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THROUGH THE LENS OF ATTACHMENT: EXPERIENCES OF TRAUMA AND PSYCHOSIS

Section A: What does the current literature tell us about how attachment protects those with an at-risk mental state (ARMS) or who have experienced Brief Limited Intermittent Psychotic Symptoms (BLIPS)? - A Critical Interpretive Synthesis

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Section B: Narratives of psychosis-like experiences: an exploration of trauma, attachment and how people manage

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Summary

Section A is a Critical Interpretive Synthesis of quantitative and qualitative literature which explored the role of attachment in those who were categorised as being at-risk of psychosis or have had brief psychotic experiences. The studies were critically appraised and synthesised to develop key synthetic constructs. Three synthetic constructs were developed in response to the review question. The findings are discussed in the context of previous research with consideration for how attachment can protect those at-risk or who have experienced brief psychosis. Implications for clinical practice and future research are discussed.

Section B is an empirical study of the general population which explores how people manage trauma and psychosis-like experiences. The study inductively analysed participant stories through structural, thematic and literary narrative analyses approaches and deductively considered attachment. Four common narratives emerged: escape, endurance, overcoming and exploration. Factors that help people to manage were identified and included meaning making. Relationships were found to help people manage their experiences as they offered a different relational experience and enhanced attachment security. Clinical impactions are discussed and suggestions for future research proposed.

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Section A

What does the current literature tell us about how attachment protects those with an at-risk mental state (ARMS) or who have experienced Brief Limited Intermittent Psychotic Symptoms (BLIPS)? - A Critical Interpretive Synthesis

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Abstract

As psychosis has become understood to be a trauma-response, exploration of attachment amongst those who experience psychosis has expanded. To date, research has predominantly focused on those with longstanding psychotic experiences. Attachment in those deemed to be at-risk or who have experienced brief psychosis has remained under-researched. Studies have often been limited to investigating attachment styles (particularly the prevalence of insecure attachment) with little consideration for how attachment could be protective for those who are at-risk or have experienced fleeting psychosis. The present review aimed to address this and through a Critical Interpretive Synthesis explored how attachment can protect those who have an at-risk mental state (ARMS) or have experienced brief-limited-intermittent-psychotic-symptoms (BLIPS). The review developed three synthetic constructs; 'secure attachment offers protection', 'resources of the self', and 'resources of others'. The review findings suggested that there are personal factors within an individual, associated with secure attachment, which help protect them against psychosis but also aspects within their relationships (relational factors) that also offer protection.

Keywords: Attachment, protective, at-risk mental state, brief psychosis

Introduction

Note on Terminology

The term psychosis has been noted to be a contested term (Geekie & Read, 2009) with the brain disease rhetoric being challenged. The biological evidence was argued to be unreliable, and it has become recognised that psychosis is a response to trauma (Guloksuz & van Os, 2018). As such, there has also been debate surrounding the most helpful way to describe related experiences (Cooke. 2017). However, the term psychosis remains commonplace within the literature and is therefore used within this review. When used it is not to imply illness but an all-encompassing description of unusual experiences including hearing voices, seeing things others do not, feelings of paranoia, suspicious thoughts, detachment from reality, and holding unshared beliefs (Cooke, 2017). Medicalised language such as, 'delusions', 'clinical', and 'symptoms' (Seery et al., 2021) is prevalent within the research literature and at times may be used in this review (denoted by single quotation marks) to remain in keeping with the original authors' terminology.

Attachment Theory

Attachment theory is underpinned by the evolutionary need for safety and the innate desire for closeness to caregivers, found to offer protection within a threatening world thus, promoting a felt sense of safety and security (Bowlby, 1979). Attachment is defined as a persistent and emotionally significant bond that an individual forms with another who is approached in times of distress (Bowlby, 1973). Bowlby's seminal theory outlined the importance of early relationships, commonly between child and caregiver(s), and how these early experiences of the self in relation to the other can have a significant impact on emotional, psychological, and social development (Bowlby, 1979; Ainsworth & Bowlby, 1991).

Early attachment experiences lead to the development of internal working models (IWM; Ainsworth & Bowlby, 1991), consisting of mental representations of the self and others, forming a framework that conceptualises beliefs about worthiness of care (Atwool, 2007). However, the evidence base for attachment theory has often relied upon observational studies of infants which presents the issue of observer bias and does not account for differing environmental or relational factors of attachment in older children (Fearon & Roisman, 2017).

Initially, the literature focused solely on the infant-caregiver relationship (Ainsworth et al., 1978; Ainsworth et al., 2015), and some psychological processes were found to relate to this bond. Mentalising; the ability to understand the mental states of the self and others is believed to result from appropriate and consistent responses from caregiver(s). Caregiver consistency was also associated with emotion regulation, social interaction, and the formation of identity (Brent & Fonagy, 2014; Fonagy & Alison, 2012). However, there was an acknowledgment that as adults, other people such as siblings or romantic partners, could act as attachment figures (Doherty & Feeney, 2004). An attachment figure can be described as "a target for proximity seeking in times of stress or need" and is seen to offer "comfort, support, protection, and security" (Obegi & Berant, 2009, p. 19). The concept of IWM was built upon to include working model-of-self and model-of-other (Bartholomew, 1990) informing adult attachment styles, comparable to those associated with the infant-caregiver relationships (Ainsworth et al., 1978; Shaver & Hazan, 1987). The Adult Attachment Interview (AAI; George et al., 1985) was deemed to be the gold standard for measuring attachment (Prince et al., 2021) however, use of the interview takes rigorous training so alternate self-report measures are often used although these also come with their own limitations.

For example, research has found self-report measures of attachment may be influenced by a stress-vulnerability that can influence how people perceive their relational dynamics (Ravitz et al., 2010). Attachment styles are defined in Table 1.

Table 1

Attachment style definitions

Attachment style	**Definition**
Secure attachment	Being comfortable with intimacy and a lack of concern about abandonment, linked to a positive working model-of-self and model-of-other meaning someone is confident, trusting, and able to express their emotions and needs (Alexander, 1993; Bartholomew, 1990, Whiffen et al., 1998)
Insecure attachment	The insecure attachment comprises three different types including avoidant, anxious, and disorganised.
Insecure avoidant	Avoidant attachment style can also be known as dismissive and is characterised by a discomfort with intimacy, reluctance to depend on others, and difficulty trusting (Park et al., 2023). Those with an insecure-avoidant attachment style are likely to have a positive model-of-self, although experience a negative model-of-other. They may not experience distress from a lack of closeness and may suppress their emotions (Bartholomew, 1990; Alexander, 1993).
Insecure-anxious	Anxious/ambivalent attachment style, also described as preoccupied, is related to concerns of rejection or fear of abandonment and as such, a desire for closeness. Those with an insecure-anxious attachment style have a

	negative model-of-self but a positive model-of-other and can have difficulty believing they are loved resulting in reassurance-seeking (Shaver et al., 2005, Park et al., 2023).
Insecure-disorganised	Disorganised or fearful attachment was used as a way to describe infants who had an unstructured response to their attachment figure, encompassing traits of both anxious and avoidant attachment styles (Main & Solomon, 1990) as the attachment figure is seen as both safe and a threat. Those with a disorganised attachment style were found to have a negative model-of-self and a negative model-of other and may desire closeness but also be fearful of it, be socially inhibited, and struggle to be assertive (Alexander, 1993).

The AAI also acknowledged that some individuals cannot be classified with an attachment style, referred to as low coherence. Categorised by traumatic attachment or the "absence of significant attachment experiences" (Speranza et al., 2017, p. 618). Often these individuals have a "precarious" sense of self, a fragmented state of mind, and distorted view of a secure base (Speranza et al., 2017, p. 619).

Attachment styles were found to influence the way people respond to adverse life events and in turn also influenced their overall mental health. Insecure attachment was associated with a susceptibility to perceive adverse events as stressful due to a felt sense of insecurity and, perceived lack of internal resources and support. Consequently, increasing the risk of experiencing emotional difficulties (Pielage et al., 2000). Whereas those with a secure attachment were found to be able to tolerate adversity and experience sustained periods of positive emotion (Mikulincer & Shaver, 2007).

It is however important to note Bowlby's attachment theory is not without its' limitations. For example, the notion that attachment in children is stable has been challenged and changes in attachment are arguably the norm as opposed to an exception (Fearon & Roisman, 2017). Attachment theory also predominantly focuses upon the influence of environmental factors yet there is some evidence of genetic influence upon attachment security that should also be considered (Fearon et al., 2014).

Attachment and Psychosis

Historically Bowlby argued that attachment had no relevance to 'schizophrenia' (Berry et al., 2019) as psychosis was seen to be a 'mental illness'. However, the trauma model of psychosis (Bloomfield et al., 2020; Read, 2001; Shevlin et al., 2007) argued that psychosis is a trauma-response. With trauma being broadly defined as relating to both interpersonal adversity such as childhood sexual abuse, bullying etc. and non-interpersonal adversity such as being homeless or experiencing a serious illness (Shevlin et al., 2007), the model proposed that psychosis is underpinned by psychological processes as opposed to biological factors, and thus, attachment was seen to be of relevance. However, the link between trauma and psychosis has arguably relied upon retrospective reporting of traumatic experiences and some have questioned if these reports were influenced by current psychosis (Fisher et al., 2011). However, findings revealed tthat retrospective reports of trauma (including childhood abuse) remained stable and were not influenced by an individual's psychotic experiences (Fisher et al., 2011). Thus, providing validity for the trauma model of psychosis.

It is also important attachment is considered in the context of psychosis as attachment systems are triggered when we seek help for distress and experiences of psychosis can be extremely distressing, leading some people to seek help (Bendall et al., 2007).

Childhood abuse was found to be highly prevalent amongst those with psychosis (Morrison, 2009) and studies have found that experiencing physical or sexual assault as a child is associated with psychosis in adulthood (Janssen et al., 2004; Shevlin et al., 2007). Therefore, given the known influence of maltreatment in childhood upon attachment, attachment theory can help to enhance our understanding of the experience of psychosis.

Attachment has been found to mediate the relationship between trauma and psychosis (Berry et al., 2007; Read & Gumley, 2010). The literature predominantly supports the view that those with psychosis have an insecure attachment style (Berry et al., 2007) and it has been found to be a risk factor for psychosis, associated with the experiences of seeing things others do not (Longden et al., 2012). Similarly, difficulties mentalising were linked to a breakdown in the resilience of those experiencing psychosis (Debbane et al., 2016). Insecure attachment has also been associated with the "sealing over" recovery style whereby the person with psychosis prefers to ignore their psychotic experiences, perceiving them to be separate from themselves with no interest in integrating or making sense of them in the coherency of their life story (Mulligan & Lavender, 2010, p. 270).

Secure attachment has been shown to offer protection against psychosis as those who had a secure attachment had fewer unshared beliefs and were less likely to report feeling suspicious (Dozier et al., 1994). Those with psychosis who had secure attachment were also more likely to adopt an "integrated" recovery style, associated with the ability to understand one's mental state (reflective functioning). This was further associated with good emotion regulation, which was seen to support recovery (Mulligan & Lavender, 2010, p. 270)/

At-risk Mental State (ARMS)

ARMS is a relatively new term within the literature and mental health settings more generally, defined as "a state that confers high, but not inevitable risk of development of 'psychotic disorder' in the near future" (Yung et al., 2005, p. 965).

Individuals with an ARMS can also be described as being at ultra-high risk of psychosis (UHR). They are reported to share similarities to those who experience psychosis in relation to seeing or hearing things others do not, unshared beliefs, detachment from reality, and paranoid thinking. However, the experiences are deemed to be less severe, less frequent, and less enduring (Brew et al., 2018). Classification of the ARMS group was seen to provide a valuable prevention opportunity to stop a proportion of people transitioning to psychosis (Yung et al., 2005). Early detection of those with an ARMS has become a popular prevention strategy with the formation of mental health services specifically targeted at the ARMS group.

The attachment-psychosis research has extended to the ARMS group with 80% of those at-risk having an insecure attachment style (Gajwani et al., 2013). There has also been some recognition of attachment acting as a protective factor as psychotic experiences were found to improve in those who are at-risk and have a secure attachment (Quijada et al., 2015). However, research remains limited and to the best of the researcher's knowledge, there is not a systematic review of the literature pertaining to the protective elements of attachment amongst the ARMS group.

Brief Limited Intermittent Psychotic Symptoms (BLIPS)

BLIPS, a subgroup of individuals deemed to be at-risk, is defined as a group of young people who have a history of fleeting or sporadic psychotic experiences that resolve spontaneously within a week without any intervention (Fusar-Poli et al., 2017), sharing similarities with brief and transient psychosis. BLIPS were also found to share similarities with psychosis-like experiences (PLE). PLE were found to be experienced by the general population and mirrored psychosis (Lee et al., 2016). Little remains known about the course of those who experience BLIPS as the experiences are so fleeting in nature.

There is also little known about the social and demographic characteristics of those who experience BLIPS, including their attachment history. Furthermore, the BLIPS group accounted for less than 10% of those at risk of psychosis (Fusar-Poli et al., 2016) and as such, have rarely been investigated as a single group but in combination with those who are classified as at-risk more generally. Further exploration of those who experience BLIPS and their attachment is needed as this could help to enhance our understanding of the trajectory of psychosis and the role attachment plays.

Review Question

This review aimed to look beyond attachment styles to consider the protective function of attachment and asked the following question: What does the current literature tell us about how attachment protects those with an at-risk mental state (ARMS) or who have experienced brief-limited-intermittent-psychotic-symptoms (BLIPS)?

Methodology

Based on systematic principles, the review conducted a thorough search of available literature across multiple databases, which was then assessed against inclusion and exclusion criteria. The final papers were identified, and the quality of each paper was appraised. Informed by Critical Interpretive Synthesis (CIS) (Dixon-Woods et al., 2006), initial common themes were identified and then further developed to generate synthetic constructs which were critically reviewed to formulate a synthesising argument.

Search Strategy

Initially, a preliminary search was conducted to help identify appropriate search terms. Three relevant research databases were identified: Applied Social Sciences Index and Abstracts; APA PsychInfo via Ovid; and Web of Science.

The search was conducted on 20th October 2023. In the absence of an existing review, no date limitation was set. Boolean operators and truncation symbols (*) were utilised to ensure the search was focused on the research question. A range of search terms (outlined in Table 2) were used to reduce the likelihood of any papers being missed.

Table 2

Search terms

Search terms	attachment OR attach* OR relationship* OR connection* OR interpersonal OR parent* OR caregiver OR developmental OR "early life" OR "early experiences" OR "protective factors" OR protect*
AND	ARMS OR "at-risk mental state" OR "at risk mental state" OR "at-risk-mental-state" OR "risk of psychosis" OR "risk for psychosis" OR "risk to psychosis"
OR	BLIPS OR "brief limited intermittent psychotic symptoms" OR "brief-limited-intermittent-psychotic-symptoms' OR "brief psychosis" OR "transient psychosis" OR "brief psychotic disorder" 0R "brief psychosis" OR "brief psychotic episode" OR "psychosis-like" OR "psychotic-like".

The initial search found that the acronym BLIPS is also an acronym related to HIV therefore, an additional Boolean operation was added of NOT (HIV) to focus the search. Broader terms relating to psychosis were excluded to focus the search on the identified groups. In accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA: Page et al., 2021) guidance, duplicates were removed.

Studies were screened firstly by title, then via the abstract, and then a full-text review was completed with reference to the inclusion and exclusion criteria (Table 3). The reference lists of the identified papers were hand-searched, and two additional papers were found. The search strategy has been illustrated in Figure 1.

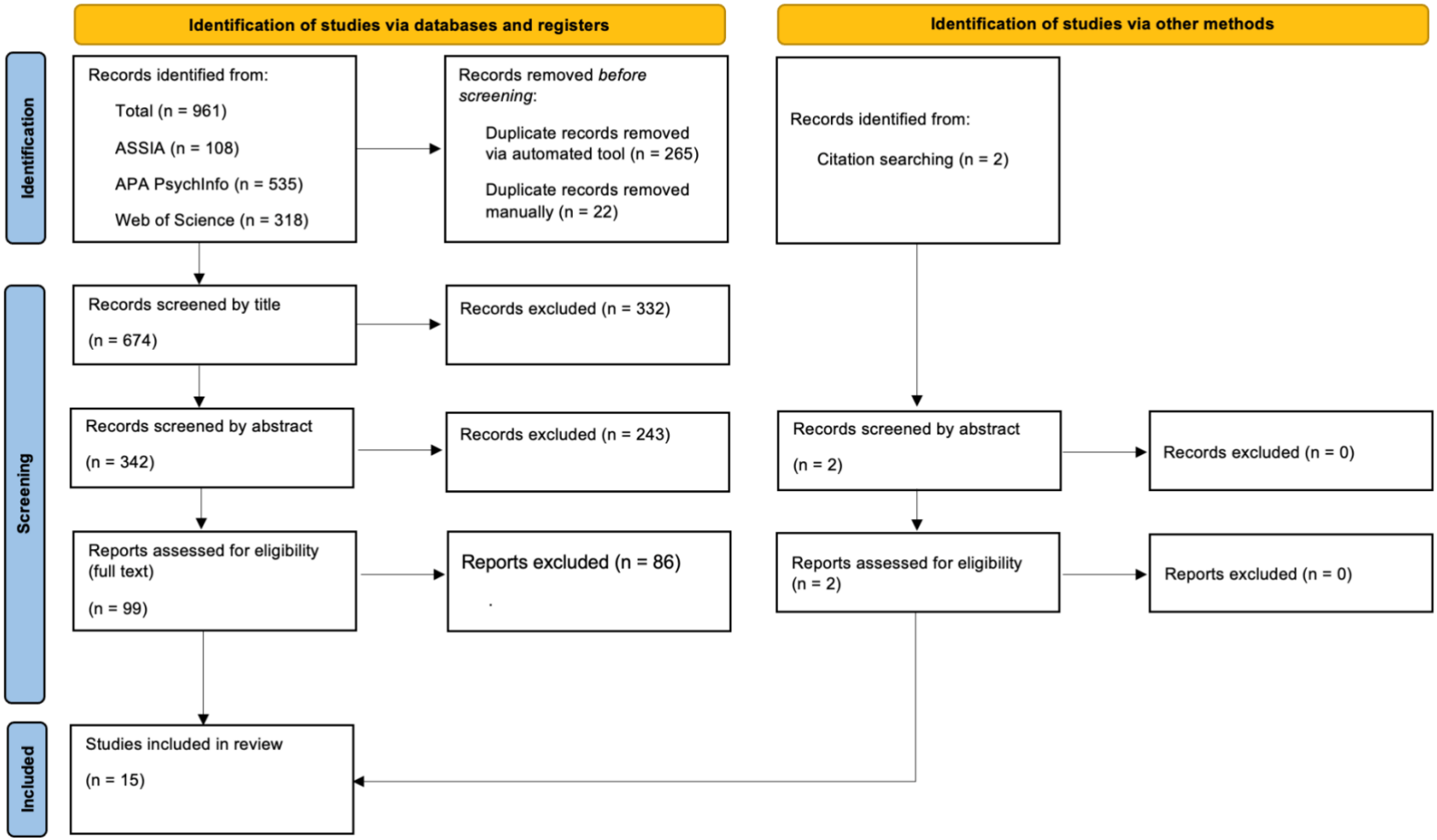
Table 3

Inclusion and exclusion criteria

Inclusion criteria	**Exclusion criteria**
• Papers available in English • Published in peer-reviewed journal • Papers that focused on individuals classified as having an at-risk mental state (ARMS), being at-risk of psychosis, or having had experienced brief limited-intermittent psychotic symptoms (BLIPS) or brief psychosis or psychosis-like experiences (PLE) • Papers that reported on attachment, interpersonal relationships, parenting, or family contexts in relation to the participants' risk of psychosis • Both quantitative and qualitative papers	• Papers that included participants with any diagnosis relating to psychosis including, 'schizophrenia', 'schizoaffective disorder', 'chronic psychosis' or 'first-episode psychosis' • Papers that did not discuss the role of attachment • Papers that did not identify participants as having an ARMS, being at-risk of psychosis, or having had BLIPS or brief psychosis or PLE

Figure 1

PRISMA diagram



Quality Appraisal

Given the varying methodologies of the review papers, two different quality appraisal tools were used to assess the quality of the research: the Critical Appraisal Skills Programme (CASP, 2018) checklist and the Joanna Briggs Institute (JBI, 2017) tool; both often used to assess the strengths and limitations of health and social care research. The CASP checklist was used for papers that fit the criteria for cohort, case-control, or qualitative studies. The JBI tool was used for papers that fit the criteria for analytical cross-sectional or case series studies. Neither checklist used a scoring system but instead provided a helpful way to methodically reflect upon the quality of the papers. To be inclusive and adopt a low threshold for exclusion criteria in accordance with the approach of CIS (Depraetere et al. (2021), no papers were excluded from the review based on quality. Nevertheless, the contribution of lower quality papers to the synthetic constructs was considered and the appraisal was used to aid critical thinking.

Data Synthesis

CIS provides a systematic and empirical method for reviewing both quantitative and qualitative research (Bales & Gee, 2013) as a combination of the two can offer an insightful understanding of the phenomena (Dixon-Woods et al. 2006). CIS aims to critically examine how a phenomenon, such as the protective function of attachment, is constructed within the literature and can provide an example of how a concept is currently understood (Farrelly & Lester, 2014). The synthesis process differentiates itself from other literature reviews as it places emphasis upon its' critical orientation, theory development, and flexibility (Dixon-Woods et al., 2006).

It is important the researcher maintains reflexivity throughout the process so that there is an awareness of the influence of their biases upon the interpretation. The CIS employed in this review was informed by Dixon-Woods et al. (2006) and the iterative process followed is outlined in Table 4.

Table 4

Synthesis process

Stages of CIS	**Application to this review**
• *Detailed inspection of the papers*	All papers included in the review were read and initial reflections were noted.
• *Identification of recurring themes*	Papers were reviewed and recurrent themes were identified and highlighted.
• *Developing a critique*	Papers were reviewed to develop a critique of the literature including studies' limitations and an interpretation of the findings. A study characteristics table was generated.
• *Generation of themes to explain the phenomena*	Initial themes were generated and synthesised.
• *Comparison of theoretical structures across papers*	Papers were critically compared with similarities and differences acknowledged.

• *Specification of synthetic constructs (based upon common themes and critique)*	Synthetic constructs were developed and defined, informed by the themes and critique of the literature (Appendix A)
• *Formulate synthesising argument (Defined by Dixon-Woods et al., (2006) as the integration of evidence from studies included in the review to form a coherent framework displaying the identified synthetic constructs and how they relate to one another).*	A qualitative summary of the review's synthesising argument was written. A theoretical framework was developed, to visually depict the synthesising argument and comprised the synthetic constructs and relationships between them.

Results

After assessing for eligibility, fifteen papers were included in this review. The study characteristics are outlined in Table 5. The reviewed studies included varying samples of those deemed to be at-risk of psychosis, ultra-high-risk (UHR), ARMS, brief psychosis, help-seeking, those in the general population who had experienced PLE, and members of the general population categorised as 'healthy controls'. The studies were conducted in various countries including the United Kingdom, Italy, and China. The majority of studies focused on the experiences of young people or adolescents, in keeping with the literature which recognised that ARMS/BLIPS are more common amongst young people (Yung et al., 2005).

Quality of Review Papers

Fifteen papers were reviewed in total (13 quantitative and 2 qualitative), so the review was notably skewed towards quantitative findings. Fourteen of the review papers were appraised to be of reasonable-good quality with clearly defined aims and appropriate methods used. One paper was deemed to be of lower quality as the follow-up process was not clear, and the influence of confounding variables was ignored (Appendix B).

The way in which papers understood attachment was informed by how they measured participants' attachment styles. The gold standard for measuring attachment, the AAI (George et al., 1985) was only used in one paper and the other measures used varied, making it difficult to compare attachment styles across studies. However, as this was not the main focus of the review this did not present a major issue. Although there was widespread use of validated measures, the majority were self-report which presented a possible responder bias. Similarly, classification of those at-risk was often determined by a single clinician which also presented the issue of bias. Some studies (3, 9, 14) arguably inappropriately used the Psychosis Attachment Measure (PAM; Berry et al., 2006), designed with the intended use to be for those with psychosis only, yet it was used to assess attachment in 'non-clinical' samples. Most papers in the review shared the common limitation of utilising a cross-sectional design and there was a noticeable gap in the evidence base for qualitative and longitudinal research with most papers recommending this for the future. Limitations of each paper are included in Table 5.

Table 5

Study characteristics

Study no.	Author(s)	Pub. year	Title	Participant group(s)	*Measures	Analysis	Findings of relevance to the review	Limitations
1	Boldrini et al.	2020	An attachment perspective on the risk for psychosis: Clinical correlates and the predictive value of attachment patterns and mentalization	110 "help-seeking" individuals Ultra-high risk (UHR) for psychosis (n = 57) Control group (non-UHR) (n = 53)	Childhood Global Assessment Scale (CGAS) Wechsler Intelligence Scale for Children (WISC) Structured Interview for Psychosis-Risk Syndrome (SIPS) Adult Attachment Interview (AAI) Reflective Functioning Scale (RFS)	Chi-squared test to compare attachment pattern distributions of UHR vs. non-UHR T-test to compare reflective functioning (RF) mean scores across groups Correlational analyses (Pearson test) of RF and SIPS in UHR group Hierarchical logistical regression – to evaluate predictive effect of attachment patterns, RF (continuous variable) and variable interactions	UHR – low attachment security and high prevalence of dismissive attachment style No difference between UHR and non-UHR for overall category of disorganised attachment Almost half of UHR – low coherence (rare classification) – could indicate absence of significant attachment in childhood or very traumatic childhood attachment relationships UHR – lower RF compared to controls. RF was negatively associated with attenuated psychotic experiences Preventative treatment aimed at fostering mentalisation, and RF may help to protect UHR from developing psychosis	Methodological limitation of measuring attachment – could be more attributable to participants' current levels of distress associated with psychosis rather than early attachment relationships as we know attachment can change in response to experiences Cognitive domains were not controlled for in the regression model Low mean age of 15.8yrs compared to other studies

							RF = significant predictor of the transition to psychosis. RF could be a marker to differentiate those at risk who are more likely to transition to psychosis Impaired RF/mentalisation relates to a breakdown in the factors that protect against psychosis (resilience). Improving mentalising abilities and therefore resilience may help protect UHR	
2	Rossi et al.	2023	Attachment and resilience as mediators or moderators in the relationship between trauma and psychotic-like experiences	1010 high school students – half directly exposed to traumatic natural disaster; half not directly exposed	International Trauma Exposure Measure (ITEM) Prodromal Questionairre-16 (iPQ-16) 11 item Resilience Scale for Adults (RSA-11) Relationship Questionnaire (RQ) – to measure attachment style	Path analysis	Personal resilience was found to be a mediator of the effect of anxious attachment styles on PLEs Dismissing attachment affects interpersonal resilience as it is associated with negative model-of-other Resilience acts as a buffer against adverse life events which	Reliance on retrospective reporting of traumatic experiences – risk of bias Limited to a single time point Current emotional state of participants unknown – could have confounding effect

							increased risk of psychosis	
3	Russo et al.	2018	Attachment styles and clinical correlates in people at ultra-high risk for psychosis	60 help-seeking individuals referred to local Early Intervention Service (EIS) 60 healthy controls (HC)	Psychosis Attachment Measure (PAM) The Trauma History Screen (THS) The Beck Depression Inventory II (BDRI-II) The Beck Anxiety Inventory (BAI) The Schizotypal Symptoms Inventory Brief Version (SSI)	T tests for comparison of scores between UHR and HC Pearson's correlation for associations between measures	HC had significantly lower anxious and avoidant attachment scores compared to UHR Most prominent attachment style for UHR = anxious Only association was between the schizotypal paranoia construct and anxious attachment style Trauma was not associated with insecure attachment in UHR Measuring attachment in UHR groups may be a useful in understanding how to create the most effective therapeutic rapport as a way to protect against developing psychosis	Cross sectional – limits understanding of the direction of relationship as experience of psychosis could influence attachment Small sample size increasing likelihood of type I and type II errors Significant age difference between groups Sample were help-seeking so not representative of the spectrum of those at risk. Also, as they were willing to seek help, this could indicate some attachment security
4	Gajwani et al.	2013	Attachment: Developmental pathways to	51 participants meeting UHR criteria from youth mental	Structured Interview for Psychosis-Risk Syndrome (SIPS)	Descriptive stats and ANOVA for preliminary analysis	Depression and social anxiety scores were significantly lower in	High prevalence of affective dysregulation may be

affective dysregulation in young people at ultra-high risk of developing psychosis	health service within EIS – comparing to standardised scores of normative data	The Revised Adult Attachment Scale (RAAS) The Beck Anxiety Inventory (BAI) The Social Interaction Anxiety Scale (SIAS) The Social Phobia Scale (SPS) The Beck Depression Inventory	and to investigate association between attachment styles with depression, anxiety and social anxiety Multiple regression analysis to test the mediating relationship between attachment styles	those with secure attachment in the UHR group compared to those with fearful or preoccupied attachment styles Performance anxiety and state anxiety were lower in secure and dismissive attachment styles than those with preoccupied type – UHR Social phobia mediates the relationship between adult attachment and depression in the UHR sample Significant relationship between attachment style and social anxiety was mediated by depression in UHR sample Clinical implications – screening, therapeutic alliance and intervention needs more focus on affective dysregulation as opposed to psychotic experiences in UHR to support recovery	as a result of self-selection/referral bias Single measure of adult attachment may bias results as affective dysregulation could contribute to current working models Adult attachment measure used when a third of the sample is under 18 Cross-sectional

							Secure attachment = positive internal models which aid emotion regulation and reduce anxiety can help those who are at risk of psychosis	
5	Quijada et al.	2012	Attachment style predicts 6-month improvement in psychoticism in persons with at-risk mental states for psychosis	31 patients within ARMS service who met inclusion criteria	Prospective study Measures used: Positive and Negative Symptoms Scale (PANNS) Global Assessment of Functioning (GAF) Relationship Questionnaire (RQ) Mental Health Items List	Paired samples t-test comparing each 'symptom' dimension and functioning at baseline and follow up Pearson's correlation of attachment, 'premorbid' social adjustment (PSA) with baseline measures of functioning Regression analyses to assess the function of attachment in predicting change in psychotic experiences and functioning	Attachment prototypes predicted improvement in psychosis experiences beyond baseline severity and PSA Secure, preoccupied and dismissing prototypes predicted improvement - similarity between the prototypes is that all have at least one positive working model (self or others) Secure attachment was unrelated to baseline measurements of psychotic experiences and functioning but predicted improvement in participants across the 6-month period None of the prototypes predicted an improvement in low mood	RQ has been mainly applied in relation to specific others whereas this study used it as a measure of general attachment Low number of participants

6	Coughlan et al.	2019	Early risk and protective factors and young adult outcomes in a longitudinal sample of young people with a history of psychotic-like experiences	17 young people from general population who reported PLEs in childhood – recruited from Adolescent Brain Development study	Longitudinal data collected from three time points: T1 – Baseline study T2 – Follow up T3 – Qualitative follow up Semi-structured interview lasting from 45mins – 1hr 50mins	Comparative case study for T1-T3 Deductive thematic analysis for T3 interview data	Four archetypes of early risk and protective factors were identified: resilient; transcending adversity; cascades of adversity and trauma; and insecure and ambivalent – highlighted the qualitative difference in early life experiences/later life outcomes of young people who have PLEs. Positive outcomes are possible for those who experience trauma and PLEs – associated with protective impact of adult attachment relationships, good peer networks and opportunity to contribute to society Lack of attachment related to externalising or internalising distress due difficulty regulating emotion as a result of the absence of attachment – exacerbating PLE Secure parental attachment offers a	Strength: addresses some limitations of quantitative research – longitudinal, richer data etc. Subjective bias as data was analysed by one person only Lack of reference to researcher's role or reflexivity

							"buffer" against the effects of multiple early traumas.	
7	Sun et al.	2017	Psychotic-like experiences, trauma and related risk factors among "left-behind" children in China	6632 students – sample was split into three groups based upon current caregiver: one parent, grandparents or other	Community Assessment of Psychic Experiences (CAPE) – positive frequency subscale The Trauma History Questionnaire (THQ) – child version Both measures were translated and validated for the purpose of this study	Descriptive statistics (t-tests and Chi-square tests) to compare the significance of differences between "left-behind" children and other socio-economic status (SES) factors Binary logistic regression – frequency of reports of specific PLE ANCOVA – total number of PLEs, traumatic events and impact were compared between "left-behind" and "non-left-behind" children, controlling for socio-demographic variables Multiple linear stepwise regression analysis – to assess association of correlates of PLE in "left-behind" children	"Left-behind" children experienced a greater number of PLE than those not "left-behind". This group may be correlated with a greater risk of trauma, lower levels of resilience and reduced availability of familial support resulting in a greater vulnerability to PLE. "Left behind" children raised by others were more likely to suffer trauma. No difference between those who were raised by one parent vs. grandparents. Close kinship offered a sense of security, reducing their experience of abandonment and loneliness post parental migration	Self-report questionnaires present a bias Some participants were very young and may not have understood some items Some important information that may impact the mental health of "left behind" children such as, duration of parental abuse, age at separation, education/health status of caregivers, was missing

8	Quijada et al.	2015	Impact of attachment style on the 1-year outcome of persons with an at-risk mental state for psychosis	38 individuals under the care of ARMS receiving "needs-based" psychosocial treatment	Positive and Negative Syndrome Scale (PANSS) Global Assessment of Functioning (GAF) Relationships Questionnaire (RQ) – to measure attachment	Paired samples t-test – comparison between baseline and 12 months on all measures (attachment, 'symptoms' and functioning) Multilevel regression analyses – to assess whether baseline attachment predicted change in psychosis experiences and functioning across three time points Partial correlations – to assess if change in attachment across the 12 months was associated with change in psychosis experiences and functioning	Baseline = majority had fearful attachment. At the end of the follow up, over a third had changed their predominant attachment prototype Those with lower levels of insecure attachment at the beginning of treatment had better outcomes after 12 months of psychosocial treatment Those with secure attachment at baseline experienced greater improvement in functioning at 12 months Attachment in relation to negative view of self – protective therapeutic space is validating and a source of personal confirmation – diminishing negative model of the self and enhance self-esteem	Sample size was limited High attrition rate Attachment was assessed by clinicians but there was no testing of the rater's reliability and their use of the attachment measure Attachment measure is better used as a continuous measure as opposed to providing categories
9	Marlowe et al.	2020	Ontological insecurity II: Relationship to attachment, childhood	N = 298 general population sample – undergraduate students	Ontological insecurity scale (OIS-34) Community Assessment of	Two-tailed tests of statistical significance Correlation analysis for all continuous variables	Ontological insecurity was found to have a stronger relationship to PLEs than childhood	Sample limited to non-clinical group of students with 75% female

			trauma, and subclinical psychotic-like experiences		Psychiatric Experiences Questionnaire (CAPE-42) Psychosis Attachment Measure (PAM) The Parental Bonding Instrument (PBI) Childhood Trauma Questionnaire short form (CTQ-SF) Tobacco, Alcohol, Prescription Medication and Other Substance—use (TAPS-1) Mental Health History Questionnaire (MHHQ)	Hierarchical multiple regression analyses – to assess if ontological insecurity was the strongest predictor of positive PLE	trauma or childhood or adult attachment The relationship between adult attachment and PLE is mediated by ontological insecurity Adult attachment and childhood trauma contributed to low mood in those who experience PLE did not relate to psychosis experiences where the mediating effect of ontological insecurity is observed	Only those who completed all the data were included – suggesting participants included were well motivated and not capturing those who did not complete certain questionnaire items
10	Rossi et al.	2021	Personal and contextual components of resilience mediate risky family environment's effect on psychotic-like experiences	500 university students	Resilience Scale for Adults (RSA) 16-item version of the Prodromal Questionnaire (iPQ-16) Risky Family Questionnaire (RFQ)	Descriptive statistics on demographic variables, RSA iPQ-16 and RFQ Confirmatory Factor Analysis of RSA with Variance-Covariance Maximum Likelihood estimation (ML)	Personal resilience as opposed to contextual resilience, mediates the effects of a risky family environment on PLE Risky family had a substantial impact on contextual resilience however, no effect from contextual resilience to PLEs was observed within the model	Partial overlap between contextual and personal resilience constructs RFQ not previously validated. Some interpretations made may be flawed by the cross-sectional design.

							Personal assets may be weakly affected by environmental factors whilst showing a large impact on PLE	The use of retrospective self-report measures may present recall bias
11	O'Brien et al.	2006	Positive family environment predicts improvement in symptoms and social functioning among adolescents at imminent risk for onset of psychosis	26 patients and primary caregivers – 'patients' = youths at risk of developing psychosis	Camberwell Family Interview (CFI) – primary caregivers Structured Interview for Prodromal Syndromes (SIPS) – youth group Strauss-Carpenter Outcome Scale (SCOS) – youth group	Pearson product-moment correlations for demographic scales (family composition, parent education, employment status, siblings, CFI, SIPS and social functioning scales) Change scores calculated for each 'symptom' and social outcome scale	Higher levels of caregiver emotional involvement, positive remarks and warmth was associated with reduction in psychosis experiences and improvement in social functioning Emotional over involvement may function differently at developmental stages - appropriate in adolescence as it serves a supportive function Positive family environment may potentiate treatment for some	Small sample size Analysis was limited to one key family member (primary caregiver) so other significant contributors to the family environment were unaccounted for
12	Peh et al.	2020	Quality of parental bonding is associated with symptom severity and functioning among	164 individuals at ultra-high risk of psychosis and 510 HC	Structured Clinical Interview for DSM-IV (SCID) Parental Bonding Instrument (PBI)	Chi-squared test to examine how the prevalence of parenting quadrants reported differs across groups	Affectionless controlling mothers were more commonly reported amongst UHR group than healthy controls	Limited to cross-sectional design as retrospective childhood probing can lead to mainly associative

			individuals at ultra-high risk for psychosis		Positive and Negative Syndrome Scale (PANSS) Calgary Depression Scale for Schizophrenia (CDSS) Global Assessment of Functioning (GAF) Social and Occupational Functioning Assessment Scale (SOFAS)	Cluster analyses of PBI factors One-way ANOVA to compare scores across groups Pearson's correlations – associations between parental bonding factors and clinical scales Hierarchical regression to account for covariates	UHR groups were more likely to report rejecting and controlling parents, with limited space for autonomy Paternal overprotection was associated with worse 'clinical' and functioning outcomes in UHR group	conclusions rather that causative Construct validity of PBI – self-report of parental experiences may not accurately reflect parental or attachment styles Age, sex and history of 'psychiatric illness' was significantly different across groups
13	Blair et al.	2018	Relationship between executive function, attachment style, and psychotic like experiences in typically developing youth	52 typically developing youth	Structured Clinical Interview for DSM-IV Non-Patient Version (SCID-NP) Kiddie-Schedule for Affective Disorders and Schizophrenia – Present and Life-time Version (K-SADS-PL) Community Assessment of Psychic Experiences (CAPE) Behaviour Rating Inventory of Executive Function Self-report Version (BRIEF-SR)	Two hierarchical multiple regressions – BRIEF-SR total interacted with EICR-R-GSF to separately predict psychotic experiences vs. low mood/distress Two separate stepwise regression models Age, sex and ethnicity differences were examined using relevant tests	Greater executive-functioning deficits and high attachment insecurity predicted increased endorsement of both positive and negative PLEs. Higher levels of PLE were predicted by greater difficulty recognising impact of one's behaviour (mentalising), less difficulty completing tasks, greater difficulty regulating emotional reactions, greater difficulty controlling	Findings may not be specific to psychosis but a general combination of behavioural difficulties in children with increased adversities All measures were taken at a single time point so ability to conclude a causal relationship between these variables are limited

					The Experiences in Close Relationship Scale – Revised – General Short Form (EICR-R-GSF)		impulses and higher attachment anxiety. Higher levels of PLE were predicted by greater difficulties altering attention and transitioning across situations, greater difficult regulating emotional reactions and higher attachment anxiety Unlike individuals with 'schizophrenia', it is attachment anxiety rather than attachment avoidance that was predictive of PLE – suggesting that the difference between attachment anxiety and avoidance may partially explain why psychosis experiences do not intensify	
14	Gaweda et al.	2018	Self-disturbances, cognitive biases and insecure attachment as mechanisms of the relationship between traumatic life	690 participants – general population with PLE	Prodromal Questionnaire (PQ-16) Traumatic Events Checklist (TEC) Psychosis Attachment Measure (PAM)	Confirmatory factor analysis – latent variables (traumatic life events, basic self-disturbance, cognitive biases, attachment styles and PLE)	Significant direct effect of exposure to traumatic life events on PLE – mediated by cognitive biases Anxious and avoidant attachment styles were	Limited to cross-sectional design 'Psychiatric' history was only verified via self-report Sample had high proportion of female participants

			events and psychotic-like experiences in non-clinical adults – A path analysis		Inventory of Psychotic-like Anomalous Self-experiences (IPASE) Davos Assessment of Cognitive Biases Scale (DACOBS)	Pearson's correlation – relationship between variables	related to traumatic life experiences Traumatic life experiences related to anxious attachment styles indirectly through cognitive biases Traumatic life events may have a stronger impact on self-disturbance than cognitive biases	
15	Byrne & Morrison	2010	Young people at risk of psychosis: a user-led exploration of interpersonal relationships and communication of psychological difficulties	8 individuals under the care of an Early Detection and Intervention Service based in the UK	Semi-structured interviews	Grounded Theory approach	High-risk individuals experienced significant difficulties with interpersonal relationships which contributed directly to the development of unusual experiences and an inability/reluctance to communicate these experiences to others Three key themes were identified: Difficulty with interpersonal relationships and reduced opportunities for communication; Reluctance to disclose unusual psychological problems; Disclosure	Relatively small sample Self-selected participants so may be biased by this – does not account for those within the EI service who chose not to engage Sample were all White-British – not applicable to wider population

		of unusual psychological problems: cost and benefits Participants fear of "going mad" had contributed to the development and maintenance of psychological difficulties as it had delayed help-seeking. Positive experiences of disclosure to others had helped to reduce anxiety and distress.

**References for the original measures can be found in Appendix C.*

Synthesis Findings

This review found that the papers predominantly focused on attachment styles of the ARMS/BLIPS groups. Papers highlighted that an insecure attachment style was a possible risk factor for experiencing psychosis (3, 4, 5, 6, 8, 14) with some acknowledgment that secure attachment could potentially offer protection for those at-risk (4, 5, 6, 8).

Synthetic Constructs

Informed by the review papers, three synthetic constructs were developed including 1) 'secure attachment offers protection', 2) 'resources of the self' (personal factors), and 3) 'resources of others' (relational factors). The critical synthesis found hat childhood trauma was commonly related to experiences of psychosis in the ARMS/BLIPS groups (2, 3, 6, 7, 9, 14). This may be because childhood trauma could potentially be as a result of the caregiver and possibly be associated with the absence of the opportunity to build attachment (neglect) or presence of traumatic attachment (abuse). It could therefore be suggested that the child learns the world is unsafe and becomes mistrusting of others, increasing suspicion which could potentially later manifest as psychosis.

1) Secure attachment offers protection

All review papers contributed to the development of construct 1. The construct illustrated how having a secure attachment can protect ARMS/BLIPS groups from psychosis. For example, individuals with insecure attachment, possibly due to their childhood trauma (2, 3, 6, 7, 9, 14), may have difficulty making sense of their experiences. This may potentially be because their caregiver was absent, inconsistent, neglectful, or abusive, and as infants, they did not get consistent feedback about the safety of the environment or felt emotion. As such, they may have become primed to perceive the environment or felt emotion of everyday experiences as threatening e.g.: the interpretation that noise from downstairs is someone

breaking in and coming to get them as opposed to conceptualising it to be a door banging because of a draft. This may potentially lead to increased suspicion and paranoia of the environment. Whereas secure attachment helps an infant to make sense of their experiences through consistent feedback. This aids emotion regulation and teaches the infant the environment and felt emotion are safe. This co-regulation is then internalised which can enable the more appropriate meaning making of felt emotion. Possibly reducing the overall level of threat felt, in turn potentially alleviating feelings of paranoia or beliefs such as "people are out to get me".

This construct also illustrated how secure attachment offers protection through various psychological processes (1, 2, 7, 10). For example, poor reflective functioning/mentalising, associated with insecure attachment, was found to be a predictor of those at UHR transitioning to psychosis (1). It is therefore conceivable that those who lacked the ability to reflect and utilise mental state information to understand themselves and others may have worsening psychotic experiences. This could potentially be because mentalising enables people to reach appropriate inferences about themselves and the people around them. Thus, if someone can mentalise they may be less likely to misinterpret the behaviour of others, possibly reducing the likelihood of reaching distorted perceptions or suspicion-based beliefs (e.g.: "there is a conspiracy against me").

Papers 2, 7, and 10 suggested how attachment protects is via secure attachment aiding in the development of resilience, with recognition that by harnessing resilience amongst those who have an insecure attachment style and are at-risk, psychotic experiences may possibly be reduced (2, 10). This could be because resilience (developed through early safety-confirming experiences via caregiver responsiveness and consistency) may be associated with the self-representation: "I am safe in the world". Upholding this belief could enable someone to feel as if they can cope with adversity (are resilient).

Therefore, if they experience BLIPS, it is arguably plausible the knowledge that they are safe and can in turn cope could be utilised to develop more adaptive trauma responses as opposed to manifesting in psychosis. This review found further psychological processes of secure attachment is how attachment protects those at-risk, which led to the development of further constructs.

Construct 1 further illustrated how attachment protects may be in the context of therapeutic intervention for the ARMS/BLIPS groups. For example, if a therapist knows someone has insecure attachment, how they engage with the individual could be tailored to their attachment needs e.g.: those with an insecure attachment could potentially benefit from consistency in terms of appointment time, location, how they are greeted, etc. In doing so, the therapist makes the environment predictable and in turn, offers a felt sense of safety. Through developing a sense of safety, the individual may begin to feel less under threat, reducing the activation of their trauma-response (psychosis). Moreover, if the therapeutic relationship can provide the opportunity to form an attachment bond whereby trust in others is established, this may help to protect the ARMS/BLIPS groups from further psychotic experiences (3, 4, 5, 8, 15). This could possibly be because by establishing trust in others, the person may begin to build a more positive model-of-others and feel safe enough to talk about their experiences. This could provide an opportunity for reality testing and possibly develop new shared meaning of their unusual experiences.

How attachment protects was also depicted by construct 1 as secure attachment enabled people to seek support, described in the papers as “help-seeking” (1, 3, 15). Those who have secure attachment could have learned from the consistency of their caregiver that they are worthy of care. As such, perceiving themselves as worthy of care may potentially encourage them to seek help (following a traumatic experience or emergence of PLE) as they believe they are deserving of it.

By seeking out help when in need, the at-risk individual may have access to intervention earlier on in the trajectory of their psychosis and this could possibly reduce the likelihood of experiences worsening. Similarly, if an infant's needs were reliably responded to in times of distress, the individual learns that it is okay to express distress as it will be appropriately responded to. Therefore, those in the ARMS/BLIPS groups who have a secure attachment may be protected as they may be more readily able to express when they are distressed, which would let others know and help them access support.

2) Resources of the self (personal factors)

The second construct was developed from the review finding that psychological processes, attained through secure attachment, was potentially how attachment protects the ARMS/BLIPS groups and related to a person's internal resources.

Aforementioned, resilience was found to be a psychological process that contributed to how attachment protects. Broadly it was defined as "one's ability to cope with difficult situations, bouncing back to a pre-stress state" (Rossi et al., 2023 p. 37). Papers described resilience as comprising two elements: personal and interpersonal/contextual (2, 3, 10, 14). Personal resilience was connected to attributes of the self which included having a positive outlook, upholding a routine, organising one's environment, and being socially competent (2). These attributes arguably relate to the maintenance of stability in one's life. This could have potentially been established from having a stable environment as an infant meaning they experienced a felt sense of security in their surroundings, others, and in turn themselves. This felt sense of stability/security could possibly mean those at-risk with secure attachment may be able to stabilise themselves e.g.: rationalise that BLIPS are not real, regulate their distress levels and if they are less distressed by the brief psychotic experiences, the experiences may be more likely to pass.

Conceptualised as an asset attained via secure attachment, personal resilience was also found to help young people adapt to adverse experiences. Successful adaptation to adversity was found to moderate the risk of psychosis (1, 2, 10). Adaptive coping strategies could arguably feel more accessible to those with a secure attachment because they have early experiences of emotional containment (e.g.: when they fell over as a child, they would cry and then be soothed by their caregiver). Therefore, they understand that they can manage distress associated with adversity and have support from others in doing so. If someone within the ARMS/BLIPS groups has not had these early experiences they may potentially suppress their emotion which theoretically could give rise to unexpressed emotions manifesting in other ways such as psychosis. As personal resilience was found to help those at-risk to adapt (2. 10), it may also help people successfully adapt to BLIPS and not require intervention. For example, someone who feels safe could utilise their attachment figure to test out their BLIPS and as that person is trusted, they may be more likely to believe them if they disprove the things they are seeing or hearing.

Another internal resource found in the review was one's sense of self. This included how someone perceives themselves (self-perception) (5) and this concept was developed from recurrent themes in the papers of self-worth, self-esteem, self-schema, and the working model-of-self (2, 4, 6, 8). Negative self-perception was found to be associated with an increased risk of psychosis and this was reflected in the depiction of ontological insecurity (9). Defined as upholding the perception that the self lacks "coherence and consistency precariously separated from the body, others, and the world" which "disintegrates into psychosis" as a result of critical and inconsistent behaviour from attachment figures (Marlowe et al., 2020, p. 442).

This could be because the critique and inconsistency from caregivers meant a sense of self (identity) could not be formed as there was a lack of co-regulation and mentalising thus, the person had difficulty inferring their mental state in the world. This could in turn mean that there is greater susceptibility to 'disintegrate' and detach from reality as it is not experienced as part of the self. Whereas, having secure attachment may aid in the development of a coherent sense of self. Consequently, the self makes sense in the world so there is less likelihood of the self 'disintegrating', and the person is potentially protected from detaching from reality.

The fear of being rejected and unloved by others negatively influenced self-perception and was often expressed by the UHR group (1). Conversely, feeling accepted and loved (secure attachment) is related to greater self-perception. In turn, greater self-perception allowed people to be more socially integrated which protected them from isolation and the associated increased risk of psychotic experiences (4). This could be because enhanced self-perception means the person has developed the skills (emotion regulation, reflective functioning, personal resilience, etc.) needed to effectively integrate with those around them. By being socially integrated, the young people at-risk have access to a peer network, where they can potentially test out their beliefs. Moreover, if someone was not socially integrated (due to insecure attachment) and in turn were more isolated, their exposure to relating to others and engaging in co-regulation, mentalising, etc. may be reduced and this may lead to misinterpretations, possibly making them more paranoid about others' intentions and potentially giving rise to psychotic experiences.

The internal resource of self-perception, developed via secure attachment, was also found to protect adolescents at-risk as good self-perception enabled them to regulate their emotions.

Effective emotion regulation was found to support the reduction of anxiety and enhanced the teenagers' moods, associated with improved outcomes of their psychotic experiences (1, 4). This could be because good emotion regulation is associated with appropriate expression of emotion reducing the likelihood of suppressed emotions manifesting in other ways such as in the form of voices. Similarly, if the adolescents are feeling less anxious in the world, they may feel more able to apply their knowledge of the self in social situations to infer the intentions of others, and being able to do this may mean they reach appropriate interpretations, potentially reducing distorted perceptions. It can therefore be suggested that how attachment protects is arguably by 'resources of the self' enabling someone to remain connected to reality as their self-state, state of others and the world can be understood. This also supports the person to integrate, as they have developed the psychological processes to do so, which offers a network where they can potentially test out their beliefs.

3) Resources of others (relational factors)

Although how attachment protects was associated with personal resources, it is a relational concept, and the personal factors found in the review inevitably exist in the context of relationships. As such, the third construct: 'resources of others' was developed. This construct captured the relational factors (what relationships provide the individual with) and included interpersonal resilience, social connection, and the presence of an attachment figure. There was significant overlap between personal and relational factors which arguably reflects the complexities of attachment and IWM whereby representations of the self and others co-occur. The review's theoretical framework attempted to depict this.

The value of the presence of an attachment figure was acknowledged by multiple papers (1, 4, 6, 7, 9, 11, 12, 15). For most, the absence of a caregiver was commonplace amongst those at-risk.

Some UHR participants' attachment could not be classified (low coherence), associated with the absence of an opportunity to form an attachment bond with the caregiver (1). Conversely the presence of an attachment figure, with the opportunity to form a bond, could potentially mitigate risk and provide protection for ARMS/BLIPS groups as their proximity provides a felt sense of safety. This was arguably supported by qualitative findings with those classified as being 'low risk and resilient' describing the value of having a present attachment figure (6). Other papers (7, 11) also recognised how the warmth and positive remarks communicated by a present attachment figure offered protection. This was found to aid social functioning (11). This may be because the warmth and positive remarks generate a positive representation of others. Thus, individuals are able to function socially as they view others favourably (positive model-of-others). In turn by maintaining social functioning, they can also maintain a positive working model-of-others through reciprocity. Therefore, psychosis experiences could possibly be reduced because they continue to feel connected to others as opposed to becoming disconnected.

Nevertheless, how attachment protects via the presence of an attachment figure was found to not be by presence alone (12). Attachment figures who were present but were experienced as controlling or over-protective (linked with anxious attachment) and did not provide space for autonomy, were associated with having an ARMS and "ineffective coping skills" like externalising of problems (Peh et al., 2020, p.28). This may be because the lack of independence meant the child did not have the opportunity to establish a sense of identity in the world and upholds a negative model-of-self. This could have possibly meant that they have difficulty integrating their experiences and instead potentially externalise experiences in the voices they hear or things they see. Therefore, it is arguably the presence of an attachment figure in combination with warmth, care, and promotion of independence that supports the development of a positive model-of-self that may protect against psychosis.

Social connection was also found to be a relational factor of how attachment protects and was illustrated by the third construct. Social connection was closely related to interpersonal/contextual resilience, described as, social support, social connectedness, and family cohesion (2). It was found to have a moderating influence on trauma upon PLE. This could be because if the network around someone is resilient, this may offer a "buffering effect" (Rossi et al., 2023, p. 42) against traumatic experiences as overall felt safety is maintained despite adversity challenging this. Originally in this review, social connection emerged in conjunction with personal factors, associated with emotion regulation. However, further synthesis found it could also be conceptualised within resources of others as it was deemed crucial for those at-risk (4).

Secure attachment was found to be associated with reduced levels of social anxiety and those who were less anxious in social settings were better able to establish social connection (4). If someone had better social connections, they arguably may have more opportunity to test out their perceptions and beliefs and thus reduce the risk of psychosis. Likewise, if someone struggled to orientate their self in social settings because of anxiety, this could possibly lead to a detachment from reality as an avoidance strategy as a way to cope. Whereas secure attachment may enable people to be socially connected because they have been taught via their early experiences that others can be trusted (6).

Overall, the synthetic constructs developed through this review provided some insight into what the literature currently tells us about how attachment protects the ARMS/BLIPS groups. The critique of the literature was synthesised to formulate a synthesising argument. A framework was also created to provide a visual depiction of the synthesis findings and how the constructs related to one another (Figure 2).

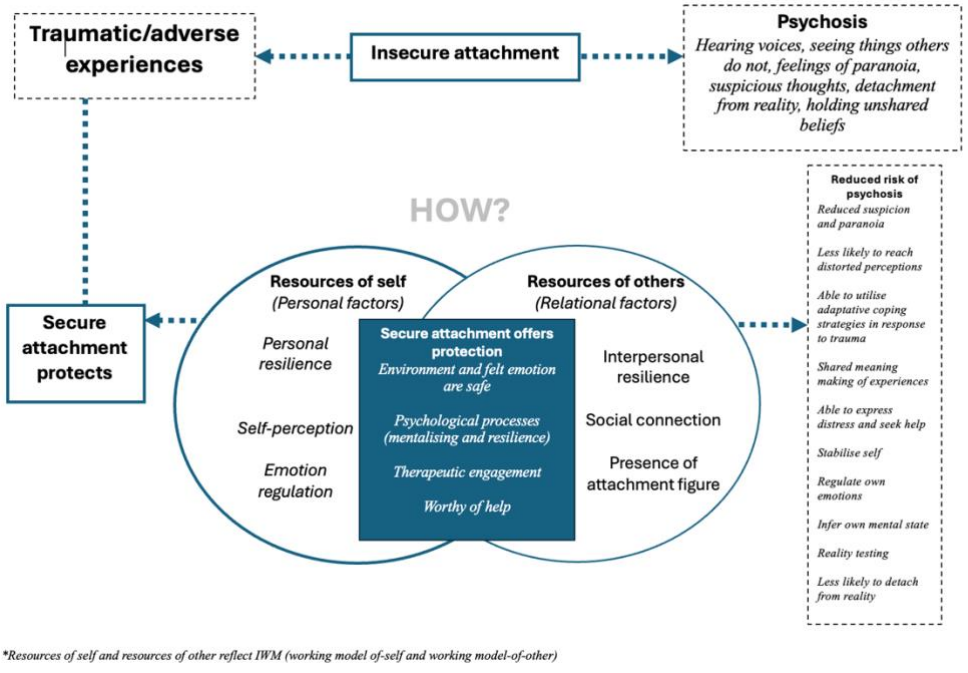
Synthesising Argument

In response to the review question, this critical synthesis proposes that how attachment protects ARMS/BLIPS groups is through secure attachment and a number of personal and relational factors that all interlink.

Arguably how attachment protects is by secure attachment providing the learning that the environment is safe, enhancing psychological processes (reflective functioning and resilience) and promoting worthiness of care which may enable expression of distress and encourage people to seek help. How attachment protects is also by the personal and relational factors associated with secure attachment including resilience, self-perception, social connection, and the presence of an attachment figure. All the above arguably support individuals to regulate their emotions, understand their own mental state and the state of others, provide various opportunities to test out their perceptions, and remain orientated to the world and reality. In turn, encouraging adaptive coping mechanisms and potentially reducing the likelihood that when faced with adversity, psychosis will emerge as a trauma response.

Figure 2

Theoretical framework



Discussion

This is the first interpretative review that has explored how attachment protects those with an ARMS or who have experienced BLIPS. The review aimed to move beyond attachment styles and find out what the current literature tells us about how attachment protects the ARMS/BLIPS groups and in turn, further enhance our understanding of the role of attachment in relation to psychosis as a trauma-response.

Informed by Dixon-Woods et al. (2006), CIS allowed for the review of both quantitative and qualitative research so that objective and subjective findings could be synthesised, and critical interpretations could be drawn about the protective function of attachment. The synthesis led to the development of three constructs 'secure attachment offers protection', 'resources of the self', and 'resources of others'. The synthesis will be discussed in relation to existing literature. Strengths and limitations of the review will also be discussed with consideration for the implications for clinical practice and future research.

In keeping with the current literature (Berry et al., 2007; Gajwani et al., 2013), this review found that insecure attachment was one factor that increased the risk of psychosis. The construct 'secure attachment offers protection' illustrated how attachment can protect the ARMS/BLIPS groups by reducing the likelihood of everyday experiences being appraised as threatening because the environment is understood to be safe. This aligned with previous research (Mikulincer & Shaver, 2007; Pielage et al., 2000) as the influence of attachment was proposed to protect against an individual being primed to perceive events as stressful. How attachment protects ARMS/BLIPS groups was also found to be potentially through positive early experiences of distress expression whereby it was learnt that expressing distress is safe, possibly enabling people to access help when distressed by their psychotic experiences (Bentall et al., 2007).

The ‘resources of the self’ construct illustrated how caregiver consistency may aid in identity formation (sense of self) (Brent & Fonagy, 2014) which may protect by enabling someone to function socially and remain connected to others and reality. ‘Resources of others’ depicted the value of a warm and present attachment figure (Obegi & Berant, 2009) and how this can provide the opportunity to test out beliefs and potentially mean someone is more inclined to trust when challenged on unusual experiences.

As depicted in the theoretical framework, the review findings were also consistent with previous trauma-psychosis research as the experience of trauma, particularly adverse childhood experiences (ACEs; Shevlin et al., 2007) were connected to psychotic experiences in the ARMS/BLIPS groups (Marlowe et al., 2020), arguably providing support for the trauma model of psychosis (Guloksuz & van Os, 2018; Read 2001). As previously found amongst those with psychosis (Morrison, 2009) childhood abuse and neglect were also highly prevalent amongst the ARM/S/BLIPS groups. This review proposed that this could be because such traumatic experiences can be difficult to make sense of, influence how experiences are appraised and without the protection of reflective functioning (via secure attachment) could potentially manifest in psychosis. Similarly, the critical synthesis proposed how attachment protects is by secure attachment providing the opportunity to emotionally co-regulate/mentalise with another. In doing so, felt emotion is arguably experienced as safe, and appropriate inferences of the self and others can be made, meaning a reduced sense of threat may be experienced (Ainsworth et al., 2015). From the perspective of the trauma model of psychosis, it could therefore be argued that the distress associated with trauma could be reduced through effective emotion regulation. In the absence of this, unprocessed trauma memories may not be well understood (in relation to the self or others) and as such, could possibly emerge in symbolic form in the voices people hear (Longden et al., 2012).

The review further supported the trauma model of psychosis as the synthetic constructs depicted the influence of various psychological processes associated with secure attachment including resilience, mentalising, emotion regulation, etc. (Brent & Fongay, 2014) upon the frequency and occurrence of psychotic experiences. The review also found how secure attachment protects is through psychological processes such as mentalising which aligns with the 'integrated' recovery type (Mulligan & Lavender, 2010). Similar to an integrated recovery type, those who are at-risk or experience BLIPS and have a secure attachment may be protected by their ability to mentalise as it enables them to understand their mental state in relation to others and in turn, integrate their experiences as part of the self. Likewise, review findings supported the concept of the 'sealing over' recovery type whereby a lack of secure attachment and difficulty understanding one's experiences (due to a lack of the psychological processes) may manifest in a detachment from reality or externalisation such as in what people hear or see. However, it is important to acknowledge the trauma model of psychosis is one of multiple explanations for experiences of psychosis and some psychosis experiences may be as a result of acute intoxication or as a result of a brain injury. This review did not account for these different explanations. Likewise, attachment is one of many biopsychosocial factors which may influence how experiences of psychosis manifest and other factors such as cognitive bias were not explored in this review.

Strengths and Limitations

This review was the first of its kind and presents a novel addition to the current literature base. The review moved away from the literature's focus on the vulnerability and detriments associated with psychosis and instead came from a more strengths/resources-based standpoint. CIS offered this review breadth as it included both quantitative and qualitative research. However, this did make it difficult to compare findings given the varying methodologies used.

As such the review utilised reciprocal translational analysis (Dixon-Woods et al., 2006) to translate the findings of the papers into one another to systematically compare the findings. The flexibility CIS provides is deemed to be one of the approach's biggest advantages (Depraetere et al., 2021). It provided this review with the opportunity to synthesise the relatively limited pool of papers and draw interpretations which can help to enhance our understanding beyond attachment styles. Nevertheless, flexibility is also argued to be one of CIS greatest weaknesses as it can be seen to present some ambiguity in relation to how it is applied to wider research. Further guidance is needed to aid the application and reporting of CIS findings in the wider literature (Depraetere et al., 2021). However, CIS was deemed to be most appropriate for this review as by simply reporting the findings from the current literature, no "new insight" (Dixon-Woods et al., 2006, p. 11) could be gained about the phenomenon of attachment in those at-risk or who have experienced BLIPS. The construct 'resources of the self' could be accused of being unhelpful as it arguably individualises difficulties in the person and could lead to self-blame (e.g.: if someone perceives themselves to not be resilient enough). Nevertheless, this review specified that the personal factors exist in the context of wider relationships which hopefully would help to contextualise the problem and reduce the likelihood of self-blame.

As expected of an interpretative review, this review relied upon the researcher's interpretation of the papers which will be biased by their prior experiences, values, clinical background, etc. For example, the researcher is in support of the trauma model of psychosis (Shevlin et al, 2007) which means they may have been more drawn to ideas relating to the influence of adversity in the papers. Also, as part of the critical interpretation, some larger leaps had to be made to reach inferences about how attachment protects from the papers' reporting of attachment styles. As Fusar-Poli et al. (2016) previously identified, most of the review papers did not differentiate the experience of BLIPS from other at-risk groups.

As such, a more detailed interpretation of the potential differences between the varying frequency and severity of psychosis experiences and how attachment may protect at the different time points was not possible. Furthermore, many of the papers continued to use medicalised language and medicalised measures such as the PANNS (Kay et al., 1987) to determine the frequency and severity of participants' psychotic experiences. As such, the synthesis resulted in the interpretation of medicalised descriptions of 'symptoms' in order to conceptualise the experiences of participants in the trauma model of psychosis.

Clinical Implications

As secure attachment offers protection, clinicians supporting ARMS/BLIPS groups may seek to better understand an individual's attachment at the point of assessment. Ideally, this would be done by using the AAI (George et al., 1985). However, with recognition of the cost and time associated with training staff to use the interview, a validated self-report attachment measure could suffice to provide some insight into the person's relational experience. Similarly, ARMS services would benefit from offering a young person at-risk a 1:1 relationship with an allocated clinician that will last the duration of their time within the service. This would offer consistency in care and provide an opportunity to develop an attachment relationship, enabling a felt sense of safety to be established which could protect from worsening psychotic experiences. This should also continue to be fostered within psychological interventions with emphasis upon the development of therapeutic alliance as this could in turn reflect the presence of an attachment figure. This could further enhance personal resources which could help to protect those at-risk. Services should also consider this approach more widely given this review has found that how attachment protects is associated with a person's worthiness of care (Atwool, 2006).

Services should implement processes (e.g.: adopting a trauma-informed approach to care) that can support people to feel worthy of care, as this may encourage help-seeking when distressed, maintain engagement, and support them to talk about their experiences. This in turn could provide opportunities for co-regulation which may also offer further protection. It may also be worthwhile to adopt a systemic approach to preventative models of care and interventions whereby a person's family, particularly identified attachment figures, are more involved (O'Brien et al., 2008) as this may also help to protect the at-risk group. Although it is important services adopt a trauma-informed approach in doing this (Bloomfield et al., 2020). This could help services to be mindful of the presence of any trauma or how the attachment figure is experienced as interpersonal difficulties or overbearing caregivers could be unhelpful as opposed to protective.

Future Research

This review showed that further research is needed in relation to the protective function of attachment amongst ARMS/BLIPS groups as currently the literature focuses upon attachment styles. Although this can provide helpful learning and demonstrate the importance of attachment, exploring the processes within attachment would further enhance our understanding of attachment in those at-risk or who have experienced BLIPS as shown by this review. Qualitative research would help to enrich the literature base and add experiential substance to the quantitative findings through the life stories of those who experience psychosis. This could further enhance our understanding but also possibly help to challenge the medicalisation of such experiences. It may also be useful to explore the experiences of those who have previously experienced PLE but have managed to learn what protected them from developing psychotic experiences that overwhelmed them and the role of their relationships.

Future reviews may wish to widen the search to include other psychological theories which may give further insight into the psychological processes related to psychosis.

Conclusion

Through CIS this review built upon the existing literature and explored how attachment can protect those deemed to be at-risk or who have experienced BLIPS. It provided an enhanced understanding of the protective function of attachment through the development of three synthetic constructs; 'secure attachment offers protection', 'resources of the self', and 'resources of others'. The review findings highlighted clinical implications and directions for future research. ARMS services could focus interventions on those that foster good therapeutic rapport to provide the opportunity to strengthen attachment and in turn enhance protective psychological processes (resilience, self-perception, emotional regulation, etc.). Future research is needed to understand more about how attachment protects, and qualitative research would help to enrich the current evidence base. Future studies could focus on those who have had PLE and managed to understand how attachment possibly protected them.

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Section B

Narratives of psychosis-like experiences: an exploration of trauma, attachment and how people manage

Word count: 7245 (320 additional words)

For the Journal of Psychosis: Psychological, Social and Integrative Approaches

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Abstract

The trauma-psychosis relationship has become well established in the literature, e.g. through the dose-response hypothesis. This has included the connection between traumatic experiences and psychosis-like experiences (PLE) within the general population. The literature has recognised that psychosis/PLE are commonly associated with childhood trauma and that this relationship is influenced by attachment, e.g. those with PLE have been found to be more likely to have an insecure attachment style. Conversely secure attachment has been found to help people manage trauma, and as psychosis can be understood as a trauma-response, secure attachment can also be protective for those with PLE.

Through a narrative approach, this study explored traumatic experiences and PLE in the general population and considered how these experiences were managed, through the lens of attachment. Common narratives included escape, endurance, overcoming and exploration. Relationships were mostly depicted as helping people manage their experiences. However, the narratives also highlighted how relationships can be unhelpful, and even exacerbate distress, amongst those who have a trauma history and PLE. The study highlights areas of consideration for clinical practice and draws attention to the value of providing space to hear the stories of those who have experienced trauma and PLE.

Key words: psychosis-like experiences, trauma, attachment, narratives

Introduction

Note on Terminology

Psychosis and/or psychosis-like experiences (PLE) are terms used to describe the phenomena of hearing or seeing things others do not ('hallucinations'), holding unshared beliefs ('delusions'), paranoia, suspicious thinking and disconnection from reality (Cooke, 2017). Long associated with the hypothesis that the experiences outlined above are 'symptoms' of a 'mental illness', psychosis continues to be conceptualised in this way within some literature (Read et al., 2009). Yet there has been a shift away from the medical model with a growing understanding that psychosis and/or PLE are a response to trauma (e.g. Romme & Escher, 2011). This study will use the terms psychosis and PLE interchangeably to encapsulate a wide range of unusual experiences as an expression of post-traumatic distress, not to imply illness. Previous research may have used different terms (e.g. 'sub-clinical', psychotic experiences, or psychotic phenomenon) and when referring to said research, this paper will use the terminology originally adopted by the authors. Medicalised language will be denoted by single quotation marks.

Psychosis Continuum

Historically psychosis has been pathologised, associated with 'psychotic disorders' such as 'schizophrenia' (Boyle, 2021). The dominant narrative of psychosis being a 'mental illness' has been found to generate anxiety (Picchioni & Murray, 2007), with societal stigma remaining a prominent issue (Eliasson et al., 2021). However, experiences of psychosis are common and hearing voices have been found to have a lifetime prevalence of 16% (Longden et al., 2012) whilst paranoia is experienced by up to 30% of people (Bebbington et al., 2013).

Moreover, the notion that experiences of psychosis exist on a continuum with everyday experience has gained traction and is becoming an accepted idea (DeRosse & Karlsgodt, 2015; Guloksuz & van Os, 2018).

The psychosis continuum has been proposed to be dimensional, as opposed to categorical, encompassing a range of experiences from PLE in the general population, to those deemed to have an at-risk mental state (ARMS; see Section A), to brief psychosis, including brief-limited-intermittent psychotic 'symptoms' (BLIPS; see Section A) and more enduring psychotic experiences, which have attracted psychiatric diagnoses (Kwapil & Barrantes-Vidal, 2015, Guloksuz & van Os, 2008). PLE can be defined as 'psychotic symptoms' in the 'non-clinical' population (Verdoux & van Os, 2002). van Os et al. (2009) expanded upon this idea and suggested that PLE differ from 'psychotic symptoms' as they are not associated with distress or help-seeking. For example, some may view PLE positively and perceive them to be helpful or as a spiritual experience (Cooke, 2007). PLE may be mild and pass with limited distress or impairment but for others the experiences can be more persistent, although do not attract a diagnosis (Yung et al., 2009), whilst others may become overwhelmed by the experiences and end up under the care of mental health services (Dominguez et al., 2010).

Those with PLE in the general population have been found to share similar experiences to those who have attracted a diagnosis (DeRosse & Karlsgodt, 2015). However, the experiences were found to differ in terms of severity, frequency and conviction (van Os et al., 2009). Arguably the difference is in how the PLE are conceptualised, as evidence has shown voice-hearing in the general population was experienced in a very similar way to a 'clinical' population (Johns et al., 2014). Likewise, a qualitative comparison found PLE commonly occurred during an emotionally significant time in people's lives when they may be feeling isolated and disconnected (Heriot-Matiland et al., 2012).

Therefore, it is suggested that it is not the experience of psychosis itself that determines the development of a 'psychotic disorder' but instead the person's context that influences how the experience is understood. Further exploration of PLE could provide insight into what prevents people attracting a diagnosis and how they alternatively make sense of and manage their experiences.

Trauma Model of Psychosis

Understanding of the relationship between trauma and psychosis has developed with growing recognition traumatic experiences lead to PLE (Larkin & Read, 2008). The content of past trauma was found to be symbolised within an individual's beliefs (Scott et al., 2007), and trauma-related intrusions manifested in the voices people heard (Peach et al., 2021). Past trauma was found to be predictive of subsequent psychotic experiences in the general population, even when other mental health difficulties were adjusted for (McGrath et al., 2015).

Read (2001) proposed a causal link between trauma and psychosis based on evidence of a dose-response relationship between the number of traumatic experiences and subsequent experiences of psychosis (Shelvin et al., 2007). Research has also shown that exposure to more traumatic experiences increased the likelihood of PLE in a "dose-dependent" manner (Saha et al., 2011, p. 259). More recent findings were also consistent with the dose-response relationship, with those who reported a greater number of past traumas being more likely to uphold unshared beliefs and detach from reality (Scott et al., 2018).

The literature has consistently found a connection between childhood trauma and psychosis, with a strong association between childhood abuse and voice hearing in adulthood (Read et al., 2005). PLE were also found to be more common in adolescents who experienced non-consensual sexual experiences, bullying and physical abuse (Lataster et al., 2006; Kelleher et al., 2008; Morrison, 2009).

Furthermore, van Nierop et al. (2015) found that the connection between adverse childhood experience (ACEs) and psychosis was not limited to those who attract diagnoses, as it was also found to be present within a general population sample.

The Role of Attachment

As the connection between ACEs and PLE has become more established, curiosity has grown into the factors mediating the relationship and attachment was found to play a prominent role in the pathway between trauma and psychosis (Gunley et al., 2014). Bentall & Sitko (2020) argued that understanding attachment in relation to psychosis is of particular importance as our attachment informs approaches to help-seeking during times of distress and as aforementioned PLE can elicit significant distress.

The presence of a negative model-of-self and model-of-other, associated with insecure attachment, was found to be significantly related to the frequency of PLE (Ustamehmetoğlu et al., 2020) and insecure attachment has been found to increase the likelihood of PLE (Berry et al., 2007). Whereas secure attachment, which is known to help people cope following trauma (Leung et al., 2022), has been found to offer a protective function. Psychological processes associated with secure attachment including reflective functioning, internal working models (IWM) and resilience (see Part A; Boldrini et al., 2020; Gajwani et al., 2013; Rossi et al., 2023) have been found to protect those experiencing PLE Alternatively, for those who are in contact with services, enhancing attachment security could support individuals in understanding their difficulties and aid therapeutic rapport (Korver-Nieberg et al., 2014). To date, there is limited narrative exploration of the role of attachment and learning how relationships are depicted in the stories of those with PLE could enhance our understanding.

Power Threat Meaning Framework (PTMF)

The PTMF lent further support to the trauma model of psychosis and recognises that what has happened to somebody (threat) is connected to their PLE (threat response) (Johnstone & Boyle, 2018). The PTMF views the term trauma as somewhat restrictive as it typically focuses upon extreme events, and thus neglects the impact of more subtle continuing adversities (Shapiro, 2018). Key components of the PTMF include power; how it operates in someone's life and the way a misuse of power poses a threat. Meaning; what sense someone makes of their experiences and the threat response; how someone responds to the threat imposed by the misuse of power, which can include PLE. Misuse of coercive and interpersonal power is associated with the increased likelihood of PLE (Ball et al., 2023).

With consideration for meaning making, the PTMF upholds the narrative position that the way we make sense of the world is through telling stories (Dent-Brown & Wang, 2006). However, dominant narratives of psychosis, including the use of medicalised language, tend to disregard subjective experience (Borchers et al., 2014) and stories of PLE are not often heard. van Sambeek et al. (2023) found that for those who had experienced trauma and psychosis, mental health care acted as a barrier to the meaning making process. Despite this, there have been some attempts to hear the narratives of those with psychosis within mental health recovery narratives (Llewellyn-Beardsley et al., 2019), although these positioned psychosis as an 'illness'. Narratives of escape, endurance and enlightenment have been found to be prominent in people's stories of psychosis. (Thornhill et al., 2004) with others understanding their experience as a journey (Colbert et al., 2013). The process of telling one's narrative was found to be important, as it offered a way of grounding oneself following a psychotic experience and facilitated the opportunity to re-establish a sense of self (Moernaut et al., 2023).

A narrative inquiry of those living with psychosis without input from mental health services found that having positive perceptions of PLE and "finding strength in personal and natural sources" (McGranahan et al., 2021, p. 5) were key. However, a full narrative approach was not adopted and how the identified sources helped required further exploration.

Research Aim

Through the power of storytelling and lens of attachment, this study aimed to explore the personal narratives of trauma and PLE within the general population, to better understand PLE as a trauma-response, and how people manage these experiences. With a view of achieving the above aim, the following research questions were posed:

1) What stories do people tell about their experiences of trauma and PLE?

2) Within their stories, what do people depict as helping them to manage these experiences?

3) Are relationships depicted within their stories? If so, how?

4) Are the relationships depicted as helping them in managing? If so, how?

NHS Values

Although the present study focused on the general population, the findings are of relevance to clinical practice and the following NHS values were considered (Table 1).

Table 1

NHS Values

NHS Value	Application to study
Working together for patients	The study explored the narratives of those who have/had PLE but have no or limited contact with mental health services to learn from their experiences what services could be doing to better to support those accessing or currently under NHS care for psychosis.
Commitment to quality of care	This study explored the personal experiences of individuals with a view of learning from them to enhance quality of care by services.
Improving lives	The study aimed to use the stories of participants to inform service development with a view of enhancing the experience of those seeking support for psychosis.
Everybody counts	The study aimed to provide suggestions for services in their approach to and understanding of psychosis, as a way to ensure everyone's needs are considered despite their individual differences or demographic.

Methods

Positioning

The philosophical position of this study drew upon critical realist epistemology. Critical realism, a form of post-positivism, suggests that reality is not limited to scientifically discoverable relationships and what can be empirically observed (Sayer, 1997). Instead, the critical realist perspective recognises that our knowledge of reality is "differentiated and transformative" (de Souza, 2014, p. 142) thus, what we know to be reality is ever-changing, influenced by the observer, subject to bias and constructed based upon prior social knowledge (de Souza, 2014; Johnstone & Boyle. 2018). Therefore, from a critical realist perspective, our knowledge of psychosis, which has been historically viewed as an illness and underpinned by societal medicalisation of distress (Johannessen & Joa, 2021), can be questioned and instead understood as a response to trauma that exists on a continuum (DeRosse & Karlsgodt, 2015).

Ethics

This study was approved by CCCU Ethics Committee (Appendix D). Participant facing information was co-produced with an Expert by Experience (EBE). Written consent was obtained from all participants (Appendix E). All interviews were audio recorded and transcribed using secure transcription software, and then manually reviewed with any inaccuracies amended. Audio recordings and any other confidential data were stored securely on an encrypted device. Any personal or identifying information was removed from transcripts and pseudonyms used. Given the sensitive nature of topics discussed, the researcher utilised their clinical skills to relay empathy and compassion.

Design

A qualitative research design, employing a narrative approach, was utilised within this study.

Interviews were conducted to elicit the expression of personal narratives (Riessman, 2008). Attachment theory (see Part A) was used deductively to explore how participants' relationships were represented in their stories.

Procedure

Recruitment

Participants were recruited from the general population via a purposive sampling strategy on a voluntary basis. Purposive sampling is the process of purposefully selecting participants based upon them having experienced the phenomena being explored (Robinson, 2015). Those who volunteered for the study and met the study's criteria (Table 2) were invited to participate.

Table 2

Study criteria

Inclusion criteria	• *Identify as having experienced trauma or adversity* • *Have previously or currently have PLE as defined by Cooke (2017)* • *Not had prior contact with mental health services* • *Self-define as "managing well" in relation but not exclusive to one or more of the following domains: relationships, meaningful activity (e.g. employment, studying, voluntary work), social life, home life etc.*
Exclusion criteria	• *At least 3 months input from NHS mental health services*

The study was advertised via social media, an open-access research platform and through email to relevant organisations e.g.: Hearing Voices Network, National Paranoia Network, InterVoice, PsyCare, Spiritual Crisis Network.

Participants contacted the researcher directly via email and the Participant Information Sheet (Appendix F) was shared. Participants were offered an introductory telephone call and were given the opportunity to ask any questions about the study. The consent form was signed and returned to the researcher and an interview was arranged. Participants were asked to provide some demographic information and complete the adapted version of the Experiences in Close Relationships Scale (ECR-S; Wei et al., 2007; Olufowote et al., 2020).

Recruitment was challenging, as the participant pool represented a "hard-to-reach group" (McGranahan et al., 2021, p. 1). Those who had PLE and now self-defined as doing well may have been less likely to be aware of psychological research studies. Likewise, the impact of stigma may have acted as a barrier to participation, as those who had not had contact with mental health services may have not sought help due to stigma (Gronholm et al., 2017) and therefore, may also not come forward for a study like this. As such, further ethical approval was attained to widen the study's inclusion criteria to include those who had prior contact with mental health services but had not had input for at least ten years. This initially drew in more participants. As time progressed, ethical approval was again attained, and the amended criteria are outlined in Table 3.

Table 3

Updated study criteria

Inclusion criteria	• *Identify as having experienced trauma or adversity* • *Have previously or currently have PLE as defined by Cooke (2017)* • *Self-define as "managing well" in relation but not exclusive to one or more of the following domains: relationships, meaningful activity (e.g. employment, studying, voluntary work), social life, home life etc.*

	• *May have had prior support from mental health services, however, will be assessed on an individual basis with recognition that managing well reflected factors beyond support offered by mental health services*
Exclusion criteria	• *Not currently in receipt of support from mental health services*

Interviews

Interviews were conducted via video call, lasting on average for 1 hour and 15 minutes. The interview schedule was informed by a narrative inquiry approach, with a broad opening question to promote storytelling. The interview schedule (Appendix G) was developed in collaboration with an EBE. In keeping with the narrative approach, topics of interest were noted on the interview schedule to generate follow-up questions. During the interviews, follow up questions, personal to the individual's story were asked to encourage further expression.

Questionnaire

Prior to the interview participants were asked to complete the adapted version of the ECR-S (Appendix H; Olufowote et al., 2019; Wei et al., 2007). Responses was used as a way to gain an understanding of participants' attachment security in their childhood and presently as adults. The questionnaire responses were used to enhance interpretation of the depiction of relationships within participants' narratives rather than being taken as a definitive representation of their attachment style. Arguably asking participants to complete the ECR-S prior to the interviews presents a potential limitation to the study as the questionnaire items may have encouraged participants to talk about their childhood, possibly biasing the stories told.

Participants

In total, nine participants took part in the study, eight of whom completed both the interview and ECR-S, whilst one person completed only the interview. Participant characteristics are outline in Table 4.

Table 4

Participant characteristics

Participant*	**Gender**	**Age range (years)**	**Ethnicity**	**Contact with NHS mental health services (Y/N)**	**Further details of contact with services if relevant**
Jim	Male	55-64	White British	N	Support from charity sector – two weeks stay at veteran residential facility. No contact for 15+ years.
Zara	Female	25-34	Middle Eastern	N	N/A
Molly	Female	35-44	White-British	Y	Known to local mental health team in late adolescence/early twenties. No contact for 10+ years.
Stephen	Male	35-44	White-British	Y	Traumatic brain injury rehabilitation. No contact for 10+ years.
Robert	Male	35-44	White-Irish	Y	Multiple brief mental health inpatient admissions in early twenties. No contact for 20+ years.
Craig	Male	18-24	Black-British	N	N/A
Jane	Female	35-44	White-Irish	N	N/A

Ben	Male	45-54	White-British	Y	Support from Early Intervention for Psychosis service and voluntary inpatient admissions 10+ years ago. Recent contact with local mental health team for brief care co-ordination and medication review only.
Thomas	Male	35-44	White-Irish	Y	Under Child and Adolescent Mental Health Services (CAMHS) for five years until age 14. No contact for 15+ years.

**Pseudonym used.*

Data Analysis

Narrative analysis places emphasises how people make sense of their own experiences is via stories and, by keeping stories intact, provides an opportunity to explore how people construct their stories (Riessman, 2008). This is of particular importance for those who experience psychosis, as there had been a lack of opportunity for them to tell their story, and discuss past trauma, within and outside of mental health services (van Sambeek et al., 2023). As such, narrative analysis was deemed the most appropriate methodology for this study.

Structural (Labov & Waletsky, 1967) and thematic narrative analysis (Riessman, 2008) were best suited to answer the research questions. Thematic narrative analysis focuses upon the content of stories ("what" is said). Structural analysis offers a deeper understanding of "how" the story is told, exploring the internal components and how they relate to one another (Riessman, 2008). Literary analysis was also considered to explore the stories' genre, tone, core narrative and positioning (Thornhill, 2004; Colbert et al., 2013). Although the analytical process (Table 5) has been presented in a linear format, analysis was conducted iteratively.

Narrative analysis allows for both inductive (as described above) and deductive approaches to the data (Sharp et al., 2019). Attachment theory was applied deductively as a "lens' to explore the data with consideration for participant responses to the ECR-S and descriptions of relationships within their narratives.

Table 5

Analytical process

Step 1	Transcripts were read and re-read, and comments/reflections were noted (Appendix I)
Step 2	Transcripts were re-read and Labov's (1967) framework of narrative structure was used to identify the following structural components of the narratives (Appendix J) Abstract: Introduces the narrative Orientation: The story's setting (time, place, situation and persons of relevance) Complicating action: Description of sequence of events that lead to the narrative's climax and keeps the listener engaged Evaluation: Commentary on the narrative which mediates the "crucial point" of the story and offers insight into the narrator's perspective of the events Result/resolution: The conclusion to the narrative resolving the story's plot Coda: The story is brought into the relevance of the present day (Riessman, 2008; Andrews et al., 2013; Khalil, 2017)
Step 3	Transcripts were re-read, and literary analysis was conducted. Core narrative, genre, tone and positioning were identified (Appendix K) Core narrative: A brief summary of the story told Genre: The type of story told Tone: The way in which the story is told and how the researcher responded

Positioning: What was hoped to be achieved from telling the story and how this was done

(Thornhill et al., 2004; Colbert et al., 2013)

Step 4	Transcripts were re-read and key themes within each narrative were identified. Themes were compared and contrasted to explore the similarities and differences across the stories in relation to the research questions (Appendix L)
Step 5	Synopsis of the narratives were written and shared with participants for feedback. Amendments were made as per the feedback and the final synopses can be found in Table 5.
Step 6	Quotations were extracted to demonstrate findings for the write up.
Step 7	Findings were written up, conclusions drawn, and future research and clinical implications considered.

Quality Assurance and Reflexivity

Arguably there are no set guidelines in ensuring the "trustworthiness" of narrative analysis (Riessman, 2008, p. 185). Nonetheless, where possible, good qualitative research practices (Mayes and Pope, 2000), were implemented to support the validity and quality of this study. A reflexive diary was maintained throughout to reflect upon the way in which the researcher's personal values and biases may have influenced the research process (Appendix M). Supervision provided opportunities to discuss personal reflections and further explore subjectivity and the impact upon the study. Interview transcripts were discussed with and reviewed by the project supervisor. Respondent validation was utilised by sharing narrative synopses with participants to assess coherency (Mayes & Pope, 2000; Riessman, 2008, p. 189). Eight of the nine participants provided feedback.

Two requested that information was added, one asked for something to be removed and the remaining five said their synopsis accurately reflected their experiences. The researcher's reflexive statement (Appendix N) outlines personal characteristics and biases which may have influenced the research process, with consideration for the "distance" between the researcher and participants (Mayes & Pope, p. 51).

Results

The results have been displayed by research question with findings from thematic, structural (Appendix J) and literary (Appendix K) analyses. Attachment has also been utilised deductively with consideration for how relationships are depicted within the narratives. Narrative synopses are outlined in Table 6 and ECR-S scores are reported in Table 7.

Table 6

Narrative synopses

Participant	Narrative synopsis
Jim	Jim began his story at the start of his career. Initially, he lacked direction and was seeking an escape from home, so he adventured around the world. Jim eventually settled back in England as a high-rank Police Officer; a role which he enjoyed but was full of violence. Every day was different, and Jim experienced the unpredictable and violent role as *"the most intoxicating high".* Although, with hindsight, Jim looked back and recognised himself as a *"changed person"*. Jim's story took a new direction after an extremely difficult day at work where someone lost their life in a brutal fight. This led Jim into a year-long investigation, with little support from colleagues or supervisors, whilst he continued in the same job, putting himself at risk each shift. Jim described how he *"relished"* this and felt as if he *"needed to be punished"*. Jim described how he developed post-traumatic stress following the incident, which caused his personality to change "*massively*". Jim recalled how this impacted his first marriage, his relationship with his children and how he eventually *"started to get visited by John".* Initially Jim was unsure if it was a dream, he recalled how John, the man who had lost his life in the fight, was sat at the end of his bed. Jim described how John's visits were always *"non-threatening"* and over time he and John *"formed a friendship"*. Jim's narrative also included the formation of another friendship with a veteran, who had a *"totally different set of circumstances"* but was having similar experiences. As such, Jim recognised that his visits from John were *"a reaction to the trauma".* Jim then focused on how others understood his difficulties with some healthcare professionals labelling

	him as "dangerous" and his parents dismissing his experiences. Jim did not want others like him to feel alone in their experiences, so he created a foundation to *"give others that network of support"*. Jim's story then returned to the past, recalling his experiences as a child and how neglect by his *"toxic"* mother was what drove him away, yet pushed him to make a success of himself. Jim's narrative reflected a change in his identity from a *"lost"*, *"angry"*, *"nasty man"* to someone who was now the *"polar opposite",* had broken the cycle of domestic abuse, and had not become the parent his mother was. Jim continues to work with his foundation, bringing people who hear voices or see things to *"survive together"*.
Zara	Zara started at the point of an *"out of body"* experience. She described how she recently had an *"unusual experience"* that mirrored her understanding of "*psychosis*". Working within mental health, Zara described working with an older gentleman in her previous job role who had unexpectedly taken his own life. Zara was initially shocked, and when she spoke to her supervisor about it, she *"completely broke down".* Zara took the rest of the week off and found herself *"ruminating"* about her last appointment with the gentleman, questioning if she had done *"enough"* and wondering if she was *"allowed to grieve"* this loss. Upon her return to work the following week, Zara recalled being in a session with another service user when the room began to *"fill up with smoke".* Zara described it as a very *"surreal"* experience as the service user wasn't reacting to the smoke, so she realised that it *"must be"* in her head. Zara tried to reassure herself that it was *"not real",* and that *"hallucinations"* were what happened to *"people with psychosis".* Zara confided in her boyfriend about her experience, and he encouraged her to speak to a healthcare professional. Having spoken to the GP, who helped to normalise Zara's reaction, she understood what had happened to her as *"stress induced hallucinations".* She explained that she continued to see the smoke, which shifted to a mirage, for around a month. Zara described how this *"very unusual experience"* has affected her. She continues to check with her boyfriend or friends whether they can see what she can. Zara identified how her supervisor and boyfriend offered support throughout this time and their *"validating"* response made it easier to manage. A key theme of Zara's narrative was making sense of her experiences.
Molly	Molly opened with her describing the *"journey"* she has been on to reach a diagnosis of attention-deficit/hyperactivity disorder (ADHD) and autism. She had been reflecting back upon her experiences and had begun to *"piece things together".* Molly's telling of her story started back when she was 14, when she initially had contact with mental health services, following a period of low mood, anxiety and truancy from school. Molly recalled having difficulty transitioning to secondary school *"without chums".* Alongside her school life, Molly described difficulty in her *"home environment",* as her father and his new partner were moving in together into the home he lived in with Molly's mother. This was a significant disruption to her life as *"everything that was historically familiar and comforting was being*

	completely ripped up". Molly recalled being aged eight when she learnt that her mother had died. She explained that she was not allowed to attend her funeral. To cope with these traumatic experiences Molly hid her emotions and found that the emotional pain would manifest physically. Molly described how, during her adolescence/early adulthood, mental health services *"missed red flags"* including her *"tricky"* relationship with her partner at the time. She listed a variety of different psychiatric medications she had been prescribed as a teenager and young woman and the *"horrific side-effects"* she experienced as a result. Molly then shared her medication-induced unusual experience. Molly emphasised how she was never provided an information leaflet at the point of prescription so never knew this would be a possible side-effect requiring emergency intervention. Molly told the story of how she tried to climb out of her bedroom window and then the next thing she could remember was being outside the house with the *"medication induced hallucination"* that her family were walking towards her. Molly texted a friend for help and then later came to realise the text that she sent was *"gibberish";* a *"shocking and scary"* discovery. Molly also described seeing a *"five-foot spider",* which was "*even more terrifying*". These unusual experiences encouraged Molly to push back on the psychiatric intervention she was receiving. Molly's story was not told chronologically, as she weaved back and forth between different times in her life, describing the people who were around her at the time, some who helped her to manage her experiences and others who further exacerbated her anxiety. Molly ended by reflecting upon the *"danger"* that can come from expressing how one feels due to a fear of it being *"pathologised"* like it had been in the past for her. A key component of Molly's narrative was the idea of rediscovering herself after having been *"pathologised"* and invalidated by those around her, including mental health services.
Stephen	Stephen caveated his story with the fact he had experienced a traumatic brain injury, which impairs his memory and recall. He began his story sharply at his earliest memory of being abused by his Mum and Nan at age eight. Silenced by his sisters, Stephen kept this traumatic experience to himself for a "*very long time*", feeling *"humiliated"* by what had happened to him. Stephen's narrative unravelled the family's generational trauma history. Stephen described how his mother took her own life when he was 17 years old, as a reaction to her own guilt yet it led to him feeling like *"the wrong one".* The death of his mother enabled Stephen to move on with his life. He described trying out different jobs and working hard to pay his rent. Stephen found himself in precarious situations with other people which lead him to join the army, the *"best thing"* he ever did. Stephen embraced the challenge of the army and enjoyed the male camaraderie. Stephen's narrative journeyed through his army experiences to the assault, which caused his brain injury. Stephen vividly described the trauma of being told he would not walk again surrounded by his *"muckers".* Stephen's narrative transitioned to his rehabilitation experience where he experienced unconventional treatment for his brain injury. Stephen described a breakthrough when he learned to walk again, yet with this came his psychosis-like response where he

	would see/hear things. Stephen returned to the army, and he described his encounter with the colleague who had assaulted him. Stephen was eventually medically discharged from the army. He initially returned home, but soon left as he wanted to *"start again"* where nobody knew him. Stephen introduced a friend from the army who had died and shared how he would consider *"what he would have said"* when faced with difficulties. Stephen later set up a group for those with brain injuries with a view of helping others like him. His narrative progressed to the current day where he is involved in post-traumatic research and brain injury charities. Stephen's story included many disruptive relationships, within which people would abuse or take advantage of him. Key themes that emerged from his narrative was that of overcoming adversity.
Robert	Robert's story began aged 3, the first time he could remember having psychosis-like experiences. Robert heard a variety of voices telling him different things. Some would be distressing, some would have religious connotations, and others provided comfort. Robert continued to describe *"peculiar"* experiences where he would see things others did not and would have a sense of disconnection from reality. Reflecting back to being a child, Robert recalled being slapped by his mother. He responded by and this contributed to a desire to "*not* not wanting to *"please her in life".* Robert described difficulties communicating with others throughout his life and developed the idea of *"being autistic"* throughout his narrative. Difficulties in friendships were weaved in throughout the story, as Robert described experiences of bullying, isolation and persecution. Robert's narrative journeyed through his early adult life and an intended *"fresh start"* at university. When at university, Robert's psychosis-like experiences became more prominent. He *"used the weed as a way to connect to people"* because navigating social situations continued to be difficult for him. Robert became very overwhelmed by the voices and attempted to take his own life. He sought support from his parents, who brought him home from university. It was at this time that Robert's story began to incorporate mental health services. He was placed on an inpatient ward and *"was medicated".* He connected with others on the ward, who he shared similar experiences with. As his social network increased, so did his loneliness, as he no longer had the voices for comfort. After his hospital admission, Robert maintained relationships with those on the ward and over time, the voices returned. Robert's relationship with the voices developed further and presently Robert appreciates these experiences, as his voices taught him *"the gift of the gab".* Robert concluded with how he is managing today: engaging in his hobbies; viewing his voices as helpful and a component of his spirituality; and using writing as a mechanism to understand his experiences. A key theme in Robert's narrative was connection with others including connection with his voices.
Craig	Craig's narrative centred around his family. He introduced his dad, who died when Craig was a teenager. He spoke fondly of his father, who played a *"vital role"* and was seen to *"complete the*

	household" for the family. Craig described hearing voices "deeply within" him following the loss of his dad. The voices told him his dad was nearby and would be home soon. Craig also experienced the sense that his dad was *"close"* to him, which was not "*easy*" for him, as he felt like he was losing control of his mind. Craig's narrative journeyed through his teenage years without his dad. He emphasised the support his family provided, which helped him to *"regain"* himself. Craig had *"a lot of traumas"* and more recently had lost his mum. This had not led to hearing voices, or feeling her nearby, in the same way as when he lost his dad, and he believed this was because he was now an adult. Craig's story then journeyed back to a car accident. He connected the accident to his spiritual beliefs. As an African, he wondered if the traumas he had experienced were a *"spiritual attack"*. Craig's narrative returned to his family, but now with a focus on his sisters and the support they offered him. He then concluded with advice to other men, informed by lessons learnt from his dad, to *"buckle up"* and face the "*obstacles*" in life, as they are "*challenges to overcome*", which ultimately lead you to being the man you hope to be.
Jane	Jane began her narrative tentatively, unsure of how much detail to share. She journeyed back to her teenage years when she experienced a sexual assault and later was "*forced to have an abortion*", which she named as significant traumatic events. Jane's narrative then returned to the present day, and she hurriedly mentioned her "unusual experiences", which included seeing things others could not. Jane told herself what she was seeing was not real and learnt that "*it was anxiety based*". Jane described having "*a complete breakdown*" around this time, with difficulties in her marriage and with her relationship with her daughter being the "*catalyst*". Jane journeyed back into her past and drew parallels between her present experiences and relationships with her parents where she felt "*restricted*" and faced "*conflict*". Jane told her story of running away from home. This led to her going from very "*rigid boundaries*" to '*no boundaries at all*". Jane initially experienced a sense of freedom she never had before. However, at times, as a teenager, it was difficult to manage this newfound freedom and the tension this caused between her and her parents. With hindsight, Jane thinks she "*coped*" or maybe "*blocked out*" some of this by going out and "*having fun*". Jane continued her story with how she now coped as an adult and named her unusual experiences as a warning sign she was "*not coping*". Jane continued with a focus upon her relationships, some which were of a support and help to her, and some which were not always as helpful. Jane sought support via a private psychologist. Their therapeutic relationship enabled her to overcome her distress and develop new ways of communicating coping. Jane concluded with the hope that she will pursue a career in psychology herself and that her lived experience would enable her to help others.
Ben	Ben opened with an introduction to his *"psychosis-like experiences".* He would see and hear *"three evil men"* who would *"torment"* him and conduct *"painful experiments"* on him. This contributed to

	paranoid thinking, as he would wonder who was working with the three men against him. Ben understood his experiences as *"past trauma being projected out in the present"*. Ben's story journeyed back to his childhood, during which his mum *"kicked out"* his dad and later remarried. As a teenager, Ben was under the impression his biological dad did not want anything to do with him, and he was persecuted by his mother, calling him Judas, for wanting contact with him. Ben's dad passed away, and soon after his death, Ben discovered his dad had been trying to contact him and his brother. Ben recalled being bullied at school and likened the three men to bullies. Ben's narrative continued chronologically into his twenties and the birth of his two children. It was following the birth of his second child that his *"psychosis"* began. Ben's story turned to his marriage, and his wife, who Ben had always felt *"comfortable"* talking to about his experiences. Ben and his wife developed techniques to cope with the three men, where they would all engage in conversations together and Ben's wife would help him to question and challenge the things they were saying. Voluntary psychiatric admissions weaved throughout Ben's story, most of which led to Ben being overly medicated. Ben described how healthcare professionals were *"dismissive"* of his experiences and rejected the coping techniques he and his wife had established together. Ben named that this in itself was traumatic and often made managing his experiences more difficult. Although mental health professionals managed his physical safety, his *"psychological safety was neglected".* A key component of Ben's narrative was his Christianity. Someone from Ben's church community would visit him every day during his inpatient admissions and read passages of the Bible to him. Ben concluded by explaining how laments, *"prayerful songs"* which he believes are useful in the processing trauma and also helped him to manage. He ended with an expression of hope that our understanding of the *"trauma-psychosis connection"* continues to evolve, so experiences like his are better understood and supported within mental health services.
Thomas	Thomas started his story childhood, a time where there was *"a lot of guilt and shame".* Love from his mother was *"conditional",* and he experienced trauma of a sexual nature. Thomas described being under the care of child and adolescent mental health services and having therapy as a teenager and again later in life privately. It was only once he had *"accepted to talk about what happened"* that his experience of psychosis *"properly kicked in"*. Thomas experienced *"paranoid delusions"* and thought there were "*plots*" against him. He heard voices and saw flashes of lights in his vision. He shared his experiences with the people he lived with at the time, however they were not supportive and would *"gaslight"* him, intensifying the paranoia. Thomas was in fight or flight response, running out the house and hiding in park bushes in fear. He did not feel like he could return to his mum's house, and his experiences worsened. He found himself in a *"pressure pot"* until he *"couldn't handle it"*. He had the "*delusion*" that one of his housemates was going to shoot him, his sister and mum. Thomas wanted to scare this person, to keep them away and his family safe, but in the process of doing so they became

injured. Thomas was then on the run before quickly turning himself into the police and placed in custody. Thomas then described his time in prison, awaiting his trial. The prison environment was *"extremely unconducive to recovery"* but provided him with the time and space to reflect upon his experiences. Thomas recognised himself to be introspective, which enabled him to understand what was going through his head was *"not real"*. Thomas' story then became a story of sense-making, he understood his *"paranoia"* as his sympathetic nervous system acting as if he was under threat, in some ways trying to protect him. Thomas managed his experiences by reminding himself of this, distracting himself with work/tasks in prison, and leaning on his partner Alison* for support. Alison became a central component to Thomas' narrative, she was *"incredibly compassionate, very empathetic, understanding'* and would sit and talk through things with him. Thomas experienced Alison's love as *"unconditional",* a significant contrast in his story, as love was previously conditional and earnt by pleasing his family.

Table 7

ECR-S scores

Participant	Total scores	Qualitative descriptor	Interpretation (in relation to narrative)	Possible attachment processes
Jim	Childhood: 25 Adulthood: 9	Jim's score decreased by >5 points and reflected an increase in his attachment security.	Jim's improved attachment security was reflected within his narrative. As a child he experienced severe neglect and wanted to escape the family home/his mother. As an adult (with reference to his current partner), Jim feels *"accepted"* and is able to be *"open"*, *"tactile"* and show love verbally to his partner and children.	As an infant, Jim was taught his emotional and physical needs would not be met, despite expressing distress (crying). Therefore, Jim did not seek proximity to his caregiver as no safety or security came from doing so, contributing to his desire to escape. Jim may have been more suspectable to PLE as did not have the attachment bond that would have helped him to

				develop adaptive strategies in response to adversity. Jim's current relationship has provided a felt sense of safety as expression of emotion has likely been consistently responded to. As such, he feels emotionally contained so is able to engage in co-regulatory strategies within other relationships including with his children.
Zara	Childhood: 19 Adulthood: 31	Zara's childhood score was <24 and reflected attachment security. Her score increased to >24, indicating a reduction in her attachment security.	Zara's narrative did not include information about her childhood relationships. She said that she did not tell her parents about her PLE as they *"would have blown it out of proportion"* and named a *"distance"* between her and them. Zara described having a close bond with her partner, but this was not reflected in her score.	With little information about her childhood, it is hard to make inferences about Zara's possible attachment processes as an infant. However, what she has said could imply that she experiences her parents as overbearing and as such, keeps them at a distance as a way to maintain independence. The disparity between her score and description of her bond with her partner could imply a felt sense of safety with her partner (why she felt able to tell him about her PLE) but early

				experiences may mean she is wary of this closeness.
Molly	Childhood: 26 Adulthood: 21	Molly's score decreased by 5 points and reflected an increase in her attachment security.	Molly's improved attachment security was reflected in her narrative as she named an improvement in the *"quality"* of her relationships including with her father. Molly also described now being in a *"healthy relationship"* with her current partner.	Molly's change in attachment may reflect a growing sense of safety, emerging from the better *"quality"* relationships with both her partner and father. Whereas as an infant that safety was lost due to the loss of her mother, physical punishment from her father and disruption to what was once her safe environment of the family home.
Stephen	Childhood: N/A Adulthood: N/A	Declined to complete.	During his interview, Stephen explained that he had declined to complete the ECR-S as he did not feel the questions applied to him.	Stephen's narrative suggested his attachment security was severely disrupted at an early age due to abuse from his attachment figures (mother and grandmother). Relationships in his adult life were depicted as inconsistent and he would often be taken advantage of. This could be because Stephen did not have the attachment bond needed to develop psychological processes

				such as mentalising. Therefore, as an adult he may have difficulty understanding his mental state and the mental state of others and misinterpret people's intentions making him vulnerable in relationships. This may also make him vulnerable to PLE as not being able to understand the self or others may lead to a detachment from reality as a way to avoid difficult emotions.
Robert	Childhood: 31 Adulthood: 20	Robert's score decreased by >5 points and reflected an increase in his attachment security.	Robert's improved attachment security was somewhat reflected in his narrative. Robert conveyed having a strained relationship with his mother as he recalled being "slapped" and not wanting to *"please her"*. He also experienced persecution from peers and used drugs as a way to *"connect"* with others. As an adult, Robert's parents brought him "back home" following his suicide attempt.	As an infant Robert's care was somewhat inconsistent with some responsiveness to his needs but also experiences of violence. This may have meant he struggled to regulate his emotions as how they had been responded to differed. As such, he use of substances may present a maladaptive way in which he regulated his emotions in order to feel emotionally safe enough to connect with others.

			He described making and sustaining friendships with those who also experienced psychosis.	As an adult, Robert made friends with others who also had experienced PLE, this may have provided Robert with a network whereby he could mentalise with others (as he could understand his state in relation to theirs (as it was similar) and therefore, he was able to develop relationships.
Craig	Childhood: 24 Adulthood: 25	Craig's scores increase by 1 point, remaining relatively stable. Craig's childhood score (24) and adulthood score (>24) indicated a level of attachment insecurity.	Craig's stability in scores was reflected in his narrative as there was no notable change in his depiction of relationships. Craig/s insecurity may be connected to the loss of his father in his adolescence as this had a profound impact on him and contributed to his PLE.	Craig's father was recognised to be his attachment figure throughout his narrative. He shared how his father provided consistency and was responsiveness to his needs. The loss of his father as a teenager may have disrupted this attachment and taught Craig that the world is no longer safe (as his representation of safety/security) had died. However, Craig's family continued to offer care and he was able to maintain a felt sense of safety via his eldest sister becoming an attachment figure.

Jane	Childhood: 25 Adulthood: 26	Jane's scores increased by 1 point, remaining relatively stable. Jane's childhood and adulthood scores were both >24, indicating attachment insecurity.	Jane's stability in scores was reflected in her narrative as there was notable change in her depiction of relationships. Jane's insecurity was reflected in the named difficulties with her parents as a child as there was *"conflict"* and issues associated with their implementation of and then later lack of boundaries. Jane's insecurity was also reflected in her named recent relational difficulties with her partner and daughter.	As a child, Jane's care was depicted to be inconsistent with her caregivers being experienced as overbearing (possibly pacifying Jane before she had even expressed distress). However, this later changed to a withdrawal of care/responsiveness. This could mean Jane was unable to establish a working model-of-self or others as there was no reciprocity therefore, she did not develop emotional regulation which may continue to impact her relationships to date. This could also be why her emotional state ("*stress*") manifests in PLE.
Ben	Childhood: 36 Adulthood: 13	Ben's score decreased by >5 points and reflected an increase in his attachment security.	Ben's improved attachment security was reflected within his narrative. As a child he experienced disruption in the family home, loss of his father and persecution by his mother.	As a child, Ben's attachment bond was disrupted through the loss of his father and persecution of his mother. There was implied inconsistency of care, and this may have led to Ben feeling

			As an adult, Ben's wife has become his attachment figure as she provides him with support and understanding which has helped him to manage his PLE.	unsafe, increasing his paranoia and suspicion. As an adult, Ben's wife provided safety through consistency and responsiveness which in turn taught Ben others could be trusted and in turn allowed him to engage in reality testing with her as a way to manage his PLE. The way in which his wife responded to his distress may have also encouraged Ben to seek help as he was able to perceive himself as worthy of care and thus, deserving of support.
Thomas	Childhood: 50 Adulthood: 32	Thomas' score decreased by >5 points and reflected an increase in his attachment security. His adulthood score remained >24 and indicated ongoing attachment insecurity despite some improvement.	Thomas' attachment insecurity (with some improvement) was reflected within his narrative. As a child, he experienced neglect and experienced his mother's love as *"conditional"*. His father was not present, and his narrative depicted an absence of secure base. As an adult, his partner has provided him with some	As an infant, Thomas' physical needs were met but there was an absence of emotional containment. This lack of emotional containment may have contributed to difficulties in understanding his own emotions and meant he was unable to mentalise the states of others. Not having this and not being able to understand the state of himself or

security in demonstrating "unconditional love". Other relationships in adulthood have contributed to his PLE and exacerbated associated distress.	others may have contributed to Thomas being suspicious of others and he may have misinterpreted their behaviour.

Research Question 1

The narrative analysis identified and synthesised participants stories into four common narratives.

Escape narratives

Five participants shared a common desire to *"escape"* from their childhood trauma however, for two this was central to their stories. Escape narratives were orientated to childhood to provide context for why there was a desire to escape. Participants wanted to *"get away"* from their home environment, often a place of safety and security for a child. However, for participants there was a reported misuse of interpersonal power in the family home as it was described as a place of *"abuse"* and *"neglect",* disrupting attachment security. Jim said he experienced both emotional and physical neglect from his mother. Whereas Thomas named experiencing emotional neglect as his physical needs were attended to, but his emotional needs were not and he perceived that *"love was conditional".*

"If there was an issue, they'll throw something at it, like, here have this rather than sit down and talk about it and try, they just don't have that capacity for emotions." (Thomas)

Escape narratives highlighted how the two male participants utilised their careers as a *"vessel"* to *"get out of the home"*. Jim ventured around the world, keeping a "*distance"* from his family.

Thomas also physically distanced himself from his family and created metaphorical distance by challenging his *"family's plan"*. A shared component of the escape narratives was empowerment as participants described how they took control of their lives through their escape and strived to prove to their families that they could be *"successful"* in spite of what had happened to them.

Escape narratives described how childhood trauma *"caught up"* with participants in the form of voices and paranoia. For Thomas this re-enacted his desire to *"run-away"* whilst for Jim his PLE provided him with a close relationship, something he reported he had lacked in his childhood. The content of Jim's PLE was symbolic of a more recent interpersonal trauma, but he recognised how it connected to his childhood experiences. Thomas' PLE reflected a manifestation of his uncertainty in relationships, formed through his early experience. He experienced paranoia, fearful of the people around him as they presented *"a threat"* that he needed to escape from.

Endurance narratives

Endurance narratives were characterised as *"surviving"* ongoing adversity and enduring the recurrent misuse of power.

Participants orientated their stories to their childhood and chronologically described the persistent adversity they endured. Stephen reported misuse of coercive and interpersonal power in the form of sexual abuse from his attachment figures. This led to feelings of *"guilt and shame"* that he has continued to endure as an adult. Robert's endurance narrative differed as he experienced 'everyday adversity' and described how he endured persecution from his peers. Endurance narratives captured how experiences of adversity continued from childhood into adulthood.

Robert endured marginalisation as he was treated as different from others and was isolated, understood by him as being because he is *"autistic"*.

Stephen endured adapting to a significant change to his physical ability (embodied power) and being *"outcast"* from the army, somewhere that had initially offered *"a sense of belonging"*. Endurance narratives reflected the trauma-psychosis connection with a shared understanding amongst participants that PLE occur in response to adversity and thus, are also an experience to be endured *"just like everything else"*.

For Robert the trauma-PLE connection was notably present in his story but for him it was indirect as he used substances to cope with his adverse experiences, which exacerbated his PLE. Endurance narratives also emphasised feelings of *"shame"* and *"humiliation"*, related to a negative internal working model-of-the-self, *d*eveloped in response to childhood adversity which extended into adulthood as power continued to be misused against participants. The endurance narratives reached an evaluative point of acceptance of suffering with the acknowledgment that *"every day is a battle"*.

Overcoming narratives

Overcoming narratives shared the common experience of overcoming traumatic loss, specifically the loss of a father. These narratives were not clearly orientated which arguably represented the disorientation participants experienced following the loss of a caregiver. Overcoming narratives highlighted the connection between trauma and psychosis as the losses were directly *"projected"* into the content of participants' PLE. For Craig this was represented by voices telling him his Dad was *"nearby"* or that *"he'll be back"*. For Ben, the connection was more subtle, but he understood the three men he saw were symbolic of himself, his stepfather and biological father and represented a *"powerlessness"* which he had felt as a child.

Ben's narrative also differed to Craig's as he described having to overcome being persecuted by his mother who he reported had misused interpersonal and ideological power against him, branding his as *"Judas"*.

His experience of persecution was later re-enacted by the misuse of power by mental health services as similar to how he experienced his mother, those who Ben sought help from, were *"neglectful"* and branded him as *"unsafe"* and *"risky"* which was difficult to overcome. Overcoming narratives shared the common experience of overcoming more recent traumatic experiences however, only interpersonal trauma was found to be connected to PLE.

Exploration narratives

Exploration narratives were stories of *"rediscovering"* the self following trauma and PLE. Assimilating with the journey genre, the narratives did not reflect a voyage that reached an end point but an ongoing exploratory quest. Exploration narratives encompassed stories from female participants only. All shared a common curiosity to understand their PLE, normalised as a response to *"stress"*, *"anxiety"*, and *"loss".* For Molly, she understood her PLE as a *"medication induced hallucination"* that had emerged because her trauma-response had been *"pathologised"*. Jane and Zara's narratives also shared a recognition that their PLE was in response to adversity, but Jane remained tentative, fearful that like Molly, her experiences could be *"pathologised".*

Jane and Molly's narratives journeyed from their childhood to present day. Both stories described a lack of emotional containment from caregivers. Molly reported that she lacked containment following the loss of her mother. She also reported significant disruption to her home environment as her father introduced his new partner *and "everything that was historically familiar and comforting was being completely ripped up"*.

Jane's lack of emotional containment was experienced differently as she viewed her parents as implementeing very *"rigid boundaries"* that were not containing but instead experienced as overbearing as she was unable to explore the world independently. Jane reported this later changed to '*no boundaries at all"*, which she experienced as even more un-containing.

Journeying away from childhood experiences, the narratives all discussed the exploration process as a way of *"piecing things together"* to reclaim one's sense of self following experiences of disempowerment.

All four narrative types told the story of the trauma-psychosis connection however, in some stories the relationship was indirect, influenced by substance use or psychiatric medication. For others it was arguably more direct as adverse experiences manifested in their PLE and informed how they made sense of their experiences. All the stories of trauma were interpersonal (abuse, neglect and loss) and this may be related to a disruption to attachment security.

Research Question 2

The narratives shared commonalities in what helped people to manage their PLE including spirituality and the meaning-making process which comprised of understanding PLE as *" not real"* and a response to trauma.

Meaning making

For all participants, meaning making was key in helping them to manage. A recurrent theme across all participants narratives and how they made sense of their PLE was knowing that it was *"not real"*. By making sense of their experiences as *"not reality"*, they were able to *"rationalise"* and *"accept"* what was happening to them. For some, this process happened in collaboration with others as they were able to *"check out"* their experiences. Doing so helped to normalise their experience, humanising them as opposed to feeling like an *"alien".*

For five participants making sense of their PLE as being a response to trauma challenged the belief that they were *"mad"* or *"losing their mind",* which in turned enabled them to *"regain a sense of control"* in managing the experiences.

For three participants, their meaning-making process and *"acceptance"* of their voices involved being in dialogue with them. Jim and Robert described this as a process of *"connecting|"* with the voices and forming a *"friendship"*.

"On average, now it's probably maybe once a week, sometimes twice a week about random things, just like we're mates chatting. And it doesn't threaten me. It doesn't scare me. I've accepted it. I've normalised it. And I just allow it to happen. No, I don't confront it. I don't try and stop it. It's just oh here he is, again, let's have another chat." (Jim)

Robert described how he understood his voices as providing him with lessons, including teaching him *"the gift of the gab"*. This helped Robert manage his experiences, as he experienced the voices as supportive as they helped him develop connections with others. Robert also understood that for him, his PLE worsened when he *"used the weed as a way to connect to people"* but through finding meaning in his PLE he was able to also connect with others so that he no longer needed to rely on drugs to do so. Whereas Ben's connection with his voices and what helped him to manage was *"challenging"* them to disprove what they were saying about him. For all three, the meaning making process which enabled them to connect to their voices helped them to manage as they engaged with the PLE as opposed to *"resisting"* them. Jim and Robert also shared the common experience of connecting with their voices via writing a *"book"* as a way to help them manage. It may be that the process of writing offered a way for them to tell their stories without judgement, whereas when told aloud both were previously subject to stigma.

For others, making sense of PLE helped in managing as they were experienced as a *"warning sign"* that they were struggling or *"in danger"*.

Jane described how she understood her PLE to be a sign she was *"anxious or becoming overwhelmed",* which encouraged her to reduce stress in her environment.

Similarly, Thomas' narrative outlined how through understanding his PLE as a threat-response, he was able to use it as a sign that he is struggling and would utilise grounding techniques as a way to help him manage.

For Zara and Stephen, the research interview itself enabled both to make further sense of their experiences as they named how they had come to new *"recollections"* or *"reflections"* whilst sharing their story.

"That was only just something just now that kind of started coming to mind. So, I just thought I would say share that actually, that was a very fresh reflection just now." (Zara)

Spirituality

Although only three participants identified connecting with their spirituality as a factor that helped them to manage, their narratives highlighted how important this was to them. All three participants described themselves as Christian.

Robert's spirituality helped him to manage his experiences as believed some of his voices were spirits, providing a connection to God and making the transition to heaven an easier process when it does happen.

"I've been dwelling on spiritual things for my whole life. So, when I get there, I land on my feet." (Robert)

Craig recognised his experiences as *"obstacles sent from God"*. This helped him manage his experiences as he believed God would only send him difficulties that he could overcome. Similarly, Ben's spiritual beliefs helped him to manage as his faith *"grounded"* him during more intense periods of PLE. He described how Christianity also provided him with laments; a way of processing trauma within the context of his faith which helped him to manage. The use of laments to process trauma mirrored other participants stories where they used writing as a processing mechanism.

"I really find the laments really useful in terms of processing trauma, because they've all come from, that they're written by people who've experienced trauma, which kind of why they're kind of why they're there." (Ben)

Research Questions 3 & 4

Relationships were depicted in all participants' narratives as their stories were orientated to the people in their lives. The relationships that were depicted as helping provided a different relational experience which may have promoted a felt sense of safety and for some potentially enhanced their attachment security.

Relationships within the narratives centred around *"connection"*. For some this included seeking connection (Jim, Stephen, Robert, Jane and Thomas) whilst for others it included feeling connected (Jim, Zara, Molly, Craig and Ben). Some narratives also explored how the misuse of interpersonal power contributed to feeling disconnected and in turn, a fear of connection later in life.

Four narratives depicted the concept of seeking connection. All had experienced ACEs, the majority of which related to reports of neglect, maltreatment or abuse from mothers (Jim, Stephen, Jane and Thomas). Jim reported being severely neglected throughout his early developmental stages and how for him, this has led to him seeking connection as an adult, often out of *"desperation"* and a subconscious need to *"please people"*. His desperation to please people arguably reflected traits associated with insecure-anxious attachment. As he experienced his mother as neglectful, he may have learnt he was not worthy of care, leading him to be keen to overly please people as a way to elicit care. Contrastingly his relationship with his current partner and network of wider relationships via his foundation have provided him with consistency as they will *"survive together"*.

Stephen's relationship with his mother was similarly described as *"toxic"*, depicted as *"abuse"* which disrupted his childhood, generating feelings of *"guilt and shame"*.

Throughout his narrative, the relationships in Stephen's life were chaotic, which contributed to his story's genre. He described how he would seek out connections with various people, mostly women, at the same time, to try to fulfil his feelings of *"disconnect"*. As Stephen did not complete the ECR-S, it is hard to make inferences about his attachment. However, the story he told of his relationships suggested that he possibly lacks attachment security because of his early childhood experiences.

Similarly to Stephen, Thomas' experience of childhood trauma generated *"a lot of guilt and shame"* and his experience of relationships was that of neglect as he felt his mother's love was *"never without conditions"*. Later relational experiences further contributed to Thomas' distress and exacerbated his PLE as he described his housemates *"gaslighting"* him and this made him feel more paranoid. Thomas' narrative was not an obvious pursuit for connection however, a turning point within his story was at a time where he experienced a *"new"* connection through *"unconditional love"* from his partner.

"She just she loved me because she loved me. It wasn't, I didn't have to do anything for it and that was new to me, that was the first time that I'd experienced that. So that's probably why it felt safe to talk to her." (Thomas)

Thomas' story conveyed how the unconditional love he felt from his partner helped him to feel safe and similarly to Jim, enabled him to earn attachment security as an adult. This could suggest that until his current partner, Thomas may not of had the opportunity to engage in emotional co-regulation which could have possibly contributed to his PLE whereas now, being able to do this with his partner has helped him to manage.

Feeling connected to partners helped participants to manage their PLE. For Zara, her partner's *"non-judgemental care"* supported her to feel *"held"*. The metaphor of being "held", reflected the experience of being emotionally contained in turn providing a sense of safety, supporting Zara to manage her PLE.

Likewise, Molly's relationship with her partner was depicted as helping her to manage her experiences as he held space for her to explore her experiences and they would *"philosophise together",* demonstrating the value of collaborative meaning-making. Ben's narrative also reflected the value of collaborative meaning-making as together, he and his wife, developed dialogue techniques to *"challenge and question"* his voices as a way to help him manage. The collaborative meaning-making depicted was also described by three other participants. It represented the process of reality-testing, whereby they all had a person who they trusted enough to tell their experiences to and in turn, could be safely challenged. This may have helped them to manage by learning that what they could see/hear was not real.

Craig's relationships were also central to helping him manage his experiences as he lent on his sisters for support and depicted an ongoing secure attachment to his family, reflected in his stable ECR-S scores. This could be because, following the loss of his father, his eldest sister became his attachment figure and provided the consistency and responsiveness his father had once given him. As Craig's PLE followed the loss of his father, it could be suggested that his PLE were a manifestation of him processing this threat to security as this was later re-established via his sisters which helped his PLE to reduce.

Robert's narrative was somewhat different, dominated by a longing for connection as it was *"always difficult"* for him. However, Robert established a connection with his voices and utilised this as a way to develop communication strategies so that he could connect with others too. It could be suggested that Robert utilised his voices to develop his reflective functioning, possibly absent due the inconsistency of his caregivers. Whereas his voices provided a form of social connection whereby he would experience the voices as separate from him and in turn, infer his mental state in relation to others (voices).

Overall relationships were depicted as mainly helping participants manage their experiences. However, experiences of early misuse of interpersonal power by attachment figures was found to potentially contribute to the onset of PLE. For those who experienced contrasting relational experiences later in life, it could be suggested that they felt safe enough to speak to others about their experiences and utilised those relationships to help them to manage through emotional regulation, mentalising, reality testing and earning attachment security.

Discussion

This study aimed to explore the personal narratives of trauma and PLE in the general population to better understand PLE as a trauma-response and how people manage these experiences. The narratives were explored through the "lens" of attachment, with consideration for how relationships were depicted within the stories told and how they potentially helped people to manage. The study addressed four research questions and an interpretation of the findings, strengths and limitations of the study, clinical implications and future research suggestions are outlined below.

The narratives told included four broad types: escape, endurance, overcoming and exploration and arguably supported the trauma model of psychosis (Read, 2001). Stories depicted the impact of extreme events as well as ongoing adversity (Johnstone & Boyle, 2018; Shapiro, 2018). In keeping with previous literature, the narratives described a connection between the misuse of interpersonal power in childhood and psychotic experiences (Ball et al., 2023; van Nierop et al., 2015). Although, the use retrospective reporting may present a potential limitation of this study.

Escape narratives have also been found in previous research although centred around escaping the "imprisonment" of mental health services (Thornhill et al., 2004, p. 187).

Whereas the present study's escape narratives were stories of escape from the family home due to reports of abuse and neglect. This could be because the present study recruited from the general population as opposed to a 'clinical' sample. Nevertheless, PLE in the general population and those who are under the care of mental health services share similarities (Linscott & van Os, 2013) and the escape narratives demonstrated how a misuse of power (Johnstone & Boyle, 2018) was enacted in participants' lives. The findings therefore could suggest that mental health services have the potential to replicate relational patterns and represent a further threat (Ball et al., 2023).

The endurance narratives had similar traits to other endurance narratives of those with psychosis (Thornhill et al., 2004), acknowledging the *"obstacles"* of life and how through enduring difficulties, they can be overcome. This is also reflected within mental health recovery narratives with recognition for the ongoing nature of mental health difficulties (Llewellyn-Beardsley et al., 2019). However, participants did not use language alluding to recovery, possibly because they did not conceptualise their PLE as an 'illness' to recover from, rather a response to trauma which can be managed in the context of their everyday lives (Romme & Escher, 2011). Thus, the participants' endurance narratives arguably challenged the dominant narratives of psychosis (Borchers et al., 2014).

Previous findings have shown that mental health settings may not be the best context in which to understand one's PLE (van Sambeek et al., 2023) and as none of the participants in this study were currently situated within mental health services, this could arguably be why meaning making was notably present within their narratives. Similarly to previous research (Moernaut et al., 2023), meaning making was identified within the narratives as a key factor that helped participants to manage their experiences as by understanding their difficulties, they felt more equipped to manage them.

Some narratives depicted the value of collaborative meaning making and how this could facilitate reality-testing as a further way to manage PLE, aligning with the potential protective function of the psychological processes of mentalising and emotion regulation (see Part A).

Other factors that helped participants to manage their PLE resembled McGranahan et al., (2021)'s findings. However, the present study expanded upon this and explored how relationships help people to manage (such as via collaborative meaning making as outlined above). Relationships with others were also depicted as helping by offering a contrasting experience that differed from childhood experiences which reflected earned attachment security. Participants highlighted how a *"new"* relational experience from which they could earn attachment security and feel *"held", "understood"* and *"accepted"* helped them to manage their PLE. Therefore, this could be seen to support the interpretations proposed in Part A as the development of secure attachment was found to help participants manage their PLE. Arguably, if attachment hadn't been earned and the associated psychological processes were not developed through new relational experiences, participants PLE may have worsened possibly resulting in intervention from mental health services.

Strengths and Limitations

A strength of this study was that it adopted a narrative approach, an effective method for eliciting stories. The study also demonstrated depth of the analysis by employing a combination of structural, thematic and literary narrative analyses. In doing so a greater understanding of the narratives was developed compared to if only one type of analysis was used. The open-ended interview questions promoted storytelling and enabled participants to share their narrative. However, this also presented a drawback as for some, they were unsure of where to begin their story, requiring further guidance from the researcher which could have biased the direction they took their narrative.

The study explored the experiences of an under-researched group as those who experience PLE in the general population are often over-looked, with 'clinical' samples being a focus within the literature. However, it was limited by its' small homogenous sample of predominantly White-British males. The bias to the White-Western perspective could have impacted the narratives that emerged and reflect an individualistic culture where *"escape"* is possible. If the sample was more diverse in ethnicity and cultural backgrounds, the narratives may have also included stories from a collectivist perspective which may potentially be different. Similarly, the sample was dominated by males and the findings may be subject to the influence of gender roles or wider narratives surrounding masculinity. Furthermore, the narratives are participants' appraisals of their experiences and the findings lack the perspectives of others which may have further enriched the stories.

Clinical Implications

The study's findings illustrated how people who experience trauma and PLE can manage independently. The stories told showed how attachment security can be enhanced and in turn help in managing traumatic experiences and PLE. This arguably suggests that by strengthening relationships and enhancing one's social network, PLE can be managed independently and in turn, mental health services do not need to intervene. Nevertheless, service intervention can remain of value especially if the services operate from a trauma-informed perspective and ask, 'what happened to you?' as opposed to treating experiences of psychosis as an 'illness' as this could aid in collaborative meaning making which in turn may help in managing experiences of psychosis. Similalry, if services involve a person's attachment figure or other family members this could support in the maning-making process via joint sessions. An assessment informed by the PTMF could help to facilitate this and do so in a way that does not locate the problem in the person but acknowledges the role of power, including the power held by the mental health professional in the room.

The study's participants predominantly understood their PLE to not be real and in turn experienced less distress. As such, mental health services may be well placed to intervene if/when people are perceiving their PLE to be real or are experiencing significant distress as a result. However, the focus should arguably be on providing space to enable someone to tell their story as this has been found to help people in managing their psychotic experiences (Korver-Nieberg et al., 2014). Arguably in order to achieve this services would need to challenge the dominant narratives of psychosis including associated stigma which is known to be prevalent even amongst staff (Picchioni & Murray, 2007).

However, the implications of the study's findings are much broader than mental health service intervention and highlight the value of community-based interventions such as community-run groups like the Hearing Voices Network which can help to strengthen social inclusion amongst those with psychosis. Moreover, wider social preventative action including psychoeducation in schools and/or universities may help to enhance understanding of PLE and normalise the experiences. This in turn could help reduce self and societal stigma and encourage more people to talk about PLE with their loved ones. Further education about psychosis for General Practitioners could mean those experiencing PLE are not met with such a stigamised response within primary care. Furthermore, if research evidence, like this study, could be disseminated more widely and the dominant narrative of psychosis challenged within the mainstream media, this could widen the network of support available to those with PLE as more people would have a greater understanding of the experiences.

Future Research

Given the identified limitations of the present study's sample, future research would benefit from targeting a larger, more diverse demographic group to elicit a more varied range of narratives.

Future studies may also want to consider the narratives of the attachment figures of those who have PLE, to obtain other perspectives and further enrich our understanding of the experiences. Doing so could offer greater insight into the role of attachment through comparison of the narratives. Another direction for future research could also be to replicate this study amongst those who are currently under mental health services to assess any similarities or differences between stories of managing PLE.

Conclusion

Through a narrative analysis approach, this study was able to build upon the current psychosis narratives literature. This study did not conceptualise psychosis as an illness but as a trauma-response and considered how power is operationalised in people's lives. It also explored how relationships are depicted within people stories, with consideration for attachment and how this may help people to manage. The narratives supported the trauma model of psychosis and depicted how meaning making and understanding PLE as "*not real"* can help people to manage. The relationships in people's narratives were also found to influence PLE with new relational experiences, which contrasted to early childhood experiences, helping people to manage through earned attachment security.

The study had both its' strengths and limitations and highlighted implications for clinical practice and directions for future research.

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Section C: Appendices

Appendix A: Critical Interpretive Synthesis findings table

Quality appraisal key

Good
Reasonable
Poor

Synthetic constructs	Themes	Synthesis of themes	Relevant papers
Secure attachment offers protection	Sense of safety Environment Emotional safety Insecure attachment is a risk factor Secure attachment is a protective factor Threat Trauma-response Mentalising Resilience Affect regulation Adaptation to trauma Resilient Paranoia Risk factor Therapeutic interventions Engagement Help-seeking Managing distress Therapeutic rapport Alliance	Secure vs. insecure (protective vs. risk) - Felt sense of safety - Psychological processes - Adaptation to adversity - Therapeutic relationship - Help-seeking	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 *Quality of papers that contributed to construct = reasonable/good*
Resources of the self (Personal factors)	Internal assets Resources Personal resilience Adaptative Sense of self Self-worth Self esteem Self-schema Working model-of-self IWM	Personal resilience - Adaptive - Internal resource Self-perception	1, 2, 4, 6, 8, 10 *Quality papers that contributed to construct = good*
Resources of others (Relational factors)	Relationships Presence of caregiver Presence of parent Parental bond Warmth Attachment figure Overcontrolling parents Absent parent Parental loss Loss of attachment figure Family = attachment figure Social connection Social integration Peer networks Friendship Social anxiety Interpersonal resilience Contextual resilience Family environment	Presence of attachment figure (Presence alone not enough) - Presence of caregiver - Parental bond - Attachment figure - Overcontrolling parents - Loss Social connection - Connected to others - Social integration - Peer networks - Social anxiety inhibits connection Interpersonal resilience (By product of social connection?)	1, 2, 4, 6, 7, 9, 10, 11, 12, 15 *Quality of papers that contributed to construct = good*

Appendix B: Quality appraisal table

Good
Reasonable
Poor

Study no.	Appraisal tool	Comments (informed by appraisal tool questions)
1	CASP	Study had a clear focus and cohort was recruited in an acceptable way. Some potential bias as clinicians identified those at UHR vs. non-UHR. Accounted for possible bias for AAI – two raters, blind to other variables and both raters agreed 100%. Recognition of confounding variables but were not controlled for in analysis. Good follow up of participants, results reported at 95% CI and were believable, in line with hypotheses. Findings are applicable to target population and clinical implications were considered.
2	CASP	Study had a clear focus, and appropriate methods were used to answer the research question. Sampling method reported to minimise bias but strategy not outlined and unclear distinction between those exposed to natural disaster and those not. Confounding variables were considered. Results were believable, applicable to local population and fit with other available evidence.
3	CASP	Study had a clear focus and cohort was recruited in an acceptable way. Use of PAM for healthy controls – not appropriate as measure is specifically for those with psychosis. Not all confounding variables were identified. Follow up process was unclear. Results support previous findings, but PAM is not commonly used to identify attachment styles. Clinical implications were considered.
4	JBI	Inclusion criteria was defined, and subjects/setting were described in detail. Criteria for UHR was unclear as was determined by EIP screening which was not clearly outlined. Use of valid/reliable measures. Confounding variables not listed. Appropriate statistical analysis was used.
5	JBI	Inclusion criteria was defined, and a valid method was used. Demographic and clinical information was clearly presented. Follow up of cases was not clear. Statistical analysis used was appropriate. Study was limited by the use of the RQ as it is better used as a continuous measurement as opposed to categorical.
6	CASP	Clear research aims and qualitative methodology was appropriate. Recruitment and data collection was appropriate. Researcher identified self as 'healthy control', presenting some bias but reflexivity was limited. Limited ethical considerations reported. Added richness to spare and quantitative dominant research area.
7	JBI	Inclusion criteria was clearly defined, and subjects and settings were described in enough detail. Objective criteria used to measure the condition and confounding factors were identified, accounted for in the ANCOVA and used to inform recommendations for future research. Outcomes measured in a valid and reliable way with appropriate statistical analysis used.
8	JBI	Clear inclusion criteria, condition was measured in standard way for all participants in the case series. Incomplete inclusion of participants. Demographic and clinical information was clearly reported. Follow up cases were clearly reported. Analysis used was appropriate for longitudinal data. High attrition rate (expected with sample) and lack of inter-rater reliability despite different clinicians administering the measure.
9	JBI	Inclusion criteria and subjects/setting was unclear. Objective criteria were used for measurement of the condition. Confounding variables were identified and accounted

		for. Outcome was measured in a valid and reliable way and the statistical analysis used seemed appropriate.
10	JBI	Inclusion criteria was clearly defined. Subjects and setting were described in enough detail. RFQ was not previously validated but other measures used were valid and reliable. Confounding variables were not clearly identified, brief acknowledgement of overlap between contextual and person resilience. Acknowledgement of the limitation of cross-sectional data.
11	CASP	Study addressed clearly focused issue and cohort were recruited in an acceptable way. Bias was minimised where possible and was some acknowledgment of confounding variables. It was unclear if confounding variables were accounted for in the analysis. Follow up was sufficient with both measures completed again. Results were believable and can be applied to local population. Findings were in keeping with other available evidence and clinical implications were clearly outlined.
12	CASP	Study addressed clearly defined issue and appropriate method was used to answer the research question. Data was recruited in an acceptable way with controls selected in an appropriate way. Sig difference between demographic of groups was acknowledged and accounted for via hierarchical regression. Results are believable. can be applied to the local population and fits with other available evidence.
13	JBI	Inclusion criteria was clear, and subjects/settings described in sufficient detail. Measures were valid and reliable. Confounding variables were identified and accounted for. Statistical analysis used was appropriate.
14	JBI	Inclusion criteria was clearly defined. The subjects and setting were described in enough detail. Measures used were valid and reliable although diagnosis history was self-reported so may be biased. Confounding variables were not identified or considered in the model. Appropriate statistical analysis was used. Limited to cross sectional design so no causal inferences could be made.
15	CASP	Aims were clearly stated, and use of qualitative methodology was appropriate. Research design adequately addressed aims of the research. Recruitment and data collection were also appropriate. The relationship between the researcher and participants was considered with reflexivity and researcher's position described. Research was valuable as highlighted importance of validating and normalising experiences, however, was limited to small homogenous sample.

Appendix C

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Appendix D

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Appendix E: Example consent form

Canterbury Christ Church University

/

Salomons Institute for Applied Psychology

One Meadow Road, Tunbridge Wells, Kent TN1 2YG

www.canterbury.ac.uk/appliedpsychology

Ethics approval number: ETH2122-0303
Version number: 1
Participant Identification number for this study: 1001

CONSENT FORM

Title of Project: Stories of managing trauma, difficulty and psychosis-like experiences

Name of Researcher: Abbie Barnes

Please initial box	
1. I confirm that I have read and understand the information sheet dated: 04/05/2023 (version 1) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, up until two weeks following the interview when data analysis will have commenced, without my legal rights being affected.	
3. I understand that relevant sections of the data collected during the study may be looked at by the lead supervisor (Susannah Colbert) and give permission for these individuals to have access to my data.	
4. I agree that anonymous quotes from my interview and other anonymous data may be used in published reports of the study findings.	
5. I agree to use of audio/video recording, with possible use of verbatim quotation in published reports of the study findings.	
6. I agree for my anonymous data to be used in further research studies.	
7. I can be contacted again by the research team about involvement in future studies.	
8. I agree to take part in the above study.	

Name of Participant: **Date:**

Signature: _____

Name of Person taking consent: Abbie Barnes (Researcher/Trainee Clinical Psychologist) **Date:**

Signature: _____

Appendix F: Participant information sheet

Thursday 4th May 2023

Canterbury Christ Church University

Salomons Institute for Applied Psychology

One Meadow Road, Tunbridge Wells, Kent TN1 2YG

www.canterbury.ac.uk/appliedpsychology

Information about the research

Stories of managing trauma, difficulty and psychosis-like experiences

Hello. My name is Abbie Barnes and I am a Trainee Clinical Psychologist at Canterbury Christ Church University. I would like to invite you to take part in a research study. Before you decide whether to take part, it is important that you understand why the research is being done and what it would involve for you.

Please talk to others about the study if you wish.

(Part 1 tells you the purpose of this study and what will happen to you if you take part. Part 2 gives you more detailed information about the conduct of the study).

What is the purpose of the study?
To learn from the stories of those with lived experience of trauma and psychosis-like experiences. This can include perceptual anomalies, hearing voices or sounds others do not, feeling paranoid and/or holding unshared beliefs.

Why have I been invited?
You were invited to take part in the project as you volunteered having identified with the participant qualities listed in the online advertisement. You meet the study criteria (as follows) and have expressed an interest in sharing your story.

1. Have experienced some type of trauma during your life.
2. Following that traumatic experience, you noticed a change and experienced one or more of the following: hearing or seeing things others do not, feeling paranoid and suspicious, holding unshared beliefs.
3. Self-identify as 'doing well' and/or 'managing' – you feel you're at a stage in your life where you are doing well and this may include in your personal, professional and/or social life.

Do I have to take part?
It is up to you to decide whether to join the study. If you agree to take part, I will then ask you to sign a consent form. You will receive a copy of the signed form for your records.
You are free to withdraw at any time up until the point of data analysis, without giving a reason.

What will happen to me if I take part?
If you take part in the study, you will be invited to attend an interview, either in-person or via video call on MS Teams.

The interview will last approximately 1 hour but timing will be flexible depending on how the conversation goes.
During the interview, I will ask you to share your story and we will spend some time discussing your experiences and how you have coped.
The interview will be audio-recorded for the purpose of the study however, all recordings will be fully anonymised.

Expenses and payments

Should we meet in person, your travel expenses will be reimbursed (up to £10.00). Participating in the study also automatically enters you into a prize drawer for a £75.00 Amazon voucher.

What will I be asked to do?
You will be asked to share your life story; you will be encouraged to share as much as you feel comfortable.

What are the possible disadvantages and risks of taking part?
Given the topics we may discuss, you may experience some emotional distress or discomfort recalling your past experiences. As such, we would encourage you to identify someone in your life who you can approach for support following the interview as necessary. We will also provide you with contact information for relevant local support services. Alternatively, if you'd like to speak to someone following the interview, you can contact:

Samaritans
Tel: 116 123 (Free from any phone and open 24 hours a day)

SANEline
Tel: 0300 304 7000 (4.30pm–10.30pm every day)

SHOUT Text Service
Text 85258 for free 24/7 support

What are the possible benefits of taking part?
We cannot promise the study will help you but the information we get from this study will help improve the support offered to people with psychosis and those in the general population who have psychosis-like experiences following trauma.

What if there is a problem?
Any complaint about the way you have been dealt with during the study or any possible harm you might suffer will be addressed. The detailed information on this is given in Part 2.

Will information from or about me from taking part in the study be kept confidential?
Yes. We will follow ethical and legal practice and all information about you will be handled in confidence. There are some rare situations in which information would have to be shared with others. The details are included in Part 2.

This completes part 1.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

Part 2

What will happen if I don't want to carry on with the study?
If you withdraw from the study, we would like to use the data collected up to your withdrawal.

What if there is a problem?
If you have a concern about any aspect of this study, you should ask to speak to me and I will do my best to address your concerns. You can contact me by leaving a message on the 24-hour voicemail phone number 01227 927070. Please leave a contact number and say that the message is for Abbie Barnes and I will get back to you as soon as possible.
If you remain dissatisfied and wish to complain formally, you can do this by contacting Dr Fergal Jones, Clinical Psychology Programme Research Director, Salomons Institute for Applied Psychology fergal.jones@canterbury.ac.uk

Will information from or about me from taking part in the study be kept confidential?
All information which is collected from or about you during the course of the research will be kept strictly confidential. Your contribution to the project will be anonymised and a pseudonym used. Participants have the right to check the accuracy of data held about them and correct any errors.

The only time we would be obliged to pass on information to a third party and break confidentiality would be if we are concerned about your safety or the safety of somebody else such as a friend, child etc. Any need to break confidentiality will be discussed with you in advance to be transparent and honest. The only time this would not be discussed with you would be if doing so will increase the risk to you or another.

Similarly, if you were to disclose a crime and the perpetrator(s) of a crime were identified (through name or relationship) and the incident has not already been investigated, we would need to inform the police and possibly social services, as that person may pose a risk to others. We would again try to speak to you about this first.

What will happen to the results of the research study?
Participants often want to know results of a study they have been in.

- The results will be reported on within my Major Research Project submission with the intention to also publish the results in relevant academic journals.
- Results may also be used to inform psychoeducation and/or training for health professionals.
- Anonymised quotes from interviews/open-ended questions on questionnaires will be used in published reports.
- Please note you will not be identified in any report/publication.

Who is sponsoring and funding the research?
Salomons Institute of Applied Psychology at Canterbury Christ Church University.

Who has reviewed the study?
This study has been reviewed and given favourable opinion by the Salomons Ethics Panel (Salomons Institute for Applied Psychology, Canterbury Christ Church University).

Further information and contact details

1. General information about research

Please refer to the following web pages for more information about being involved in research:

- https://www.nihr.ac.uk/patients-carers-and-the-public/i-want-to-take-part-in-a-study.htm
- https://www.ukri.org/councils/esrc/guidance-for-applicants/research-ethics-guidance/what-to-expect-as-a-research-participant/

2. Specific information about this research project

If you would like to speak to me and find out more about the study or have questions about it answered, you can leave a message for me on a 24-hour voicemail phone line at 01227 927070. Please say that the message is for Abbie Barnes and leave a contact number so that I can get back to you.

3. if dissatisfied with the study and want to complain.

If you have a concern about any aspect of this study, you should ask to speak to me and I will do my best to address your concerns. You can contact me by leaving a message on the 24-hour voicemail phone number 01227 927070. Please leave a contact number and say that the message is for Abbie Barnes and I will get back to you as soon as possible. If you remain dissatisfied and wish to complain formally, you can do this by contacting Dr Fergal Jones, Clinical Psychology Programme Research Director, Salomons Institute for Applied Psychology fergal.jones@canterbury.ac.uk

Appendix G: Interview schedule

Narrative Interview Schedule

If it feels safe and comfortable to do so, I would be interested to know how it is you came to be here with me today. Start as far back as feels important to you, and please take the time you need to think and talk things through. If you need to stop or step away at any point that is okay too.

Topic areas for probes –

- Traumatic experience(s)
  - *E.g.: Have you had any particularly difficult experiences or periods of time in your life?*
- Trauma response(s)
  - *Refer to unusual experience if not mentioned*
  - *E.g.: How did you respond when *use participant's language/phrasing* happened? What was life like for you during that time? OR what did a bad day look like?*
- People in your life
  - *E.g.: Were there people in your life who tried to help? If so, what did they do that was helpful? If not, did you try to seek support from others?*
- Managing
  - *E.g.: What sense have you made of your experiences? Are the affecting you now? If so, how?*
- Score on questionnaire
  - *E.g.: What relationships were you thinking about when you answered those questions?*

Appendix H

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Appendix K: Literary analysis

Participant	Core narrative	Genre	Tone	Positioning
Jim	*"So out of all this awfulness, comes something positive"*	Escape	Optimistic	Demonstrating that he has changed
Zara	*"I didn't realise that this is something that could happen to people like me"*	Enlightenment	Curious	Making sense of her experiences
Molly	*"I started to piece things together"*	Journey	Reflective	Rediscovering her sense of self
Stephen	*"Where the fuck do I go from here?"*	Chaos	Disrupted	Communicating his suffering and shocking the researcher
Robert	*"Every day's a battle"*	Endurance	Disjointed	Communicating his strengths and abilities
Craig	*"This happened for a purpose"*	Enlightenment	Calm	Overcoming loss
Jane	*"Doing this on my terms"*	Re-establishing	Tentative	Setting healthy boundaries
Ben	*"Instilling a sense of hope"*	Endeavour	Thoughtful	Expressing disappointment and gratitude
Thomas	*"New to me"*	Escape	Considered	Telling the story of how things changed for him

Comments: *The literary analysis revealed a variety of genres across the participants narratives. Some narratives fitted within the same genre (escape and journey) although their tone and positioning differed. Core narratives were individual to each participant and used their own words.*

Appendix L

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Appendix N: Reflexive statement

I, the study's lead researcher/author, am a White-British female training to be a Clinical Psychologist within the UK. I have a particular clinical interest in PLE and trauma stemming from my early career working on specialist ward for those experiencing psychosis. I noticed there were individuals on the ward who had experienced past trauma, and the content of their traumatic experiences were manifesting in their "psychosis symptoms" yet this was given little acknowledgement in their care plans. This triggered my interest in the trauma-psychosis hypothesis and informed my view that there is a link between past trauma and PLE, which ultimately contributed to the development of this research project.

Throughout the project, I held in mind that this is the context with which I approached the research with recognition that it influenced the way I understood and interpreted participant stories. Through supervision with project supervisions, I reflected upon the bias I held in thinking that participants' trauma would have contributed to the onset of their PLE as some participants did not share this belief. I recognised that this could have led to my posing questions that favoured this view. Therefore, in an attempt to reduce this bias, the interview schedule was developed in collaboration with an EBE.

As I work within NHS mental health services, I also uphold a bias towards the value of services and believe that psychological intervention is helpful for people who have experienced trauma or PLE. As such, it was important I remained mindful of this view so to not encourage such intervention within the research context, despite thinking it could have been of us to some participants. To address this, I named my role as a "researcher", as opposed to a "mental health professional employed by the NHS",

during my initial telephone or email contact with participants. Moreover, I also considered how I, in turn, may have been positioned by participants, some of whom had negative connotations of NHS mental health services. Supervision enabled me to discuss and reflect upon this and helped to enhance my awareness of the possible transference occurring between the participants and I, as this would have had an effect upon the way I felt towards a participant and thus biased my analysis.

Similarly, as I do not have any particular spiritual beliefs and would describe myself as an atheist, I identified my personal bias that there is no spiritual component to PLE. Yet for some participants this was a key component of their story and how they managed their experience. I may therefore have inadvertently disregarded or not paid close enough attention to the spiritual aspects of someone's story and potentially missed opportunities to explore this further in the interviews.

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Appendix P: Journal submission note

The paper 'Narratives of psychosis-like experiences: an exploration of trauma, attachment and how people manage' is for submission to the journal of Psychosis: Psychological, Social and Integrative Approaches.

This journal was chosen as it adopts a multi-disciplinary approach and addresses the field of psycho-social causes of psychosis (including trauma) and invites first person accounts of psychosis. The journal also provides the option to publish as open access. The maximum word limit for publication in this journal is 6000 words (including abstract, table, references etc.). This paper's wordcount will be reduced to fit the journal's requirements for the purpose of publication.