads to significantly higher PTSD symptoms than multiple abuses in the absence of sexual abuse, suggesting that there is something uniquely traumatising about the experience of sexual abuse (Ryan et al., 2000; Wong et al., 2016). Childhood sexual abuse also increases the risk of developing CPTSD (Hyland et al, 2017a). Experiencing symptoms of PTSD is highly correlated with substance misuse, suicidal ideation, and suicidality (Ayano et al., 2020; Dawson-Rose et al., 2020; DiGuiseppi et al., 2020).

Not all young homeless people who have experienced early adversity will develop symptoms of PTSD. Bender et al. (2010) estimated that a third of homeless young adults had experienced abuse but did not meet the threshold for a diagnosis. Those with increased resilience factors such as self-efficacy, social support and emotional safety are less likely to struggle with the detrimental effects of traumatic life events (Durbin et al., 2019; Ferguson, et al., 2011; Kim et al., 2019). Those with higher resilience are less vulnerable to poor mental health and that resilience is developed through community participation, social support and financial security. For adults with four or more ACEs, the prevalence of mental illness is more than halved when they have these resilience resources (Bellis et al., 2018; Hughes et al., 2018). One must consider what resilience resources young homeless people might have, when they often have little social support and no financial security. Their community, if any, is likely to consist of other young people in a similar situation to themselves. Despite a wealth of research demonstrating links between childhood adversity and poor mental

health outcomes, only a handful of studies exist regarding the effect of known resilience factors for this population, all of which are cross-sectional or qualitative studies that were unable to comment on causality.

Serious physical and mental health issues can be exacerbated by the social isolation and loneliness experienced by those who are homeless (Bower et al., 2018). Loneliness in homeless youth is significantly predicted by childhood neglect, low self-esteem and low levels of social involvement (Kidd & Shahar, 2008). Standardised measures of loneliness are not a good fit for this population, who may experience loneliness differently to those who are housed, thus findings should be treated with caution (Bower et al., 2021). Young people have usually faced rejection from their families and continue to be rejected by others in society once they become homeless, meaning that loneliness may both precede, and be a feature of, homelessness. The direction of relationship between loneliness, trauma and mental health outcomes in this population is yet to be explored. People who are homeless often lack companionship and have precarious and changeable relationships with others who are homeless (Bower et al., 2018; Santos, 2018). Neale and Brown (2016) found that although homeless people's friendship networks were small these provided emotional and practical support and the young people desired regular and consistent contact.

Young homeless people may lack a sense of belonging and identity as well as a profound sense of loneliness (Santos, 2018). Rejection and stigmatisation by both their own families and wider society, could potentially mean that loneliness is something experienced by the homeless population, who are seen as 'other' and occupy a space that is designed to keep them out; with many local authorities creating hostile environments with move-on policies and anti-homeless benches. With little sense of belonging, other than in services that provide short term accommodation such as hostels, it is unsurprising that many homeless people find companionship among their peers and can be reluctant to accept support with housing as this would mean losing

their community (Santos, 2018). Social connectedness and connection with friends, family or partners is associated with lower risk of developing PTSD (Besser et al., 2014; Kim et al., 2018).

Alternatively, some young homeless people have been seen to be purposely distancing themselves from social interaction, perhaps as part of a strategy of self-preservation by keeping themselves distant from risky situations, especially when considering that they live with constant threats to their personal safety and resources (Stefancic, 2015). The evolutionary theory of loneliness posits that where relationships threaten the likelihood of survival, potentially through increased conflict or competition for resources then they can quickly become hostile, and people are more likely to become motivated by self-preservation rather than engage in mutually beneficial behaviours (Cacioppo & Cacioppo, 2018). There is also a concern that whereas some relationships with peers can provide support and safety, others may expose homeless youth to risky behaviours such as substance misuse (Bender et al., 2007; Kim et al., 2018).

Traditionally, services for homeless people enforced rigid rules and routines that afforded them little input into decision making, and those who are unable to comply often moved between services leaving little opportunity to develop feelings of mastery. Self-mastery is defined as "the extent to which one regards one's life-chances as being under one's own control in contrast to being fatalistically ruled" (Pearlin & Schooler, 1978, p.5). Mastery is having a sense of personal control and responsibility regarding one's life and is a known predictor of psychological wellbeing (Conger et al., 2009; Rutenfrans-Stupar et al., 2020). Manning and Greenwood (2019) demonstrated that personal mastery had a significant direct negative effect on psychiatric symptoms, acting as a mediator on the relationship of personal choice, meaning that increased choice and a sense of personal mastery had a significant impact on recovery from mental health problems. Self-mastery is also related to optimism, quality of life and social participation in an apparently circular relationship, with self-mastery acting as a mediator (Rutenfrans-Stupar et al., 2020). Experiences that build self-mastery

lead to increased feelings of self-efficacy, or belief in one's ability to achieve goals (Bandura, 1997). As yet, no research exists that explores the relationship of trauma to mastery, and whether mastery could be considered a resilience factor against PTSD. However, traumatised adolescents with PTSD have been shown to have significantly lower levels of self-efficacy and social connectedness than those who have been traumatised but do not experience post traumatic symptoms (Bender et al., 2010; Benight & Bandura, 2004; Kim et al., 2018; Saigh et al., 1995). As self-mastery and loneliness are similar concepts to self-efficacy and social connectedness, it is worth exploring how they may act as vulnerability or resilience factors.

The long-lasting detrimental effects of trauma are well documented in the literature, both in terms of mental health and physical health outcomes. Physical and emotional abuse are known risk factors for poor mental health outcomes. Living in environments with domestic abuse and substance misuse are also negatively associated with mental health outcomes such as depression, anxiety or other mood disorders (McManus & Thompson, 2008). Young homeless people with a history of adverse childhood experiences are more vulnerable to victimisation once homeless, higher rates of alcohol and substance dependence and have more criminal justice involvement (Bender et al, 2010; Bender et al., 2014b; Edalati et al, 2017).

A study by Hodgson et al., (2015) collected longitudinal data over three years, focusing particularly on the prevalence of psychiatric conditions in the young homeless population and the relationship between different conditions, comorbidities and health service use. Participants were divided into three clusters via cluster analysis; minimal mental health issues; mood, substance and conduct disorder; and PTSD, mood, and anxiety issues, with the intention of exploring physical and mental health outcomes for each subgroup (Hodgson et al., 2015). Those in the PTSD, mood and anxiety cluster had higher levels of past mistreatment, more comorbidities, and a higher risk of suicide. It was also noted that this group also had high levels of loneliness and low levels of self-

mastery. The use of mental health services in this sample was low in comparison to the high levels of psychiatric comorbidities, 87.7% of participants met the criteria for at least one psychiatric diagnosis but only 31.1% had accessed mental health support (Hodgson et al., 2014). Though childhood mistreatment was a feature of the PTSD cluster, this study took place before the first large scale ACEs study in Wales (Bellis, 2016) and thus childhood maltreatment was not considered nor defined in line with ACE literature. This study offered commentary on the distinguishing features of each cluster, but further analysis was needed to understand the contribution of childhood maltreatment to post traumatic symptoms.

Study Overview and Aims

This current study uses the same archival dataset as described in Hodgson et al (2014, 2015) and aims to build upon their findings by further exploring the relationship between exposure to early adverse experiences and post-traumatic stress symptoms in a sample of young people with experiences of homelessness. It also aimed to consider loneliness and self-mastery as vulnerability and resilience factors. The following hypotheses were tested:

1) Experiencing multiple categories of childhood adversity will be associated with higher levels of PTSD symptoms;
2) Experiencing sexual abuse, over and above the effect of other indices of early adversity will be associated with higher levels of PTSD symptoms;
3) Higher levels of self-mastery will moderate the effect of adverse experiences on later trauma symptoms, acting as a protective factor;
4) Higher levels of loneliness will moderate the effect of adverse experiences on later trauma symptoms, increasing vulnerability to PTSD symptoms.

Method

Data Collection and extraction

This study used pre-collected, archival data from a previous project led by the second project supervisor. After identifying participants who had completed the measures of interest, all relevant data was extracted from the original dataset in its raw form, coding and computation of variables was completed by the author of this paper.

Participants

Participants took part in the two waves of a longitudinal study examining the experiences of homeless people aged between 16 and 23 years old (mean = 17.84 years; *SD* = 1.65). Out of 116 original participants, 67 participants provided details regarding trauma symptoms at timepoint 1, with a further 17 providing this data at timepoint 2 (approximately 8 months later), forming the sample of 84 participants in this study. At recruitment, all participants were staying in temporary supported accommodation provided by a third sector organisation and were recruited via their support workers over a 12-month period. 65.5% of participants were female and 94% were white, with the further 6% being of black and minority ethnic backgrounds. Most participants in this sample had been homeless for more than one month of the previous year (mean = 208 days; *SD* = 128). For more detailed participant demographics, including information regarding features of homelessness, see table 1.

Table 1

Participant demographics

		Number (% of sample)
Gender	Male	29 (34.5%)
	Female	55 (65.5%)
Age	16-18	61 (72.6%)
	19-21	19 (22.6%)
	22-24	6 (7.1%)
Ethnicity	White	79 (94%)
	Black	2 (2.4%)
	Mixed Race	2 (2.4%)
	Asian	1 (1.2%)
Relationship status	Single	49 (58.3%)
	In long term relationship	27 (32.1%)
	Dating	8 (9.5%)
Total amount of time homeless	<30 days	3 (3.6%)
	31-180 days	27 (32.1%)
	181-364 days	23 (27.4%)
	A year or longer	31 (36.9%)
Age first without a permanent home	<10	1 (1.2%)
	11-14	6 (7.1%)
	15-18	65 (77.4%)
	>19	10 (11.9%)
	Missing	2 (2.4%)
Age when left school	10-13	5 (6%)
	14-17	71 (84.5%)
	>18	2 (2.4%)
	Missing	6 (7.1%)

Procedure

Participants took part in a structured interview that lasted approximately two hours and was conducted by researchers trained in its administration (see appendix c for a copy of the interview schedule). Participants gave informed written consent and understood that they were able to withdraw themselves or their data from the study at any time (see appendix d for consent form used). The questions were read aloud to ensure understanding and all interviews were tape recorded. Participants were permitted to request a break or to skip a question if they found them distressing. Participants received a gift voucher in return for their involvement.

Measures

The interview consisted of questions on demographic information and past experiences such as age at first time homeless, number of times homeless, who they lived with as a child, experiences at school and whether they had ever been expelled. Participants were also asked about drug and alcohol use, relationships, and their history of involvement with the criminal justice system.

Early Adversity

A variety of questions explored whether participants had a history of adverse childhood experiences. ACEs were divided into six categories, which were informed by the most categorised ACEs across multiple studies included in a systematic review (Hughes *et al.*, 2017) and coded by the first author. These categories were physical abuse, sexual abuse, emotional abuse, household substance abuse, household mental illness and neglect. The three other most common categorisations are exposure to domestic violence, parental separation or divorce and household criminality. Domestic violence was not asked about during the first timepoint of this study and data regarding household criminality was not available. Though participants were asked who they had mainly lived with as a child, they were not explicitly asked about parental separation, so this category was not coded. Some ACEs, such as sexual abuse, were covered by just one question (*were you ever sexually abused?)* whereas others were assessed via a range of questions, such as neglect (*did you ever feel ignored at home? Did you have enough to eat? Did you ever feel your needs were neglected?).* (For a full description of each question used in determining ACEs, see appendix e)

Post-Traumatic Stress Disorder

Post-traumatic stress disorder was measured using the Impact of Events Scale Revised (IES-R; Weiss & Marmar, 1997). The IES-R is a 27-item questionnaire that asks respondents to first disclose the most stressful event they have ever experienced then rate their level of distress in the previous week based across three subscales: intrusion, avoidance and hyperarousal. The subscales are

measured by 22 Likert-scale items which are then totalled, with a score of 33 or above are considered to be indicative of a diagnosis of PTSD. The IES-R is a standardised measure with good internal reliability (α = 0.81). Despite not being designed as a diagnostic tool, it has been demonstrated that it can discriminate between someone having PTSD or not (Beck et al, 2008). A study by Creamer et al. (2003) reported that a score of 33 or above gave a diagnostic specificity of 0.82 and a sensitivity of 0.91, whereas Cloitre et al. (2018) reported figures of 72% specificity 80% sensitivity, both suggesting that the IES-R is a reliable screening tool.

Loneliness

Loneliness was measured using the UCLA loneliness scale (Version 3; Russell, 1996). This is a 20-item scale that measures respondents' feelings of loneliness and social isolation. Participants are asked to rate each item from 1 (never) to 4 (often) giving a total score between 0 and 60. A higher score is indicative of a greater degree of loneliness or isolation. Some standardised measures of loneliness may not be appropriate for homeless populations as they fail to encompass the multidimensional nature of loneliness for young homeless people (Bower et al., 2021). Scales that ask about family and intimate relationships might not be a good fit for young people for whom family relationships are strained or not a priority. The UCLA was identified as a suitable measure due to its lack of specific questions around family or intimate relationships, instead using broader statements such as 'I lack companionship', 'I feel completely alone'. The UCLA scale had a high level of internal consistency (α = 0.81).

Self-mastery

Pearlin's Self-Mastery Scale was used to measure participants' sense of self-mastery (Pearlin & Schooler, 1978). This is a 7-item questionnaire that asks respondents to rate items from 1 (strongly disagree) to 7 (strongly agree), giving a score between 7 and 35. Higher scores imply a greater sense of self-mastery. This scale had an acceptable level of internal consistency (α = 0.72).

Ethical Considerations

Ethical approval for this study was granted by the School of Medicine Research Ethics Committee at Cardiff University (Ref: EC.12.12.04.3381RA3). As this study uses archival data, research questions were developed based on knowledge of the interview schedule and past research published regarding the same dataset. A proposal was registered before access to the dataset was granted, to ensure that hypotheses were not developed after the data was explored (known as p-hacking) (Heng et al. 2018).

Data Analysis

Data analysis was conducted using IBM SPSS software version 27.0, (IBM corp., 2022). ACE variables were created with participants scored as either having experienced a category of ACE or not, giving a score of 1 or 0. A cumulative score was given for each category of ACE experienced (range 0-6). Odds ratios were also calculated for the effect of each type of ACE on IES-R scores. Two further variables were created for domain of ACE, with participants again scoring a 0 or a 1 depending on if they had experienced childhood maltreatment or household dysfunction. Scores on the IES-R influenced two variables; a continuous sum score and a dichotomous variable giving a yes/no response on whether they met the clinical cut-off indicative of a diagnosis of PTSD. The relationship between categories of childhood adversity and PTSD symptoms were explored using a correlational analysis. The predictive capability of each domain of adversity, with sexual abuse treated as a separate variable, was explored with a standard multiple regression analysis. The outcome of the multiple regression informed the entry of the same variables into a hierarchical multiple regression model. Self-mastery and loneliness were treated as scale variables and entered into a correlational analysis with IES-R score, the dichotomous PTSD cut off variable and each type of adversity. A moderation analysis was conducted using SPSS PROCESS macro version 4 (Hayes, 2021). As the study used archival data, a post-hoc power analysis for linear multiple regression was computed, using

G*Power (Faul et al, 2009) for a sample size of 84 with three predictors, giving a result of 84% powered to detect medium effects (see appendix f for G*power calculations).

Results

Descriptive statistics were used to calculate the frequency of each category of adverse childhood experience (ACE; table 2) and the number of ACE categories experienced by participants (figure 1). The median number of ACEs was 4, with 94% of the sample reporting at least one ACE and 51.2% of the sample having experienced four or more ACEs. The mean score on the IES-R was 44.54 (*SD* 17.04*),* with 59 (70.2%) of participants scoring over the clinical cut off score of 33. (All raw data outputs can be found in appendix g).

Table 2

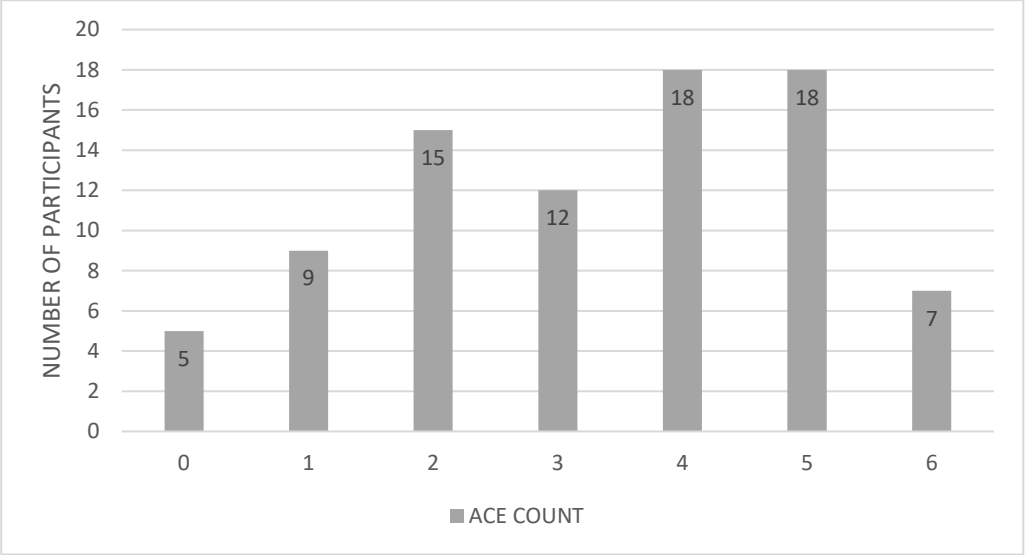
Number and proportion of participants experiencing each category of ACE

	Number of participants (%)
Sexual	14 (17%)
Physical	47 (56%)
Emotional	58 (69%)
Neglect	67 (80%)
Household Substance Abuse	44 (52%)
Household Mental Health	48 (57%)

ACE scores indicated that a high number of participants had experienced neglect (n=67, 80%) and/or emotional abuse (n=58, 69%). 56% of the sample had experienced physical abuse (n=47) and 17% of the sample had experienced sexual abuse (n=14). Having someone with a substance abuse problem in their household was reported by 52% of participants (n=44) and 57% had a household member with a serious psychological problem (n=48).

Figure 1

Total number of ACE categories experienced by participants



Correlational analyses examined the relationships between categories of ACE (table 3) using a Pearson's correlational analysis. There were positive correlations between emotional abuse and physical abuse in childhood, $r = 0.43$, $p < 0.01$. Emotional abuse was also associated with neglect, $r = 0.61$, $p < 0.01$. Neglect and physical abuse were also correlated, $r = 0.31$, $p < 0.01$. Household mental health difficulties and household substance abuse were correlated, $r = 0.48$, $p < 0.01$.

Table 3

Inter-correlations between different categories of Adverse Childhood Experiences.

	ACE	1	2	3	4	5	6
1	Physical Abuse	-					
2	Sexual Abuse	0.20	-				
3	Emotional Abuse	0.43**	0.15	-			
4	Neglect	0.31**	0.15	0.61**	-		
5	Household Mental Health problems	0.14	0.08	0.20	0.20	-	
6	Household Substance Abuse	0.15	0.22	0.20	0.16	0.48**	-
	Mean	0.57	0.17	0.70	0.80	0.56	0.60
	(SD)	*(0.50)*	*(0.38)*	*(0.46)*	*(0.40)*	*(0.50)*	*(0.49)*

N= 84, Note: ** $p < 0.01$

ACES and PTSD symptoms

Of the 59 participants who met the clinical cut off on the IES-R, indicative of a diagnosis of PTSD, 97% had experienced at least one category of ACE (n=57). Over half of the sample who met the threshold suggestive of PTSD had experienced four or more ACEs (n=36, 61%). Table 4 provides frequency information for participants who met the threshold indicative of a PTSD diagnosis and the number of ACE categories they reported.

Table 4

PTSD threshold met by total number of ACE categories reported

		MET THRESHOLD INDICATING PTSD N (%)
ACE COUNT	0	2 (3.4%)
	1	7 (11.9%)
	2	7 (11.9%)
	3	7 (11.9%)
	4	13 (22%)
	5	17 (28.8%)
	6	6 (10.1%)

Correlational analyses examined the relationship between categories of ACE and total number of ACEs with PTSD variables (IES-R total score and PTSD clinical cut off). Sexual abuse and household mental health problems were the only variables that were significantly correlated with both IES-R score and the meeting the clinical cut off suggestive of PTSD. Physical abuse was also correlated with meeting the clinical cut off, $r = 0.27$, $p < 0.05$. (See table 5)

Table 5

Inter-correlations between categories of Adverse Childhood Experiences and PTSD symptoms

ACE	IES-R score	PTSD threshold met
Physical Abuse	0.18	0.27*
Sexual Abuse	0.28*	0.23*
Emotional Abuse	0.21	0.14
Neglect	0.16	0.13
Household Mental Health	0.26*	0.23*
Household Substance Abuse	0.21	0.21

N= 84, Note: * $p < 0.05$

A cross tabulation gave odds ratios for a meeting diagnostic cut off for each type of ACE (see table 6). Sexual abuse was associated with the highest risk of meeting the IES-R clinical threshold, with an OR of 6.795 [CI .836-55.246]. The odds ratio for meeting the cut off score commensurate with a diagnosis of PTSD in those who had experienced physical abuse was 3.378 [CI 1.268-8.998]. Emotional abuse and neglect were associated with similar levels of risk, with Odds ratios of 1.911 [.708-5.158] and 1.906 [.630-5.763] respectively. Household dysfunction variables, household substance abuse and household mental health problems, were associated with a higher risk of meeting clinical cut off, with Odds ratios of 2.478 [CI .945-6.500] and 2.684 [CI 1.010-7.134].

Table 6

Odds Ratios for meeting cut off indicative of PTSD by type of ACE

Variable	OR	CI (95%)
Sexual Abuse	6.795	[.836 - 55.246]
Physical Abuse	3.378	[1.268 - 8.998]
Emotional Abuse	1.911	[.708 - 5.158]
Neglect	1.906	[.630 - 5.763]
Household Substance Abuse	2.478	[.945 - 6.500]
Household mental health problems	2.684	[1.010 - 7.134]

A linear regression showed that total number of ACEs predicted scores on the IES-R, with more ACEs predicting a higher score (see table 7). The data met all assumptions; there was an independence of residuals, homoscedasticity and the residuals were normally distributed. Total number of ACEs accounted for 9.1% of the variation in IES-R scores, with an adjusted R^2 of 8.0%. The total number of ACEs significantly predicted IES-R scores, $F(1,82) = 8.20$, $p = 0.05$. The slope coefficient was significant, suggesting that each additional ACE experienced predicted an increase of approximately 3.019 points on the IES-R.

Table 7

Binomial linear regression analysis of total ACES and IES-R score

Variable	Beta	95% CI	β	T	Sig.
Total number of ACEs	3.019	[0.921, 5.117]	.301	2.863	.005

$R^2 = 0.091$; (N= 84, $p = 0.005$)

The effect of sexual abuse

A multiple linear regression was used to explore the relationship between sexual abuse (IV_1), childhood maltreatment in the absence of sexual abuse (IV_2) and household dysfunction (IV_3) and IES-R scores (see table 8). A significant regression equation was found ($F(3,74) = 5.715$, $p = 0.001$), with an R^2 of .188. Participants predicted IES-R score increased by 10.90 points where they had experienced sexual abuse, 2.53 for each category reported in the childhood maltreatment domain and 4.09 for each category in the household dysfunction domain, where sexual abuse is coded as 1 = yes, 0 = no, and the other variables are measured as number of ACEs in those domains. Only the experience of sexual abuse was a significant predictor of IES-R score.

Table 8

Standard Multiple Regression of childhood adversity domains on IES-R score

Variable	Beta	95% CI	β	T	Sig.
(Constant)	31.679	[23.566, 39.792]		7.780	<.001
Childhood maltreatment	2.529	[-.904, 5.962]	.162	1.468	.146
Household dysfunction	4.096	[-.222, 8.414]	.208	1.890	.063
Sexual Abuse	10.895	[1.589, 20.200]	.252	2.333	.022

Note. $R^2 = 0.188$ (N = 84, $p = 0.05$)

A hierarchical linear regression was used to explore the model fit further (see table 9 for full details on each of the regression models). The IES-R score remained as the dependent variable and sexual abuse was entered into the first model, household dysfunction into the second and childhood maltreatment into the third. The results of the first model were statistically significant, $R^2 = .105$, $F(1,76) = 8.926$ ($p = 0.004$) showing that the experience of sexual abuse significantly predicted higher IES-R scores. The addition of household dysfunction to the prediction of IES-R (model 2) led to a statistically significant increase in R^2 of 0.059 $F(1,75) = 5.327$, ($p = 0.24$). The addition of childhood maltreatment did not lead to a significant increase in predictive ability. The full model of sexual abuse, household dysfunction and childhood maltreatment to predict IES-R score was statistically significant $R^2 = .188$, $F(3,74) = 5.715$, ($p = 0.001$), adjusted $R^2 = 0.155$.

Table 9

Hierarchical regression models predicting IES-R score on adversity variables

Variable	Beta	Std. Error	β	T	Sig.	CI (95%)
Model 1						
Sexual Abuse	14.007	4.688	.324	2.988	.004	[4.670-23.344]
Model 2						
Constant	35.886	2.914		12.314	<.001	[30.081-41.692]
Household dysfunction	4.883	2.116	.248	2.308	.024	[.668- 9.098]
Model 3						
Constant	31.679	4.072		7.780	<.001	[23.566-39.792]
Childhood Maltreatment	2.529	1.723	.162	1.468	.146	[-.904-5.962]

R^2 = 0.105 for model 1 (p <.01); ΔR^2 = .142 for model 2 (p <.05)

Loneliness and self-mastery

A further correlational analysis explored the relationships between adversity, PTSD symptoms and self-mastery and loneliness (see table 10). Emotional abuse and neglect were associated with lower levels of self-mastery. Emotional abuse, household mental health problems and household substance abuse were associated with higher levels of loneliness. Low levels of self-mastery were associated with high levels of loneliness.

Table 10

Inter-correlations between categories of Adverse Childhood Experiences, PTSD symptoms, mastery and loneliness

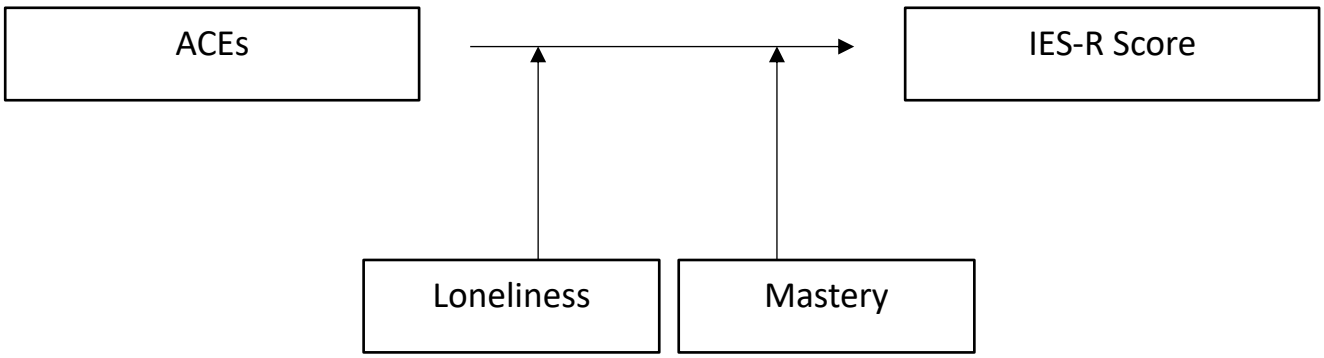
ACE	IES-R score	PTSD threshold met	Self-mastery	Loneliness
Physical Abuse	0.18	0.27*	0.06	0.11
Sexual Abuse	0.28*	0.23*	0.10	0.004
Emotional Abuse	0.21	0.14	-0.32**	0.24*
Neglect	0.16	0.13	-0.24*	0.18
Household Mental Health	0.26*	0.23*	-0.12	0.23*
Household Substance Abuse	0.21	0.21	-0.09	0.25*
Self-mastery	-0.16	-0.05	-	-0.51**
Loneliness	0.20	0.13	-	-

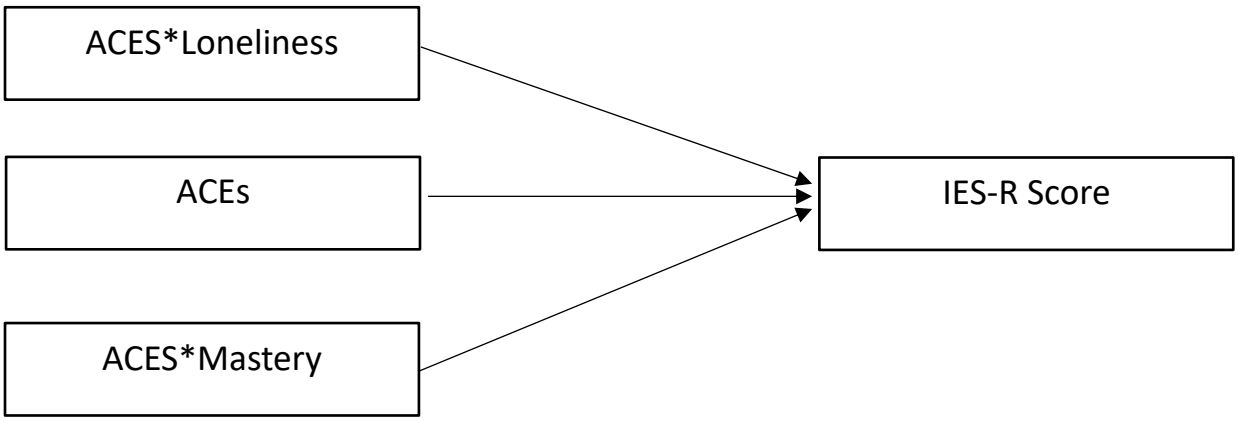
N= 84, Note: * $p < 0.05$, ** $p < 0.01$

We hypothesized that loneliness and self-mastery would have a moderating effect on the relationship between childhood adversities and IES-R score, with self-mastery acting as a resilience factor and loneliness making people more vulnerable to trauma symptoms. The moderation analysis was run using SPSS PROCESS macro version 4 (Hayes, 2021). The outcome variable was IES-R score with number of accumulative ACE score as the predictor variable. Loneliness and self-mastery scores were entered into the same model (model 2) as moderators (see figure 2).

Figure 2

Conceptual and statistical moderation models on the relationship between adversity and IES-R score





The interaction between ACEs and loneliness was not found to be significant *B* = 0.15, 95% CI (-.07, .38) p > 0.05, nor was the interaction effect of ACEs and mastery, *B* = 0.10, 95% CI (-.53, .74) p > 0.05 (for full results see table 11). These findings are possibly due to the analysis being underpowered. A G*power calculation showed that the required amount of participants for a moderation analysis with two moderators is 119.

Table 11

Moderation analysis results of loneliness and mastery scores acting as moderators on the effect of accumulative ACE scores on the IES-R

	B (SE)	**CI**	**t**	**P**
ACEs	6.20 (10.72)	(-27.53, 15.13)	-.58	.56
Loneliness	.29 (.39)	(-1.07, .49)	-.74	.46
Mastery	.61 (1.28)	(-3.15, 1.93)	-.48	.63
Interaction 1: ACEs and loneliness	.15 (.11)	(-.07, .38)	1.38	.17
Interaction 2: ACEs and mastery	.10 (.32)	(-.53, .74)	.32	.75

Discussion

This study set out to explore the relationship between recalled early adverse childhood experiences and post-traumatic stress symptoms, in a youth homeless population. It planned to consider the unique role that sexual abuse has in the development of trauma symptoms, over and above the effects of other types of adversity. It had also intended to explore the effect of self-mastery and loneliness as moderators on the relationship between adverse childhood experiences and post-traumatic symptoms.

Perhaps unsurprisingly, there was a high number of childhood adversities reported by participants in this sample, with 94% experiencing at least one type of ACE. This is similar to findings by Edalati et al. (2017) who estimated that 98% of young homeless people had experienced at least one ACE, compared to approximately 50-66% of the general population (Campbell *et al*, 2016; Felitti *et al*, 1998). Around half the sample (51%) had experienced four or more ACEs, in line with Dawson-Rose's estimate that 50-77% of the youth homeless population had four or more ACEs. The most frequently reported ACE was neglect, which has previously been shown to be a significant predictor of loneliness (Kidd & Shahar, 2008).

A binomial linear regression showed a significant positive correlation between the number of ACEs reported and participants score on the IES-R measure of PTSD symptoms. For each category of ACE experienced, the IES-R score was predicted to increase by 3.02 points, meaning that we would expect that participants reporting high numbers of adverse experiences would also report a high level of trauma symptoms. The presence of one ACE was not a sensitive predictor of PTSD, as 85% of participants who met the threshold indicative of PTSD had two or more ACEs. Physical abuse, sexual abuse and household mental health problems were all correlated with the likelihood of meeting the clinical cut off score of 33 suggestive of a diagnosis of PTSD on the IES-R, replicating

previous findings that these types of adversity contributed significantly to the development of later mental health problems (Ryan et al., 2000; Wong et al., 2016).

Correlational analyses provided a basis for considering the ACEs in terms of domains, with the childhood maltreatment categories being correlated and the household dysfunction categories being correlated. These were entered into a standard multiple regression and past research informed the decision to enter sexual abuse as a separate variable. The regression analyses found that sexual abuse significantly predicted higher scores on the IES-R, suggesting that the experience of sexual abuse is related to experiencing more trauma symptoms than other forms of childhood maltreatment or household dysfunction. This is consistent with the finding by Wong *et al*. (2016) that sexual abuse has a more detrimental effect on mental health than a combination of other abuses in the absence of sexual abuse. Though not significant, household dysfunction predicted more of an increase in IES-R scores than childhood maltreatment, which contrasts with previous findings (Negriff, 2020; Ryan *et al;* 2000). This is perhaps explained by the use of sexual abuse as a separate variable; were sexual abuse included under childhood maltreatment we would expect to see a greater effect. It is important to note that the regression analyses did not meet assumptions for linearity and homoscedasticity, which is likely explained by the small sample size.

Both categories of household dysfunction were correlated with high levels of loneliness. Emotional abuse was significantly correlated with low levels of self-mastery and high levels of loneliness suggesting a potential relationship between emotional abuse and low self-esteem, which has been shown to be a predictor of loneliness. Kidd & Shahar (2008) found a relationship between neglect, self-esteem, and loneliness but more is research is needed to understand the complexities of this relationship, and perhaps to further unpick overlapping features of neglect and emotional abuse. High levels of loneliness were also correlated with low levels of self-mastery, suggesting that participants who are feeling isolated could also be lacking in connection and activities that allow

them to build a sense of self-mastery. Contrary to findings by Manning & Greenwood (2019) correlational analyses did not suggest a relationship between self-mastery scores and IES-R scores. Withdrawal from activities because of PTSD may mean a reduction in opportunities to build self-mastery, and it has previously been demonstrated that low self-mastery has a direct negative effect on psychiatric symptoms, in what could potentially be a circular relationship. Though this finding was not indicated here, it may have been due to the relatively small sample size.

Limitations

The categorisation of ACEs in this study must be treated with caution. This study used a retrospective dataset which collected a large amount of data from a young homeless sample but was not designed with a study of ACEs in mind. Participants were also required to recall experiences from their past and no data was collected on the recency of adverse experiences, details regarding timing of ACEs and onset of mental health difficulties was not collected. Moreover, questions have been raised about the reliability and validity of retrospective accounts (Maughan & Rutter, 1997). As this study analysed cross-sectional data there is the chance that recall could have been biased by several factors including mood and symptomology on the day of assessment (Maughan & Rutter, 1997).

ACE categories were created where questions regarding experiences were asked directly and mapped onto typical measurement of ACEs (i.e.: *Were you ever sexually abused? Were you ever hit?"*). This meant that only six out of the nine most measured ACE categories (Hughes et al., 2017) were available for analysis. A standardised measure of ACEs, such as the ACE-IQ (World Health Organisation (WHO), 2018) would have provided a more robust measurement of ACEs, though this is currently only validated for participants over the age of 18. Caution is also advised when discussing the effects of individual ACE categories, as ACEs rarely occur in isolation, making it difficult to identify the contribution of each type of adversity (Higgins & McCabe, 2003; Negriff, 2020). Division

of ACEs into categories also runs the risk of being reductionist, as giving a dichotomous response tells us very little about the frequency or severity of abuse, meaning that only tentative comparisons may be made between subjects, i.e: two participants' experience of physical abuse may have been very different, yet both would be assigned the same score. Findings regarding sexual abuse should also be treated with caution. The experience of sexual abuse was covered in one dichotomous question which means that the true level of sexual abuse may be underrepresented as participants may not have been comfortable disclosing their experiences in this way. A yes/no question also meant that there was a lack of clarification about what was regarded as sexual abuse and thus may not have captured participants' experiences accurately. A previous study found that PTSD is best predicted by ACE severity rather than ACE type (Schalinski *et al.*2016), though number of types of adversity was the second most important predictor.

A lack of control group in this study means that any results are likely to be skewed, as this research concerns a high-risk population only. It would be difficult to draw comparisons to general population research due to the high number of adversities experienced by this group of people, compounded by the uniquely traumatising experience of being homeless. The sample may also not be representative of young homeless people as a population; every participant in this study was under the care of a third sector organisation who provided temporary housing so their experiences may be different to those who live on the streets or do not come into contact with support services. Receiving support from the service may act as a confounder that was not considered in the analysis. This study did not consider other confounders known to be related to poor mental health outcomes in young homeless people such as being from low-income households and impaired cognitive functioning (Fry et al., 2017). Other known protective factors could have been considered, such as the effect of supportive relationships on severity of trauma symptoms, rather than just using the measure of loneliness.

It was hoped that a moderation analysis would have provided more information regarding the potential moderating effects of loneliness and self-mastery on IES-R scores for those who had experienced adversity. However, a small sample meant that the data was underpowered, with a G*power (Faul et al., 2009) calculation giving a figure of 120 participants needed to power a moderation analysis. Using an archival dataset meant that the study could not meet all power requirements but was 84% powered to detect medium effects in a linear regression model. Youth homelessness is an under researched field, which will become more important as the number of young homeless people in the UK continues to increase year on year. Understanding how early childhood experiences impacts on this sample is crucial to the development of trauma informed services. Despite issues with power, the use of the archival dataset gave access to rich data that allowed the researcher to address key questions.

Though the IES-R has been demonstrated to be a reliable measure of PTSD (80% sensitivity, 72% specificity) it does not distinguish between PTSD and CPTSD, which was a classification introduced in the 11th revision of the International Classification of Diseases (ICD-11). A tool such as the International Trauma Questionnaire (ITQ; Cloitre *et al.*, 2018) differentiates between the two classifications and future research should consider which would be the more suitable tool in a population with such high incidence of childhood adversity. The IES-R was also used a screening tool and not designed to be a diagnostic assessment in this study, thus findings regarding meeting the PTSD clinical cut off should be treated with caution. However, the IES-R has been shown to have good sensitivity and specificity for diagnosing PTSD with a cut-off score of 23 (Mouthaan, et al., 2014) 10 points below the accepted cut-off score of 33 which was used in this study.

Implications and recommendations for future research

This study further adds to the evidence base aiming to understand the relationship between childhood adverse experience and later trauma symptoms in a youth homeless sample. The majority of participants in this study had experienced multiple ACEs and there was a much higher incidence of PTSD symptomology than in the general population. When considering that young homeless people are under-represented in mental health services this gives rise to the question of how we reach this vulnerable population with targeted trauma interventions. Many third sector services now run as psychologically informed or trauma informed environments to attempt to address the difficulty in engaging a population that is typically transient, however for those who would meet a clinical cut off suggesting a diagnosis of PTSD that may not be sufficient, and an evidence-based trauma intervention may be more appropriate. There is a dearth of research regarding trauma-informed interventions for young homeless people (Davies & Allen, 2017) and this is an area that merits further research. The findings of this study suggest that screening for the presence of past sexual abuse could alert services to the increased vulnerability to trauma symptoms and prompt robust support for these individuals.

The correlation between high levels of loneliness and low levels of self-mastery could potentially identify an area of intervention for third sector services, who could consider offering activities where young people have the opportunity to build self-mastery in a setting that also fosters social connection.

Further research is needed to explore the interaction between childhood adversity, PTSD symptoms and other risk factors such as substance abuse, suicidality and criminality, that were beyond the scope of this study, paying particular attention to the direction of relationships. Further exploration around the role of household dysfunction variables is also warranted, with household dysfunction being far higher in the young homeless sample than in the general population (Negriff,

2020). Longitudinal data could also look at trauma symptomology over time and consider whether recovery is possible while homeless people are continually re-exposed to trauma.

Conclusion

This study found that young homeless people have often experienced multiple adverse childhood events and have a higher rate of post-traumatic stress symptoms than the general population. Experiencing multiple abuses had a cumulative effect on severity of symptoms, with the experience of sexual abuse being the strongest predictor of symptom severity. Household dysfunction also predicted higher scores on the IES-R, when controlling for the effect of sexual abuse. Considering the high rates of household dysfunction reported by this population this warrants further research. This current study offers evidence to suggest that screening for particular types of childhood adversity could help to identify those most in need of targeted trauma interventions.

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Appendix a: Author Guidelines for Health and Social Care in the Community

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Once the submission materials have been prepared in accordance with the Author Guidelines, manuscripts should be submitted online at: https://mc.manuscriptcentral.com/HSCC

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- Abstract, unstructured;
- Up to seven keywords;
- Main body: formatted as introduction, materials & methods, results, discussion, conclusion;
- References;
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- Figure legends: Legends should be supplied as a complete list in the text. Figures should be uploaded as separate files (see below).

Abstract

This should be non-structured and should not exceed 300 words. Where appropriate authors should cover the following areas: objective; study design; location, setting and date of data collection; selection and number of participants; interventions, instruments and outcome measures; main findings; and conclusions and implications.

What is known about this topic and what this paper adds?

Please provide up to three bullet points on what is known about this topic, and three bullet points on what the paper adds. This should be written in terms of outcome statements (what is known/added) and not process statements (what was done). For example: Authors could report a specific outcome such as "experiences of patients and carers in the community did not always concur with guideline recommendations" NOT the generic process "This qualitative study reports on experiences of patients and carers in the community". This should be no more than 110 words (exclusive of the titles). Authors should avoid repeating sentences in the Abstract within the bullet points.

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Original Research	Reports of original research, with methods, findings and conclusions.	5000 (excluding figures, tables and the reference list)	Unstructured Abstract	Sources must be included
Empirical Research mixed methods	Reports qualitative and quantitative original research with methods findings and conclusions	6000 (excluding figures, tables and the reference list		Sources must be included
Review Articles	Overview of developments in fields or the current lines of thought. Synthesizes multiple sources of information and has references. Emphasis is more factual and less on opinion.	7000 (excluding figures, tables and the reference list	Unstructured Abstract	Sources must be included
Editorial	Opinion on timely or general interest topics, or to provide an overview of an issue. Usually by the Editors or someone invited by the Editors, but suggestions can be	1,500 words maximum	No abstract	Limit references to 5 or less;

	submitted to the editorial office for consideration HSCCoffice@wiley.com.			
Policy Papers	A comprehensive analysis of what a representative group of experts agree to be evidence-based and state-of-the-art knowledge on an aspect of practice/policy.	5000 (excluding figures, tables and the reference list)	Unstructured Abstract	Sources must be included
Commentary	Expert opinion from one or more people (who may agree or disagree) on a current understanding/status of a specific nursing or related area, or how practice should be undertaken.	2,000 words maximum	No abstract	Limit references to 5 or less;
Letter to the Editor *	To raise a point of interest, discuss a difference of opinion or encourage participation	1,500 word maximum	No abstract	5 or less references (more information see below)

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- Letters by article authors in response to Letters to the Editor disputing their articles are usually accepted for publication after the same type of review described above.
- If a Letter to the Editor is accepted for publication, the Editor-in-Chief will decide when and how it will be published.

Appendix b: CASP ratings

	Benson & Brennan (2018)	Boobis (2016)	Buckley et al (2020)	Housing LIN (2017)	Fieldhouse & Greatorex (2020)	Phipps et al (2017)	Revolving Doors (2019)	Ward (2014)	Watson et al (2019)
Are the results of the study valid?	5	2	5.5	3	3.5	5	4.5	4	4
Was there a clear statement of the aims of the research?	Y	Y	Y	Y	N	Y	Y	Y	Y
Is a qualitative methodology appropriate?	Y	N	Y	Y	Y	Y	Y	Y	Y
Was the research design appropriate to address the aims of the research?	Y	P	P	P	P	Y	Y	Y	Y
Was the recruitment strategy appropriate to the aims of the research?	Y	N	Y	N	Y	Y	P	N	P
Was the data collected in a way that addressed the research issue?	Y	P	Y	P	Y	Y	Y	Y	P
Has the relationship between researcher and participants been adequately considered?	N	N	Y	N	N	N	N	N	N
What are the results?	8	1.5	2.5	1	3	2	1	2.5	2.5
Have ethical issues been taken into consideration?	Y	N	P	N	Y	N	N	Y	P
Was the data analysis sufficiently rigorous?	Y	P	Y	N	Y	Y	N	P	Y
Is there a clear statement of findings?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Will the results help locally?	1	0.5	1	0	1	1	1	0	1
How valuable is the research?	Y	P	Y	N	Y	Y	Y	N	Y
	9	4	8.5	4	7.5	8	6.5	6.5	7.5

Appendix c: Interview Schedule

GENERAL INFORMATION

1. What is your date of birth? _____/_____/_____

1a. Age _____

1b. Sex M/F

2. What is your nationality?

A. White ☐1

British ☐11

English ☐12

Welsh ☐13

Scottish ☐14

Northern Irish ☐15

Irish ☐16

Any other white background ☐17

(please write in)_____

B. Mixed ☐2

White and Black Caribbean ☐21

White and Black African ☐22

White and Asian ☐23

any other Mixed background ☐24

(please write in)_____

C. Asian or Asian British. ☐3

Indian ☐31

Pakistani ☐32

Bangladeshi ☐33

Any other Asian background ☐34

(please write in) _____

D. Black or Black British ☐4

Caribbean ☐41

African ☐42

Any other Black background ☐43

(please write in)_____

E. Chinese or other ethnic group ☐5

Chinese ☐51

Any other ☐52

(please write in)_____

RECENT LIVING ARRANGEMENTS

1. During the <u>past month</u> where have you usually been living?

		Estimated number of days in these arrangements
Own place (rented or owned) *Circle below*	☐1	
Private rented		**Local authority/housing association**
Other, please indicate:	☐2	
Shelter/hostel	☐21	
Bed and breakfast	☐22	
On the streets	☐23	
Someone else's place (Family or Friends please indicate)	☐24	
Deserted building	☐25	
Car or caravan	☐26	
Foster care (how many placements)	☐27	
Residential care home (how many placements)	☐28	
Prison	☐29	
Alcohol or drug treatment	☐30	
Medical treatment	☐31	
Psychiatric treatment under MHA	☐32	
Psychiatric treatment not under MHA	☐33	
Other (please specify) _____	☐34	

2. Now let us talk just about who you mostly lived with during the past month.

		Estimated number of days in these arrangements
With significant other (partner/girlfriend/boyfriend/spouse) (no children)	☐1	
With significant other and children	☐2	
With children alone	☐3	
With parents	☐4	
With family (different than above specify)	☐5	
With friends	☐6	
Foster carer	☐7	
Residential care home residents & staff	☐8	
Alone	☐9	
Other (*please specify)*	☐10	

3. Are you satisfied with these arrangements?

No ☐1 Yes ☐2 Indifferent ☐3

3. During the <u>past year</u> where have you usually been living?

		Estimated number of days in these arrangements
Own place (rented or owned) *Circle below*	☐1	
Private rented		**Local authority/housing association**
Other, please indicate:	☐2	
Shelter/hostel	☐21	
Bed and breakfast	☐22	
On the streets	☐23	
Someone else's place (Family or Friends please indicate)	☐24	
Deserted building	☐25	
Car or caravan	☐26	
Foster care (how many placements)	☐27	
Residential care home (how many placements)	☐28	
Prison	☐29	
Alcohol or drug treatment	☐30	
Medical treatment	☐31	
Psychiatric treatment under MHA	☐32	
Psychiatric treatment not under MHA	☐33	
Other (please specify) _____	☐34	

4. Now let us talk just about <u>who</u> you mostly lived with during the <u>past year</u>.

		Estimated number of days in these arrangements
With significant other (partner/girlfriend/boyfriend/spouse) and children	☐1	
With significant other (no children)	☐2	
With children alone	☐3	
With parents	☐4	
With family (different than above specify)	☐5	
With friends	☐6	
Foster carer	☐7	
Residential care home residents & staff	☐8	
Alone	☐9	
Other (*please specify)*	☐10	

5. Are you satisfied with these arrangements?

No ☐1 Yes ☐2 Indifferent ☐3

5b. How much control have you had over these arrangements?

.....

.....

.....

.....

LIVING SITUATION

1. **Do you consider yourself to be homeless?**

   No ☐1 Yes ☐2

   Why?
   .....
   .....

   .....
   .....

   .....
   .....

2. **Can you estimate how much time you have been without a permanent home (own tenancy, family home) in the past year?**

   No time ……. ☐1

   One week or less (1-7 days) …….. ☐2

   Between a week and a month (8-31 days) ……. ☐3

   Between a month and half a year (32-180 days) …… ☐4

   Between half a year to a year (181-365 days) …… ☐5

   All the time ……. ☐6

3. **Have you been without a permanent home in the past 30 days?**

   No ☐1 Yes ☐2

3a. If yes, where did you stay during these days?

Shelter/hostel	☐1
Bed and breakfast	☐2
On the streets	☐3
Someone else's place (Family or Friends please indicate)	☐4
Deserted building	☐5
Car or caravan	☐6
Foster care	☐7
Residential care home	☐8
Prison	☐9
Alcohol or drug treatment	☐10
Medical treatment	☐11
Psychiatric treatment under MHA	☐12
Psychiatric treatment not under MHA	☐13
Other (please specify) _____	☐14

LIVING ARRANGEMENTS SINCE LEAVING YOUR PERMANENT HOME.

1a. Since you left home how many times have you been without a permanent home?

_____times

1b. If yes to above, how old were you the first time you were without a permanent home?

_____

1c.

DETAIL (Record each episode and details)		
With/place stayed	**Length of Episode**	**Reason**

2. Can you estimate how much time altogether you have been without a permanent home?

No time …….. ☐1

One week or less (1-7 days) …….. ☐2

Between a week and a month (8-31 days) …….. ☐3

Between a month and half a year (32-180 days) …… ☐4

Between half a year to a year (181-365 days) …… ☐5

A year or longer …… ☐6

3. When you first left your permanent home – what do you think were the main reason(s) this happened? TICK ALL THAT APPLY AND CIRCLE THE MOST IMPORTANT.

Financial problems	☐1	Work	☐7	Running away	☐13
Mental health	☐2	Bereavement	☐8	Parents Divorce	☐14
Relationship breakdown	☐3	Offending	☐9	Parents new partner	☐15
Physical health	☐4	Gambling problems	☐10	Overcrowding	☐16
Alcohol problems	☐5	Drug problems	☐11	Chose to leave	☐17
Sexuality	☐6	Being kicked out of home	☐12	Other (please explain)	☐18

_____

_____

_____

4. Have you ever lived with your parents?

No ☐1 Yes ☐2

Specify who you lived with most

Both biological parents ☐1 Biological mother ☐2 Biological Father ☐3 Biological Mother and Partner ☐4

Biological Father and Partner ☐5 Grandparents ☐6 Adoptive parents☐7 Stepmother ☐8 Stepfather ☐9

5. When you were living with your parents, were you ever without a permanent home?

No ☐1 Yes ☐2

5a. If yes to 5, how old were you the first time you were without a permanent home while living with your parents?

_____

5b. If yes to 5a, how many periods of time were you without a permanent home while living with your parents? _____times

DETAIL (Record each episode and details)		
With/place stayed	**Length of Episode**	**Reason**

DETAIL (Record each episode and details)		
With/place stayed	**Length of Episode**	**Reason**

5c. Can you estimate how much time altogether you were without a permanent home with your parents?

No time …….. ☐1

One week or less (1-7 days) …….. ☐2

Between a week and a month (8-31 days) …….. ☐3

Between a month and half a year (32-180 days) …… ☐4

Between half a year to a year (181-365 days) …… ☐5

A year or longer …… ☐6

LIVING ARRANGMENTS WHEN YOU WERE YOU A CHILD

1. When you were a child who did you live with? (tick all that apply)

Your mother and father ☐1	Mother only ☐2	Grandparents ☐3
Mother and partner ☐4	Father only ☐5	Aunt ☐6
Father and partner ☐7	Foster Carer ☐8	Uncle ☐9
Residential care home ☐10	Adoptive parent ☐11	
Other (specify) ☐12		

_____

_____

_____

2. **Have you ever run away from home?** No ☐1 Yes ☐2

2a. If 'YES' how old were you when you first ran away? .....

2b.If yes to above, who were you living with at the time when you ran away from home and how many times did this happen?

	Number of times		**Number of times**
Your mother and father ☐1		Mother only ☐2	
Mother and step-parent ☐3		Father only ☐4	
Father and step-parent ☐5		Foster Carer ☐6	
Residential care home ☐7		Grandparents ☐8	
Adoptive parents ☐9		Aunt ☐10	
Uncle ☐11		Other (specify) ☐12	

3. Before the age of 18 were you ever ordered to move out of where you were living?

No ☐1 Yes ☐2

3a. If yes to above, who were you living with when you were ordered to move out and how many times did this happen?

	Number of times		**Number of times**
Your mother and father ☐1		Mother only ☐2	
Mother and step-parent ☐3		Father only ☐4	
Father and step-parent ☐5		Foster Carer ☐6	
Residential care home ☐7		Grandparents ☐8	
Adoptive parents ☐9		Aunt ☐10	
Uncle ☐11		Other (specify) ☐12	

MORE ABOUT YOU.

1. Are you still in school? No ☐1 Yes ☐2

If not, how old were you when you left school? _____

2. How many times have you skipped [did you skip] school for a full day without an excuse?

Never ☐0 1 or 2 times ☐1 3 to 10 times ☐2 More than 10 times ☐3

3. How old were you when you stopped regularly attending school .....

4. Have you ever received an out-of-school suspension from school?

No ☐1 Yes ☐2

5. Have you ever received an in-school suspension?

No ☐1 Yes ☐2

6. Have you ever been expelled from school?

No ☐1 Yes ☐2

7. Were you ever aware that you were on a statement of special educational need whilst at school?

No ☐1 Yes ☐2 Don't Know ☐2

8. Did you receive any special support to help you with your learning whilst a school?

No ☐1 Yes ☐2 Don't Know ☐2

Details

.....
.....
.....
.....

9. During this past school year/during your last year at school [whichever is applicable] how often have you had trouble/did you have trouble]:

9a. Getting along with your teachers?

Never	Just a few times	About once a week	Almost everyday	Everyday
☐0	☐1	☐2	☐3	☐4

9b. Paying attention in school?

Never	Just a few times	About once a week	Almost everyday	Everyday
☐0	☐1	☐2	☐3	☐4

9c. Getting your homework done?

Never	Just a few times	About once a week	Almost everyday	Everyday
☐0	☐1	☐2	☐3	☐4

9d. Getting along with other students?

Never	Just a few times	About once a week	Almost everyday	Everyday
☐0	☐1	☐2	☐3	☐4

10. How much do you agree or disagree with the following statements:

10a. You feel [felt] close to students at your school

Strongly agree ☐1 Agree ☐2 Neither agree nor disagree ☐3 Disagree ☐4 Strongly disagree ☐5

10b. You feel(felt) close to staff at your school

Strongly agree ☐1 Agree ☐2 Neither agree nor disagree ☐3 Disagree ☐4 Strongly disagree ☐5

10c. You feel [felt] like you are [were] part of your school

Strongly agree ☐1 Agree ☐2 Neither agree nor disagree ☐3 Disagree ☐4 Strongly disagree ☐5

10d. Students at your school are [were] prejudiced

Strongly agree ☐1 Agree ☐2 Neither agree nor disagree ☐3 Disagree ☐4 Strongly disagree ☐5

10e. You are [were] happy to be at your school

Strongly agree ☐1 Agree ☐2 Neither agree nor disagree ☐3 Disagree ☐4 Strongly disagree ☐5

10f. The teachers at your school treat [treated] students fairly

Strongly agree ☐1 Agree ☐2 Neither agree nor disagree ☐3 Disagree ☐4 Strongly disagree ☐5

10g. You feel [felt] safe in your school

Strongly agree ☐1 Agree ☐2 Neither agree nor disagree ☐3 Disagree ☐4 Strongly disagree ☐5

10h. You feel (felt) bullied at your school

Strongly agree ☐1 Agree ☐2 Neither agree nor disagree ☐3 Disagree ☐4 Strongly disagree ☐5

10i. If YES to 10h, by who?.....

11. What is your highest level of education?

A. Left school before completing GCSEs, an NVQ level 1 or a foundation GNVQ ☐1

B. 1 to 4 GCSE any grades, NVQ level 1 or foundation GNVQ ☐2

C. 5 or more GCSEs (grades A-C), 1 A level, 1 to 3 AS levels, NVQ level 2, Intermediate GNVQ ☐3

D. 2 or more A levels, 4 or more AS levels, NVQ level 3, Advanced GNVQ ☐4

E. Other qualifications obtained (not already mentioned above} ☐6

Please specify _____

12. What is your current employment situation?

Paid Employment:

Full time (35+ hours/week) ☐1

Part time (regular hours) ☐2

Part time (irregular, day work) ☐3

Casual work (cash in hand) ☐4

Not working:

Training/college ☐5 Job Seekers Allowance ☐6

Income support	☐7	Educational maintenance allowance	☐8
Disability Living allowance	☐9	Carer (adult or child specify)	☐10
College	☐11	School	☐12
Other	☐13	please specify _____	

12a. Are you satisfied with this situation?

No ☐1 Yes ☐2

12b. Why ?

.....

.....

12c. If no to 12a do you feel able to change this situation?

No ☐1 Yes ☐2 Yes with help ☐3

13. How troubled or bothered have you been by this employment situation in the past 30 days?

Not at all ☐1 Slightly ☐2 Moderately ☐3 Considerably ☐4 Extremely ☐5

14. How long was your longest period of paid employment?

_____Years _____Months

15. What was your usual employment pattern within the last year?

Full time (35+ hours/week) ☐1 Armed forces ☐2

Part time (regular hours) ☐3 Part time (irregular, day work ☐4

Disability ☐5 Unemployed ☐6

Training/college ☐7 In hospital ☐8

On long term sick leave ☐9 In Prison/young offenders institute or secure unit ☐10

16. Have you received money from the following sources in the past 30 days?

Employment (net income) ☐1

Benefits e.g. income support, JSA, DLA, tax credits: ☐2

Partner, family or friends (Money for personal expenses) ☐3

Illegal activities ☐4

17. If in employment, how many days were you paid for working in the past 30 days?

(do not include prostitution, dealing or other illegal activities)

_____days

18. How many people depend on you for the majority of their food, shelter, etc?

_____ people

19. Have you ever served in the Armed Forces?

No ☐1 Yes ☐2

Please specify: _____

FAMILY BACKGROUND/SOCIAL RELATIONSHIPS

1. What is your relationship Status:

Married ……. ☐1 Widowed …… ☐2 Divorced …… ☐3

Remarried …….. ☐4 Separated …… ☐5 Never Married …….. ☐6

Cohabiting …….. ☐7 Single…….. ☐8 In a long term relationship ☐9

Dating ..... ☐10

1a. For how long have you been in this relationship .....

1b. *If answered' separated',' cohabitating' or' single', ask*: Have you ever been married?

No □1 Yes □2

2. Are you satisfied with your relationship situation?

No ☐1 Yes ☐2 Indifferent ☐3

3. If you do not mind could, you tell me how you would define your sexuality?

Straight ☐1 Gay ☐2 Lesbian ☐3 Bisexual ☐4

Not sure ☐5 Other ☐6 Prefer not to answer ☐7

4. Do you have any children? (If 'no' move to question 5)

No ☐1 Yes ☐2

4a. If yes, how many children do you have? _____

(*Do not ask interviewee directly, but record here if the death of a child/children is disclosed (and numbers of)*

_____

4b. Do you live with your children?

No ☐1 Yes ☐2

4c. If no, who do they live with? ***interviewer write answer***

.....

4d. How often do you see your children?.....

4e. Is contact supervised? No ☐1 Yes ☐2

5. Who do you spend most of your time with? _____

Family ☐1 Friends ☐2 Llamau friends ☐3 Partner ☐4 Alone ☐5

6. Are you satisfied with spending your free time this way?

No ☐1 Yes ☐2 Indifferent ☐3

7. During a typical week, how do you spend your time? ***(prompt: working, with friends, with family etc)***

_____

_____

_____

8. How many close friends do you have? _____

9. The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described.

	Never	Rarely	Sometimes	Always
9a. How often do you feel that you are "in tune" with the people around you?	☐1	☐2	☐3	☐4
9b. How often do you feel that you lack companionship?	☐1	☐2	☐3	☐4
9c. How often do you feel that there is no one you can turn to?	☐1	☐2	☐3	☐4
9d. How often do you feel alone?	☐1	☐2	☐3	☐4
9e. How often do you feel part of a group of friends?	☐1	☐2	☐3	☐4
9f. How often do you feel that you have a lot in common with the people around you?	☐1	☐2	☐3	☐4
9g. How often do you feel that you are no longer close to anyone?	☐1	☐2	☐3	☐4
9h. How often do you feel that your interests and ideas are not shared by those around you?	☐1	☐2	☐3	☐4
9i. How often do you feel outgoing and friendly?	☐1	☐2	☐3	☐4
9j. How often do you feel close to people?	☐1	☐2	☐3	☐4
9k. How often do you feel left out?	☐1	☐2	☐3	☐4
9l. How often do you feel that your relationships with others are not meaningful?	☐1	☐2	☐3	☐4
9m. How often do you feel that no one really knows you well?	☐1	☐2	☐3	☐4
9n. How often do you feel isolated from others?	☐1	☐2	☐3	☐4
9o. How often do you feel you can find companionship when you want it?	☐1	☐2	☐3	☐4
9p. How often do you feel that there are people who really understand you?	☐1	☐2	☐3	☐4
9q. How often do you feel shy?	☐1	☐2	☐3	☐4
9r. How often do you feel that people are around you but not with you?	☐1	☐2	☐3	☐4
9s. How often do you feel that there are people you can talk to?	☐1	☐2	☐3	☐4
9t. How often do you feel that there are people you can turn to?	☐1	☐2	☐3	☐4

10. The next few questions are also in relation to your family and upbringing when you were a child/younger and are quite brief but could be a bit difficult. If you would prefer not to answer them just say pass. Otherwise you can just say 'yes' or 'no'. ***(remind participant about confidentiality if they disclose that they or another person may be in danger or have experienced abuse)***

	Yes	No	Pass
10a. Did you ever feel ignored at home?	☐1	☐0	☐99
10b. Were you ever hit?	☐1	☐0	☐99
10c. Did you ever feel your needs were neglected at home?	☐1	☐0	☐99
10d. Did you feel physically abused?	☐1	☐0	☐99
10e. Did you feel emotionally abused?	☐1	☐0	☐99
10f. Were you ever sexually abused?	☐1	☐0	☐99
10g. Did you always have enough to eat as a child?	☐1	☐0	☐99
10h. Did you feel threatened at home?	☐1	☐0	☐99

10i. If appropriate can you share with us whether the abuse you experienced was from?

(*circle appropriately all that apply***)**

Parent Step-Parent Relative Family friend Other

(please specify)

*****

Interviewee prefers not to comment ☐

Interviewee too distressed to answer question 10. No ☐1 Yes ☐2

Assumed validity of the responses given for question 10:

Information assumed valid ☐0

Strong assumption info not valid ☐1

Interviewee disclosed conflicting information in earlier section of the interview ☐2

Provide further information……

……

11. Would you say you have had close, long lasting, personal relationships with any of the following people in your life:

If not can you tell us why? (also prompt if there were difficulties whether there was history of abuse) Emotionally, Physically Or Sexually

* if you tell me of any recent mistreatment, particularly within your current living arrangements I may need to break our agreement of confidentiality in order to protect you and other people.

Not applicable = no relative within this category. `

PERSON	**CURRENTLY** **1 = Yes,** **2 = No,** **3 = Don't know,** **4 = NA**	**If no, please give the reason why**	**WERE CLOSE TO BUT NOT NOW** **1 = Yes,** **2 = No,** **3 = Don't know,** **4 = NA**	**If no, please give the reason why**	***[If respondent identified abuse before the age of 18 interviewer to ask when did this occur e.g. preschool, primary, secondary, throughout***
Mother					
Father					
Step Mother					
Step Father					
Brother 1					
Brother 2					
Brother 3					
Sister 1					
Sister 2					
Sister 3					
Other (please specify)					

12. Please state with whom you considered yourself to have the closest relationship when you were growing up?

_____

13. Have you had significant periods in which you have experienced serious problems getting along with: (please tick)

PERSON	**Last 30 DAYS** 1 = Yes, 2 = No, 3 = Don't know, 4 =NA	**In Life** 1 = Yes, 2 = No, 3 = Don't know, 4 = NA
Mother		
Father		

Step Mother		
Step Father		
Brother 1		
Brother 2		
Brother 3		
Sister 1		
Sister 2		
Sister 3		
Other (please specify)		

14. On how many days in the past 30 days have you had serious problems:

A. With family? _____days

B. With other people (excluding family)? _____days

15. How troubled or bothered have you been in the past 30 days by these:

A. Family problems

Not at all ……. ☐1 Slightly ……..…. ☐2

Moderately ……. ☐3 Considerably …….. ☐4

Extremely …….. ☐5

B. Problems with other people

Not at all ……. ☐1 Slightly ……... ☐2

Moderately ……. ☐3 Considerably …….. ☐4

Extremely …….. ☐5

FAMILY ENVIRONMENT

Thinking about the people in your family (with whom you spent most of your time before you were 18), please answer 'True (or mostly true)' or 'False (or mostly false)' to the following statements.

		True	**False**
1.	Family members really help and support one another	☐1	☐2

2. Family members often keep their feelings to themselves ☐1 ☐2

3. We fight a lot in our family ☐1 ☐2

4. We often seem to have a lot of time on our hands at home ☐1 ☐2

5. We say anything we want to around the home ☐1 ☐2

6. Family members rarely become openly angry ☐1 ☐2

7. We put a lot of energy into what we do at home ☐1 ☐2

8. It's hard to 'blow off steam' at home without upsetting somebody ☐1 ☐2

9. Family members sometimes really lose their temper ☐1 ☐2

10. There is a feeling of togetherness in our family ☐1 ☐2

11. We tell each other our personal problems ☐1 ☐2

12. Family members hardly ever lose their tempers ☐1 ☐2

13. We rarely volunteer when something has to be done at home ☐1 ☐2

14.	If we feel like doing something on the spur of the moment, we often just pick up and do it	☐1	☐2
15.	Family members often criticize each other	☐1	☐2
16.	Family members rarely back each other up	☐1	☐2
17.	Someone usually gets upset if you complain in our family	☐1	☐2
18.	Family members sometimes shout at each other	☐1	☐2
19.	There is very little group spirit in our family	☐1	☐2
20.	Money and paying bills is openly talked about in our family	☐T	☐F
21.	If there's a disagreement in our family, we try hard to smooth things over and keep the peace	☐1	☐2
22.	We really get along well with each other	☐1	☐2
23.	We are usually careful about what we say to each other	☐T	☐F
24.	Family members often try to out-do each other	☐1	☐2
25.	There is plenty of time and attention for everyone in our family	☐1	☐2

26.	There are a lot of spontaneous discussions in our family	☐1	☐2
27.	In our family, we believe you don't ever get anywhere by raising your voice	☐1	☐2

YOUR PERSONALITY (PDQ-4)

The purpose of the following questions is for you to describe the kind of person you are. When answering the questions, think about how you have tended to feel, think, and act over the past several years.

Please answer either True or False for each item. True means that the statement is <u>generally true</u> for you. False means that the statement is <u>generally false</u> for you.

	Over the past several years ….	**True**	**False**
1.	I avoid spending time with others who may criticize me	☐1	☐2
2.	I can't make decisions without the advice, or reassurance, of others	☐1	☐2
3.	I often get lost in details and lose sight of the "big picture"	☐1	☐2
4.	I need to be the centre of attention	☐1	☐2
5.	I have accomplished far more than others give me credit for	☐1	☐2
6.	I'll go to extremes to prevent those who I love from ever leaving me	☐1	☐2
7.	Others have complained that I do not keep up with my work commitments	☐1	☐2
8.	I've been in trouble with the law several times (or would have been if I had been caught)	☐1	☐2
9.	Spending time with family or friends just doesn't interest me	☐1	☐2
10.	I get special messages from things happening around me	☐1	☐2
11.	I know that people will take advantage of me, or try to cheat me, if I let them	☐1	☐2
12.	Sometimes I get upset	☐1	☐2
13.	I make friends with people only when I am sure they like me	☐1	☐2
14.	I am usually depressed	☐1	☐2

Over the past several years ….		**True**	**False**
15.	I prefer that other people assume responsibility for me	☐1	☐2
16.	I waste time trying to make things too perfect	☐1	☐2
17.	I am “sexier” than most people	☐1	☐2
18.	I often find myself thinking about how great a person I am, or will be	☐1	☐2
19.	I either love someone or hate them, with nothing in between	☐1	☐2
20.	I get into a lot of physical fights	☐1	☐2
21.	I feel that others don’t understand or appreciate me	☐1	☐2
22.	I would rather do things by myself than with other people	☐1	☐2
23.	I have the ability to know that some things will happen before they actually do	☐1	☐2
24.	I often wonder whether the people I know can really be trusted	☐1	☐2
25.	Occasionally I talk about people behind their backs	☐1	☐2
26.	I am inhibited in my intimate relationships because I am afraid of being ridiculed (made fun of)	☐1	☐2
27.	I fear losing the support of others if I disagree with them	☐1	☐2
28.	I have many shortcomings	☐1	☐2
29.	I put my work ahead of being with my family or friends or having fun	☐1	☐2
30.	I show my emotions easily	☐1	☐2
31.	Only certain special people can really appreciate and understand me	☐1	☐2
32.	I often wonder who I really am	☐1	☐2
33.	I have difficulty paying bills because I don’t stay at any one job for very long	☐1	☐2
34.	Sex just doesn’t interest me	☐1	☐2

Over the past several years ….		**True**	**False**
35.	Others consider me moody and “hot tempered”	☐1	☐2
36.	I can often see, sense, or feel things, that others can’t	☐1	☐2
37.	Others will use what I tell them against me	☐1	☐2
38.	There are some people I don’t like	☐1	☐2
39.	I am more sensitive to criticism or rejection than most people	☐1	☐2
40.	I find it difficult to start something if I have to do it by myself	☐1	☐2
41.	I have a higher sense of morality than other people	☐1	☐2
42.	I am my own worst critic	☐1	☐2
43.	I use my “looks” to get the attention that I need	☐1	☐2
44.	I very much need other people to take notice of me or compliment me	☐1	☐2
45.	I have tried to hurt or kill myself	☐1	☐2
46.	I do a lot of things without considering the consequences	☐1	☐2
47.	There are few activities that I have any interest in	☐1	☐2
48.	People often have difficulty understanding what I say	☐1	☐2
49.	I object to supervisors telling me how I should do things.	☐1	☐2
50.	I keep alert to figure out the real meaning of what people are saying	☐1	☐2
51.	I have never told a lie	☐1	☐2
52.	I am afraid to meet new people because I feel inadequate	☐1	☐2
53.	I want people to like me so much that I volunteer to do things that I’d rather not do	☐1	☐2
54.	I have accumulated lots of things that I don’t need but I can’t bear to throw out	☐1	☐2

Over the past several years ….		**True**	**False**
55.	Even though I talk a lot, people say that I have trouble getting to the point	☐1	☐2
56.	I worry a lot	☐1	☐2
57.	I expect other people to do favours for me even though I do not usually do favours for them	☐1	☐2
58.	I am a very moody person	☐1	☐2
59.	Lying comes easily to me and I often do it	☐1	☐2
60.	I am not interested in having close friends	☐1	☐2
61.	I am often on guard against being taken advantage of	☐1	☐2
62.	I never forget, or forgive, those who do me wrong	☐1	☐2
63.	I resent those who have more “luck” than I	☐1	☐2
64.	A nuclear war may not be such a bad idea	☐1	☐2
65.	When alone, I feel helpless and unable to care for myself	☐1	☐2
66.	If others can’t do things correctly, I would prefer to do them myself	☐1	☐2
67.	I have a flair for the dramatic	☐1	☐2
68.	Some people think that I take advantage of others	☐1	☐2
69.	I feel that my life is dull and meaningless	☐1	☐2
70.	I am critical of others	☐1	☐2
71.	I don’t care what others have to say about me	☐1	☐2
72.	I have difficulties relating in a one-to-one situation	☐1	☐2
73.	People have often complained that I did not realise that they were upset	☐1	☐2
74.	By looking at me, people might think that I’m pretty odd, eccentric or weird	☐1	☐2

Over the past several years ….		**True**	**False**
75.	I enjoy doing risky things	☐1	☐2
76.	I have lied a lot in this set of questions	☐1	☐2
77.	I complain a lot about my hardships	☐1	☐2
78.	I have difficulty controlling my anger, or temper	☐1	☐2
79.	Some people are jealous of me	☐1	☐2
80.	I am easily influenced by others	☐1	☐2
81.	I see myself as thrifty but others see me as being cheap	☐1	☐2
82.	When a close relationship ends, I need to get involved with someone else immediately	☐1	☐2
83.	I suffer from low self-esteem	☐1	☐2
84.	I am a pessimist	☐1	☐2
85.	I waste no time in getting back at people who insult me	☐1	☐2
86.	Being around other people makes me nervous	☐1	☐2
87.	In new situations, I fear being embarrassed	☐1	☐2
88.	I am terrified of being left to care for myself	☐1	☐2
89.	People complain that I'm very stubborn	☐1	☐2
90.	I take relationships more seriously than do those who I'm involved with	☐1	☐2
91.	I can be nasty with someone one minute, then find myself apologizing to them the next minute	☐1	☐2
92.	Others consider me to be stuck up	☐1	☐2
93.	When stressed, things happen. Like I get paranoid or just "black out"	☐1	☐2
94.	I don't care if others get hurt so long as I get what I want	☐1	☐2

Over the past several years ….		**True**	**False**
95.	I keep my distance from others	☐1	☐2
96.	I often wonder whether my partner has been unfaithful to me	☐1	☐2
97.	I often feel guilty	☐1	☐2
98.	I have done things on impulse that could have got me into trouble *(interviewer to read list below and tick all that apply)*	☐1	☐2

a. Spending more money ☐

b. Having sex with people I hardly know ☐

c. Drinking too much ☐

d. Taking drugs ☐

e. Eating binges ☐

f. Reckless driving ☐

99. Before the age of 15, I was somewhat of a trouble maker, doing some of the things below *(interviewer to read list below and tick all that apply)* ☐1 ☐2

	Yes	No
a. I was considered a bully	☐	☐
b. I used to start fights with other kids	☐	☐
c. I used a weapon in fights that I had	☐	☐
d. I robbed or mugged other people	☐	☐
e. I was physically cruel to other people	☐	☐
f. I was physically cruel to animals	☐	☐
g. I forced someone to have sex with me	☐	☐

h. I lied a lot	☐	☐
i. I stayed out at night without my parents permission	☐	☐
j. I stole things from others	☐	☐
k. I set fires	☐	☐
l. I broke windows or destroyed property	☐	☐
m. I ran away from home overnight more than once	☐	☐
n. I began skipping school, a lot, before age 13	☐	☐
o. I broke into someone's house, building or car	☐	☐

MEDICAL STATUS

1. In recent months how would you say your physical health has been?

Excellent …… ☐1 Very good …….. ☐2 Fair …….. ☐3

Good …….. ☐4 Poor …… ☐5 Very poor …… ☐6

2. If you have been having problems for how long have you had these problems?

No time …….. ☐1

One week or less (1-7 days) …….. ☐2

Between a week and a month (8-31 days) …….. ☐3

Between a month and half a year (32-180 days) …… ☐4

Between half a year to a year (181-365 days) …… ☐5

All the time …….. ☐6

Please detail specifics of physical health problems

_____

_____

_____

_____

_____

_____

3. Have your health problems limited your well-being or activities in the past year

No ☐1 Yes ☐2

4. How severe have the limitations on your physical activities been?

Not at all …… ☐1 Slightly …….. ☐2

Moderately …… ☐3 Considerably …….. ☐4

Extremely …….. ☐5

5. How many times in your life have you been hospitalised overnight for physical health problems/injuries? (EXCLUDE DETOX, PREGNANCY)

_____times

5a. How long ago was your last hospitalisation for a physical problem? (NOT PREGNANCY)

_____weeks/months/years *(delete as appropriate)*

5b. How long was the longest hospitalisation that you have had?

_____days/weeks/months/years *(delete as appropriate)*

5c. FEMALE ONLY

Have you ever been pregnant? No ☐1 Yes ☐2

5d. How many times? _____

5e. If you feel able to tell me could you say what happened with the pregnancy whether you had the baby, a miscarriage or if you decided not to carry on with the pregnancy? If you don't want to answer that is fine.

Miscarriage ☐1 Decided not to carry on with pregnancy ☐2

Don't wish to answer ☐3 Kept the baby ☐4

Gave child up for adoption ☐5 Other (please specify) ☐6

_____

6. Are you taking any prescribed medication on a regular basis for a physical problem?

No ☐1 Yes ☐2

Please specify

_____

_____

7. Are you taking any prescribed medication on a regular basis for a mental illness?

No ☐1 Yes ☐2

Please specify

_____
_

8. Have you ever received an injury or a severe blow to the head?

No ☐1 Yes ☐2

Please specify

_____

How many times has this happened? _____

9. Have you ever received any other serious injuries?

No ☐1 Yes ☐2

Please specify

_____

How many times has this happened? _____

10. How many days have you experienced medical problems in the past 30 days? (NOT PREGNANCY RELATED)

_____days

11. How many times have you been treated for any psychological or emotional problems?

A. In a hospital _____times

B. As an outpatient _____times

Notes

_____

_____

12. How many days in the past 30 have you experienced these psychological or emotional problems? _____days

13. Is the participant currently receiving Mental Health Care?

No □1 Yes □2 Unknown □3

15. How much have you been troubled or bothered by these physical, psychological or emotional problems in the past 30 days?

Not at all ……. □1 Slightly …….. □2

Moderately ……. □3 Considerably …….. □4

Extremely …….. □5

Use of HOSPITAL BASED SERVICES

16. **<u>In the last 6 months</u>, have you made use of any <u>hospital-based services</u>?** No ☐1 Yes ☐2

If yes, which ones:

17. **Psychiatric ward?** No ☐1 Yes ☐2

17a. If yes, how many times have you been admitted as an inpatient during the last 3 months?

_____times

17b. How many <u>days in total</u> did you stay there as an inpatient?

_____times

No ☐1 Yes ☐2

18. **General medical ward?**

18a. If yes, how many times have you been admitted as an inpatient during the last 3 months?

_____times

18b. How many <u>days in total</u> did you stay there as an inpatient?

_____times

19. **Psychiatric outpatient visit?**

19a. If yes, how many times did you attend an outpatient visit? No ☐1 Yes ☐2

_____times

20. **Other hospital outpatient visit?** No ☐1 Yes ☐2

20a. If yes, how many times did you attend an outpatient visit?

_____times

21. Accident and emergency department?

21a. If yes could you explain why you attended A&E?

_____

21b. How many times did you attended? _____ No ☐1 Yes ☐2

21c. If yes can you tell me if you were offered any follow up services?

_____

Use of COMMUNITY-BASED and SOCIAL CARE Services'

22. <u>In the last 6 months</u>, you made use of any services for problems with your <u>physical health</u> No ☐1 Yes ☐2

If yes, what kind of help?

23 . General Practitioner, Community Nurse or Health Care Assistant? No ☐1 Yes ☐2

23a. If yes, how many contacts have you had with this service during the last 3 months? _____

23b. What was the reason for the visit(s)?

_____

_____

23c. Are you registered with a GP? No ☐1 Yes ☐2

24. <u>In the last 6 months,</u> have you made use of any services for <u>psychiatric or psychological problems</u>? No ☐1 Yes ☐2

If yes, what kind of help?

25. Community Psychiatrist, Community Psychiatric Nurse, Psychologist or Community Mental Health team member? No ☐1 Yes ☐2

25a. If yes, how many contacts have you had with this service during the last 3 months? _____

25b. What was the reason for the visit(s)?

_____

_____

25c. Who did you see?_____

26. **<u>In the last 6 months,</u> have you made use of any services for <u>alcohol or drug problems?</u>** No ☐1 Yes ☐2

If yes, what kind of help?

27. An Alcohol Worker?

27a. If yes, how many contacts have you had with this service during the last 3 months? _____ No ☐1 Yes ☐2

28. A Drug Worker?

28. If yes, how many contacts have you had with this service during the last 3 months? _____ No ☐1 Yes ☐2

29. <u>In the last 3 months</u>, have you made use of <u>any other services</u> that have <u>not</u> already been mentioned? No ☐1 Yes ☐2

29a. If yes, please specify

_____

_____

_____

29b. How many contacts have you had with this service during the last 3 months? _____

29c. What was the reason for the visit(s)?

_____

30. **<u>For any of the above services, have you felt you were unhappy with this service?</u>** No ☐1 Yes ☐2

30a. If yes, which service(s) and why? ***[interviewer to read back the ones they have mentioned they have used]_____***

_____

_____

No ☐1 Yes ☐2

31. I would now like you to think about the services we have already talked about. Of the services discussed, are there any you would have liked to have had access to, but haven't been able to access?

Don't know ☐3

31a. If Yes, which services would you like to have had access to?

_____

_____

31b. What were the main reasons you were not able to access this service?

MASTERY

How strongly would you agree or disagree with these statements about yourself?

1. There is really no way I can solve some of the problems I have

Strongly agree ☐1 Agree ☐2 Neutral ☐3 Disagree ☐4 Strongly disagree ☐5

2. Sometimes I feel that I'm being pushed around in life

Strongly agree ☐1 Agree ☐2 Neutral ☐3 Disagree ☐4 Strongly disagree ☐5

3. I have little control over the things that happen to me

Strongly agree ☐1 Agree ☐2 Neutral ☐3 Disagree ☐4 Strongly disagree ☐5

4. I can do just about anything I really set my mind to

Strongly agree ☐1 Agree ☐2 Neutral ☐3 Disagree ☐4 Strongly disagree ☐5

5. I often feel helpless in dealing with the problems of life

Strongly agree ☐1 Agree ☐2 Neutral ☐3 Disagree ☐4 Strongly disagree ☐5

6. What happens to me in the future mostly depends on me

Strongly agree ☐1 Agree ☐2 Neutral ☐3 Disagree ☐4 Strongly disagree ☐5

7. There is little I can do to change many of the important things in my life

Strongly agree ☐1 Agree ☐2 Neutral ☐3 Disagree ☐4 Strongly disagree ☐5

HOARDING BEHAVIOUR (OCD)

1. Have you ever found it difficult to discard (or recycle, sell, give away) ordinary things that other people would get rid of?

0	1	2	3	4	5	6	7	8
I have no difficulty		I have mild difficulty		I have moderate difficulty		I have severe difficulty		I have extreme difficulty

2. Have you ever experienced that it was difficult for you to use the rooms in your home because of the clutter or the number of your possessions?

0	1	2	3	4	5	6	7	8
It is not at all difficult		It is mildly difficult		It is moderately difficult		It is severely difficult		It is extremely difficult

3. Have you ever had a problem with collecting free things or buying more things than you need or can use or can afford?

0	1	2	3	4	5	6	7	8
I have no problem		I have a mild problem—for example, occasionally (less than weekly) I collect or buy items I don't need, or I collect or buy a few unneeded items		I have a moderate problem—for example, regularly (once or twice weekly) I collect or buy items I don't need, or I collect or buy some unneeded items		I have a severe problem—for example, frequently (several times per week) I collect or buy items I don't need, or I collect or buy many unneeded items		I have an extreme problem—for example, very often (daily) I collect or buy items I don't need, or I collect or buy large numbers of unneeded items

4. Have you ever experienced emotional distress because of clutter, difficulty discarding things, or problems with buying or acquiring things?

0	1	2	3	4	5	6	7	8
I am not at all distressed		I am mildly distressed		I am moderately distressed		I am severely distressed		I am extremely distressed

5. Have you ever experienced impairment in your life (daily routine, job/school, social activities, family activities, financial difficulties) because of clutter, difficulty discarding, or problems with buying or acquiring things?

0	1	2	3	4	5	6	7	8
I am not at all impaired		I am mildly impaired		I am moderately impaired		I am severely impaired		I am extremely impaired

6. Has any of the above problems (i.e. difficulty discarding things, excessive clutter, or excessive collecting/buying of unnecessary things) <u>ever</u> contributed to you becoming homeless during your lifetime?

No☐1 Yes ☐2

If answered 'yes' to above question, please make notes of any comments made by the participant linking their hoarding to their homelessness below

;

7. Now that you are in your current living situation, do you still have a lot of things/ a lot more things than other people?

No☐1 Yes ☐2

7a. If yes, where do you keep these things?

Carry them with ☐1 Keep them stashed away ☐2 Other ☐3 Please specify: _____

8. Have you ever experienced frequent and irresistible impulses to buy things that you don't need, often spending more than you could afford, and causing marked distress, interference and financial problems?

Strongly agree ☐1	Somewhat agree ☐2	Neither agree nor disagree ☐3	Somewhat disagree ☐4	Strongly disagree ☐5

DRUG/ALCOHOL USE/SMOKING

I would like to ask you some questions about your alcohol and drug use.

1. Do you drink alcohol at all?

Has never used alcohol ☐1 Once or twice in a lifetime ☐2 Alcohol used more than twice ☐3

2. At what age did you first start drinking alcohol? _____ years

3. Have you ever used drugs other than those required for medical reasons?
No ☐1 Yes ☐2

4. Do you CURRENTLY consider yourself to have a problem with

a. Alcohol? No ☐1 Yes ☐2

b. Drugs? No ☐1 Yes ☐2 Prescription/Illegal *(please specify)*

5. At what age did you first start to experience problems with alcohol? (COMPLETE AS APPROPRIATE) _____ years Not applicable ☐

6. At what age did you first start to experience problems with your drug use?

_____ years Not applicable ☐

7a. Do you want to stop drinking alcohol? No ☐1 Yes ☐2 In recovery ☐3

7b. Do you want to stop taking drugs? No ☐1 Yes ☐2 In recovery ☐3

8. Do you smoke, or use tobacco in any other form? No ☐1 Yes ☐2

9. Have you ever smoked cigarettes regularly that is at least 1 cigarette every day for 30 days?

No☐1

Yes☐2

10. During the past month, on average, how many cigarettes did you smoke each day?

Never smoked in my life ….. ☐1

1-5 …….. ☐2

6-10 …… ☐3

11-20 …….. ☐4

21-30 …….. ☐5

more than 30 ……☐6

11. Have you ever tried giving up cigarettes? No ☐1 Yes ☐2 Never smoked ☐0

11a. If yes, how many times? _____times

LEGAL STATUS

Now, I would like to ask you a bit about any other possible problems you are facing at the moment.

1. Are you currently on a community supervision order e.g., probation, parole, guardianship? No ☐1 Yes ☐2 Unknown ☐3

2. Are you presently awaiting charges, trial or sentence? No ☐1 Yes ☐2

2a. If yes, what for?

_____

3. How many times in the past 30 days and in your life have you been ARRESTED and CHARGED with the following (Show list to participant) :

	Past 30 Days	**In your life**
A. Shoplifting	_____	_____
B. Handling Stolen Goods	_____	_____
C. Vandalism	_____	_____
D. Parole/Probation Violation	_____	_____
E. Drug Charges –Possession	_____	_____
F. Drug Charges – Supply/Intent to	_____	_____
G. Forgery	_____	_____
H. Weapons Offence	_____	_____
	_____	_____
I. Burglary, Breaking & Entering		
J. Robbery	_____	_____

K. Common Assault	_____	_____
L. GBH- Grievous Bodily Harm	_____	_____
M. ABH- Actual Bodily Harm	_____	_____
N. Arson	_____	_____
O. Rape/ Sexual Assault	_____	_____
P. Attempted murder	_____	_____
Q. Murder, Manslaughter	_____	_____
R. Prostitution	_____	_____
S. Contempt of Court	_____	_____
T. Other _____	_____	_____

4. How many times in your life have you been charged with the following: (please tick)

a) Public Order Offences…….. No☐1 Yes ☐2 …If yes, how many times?.....

b)Begging…….. No☐1 Yes ☐2…If yes, how many times?.....

c) Drunk and Disorderly…….. No☐1 Yes ☐2…If yes, how many times?.....

d) Anti-social behaviour orders …… No☐1 Yes ☐2…If yes, how many times?.....

e) Drug treatment orders …….. No☐1 Yes ☐2…If yes, how many times?.....

5. Have you ever been charged with driving while under the influence of alcohol or drugs?

No ☐1 Yes ☐2

6. Other major driving violation (please specify all that apply)

Reckless driving	No☐1 Yes ☐2
Speeding	No☐1 Yes ☐2
Driving without a license	No☐1 Yes ☐2
Driving without insurance	No☐1 Yes ☐2
Dangerous driving	No☐1 Yes ☐2
Other driving offense a (please specify)	No☐1 Yes ☐2

7. Have you ever been in prison or young offender's institution in your life?

No☐1 Yes ☐2

7a. If 'YES' how many times? _____

7b. How old were you when you first were in prison or a young offenders institution?

7c. For how many months were you in prison or a young offenders institute in your life?

Years……Months……Days……..

7d. What was your longest period in one of these places?

……..

7e. How long was your last period of being in prison/ young offenders?

.....

7f. What was it for?

.....

7g. How many days in the past 30 days were you detained or incarcerated? .....Days

8. How many days in the past 30 days have you engaged in illegal activities for profit?

……..Days

9. How serious do you feel your present legal problems are? (EXCLUDE CIVIL)

Not at all ……	☐1	Slightly ……..	☐2
Moderately ……	☐3	Considerably ……..	☐4
Extremely ……..	☐5	N/A……..	☐6

10. How important to you NOW is counselling or referral for these legal problems?

Not at all ……	☐1	Slightly ……..	☐2
Moderately ……	☐3	Considerably ……..	☐4
Extremely ……..	☐5	N/A……..	☐6

FAMILY HISTORY

1. Have any of your relatives had what you would call a significant drinking, drug use or psychiatric problem – one that did or should have led to treatment? (Make note if there is more than one Aunt or Uncle or additional siblings with issues)

N/A = Not applicable/No relative in the category.

Biological Mother's Side

Alcohol	Drug	Psychological
A. Mother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**A.** Mother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**A.** Mother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4
B.Grandfather **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**B**.Grandfather **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**B**.Grandfather **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4
C. Grandmother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**C**. Grandmother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**C**. Grandmother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4
D. Aunt **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**D**. Aunt **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**D**. Aunt **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4

E. Uncle **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**E**. Uncle **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**E**. Uncle **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4

Biological Father's Side		
Alcohol	**Drug**	**Psychological**
A. Father **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**A.** Father **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**A.** Father **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4
B.Grandfather **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**B**.Grandfather **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**B**.Grandfather **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4
C. Grandmother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**C**. Grandmother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**C**. Grandmother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4

D. Aunt **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**D**. Aunt **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**D**. Aunt **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4
E. Uncle **No** ☐1 **Yes** ☐2 **Don't know** ☐ **N/A** ☐4	**E**. Uncle **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**E**. Uncle **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4

Biological Siblings		
Alcohol	**Drug**	**Psychological**
A. Brother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**A.** Brother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**A.** Brother **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4
B.Brother 2 **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**B**.Brother 2 **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**B**.Brother 2 **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4

C. Sister **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**C**. Sister **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**C**. Sister **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4
D. Sister 2 **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**D**. Sister 2 **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4	**D**. Sister 2 **No** ☐1 **Yes** ☐2 **Don't know** ☐3 **N/A** ☐4

MAKE A NOTE IF STEP SIBLI NG

STRESSFUL EXPERIENCES (PTSD)

I would now like to ask you about any particularly stressful experiences you may have had during your life. Most people experience stress now and then, for example, when they visit the dentist. However, some experiences are more unusual and may be particularly distressing. They could have happened in childhood or later; they could have happened in relation to your family or something else altogether.

1. Have you had one or more majorly distressing experiences in your life?

No ☐1 Yes ☐2
……

2. Think about the most stressful event that ever happened in your life. Can you tell me what this event was?

……

……

3. When did this event take place? (SPECIFY AGE OF INDIVIDUAL AND LENGTH OF TIME)

……
……

4. Has anything else as distressing as this happened to you?

No ☐1 Yes ☐2 ……

5. Have you ever been diagnosed with PTSD? No ☐1 Yes ☐2

Interviewee too distressed to answer PTSD questions? No ☐1 Yes ☐2

Now, focussing on this most stressful event, can you tell me how distressing this event has been for you during the past 30 days? How much were you distressed or bothered by these difficulties during the past 30 days?

6. Any reminder brought back feelings about it

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

7. I had trouble staying asleep

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

8. Other things kept making me think about it

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

9. I felt irritable and angry

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

10. I avoided letting myself get upset when I thought about it or was reminded of it

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

11. I thought about it when I didn't mean to

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

12. I felt as if it hadn't happened or wasn't real

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

13. I stayed away from reminders about it

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

14. Pictures about it popped into my mind

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

15. I was jumpy and easily startled

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

16. I tried not to think about it

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

17. I was aware that I still had a lot of feelings about it, but I didn't deal with them

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

18. My feelings about it were kind of numb

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

19. I found myself acting or feeling as though I was back at that time

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

20. I had trouble falling asleep

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

21. I had waves of strong feelings about it

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

22. I tried to remove it from my memory

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

23. I had trouble concentrating

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

24. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

25. I had dreams about it

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

26. I felt watchful or on-guard

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

27. I tried not to talk about it

Not at all ☐1 A little bit ☐2 Moderately ☐3 Quite a bit ☐4 Extremely ☐5

Have you ever been in care?	**Yes**	**No**
If yes how long for		

During the past 12 months, on how many days did you drink alcohol?

Never.....1

1-2 days in past 12 months.....2

1 day a month or less 3

2-3 days a month.....4

1-2 days a week.....5

3-5days a week.....6

Every day or almost every day.....7

Thinking of all the alcoholic drinks you had in the past 12 months. How many did you have in a typical week?

Never had a drink.....1

0.....2

1-5.....3

6-10.....4

11-20.....5

21-30.....6

More than 30.....7

What did you usually drink?

Wine 1

Beer.....2

Lager.....3

Spirits.....4

Alcopops.....5

Cider.....6

General Comments

1. What brought you to Llamau this time?

……
……
……
……
……

2. Is there anything more you feel Llamau or your support workers could do to help you improve your situation?

……
……
……
……

……

3. Would you like to make any comments on your experience of taking part in this interview today (how you felt etc)?

.....
.....
.....
.....
.....

……..

……..

4. If appropriate ask how they feel they are progressing and about the positive changes they have made?

.....
.....
.....
.....
.....

Thank you very much for taking part in this interview today.

Appendix d: Consent form

CONSENT FORM FOR PARTICIPANTS

Please complete this form if you wish to participate in the

STUDY OF EXPERIENCES OF YOUNG HOMELESS PEOPLE (SEYHoPe)

	Please Tick
I have read and understood the Information Sheet, Version 2.0 dated 20/05/2010	☐
I have been given the opportunity to ask questions and have received satisfactory answers.	☐
I agree to take part in this study.	☐
I understand that any information I provide will be kept strictly confidential to the research, except for the points about safety as detailed in the information sheet, and will be handled in accordance with the Data Protection Act 1998.	☐
I understand that the researchers may access my records held by Llamau and I give my full consent for this.	☐
I understand that this interview will be recorded for the purposes of the research.	☐
I understand that participation in this study is entirely voluntary and that I am free to withdraw my name and information at any time without giving a reason by contacting: Kate Hodgson at Llamau on: 029 20239585.	☐
Name of participant: (Please print) ..... Signature: ..... Date: ..... Contact details – Phone number ..... Email: _____	
Name of person taking consent: (Please print) ..... Signature: ..... Date:	

Appendix e: ACE Categorisation

ACE Category	Questions Asked
Physical Abuse	Did you feel physically abused? Were you ever hit?
Sexual Abuse	Were you ever sexually abused?
Emotional Abuse	Did you feel emotionally abused? Did you feel threatened at home?
Household Substance Abuse	Have either your mother or father had what you would call a significant drinking problem- one that did or should have led to treatment? Have either your mother or father had what you would call a significant drug use problem- one that did or should have led to treatment?
Household Mental Illness	Have either your mother or father had what you would call a significant psychiatric problem- one that did or should have led to treatment?
Neglect	Did you ever feel your needs were neglected at home? Did you always have enough to eat as a child? Did you ever feel ignored at home?

Appendix f: G*Power calculations

G*power calculation for multiple regression model

F tests – Linear multiple regression: Fixed model, R^2 deviation from zero

Analysis:	Post hoc: Compute achieved power		
Input:	Effect size f^2	=	0.15
	α err prob	=	0.05
	Total sample size	=	84
	Number of predictors	=	3
Output:	Noncentrality parameter λ	=	12.6000000
	Critical F	=	2.7187850
	Numerator df	=	3
	Denominator df	=	80
	Power (1−β err prob)	=	0.8401496

G*power calculation for moderation analysis

F tests – Linear multiple regression: Fixed model, R^2 deviation from zero

Analysis:	A priori: Compute required sample size		
Input:	Effect size f^2	=	0.15
	α err prob	=	0.05
	Power (1−β err prob)	=	0.95
	Number of predictors	=	3
Output:	Noncentrality parameter λ	=	17.8500000
	Critical F	=	2.6834991
	Numerator df	=	3
	Denominator df	=	115
	Total sample size	=	119
	Actual power	=	0.9509602

Appendix g: Raw data outputs

Correlations

		SUMIESR	Meets Threshold for PTSD	Ever sexually abused	Physical	Emotional	Neglect	HouseSub	Housepsych	Loneliness Score	Mastery Score
SUMIESR	Pearson Correlation	1	.814**	.279*	.175	.205	.161	.213	.264*	.195	-.160
	Sig. (2-tailed)		.000	.012	.113	.063	.143	.057	.020	.076	.146
	N	84	84	81	83	83	84	81	78	84	84
Meets Threshold for PTSD	Pearson Correlation	.814**	1	.225*	.273*	.141	.126	.207	.227*	.133	-.048
	Sig. (2-tailed)	.000		.043	.012	.202	.254	.063	.045	.229	.664
	N	84	84	81	83	83	84	81	78	84	84
Ever sexually abused	Pearson Correlation	.279*	.225*	1	.196	.147	.145	.186	.080	.004	.098
	Sig. (2-tailed)	.012	.043		.081	.193	.197	.102	.495	.974	.385
	N	81	81	81	80	80	81	78	75	81	81
Physical	Pearson Correlation	.175	.273*	.196	1	.432**	.312**	.153	.137	.110	.058
	Sig. (2-tailed)	.113	.012	.081		.000	.004	.176	.232	.324	.600
	N	83	83	80	83	83	83	80	78	83	83
Emotional	Pearson Correlation	.205	.141	.147	.432**	1	.611**	.172	.196	.235*	-.319**
	Sig. (2-tailed)	.063	.202	.193	.000		.000	.128	.086	.033	.003
	N	83	83	80	83	83	83	80	78	83	83
Neglect	Pearson Correlation	.161	.126	.145	.312**	.611**	1	.157	.195	.180	-.237*
	Sig. (2-tailed)	.143	.254	.197	.004	.000		.163	.087	.102	.030
	N	84	84	81	83	83	84	81	78	84	84
HouseSub	Pearson Correlation	.213	.207	.186	.153	.172	.157	1	.476**	.246*	-.088
	Sig. (2-tailed)	.057	.063	.102	.176	.128	.163		.000	.027	.436
	N	81	81	78	80	80	81	81	78	81	81
Housepsych	Pearson Correlation	.264*	.227*	.080	.137	.196	.195	.476**	1	.234*	-.124
	Sig. (2-tailed)	.020	.045	.495	.232	.086	.087	.000		.039	.278
	N	78	78	75	78	78	78	78	78	78	78
Loneliness Score	Pearson Correlation	.195	.133	.004	.110	.235*	.180	.246*	.234*	1	-.507**
	Sig. (2-tailed)	.076	.229	.974	.324	.033	.102	.027	.039		.000
	N	84	84	81	83	83	84	81	78	84	84
Mastery Score	Pearson Correlation	-.160	-.048	.098	.058	-.319**	-.237*	-.088	-.124	-.507**	1
	Sig. (2-tailed)	.146	.664	.385	.600	.003	.030	.436	.278	.000	
	N	84	84	81	83	83	84	81	78	84	84

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

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

Multiple regression output

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.434[a]	.188	.155	15.33774	1.823

a. Predictors: (Constant), Housedys, Ever sexually abused, Maltreatment

b. Dependent Variable: SUMIESR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4032.953	3	1344.318	5.715	.001[b]
	Residual	17408.227	74	235.246		
	Total	21441.179	77			

a. Dependent Variable: SUMIESR

b. Predictors: (Constant), Housedys, Ever sexually abused, Maltreatment

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	31.679	4.072		7.780	.000	23.566	39.792					
	Ever sexually abused	10.895	4.670	.252	2.333	.022	1.589	20.200	.324	.262	.244	.939	1.065
	Maltreatment	2.529	1.723	.162	1.468	.146	-.904	5.962	.273	.168	.154	.897	1.115
	Housedys	4.096	2.167	.208	1.890	.063	-.222	8.414	.298	.215	.198	.908	1.101

a. Dependent Variable: SUMIESR

Hierarchical regression output

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.324[a]	.105	.093	15.88923	.105	8.926	1	76	.004	
2	.406[b]	.164	.142	15.45536	.059	5.327	1	75	.024	
3	.434[c]	.188	.155	15.33774	.024	2.155	1	74	.146	1.823

a. Predictors: (Constant), Ever sexually abused

b. Predictors: (Constant), Ever sexually abused, Housedys

c. Predictors: (Constant), Ever sexually abused, Housedys, Maltreatment

d. Dependent Variable: SUMIESR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2253.642	1	2253.642	8.926	.004[b]
	Residual	19187.538	76	252.468		
	Total	21441.179	77			
2	Regression	3526.069	2	1763.034	7.381	.001[c]
	Residual	17915.111	75	238.868		
	Total	21441.179	77			
3	Regression	4032.953	3	1344.318	5.715	.001[d]
	Residual	17408.227	74	235.246		
	Total	21441.179	77			

a. Dependent Variable: SUMIESR

b. Predictors: (Constant), Ever sexually abused

c. Predictors: (Constant), Ever sexually abused, Housedys

d. Predictors: (Constant), Ever sexually abused, Housedys, Maltreatment

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	40.922	1.986		20.604	.000	36.966	44.878					
	Ever sexually abused	14.007	4.688	.324	2.988	.004	4.670	23.344	.324	.324	.324	1.000	1.000
2	(Constant)	35.886	2.914		12.314	.000	30.081	41.692					
	Ever sexually abused	12.067	4.637	.279	2.602	.011	2.829	21.304	.324	.288	.275	.967	1.034
	Housedys	4.883	2.116	.248	2.308	.024	.668	9.098	.298	.258	.244	.967	1.034
3	(Constant)	31.679	4.072		7.780	.000	23.566	39.792					
	Ever sexually abused	10.895	4.670	.252	2.333	.022	1.589	20.200	.324	.262	.244	.939	1.065
	Housedys	4.096	2.167	.208	1.890	.063	-.222	8.414	.298	.215	.198	.908	1.101
	Maltreatment	2.529	1.723	.162	1.468	.146	-.904	5.962	.273	.168	.154	.897	1.115

a. Dependent Variable: SUMIESR