

RESEARCH ARTICLE

Does insecure attachment lead to psychosis via dissociation? A systematic review of the literature

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Abstract

Purpose: Insecure attachment may constitute a vulnerability factor for psychosis, and dissociation may be a key mechanism in the development of auditory hallucinations specifically. While there is good evidence for the role of these processes in isolation, it is unclear whether dissociation accounts for the association between insecure attachment and psychosis. This systematic review takes a theory-driven approach to examine proposed causal relationships across the clinical and nonclinical literature.

Methods: We searched five databases (PubMed, Web of Science, PsycINFO, CINAHL and ETHOS) for published and unpublished research examining attachment, dissociation and psychosis. Two independent reviewers extracted the data and assessed the quality of all included studies.

Results: We identified 242 potential articles and included 13 in the final review (2096 participants). We found that (1) disorganised attachment was consistently associated with dissociation and inconsistently associated with voices and paranoia, (2) dissociation was associated with voices and paranoia, and these links were stronger in clinical samples, and (3) dissociation played a role in the impact of insecure attachment on voice hearing and paranoia in clinical groups.

Conclusions: This is the first review to synthesise the research examining attachment, dissociation, and psychosis. The evidence is consistent with proposed causal hypotheses and raises conceptual and measurement issues, for example, the need to clarify the relative contributions of different insecure attachment styles, and utilise behavioural/observational measures to strengthen study designs. Most importantly, we need experimental and longitudinal studies to confirm causal links and targets for treatment.

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KEYWORDS

attachment, auditory hallucinations, dissociation, paranoia, psychosis, systematic review, voice hearing

INTRODUCTION

Psychosis refers to thinking and perceptions that differ from commonly shared reality, including hallucinations (perceptions in the absence of external stimuli), delusions (firmly held beliefs despite evidence to the contrary), and disorganised or confused thinking (Cooke, 2014). *Auditory hallucinations* (AHs) are commonly experienced as voices, and reported by up to 80% of people with a diagnosis of schizophrenia (McCarthy-Jones et al., 2017). *Paranoia* describes unfounded or exaggerated beliefs about interpersonal threat, ranging from suspiciousness to persecutory delusions which are reported by ~65% of people with psychosis diagnoses (Collin et al., 2023).

There is now broad agreement that experiences traditionally associated with psychosis occur on a clinical/nonclinical continuum and are maintained by similar psychological processes (van Os et al., 2009). Both AHs and paranoia are present in a range of mental health conditions and reported by a substantial minority of the general population (Freeman et al., 2005; Honig et al., 1998; Leede-Smith & Barkus, 2013). While differences in frequency, severity, appraisal and impairment distinguish clinical and non-clinical groups (Nayani & David, 1996; van Os et al., 2009; Verdoux & van Os, 2002), we can examine psychotic-type experiences and vulnerability factors in analogue samples to inform our understanding of psychosis in clinical populations.

Insecure attachment has been investigated as a vulnerability factor for psychosis across the clinical/non-clinical continuum. Attachment theory assumes that early interactions with primary caregivers lead to the development of *internal working models* – representations of the self and others that guide thinking, feeling and behaviour in subsequent relationships (Bowlby, 1969). The most commonly used framework in social and clinical psychology identifies three main attachment styles: secure, insecure-anxious and insecure-avoidant (Mikulincer & Shaver, 2010). Ainsworth et al. (1978) originally labelled infant attachment patterns as secure, ambivalent/resistant and avoidant. Later, Main and colleagues applied this typology to adult attachment, using the terms secure, preoccupied and dismissing (to categorise responses in the Adult Attachment Interview cf. Main et al., 1998). While a number of descriptors are used in the literature, these comparable attachment styles can be labelled secure, anxious and avoidant (Mikulincer & Shaver, 2010). In the present review, we use the terms proposed by Mikulincer and Shaver (2010) and include corresponding terms in parentheses, where used by the original authors. We use the term *insecure* to denote attachment styles that are not secure.

Secure attachment develops when a caregiver is generally available and responsive, and is characterised by a broadly positive view of self and others, effective emotion regulation, and an ability to manage close relationships; *anxious* (preoccupied) attachment typically follows inconsistent caregiving, resulting in negative beliefs about the self, hyperactivation (escalation) of emotion to access care, and ambivalence in close relationships; *avoidant* (dismissive) attachment typically follows physically or emotionally absent caregiving, resulting in negative beliefs about others, deactivation (suppression) of emotion, excessive self-reliance and avoidance of close relationships (Mikulincer & Shaver, 2010). A fourth style, *disorganised attachment*, describes an unpredictable combination of anxious and avoidant patterns (Main & Solomon, 1990), and is thought to develop in response to frightening, confused or inconsistent caregiving, possibly due to caregivers' own unresolved trauma (Main & Hesse, 1990). Similarly, *fearful attachment* describes high levels of both anxious and avoidant patterns – a desire for close relationships alongside fear and avoidance of others (Bartholomew & Horowitz, 1991). Some argue that fearful and disorganised attachment are analogous (Alexander, 1992), while others conceptualise disorganised attachment as distinctly unpredictable (Paetzold et al., 2015).

A series of reviews and meta-analyses now convincingly demonstrate an association between insecure attachment and psychotic experiences in adulthood, in clinical and non-clinical populations (Berry et al., 2007; Carr et al., 2018; Gumley et al., 2014; Korver-Nieberg et al., 2014; Lavin et al., 2020; Murphy et al., 2020). What is less clear is how insecure attachment leads to psychosis, in terms of child development and mechanisms involved. Dissociation has been posited as a likely causal process in the relationship between insecure attachment and psychosis.

Dissociation is defined as a lack of normal integration of thoughts, feelings and other internal experiences in consciousness and memory (Bernstein, 1986). This ranges in severity from common 'tuning out' to extreme absences, and may include gaps in memory (amnesia), a sense of distance from one's own body (depersonalisation), a sense of distance from immediate surroundings (derealisation) and fragmentation of a sense of self (identity disturbance) (Bremner et al., 1998).

Dissociation is associated with trauma in clinical and non-clinical populations (Dalenberg et al., 2012), and may be a direct consequence of trauma, or function to avoid or reduce associated physical and emotional pain (Dorahy & van der Hart, 2007; Ogawa et al., 1997). Systematic and meta-analytic reviews demonstrate robust associations between dissociation and both hallucinations and paranoia across the clinical/non-clinical psychosis continuum (Longden et al., 2020; Pilton et al., 2015).

Liotti (1992, 2009) conceptualises disorganised attachment as an early dissociative process; in the context of frightening and confusing early relationships, distinct internal working models develop simultaneously and separately ('split off') from one another, and this provides a foundation for dissociation in adults. In this way, dissociation can be conceptualised as part of personality development and adaptive in enabling the child to maintain a relationship with a potentially damaging caregiver (Gumley & Liotti, 2019; Liotti, 1992, 2009; Moskowitz et al., 2019). When a child is both drawn towards and fearful of their caregiver, the fight or flight system is activated as well as the attachment system, urging the child to approach and to withdraw, resulting in a confused and confusing set of responses. Importantly, longitudinal research shows that disorganised attachment in childhood predicts dissociation in adulthood (Carlson, 1998; Ogawa et al., 1997).

The evidence suggests that insecure attachment, typically following early interpersonal adversity, constitutes a vulnerability factor for psychosis (Gumley et al., 2014; Read & Gumley, 2008), and that dissociation may be a key causal mechanism for both voices and paranoia (Longden et al., 2020; Moskowitz & Corstens, 2007). In line with this existing literature, the cognitive attachment model of voice hearing (CAV; Berry et al., 2017) incorporates cognitive, attachment and dissociative processes to explain the development and maintenance of distressing voices. In this model, voices are conceptualised as dissociated trauma-related memories experienced as external due to poor source monitoring. Where voices are malevolent or threatening (e.g. 'we're going to get you'), paranoia may arise from associated appraisals (e.g. 'they're going to get me'). The model also assumes that early adversity increases the likelihood of developing a disorganised attachment style, which predisposes the person to dissociation, increasing the likelihood of voice hearing further.

Recent evidence partially supports a similar process for paranoia; in an online sample of people with self-reported psychosis, disorganised attachment (along with negative beliefs about others) mediated the association between trauma and paranoia, while controlling for voices and mood (Humphrey et al., 2022). These authors did not measure or make predictions about the role of dissociation.

In summary, insecure attachment and dissociation are likely to contribute to the development of psychosis. This review addresses the hypothesis that early relational trauma predisposes a disorganised attachment style, which increases proneness to dissociation in response to stressors, in turn triggering psychotic experience. Previous reviews have found associations between attachment and psychosis (Lavin et al., 2020) and dissociation and psychosis (Longden et al., 2020); however, it remains unclear whether dissociation *accounts for* the impact of insecure attachment on psychosis/psychotic-type experience. This review takes a theory-driven approach to examining proposed causal relationships between insecure attachment, dissociation, and psychosis/psychotic-type experiences across the clinical/ non-clinical spectrum.

METHOD

Search strategy and terms

We followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Page et al., 2021) to report published and unpublished empirical studies examining attachment style and dissociation in people with psychotic experiences. To ensure a comprehensive review of the literature, we searched five databases: PubMed, Web of Science, PsycINFO, CINAHL and British Library EThOS (for unpublished dissertations) from inception to 01.08.2023.

We utilised three search strings; (1) dissociat* OR 'multiple personalit*' OR depersonalisation OR depersonalization OR derealisation or derealization OR absorption AND (2) attachment OR 'attachment theory' OR 'internal working models' OR 'felt security' AND (3) psychos?s OR psychotic OR schizophre* OR schizotypy OR paranoi* OR delusion* OR hallucinat* OR voices. References and citations of previous relevant reviews and all eligible articles were hand-searched, and this process was repeated by an independent researcher.

Inclusion and exclusion criteria

We selected English language publications of studies that utilised: (1) quantitative methodology, (2) a standardised measure of attachment, (3) a standardised measure of dissociation, and (4) a standardised measure of psychosis/psychotic-type experiences or recruited a sample with psychosis/psychotic-type experiences. Exclusion criteria were studies that: (1) were not published in English, (2) used qualitative methodology only, and (3) were books, book reviews, book chapters, conference extracts, case reports or other reviews.

Screening and data extraction

We established eligibility at two stages: (1) title and abstract screening, and (2) full text article screening (see [Figure 1](#)). Screening and data extraction were completed by the first author and an independent researcher, and any disagreements (one) resolved through discussion with the research team. The independent researcher was an undergraduate psychology student instructed in the screening and data extraction process by the first author.

Quality assessment

We used the Joanna Briggs Institute (JBI) Checklist for Analytical Cross-Sectional Studies (JBI-CACSS) to assess cross-sectional studies, and the JBI Checklist for Quasi Experimental Research (JBI-CQER) to assess experimental studies. The JBI-CACSS is recommended for the quality assessment of cross-sectional research (Ma et al., 2020). The JBI-CACSS and JBI-CQER assess eight and nine aspects of research methodology and analysis, respectively (see [Tables 2](#) and [3](#)). Items are rated yes/no/unclear/not applicable. We calculated the overall ratings as follows: (1) $\geq 75\%$ items scored 'yes' – low risk of bias; (2) 50%–74% items scored 'yes' – moderate risk of bias; (3) $\leq 49\%$ items scored 'yes' – high risk of bias.

RESULTS

[Table 1](#) shows data extracted for the 13 studies that met inclusion criteria. The majority ($n = 10$) were conducted in the UK, and all between 2011 and 2023, indicating a recent and growing interest in the area. Most adopted cross-sectional designs and used correlation/regression analyses.

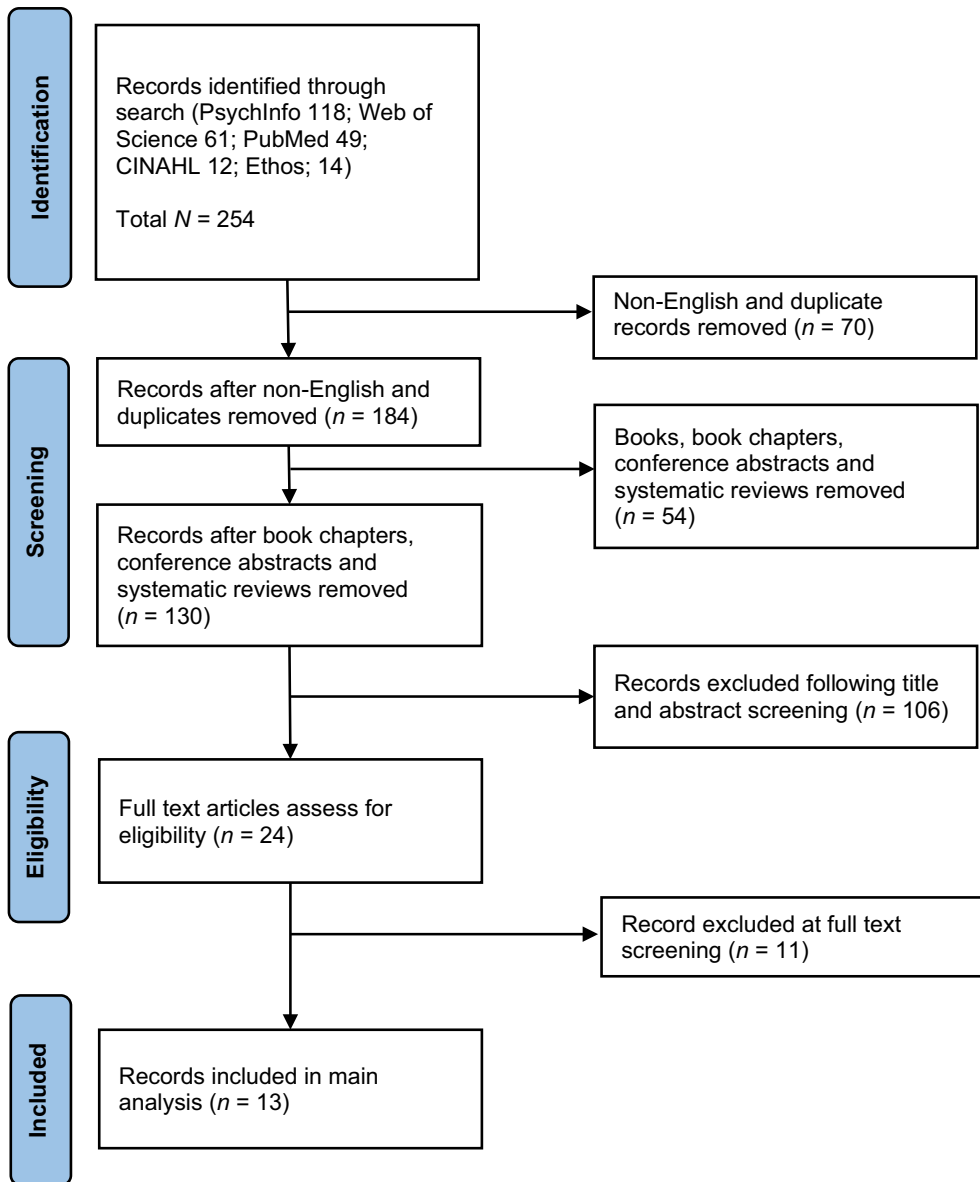


FIGURE 1 Paper selection flow chart.

Demographic characteristics

A total of 2096 participants participated in the 13 studies, of which approximately half were female (55%). Eight studies recruited clinical samples ($n = 1098$; 52%) and the most common diagnosis was schizophrenia ($n = 316$; 34%). Participants' average ages ranged from 20 to 41.5 years (one study did not report average age). Ten studies reported participants' ethnicity, and of these, 71% identified as White.

Measures

Seven self-report measures of attachment were used across the 13 studies (see Table 1). About half ($n = 6$) used the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991), indicating some

TABLE 1 Data extraction.

Authors (date), country	Study design	Sample characteristics	Measures of interest	Analyses	Key findings	Risk of bias
Austin (2011), UK Unpublished	Cross sectional	Male offenders in secure hospital with psychosis diagnoses (N = 56; mean age = 40)	Childhood Trauma Questionnaire, Impact of Events Scale-Revised, Relationship Questionnaire, Dissociative Experiences Scale-II, Positive and Negative Syndrome Scale	Correlation and Kruskal-Wallis	Dissociation not associated with trauma, total positive symptoms, emotional/sexual abuse history, hallucinatory behaviour or delusions. Dissociation positively associated with delusions ($r = .33, p < .01$) and hallucinatory behaviour ($r = .35, p < .01$) No group differences in dissociation between participants with/without trauma Secure attachment most endorsed style	Low
Berry et al. (2018), UK Published	Cross-sectional	University staff and student sample (N = 123; mean age = 22, male = 36, female = 87)	Childhood Trauma Questionnaire, Relationship Styles Questionnaire, Dissociative Experiences Scale-II, Laury-Slade Hallucination Scale, Positive and Negative Affect Schedule	Correlation and multiple regression	Avoidant attachment and dissociation predicted more AHs, $F(6, 106) = 15.20, p < .001$; adjusted $R^2 = .432$	Low
Degnan (2020), UK Unpublished	Cross sectional	Self-reported psychosis/treated for psychosis (N = 242; mean age = 33.17, male = 154, female = 74)	Brief Betrayal Trauma Survey, Psychosis Attachment Measure-Revised, Dissociative Experiences Scale-II, Self-Evaluation of Negative Symptoms, Community Assessment of Psychotic Experiences	Mediation	Disorganised attachment and dissociation together mediated the childhood trauma-negative symptom association, explaining 40% of the variance Disorganised attachment mediated the trauma-total negative symptoms ($\beta = 0.06, SE = 0.03, 95\% CI = 0.02-0.13$), trauma-experiential symptoms ($0.05, SE = 0.02, 95\% CI = 0.02-0.12$) and trauma-expressive symptoms ($\beta = 0.06, SE = 0.02, 95\% CI = 0.02-0.12$) associations Dissociation mediated the trauma-negative symptoms ($\beta = 0.04, SE = 0.02, 95\% CI = 0.01$ to 0.10) and trauma-experiential symptoms ($\beta = 0.04, SE = 0.02, 95\% CI = 0.01-0.10$) associations	Low
McGonagle (2017), UK Unpublished	Cross-sectional	Self-reported psychosis diagnosis (N = 230, mean age = 36.95, male = 46, female = 184)	Brief Betrayal Trauma Survey, Dissociative Experiences Scale-II, Creative Experiences Scale, Community Assessment of Psychotic Experiences	Multiple regression and serial mediation	Fearful attachment and dissociation mediated the trauma-AHs association ($\beta = 0.01, 95\% CI = 0.002, 0.03$), accounting for 25.4% of the total effect, $r_M = .254$	Low

TABLE 1 (Continued)

Authors (date), country	Publication status	Study design	Sample characteristics	Measures of interest	Analyses	Key findings	Risk of bias
Mertens et al. (2021), Spain Published	Cross-sectional	Undergraduate students (N = 89, mean age = 24.8, male = 34, female = 55)	Interview for Traumatic Events in Childhood, Relationship Questionnaire, Dissociative Experiences Scale-II, Schizotypal Personality Questionnaire, Structured Clinical Interview for DSM-4 Axis 2 Disorders	Correlation and parallel/serial mediation	Preoccupied (anxious) attachment and dissociation-mediated effect of emotional abuse on self-reported paranoid traits (anxious attachment: $b = 0.01$, $SE = 0.01$, 95% CI = 0.01, 0.04; dissociation: $b = 0.04$, $SE = 0.02$, 95% CI = 0.01, 0.09) and interview-based paranoid traits (anxious attachment: $b = 0.04$, $SE = 0.02$, 95% CI = 0.01, 0.1; dissociation: $b = 0.04$, $SE = 0.03$, 95% CI = 0.01, 0.13)	Low	
Pearce et al. (2017), UK Published	Cross-sectional	Self-reported help-seekers of medical support for distressing psychosis (N = 112; mean age = 40.2, male = 81, female = 30)	Brief Betrayal Trauma Survey, Relationship Questionnaire, Dissociative Experiences Scale-Revised, Community Assessment of Psychotic Experiences	Correlation and mediation	Fearful attachment and dissociation-mediated effect of emotional abuse on self-reported paranoid traits (fearful attachment: $b = 0.02$, $SE = 0.01$, 95% CI = 0.003, 0.05; dissociation: $b = 0.04$, $SE = 0.02$, 95% CI = 0.01, 0.09)	Low	
Pollard et al. (2020), UK Published	Cross-sectional	Self-reported psychosis diagnosis (N = 144, mean age = not reported, male = 47, female = 94)	Brief Betrayal Trauma Survey, Psychosis Attachment Measure-Revised, Adult Disorganised Attachment, Relationship Questionnaire, Dissociative Experiences Scale-II, Community Assessment of Psychotic Experiences	Correlation	Dissociation mediated the childhood trauma–voice hearing association ($\beta = 0.09$, 95% CI = 0.03, 0.17). Dissociation ($\beta = .17$, 95% CI = 0.07, 0.30) and fearful attachment ($\beta = 0.05$, 95% CI = 0.01, 0.12) mediated the childhood trauma–paranoia association	Low	

(Continues)

TABLE 1 (Continued)

Authors (date), country	Publication status	Study design	Sample characteristics	Measures of interest	Analyses	Key findings	Risk of bias
Puckett et al. (2023), UK Published	Experimental (impact of attachment on voice hearing and paranoia)	Analogue sample prone to AHs (N = 128, mean age = 24.5, male = 78, female = 47, non-binary = 2, prefer not say = 1)	Psychosis Attachment Measure-Revised, Dissociative Experiences Scale-II, Clinician Administered Dissociative Symptom Scale – 6-item, Launay-Slade Hallucination Scale, Continuum of Auditory Hallucinations (state), Brief Paranoia Checklist	ANOVA and mediation	Dissociation increased from time 1 to time 2, $F(1, 126) = 71.53, p < .001, \eta^2 = .39$ in both secure, $t(65) = -5.30, p = .001, d = 0.43$ and disorganised, $t(61) = -7.41, p = .001, d = 0.75$ attachment conditions. Paranoia decreased in the secure, $t(65) = 2.56, p = .01, d = 0.21$ condition. Dissociation did not mediate the effect of attachment on AHs or paranoia. In exploratory analysis, trait dissociation fully mediated the effect of trait disorganised attachment on state AHs ($\beta = 0.27, SE = 0.14, 95\% CI = 0.01, 0.37$)	Low	
Sitko (2015), UK Unpublished	Cross-sectional	Participants with schizophrenia spectrum diagnoses (N = 80; mean age = 41.5, male = 60, female = 20)	Relationship Questionnaire, Dissociative Experiences Scale-II, Positive and Negative Syndrome Scale	Correlation, hierarchical regression and moderation	Attachment style did not predict AHs. Anxious ($\beta = 0.23, SE = 0.04, p = .03$) and avoidant attachment ($\beta = 0.36, SE = 0.04, p = .001$) predicted paranoia Dissociation moderated the anxious attachment–paranoia association accounting for 37% of the variance, $F(5, 70) = 7.46, p < .001$	Low	
Strachan et al. (2023), Australia Published	Cross-sectional	University students (N = 528, mean age = 22.14, male = 127, female = 393, non-binary = 8)	PTSD Diagnostic Scale for DSM-5 (adapted), State Adult Attachment Measure, Depression Anxiety and Stress Scales-21, Perth Emotion and Regulation Competency Inventory, Dissociative Experiences Measure Oxford, Multi-modality Unusual Perceptual Experiences Questionnaire	Path analysis	Total (combined) indirect effects from trauma to unusual perceptual experiences accounted for 37.1% of the variance. Insecure attachment, emotion regulation deficits, negative affect and dissociation mediated these effects ($\beta = 0.08, 95\% CI [0.05, 0.11], p < .001$)	Low	
Williams (2017), UK Unpublished	Cross-sectional	Participants with schizophrenia spectrum diagnoses (N = 50, mean age = 41.36, male = 34, female = 16)	Relationship Questionnaire, Dissociative Experiences Scale-II, Revised Launay-Slade Hallucination Subscale, Calgary Depression Scale for Schizophrenia	Mediation	Dissociation mediated the fearful attachment–AHs association ($\beta = 0.37, 95\% CI = 0.07, 0.68$) – remained significant when age, gender and ethnicity covaried ($\beta = 0.38, 95\% CI = 0.06–0.71$), but not when age, gender, ethnicity and depression covaried	Low	

TABLE 1 (Continued)

Authors (date), country	Study design	Sample characteristics	Measures of interest	Analyses	Key findings	Risk of bias
de With et al. (2023), Netherlands Published	Cross-sectional	Participants with non-affective psychotic disorders (N = 184, mean age = 35.6, male = 112, female = 70, unknown = 2)	Psychosis Attachment Measure (Dutch version), Self-Experience Lifetime Frequency Scale	Multiple regression	Anxious attachment was positively associated with disturbed self-awareness ($\beta = 4.048, p = .023$) and depersonalisation ($\beta = 2.975, p = .011$) Positive symptoms were positively associated with disturbed self-awareness ($\beta = 11.899, p < .001$) and depersonalisation ($\beta = 4.659, p = .004$)	Low
Wong (2016), UK Unpublished	Experimental (impact of stress on voice hearing)	General population (N = 130, median age = 20, male = 42, female = 88)	Childhood Trauma Questionnaire, Relationship Scales Questionnaire, Dissociative Experiences Scale-II, Laumay-Slade Hallucination Scale Revised, Positive and Negative Affect Schedule, Voice Detection Task, Stress Manipulation Task	ANCOVA and linear regression	No group differences on rating of false alarms post-stress manipulation False alarms at baseline and depersonalisation predicted false alarms post-stress manipulation No association between childhood sexual abuse, hallucination proneness and attachment style	Low

Abbreviations: 95% CI, 95% confidence level; $\frac{1}{2}$ unstandardised regression coefficients; P_{AP} proportion mediated; r_2 , R-squared; SE , standardised error; β , standardised regression coefficients.

TABLE 2 Quality assessment of cross-sectional studies.

Study	Were inclusion criteria clearly defined?	Were study subjects and setting described in detail?	Was exposure (IV) measured in a valid and reliable way	Were objective, standard criteria used to measure the condition?	Were confounding factors identified?	Were strategies to deal with confounding factors stated?	Were outcomes measured in valid and reliable way?	Was appropriate statistical analysis used?	Risk of bias
Austin (2011)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low
Berry et al. (2018)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low
Degnan (2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low
McGonagle (2017)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low
Mertens et al. (2021)	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Low
Pearce et al. (2017)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low
Pollard et al. (2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low
Sitko (2015)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Low
Strachan et al. (2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low
de With et al. (2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low
Williams (2017)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Low

TABLE 3 Quality assessment of experimental studies.

Study	Are 'cause' and 'effect' clear?	Were participants included in comparisons similar?	Were participants included in comparisons receiving similar treatment/care, other than intervention of interest?	Was there a control group?	Were there multiple measurements of the outcome pre and post-intervention/exposure?	Was follow up complete and if not were differences between groups adequately described and analysed?	Were outcomes of participants included in comparisons measured in the same way?	Were outcomes measured in a reliable way?	Was appropriate statistical analysis used?	Risk of bias
Puckett et al. (2023)	Yes	Yes	Yes	No	No	N/A	Yes	Yes	Yes	Low
Wong (2016)	Yes	Yes	Yes	Yes	No	N/A	Yes	Yes	Yes	Low

consistency in the field. The majority (10) measured trait dissociation using the Dissociative Experiences Scale-II (DES-II; Carlson & Putnam, 1993), a level of consistency that facilitates comparisons across studies. Eleven tools measured psychotic experiences, with the Community Assessment of Psychotic Experiences (CAPE; Konings et al., 2006) used most frequently ($n = 4$).

Quality assessment

Quality assessment ratings are reported in Tables 2 and 3, with overall scores added to Table 1. All were rated as low risk overall, so we can be reasonably confident in the results. Heterogeneity across studies precluded a meta-analysis.

All but two studies (Mertens et al., 2021; Wong, 2016) relied solely on self-report measures.

What is the relationship between attachment, dissociation and psychotic experiences?

Seven of the 13 studies examined associations between attachment, dissociation and AHs (Berry et al., 2018; McGonagle, 2017; Pearce et al., 2017; Puckett et al., 2023; Sitko, 2015; Williams, 2017; Wong, 2016). Of these, Berry et al. (2018), Puckett et al. (2023), and Wong (2016) ran non-clinical studies and all others recruited clinical participants with diagnosed or self-reported psychosis. Five studies examined associations between attachment, dissociation and paranoia (McGonagle, 2017; Mertens et al., 2021; Pearce et al., 2017; Puckett et al., 2023; Sitko, 2015). Of these, Mertens et al. (2021) and Puckett et al. (2023) ran non-clinical studies and all others recruited clinical participants with diagnosed or self-reported psychosis. One study measured 'unusual perceptual experiences' in a non-clinical group (Strachan et al., 2023), and four measured 'positive symptoms' in clinical samples, but did not distinguish hallucinations, paranoia or other symptoms in the analyses (Austin, 2011; de With et al., 2023; Degnan, 2020; Pollard et al., 2020). Degnan (2020) also measured negative symptoms.

Associations between attachment and dissociation

Non-clinical studies

These showed¹ small to moderate positive correlations between dissociation and both anxious (preoccupied) and disorganised (fearful) attachment (Berry et al., 2018; Mertens et al., 2021; Puckett et al., 2023; Strachan et al., 2023), and a small negative association with secure attachment (Mertens et al., 2021). There was inconsistent support for a small positive association between dissociation and avoidant (dismissive) attachment (Berry et al., 2018; Mertens et al., 2021). One study did not report these correlations (Wong, 2016).

Clinical studies

All five studies measuring dissociation and disorganised (fearful) attachment found small to moderate positive associations (Degnan, 2020; McGonagle, 2017; Pearce et al., 2017; Pollard et al., 2020; Williams, 2017). Two studies examined associations with secure attachment and found small negative correlations (McGonagle, 2017; Williams, 2017). Three of four studies found no association with anxious (preoccupied) attachment (McGonagle, 2017; Pearce et al., 2017; Williams, 2017), and one found a small positive association (Sitko, 2015). Using a different measure, one study found large positive associations between anxious attachment and both disturbed self-awareness and depersonalisation (de

¹We include broadly accepted comparable terms in parentheses, where used by study authors, acknowledging some controversy in the literature regarding distinctions between categories drawn from different classification systems, (cf. Alexander, 1992; Paetzold et al., 2015).

With et al., 2023). Four studies found no association between avoidant (dismissive) attachment and dissociation (McGonagle, 2017; Pearce et al., 2017; Sitko, 2015; Williams, 2017), one found a trend (de With et al., 2023) and one a small positive association (Degnan, 2020). Austin (2011) did not report these correlations.

Summary

Disorganised attachment is consistently associated with dissociation in clinical and non-clinical samples, typically with small to moderate correlations. Findings are mixed for anxious and avoidant attachment.

Associations between attachment and psychosis/psychosis experiences

Non-clinical studies

The non-clinical studies found small positive correlations between voice predisposition and both anxious and avoidant attachment (Berry et al., 2018) and a similar pattern for paranoia (Mertens et al., 2021). Strachan et al. (2023) also reported a small positive association between insecure attachment and unusual perceptual experiences, while Puckett et al. (2023) found no associations between voice predisposition and anxious, avoidant or disorganised attachment. When assessed through interview (rather than self-report), the association between attachment with paranoia became moderate for anxious and non-significant for avoidant attachment (Mertens et al., 2021). One study examined secure attachment, finding a small negative association with paranoia (on both self-report and interview measures), and disorganised (fearful) attachment, finding a small positive association with paranoia (again, on self-report and interview measures) (Mertens et al., 2021). Wong (2016) did not report these correlations.

Clinical studies

There is evidence of small-to-moderate associations between disorganised (fearful) attachment and both paranoia (McGonagle, 2017; Pearce et al., 2017) and positive symptoms (Degnan, 2020; Pollard et al., 2020). One study found a small positive association between disorganised (fearful) attachment and voices (Pearce et al., 2017) but two others found none (McGonagle, 2017; Williams, 2017). Two of three studies found small positive associations between anxious (preoccupied) attachment and paranoia (McGonagle, 2017; Sitko, 2015), though Pearce et al. (2017) found none. Two of these found no association between anxious (preoccupied) attachment and hallucinations (Pearce et al., 2017; Sitko, 2015) but McGonagle (2017) found a small negative association. Sitko (2015) found a moderate positive association between avoidant attachment and paranoia, but this was not replicated in the two others (McGonagle, 2017; Pearce et al., 2017). de With et al. (2023) found avoidant attachment to be strongly associated with positive symptoms of psychosis. Austin (2011) did not report these correlations.

Summary

The most consistent finding is for an association between disorganised attachment and paranoia. There is some evidence for associations between both anxious and avoidant attachment and psychotic experiences in the non-clinical samples, but the evidence is mixed in the clinical groups.

Associations between dissociation and psychosis/psychosis experiences

Non-clinical studies

These found small-to-moderate positive correlations between dissociation and voice predisposition (Berry et al., 2018), unusual perceptual experiences (Strachan et al., 2023), and paranoia using

self-report and interview measures (Mertens et al., 2021). One study found that dissociation was not associated with predisposition to AHs (Puckett et al., 2023) and Wong (2016) did not report these correlations.

Clinical studies

Four of five studies found small-to-strong positive associations between dissociation and hallucinations (Austin, 2011; McGonagle, 2017; Pearce et al., 2017; Williams, 2017) and one study found no association (Sitko, 2015). Similarly, four of four studies found small-to-moderate associations between dissociation and paranoia (Austin, 2011; McGonagle, 2017; Pearce et al., 2017; Sitko, 2015). The three studies measuring positive symptoms of psychosis more broadly found moderate-to-strong positive associations with dissociation (de With et al., 2023; Degnan, 2020; Pollard et al., 2020). The one study that measured negative symptoms also found small positive associations with dissociation (Degnan, 2020).

Summary

These studies indicate that dissociation is associated with both voices and paranoia, and that these links may be stronger in clinical samples.

Associations between attachment, dissociation and psychosis/psychotic experiences

Some studies employed regression and mediation analyses to examine associations between all three variables of interest: attachment, dissociation and psychosis/psychotic-type experiences.

Non-clinical studies

Berry et al. (2018) showed that attachment avoidance and dissociation predicted voice hearing predisposition (controlling for age and negative affect) – individuals with higher levels of attachment avoidance and/or dissociation were more prone to voice hearing. Mertens et al. (2021) found that anxious (preoccupied) attachment and dissociation mediated the effect of early adversity on paranoia (self-report and interview measures), and that disorganised (fearful) attachment and dissociation mediated the effect of early adversity on paranoia (self-report only) but found no serial mediation effect to support the hypothesis that insecure attachment preceded (increased) dissociation in the impact on (increased) paranoia. Puckett et al. (2023) found that dissociation fully mediated the effect of trait disorganised attachment on state auditory hallucinations. Strachan et al. (2023) found that insecure attachment, emotion dysregulation, negative affect and dissociation all mediated the effect of trauma on unusual perceptual experiences.

Clinical studies

Most clinical studies focused on the role of disorganised (fearful) attachment and dissociation on psychotic experience. Three studies evidenced the mediating role of dissociation in the link between disorganised (fearful) attachment and AHs (McGonagle, 2017; Pearce et al., 2017; Williams, 2017) – increases in disorganised (fearful) attachment were associated with increased dissociation which was in turn associated with increased AHs. Williams (2017) found that the mediation became non-significant when age, gender, ethnicity and depression were added as covariates, but remained significant when depression was removed. Interestingly, in relation to paranoia, Sitko (2015) found that dissociation moderated the effect of attachment anxiety (but not avoidance) on paranoia – as dissociation *increased*, the effect of attachment anxiety on paranoia *decreased*.

Summary

Dissociation is likely to play a role in the impact of insecure attachment on AHs and paranoia in clinical groups.

DISCUSSION

This is the first systematic review to synthesise the literature examining the role of attachment and dissociation in people with clinical and non-clinical psychosis/psychotic-type experience. Thirteen studies have been completed over the last 12 years, the majority in the UK. This shows a recent and growing interest in understanding attachment-relevant mechanisms in psychosis, and that the UK currently leads the field.

We selected studies measuring attachment, dissociation and psychosis in clinical and non-clinical samples. We found that (1) disorganised attachment is consistently associated with dissociation in clinical and non-clinical groups (with mixed evidence for associations with anxious and avoidant attachment), (2) disorganised attachment is often associated with paranoia (with mixed evidence for the impact on voices, and the impact of anxious and avoidant attachment on psychotic experiences), (3) dissociation is associated with both voices and paranoia, and these links are likely to be stronger in clinical samples, (4) dissociation is likely to play a role in the impact of insecure attachment on voice hearing and paranoia in clinical groups.

These findings indicate that disorganised attachment, which often results from early interpersonal trauma, predisposes dissociation in adulthood, which can in turn trigger voices and paranoia (see [Figure 2](#)). This is consistent with developmental (Liotti, 1992, 2009) and mechanistic models (Berry et al., 2017) of psychosis that highlight the role of dissociation in the association between disorganised attachment and psychosis. The finding that disorganised attachment is consistently associated with dissociation, and that dissociation is associated with both voices and paranoia, particularly in clinical samples, suggests that both disorganised attachment and dissociation are causally linked to psychosis.

The studies examining candidate causal mechanisms are of particular interest. These indicate (but do not prove) that disorganised attachment may predispose dissociation which may increase voice hearing (McGonagle, 2017; Pearce et al., 2017; Williams, 2017). Additionally, the effect of attachment anxiety on paranoia may decrease as dissociation increases (Sitko, 2015). Our results support the suggestion that disorganised attachment leads to voice hearing via dissociation (Berry et al., 2017), and raise interesting questions about the (possibly protective) function of dissociation in the relationship between attachment insecurity and paranoia (cf. Longden et al., 2020).

The combination of (1) broadly consistent findings for the role of disorganised attachment on dissociation and psychotic experience, and (2) mixed results for the role of anxious and avoidant attachment across clinical and non-clinical studies, raises conceptual and measurement issues. *Is it possible that anxious and avoidant attachment patterns commonly co-exist in clinical groups with psychosis, and so current measures serve (for some people) as a proxy for disorganised or fearful patterns?* While disorganised and fearful attachment are often used interchangeably, these categories come from different classification systems and there is some disagreement regarding assumed equivalence (cf. Paetzold et al., 2015). Measurement issues have long been debated in the broader attachment literature and now need to be grappled with in relation to psychosis to confirm whether current self-report scales accurately reflect conceptually distinct attachment patterns for these populations.

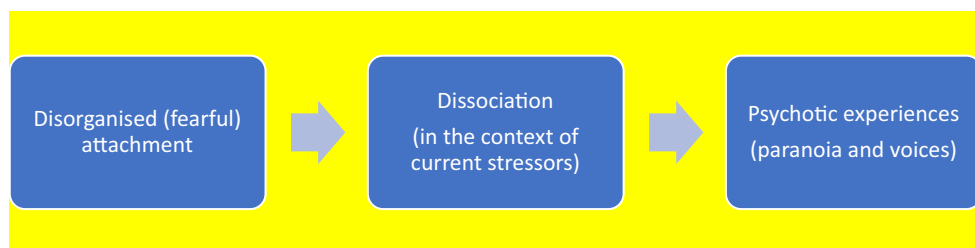


FIGURE 2 Predisposing relationships between disorganised (fearful) attachment, dissociation and psychosis.

Limitations and research implications

The heterogeneity of the research precluded a meta-analysis and indicates that we need a consensus on study designs and measures (particularly for attachment) to advance the field. While the quality assessment indicated a low risk of bias for all studies included, several remain unpublished and have therefore not benefitted from peer review. The reliance on cross-sectional designs, self-report measures (particularly for people who are avoidantly attached and may under-report problems; Gumley et al., 2014; Strand et al., 2015) and correlational analyses limit conclusions, notwithstanding the use of mediation and path analyses in some studies. Fully powered experimental and longitudinal clinical studies are needed to establish causal links. We now need to:

1. Examine anxious, avoidant and disorganised/fearful attachment patterns in people with psychosis to determine the extent to which these co-exist, and if so, which are the key factors predictive of dissociation and psychosis
2. Examine the relative contributions of anxious, avoidant and disorganised/fearful attachment to voices, paranoia and other psychosis experiences separately, and the mediating role of dissociation *while controlling for the effect of other attachment styles*
3. Agree working definitions of disorganised and fearful attachment, and confirm (and distinguish) validity of self-report measures for each²
4. Run and replicate experimental studies that manipulate proposed causal mechanisms (using current measures of attachment and dissociation) to establish causal relationships
5. Draw on behavioural and observer measures as well as self-report questionnaires to strengthen study designs.

Clinical implications

Our findings indicate that insecure attachment is likely to be a vulnerability factor for psychosis, and that dissociation may mediate this effect and trigger psychotic experiences on a day-to-day basis. Importantly, this applies to paranoia (and possibly negative symptoms) as well as voices. As clinicians, we can assess these factors and incorporate in treatment planning where indicated (see Table 4).

We recommend that clinicians routinely ask about early and later adversity (Read et al., 2005, 2008; Read & Gumley, 2008). Read et al. (2008) provide a list of principles for asking about childhood trauma and responding to people's answers. These include asking everyone, asking at initial assessment (unless the person is in crisis), not seeking details, affirming it was helpful to tell, checking current emotional state, safety and support, and offering follow-up (Read et al., 2008). Attachment and dissociation should also be assessed through clinical interview and/or standardised measures. In the case of psychological assessment and therapy, relevant early experience, attachment style and dissociation can be named in the formulation and linked to psychosis symptoms to facilitate understanding. For people with insecure attachment, it is important to foster a sense of *felt security* through therapeutic interactions that are consistent, reliable and boundaried (cf. Mikulincer et al., 2013). Felt security can also be targeted directly with brief imagery tasks (Newman-Taylor, 2020; Newman-Taylor et al., 2021; Pitfield et al., 2020; Sood et al., 2021, 2022a, 2022b; Sood & Newman-Taylor, 2020). In terms of treatment planning, clinicians should teach people to manage their dissociation, e.g. through psychoeducation and grounding skills (Newman-Taylor & Sambrook, 2013; Paulik et al., 2022), and address trauma directly where early adversity and dissociation dominate the presentation (Hardy, 2017; Keen et al., 2017; Paulik et al., 2019; van den Berg

²Ideally, we would address (3) before (1) and (2) but expect it will take time for researchers in the field to come together with people with psychosis to agree on working definitions of disorganised and fearful attachment.

TABLE 4 Clinical implications of the review.

1.	Clinicians and MDTs: Routinely ask about early adversity
2.	Psychologists and psychological therapists: Routinely assess attachment and dissociation, and name these processes in formulation diagrams
3.	Psychologists and psychological therapists: When formulating, discuss the function of dissociation for the individual, which probably increases likelihood of voices, and possibly decreases paranoia (in the context of anxious attachment)
4.	Clinicians and MDTs: Prioritise consistent and boundaried therapeutic relationships for people with insecure attachment and find ways to facilitate 'felt security'
5.	Psychologists and psychological therapists: Prioritise means of managing dissociation where relevant, for example, psychoeducation and grounding skills
6.	Clinicians and MDTs: Consider trauma-focused approaches where early adversity and dissociation dominate the presentation
7.	Service leads: Incorporate timelines for assessment of early adversity, attachment and dissociation, in care pathways for people with psychosis
8.	Service leads: Establish internal reporting/routine audit systems that monitor these care pathways for community and in-patient multi-disciplinary teams

et al., 2020). At a service level, care pathways that specify timescales for recommended interventions (Department of Health, 2014; Rathod et al., 2016) should incorporate assessment of adversity, attachment and dissociation, to ensure routine implementation.

CONCLUSION

This is the first theory-driven review of proposed causal links between attachment, dissociation and psychosis. The evidence is consistent with hypothesised causal pathways but raises important conceptual and measurement issues (as outlined in research implications, above). We now need replicable experimental and longitudinal studies to examine causality. Routine assessment and formulation of attachment style and dissociation are likely to improve clinical outcomes for people with psychosis, particularly for those with a history of early relational trauma.

AUTHOR CONTRIBUTIONS

Joseph Puckett: Conceptualization; methodology; data curation; investigation; formal analysis; writing – original draft; writing – review and editing. **Monica Sood:** Conceptualization; methodology; supervision; writing – review and editing. **Katherine Newman-Taylor:** Conceptualization; methodology; writing – review and editing; supervision.

CONFLICT OF INTEREST STATEMENT

Katherine Newman-Taylor is guest editing a special issue for the journal. The other authors have no declarations of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

ETHICAL APPROVAL

This work has been carried out in accordance with the Declaration of Helsinki. Privacy rights were observed throughout.

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REFERENCES

- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. N. (1978). *Patterns of attachment: A psychological study of the strange situation*. Psychology Press.
- Alexander, P. C. (1992). Application of attachment theory to the study of sexual abuse. *Journal of Consulting and Clinical Psychology, 60*(2), 185–195. <https://eds.p.ebscohost.com/eds/pdfviewer/pdfviewer?vid=0&sid=a56e0601-7bd5-4982-a8a6-881e80656f66%40redis>
- Austin, J. (2011). *The connection between psychosis, trauma and dissociation: An exploratory study involving patients in forensic mental health settings* [Unpublished doctoral dissertation] University of Edinburgh.
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*(2), 226–244. <https://doi.org/10.1037/0022-3514.61.2.226>
- Bernstein, E. M. (1986). *Development, Reliability, And Validity Of A Dissociation Scale (derealization, Depersonalization, Test Construction)* (Order No. 8613654). Available from ProQuest One Academic. (303471191). <https://www.proquest.com/dissertations-theses/development-reliability-validity-dissociation/docview/303471191/se-2?accountid=13963>
- Berry, K., Barrowclough, C., & Wearden, A. (2007). A review of the role of adult attachment style in psychosis: unexplored issues and questions for further research. *Clinical Psychology Review, 27*(4), 458–475.
- Berry, K., Fleming, P., Wong, S., & Bucci, S. (2018). Associations between trauma, dissociation, adult attachment and proneness to hallucinations. *Behavioural and Cognitive Psychotherapy, 46*(3), 292–301. <https://doi.org/10.1017/S13524658170000716>
- Berry, K., Varese, F., & Bucci, S. (2017). Cognitive attachment model of voices: Evidence base and future implications. *Frontiers in Psychiatry, 8*, 111. <https://doi.org/10.3389/fpsy.2017.00111>
- Bowlby, J. (1969). *Attachment and loss: Attachment (Vol. 1)*. Basic Books.
- Bremner, J. D., Krystal, J. H., Putnam, F. W., Southwick, S. M., Marmar, C., Charney, D. S., & Mazure, C. M. (1998). Measurement of dissociative states with the clinician-administered dissociative states scale (CADSS). *Journal of Traumatic Stress, 11*(1), 125–136. <https://doi.org/10.1023/A:1024465317902>
- Carlson, E. A. (1998). A prospective longitudinal study of attachment disorganization/disorientation. *Child Development, 69*(4), 1107–1128. <https://doi.org/10.1111/j.1467-8624.1998.tb06163.x>
- Carlson, E. B., & Putnam, F. W. (1993). An update on the dissociative experiences scale. *Dissociation: Progress in the Dissociative Disorders*.
- Carr, S. C., Hardy, A., & Fornells-Ambrojo, M. (2018). Relationship between attachment style and symptom severity across the psychosis spectrum: A meta-analysis. *Clinical Psychology Review, 59*, 145–158.
- Collin, S., Rowse, G., Martinez, A., & Bentall, R. P. (2023). Delusions and the dilemmas of life: A systematic review and meta-analyses of the global literature on the prevalence of delusional themes in clinical groups. *Clinical Psychology Review, 104*, 102303.
- Cooke, A. (2014). *Understanding psychosis and schizophrenia: Why people sometimes hear voices, believe things that others find strange, or appear out of touch with reality, and what can help*. British Psychological Society.
- Dalenberg, C. J., Brand, B. L., Gleaves, D. H., Dorahy, M. J., Loewenstein, R. J., Cardena, E., Frewen, P. A., Carlson, E. B., & Spiegel, D. (2012). Evaluation of the evidence for the trauma and fantasy models of dissociation. *Psychological Bulletin, 138*(3), 550–588.
- de With, J., de Haan, L., & Schirmbeck, F. (2023). Attachment style and self-experience: The association between attachment style and self-reported altered self-experience in patients with psychotic disorders, unaffected siblings, and healthy controls. *Journal of Nervous and Mental Disease, 211*(6), 440–447. <https://doi.org/10.1097/NMD.0000000000001634>
- Degnan, A. (2020). *Psychological processes associated with negative symptoms and quality of life in psychosis* [Unpublished doctoral dissertation]. University of Manchester.
- Department of Health & NHS England. (2014). *Achieving better access to mental health services by 2020*. Department of Health.
- Dorahy, M., & van der Hart, O. (2007). Relationship between trauma and dissociation. In *Traumatic dissociation. Neurobiology and treatment* (pp. 3–30). American Psychiatric Publishing, Inc.
- Freeman, D., Garety, P. A., Bebbington, P. E., Smith, B., Rollinson, R., Fowler, D., Kuipers, E., Ray, K., & Dunn, G. (2005). Psychological investigation of the structure of paranoia in a non-clinical population. *The British Journal of Psychiatry, 186*(5), 427–435. <https://doi.org/10.1192/bjp.186.5.427>
- Gumley, A., & Liotti, G. (2019). An attachment perspective on schizophrenia: The role of attachment, dissociation and mentalization. In A. Moskowitz, M. J. Dorahy, & I. Schäfer (Eds.), *Psychosis, trauma and dissociation: Evolving perspectives on severe psychopathology* (pp. 97–116). Wiley.
- Gumley, A. I., Taylor, H. E. F., Schwannauer, M., & MacBeth, A. (2014). A systematic review of attachment and psychosis: Measurement, construct validity and outcomes. *Acta Psychiatrica Scandinavica, 129*, 257–274. <https://doi.org/10.1111/acps.12172>

- Hardy, A. (2017). Pathways from trauma to psychotic experiences: A theoretically informed model of posttraumatic stress in psychosis. *Frontiers in Psychology*, 8, 697.
- Honig, A., Romme, M. A., Ensink, B. J., Escher, S. D., Pennings, M. H., & Devries, M. W. (1998). Auditory hallucinations: A comparison between patients and nonpatients. *The Journal of Nervous and Mental Disease*, 186(10), 646–651.
- Humphrey, C., Berry, K., Degnan, A., & Bucci, S. (2022). Childhood interpersonal trauma and paranoia in psychosis: The role of disorganised attachment and negative schema. *Schizophrenia Research*, 241, 142–148. <https://doi.org/10.1016/j.schres.2022.01.043>
- Keen, N., Hunter, E., & Peters, E. (2017). Integrated trauma-focused cognitive-behavioural therapy for post-traumatic stress and psychotic symptoms: A case-series study using imaginal reprocessing strategies. *Frontiers in Psychiatry*, 8, 92. <https://doi.org/10.3389/fpsy.2017.00092>
- Konings, M., Bak, M., Hanssen, M., Van Os, J., & Krabbendam, L. (2006). Validity and reliability of the CAPE: A self-report instrument for the measurement of psychotic experiences in the general population. *Acta Psychiatrica Scandinavica*, 114(1), 55–61.
- Korver-Nieberg, N., Berry, K., Meijer, C. J., & De Haan, L. (2014). Adult attachment and psychotic phenomenology in clinical and non-clinical samples: A systematic review. *Psychology and Psychotherapy: Theory, Research and Practice*, 87(2), 127–154. <https://doi.org/10.1111/papt.12010>
- Lavin, R., Bucci, S., Varese, F., & Berry, K. (2020). The relationship between insecure attachment and paranoia in psychosis: A systematic literature review. *British Journal of Clinical Psychology*, 59(1), 39–65. <https://doi.org/10.1111/bjc.12231>
- Leede-Smith, S., & Barkus, E. (2013). A comprehensive review of auditory verbal hallucinations: Lifetime prevalence, correlates and mechanisms in healthy and clinical individuals. *Frontiers in Human Neuroscience*, 7, 367. <https://doi.org/10.3389/fnhum.2013.00367>
- Liotti, G. (1992). Disorganized/disoriented attachment in the etiology of the dissociative disorders. *Dissociation*, 5(4), 196–204.
- Liotti, G. (2009). Attachment and dissociation. Dissociation and the dissociative disorders: DSM-V and beyond. In P. F. Dell & J. A. O'Neil (Eds.), *Dissociation and dissociative disorders: DSM-V and beyond* (pp. 53–65). Routledge.
- Longden, E., Branitsky, A., Moskowitz, A., Berry, K., Bucci, S., & Varese, F. (2020). The relationship between dissociation and symptoms of psychosis: A meta-analysis. *Schizophrenia Bulletin*, 46(5), 1104–1113. <https://doi.org/10.1093/schbul/sbaa037>
- Ma, L. L., Wang, Y. Y., Yang, Z. H., Huang, D., Weng, H., & Zeng, X. T. (2020). Methodological quality (risk of bias) assessment tools for primary and secondary medical studies: What are they and which is better? *Military Medical Research*, 7, 1–11.
- Main, M., & Hesse, E. (1990). *Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened and/or frightening parental behavior the linking mechanism?* The University of Chicago Press.
- Main, M., Goldwyn, R., & Hesse, E. (1998). *Adult attachment scoring and classification system*. Unpublished manuscript, University of California at Berkeley.
- Main, M., & Solomon, J. (1990). Procedures for identifying infants as disorganized/disoriented during the Ainsworth strange situation. In *Attachment in the preschool years: Theory, research, and intervention* (Vol. 1, pp. 121–160). The University of Chicago Press.
- McCarthy-Jones, S., Smailes, D., Corvin, A., Gill, M., Morris, D. W., Dinan, T. G., Murphy, K. C., Anthony O'Neill, F., Waddington, J. L., Australian Schizophrenia Research Bank, Donohoe, G., & Dudley, R. (2017). Occurrence and co-occurrence of hallucinations by modality in schizophrenia-spectrum disorders. *Psychiatry Research*, 252, 154–160.
- McGonagle, G. (2017). *Does fearful attachment and dissociation mediate the relationship between Trauma and voice-hearing in psychosis?* [Unpublished doctoral dissertation] University of Manchester.
- Mertens, Y. L., Racioppi, A., Sheinbaum, T., Kwapil, T., & Barrantes-Vidal, N. (2021). Dissociation and insecure attachment as mediators of the relation between childhood emotional abuse and nonclinical paranoid traits. *European Journal of Psychotraumatology*, 12(1), 1888539. <https://doi.org/10.1080/20008198.2021.1888539>
- Mikulincer, M., & Shaver, P. R. (2010). *Attachment in adulthood: Structure, dynamics, and change*. Guilford Publications.
- Mikulincer, M., Shaver, P. R., & Berant, E. (2013). An attachment perspective on therapeutic processes and outcomes. *Journal of Personality*, 81(6), 606–616. <https://doi.org/10.1111/j.1467-6494.2012.00806.x>
- Moskowitz, A., & Corstens, D. (2007). Auditory hallucinations: Psychotic symptom or dissociative experience? *The Journal of Psychological Trauma*, 6, 35–63.
- Moskowitz, A., M. J. Dorahy, & I. Schäfer (Eds.) (2019). *Psychosis, trauma and dissociation: Evolving perspectives on severe psychopathology*. John Wiley & Sons.
- Murphy, R., Goodall, K., & Woodrow, A. (2020). The relationship between attachment insecurity and experiences on the paranoia continuum: A meta-analysis. *British Journal of Clinical Psychology*, 59(3), 290–318.
- Nayani, T., & David, A. (1996). The auditory hallucination: A phenomenological survey. *Psychological Medicine*, 26, 177–189.
- Newman-Taylor, K. (2020). 'Felt security' as a means of facilitating imagery rescripting in psychosis: A clinical protocol and illustrative case study. *The Cognitive Behaviour Therapist*, 13, e24.
- Newman-Taylor, K., & Sambrook, S. (2013). The role of dissociation in psychosis. In F. Kennedy, H. Kennerley, & D. Pearson (Eds.), *Cognitive Behavioural approaches to the understanding and treatment of dissociation* (pp. 119–132). Routledge.
- Newman-Taylor, K., Sood, M., Rowe, A., & Carnelley, K. B. (2021). Attachment imagery as a means of effecting change in paranoia, mood, and behavioural intentions in an analogue sample. *Brain Sciences*, 11(10), 1257. <https://doi.org/10.3390/brainsci11101257>

- Ogawa, J. R., Sroufe, L. A., Weinfield, N. S., Carlson, E. A., & Egeland, B. (1997). Development and the fragmented self: Longitudinal study of dissociative symptomatology in a nonclinical sample. *Development and Psychopathology*, *9*(4), 855–879. <https://doi.org/10.1017/s0954579497001478>
- Paetzold, R. L., Rholes, W. S., & Kohn, J. L. (2015). Disorganized attachment in adulthood: Theory, measurement, and implications for romantic relationships. *Review of General Psychology*, *19*(2), 146–156. <https://doi.org/10.1037/gpr0000042>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *International Journal of Surgery*, *88*, 105906. <https://doi.org/10.1016/j.ijssu.2021.105906>
- Paulik, G., Newman-Taylor, K., Steel, C., & Arntz, A. (2022). Managing dissociation in imagery rescripting for voice hearers with trauma: Lessons from a case series. *Cognitive and Behavioral Practice*, *29*(2), 434–445.
- Paulik, G., Steel, C., & Arntz, A. (2019). Imagery rescripting for the treatment of trauma in voice hearers: A case series. *Behavioural and Cognitive Psychotherapy*, *47*(6), 709–725.
- Pearce, J., Simpson, J., Berry, K., Bucci, S., Moskowitz, A., & Varese, F. (2017). Attachment and dissociation as mediators of the link between childhood trauma and psychotic experiences. *Clinical Psychology & Psychotherapy*, *24*(6), 1304–1312. <https://doi.org/10.1002/cpp.2100>
- Pilton, M., Varese, F., Berry, K., & Bucci, S. (2015). The relationship between dissociation and voices: A systematic literature review and meta-analysis. *Clinical Psychology Review*, *40*, 138–155. <https://doi.org/10.1016/j.cpr.2015.06.004>
- Pitfield, C., Maguire, T., & Newman-Taylor, K. (2020). Impact of attachment imagery on paranoia and mood: Evidence from two single case studies. *Behavioural and Cognitive Psychotherapy*, *48*(5), 572–583. <https://doi.org/10.1017/S1352465820000351>
- Pollard, C., Bucci, S., MacBeth, A., & Berry, K. (2020). The revised psychosis attachment measure: Measuring disorganized attachment. *British Journal of Clinical Psychology*, *59*(3), 335–353. <https://doi.org/10.1111/bjc.12249>
- Puckett, J., Sood, M., & Newman, T. K. (2023). Does disorganised attachment lead to auditory hallucinations via dissociation? An experimental study with an analogue sample. *Psychology and Psychotherapy: Theory, Research and Practice*, *96*, 868–884. <https://doi.org/10.1111/papt.12477>
- Rathod, S., Garner, C., Griffiths, A., Dimitrov, B. D., Newman-Taylor, K., Woodfine, C., Hansen, L., Tabraham, P., Ward, K., Asher, C., Phiri, P., Naeem, F., North, P., Munshi, T., & Kingdon, D. (2016). Protocol for a multicentre study to assess feasibility, acceptability, effectiveness and direct costs of TRlumph (treatment and recovery in Psychosis): Integrated care pathway for psychosis. *BMJ Open*, *6*(12), e012751.
- Read, J., Fink, P. J., Rudegeair, T., Felitte, V., & Whitfield, C. L. (2008). Child maltreatment and psychosis: A return to a genuinely integrated bio-psycho-social model. *Clinical Schizophrenia & Related Psychoses*, *2*(3), 235–254. <https://doi.org/10.3371/csrp.2.3.5>
- Read, J., & Gumley, A. (2008). Can attachment theory help explain the relationship between childhood adversity and psychosis? In J. Schwarz (Ed.), *Attachment: New directions in psychotherapy and relational psychoanalysis* (pp. 1–35). Karnac Books.
- Read, J., van Os, J., Morrison, A. P., & Ross, C. A. (2005). Childhood trauma, psychosis and schizophrenia: A literature review with theoretical and clinical implications. *Acta Psychiatrica Scandinavica*, *112*(5), 330–350. <https://doi.org/10.1111/j.1600-0447.2005.00634.x>
- Sitko, K. (2015). *Dissociation moderates the association between attachment and paranoia* [Unpublished doctoral dissertation]. University of Liverpool.
- Sood, M., Carnelley, K. B., & Newman-Taylor, K. (2021). How does attachment imagery for paranoia work? Cognitive fusion and beliefs about self and others mediate the impact on paranoia and anxiety. *Psychology and Psychotherapy: Theory, Research and Practice*, *94*(4), 973–993. <https://doi.org/10.1111/papt.12354>
- Sood, M., Carnelley, K. B., & Newman-Taylor, K. (2022a). Do emotion regulation strategies mediate the attachment-paranoia association? An experimental study of repeated attachment-imagery priming and stress buffering. *Psychology and Psychotherapy: Theory, Research and Practice*, *95*(3), 781–806. <https://doi.org/10.1111/papt.12398>
- Sood, M., Carnelley, K. B., & Newman-Taylor, K. (2022b). How does insecure attachment lead to paranoia? A systematic critical review of cognitive, affective, and behavioural mechanisms. *British Journal of Clinical Psychology*, *61*(3), 781–815. <https://doi.org/10.1111/bjc.12361>
- Sood, M., & Newman-Taylor, K. (2020). Cognitive fusion mediates the impact of attachment imagery on paranoia and anxiety. *Cognitive Therapy and Research*, *44*, 1150–1161. <https://doi.org/10.1007/s10608-020-10127-y>
- Strachan, L. P., Paulik, G., Preece, D. A., & McEvoy, P. M. (2023). Pathways from trauma to unusual perceptual experiences: Modelling the roles of insecure attachment, negative affect, emotion regulation and dissociation. *Psychology and Psychotherapy: Theory, Research and Practice*, *96*, 934–951. <https://doi.org/10.1111/papt.12486>
- Strand, J., Goulding, A., & Tidefors, I. (2015). Attachment styles and symptoms in individuals with psychosis. *Nordic Journal of Psychiatry*, *69*(1), 67–72. <https://doi.org/10.3109/08039488.2014.929740>
- van den Berg, D., van de Giessen, I., & Hardy, A. (2020). Trauma therapies in psychosis. In *A clinical introduction to psychosis* (pp. 447–463). Academic Press. <https://doi.org/10.1016/B978-0-12-815012-2.00019-5>

- van Os, J., Linscott, R., Myin-Germeys, I., Delespaul, P., & Krabbendam, L. (2009). A systematic review and meta-analysis of the psychosis continuum: Evidence for a psychosis proneness–persistence–impairment model of psychotic disorder. *Psychological Medicine, 39*(2), 179–195. <https://doi.org/10.1017/S0033291708003814>
- Verdoux, H., & van Os, J. (2002). Psychotic symptoms in non-clinical populations and the continuum of psychosis. *Schizophrenia Research, 54*(1–2), 59–65. [https://doi.org/10.1016/S0920-9964\(01\)00352-8](https://doi.org/10.1016/S0920-9964(01)00352-8)
- Williams, J. (2017). *Psychological mechanisms of the relationship between early adversity and psychosis* [Unpublished doctoral dissertation] University of Manchester.
- Wong, S. (2016). *A systematic review and empirical study investigating cognitive and social models of voice hearing*. [Unpublished doctoral dissertation]. University of Manchester.

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