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ORIGINAL ARTICLE

Measuring attachment and parental bonding in psychosis and its clinical implications

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Background. Attachment theory proposes that psychological functioning and affect regulations are influenced by the attachment we form with others. Early relationships with parents or caregivers lay the foundations for attachment styles. These styles are proposed to influence how we relate to others during our life can be modified by the relationships and events we experience in our lifespan. A secure attachment style is associated with a capacity to manage distress, comfort with autonomy and the ability to form relationships with others, whereas insecure attachment can lead to dysfunctional relationships, emotional and behaviour avoidance. Attachment theory provides a useful framework to inform our understanding of relationship difficulties in people with psychosis. This paper aims to complement recent systematic reviews by providing an overview of attachment theory, its application to psychosis, including an understanding of measurement issues and the clinical implications offered.

Method. A narrative review was completed of the measures of attachment and parental bonding in psychosis. Its clinical implications are also discussed. The paper also explores the link between insecure attachment styles and illness course, social functioning and symptomatology. The following questions are addressed: What are the key attachment measures that have been used within the attachment and psychosis literature? What are the results of studies that have measured attachment or parental bonding in psychosis and what clinical implications can we derive from it? What are some of the key questions for future research from these findings in relation to the onset of psychosis research field?

Results. The most commonly used measures of attachment in psychosis research are reviewed. Self-report questionnaires and semi-structured interviews have mainly been used to examine attachment styles in adult samples and in recent years comprise a measure specifically developed for a psychosis group. The review suggests that insecure attachment styles are common in psychosis samples. Key relationships were observed between insecure, avoidant and anxious attachment styles and psychosis development, expression and long-term outcome.

Conclusions. Attachment theory can provide a useful framework to facilitate our understanding of interpersonal difficulties in psychosis that may predate its onset and impact on observed variability in outcomes, including treatment engagement. Greater attention should be given to the assessment of attachment needs and to the development of interventions that seek to compensate for these difficulties. However, further investigations are required on specifying the exact mechanisms by which specific attachment styles impact on the development of psychosis and its course.

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Key words: Attachment style, attachment theory, parental bonding, psychosis, schizophrenia and onset of psychosis.

Introduction

Attachment theory, as espoused by Bowlby (1969; 1973) is a lifespan developmental model of psychological functioning and affect regulation that emerges from the universal need to form affectional bonds within close relationships, initially with primary caregivers. During infancy, if the caregiver is perceived as available, responsive and sensitive to an individual's proximity seeking attempts, the individual will develop a secure attachment style that is associated with a capacity to manage distress, comfort with autonomy and the ability to form relationships with others (Shaver & Mikulincer, 2002; Mikulincer & Shaver, 2007). Conversely, if the caregiver is perceived as unavailable, unresponsive and insensitive to proximity-seeking attempts, an individual will either make use of hyperactivating strategies (e.g., eliciting care from an attachment partner through clinging and controlling responses) which can lead to the development of an *insecure–ambivalent* attachment style or

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deactivating strategies (e.g., distancing oneself from an attachment partner to handle a stressful situation alone) that can lead to the development of an *insecure–avoidant* attachment style (Shaver & Mikulincer, 2002; Mikulincer & Shaver, 2007). A fourth *disorganised* attachment style is said to reflect individuals who make use of both hyperactivating and deactivating strategies which is thought to represent fearful interactions with caregivers (Main & Solomon, 1986; 1990).

These early experiences lay the foundations for an individual's internal mental representations or 'working models' of the self and others (Mikulincer, 1998) and go on to organise cognition, affect and behaviour in adult relationships (Waters & Cummings, 2000). Research to date has broadly characterised patterns of attachment as either secure or insecure (Ainsworth *et al.* 1978; Crowell & Treboux, 1995; Brennan *et al.* 1998) and, although open to revision following significant changes in caregiver interactions (Bowlby, 1969; 1973) or adverse life events (Waters and Cummings, 2000), attachment patterns are considered to be relatively stable across time within the general population (Waters & Cummings, 2000). Although secure and insecure attachment strategies are functional in their developmental context (Fraley, 2002), difficulties in caregiver bonding and attachment-related adverse childhood experiences (e.g., trauma or loss) have been linked to increased risk of later psychopathology in clinical groups (Greenberg, 1999; Morgan & Fisher, 2007; Read *et al.* 2009; Read & Gumley, 2010). Given these findings, there has been growing interest in exploring what influence attachment theory may play in furthering our understanding of the development of psychosis.

Two recent comprehensive systematic reviews of the attachment and psychosis literature (Gumley *et al.* 2014; Korver-Nieberg *et al.* 2014) have pointed towards the importance of understanding the influence that attachment styles may play in the aetiology, trajectory and recovery of psychosis. These authors concluded that there was evidence supporting the construct validity of attachment measurements in people with psychosis. They found small to moderate associations between attachment styles and outcomes, including positive and negative symptoms, depression and quality of life; and suggested that an insecure–avoidant attachment style may be a risk factor for problematic recovery following psychosis. Furthermore, they found that both insecure–anxious and insecure–avoidant attachment styles are associated with psychotic phenomenology and with an indication that insecurely attached individuals are more vulnerable to developing maladaptive coping strategies in relation to their recovery from psychosis (Gumley *et al.* 2014; Korver-Nieberg *et al.* 2014).

The aim of the present paper is to complement these two recent systematic reviews by exploring some of the key findings from the accumulating literature on attachment and psychosis and their relevance to further understanding the critical period of the development of psychosis. More specifically the following questions will be considered:

- What are the key attachment measures that have been used within the attachment and psychosis literature?
- What are the results of studies that have measured attachment or parental bonding in psychosis and what clinical implications can we derive from it?
- What are some of the key questions for future research from these findings in relation to the onset of psychosis research field?

What are the key attachment measures that have been used within the attachment and psychosis literature?

The adult attachment literature has focused on research using semi-structured interviews and self-report measures. The ability of these measures to accurately capture an individual's working model of attachment has raised debate within the literature as to whether they reflect interpersonal dispositions or account more for ways individuals act in close relationships (Pietromonaco & Barrett, 2000). More recent reviews of attachment measures (e.g., Fraley & Spieker, 2003; Main *et al.* 2005) have favoured dimensional approaches to delineating attachment styles and have cautioned that researchers need to consider the assumptions that a specific attachment measure makes in relation to attachment theory, and consider which relationships are under investigation before adopting a particular attachment measure as they may be targeting different constructs (Crowell & Hauser, 2008; Crowell *et al.* 1999; 2008).

The most commonly used measures of attachment in psychosis research are reviewed briefly below.

The original Hazan & Shaver (1987) self-report measure of attachment has been used extensively in attachment research. The questionnaire consists of three sets of statements, which delineate the attachment styles of security, insecure–avoidant and insecure–ambivalent. Despite its wide use, the authors have since recommended using more sophisticated measures, which have been developed more recently (http://internal.psychology.illinois.edu/~rcfraley/measures/measures.html).

One such measure is the Attachment Style Questionnaire (ASQ, Feeney *et al.* 1994). The ASQ is a 40-item self-report questionnaire that assesses the individual's internal working model of peer relationships. Participants rate their agreement with the

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statements on a 6-point Likert-type scale ranging from 'Strongly Disagree' to 'Strongly Agree'. The ASQ has adequate reliability and good convergent validity with other attachment measures, family functioning measures and personality measures.

The most frequently used assessment measure of attachment is the Adult Attachment Interview (AAI, Main & Goldwyn, 1984), The AAI is a semi structured interview instrument that classifies adults into secure–autonomous, insecure–dismissing, insecure–preoccupied and unresolved attachment styles whereby the 'coherence' of their narrated description of their early attachment relationships are measured. Although the AAI is considered the 'gold-standard' measure of attachment it has been noted that when administered to individual's with psychosis, the results can be confounded by the presence of psychotic experiences (Dozier *et al.* 1999).

In recent years, a specific instrument called the Psychosis Attachment Measure (PAM) has been develop to assess attachment in psychosis (Berry *et al.* 2006; 2007*a*, *b* #50). The PAM is a 16-item self-reported attachment measure where items refer to thoughts, feelings and behaviours in close interpersonal relationships, but do not refer specifically to romantic relationships. Eight of the items assess the construct of avoidance (e.g., 'I prefer not to let other people know my 'true' thoughts and feelings') and eight items assess the construct of anxiety (e.g., 'I tend to get upset, anxious or angry if other people are not there when I need them').

The Parental Bonding Instrument (PBI, Parker *et al.* 1979), which assesses perceived levels of parental care and overprotection, has also been widely used within the literature to review the influence of primary caregiver style and its association with the development of psychosis. As such it was also included within the current review. The PBI is a 25-item measure that measures an adult's retrospective account of the parenting they received up to the age of 16 years. Two scales termed 'care' and 'overprotection' (or 'control') measure core parental styles as perceived by the child in respect to care received from the mother and father, respectively. Parker *et al.* identified four quadrants with different attachment styles and demonstrated that the 'affectionless control' style (characterised by low care and high protection) was overexpressed in psychotic participants.

What are the results of studies that have measured attachment or parental bonding in psychosis and what clinical implications can we derive from it?

The details of the papers reviewed in this paper can be found in table 1.

Early onset and longer admissions

Ponizovsky *et al.* set out to test whether insecure attachment styles were associated with diagnosis and illness course in a sample of male inpatients with a diagnosis of schizophrenia. They used the Hazan & Shaver self-report measure of attachment. Their findings suggested that patients with insecure attachment styles when compared with patients with secure attachments had a significantly earlier age of psychosis onset and longer admissions (Ponizovsky *et al.* 2007).

A sample of 72 patients with schizophrenia admitted consecutively across four psychiatric units was compared with a sample of controls recruited from General Practitioners using the PBI. Patients' representations of parenting styles impacted on illness onset and course. The results suggested that patients with psychosis were more likely to rate both parents as being less caring and fathers as being more overprotective. Furthermore, patients who rated both parents as being low caring and overprotective also tended to have an earlier age of initial hospitalisation for psychosis and at nine months following discharge, were also more likely to be readmitted (Parker *et al.* 1982). These findings were also replicated in study, which assessed 62 patients with a diagnosis of schizophrenia using the PBI. The results indicated that the patients who perceived their parents positively tended to experience fewer relapses (Warner & Atkinson, 1988).

Social functioning

The Attachment Style Questionnaire has been used to explore the role of attachment styles, personality characteristics and the implications for social functioning in 96 first episode psychosis service users and controls. Those in the clinical sample were more likely to report greater difficulties in their peer attachments when compared with their matched controls. Results also indicated that first episode psychosis service users reported higher levels of attachment anxiety, discomfort with closeness and a greater need for approval in peer relations compared with controls. Attachment and personality styles both played a role in social functioning (Couture *et al.* 2007).

Psychotic symptoms

Dozier and Lee interviewed 76 patients with psychosis using the AAI. Patients who were more reliant on hyperactivating strategies reported more psychotic symptoms than those using deactivating strategies. However, they found that patients with dismissing attachment styles, who made use of deactivating

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Table 1. *Reviewed studies (grouped by assessment instrument and listed in chronological order)*

Authors	Participants	Main results
Hazan & Shaver self-report measure of attachment		
Ponizovsky *et al.* (2007)	Thirty patients with schizophrenia and 30 age match controls	Lower levels of secure attachment in patient group compared with controls. Patient groups reported greater levels of avoidant attachment styles Avoidant attachment was positively linked to positive and negative symptomatology compared anxious/ambivalent symptomatology that was linked to positive symptomatology only. A younger age of onset and longer inpatient admissions were linked to insecure attachment styles
Attachment Style Questionnaire (ASQ)		
Couture *et al.* (2007)	Ninety-six patients with a first episode of psychosis and 66 healthy controls	Patients reported greater attachment difficulties in peer relationships. They reported higher levels of pre-occupation (attachment anxiety), discomfort with closeness and a greater need for approval in peer relations compared with controls. Social functioning was related both to attachment and personality styles
Parental Bonding Questionnaire (PBI)		
Parker *et al.* (1982)	Case–control study of 72 patients with a clinical diagnosis of schizophrenia and 72 controls recruited from GP waiting rooms	Compared with the control groups, the patient group rated their parents as less caring. Fathers were also reported to be more overprotective. Furthermore, patients who perceived both parents as been less caring were more likely to be readmitted to hospital at 9 months follow-up
Warner & Atkinson (1988)	Sixty-two patients with schizophrenia	Patients who reported positive perceptions of their parents recorded fewer relapses when they maintained frequent contact but a poorer illness outcome if contact was less frequent. The converse was true for service users reporting negative perceptions of their careers
Helgeland & Torgersen (1997)	A mixed patient group comprising 19 patients with schizophrenia and 14 patients with borderline personality disorder and 15 non-clinical controls	Compared with clinical controls, patient groups reported their parents as being less caring and more overprotective. No differences were observed between the two clinical groups
Willinger *et al.* (2002)	Thirty-six patients with schizophrenia or schizoaffective diagnosis and their siblings	Mothers were described as less caring and over protective by patient group in comparison with reports from siblings
Onstad *et al.* (1994)	Twelve monozygotic and 19 same dizygotic twin pairs discordant for schizophrenia	Higher levels of parental over protection were reported by the patient groups compared with the non-clinical siblings
Adult Attachment Interview (AAI)		

Continued

Table 1. *Continued*

Authors	Participants	Main results
Dozier & Lee (1995)	Seventy-six patients with severe psychopathology who experienced psychotic symptoms of delusions, hallucinations and suspiciousness	Patients with dismissing attachment styles experienced more delusions, hallucinations and suspiciousness and were rated by case workers as 'more psychotic'
MacBeth *et al.* (2011)	Thirty-four Patients with first-episode psychosis	Mixed insecure/dismissive attachments were predominant in the sample but no relationship observed between attachment styles and psychosis symptoms
Psychosis attachment measure		
Berry *et al.* (2007*a*, *b*)	Fifty-eight patients with psychosis	Patients reported lower levels of attachment anxiety and higher levels of attachment avoidance towards key staff members when compared with parental relationships
Berry *et al.* (2008)	Ninety-six patients with schizophrenia spectrum diagnosis	Avoidant attachment style was linked to positive psychosis symptoms, paranoia and negative symptoms

strategies, experienced more delusions, hallucinations and suspiciousness, and were rated by case workers as presenting as 'more psychotic' (Dozier & Lee, 1995).

MacBeth *et al.* (2011) also used the AAI to interview 34 patients with first-episode psychosis. They found that insecure/dismissive attachments were predominant in the sample but no relationship was observed between attachment styles and symptoms of psychosis.

Relationships with others

Researchers using the PAM studied a sample of 58 patients with psychosis on attachment dimensions of avoidance and anxiety in relation to psychiatric staff and parents. Scores on the two attachments dimensions varied depending on the type of relationship and the authors concluded that factors that influence variability in attachment relationships should be considered in treatment plans as it may be possible to support individuals with insecure attachment styles to develop more positive relationships with others (Berry *et al.* 2007*b*). In a second study, Berry *et al.* (2008) used a prospective design to assess attachment in 96 patients with psychosis. They found that higher levels of attachment anxiety and attachment avoidance predicted both symptom severity and difficulties in therapeutic relationships (Berry *et al.* 2006).

A study of parental bonding assessed a sample of 19 patients with schizophrenia, 14 with borderline disorders and 15 control participants with the PBI and similarly observed that patients with schizophrenia spectrum disorders reported less parental care and more overprotection (defined as low care and high control) than their non-clinical counterparts although the difference proved non-significant (Helgeland & Torgersen, 1997).

In a sample of 36 patients with schizophrenia or schizoaffective disorders compared with their siblings, Willinger *et al.* (2002) found that patients had a greater tendency to describe their mothers as being less caring and more overprotective towards them compared with descriptions from their healthy siblings. The perceptions of higher maternal overprotection remained a key factor even after controlling for the influence of premorbid personality.

Interestingly, a study examining 12 monozygotic and 19 same-sex zygotic twin pairs discordant for DSM-III-R schizophrenia found that patients reported higher levels of parental overprotection than their probands, raising the question of whether the differences in parental bonding could be explained by the presence of a psychotic disorder (Onstad *et al.* 1994).

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Clinical implications

In combination, these studies indicate a relationship between childhood attachment, patient reflections on parenting style and psychosis. Significant relationships were found between recollections of early attachment relationships and attachment style (Berry *et al.* 2007*b*). Individuals rated as having insecure attachment styles in adulthood were also more likely to describe early caregiving relationships as being characterised by rejecting or inconsistent parenting (Fonagy *et al.* 1994). In line with Bowlby's attachment theory (Bowlby, 1969; 1973), it seems that recollections of adverse early experiences with primary caregivers are likely to limit the capacity to form secure attachments in adulthood as these studies suggest that individuals who perceived their caregivers as insensitive or indifferent to their distress were more likely to experience difficulties in relating to others.

Within the field of psychosis an individual's attachment style has been suggested as a clinically relevant construct in relation to the development, course and treatment of psychosis. More specifically it has been suggested that the attachment experience of individuals with psychosis is an important construct for understanding how social information is processed and how mentalisation skills are developed within this population (Korver-Nieberg *et al.* 2014). Gumley's systematic review of attachment and psychosis found that individuals with psychosis who had a secure attachment had better engagement and greater treatment adherence, whereas insecure attachment was found to be related to disengagement with treatment services and avoidant attachment was related to help-seeking difficulties, poorer use of treatment, longer hospital admissions and lower-rated therapeutic alliance. Their findings also suggested that the attachment system is activated in the relationships that individuals develop with their service providers and as such, highlight attachment theory as a useful framework in which to consider recovery within individuals with psychosis. These authors further note the importance of services being aware of how these systems may be activated within individuals as a means to provide '*an attuned response to the needs of individuals*' and establish '*a safe haven and secure base for recovery*' (Gumley *et al.* 2014).

What are some of the key questions for future research from these findings in relation to the onset of psychosis research field?

Attachment studies in psychosis have mainly focused on multiple episode samples where the results have invariably been confounded by the presence of secondary disabilities impacting upon quality of social relationships. The extent to which insecure/avoidant representations predominate in first episode samples requires further study. Establishing the distribution of secure and insecure attachment representations in first onset psychosis groups, and implicit within this the cognitive–affective–interpersonal model that each attachment classification represents, could provide a basis for tailoring treatment models towards the specific needs of the individual. Future research in attachment in psychosis should also consider that various attachment styles are assessed by different instruments. Instruments such as the Hazan and Shaver measure were developed within the social psychology research tradition, others came from a developmental psychology tradition (e.g., AAI; Roisman *et al.* 2007; Crowell *et al.* 2008). To date only the PAM was developed specifically to measure attachment styles in individuals with psychosis (Berry *et al.* 2008). Finally, future research should evaluate the strength and weaknesses of self-report measures versus semi-structured interview measures of attachment in psychosis research.

Limitations

The studies reviewed in this paper suggest that insecure attachment representations are evident at different illness phases including during the at-risk mental state (Couture *et al.* 2007; Gajwani *et al.* 2013). They are linked to a poorer quality of interpersonal relationships and less integrated recovery styles (Berry *et al.* 2007*b*; Gumley *et al.* 2014). Thus, insecure attachment styles may serve as a vulnerability factor for both the development and persistence of psychosis. Recent data from at-risk psychosis populations (e.g., O'Brien *et al.* 2006; Tienari *et al.* 2004; McFarlane & Cook, 2007) attests to the important role played by family relationships in the expression and course of psychosis symptomatology. However, as most attachment studies are cross-sectional, it is equally possible that having a more severe course of illness can render individuals more likely to develop and/or recall difficulties in attachment relationships.

Concluding remarks

In conclusion, reports of caregiver attachment difficulties may play an important role in the development of psychosis. The narrative review speaks to the importance of greater attention being given to the assessment and understanding of attachment needs and difficulties that are experienced and reported during the early years, and it emphasises the need to develop interventions that seek to compensate for these

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difficulties. Secure attachment may confer advantages in facilitating how individuals make sense of their experiences and their readiness to engage with therapeutic interventions and seek help. In contrast, individuals presenting with insecure attachment representations may find the reciprocal process of engagement with clinicians threatening or overwhelming, and consequently may disengage from services to regulate affect. An understanding of attachment representations may therefore be relevant to understanding differences in recovery trajectories in the first few years after treatment for psychosis is initiated, particularly in understanding the role help seeking may play in accelerating or forestalling relapse (Gumley *et al.* 2010; Onwumere *et al.* 2011).

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Conflict of Interest

None.

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