Psychological Factors Associated with Service Engagement and Dimensions of Psychosis

A thesis submitted to The University of Manchester for the degree of Doctor of Clinical Psychology in the Faculty of Biology, Medicine and Health

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Thesis abstract
The current thesis titled ‘Psychological factors associated with service engagement and dimensions of psychosis’ has been prepared by Greta McGonagle in the year 2017. The thesis has been submitted to The University of Manchester for the degree of Doctor of Clinical Psychology in the Faculty of Biology, Medicine and Health (School of Health Sciences). The thesis has been prepared in paper based format and comprises three papers. The overall theme of the thesis is the investigation of attachment and its association with psychosis.

Firstly, a systematic literature review sought to identify, summarise and critically evaluate studies that investigated associations between adult attachment and relationships with mental health services in people with psychosis. There was some evidence of associations between insecure attachment (namely avoidant attachment) and therapeutic alliance and insecure attachment and engagement with services. Secure attachment was also associated with self-reported attachment to services as a whole.

Secondly, research was carried out to explore the potential mediating role of fearful attachment and dissociation between childhood interpersonal trauma and auditory verbal hallucinations (AVHs). The results showed that fearful attachment was statistically significantly associated with childhood interpersonal trauma, dissociation and paranoia but not AVHs. Dissociation was associated with fearful attachment, childhood interpersonal trauma, AVHs and paranoia, although, depersonalisation/derealisation was a stronger predictor of AVHs than other types of dissociation. A serial mediation analysis highlighted a possible causal pathway between childhood interpersonal trauma and AVHs, mediated by fearful attachment and dissociation, however further prospective research is needed to confirm this.

Finally, the third paper is a critical evaluation and reflection of the design, decision making processes, methodology, clinical implications and proposed future research in papers one and two. Personal reflections of the overall research process are also presented.
Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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Acknowledgements

There are a number of people to whom I must extend my gratitude for their support and assistance during the completion of this thesis.

Firstly, I would like to give my sincerest thanks to all the people who volunteered to take part in this research. I would also like to thank all the people and organisations who shared and tweeted my study online.

I would also like to thank my supervisors Dr Katherine Berry, Dr Sandra Bucci and Dr Filippo Varese who have guided and supported me throughout every stage of this project, especially in initially conceptualising the project and in the latter stages of write-up. I feel very privileged to have worked with leading researchers in the field.

Finally, I must pay special thanks to my family and friends, who have encouraged me, supported me and kept me smiling throughout this process. In particular, my husband for his unconditional support and encouragement throughout the course. Thank you, I could not have done this without you!
Is Adult Attachment Associated with Engagement with Services? A systematic Literature Review

The following paper has been prepared for submission to ‘Clinical Psychology and Psychotherapy.’ The guidelines for authors are presented in Appendix A.

Word count: 6951 (excluding tables, figures and references).
Abstract

Purpose: This review sought to identify, summarise and critically evaluate studies that investigated associations between adult attachment and relationships with mental health services in the context of psychosis.

Methods: A search was conducted on the following databases from 1980 to December 2016: Web of Science; PubMed; CINAHL; and PsychINFO. Reference lists of relevant papers were also searched and authors in the field were contacted. Of the 9695 articles identified, ten met inclusion criteria for the review. These articles were then quality appraised using the Effective Public Health Practice Project tool (EPHPP; Thomas, Ciliska, Dobbins, & Micucci, 2004).

Results: There was some evidence of associations between insecure attachment (namely avoidant attachment) and therapeutic alliance, and insecure attachment and engagement with services. Secure attachment was also associated with self-reported attachment to services as a whole. There were a number of limitations across the studies; the majority of studies were cross-sectional and it was difficult to make comparisons between studies due to the range of different measures used to assess attachment and alliance.

Conclusions: Adult attachment security may be an important factor to consider in determining the way in which service users with psychosis engage with mental health services. However, more studies with longitudinal designs are needed to investigate the direction of causal relationships.

Practitioner Points

- It is important to assess service users’ attachment styles upon entry to services as this may have implications for their future level of engagement with staff and the quality of therapeutic relationships.
- Staff may need additional support and supervision in working with service users with insecure attachment styles and those service users with avoidant attachment styles in particular.
- Staff need to adopt different approaches when trying to engage clients with different attachment styles.

Key words: psychosis, schizophrenia, attachment, alliance, engagement, help-seeking.
1. Introduction

Individuals with psychosis have historically experienced difficulties engaging in mental health treatments (Lecomte et al., 2008). Service engagement is complex and multifaceted but has been conceptualised as clients’ availability for arranged appointments, collaborative responsibility in the management of mental health difficulties, help-seeking and the extent to which a client adheres to medication (Tait, Birchwood, & Trower, 2002). Therapeutic alliance (TA) may also play a key function in engagement (Kane et al., 2015; Lecomte et al., 2008) as it has been shown to have a significant influence on treatment in psychosis (Priebe et al., 2011). TA, or working alliance, is defined as collaborative negotiation, agreement and engagement in goals and tasks, with a personal bond between both parties, which includes trust and respect (Bordin, 1979). There are similarities between the concept of service engagement and TA in that they both consider collaboration as a key aspect of working towards shared treatment goals and agreed therapeutic tasks. However, it is important to note there are distinctions between the concepts of engagement and TA. Service engagement considers more explicitly objective factors such as attending appointments and proactive help-seeking, whereas TA recognises the role of more subjective interpersonal factors such as trust, feeling understood and mutual respect. For individuals with psychosis, engagement is problematic for various complex reasons, including disagreements with health care professionals about the need for treatment or the type of treatment on offer, difficulties in relating to others more generally, or histories of interpersonal trauma and consequent limited trust of others (Kreyenbuhl et al., 2009). One potentially useful construct in understanding service engagement and TA in psychosis is the concept of attachment.

Attachment theory was first developed by Bowlby (1969) who proposed that an infant has an innate biological need for close proximity with its primary caregiver to ensure survival (Bowlby, 1977). The so-called attachment-figure provides a secure base to explore the world and offers support to regulate emotions. Bowlby’s theory posits that interactions with the primary caregiver in early childhood influence behavioural interactions in adulthood through ‘internal working models’ or mental representations about the self and others (Bowlby, 1977). In both the child and the infant literature, researchers have conceptualised people as having different types of attachment styles, which are hypothesised to reflect different
internal working models and consequent ways of regulating affect and relating to others (Mikulincer, Shaver, & Pereg, 2003). A person with a secure attachment is described as having received relatively consistent responsive care-giving and consequently having a positive view of self, others and the world. They value close relationships, can seek support from others when needed and have the skills to manage distress (Shaver & Mikulincer, 2002). Unresponsive or insensitive care-giving is hypothesised to result in the development of an insecure attachment style. Those with avoidant attachment style (also known as dismissing attachment) value independence and are self-reliant, viewing others negatively and ultimately dismiss or reject close relationships (Shaver & Mikulincer, 2002). Those with an anxious attachment style (also known as ambivalent attachment) have a poor view of self, with the expectation that others will be unpredictable. Having an anxious attachment results in the individual experiencing elevated levels of distress and heightened emotional expression (Gumley, Taylor, Schwannauer, & MacBeth, 2014; Shaver & Mikulincer, 2012). There is also a fourth type of insecure attachment termed fearful attachment, which is conceptualised in terms of negative beliefs about the self and others and a desire for closeness with others but avoidance of relationships due to a fear of rejection. As a result, people with this attachment style may vacillate between approach and avoidance behaviours in relationships (Bartholomew & Horowitz, 1991). Fearful attachment style has been associated with earlier abuse or maltreatment and has been linked to unresolved loss or trauma (Bartholomew, 1997).

Bowlby (2008) likened the therapeutic relationship to an attachment relationship, whereby the therapist acts as an attachment figure by creating a secure base for the distressed client and affording the client time, space and safety to explore themselves and their interpersonal environment. Through the therapist providing corrective emotional experiences, an attachment framework would suggest that an individual’s internal working models of relationships could be reshaped (Adshead, 2004; Holmes, 2002). Insecure attachment styles are related to difficulties in interpersonal and therapeutic relationships (Berry, Barrowclough, & Wearden, 2008; Daniel, 2006; Tait, Birchwood, & Trower, 2004) and poorer help-seeking (Vogel & Wei, 2005). In those with anxious or ambivalent attachment styles, this may be due to the individual’s attempts to seek proximity via heightened emotional expression,
causing clients to be viewed by clinicians as demanding and emotionally draining (Barber et al., 2006). In those with dismissing or fearful attachment styles, this may be due to difficulties clients have in seeking care and expressing their needs to others (Barber et al., 2006).

Evidence suggests that insecure attachment style increases the likelihood of developing mental health difficulties and there is evidence of higher prevalence of insecure attachment in psychosis compared to rates reported in general population samples (Harder, 2014). These findings are not surprising as there is a high incidence of early trauma experiences in psychosis samples (Kilcommons & Morrison, 2005; Varese et al., 2012) and the well-established effects that early trauma has on the attachment system (Lyons-Ruth & Block, 1996).

A previous review of the attachment and psychosis literature reported evidence of moderate associations between insecure attachment and poorer engagement with services (e.g., Gumley et al., 2014). However, this review presented a broad review of the attachment and psychosis literature and as such did not have scope to provide a detailed appraisal of the attachment and therapeutic engagement studies. The attachment and psychosis literature is also a growing field with a number of studies published since the search conducted by Gumley and colleagues (2014). The current review, therefore, aimed to provide an updated and more detailed appraisal of the attachment and therapeutic engagement literature. Specifically, we sought to examine the impact of different insecure attachment styles, in samples with psychosis, on engagement, help-seeking and therapeutic alliance and highlight areas for future research. We hypothesised that greater attachment insecurity will be associated with poorer alliance and engagement with services.

2. Method

2.1. Search Procedure
This review was carried out in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Moher, Liberati, Tetzlaff, Altman, & Group, 2009). A literature search was conducted to systematically identify empirical studies assessing attachment style and service engagement in a psychosis sample using the following
electronic databases: Web of Science, CINAHL, Pubmed and PsycINFO. Two search strings were used (psychosis and attachment): Voice* OR hallucinat* OR delusion OR paranoi* OR psychotic OR psychos* OR schizophren* OR ‘severe mental’ OR ‘serious psychiatric’ OR ‘serious mental’ AND Adult Attachment OR Attachment. The reference lists from previous reviews and the eligible articles were further inspected in a bid to identify further literature not found in the database search; no additional eligible papers were identified.

2.2 Inclusion and exclusion criteria

Inclusion and exclusion criteria were established prior to the literature search. Inclusion criteria were: (1) studies that used a psychosis sample as defined by DSM or ICD diagnostic criteria or a self-reported diagnosis of psychosis; (2) used a validated measure of attachment; (3) used a validated measure of either relationship to services or alliance; (4) published in English language; and (5) published in a peer reviewed journal from 1980-2017. No restrictions were placed on the age of study participants.

Studies were excluded if they were: (1) qualitative methodology (as we are interested in the degree of association between attachment and alliance/engagement); (2) not published in English language; (3) book chapters, dissertations, or presented as a conference extract (as they have not been subject to a robust peer review process); and (4) reviews. Further exclusions were applied if associations between attachment and engagement/alliance were not reported; although, attempts were made to contact authors where possible.

2.3 Screening and Data Extraction

Figure 1 shows a diagram detailing the flow of studies through the different phases of the systematic search. Eligibility was established via application of exclusion criteria in three subsequent stages: article titles, abstracts and full text. Ten papers were therefore retained in the current review. Data was extracted by GM and a postgraduate researcher. Ten percent (n=669) of papers at title level were double-rated, with strong levels of agreement (95%, kappa=0.7). Fifteen percent (n=80) of papers at the abstract level were also double-rated with good levels of agreement (95%, kappa =.71). Finally, 50% of full papers were double-rated
(n=35), with excellent levels of agreement (95%, kappa = .89). Discrepancy in the data extracted was discussed with the wider research team until a consensus was reached.

2.4 Quality assessment

Eligible studies were quality assessed using the Effective Public Health Practice Project tool (EPHPP; Thomas et al., 2004), which is an assessment tool that provides flexibility to quality assess a range of quantitative study designs. The EPHPP consists of six domains which studies are rated on: (1) selection bias, (2) study design, (3) confounders, (4) blinding, (5) data collection methods and (6) withdrawal and dropouts. In this study, the tool was used to score only domains relevant to the method of each study (Appendix B). For example, blinding was recorded as not applicable for non-experimental studies. The six domains are used to rate the overall quality of the papers as Weak (two or more weak ratings), Moderate (one weak rating), or Strong (no weak ratings). A weak rating may be applied if, for example, the article does not use a sample representative of the target population, if the study design is cross-sectional, if confounders were not controlled for, if measures used were not valid and reliable and if there were high dropout rates. The EPHPP has been found to have good content and construct validity (Thomas et al., 2004) and inter-rater reliability (Armijo-Olivo, Stiles, Hagen, Biondo, & Cummings, 2012). Independent, masked quality ratings by the research team demonstrated good inter-rater reliability with GM (95%, kappa = .71).
Records identified through search 9695 (Web of Science 785; Cinahl 2971; PubMed 2319; PsycInfo 3620)

Records after duplicates removed 8165

Books, Dissertations and Dissertation abstracts removed 1450

Records after Books, Dissertations and Dissertation abstracts removed 6715

Records excluded at title level 6179

Records screened at abstract level 536

Records excluded at abstract level 465

Full Text articles assessed for eligibility 71

Records excluded at full text 61:
- Not written in English (n=7)
- Not a psychosis sample (n=23)
- Did not use a validated measure of attachment/alliance/engagement (n=26)
- Did not report an association between attachment and alliance/engagement (n=2)
- Used the same data from a previous study (n=2)
- Another paper superseded abstract (n=1)

Records included in main analysis 10
3. Results

3.1 Overall summary of studies
Characteristics of the included articles are provided in Table 1. Studies were either cross-sectional (n=8) or longitudinal (n=2) in design and were conducted in the United Kingdom (n=6), Switzerland (n=3) and United States of America (n=1).

3.2 Demographic characteristics
The total number of participants included across all studies was 985, of which 47% (n=465) were single, primarily White British (n=385; 39%) and male (n=667; 68%). Where it was reported, the majority of participants were unemployed (n=486; 49%), thirty-eight percent (n=375) of participants were living alone, with 9% (n=93) living with family, or in a house share, hostel or temporary accommodation. The predominant diagnosis was schizophrenia (n=602; 61%), followed by schizoaffective disorder (n=176; 18%) and brief psychotic episode (n=54; 6%). The median age of onset of psychosis was 25 years, with papers reporting a mean duration of psychosis and/or mental health problems of 14 years.

3.3 Measures

3.3.1 Attachment
Four different measures were used to assess the concept of attachment. The most commonly used measure was the Psychosis Attachment Measure (PAM; 6 studies). Items on the PAM are divided into two subscales: Anxious and Avoidant attachment. One study used the Relationship Scales Questionnaire (RSQ), which provides four different attachment styles: Secure, Fearful, Preoccupied and Dismissing. One study used the Revised Adult Attachment Scale (RAAS). The RAAS assesses attachment and can be scored into three subscales: Anxiety, Closeness and Dependence. Two papers used the Adult Attachment Interview (AAI), which is a clinician-rated semi-structured interview categorising people into either Secure (freely autonomous), Insecure (preoccupied, dismissive) or unresolved categories.

3.3.2 Therapeutic Alliance
In order to measure alliance, two different scales were utilised in this review. The most commonly used measure (n=4 studies) was the Scale to Assess the Therapeutic Relationship
(STAR), ‘Patient’ and ‘Clinician’ version. Both versions include subscales on ‘positive collaboration’ and ‘positive clinician’, while only the Patient version includes ‘non-supportive clinician input’ and only the Clinician version includes ‘emotional difficulties’. Higher scores represent a better alliance. Three studies utilised the Working Alliance Inventory (WAI), ‘Informant’ and ‘Patient’ version. The WAI assesses agreement between clinician and patient on therapeutic goals, tasks and development of emotional bond (trust, acceptance and confidence). Summation of the scores is indicative of the strength of the TA, with a high score indicating a good alliance.

3.3.3 Service Engagement
The Service Engagement Scale (SES) was used in three studies. The SES is a 14-item measure rated by the clinician on a four-point Likert Scale with four subscales on availability, collaboration, help-seeking and treatment adherence, with higher scores indicating lower engagement.

3.3.4 Attachment to Services
The Service Attachment Questionnaire (SAQ) was used in two studies. However, Catty et al. (2012) adapted the title of the questionnaire to the Team Attachment Questionnaire (TAQ). The SAQ/TAQ is a self-report measure of attachment to services and staff, with higher scores indicating greater attachment security. The subscales consist of being attended to and listened to, being there-consistency and continuity, being given enough time – ending and leaving, safe environment, relationships which enable helpful thinking, human contact and comfort.
<table>
<thead>
<tr>
<th>Author, Date, Country</th>
<th>Design</th>
<th>Sample Characteristics</th>
<th>N</th>
<th>Measures</th>
<th>Age</th>
<th>Sex</th>
<th>Main (relevant) findings</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berry et al. (2008) UK</td>
<td>Cross-sectional</td>
<td>Schizophrenia (n=77), schizoaffective disorder (n=15) and a psychotic episode (n=4).</td>
<td>96</td>
<td>PAM</td>
<td>44</td>
<td>66</td>
<td>Higher attachment avoidance was associated with lower TA as rated by client (r = 0.44; p &lt; 0.001) and by staff (r = 0.33; p = 0.003).</td>
<td>Moderate</td>
</tr>
<tr>
<td>Berry et al. (2015) UK</td>
<td>Longitudinal</td>
<td>Schizophrenia (n=133), schizophreniform disorder (n=1), Schizoaffective disorder (n=13), psychosis not otherwise specified (n=17)</td>
<td>164</td>
<td>PAM</td>
<td>37.4</td>
<td>146</td>
<td>Neither therapist-rated nor client-rated alliance was significantly related to attachment. Correlations unavailable.</td>
<td>Weak</td>
</tr>
<tr>
<td>Blackburn, Berry, and Cohen (2010) UK</td>
<td>Cross-sectional</td>
<td>Schizophrenia (n=69), Bipolar Disorder (n=5), Substance Misuse (n=3)</td>
<td>78</td>
<td>PAM</td>
<td>39</td>
<td>62</td>
<td>Associations between a secure attachment and a better attachment to services (r = 0.39; p &lt; 0.001).</td>
<td>Weak</td>
</tr>
<tr>
<td>Catty et al. (2012) UK</td>
<td>Cross-sectional</td>
<td>Psychotic disorders (n=53), non-psychotic disorders (n=40).</td>
<td>93</td>
<td>RSQ</td>
<td>STAR; TAQ</td>
<td>41.9</td>
<td>48</td>
<td>Preoccupied attachment was negatively associated with service attachment (r = −.22, p = .040).</td>
</tr>
<tr>
<td>Cavelti, Homan, and Vauth (2016) Switzerland</td>
<td>Longitudinal cohort</td>
<td>Schizophrenia (n=89) and schizoaffective disorder (n=44).</td>
<td>133</td>
<td>PAM</td>
<td>STAR-P; STAR-C</td>
<td>44.5</td>
<td>86</td>
<td>No significant influence of attachment style at baseline on clinician ratings of TA at follow-up (β = -0.07, t(122) = -.71, p = .482) or client ratings of TA at follow-up (β = .03, t(122) = .43, p = .667).</td>
</tr>
<tr>
<td>Author, Date, Country</td>
<td>Design</td>
<td>Sample Characteristics</td>
<td>N</td>
<td>Measures</td>
<td>Age</td>
<td>Sex</td>
<td>Main (relevant) findings</td>
<td>Quality Rating</td>
</tr>
<tr>
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</tr>
<tr>
<td>Kvrgic et al. (2012) Switzerland</td>
<td>Cross-sectional</td>
<td>Schizophrenia (n=90), schizoaffective disorder (n=37).</td>
<td>127</td>
<td>PAM</td>
<td>STAR; SES</td>
<td>44.6</td>
<td>84</td>
<td>Negative effects between avoidant attachment style and TA rated by the client (r=-0.25; p &lt; .01). Anxious attachment associated with treatment adherence (r = 0.20; p = 0.02). Avoidant attachment predicted TA as rated by the client (B= -.21, t(122) = -2.23, p=.03).</td>
</tr>
<tr>
<td>Kvrgic, Cavelti, Beck, Rusch, and Vauth (2013) Switzerland</td>
<td>Cross-sectional</td>
<td>Schizophrenia (n=102), schizoaffective disorder (n=54).</td>
<td>156</td>
<td>PAM</td>
<td>STAR</td>
<td>44.5</td>
<td>102</td>
<td>Attachment did not predict the quality of the TA as rated by the client. The Beta for avoidant attachment was not significant at -0.039 when the psychotic symptoms, depression, recovery and self-esteem were also entered into the model. Bivariate associations were not reported.</td>
</tr>
<tr>
<td>MacBeth, Gumley, Schwannauer, and Fisher (2011) UK</td>
<td>Cross-Sectional</td>
<td>First episode of psychosis (n=34).</td>
<td>34</td>
<td>AAI</td>
<td>SES</td>
<td>23.3</td>
<td>20</td>
<td>Associations between attachment and engagement with services (K-W: = 7.11; df = 2; p = 0.029; r = 0.60). Secure attachment associated with better engagement than avoidant attachment (M-W: U = 11.5; p = 0.011) and had better treatment adherence than preoccupied attachment (M-W: U = 3; p = 0.018).</td>
</tr>
<tr>
<td>Tait et al. (2004) UK</td>
<td>Cross-sectional</td>
<td>50 participants with schizophrenia or related disorders (F20, F22, F23, F25)</td>
<td>50</td>
<td>RAAS</td>
<td>SES</td>
<td>33.8</td>
<td>31</td>
<td>Insecure attachment was associated with poorer engagement with services (t = 3.64; p &lt; 0.001).</td>
</tr>
<tr>
<td>Tyrrell, Dozier, Teague, and Fallot (1999) USA</td>
<td>Cross-sectional</td>
<td>Schizophrenia (n=31), schizoaffective disorder (n=31), bipolar disorder (n=8), major depression (n=6).</td>
<td>54</td>
<td>AAI</td>
<td>WAI</td>
<td>41</td>
<td>22</td>
<td>Clients who were more deactivating formed better TA with less deactivating case managers (r = 0.53; p &lt; 0.01).</td>
</tr>
</tbody>
</table>
3.4 Study quality assessment

The results of the quality appraisal are reported in Appendix C, with the overall scores reported in Table 1.

All of the studies referred participants opportunistically from clinics, and therefore selection bias must be considered, as participants may not be representative of the target population. Furthermore, in only six studies was it clear what the percentage uptake was, with three reporting 80-100% (Berry et al., 2008; MacBeth et al., 2011; Tait et al., 2004), one reporting 60-79% (Catty et al., 2012), and Cavelti et al. (2016) reporting below 60%.

Only two studies were longitudinal in design (Berry et al., 2015; Cavelti et al., 2016), while the remaining eight were cross-sectional designs thereby not enabling an assessment of change in these concepts over time and inferences about the direction of relationships. Furthermore, the majority utilised self-report questionnaires to measure the constructs of interest, with the exception of MacBeth et al. (2011) and Tyrrell et al. (1999) who used the AAI to measure attachment. While all the measures utilised are described as valid and reliable to establish the constructs being investigated, there is susceptibility for recall bias or social desirability bias.

Whilst five studies (Berry et al., 2008; Catty et al., 2012; Cavelti et al., 2006; Kvrgic 2013; Tait et al., 2004; Tyrrell et al., 1999) controlled for a range of covariates (e.g. psychotic symptoms, gender, age, time in treatment), the remaining did not attempt to control for relevant confounds. In addition, none of the studies controlled for previous experience in therapy (Moran, 2007).

It is also important to consider that, where it was reported, the majority of participants across all studies were White British (n=385; 39%) and male (n=667; 68%), thus limiting the generalisability of the findings to other ethnic groups and females.
3.5 Attachment and Alliance

Six studies examined the influence of attachment style on client’s ratings of TA. Three studies (Berry et al., 2008; Tyrell, 1999; Kvrgic, 2012) reported associations between attachment avoidance and poor TA. In particular, Berry (2008) reported a small negative association with avoidant attachment (PAM) and difficulties in the TA (WAI) in both the staff ($r = -0.33; p = 0.003$) and client reports ($r = -0.44; p < 0.001$). No association was found for attachment anxiety. Similarly, Kvrgic et al. (2012) reported small negative effects between avoidant attachment style (PAM) and TA as rated by the client (STAR-P; $r=-0.25; p = < .01$). Specifically, there was a small positive association between avoidant attachment and ‘non-supportive clinician input’ ($r=0.19, p=<.05$) and ‘positive clinician input’ ($r=0.23, p=<.05$). Furthermore, in a regression analysis, avoidant attachment predicted TA as rated by the client ($B= -.21, t(122) = -2.23, p = .03$). However, Kvrgic et al. (2012) reported no relationship between attachment style and TA as rated by psychologists (STAR-C). The findings that client TA was significant versus psychologist ratings highlights the importance of measuring differing views of the TA. In a novel study by Tyrell et al. (1998) that looked at the interaction effects between client and case manager alliance and the impact of this interaction on alliance and outcomes, less deactivating (avoidant) case-managers formed stronger TA (WAI) with more deactivating (avoidant) clients (AAI) than with less deactivating clients ($r = 0.53; p < 0.01$).

There are a number of strengths and weaknesses to consider when interpreting the results of these studies. The fact that positive associations were reported between attachment and alliance using different measures of alliance and outcomes suggests that the findings are relatively consistent. A limitation however, is that all three studies employed a cross-sectional design. Berry (2008) controlled for confounders and note the associations reported were evident independent of symptom severity. However, multiple tests were carried out on the data, which may increase the likelihood of type 1 errors. Furthermore, although several staff members completed the WAI for a number of participants, Berry et al. (2008) controlled for this in the analysis and found that this approach did not affect the study findings. However, Tyrell (1999) did not report controlling for caseworkers completing the WAI for multiple participants, although they did report controlling for length in treatment. Therefore,
the researchers may have overestimated the significance of the findings. Within Kvrgic (2012) there are limitations in the study design and methodological process as the authors did not report controlling for confounding variables and used the STAR, a measure that has not been validated for use in German. There were also limitations across studies in terms of the generalisability of the samples recruited. Both Tyrrell (1999) and Berry (2008) had relatively small sample sizes (n= 54 and n=96 respectively) and did not report power calculations. The samples in Kvrgic et al (2012) and Berry et al (2008) were predominantly White male and all three studies recruited convenience samples meaning that staff might have potentially referred individuals who they considered would be more engaged.

In contrast to the studies above, Kvrgic (2013), Berry (2015) and Cavelti (2016) reported no significant associations between client attachment and TA. In their study, Kvrgic (2013) reported no significant relationship between the quality of the TA (STAR) and attachment (PAM). Rather, greater insight, less self-stigma and stronger recovery orientation were stronger predictors of TA, accounting for 16% of the variance. These findings highlight that other factors may be important in the development of TA. The following two longitudinal studies by Berry et al. (2015) and Cavelti et al. (2016) also reported no significant associations between client attachment and TA. Berry et al. (2015) asked both therapists and clients to rate TA (WAI) and reported that client attachment (PAM) was not associated with TA, a finding that was maintained at 12 and 24 months follow up. Interestingly, Berry et al. (2015) reported higher TA was correlated with the therapist’s assessment of the client’s cognitive ability, motive to engage, commitment and perseverance and concerns for cognitive ability. This builds on Kvrgic’s et al. (2013) study, highlighting other variables important to developing a strong TA. In addition, Cavelti et al. (2016) found no association between attachment style (PAM) at baseline and client’s/therapist’s ratings of TA (STAR-P & STAR-C). Cavelti et al. (2016) reported that thought disorder impacted on the TA and suggested in turn this may obstruct treatment endeavours. Furthermore, greater TA predicted an individual’s motivation to ask for help at follow-up. This therefore highlights the importance of developing a strong TA, creating a secure base for clients to ask for help.
There are a number of strengths and weaknesses in Kvrgic et al. (2013), Berry et al. (2015) and Cavelti et al. (2016). Kvrgic et al. (2013) was cross-sectional in design and therefore the direction of relationships between variables is uncertain. A particular strength of Kvrgic et al. (2013) was that they controlled for the duration of treatment with the therapist and found this had no influence on TA. Furthermore, Cavelti et al. (2016) reported controlling for predictors of TA, for example, attachment, insight, functioning and symptoms. However, Berry (2015) does not report controlling for confounders. Both Berry et al. (2015) and Cavelti et al. (2016) had large sample sizes (n=164, n=133 respectively), however, in Cavelti et al. (2016) this sample size may not have been sufficient for the complexity of the multivariate analysis conducted. In terms of the generalisability of the samples, all three studies were predominantly males, with a mean age range of 37.4 years to 44.5 years and a relatively long history of psychosis. Furthermore, a limitation of Cavelti et al. (2016) is their exclusion of client’s who had an alcohol and substance dependency as the results may not be representative of a population with psychosis. Conversely, in Berry et al.’s (2015) study alcohol and substance misuse was an inclusion criteria. Therefore, more studies are needed with younger individuals, with first episode psychosis, with an equal spread of males and females to determine the generalisability of findings.

Finally, collectively, all three studies used the PAM to measure attachment, and Kvrgic et al. (2013), and Cavelti et al. (2016) used the STAR to measure TA making comparison across the studies easier. However, Kvrgic’s et al. (2013) and Cavelti’s et al. (2016) studies were conducted in Switzerland and again the STAR is not validated for use in German. Furthermore, Kvrgic et al. (2013) missed the opportunity to measure therapist ratings of alliance, given both client and therapist ratings may not be related (Wittorf et al., 2009). Berry et al. (2015) reported staff and client dyads assessed for TA were primarily male (n=4), with a range of professions (clinical psychology, social workers and nursing) trained in psychological therapies, and Cavelti et al. (2016), reported utilising the client’s therapists. This is in contrast with the Berry et al. (2008) and Tyrrell et al. (1999) studies detailed above as they reported a significant relationship between attachment and TA with support workers (44%; Berry et al., 2008) and case-managers (Tyrrell et al., 1999) who are presumably not trained in psychological therapies per se. Therefore, these staff members in comparison with
the staff members in Berry et al. (2015) and Cavelti et al. (2016) may have been unable to build positive alliances with individuals who are historically difficult to engage due to interpersonal difficulties and insecure attachment patterns.

### 3.6 Attachment and engagement with services

Three studies assessed the relationship between attachment and engagement with services (MacBeth et al., 2011; Kvrgic et al., 2012; Tait et al., 2004). MacBeth et al. (2011) reported a positive association between attachment (AAI) and total engagement with services (SES: Kruskal-Wallis: $x^2 = 7.11; df = 2; p = 0.029; r = 0.60$). In particular, better service engagement was evident for those who reported a secure attachment versus those with an avoidant attachment style (M-W: $U = 11.5; p = 0.011$). Furthermore, better treatment adherence was reported in securely attached individuals in comparison to those with a preoccupied attachment style (M-W: $U = 3; p = 0.018$). Kvrgic et al. (2012) also reported a small association between participants with anxious attachment (PAM) and greater treatment adherence (SES: $r = 0.20; p < .05$). Finally, Tait et al. (2004) conducted their study over three time points; however, the RAAS was given at 3 months, and the SES was given at 6 months. They reported greater insecurity of attachment was associated with poorer engagement with services when compared with those who reported with a secure attachment ($t = 3.64; p < 0.001; r = 0.21$).

Again, there are a number of strengths and weaknesses to note when interpreting the results of these studies. With regards to the sample, in MacBeth et al. (2011) the distribution of attachment in the sample was described as heterogeneous, meaning that the authors could explore associations between engagement and different attachment types. A further strength of the Macbeth et al. (2011) study is the examination of engagement in a young (mean age 23.32 years), first episode psychosis sample, with a mean of 50 weeks’ duration, which contrasts to the majority of the existing literature focusing on samples with longer histories of psychosis. A limitation with this study, however, is the possibility of selection bias as potential participants were approached for consent and only took part in the study after the resident medical officer’s approval.
With regards to the measures, MacBeth et al. (2011) utilised the AAI to assess attachment style. Although the AAI is a gold standard measure of attachment, there are some concerns in the literature about coding the transcripts of the AAI in those with severe mental illness (Turton, McGauley, MarinAvellan, & Hughes, 2001). For example, the interviewee’s may present with delusional thinking, and may possibly be in receipt of medication with sedating effects, which impacts the interview (Turton, McGauley, MarinAvellan, & Hughes, 2001). Despite these concerns, Macbeth et al. (2011) reported this was not an issue as there was no association between symptomatology and attachment.

Finally, there are some methodological issues to note in Tait et al. (2004). The authors reported comparing insecure and secure attachment using a one-sample t-test to test mean differences in engagement; however, it is unclear why the attachment data was dichotomised in this way rather than exploring associations between continuous measures of attachment and engagement.

3.7 Attachment to Services

Two studies examined client attachment style and attachment to services (Blackburn et al., 2010; Catty et al., 2012). Blackburn et al. (2010) reported greater attachment security, as measured by the PAM, had a small negative association with attachment to services \( (r = -0.39; p < 0.001) \). Furthermore, adult attachment was a significant independent predictor of attachment to services \( (B = -0.27, t = -2.58, p = 0.012) \). Catty et al. (2012) found preoccupied attachment as measured by the RQ was negatively associated with the TAQ \( (r = -0.22, p = 0.040) \), and TA was strongly associated with the TAQ \( (r = 0.015, p = 0.001) \).

There are a number of limitations to note in both of these studies. In terms of the samples used, in Blackburn et al. (2010) there is the potential for selection bias with participants volunteering from an inpatient rehabilitative service, and they were excluded if they were considered “too unwell”. Furthermore, some of the clients had been in the service for a short period of time and therefore may not have had an opportunity to develop a TA or attachment to the service. Generalisability in this study is also limited (male, 80%; White British, 87%). However, in Catty et al. (2012) the sample had a lower proportion of White British
participants (67%), with an equal spread between males and females (males, 52%). A limitation of both Blackburn et al. (2010) and Catty et al. (2012) was their small sample sizes (n=78 and n=93 respectively), and they did not report a priori power calculations, although the results were statistically significant suggesting that power may not have been an issue. Furthermore, Catty et al. (2012) used a mixed sample whereby 53 participants reported a psychotic disorder versus 40 who reported a non-psychotic disorder and did not report analyses separately for each group.

With regards to measurement, in Blackburn et al. (2010) insecure attachment was not categorised in terms of anxious or avoidant styles; therefore, it is unclear whether these were also independent predictors of attachment to services. Furthermore, they also found a high proportion of secure attachment in their sample, suggesting the sample may have been unrepresentative of the population of people diagnosed with psychosis.

4. Discussion
The aim of the current paper was to review the relationship between attachment and help-seeking, service engagement and TA in samples of people with psychosis. Specifically, we sought to examine the association between different insecure attachment styles and therapeutic relationships, critically appraise the literature and highlight areas for future research.

Across a number of studies small negative associations were found with avoidant attachment and difficulties in the TA from both the perspectives of the clients and the mental health staff. However, one study (Kvrgic et al., 2012) reported no relationship between attachment style and TA as rated by psychological therapists. This highlighted the importance of exploring the differential effects of attachment on alliance across professional groups. Anxious attachment was not a significant associate of alliance in any of the studies suggesting that it may play a less important role in determining the quality of alliance than avoidant attachment. People with anxious attachment style may be more dependent on others for support and may therefore be easier to engage. Nonetheless, their dependence on others and hypersensitivity to rejection may result in more ruptures in TA, which will not be captured
in these cross-sectional studies. It is important to reflect that there were also a number of studies which reported no association between TA and attachment, two of which were longitudinal in design (Berry et al., 2015; Cavelti et al., 2016). However, the EPHPP highlighted a number of weaknesses with these studies. Berry et al., (2015) was considered weak in quality due to their poor control of confounding variables and high withdrawal/dropout rates. Those who dropped out may have been the very participants who had avoidant attachment and were struggling to engage and thus rich data will have been lost. Similarly, in Cavelti et al., (2016) 264 participants were asked to participate, with only 156 agreeing. Again, rich data may have been lost from these participants and in both these studies the authors did not report the reasons for dropout/poor agreement rates. Cavelti et al., (2016) and Kvrgic (2013) were both considered moderate in quality, however had a number of important weaknesses. Both studies were conducted in Switzerland and the STAR is not validated for use in German. Cavelti et al. (2016) had a large sample size, however, this may not have been sufficient for the complexity of the multivariate analysis conducted. Therefore, this review interprets the non-significant findings found in these studies with caution. The three studies which did report associations between TA and attachment also had strengths and weaknesses worth considering. Kvrgic et al., (2012) was considered weak in quality as the authors did not report controlling for confounding variables and again used the STAR, a measure that has not been validated for use in German. Berry et al., (2008) and Tyrell (1999) both scored moderate in quality with both falling down on their cross-sectional study design. However, both controlled for confounding variables, and while they both had small samples, they still found significant associations. The fact that positive associations were reported between attachment and alliance using different measures of alliance and outcomes suggests that the findings are relatively consistent.

The review also highlighted that securely attached clients had better engagement with services whereas greater insecurity of attachment was associated with poorer engagement with services. This was particularly evident in those with a secure versus an avoidant attachment style (Macbeth et al., 2011). Two of the studies also reported associations between anxious (preoccupied attachment) and poorer treatment adherence. It is possible that those with an anxious attachment may experience themselves as needing treatment or may
be more likely adhere to treatment for fear of rejection by their care providers (Shaver & Mikulincer, 2002).

Finally, this review also looked at attachment, and service attachment, which is a relatively novel construct, conceptually related to the TA and engagement. This review found insecure attachment was a significant predictor of poor attachment to services (Blackburn et al., 2010). In particular, having a less anxious attachment was associated with better service attachment (Catty et al., 2012), although no significant findings were reported in relation to avoidant attachment. The potentially more important role of anxious attachment compared to avoidant attachment is surprising given the relatively more consistent relationship between avoidant attachment and alliance and may be explained by the fact that attachment to services taps a slightly different concept to alliance and is perhaps one that is more sensitive to the perceived unmet needs of those with anxious attachment patterns.

The studies within this review utilised a range of attachment measures, and measures of alliance and engagement with services, making it somewhat difficult to make comparisons across studies and integrate findings. Self-report measures of attachment have the advantage in that they are quick and easy to administer and have demonstrated reliability and validity. However, there are some limitations to conceptualising attachment using self-report measures. For example, there are difficulties in interpreting attachment styles (Garbarino, 1998); some researchers have queried whether self-report measure of attachment truly measure attachment in psychosis (Olbert et al., 2016), with some measures assessing romantic relationships, which holds limited value in the context of psychosis as such individuals are often unlikely to be in stable relationships (Randolph, 1998). Additionally, research suggests clients with avoidant attachment styles may in fact report a secure attachment style, therefore highlighting the need for both client and clinician versions of attachment measures (Arbuckle, Berry, Taylor, & Kennedy, 2012; Berry et al., 2008). The AAI, a clinician-rated interview of attachment, is regarded as the “gold standard” measure of attachment style as it is scored by the interviewer and maintains test-retest reliability after 18 months and 4 years (Ammaniti, Speranza, & Candelori, 1996; Crowell et al., 1996). The AAI has also demonstrated strong correlations between infant attachment and parental AAI.
responses (Fonagy, Steele, & Steele, 1991). However, a drawback of the measure is that it is time-consuming to administer and is often impractical to use in busy clinical settings or in a research context, requiring costly and extensive training (Hesse, 1999; Van IJzendoorn, 1995). Arguably, both methods of assessing attachment offer a distinct examination of the function and process of attachment styles (Roisman et al., 2007; Shaver & Mikulincer, 2002).

A number of studies within the review used the STAR and WAI to measure alliance. The advantage of both of these measures is that they assess TA from clinician and patient viewpoints, which is important given that the views of each may be very different (Couture et al., 2006; Fitzpatrick, Iwakabe, & Stalikas, 2005; Wittorf et al., 2009). The WAI is the most commonly used measure of TA (Busseri & Tyler, 2003) but has been criticised for not fully capturing the multifaceted nature of the concept of alliance (Andrusyna, Tang, DeRubeis, & Luborsky, 2001; Hatcher & Barends, 1996; Tracey & Kokotovic, 1989). Studies that investigated service engagement used the well validated SES. Although this measure has good psychometric properties the reliance solely on the SES does not permit an examination of the service users’ perception of engagement. This review included studies assessing attachment to services as a measure of therapeutic relationships. However, it is important to consider the extent to which staff relationships with clients can be considered an attachment relationship (Ma, 2007) as they are often time-limited, and restricted by boundaries, both ethically and organisationally (Berry & Drake, 2010).

In terms of the results found, eight studies included in this review were cross-sectional; as such, causal relationships cannot be determined. It is also worth noting that two research teams (UK and Switzerland) appear to have been involved in six of the studies in this review (UK: Berry 2008; Berry 2015; Blackburn 2010; Switzerland: Kvgic 2012; Kvgic 2013; Cavelti 2016). It would, therefore, be helpful to see findings replicated by other research groups, in other geographical locations. Additionally, Black and minority groups are under-represented in the majority of studies reviewed, which is reflective of the psychosis literature more broadly (Iwamasa, Sorocco, & Koonce, 2002; Woodall, Morgan, Sloan, & Howard, 2010). Furthermore, findings across the studies do not apply to females and males equally as the samples recruited were primarily male (male n=667, 68%), which may account for the
poor engagement reported. For example, Moran (2007) reported that being female is associated with higher rates of help-seeking behaviour. Finally, all of the studies referred participants opportunistically from clinics, and therefore selection bias must be considered, as participants may not be representative of the target population.

4.1 Strengths and Limitations of the Review
Firstly, the review was conducted transparently following the PRISMA guidelines (Liberati et al., 2009), which enables readers to assess the quality of the review and replicate the search. Secondly, the method employed was thorough, searching key databases using comprehensive search terms. Finally, studies included were assessed for quality which allowed critical appraisal of the findings of each study, allowing for consideration of bias, and the strength of the evidence overall.

There are also some limitations of the current review. Studies not published in English were excluded, which may bias findings reported in this review and may compromise the application and generalisability of findings to other cultures. Additionally, book chapters, dissertations, or conference extracts were omitted as they had not been subject to a robust peer review process. However, omitting these increases the risk of selection/publication bias.

4.2 Clinical Implications
The findings of this review suggest that attachment style, particularly insecure attachment, is an important factor to consider when working with clients with psychosis who are engaging with services. On an individual therapeutic basis, emphasis should be placed on establishing an individual’s attachment style early in therapy, which may inform the therapeutic approaches clinicians are offering in a more individualistic way. This would allow services to anticipate need and proactively make adjustments to a person’s care, potentially improving engagement (Tyrell et al., 1999). For example, those who present with an anxious attachment may need support and patience from the clinician in developing their confidence and reducing their mistrust in relationships. Furthermore, clinicians could offer support in improving client’s feelings of control and ability to cope with distress (Bartholomew & Horowitz, 2001). For those who present with an avoidant attachment style,
who might suppress emotions and dismiss relationships, clinicians might consider spending earlier stages of their work focused on developing trusting relationships and providing a ‘secure base’ in order to challenge and weaken a client’s negative view of relationships, enhance emotional regulation and create new internal working models (Bartholomew & Horowitz, 2001). Furthermore, for those with interpersonal difficulties, a greater emphasis could be put on utilising attachment theory in formulations, subsequently informing interventions, which promote engagement with services. Nurturing the TA may also enable clients to develop a secure base in which they can review their difficulties. Collaboration, coherent narratives, emotional communication, reflective dialogue and repair are described as the elements required to foster secure attachments (Siegel, 1999) and may therefore be important for clinicians to consider.

From a more systemic perspective, having knowledge of a client’s attachment style should trigger additional support for staff as required. For example, working with clients with an avoidant attachment style may require supervision and reflective practice to avoid burn out and getting pulled into dynamics which maintain clients’ insecure attachment patterns. For example, staff working with avoidant clients may feel pushed away and perpetuate cycles of avoidance, whereas staff working with anxious clients may feel compelled to meet clients’ needs for dependency but ultimately fail to provide the level of care desired by clients. It is not uncommon when teams are burnt out to vacillate between being over-regulated, inflexible and punitive to being dangerously unboundaried and risk naïve. Therefore, reflective practice and supervision has the potential to help staff consider enactments and their role in maintaining insecure attachment styles, reducing punitive clinical practice, and exploring the maintenance of challenging behaviours (Berry, Barrowclough, & Wearden, 2009).

Finally, from a wider service perspective, multi-disciplinary working is paramount when working in the context of psychosis. A challenge for services is to provide a ‘secure base’ for clients to seek support in times of need. This can be achieved via consistency of care, offering caring and containing responses to emotional dysregulation (Goodwin, Holmes, & Cochrane, 2003). Interventions need to take place within an environment where staff
members are attuned to the needs of the clients and within which staff members themselves feel secure and supported by those around them including their organisations (Bucci, Roberts, Danquah, & Berry, 2015). The task of developing a secure base is therefore the responsibility of the individual health care professional and the service itself.

4.3 Future Research

A number of potential avenues for future research have been highlighted by this review. From a quality perspective, the design of many of the studies in this review was a major weakness. Future research should consider prospective longitudinal designs to investigate the causal relationships between attachment, psychosis and alliance/engagement. This is particularly important given that research suggests that attachment and alliance changes over time (Lewis, Feiring, & Rosenthal, 2000; Waters, Weinfield, & Hamilton, 2000). Furthermore, more representative and diverse sampling are essential (e.g., first episode psychosis) as all the studies in this review scored moderate or weak in their sampling methods. Also, future studies should consider controlling for gender, age, psychotic symptomatology, and previous experience of therapy being positive, as these may influence a person’s report of attachment style and help-seeking behaviour (Moran, 2007; Berry et al., 2008). Finally, further research is needed to examine the different approaches of assessing attachment. It would be interesting to consider any differences between the AAI and self-report measures and their effects on therapeutic relationships within the same study. In addition, it is important that more studies collect data on both the client and staff views, considering the differences in opinion (Wittorf et al., 2009).

Additionally, more research is needed on an individual’s general attachment to a service as a whole and the relationship of this construct to alliance and engagement. Finally, it was noteworthy that with the exception of Tyrell et al (1999), no studies investigated the influence of health care professional’s attachment styles. The interaction effect reported in this paper suggests that it is imperative that future studies consider the impact of health care professional’s attachment on the development of TA (Berry et al., 2008) and how client and staff attachment styles interact (Bucci et al., 2015).
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Does fearful attachment and dissociation mediate the relationship between trauma and voice-hearing in psychosis?

The following paper has been prepared for submission to ‘The British Journal of Clinical Psychology.’ The guidelines for authors are presented in Appendix D.

Word count: 5132 (excluding tables, figures and references)
Abstract

Objectives: The current study aimed to investigate the potential mediating role of fearful attachment and dissociation between childhood interpersonal trauma and auditory verbal hallucinations (AVHs).

Methods: The study was a cross-sectional, correlational, questionnaire-based design and included 230 participants with a self-reported diagnosis, or symptoms of psychosis. Participants were recruited online and completed self-report measures investigating experiences of childhood trauma, attachment, hallucinations and dissociation.

Results: The results showed that fearful attachment was statistically significantly associated with childhood interpersonal trauma, dissociation and paranoia but not AVHs. Dissociation was associated with fearful attachment, childhood interpersonal trauma, AVHs and paranoia, although, depersonalisation/derealisation was a stronger predictor of AVHs than other types of dissociation. A serial mediation analysis highlighted a possible causal pathway between childhood interpersonal trauma and AVHs, mediated by fearful attachment and dissociation, however further prospective research is needed to confirm this. Conclusions: The findings suggest there is an important role in fearful attachment and dissociation in the development of AVHs.

Practitioner Points:

• It will be important for clinicians to understand the potential role that attachment plays in the development and maintenance of symptoms.
• It will be important for clinicians working with clients with AVHs to understand and address the role of attachment and dissociation in their formulations.

Key words: Childhood interpersonal trauma, psychosis, schizophrenia, hearing voices, attachment, dissociation.
1. Introduction

Hearing voices (auditory verbal hallucinations; AVHs) has been described as the experience of hearing a voice in the absence of an external stimulus (Waters et al., 2012). AVHs are a common occurrence in the general population with research suggesting median prevalence rates of 13.2% (Beavan, Read, & Cartwright, 2011). There is a growing consensus that clinical and non-clinical voice hearing exists on a continuum (e.g., Van Os, Hanssen, Bijl, & Ravelli, 2000; Van Os, Linscott, Myin-Germeys, Delespaul, & Krabbendam, 2009). However, although AVHs can occur in the absence of a mental health difficulty (McCarthy-Jones & Davidson, 2013), they are often associated with distress (Hatzipetrou & Oei, 2010).

The role of trauma in increasing the risk of developing voices is now well established (Longden, Madill, & Waterman, 2012; Varese et al., 2012b). Although not all individuals who experience trauma develop AVHs, significant associations have been found between AVHs and early adverse childhood experiences such as physical, sexual, emotional abuse, neglect and bullying (Bentall, Wickham, Shevlin, & Varese, 2012; Shevlin, Dorahy, & Adamson, 2007). Furthermore, there is growing evidence that the more severe or frequent the exposure to trauma, the greater the risk of AVHs (Shevlin et al., 2011). Researchers are considering mechanisms that might explain this relationship; dissociation and attachment status have been suggested as possible mechanisms (Berry & Bucci, 2016).

Generally speaking, dissociation is defined as “a disruption of and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behaviour” (Diagnostic and Statistical Manual of Mental Disorders-V, American Psychiatric Association, 2013; DSM-V; p. 291). It is described as a pervasive consequence of exposure to traumatic experiences (Dalenberg & Carlson, 2012; Dorahy & van der Hart, 2007; Van der Hart, Nijenhuis, & Steele, 2006) and as a self-protective mechanism to the trauma (Briere, 1996). These experiences might be viewed as transdiagnostic processes that occur across different clinical, as well as non-clinical samples (Anketell et al., 2010; Perona-Garcelán et al., 2012b; Ross, Joshi, & Currie, 1990). Dissociation may represent an important mechanism mediating the effects between trauma and vulnerability to AVHs (Moskowitz, Read, Farrelly, Rudegeair, & Williams, 2009) with
robust relationships already reported between childhood trauma (Perona-Garcelán et al., 2012a) and hearing voices (Pilton, Varese, Berry, & Bucci, 2015; Varese, Barkus, & Bentall, 2012a). However, some researchers have argued that individuals who have experienced adverse childhood experiences may be prone to fantasy as a means to escape from their reality (Lawrence, Edwards, Barraclough, Church, & Hetherington, 1995). Hyman and Billings (1998) suggested individuals who reported high scores on measures of fantasy-proneness are more inclined to develop ‘pseudomemories’. Dalenberg et al. (2012) reported that the early trauma reported by individuals with dissociation are fabricated memories resulting from fantasy-proneness. Resultantly, fantasy-proneness may be a confounder between the relationship between trauma and dissociation.

There are also more nuanced understandings of dissociation. Holmes et al. (2005) and Brown (2006) have argued that there are different types of dissociation, namely detachment and compartmentalization. Holmes et al. (2005) describes detachment as “an altered state of consciousness characterised by a sense of separation” (or detachment) consisting of out-of-body experiences, depersonalisation, and derealisation (p.6). Compartmentalization in contrast is described by Holmes et al. (2005) as “a deficit in the ability to deliberately control processes or actions that would normally be amenable to such control” (p.7). Compartmentalization consists of dissociative amnesia, conversion disorders, somatoform dissociation and identity alteration (Brown, 2002, 2004; Cardeña, 1994; Nijenhuis, Spinhoven, van Dyck, van der Hart, & Vanderlinden, 1998). Evidence supports the proposal that these two subtypes of dissociation are distinct constructs (Baker et al., 2003; Brown, Schrag, & Trimble, 2005; Sierra & Berrios, 2000). Many studies have looked at dissociation with the Dissociation Experience Scale (DES) subscales (amnesia, absorption, depersonalisation/derealisation), but not compartmentalization versus other aspects of dissociation.

In addition to dissociative phenomena, attachment style has also been found to be an important mechanism in the development of AVHs, with studies focusing more specifically on the role of insecure attachment. Attachment theory was developed by Bowlby (1969) who proposed interactions with the primary caregiver in early childhood influence behavioural
interactions in adulthood through ‘internal working models’ or mental representations about
the self and others (Bowlby, 1977). In both the child and the infant literature, researchers
have conceptualised people as having four different types of attachment styles (e.g., secure,
preoccupied, dismissive, disorganised), which are hypothesised to reflect different internal
working models and consequent ways of regulating affect and relating to others (Mikulincer,
from caregiver maltreatment, physical, sexual and emotional abuse whereby the primary
caregiver is seen as both a source of safety and distress (Liotti, 2004). It can also arise as a
result of more subtle but frequent insensitive parenting behaviours (Lyons-Ruth & Jacobvitz,
1999; Madigan et al., 2006) because of the negative impact on the HPA system and activation
of the stress system (Gunnar & Cheatham, 2003; Hane & Fox, 2006). Research suggests that
fearful attachment, conceptualised as a negative view of self, feeling unworthy and
unlovable, distrust of others and avoidance of close relationships for fear of rejection
(Bartholomew, 1990; Bartholomew & Horowitz, 1991), may be the adult equivalent of
Studies have found a high prevalence of insecure attachment in psychosis samples (Gumley,
Taylor, Schwannauer, & MacBeth, 2014) with associations between insecure attachment and
hallucinations (Korver-Nieberg, Berry, Meijer, de Haan, & Ponizovsky, 2015) and paranoia
(Berry, Barrowclough, & Wearden, 2008a). It is unsurprising that there are associations
between insecure attachment and both hallucinations and paranoia given their substantial
covariation (Bentall et al., 2014; Varese & Bentall, 2011). Resultantly, it is important that
research examining the processes in predicting AVHs also control for paranoia.

Liotti (2004) proposed that the approach-avoid attachment behaviour seen in disorganised
attachment results in confused and incoherent coping strategies in which the person is unable
to resolve the conflict between simultaneously seeking safety from their attachment figure
and avoiding distress from them. In adulthood, when faced with a stressor, these confusing
and incoherent coping strategies are reactivated causing responses that mirror dissociative
experiences in which an individual is unable to coherently integrate memories, consciousness
and self-identity (Liotti, 2004). Studies have not tested these ideas fully; although there is
some evidence that fearful attachment, which overlaps with the concept of disorganised
attachment, is associated with psychotic experiences (Strand, Goulding, & Tidefors, 2015), in particular hallucinations (Ponizovsky, Vitenberg, Baumgarten-Katz, & Grinshpoon, 2013b). Sheinbaum, Kwapil, and Barrantes-Vidal (2014) reported in their non-clinical study with a schizotypy sample that the relationship between childhood trauma and psychotic-like experiences was mediated by fearful attachment.

Berry and Bucci (2016) have developed a model that integrates well-established cognitive theories of voices with attachment theory, taking into account dissociative and trauma literatures. Termed the Cognitive Attachment Model of Voices (CAV), Berry and Bucci (2016) propose that individuals with a disorganised attachment pattern are more likely to dissociate in response to ongoing relational trauma in the context of attachment relationships or other later trauma. The authors propose that dissociation is likely to increase vulnerability to AVHs, as in line with cognitive theories of voice-hearing, AVHs can be conceptualised as dissociated and poorly integrated aspects of the self (Dorahy & van der Hart, 2007; Longden et al., 2012; Van der Hart et al., 2006).

The present study, therefore, aimed to test aspects of the CAV model (Berry & Bucci, 2016) and provide a clearer understanding of the role of fearful attachment and dissociation in the context of AVHs. The following hypotheses were examined:

1. Fearful attachment will be positively associated with trauma, dissociation and AVHs.
2. Both fearful attachment and dissociation will mediate the relationship between trauma and AVHs in a serial mediation analysis.

In addition, a secondary aim of the study was to explore which aspects of dissociation are a stronger correlate of AVHs than other aspects of dissociation.

### 2. Method

#### 2.1 Participants
An online clinical sample of participants aged 18 years or older with a self-reported diagnosis of psychosis were recruited. Participants were considered eligible if they reported receiving
at some point in their lives: i) antipsychotic medication for experiences related to psychosis; ii) treatment in a mental health unit/hospital for experiences related to psychosis; iii) input from a community mental health team or early intervention service for experiences related to psychosis; iv) therapeutic input (e.g., CBT therapist, psychologist) for experiences related to psychosis, such as AVHs, visual hallucinations, paranoid ideation or unusual beliefs.

A power analysis (G*Power) was conducted using a priori methods and revealed recruiting 100 participants or more would allow us to reliably detect significant effects as small as \( r = 0.27 \) at the recommended power of 0.80. Key relationships were considered (e.g., association between trauma and AVHs, and between dissociative experiences and AVHs) and are considerably more robust than this estimate, with other studies reporting robust mediational indirect effects with samples as small as 45 (Pilton, Varese, Berry & Bucci, 2015; Varese, Barkus & Bentall, 2011).

A total of 249 participants completed the demographics questionnaire, of which three were unable to continue into the survey due to being under the age of 18, and a further 16 were manually excluded due to not meeting the inclusion criteria. Therefore, 230 continued into the survey, with 70% completing all the questionnaires to the end. Table 1 presents demographic information. Participants ranged in age from 18 to 73 years, with a mean age of 36.95 (SD = 11.60). The majority of participants were female (80%, n=184), White British (56%, n=128), with 91% reporting their first language as English (n=209).

Table 2 presents the clinical characteristics of the participants in this sample. The majority had a diagnosis of depression with psychotic features (40%, n=92), were currently receiving antipsychotic medication for hallucinations (43%, n=98), and 75% of the sample (n=173) were receiving mental health support for hallucinations. Sixty-eight percent (n=156) reported they had been in hospital for mental health difficulties, with 1% (n=3) currently in hospital.
<table>
<thead>
<tr>
<th>Table 1: Demographics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
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<td></td>
</tr>
<tr>
<td>Female</td>
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<td>80</td>
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<tr>
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<tr>
<td>Any other white background</td>
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<td>23</td>
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<tr>
<td>Other</td>
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<td><strong>Sexual Orientation</strong></td>
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<td>19</td>
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<tr>
<td>Other</td>
<td>14</td>
<td>6</td>
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<tr>
<td>Prefer not to say</td>
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<td>3</td>
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<td><strong>First Language</strong></td>
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<tr>
<td>English</td>
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<td>91</td>
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<td>Never married and never registered a same-sex civil partnership</td>
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<td>59</td>
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<tr>
<td>Separated, but still legally married</td>
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<td>6</td>
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<tr>
<td>Divorced</td>
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<td>10</td>
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<tr>
<td>Widowed</td>
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<tr>
<td>In a registered same-sex civil partnership</td>
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<td>0</td>
</tr>
<tr>
<td>Separated, but still legally in a same-sex civil partnership</td>
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<td>0</td>
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<td><strong>Education</strong></td>
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<td>Degree level qualification</td>
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<td>47</td>
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<td>Teaching qualification, HND, NVQ level 4</td>
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<td>A' Levels, OND, NVQ level 3</td>
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<td>O' Level passes (Grade A-C) or GCSE (Grades A-C) or NVQ level 2</td>
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<td>O' Level (Grades D &amp; E) or GCSE (Grades D-G) or NVQ level 1</td>
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<td>Self Employed</td>
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<tr>
<td>Looking after family/home</td>
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<td>4</td>
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<td>Receipt of sickness or disability benefits</td>
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<td>31</td>
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<tr>
<td>Retired</td>
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<td>2</td>
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<td>Other Inactive</td>
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Table 2: Clinical Characteristics

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<th>Received Psychiatric Diagnosis</th>
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<tr>
<td>Yes</td>
<td>216</td>
<td>94</td>
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<tr>
<td>Schizophrenia</td>
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<tr>
<td>Schizoaffective</td>
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<td>21</td>
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<tr>
<td>Schizophreniform</td>
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<td>1</td>
</tr>
<tr>
<td>Depression with psychotic features</td>
<td>92</td>
<td>40</td>
</tr>
<tr>
<td>Delusional Disorder</td>
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<td>3</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>64</td>
<td>28</td>
</tr>
<tr>
<td>Brief Psychotic Disorder</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Any other which included psychotic experience</td>
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<td>24</td>
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<tr>
<td>Other</td>
<td>40</td>
<td>17</td>
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<tr>
<td>None of the above</td>
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<table>
<thead>
<tr>
<th>Current receiving antipsychotic medication(^1)</th>
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<th>%</th>
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<tbody>
<tr>
<td>Hallucinations</td>
<td>98</td>
<td>43</td>
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<tr>
<td>Delusions</td>
<td>73</td>
<td>32</td>
</tr>
<tr>
<td>Paranoia</td>
<td>90</td>
<td>39</td>
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<tr>
<td>Unusual Beliefs</td>
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<td>No</td>
<td>109</td>
<td>47</td>
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<table>
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<tr>
<th>Current receiving mental health support(^2)</th>
<th>n</th>
<th>%</th>
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<tbody>
<tr>
<td>Hallucinations</td>
<td>173</td>
<td>75</td>
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<tr>
<td>Delusions</td>
<td>136</td>
<td>59</td>
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<td>Paranoia</td>
<td>152</td>
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<td>Unusual Beliefs</td>
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<table>
<thead>
<tr>
<th>Been in hospital for mental health difficulties</th>
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<tr>
<td>Yes</td>
<td>156</td>
<td>68</td>
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<tr>
<td>Are you currently in hospital for MH diff</td>
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<tr>
<td>Yes</td>
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<td>1</td>
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<tr>
<td>Received input from CMHT or Early Intervention Service</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>159</td>
<td>69</td>
</tr>
<tr>
<td>Currently receiving input from CMHT or Early Intervention Service</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>87</td>
<td>38</td>
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<tr>
<td>RQ Category</td>
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<tr>
<td>Secure</td>
<td>19</td>
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<tr>
<td>Fearful</td>
<td>101</td>
<td>56</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>31</td>
<td>17</td>
</tr>
<tr>
<td>Dismissive</td>
<td>28</td>
<td>16</td>
</tr>
</tbody>
</table>

\(^1\) The participants were able to select as many symptoms that applied to them for which they were receiving antipsychotic medication.

\(^2\) Additionally, the participants were able to select one or more symptoms for which they were receiving mental health support.
2.2 Measures

The variables presented in this study were part of a wider programme of research exploring trauma, attachment, dissociation and psychosis across the psychosis continuum. This study used measures pertinent to the study hypotheses (see Appendix E for copies of measures).

2.2.1 Demographics

Key demographic information was collected on age, sex and ethnicity. Further questions pertinent to the inclusion criteria were assessed: psychiatric diagnosis, receipt of antipsychotic medication, receipt of mental health support, inpatient in hospital for mental health difficulties, number of contacts, currently residing in hospital, historical and current input from community mental health teams and/or early intervention services.

2.2.2 Trauma

**The Brief Betrayal Trauma Survey (BBTS: Goldberg & Freyd, 2006)**

The BBTS was used to assess exposure to interpersonal trauma. The BBTS consists of 12 items rated on a 3-point Likert scale (Never, One or Two Times, More Than That) addressing a range of adverse life experiences “before 18” and “after 18”. Subscales for interpersonal trauma (items 2-10, e.g. sexual assault by close family member) and non-interpersonal trauma (items 1-2, e.g. natural disaster) were established. The measure has good test-retest reliability (Goldberg & Freyd, 2006) and construct validity (DePrince & Freyd, 2004). Reliability in the present study was excellent (α = .88) for the total interpersonal trauma score. The measure has been widely used with clinical and non-clinical participants (e.g., Goldsmith, Freyd, & DePrince, 2012), and in participants with psychosis (Stain et al., 2013).

2.2.3 Attachment

**The Relationship Questionnaire (RQ: Bartholomew & Horowitz, 1991)**

The RQ has a categorical and continuous score to assess attachment styles. The categorical score has been used to report demographic characteristics whereby the participant selects one of four statements which they feel most represents them, each assessing one attachment pattern: secure, fearful, preoccupied or dismissive. For example, selecting “it is easy for me to become emotionally close to others” represents a secure attachment style. The continuous
scores were used in the main analysis where participants are presented with the same statements and asked to rate how much they represent them on a 7-point Likert scale. The RQ has good psychometric properties and has been used in previous clinical studies (e.g., Ponizovsky, Vitenberg, Baumgarten-Katz, & Grinshpoon, 2013a).

2.2.4 Dissociation

Dissociative Experiences Scale (DES-II: Carlson & Putnam, 1993)
The DES-II is a 28-item self-report measure of absorption, amnesia, depersonalisation and derealisation. Participants are asked to rate by percentage of 0-100% the extent to which they have experienced each item. Reliability and validity was reported to be good (Holtgraves & Stockdale, 1997) with excellent reliability in the current study on the DES-II total score ($\alpha = .955$), and the associated subscales, Amnesia ($\alpha = .905$), Depersonalisation/Derealisation ($\alpha = .859$), and Absorption ($\alpha = .875$). The hearing voices item in the DES-II (item 27) was removed in this study to avoid potential associations being artificially inflated.

Personality Structure Questionnaire (PSQ: Pollock, Broadbent, Clarke, Dorrian, & Ryle, 2001)
The PSQ is an 8-item self-report measure of deficits in personality integrity. It was designed to measure the multiple self-states model of borderline personality disorder and as such arguably measures compartmentalization at a higher level than individual symptoms. Participants are asked to read two contrasting statements, e.g. My sense of self is always the same – How I act or feel is constantly changing. Participants are then asked to mark which statement is more true for them on a 5-point Likert scale. The PSQ was shown to be a reliable self-report measure correlated with identity disturbance, dissociation and multiplicity (Pollock et al., 2001). Reliability in the current study was excellent for the total score ($\alpha = .88$), and the associated subscales: differing self-states ($\alpha = .845$), changeability in mood ($\alpha = .861$), and behavioural loss of control ($\alpha = .749$).

2.2.5 Fantasy-Proneness

The Creative Experiences Scale (CES: Merckelbach, Horselenberg, & Muris, 2001)
The CES is a 25-item yes/no self-report measure of fantasy proneness, which was used to control for the potential impact of fantasy-proneness on the relationship between trauma and dissociation. Test-retest reliability and internal consistency of the CEQ are good (0.95 and 0.72). The scale also correlates strongly with other validated measures of fantasy-proneness (e.g., Tellegen Absorption Scale, TAS; Kihlstrom, Glisky, & Angiulo, 1994). Reliability in the current study was excellent (α = .816).

2.2.6 Psychotic Experiences

**Community Assessment of Psychotic Experiences (CAPE: Stefanis et al., 2002)**

The CAPE is a 42-item self-report measure utilising a 4-point Likert scale to indicate frequency of psychotic symptoms (“Never”, “Sometimes”, “Often” and “Nearly always”). In clinical and non-clinical samples, the CAPE has good psychometric properties (Thewissen, Bentall, Lecomte, van Os, & Myin-Germeys, 2008; Yung et al., 2009) and good validity (Stefanis et al., 2002). Development of subscales was informed by Schlier, Jaya, Moritz, and Lincoln (2015), with this study particularly interested in the Positive Hallucinations subscale (Do you ever hear voices when you are alone; Do you ever hear voices talking to each other when you are alone), and Positive Paranoia scale (Do you ever feel as if some people are not what they seem to be; Do you ever feel as if you are being persecuted in some way; Do you ever feel as if there is a conspiracy against you; Do you ever feel that people look at you oddly because of your appearance). Reliability in these subscales was good (Spearman-Brown’s reliability coefficient = .884), (α = .768) respectively.

2.3 Procedure

Ethical approval for this study was sought from University of Manchester Research Ethics Committee (Appendix F). Participants were recruited via advertisement on social media (Facebook and Twitter) and details of the study were emailed to hearing voices groups worldwide. More specifically, on Facebook, the study poster (Appendix G) was advertised on mental health charities walls (e.g., Mind, Hearing Voices Network, Rethink, Time to Change, Intervoice, Mental Health Foundation), and similarly these charities were contacted on Twitter and asked to retweet the advertisement to their followers. Furthermore, recruitment
was maximised by contacting 275 Hearing Voices support groups world-wide either via email, phone, or social media. The group organisers were requested to inform their group members of the study and share the poster with details and the link to the survey. Participants then clicked on the survey link where they were presented with the participant information sheet (Appendix H). By clicking the ‘next’ button participants indicated their consent to participate. Participants then proceeded into the demographics questionnaire and participants who reported their age as under 18 were automatically prevented from progressing into the remaining questionnaires. At the end of the survey, if participants wished to enter into a prize draw and/or receive feedback on the study, they were asked to leave their email address. Finally, they were then presented with a debrief sheet (Appendix I).

2.4 Data Analysis
Data were analysed using SPSS version 23. All variables were checked for normality using the Skewness and Kurtosis tests, which revealed the majority of variables were not normally distributed. Therefore, in order to test the first hypothesis, bivariate associations between variables were examined using Spearman correlations. A multiple regression analysis was then conducted to explore which aspects of dissociation were significant predictors of voice-hearing. Finally, a serial mediator analysis was carried out with the SPSS analytic procedures described by Hayes et al. (2013) to establish if fearful attachment (M₁) and dissociation (M₂) mediated the effect between childhood interpersonal trauma (X) and AVHs (Y). The serial mediator analysis assumes a causal link between mediators, and was specified a causal flow (X -> M₁ -> M₂ -> Y). The indirect effects were tested using bootstrapped confidence intervals (CIs) of 10,000 bootstrap draws (Preacher & Hayes, 2004) as parametric assumptions are not made. All models controlled for appropriate covariates (e.g., paranoia, fantasy-proneness). Mediation was deemed present if there was a statistically significant indirect effect between the variables of interest.

3. Results
3.1 Confounding Variables
In order to test for potential confounding variables, Mann Whitney U tests were conducted to see if there were any significant different differences between gender and ethnicity and
the variables of interest. No significant differences were found in gender; however, there were differences found with ethnicity and fantasy-proneness (U = 875.5, Z=-2.193, p = .028, Median 13.000), and CAPE Hallucinations (U = 1784.5, Z=-2.502, p = .012, Median 4.000).

3.2 Fearful attachment

The first hypothesis examined if fearful attachment is positively associated with trauma, dissociation and voices. Table 3 provides non-parametric (Spearman’s $r_s$) correlation coefficients. Fearful attachment style (RQ) was significantly associated with childhood interpersonal trauma ($r_s (161) = 0.283, p = .000$), DES-II total score ($r_s (156) = 0.418, p = .000$) and Amnesia ($r_s (160) = 0.284, p = .000$), Depersonalisation/Derealisation ($r_s (158) = 0.350, p = .000$), and Absorption ($r_s (158) = 0.385, p = 0.000$). Furthermore, fearful attachment was associated with the PSQ ($r_s (153) = .293, p = .000$) and its subscales. Finally, fearful attachment was associated with CAPE paranoia ($r_s (182) = .291, p = .000$) but not CAPE hallucinations ($r_s (180) = .124, p = .098$).
### Table 3: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</tr>
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<tbody>
<tr>
<td>1</td>
<td>RQ – Secure style</td>
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<td>RQ - Fearful style</td>
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<td>RQ - Dismissive style</td>
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<td>.061</td>
<td>-.115</td>
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<tr>
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<td>DES Total Score</td>
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<td>.418**</td>
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</tr>
<tr>
<td>6</td>
<td>DES Depersonalization/Derealization</td>
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<td>.350**</td>
<td>.044</td>
<td>-.094</td>
<td>.865**</td>
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<tr>
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<td>.065</td>
<td>-.047</td>
<td>.824**</td>
<td>.598**</td>
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</tr>
<tr>
<td>8</td>
<td>DES Absorption</td>
<td>-.274**</td>
<td>.385**</td>
<td>.020</td>
<td>-.123</td>
<td>.918**</td>
<td>.763**</td>
<td>.648**</td>
<td>-</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>PSQ Total Score</td>
<td>-.253**</td>
<td>.293**</td>
<td>.173*</td>
<td>-.064</td>
<td>.416**</td>
<td>.340**</td>
<td>.400**</td>
<td>.303**</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td>PSQ Differing Self States</td>
<td>-.195**</td>
<td>.219**</td>
<td>.202*</td>
<td>-.015</td>
<td>.336**</td>
<td>.297**</td>
<td>.309**</td>
<td>.229**</td>
<td>.865**</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
<td>11</td>
<td>PSQ Changeability in Mood</td>
<td>-.287**</td>
<td>.331**</td>
<td>.034</td>
<td>-.034</td>
<td>.356**</td>
<td>.275**</td>
<td>.375**</td>
<td>.272**</td>
<td>.798**</td>
<td>.491**</td>
<td>-</td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>PSQ Behavioural Loss of Control</td>
<td>-.164*</td>
<td>.190*</td>
<td>.109</td>
<td>-.156</td>
<td>.318**</td>
<td>.212**</td>
<td>.333**</td>
<td>.254**</td>
<td>.747**</td>
<td>.446**</td>
<td>.612**</td>
<td>-</td>
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<tr>
<td>13</td>
<td>CES Total</td>
<td>-.062</td>
<td>.099</td>
<td>.104</td>
<td>.006</td>
<td>.421**</td>
<td>.443**</td>
<td>.234**</td>
<td>.441**</td>
<td>.100</td>
<td>.201*</td>
<td>-.035</td>
<td>-.034</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>CAPE Positive Hallucinations</td>
<td>-.159*</td>
<td>.124</td>
<td>-.219**</td>
<td>.102</td>
<td>.421**</td>
<td>.377**</td>
<td>.378**</td>
<td>.333**</td>
<td>.123</td>
<td>.068</td>
<td>.182*</td>
<td>.052</td>
<td>.146</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>CAPE Positive Paranoia</td>
<td>-.229**</td>
<td>.281**</td>
<td>.292**</td>
<td>.065</td>
<td>.426**</td>
<td>.339**</td>
<td>.314**</td>
<td>.384**</td>
<td>.273**</td>
<td>.191*</td>
<td>.211**</td>
<td>.258**</td>
<td>.240**</td>
<td>.219**</td>
<td>-</td>
</tr>
<tr>
<td>16</td>
<td>BBTS Child Trauma Interpersonal</td>
<td>-.129</td>
<td>.283**</td>
<td>.067</td>
<td>.118</td>
<td>.458**</td>
<td>.388**</td>
<td>.414**</td>
<td>.321**</td>
<td>.139</td>
<td>.092</td>
<td>.130</td>
<td>.094</td>
<td>.144</td>
<td>.131</td>
<td>.255**</td>
</tr>
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</table>

*RQ, Relationship Questionnaire; DES-II, Dissociation Experiences Scale; CAPE, Community Assessment of Psychotic Experiences; PSQ, Personality Structure Questionnaire; CES, Creative Experiences Scale; BBTS, Brief Betrayal Trauma Survey. *p<0.05, **p<0.001*
3.3 Dissociation and AVHs

A multiple regression using the ‘enter’ method was conducted to explore which aspects of dissociation are a stronger independent correlate of AVHs. To test the assumptions of multiple regression, an analysis of standardised residuals highlighted that there were no outliers in the sample (Min -1.782, Max 2.345). There was no evidence of multicollinearity and the data met the assumption of independent errors (Durbin-Watson = 2.063) and non-zero variance. Furthermore, there were normally distributed errors on the histogram and P-P plot of standardised residuals. The scatterplot of standardised residuals showed that the data met the assumptions of homogeneity of variance and linearity.

The DES subscales (Amnesia, Absorption, Depersonalisation/derealisation) and PSQ subscales (Behavioural loss of control, Differing Self States, Changeability in mood) explained a significant amount of the variance in the scores on the CAPE hallucinations subscale (F(6,141) = 5.448, p=.000, R² = .188, R² Adj = .154). More specifically, the DES depersonalisation/derealisation subscale significantly predicted the values of CAPE hallucinations (β = .282, t(6,141) = 2.307, p = .022). The remaining variables were not significant; PSQ Differing Self States (β = -.108, t = -1.163, p = .247); PSQ Changeability in Mood (β = .195, t = 1.866, p = .064); PSQ Behavioural Loss of Control (β = -.144, t = -.144, p = .159); DES Amnesia (β = .135, t = 1.277, p = .204); DES Absorption (β = .033, t = 270, p = .787).

3.4 Serial Mediator Model

The hypothesis that fearful attachment and dissociation will mediate the relationship between trauma and hearing voices was tested with a serial mediator model (Hayes, 2013). Unstandardized indirect effects were computed for each of 10,000 bootstrapped samples, and a 95% confidence interval was computed. As Figure 2 illustrates, whilst controlling for paranoia, fantasy-proneness and ethnicity, the standardized regression coefficient between childhood interpersonal trauma and fearful attachment was statistically significant (a1: b = .095, 95% CI [.025, .166], p = .008) as was the standardized regression coefficient between fearful attachment and dissociation (d21: b = 72.114, 95% CI [24.061, 120.167], p = .004), and also the standardized regression coefficient between dissociation and hearing voices (b2:
b = 0.001, 95% CI [.001, .002], p = .000). The standardized direct effect was not statistically significant ($c'_1 = -0.026$, $t(135) = -0.613$, $p = .541$). The bootstrapped unstandardized indirect effect was .010, and the 95% confidence interval ranged from .002, .028; therefore, the indirect effect was entirely above zero. The mediators could account for 25.4% of the total effect, $P_M = .254$.

4. Discussion

This study aimed to delineate the pathway by which childhood interpersonal trauma might lead to AVHs in participants with a self-reported diagnosis or symptoms of psychosis. To our knowledge this is the first study to conduct a serial mediation analysis and find that both fearful attachment and dissociation mediated the effect of childhood interpersonal trauma and AVHs. This study also extends previous evidence by demonstrating correlations between fearful attachment and all the subscales of dissociation, childhood interpersonal trauma and paranoia, but not AVHs as measured by a subscale on the CAPE. Additionally, this study also explored which aspect of dissociation was a better predictor of AVHs and found depersonalisation and derealisation to be a better predictor.
This study found that fearful attachment and dissociation mediated the effect between childhood interpersonal trauma and AVHs in participants with a self-reported diagnosis or symptoms of psychosis. This study supports previous research stating that dissociation (Perona-Garcelán et al., 2012a; Pilton et al., 2015; Varese et al., 2012a) and fearful attachment (Sheinbaum et al., 2014) are robust mediators between childhood interpersonal trauma and AVHs when considered together in the same model. This result was upheld when controlling for ethnicity, fantasy-proneness, and paranoia. It is noteworthy that the significant mediation was only found when both fearful attachment and dissociation were in a serial mediation analysis. We did not find evidence of mediation between childhood interpersonal trauma and AVHs via fearful attachment when the analysis was conducted using a single mediation model. The direct link between dissociation and AVHs was strong and the two are associated directly even when attachment is not implicated in the model. Interestingly, Sitko, Bentall, Shevlin, O'Sullivan, and Sellwood (2014) reported anxious attachment mediated the relationship between rape and hallucinations; however, the effect was non-significant when controlling for depression. In the current study, it was with the addition of both fearful and dissociation into the serial mediation model that we found a significant indirect effect. This offers some support to Liotti’s (2004) suggestion that incoherent and confusing coping strategies developed in childhood may be reactivated in adulthood when faced with a stressor, resultantly mirroring dissociative experiences in which an individual is unable to coherently integrate memories, consciousness and self-identity. These findings also support the vulnerability pathway of the CAV model (Berry & Bucci, 2016).

It is important to reflect that the CAV model posits that it is disorganised attachment which mediates the effect between childhood interpersonal trauma and AVHs. In this study, the use of the RQ meant that we tested the model with fearful attachment. However, Bartholomew (1990; 1997) suggests that fearful attachment assessed by the RQ is conceptually related to the unresolved category of the AAI which is the adulthood manifestation of disorganised attachment in childhood (Bartholomew 1990; 1997). Bartholomew (1990) argues there are two types of avoidant attachment; dismissing and fearful. An individual with a dismissing style rejects the desire for social contact to a positive self view and belief in their self-sufficiency. An individual with a fearful style has a desire for social contact, but this is
deterred by a fear of being rejected by others, as such people with fearful attachment may oscillate between approach and avoidance behaviours in close relationships, resulting in a disorganised pattern to attachment.

The finding of associations between fearful attachment and paranoia but not AVHs are in line with previous research, which reports associations between insecure attachment and paranoia (Berry, Barrowclough, & Wearden, 2008b; Pearse et al., Under Review; Pickering, Simpson, & Bentall, 2008; Sitko et al., 2014; Wickham, Sitko, & Bentall, 2015). Interestingly, Sitko et al. (2014) investigated particular forms of early trauma and reported that hallucinations were associated with sexual abuse, specifically rape and sexual molestation, whereas paranoia was associated with neglect. They also reported insecure attachment (anxious and avoidant) mediated the relationship between neglect and paranoia. These findings highlight the importance of categorising specific trauma experiences. Additionally, Pearse et al. (Under Review) reported that fearful attachment was a robust mediator of trauma and paranoia. Theoretically, this perhaps fits with our understanding of fearful attachment as negative view of self and others, as Hardy et al. (2016) reported that the relationship between childhood trauma and paranoia was mediated by negative beliefs about self and others.

This study also found depersonalisation and derealisation to be a better predictor of AVHs than other aspects of dissociation. This is in line with previous research; for example, Vogel, Braungardt, Grabe, Schneider, and Klauer (2013) reported in a clinical sample with a diagnosis of schizophrenia that the detachment subtype was associated with positive symptoms, whereas compartmentalization, particularly amnesia, was associated with negative symptoms. Furthermore, Humpston et al. (2016) reported that the detachment subtype was associated with psychotic like symptoms in a non-clinical population.

4.1 Strengths and Limitations

A strength of this study was the large sample recruited from a wide geographical region, which was not isolated to mental health clinics. Utilising this method reduced the potential for researcher bias in the assessment process. Additionally, we conducted a serial mediation,
which is a robust analysis procedure. Finally, we also controlled for relevant co-variables. The present study had a number of limitations. In terms of the design, it is not possible to infer causality from cross-sectional correlational data. Furthermore, there are some limitations with self-report questionnaires and conceptualising attachment in this way. For example, some researchers have queried whether self-report measures of attachment truly measure attachment in psychosis (Olbert et al., 2016). Additionally, the nature of online recruitment meant we were unable to validate diagnosis as this was self-reported. Given this study hoped to recruit an online sample, self-report questionnaires were deemed the only viable way to do this. Furthermore, the PROCESS software is limited by being unable to specify which covariates to control for at different points of the model. In other words, the covariates will control on each aspect of the model. Despite these limitations, the serial mediational analysis employed enabled testing of the overall fit of the model, emphasising strength of the associations between the variables, and highlighting interaction effects that may not have been apparent in simple regression analysis. The generalisability of the findings is also limited to some extent. Firstly, we recruited a predominantly female sample (80%) with an age range of 18-73, with mean age 36.95 years. This may be a function of the platform used to advertise the study (primarily Twitter and Facebook), which introduces a level of self-selection. This method of recruitment may have excluded those with chronic psychosis, or the older generation, who may not have access to these social networks and are therefore unlikely to have seen the advertisements. However, our sample does not appear to be uncommon in online samples, with other studies reporting similar gender distributions (Pearse et al., Under Review; Robson & Mason, 2015). In addition, this study had a 30% attrition rate, which might have been due to the length of the survey and the inability for participants to save responses and return at a later date. Furthermore, our sample reported their primary diagnosis was depression with psychotic features (40%), with 46% reporting either a diagnosis of schizophrenia, schizoaffective, or schizophreniform. This pattern of diagnosis is not necessarily consistent with other psychosis samples and may, therefore, impact on the generalisability of our findings. However, psychosis is a heterogeneous phenomenon, which encapsulates a range of symptoms. The majority of our sample was currently receiving antipsychotic medication for hallucinations (43%, n=98), and 75% of the
sample (n=173) was receiving mental health support for hallucinations. Therefore, AVHs was well represented within the current study.

4.2 Clinical Implications
This study highlighted a possible causal pathway between childhood interpersonal trauma and AVHs, mediated by fearful attachment and dissociation, however further prospective research is needed to confirm this. Clinicians should pay particular attention to and routinely gather information regarding the processes that have led a person to developing AVHs. This information should subsequently inform formulations and intervention plans. In particular, depersonalisation/derealisation were strong predictors of AVHs. This finding suggests that clinicians should consider employing specific therapeutic strategies when working with individuals who experience both AVHs and dissociation rather than assuming a generalised approach for dissociation will be helpful. For example, as detachment was described as a sense of separation consisting of out-of-body experiences, an intervention around the experiences of depersonalisation, and derealisation (Holmes et al., 2005) might focus on encouraging a client to keep diaries to identify subtle variations and associated situations, thoughts, emotions and behaviours. Once a good understanding is established, treatment might focus on challenging the maintenance cycle (Hunter, Phillips, Chalder, Sierra, & David, 2003). For example, challenging unhelpful appraisals of symptoms as threatening, reducing anxiety via detached mindfulness and safety behaviours via behavioural experiments.

4.3 Future Research
More longitudinal studies are needed to look at the direction and cause of childhood interpersonal trauma and AVHs. In particular, future studies may consider face-to-face interviews, recruiting from mental health services, which may be helpful to recruit a more representative and diverse sample. Furthermore, research could perhaps employ an interview-based design and establish attachment using the Adult Attachment Interview (AAI: George, Kaplan, & Main, 1985) as this is considered the gold standard measure of attachment. Additionally, this would allow for the categorisation of a disorganised style. Furthermore, future studies might consider using other measures of compartmentalisation.
Finally, future studies might consider examining different forms of childhood interpersonal trauma, and also conducting a serial mediation analysis to see if our findings can be replicated.
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Critical Evaluation and Reflection

Word count: 5714 (excluding references)
1. Introduction
The aim of this paper is to offer a critical appraisal of the research conducted within the systematic review and empirical paper, in particular the planning, execution and interpretation of the studies. Overall reflections of the research as a whole will also be considered.

2. Systematic Review
2.1 Topic Selection
Choosing a topic area was initially quite difficult as the literature in psychosis is well researched, with many reviews already published. Having scoped the research a previous systematic review was found, which reported moderate associations between insecure attachment and poorer engagement with services (Gumley, Taylor, Schwannauer, & MacBeth, 2014). However, this review presented a broad evaluation of the attachment and psychosis literature and as such did not have scope to provide a detailed appraisal of the attachment and therapeutic engagement studies. Therefore, it was decided to undertake a more detailed examination of the attachment and therapeutic engagement literature, employing strict inclusion and exclusion criteria, including only those studies that used a validated measure of attachment and engagement/therapeutic alliance. Interestingly, we found only small effects, and a number of limitations with these studies, which therefore highlighted the need for further research.

2.2 Search Terms
Careful consideration was given to the development of the search strings. It was initially considered that three search strings should be developed on attachment, psychosis and engagement/alliance. However, in order to ensure the search was as broad as possible and that papers were not excluded in error, the decision was made to use only two search strings on psychosis and attachment. To develop these strings, previous reviews searching similar concepts were examined for search terms and truncation. ‘Severe mental’ OR ‘serious psychiatric’ OR ‘serious mental’ were included in the psychosis search string to ensure an all-encompassing search. Furthermore, the Adult Attachment Interview and Psychosis Attachment Measure were included in the attachment search string; however, these terms
were subsequently dropped when a test run with ‘exploded’ searches highlighted no additional papers by including these terms. Additionally, the decision was made to avoid setting limits within the databases, with the exception of the years to search, because each database had different limits, and it was not clear the impact this would have on the search. There were pros and cons to the inclusive search methodology. A major con was that terms such as psychos* returned many papers on psychosomatic research, and ‘severe mental’ returned many studies that did not include psychosis samples. Furthermore, not setting limits resulted in many books, dissertations and conference papers. However, a pro to this approach was that the trainee was able to manually exclude papers, making an informed decision, rather than depending on computer software to do this, and thus is a more robust method ensuring all relevant papers were included.

2.3 Inclusion and Exclusion Criteria

The decision was made to include only those articles which had been peer reviewed, primarily because they have been through rigorous quality assessment (Hopewell, Clarke, & Askie, 2006). There are limitations with this approach in that rich data is excluded and it increased the likelihood of publication bias (Button et al., 2013). Including grey literature moderates the effects of publication bias; however, given the time constraints it was deemed appropriate to exclude this literature.

The actual systematic process was very thorough. The inclusion criteria were very broad at title level in that titles which included attachment, psychosis, engagement or alliance, or alluded to any of these terms were taken to abstract level. Again, at abstract level a very inclusive approach was taken, and all papers that had a psychosis sample, and discussed attachment, or alliance or engagement, were taken to full text. If there was any doubt or uncertainty at abstract level the paper was also taken to full text. It was only at full text that strict inclusion criteria were applied.

What made this review unique was the exclusion of articles that did not use a validated measure of the constructs of interest. The primary reason for employing this criterion was to ensure construct validity (O'Leary-Kelly & Vokurka, 1998). Dozier (1990) is an example of
a study that was excluded due to the measure used to assess engagement, as this was made up of an 8-item questionnaire, created solely for their study and not validated.

Considering the points above, the trainee considers the transparency of the review as a positive as decisions at each level of the process were thoughtfully considered, and subsequently a detailed results section followed (Garg et al., 2008).

2.4 Contacting Authors

In four of the 71 papers which were reviewed at full text, it was noted that they met three of the four inclusion criteria (psychosis sample, validated attachment measure and validated alliance/engagement measure). Attempts were therefore made to contact these authors to request the relevant correlation needed in a bid to improve the quality of the review (Mullan et al., 2009). All the authors replied; however, one reported using only the staff version of the PAM (Berry & Greenwood, 2016), two used data from previous studies that were already included in the review (MacBeth et al., 2016; Picken, Berry, Tarrier, & Barrowclough, 2010), and one reported they no longer had a copy of the data to provide the relevant statistic (Owens, Haddock, & Berry, 2013). Although this process did not add to the review, this attention to detail is considered a strength of the review.

2.5 Quality Assessment Tool

Moher, Tetzlaff, Tricco, Sampson, and Altman (2007) suggest the quality of reporting in systematic reviews lacks consistency. Therefore, a distinctive aspect of this review was the quality assessment undertaken, critically appraising the quality of methods (Jadad et al., 2000), findings (Armijo-Olivo, Stiles, Hagen, Biondo, & Cummings, 2012) and relevance overall (Burls, 2009) in the studies that met the inclusion criteria. However, choosing the quality assessment tool was somewhat difficult given Cochrane’s recommendations that the tool should be an evaluation whereby a critical analysis of the risk of bias in each domain is undertaken, avoiding use of scales and checklists. The trainee originally considered developing a new quality tool, specifically designed for the ten studies in this review. However, upon scoping the research, the trainee found a paper by Deeks et al. (2003) who
reviewed 194 quality assessment tools and recommended six. The EPHPP was therefore selected as it was described as a good tool for use in cross-sectional studies.

During the quality appraisal, attempts were made to be as objective as possible. However, poor reporting within the studies made it somewhat difficult to always do this. The trainee reflected that although a study has not made reference to something, for example; power analysis, it does not mean this has not been considered (Higgins & Green, 2011). Resultantly, incidences similar to this were tentatively considered a limitation of the study. As quality assessment is subjective and therefore susceptible to bias, attempts to overcome this were made by involving a second rater and having extensive discussions with the broader research team. Excellent inter-rater reliability was found in the review, and therefore reflected as a noteworthy strength of this review.

There were a number of limitations with the EPHPP in that the tool gives an overall summary score which is not recommended by Cochrane. Higgins and Green (2011) report this is because explanations for such scores may not be justified as they are often a combination of the actual quality of the study and the quality of reporting within the study. Whilst the trainee still followed the guidelines of the EPHPP, less emphasis was placed on the overall score given to the study, instead reporting on the strengths, weaknesses of specific domains, and validity of results (Young & Solomon, 2009). Furthermore, the EPHPP simply requires a rating for the overall representativeness of a sample, and does not enquire about sample size, inclusion/exclusion criteria, retrospective/prospective samples. Additionally, the EPHPP does not require information on the interpretation of results (e.g., based on results, strength of evidence, application and implications). The Checklist for the Evaluation of Research Studies (Durant, 1994) may have been a better tool to overcome these limitations as this tool includes similar domains to the EPHPP, but requires more specific information in each domain. Despite these limitations, the trainee attempted to include more detailed sample descriptions and interpretation in the narrative of results.
2.6 Results

Whilst not a direct limitation of the review process, it is also important to consider the file drawer effect (Rosenthal, 1979) and the subsequent accuracy of the review as it is possible that additional studies looked at the associations of interest and may not have produced significant findings, thus did not report this in their paper. Additionally, as the data was heterogeneous, meta analytic methods could not be applied.

2.7 Clinical Implications

The review demonstrated small associations between attachment and alliance/engagement with services across a number of settings. These findings are particularly relevant to consider when engaging a population with psychosis in services. They emphasise the importance of assessing a client’s attachment style upon entry into services, informing formulations and treatments. Therefore, staff need to adopt different approaches when trying to engage clients with different attachment styles. Additionally, they highlight service needs, and the importance of offering additional support and supervision to staff when working with individuals with insecure attachment.

2.8 Future Directions

Further research is needed to consider the different approaches of assessing attachment. As such examination will be important in understanding and generalising across the various measures of attachment (Jacobvitz, Curran, & Moller, 2002). Additionally, more research is needed on an individual’s general attachment to a service as a whole and the relationship of these constructs to alliance and engagement. Specifically, studies should consider gathering both client and clinician reports on attachment and alliance. Future studies should also consider the impact of health care professional’s attachment on the development of TA (Berry, Barrowclough, & Wearden, 2008) and how client and staff attachment styles interact (Bucci, Roberts, Danquah, & Berry, 2015).

From a methodological perspective, future research should consider prospective longitudinal designs to investigate the causal relationships between attachment, psychosis and alliance/engagement. Furthermore, more representative and diverse sampling are essential.
3. Empirical research

Paper two provides a rationale for examining the development of auditory verbal hallucinations (AVHs). In short, Bentall (2004) reported that psychiatric diagnosis is not particularly meaningful or valid and can be overly general. Bentall et al. (2014) argues that a psychosis-related diagnosis encapsulates different experiences, and to understand these processes, research should consider each symptom separately. Resultantly, paper 2 investigated vulnerability factors and mediating psychological processes of AVHs. In particular, this study explored the potential mediating role of fearful attachment and dissociation between childhood interpersonal trauma and AVHs.

3.1 Ethics

As this study was part of a wider battery of research, The University of Manchester Research Ethics Committee (UREC) application was completed by two trainees. The second trainee was completing a similar study; however, the second study was conducted with a non-clinical sample. It was considered important to recruit both clinical and non-clinical samples as psychotic symptoms are experienced on a continuum.

In preparation for the ethics panel, the trainee consulted with the University of Manchester’s Community Liaison Group (CLG). The CLG was positive about the project and the measures proposed. Their main feedback was ensuring that the study was accessible to those who did not have access to a computer. This prompted consideration of alternative ways we could make the study accessible (e.g. mobile phone friendly).

Furthermore, in preparation for the ethics panel, the trainee explored avenues to advertise the study and contacted Dr Eleanor Longdon at Intervoice. Dr Longdon replied to the email stating, “I really liked the wording on your participant information sheet by the way - I get sent a lot of these, and yours really stood out in a positive sense”. The information provided to the participants was therefore considered a strength of the study.
During the ethics panel, the primary concern raised was ensuring that the participants were 18 years or older. It was explained to the panel that anyone reporting their age as under 18 would be automatically excluded. The panel raised the concern that participants may lie about their age. It was acknowledged that this is a risk, but could not be controlled for as with many online applications, individuals are simply asked to confirm they are 18 years or older. We also informed them that we had consulted the British Psychological Society Ethics Guidelines for Internet-mediated Research (Hewson & Buchanan, 2013).

3.2 Selection of Questionnaire Measures
As this study was part of a wider battery of research, the participants were presented with 13 measures in total, including measures required for the non-clinical study. There are pros and cons with this approach. A pro was the ability to collect a wide array of information from participants, which will be analysed within the wider research team. However, a limitation was the subsequent length of the survey. Many conversations were had with the research team regarding the most appropriate measures to use in this study. Initially, the administration time for completing all the measures of interest was approximately 1 hour 30 minutes and therefore had to be significantly reduced to moderate potential attrition. Resultantly, a number of measures had to be removed or adjusted to shorter versions. For example, the Generalised Anxiety Disorder-7 (GAD-7: Spitzer, Kroenke, Williams, & Löwe, 2006), which is a 7-item self-report measure of experiences associated with anxiety, was originally considered due to the need to control for emotional symptomatology when investigating risk factors for psychosis; this was subsequently dropped.

Additionally, many conversations were had about the best measure to assess the different aspects of dissociation. It would have been interesting to use the Multidimensional Inventory of Dissociation (MID: Dell, 2006), which is a multi-factorial measure of dissociation. However, it is a 218-item questionnaire and would have significantly increased the length of the survey. Therefore, this study considered using either the Somatoform Dissociation Questionnaire (SDQ: Nijenhuis, Spinhoven, Van Dyck, Van Der Hart, & Vanderlinden, 1996) or PSQ as a measure of compartmentalization, with the DES-II measuring the other aspects of dissociation (Amnesia, Depersonalisation/Derealisation, and Absorption).
decision was made to use the PSQ, as the SDQ is 20-items long. Furthermore, this study originally considered using a revised version of the DES (DES-R: Dalenberg & Carlson, 2010); however, upon reflection it was felt more appropriate to use the DES-II as it is a well validated and reliable measure of dissociation (Zingrone & Alvarado, 2001) and is the most commonly used measure of dissociation, which allows for cross comparison of results between studies.

Furthermore, many conversations were had regarding the best measures to assess attachment and relationships. The Parental Bonding Instrument (PBI: Parker, 1989), and the Measure of Parenting Style (MOPS: Parker et al., 1999), which is an adapted version of the PBI, were originally considered. However, these measures specifically look at retrospective memories of parenting and are not a measure of adult attachment. Parenting and attachment are conceptually different constructs; for example, an individual can have poor experiences/memories of parenting but still have a secure adult attachment. Therefore, it was felt the RQ would be better because it is more closely aligned to the concept of attachment. Additionally, it is short, has been used in other online studies and correlates well with other measures of attachment.

When the final measures were chosen, they were then given to lay people to complete in order to establish a true estimate of the time taken to read and complete the measures. Completion time averaged one hour and this was therefore deemed an acceptable survey length.

**3.3 Confounding variables**

Controlling for confounding variables is a relative strength in this study. The selection of the CAPE was informed by the need to control for possible covariates such as other symptoms of psychosis (e.g., paranoia) as reports suggest they are strongly associated with voices (Hartley, Barrowclough, & Haddock, 2013) and attachment (Bentall et al., 2014).

In addition, any significant differences in the demographics and the variables of interest was assessed. Interestingly, there was a significant difference of ethnicity in the hearing voices
groups. Upon reflection, this was unsurprising given the literature states that there are higher rates of schizophrenia diagnoses in Black and Minority Ethnic (BME) groups (Kirkbride et al., 2012).

3.4 Data collection methods

This study was set up using an online questionnaire survey system as this was considered the best method to recruit the number of participants required, considering the barriers to recruiting in mental health settings (Bucci et al., 2015). Some of the initial conversations regarding the development of the online survey considered having both the clinical and non-clinical participants access the same link and the demographics questionnaire would direct the participants into either the clinical or non-clinical survey based on inclusion/exclusion criteria. We were unable to do this due to the inability of the software to employ this sophisticated branching approach. It is acknowledged this is a missed opportunity to recruit participants in both surveys. For example, 16 participants accessed the clinical survey who did not meet clinical criteria and were excluded. However, they may have met the inclusion criteria for the non-clinical study. Additionally, this may have happened in the non-clinical survey and therefore the opportunity was missed to re-direct them to the clinical survey.

Additional challenges with the online survey were also the design and layout of the questionnaires. For example, there was an issue with the BBTS, whereby there were six columns beside each question; three were to rate experiences ‘Before 18’ and three were to rate experiences ‘18 or After’. It is possible that some participants only rated the ‘Before 18’ section, and the second section ‘18 or After’ defaulted to ‘no experiences’. We may, therefore, have lost important data. Many conversations were had about defaulting the second set of answers, but again this was a limitation of the software. Additionally, we considered whether it was possible to highlight incomplete questions in red if the participants tried to move on to the next questionnaire; however, the software was unable to facilitate this. The only way to overcome these difficulties in future would be to present the BBTS as two separate questionnaires, asking the same questions twice; before 18 and 18 or after. However, the trainee chose to prioritise reducing participant burden. Additionally, the CAPE is branched such that Part B (level of distress) opens up depending on responses to Part A.
Again, a limitation of the software was that it did not allow the trainee to employ a branching approach whereby part B was only seen by participants who were required to answer that section. Instead, all participants were presented with all the questions and part B was automatically set to ‘Not Distressed’. A limitation with having done this is that some participants may not have realised they were supposed to rate the part B questions, and the system was unable to provide a prompt. Therefore, if participants did not read the instructions at the beginning of the questionnaire, they may have been unsure about the part B section. Whilst the trainee reflected on the design of the system and subsequent impact on the BBTS and CAPE, there was minimal impact on paper 2 as the variables of interest were not those potentially being overlooked by participants. However, it is something to bear in mind when designing future online studies.

Finally, another issue for online recruitment was ensuring the answers are not fabricated. There was no way to control for this in the online system itself, but the trainee attempted to manage this by reviewing each participant’s answers for any suspicious responding. Subsequently, a variable for suspicious reporting was created in SPSS and analyses were run separately to see if there were any differences in results, to which there were none.

3.5 Recruitment challenges
In the early stages of designing this project, it was anticipated that recruiting a clinical sample online would be difficult. This was primarily because the trainee noted a previous online study, Robson and Mason (2015), had recruited only 44 participants in one year. The trainee contacted the authors of this study to enquire about any difficulties they encountered. They reported they struggled to maintain reliable contacts to advertise the study. The trainee therefore noted that building relationships with key advocates in the field would be important. Furthermore, it was expected that there would be a high attrition rate given the length of the survey and the inability to save and revisit the survey. The trainee was pleased with the 230 participants recruited in this study in the five months it was available online and with the 161 people who completed the survey to the end.
Recruiting such a high number of participants required a significant amount of dedication to advertise the study. To begin with, dedicated Facebook and Twitter pages were created for the study. The trainee then began seeking out hearing voices groups, support groups and mental health advocates and added them to Facebook or followed them on Twitter. Advertisements about the study were then placed on both social media sites by writing posts with the survey link and using hashtags such as #hearingvoices #psychosis #dissociation #trauma in a bid to attract participants to the social media pages. A significant amount of traffic to the social media pages was noted on evenings and weekends, particularly Friday and Saturday nights. Therefore, every Friday and Saturday night the trainee actively added new followers who were tweeting and writing about similar topics, and tweeted followers asking them to retweet and share the survey link to their followers. This resulted in a snowball effect with many people seeing the posts and tweets. On Twitter, for example, in September the trainee tweeted 179 times, which resulted in 437 profile visits, 121 new followers, and 21.2k tweet impressions (number of times tweet is seen). Again, in October, the trainee tweeted 229 times, had 1901 profile visits, 151 new followers and 37.8k impressions. The traffic to the social media pages significantly dropped when the trainee was not actively recruiting. In addition to writing posts/tweets with the survey link, the trainee also took the time to thank every follower individually who shared or retweeted the study in a bid to build reliable contacts based on the advice from previous researchers. Resultantly, there were a number of regular social media users actively sharing and retweeting the study. Additionally, in order to keep the page interesting, the trainee regularly posted research, studies and articles around psychosis and hearing voices. Again, this attracted users to the page.

In addition to recruiting through social media, the trainee also contacted 275 hearing voices groups around the world. To get this contact information, for example in America, the trainee googled American states and hearing voices groups to see what google returned. The trainee received replies from America, Australia, Brazil, Canada, France, Ireland, Italy, Netherlands, New Zealand, and the UK, all prepared to share the study with their members. However, there was one individual who emailed and reported they would not share the study with their users. They said, “I personally am not a fan of psychology and do not need anyone in a position of authority or anyone for that matter to interpret my experiences. I believe it to be
telepathy not that I can read the thoughts of the people around me.” As this was the only reply from someone who was not supportive of the study the trainee sought their supervisors support. The reaction that the recruitment email prompted in this individual was very interesting, as they also attached a number of documents for the trainee to read. Within these documents was a number of emails detailing their earlier experiences, complaints regarding their treatment in the NHS and concerns with the “lack of person centred care” and continuous use of “out of date” research and terminology. This email prompted the trainee to reflect on individual experiences and their subsequent interpretation of AVHs. Interestingly, telepathy was not an explanation the trainee had previously considered, however, this did prompt the trainee to consider how researchers could make recruitment into their studies more acceptable for individuals who have different philosophical approaches. It will be important for future studies to consider this as these experiences are also important to understand.

Finally, there are a few limitations with recruiting participants online. For example, due to the inability to save the questionnaires and revisit them later, there was a 30% attrition rate. Rich data may, therefore, have been lost. This was an unfortunate limitation due to the setup of the online survey and the inability to create log-in details. The trainee did consider creating log-in details for participants but this may have impacted on participant’s confidentiality. Attempts were made to overcome any difficulties with accessing the survey by ensuring the survey was mobile phone friendly. Additionally, when requested, the trainee emailed the surveys in a word document, so that participants could complete them on paper and then input the data to the online system thereafter. Another limitation of the study was its generalisability. For example, the trainee is unable to provide clarity with regards to where the majority of our participants came from, i.e., Facebook, Twitter or Hearing Voices Networks. This highlights a difficulty, for example, if the participants were predominantly from Hearing Voices Group, as they may appraise their experiences differently given the support they receive. In future studies, it would be useful to have a question about this in the demographics questionnaire such as, “where did you hear about this research”. Furthermore, the sample was primarily a White British, female, educated sample. Interestingly, research suggests being a younger, female, with higher socio-economic backgrounds and in full time
education or in employment is associated with involvement in social media (Duggan & Brenner, 2013).

3.6 Data Analysis

Hayes (2013) PROCESS tool is an extensively used and accepted method for mediation and moderation analysis. A strength of the study was that the model controlled for appropriate covariates (e.g., ethnicity, psychotic symptoms, fantasy-proneness). Although the study did not find a significant total effect, this is not uncommon. Research suggests that the total effect should not be used as a process for deciding if mediational analysis is appropriate (Hayes, 2009; Shrout & Bolger, 2002). Significance analysis can be impacted upon if tests are underpowered or if the assumptions of the analysis are not met, therefore resulting in a non-significant total effect. Resultantly, the causal steps approach is a poor test of mediation as it depends on the results of two other significance tests (Selig & Preacher, 2008). As such, it is recommended that the indirect effect is calculated via a bootstrapping method (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2008), which takes a random sample from the data, and orders indirect estimates (low to high), which creates a confidence interval of 95%. This technique is supported by the PROCESS tool and the trainee set bootstrapping to 10,000 samples. As the confidence interval was entirely above zero, a significant mediation was found. There are, however, some disadvantages of the PROCESS tool. For example, within the mediational analysis, nominal data could not be used and the trainee could not state which variables were to be controlled at different points of the model.

The possibility of testing the hypotheses using Structural Equation Modelling (SCM) was also explored. This would have allowed for testing all hypotheses within a single analysis. However, SEM requires relatively large participant samples, so this analytic approach was not explored further. Hayes, Montoya, and Rockwood (2017) states when considering models of observed variables, any differences between PROCESS and SEM will be “trivial”.

In addition to the RQ, the PAM (Psychosis Attachment Measure) was also administered as there is currently no self-report measure that captures the concept of disorganised attachment. The trainee’s supervisors are in the process of examining whether the PAM can be used to
determine discrete latent attachment groups in psychosis; secure, anxious, avoidant and disorganised; however, this examination is ongoing. Having four attachment groups would allow for testing the CAV model with a disorganised attachment style; however, in the event that we could not replicate the cluster analysis in Bucci, Emsley, and Berry (2017), the RQ was also administered.

With the data collected for paper 2, the statistical process described in Bucci et al. (2017) was replicated, which used a latent profile analysis (Vermunt & Parkinson, 2002) to determine discrete latent attachment groups in psychosis. The structure of the categorical multivariate data was used to identify homogenous groups (Muthen & Muthen, 2000). Unfortunately, the analysis could not be repeated with the current data set. For example, only one participant was allocated to the anxious group. We therefore did not consider this measure to be a valid measure of disorganised attachment. Categorising participants into four discrete latent attachment groups is complex. It is possible the sample size in our study was not sufficient as Bucci et al. (2017) had 588 participants in their sample. Additionally, Bucci et al. (2017) specified that their sample met the criteria for non-affective psychotic disorder, whereas our sample included participants with an affective element.

3.7 Clinical Implications
This study highlighted a possible causal pathway between childhood interpersonal trauma and AVHs, mediated by fearful attachment and dissociation, however further prospective research is needed to confirm this. Clinicians should therefore pay particular attention to, and routinely gather information regarding the processes that have led a person to developing AVHs.

3.8 Future Directions
More longitudinal studies are needed to look at the direction and cause of childhood interpersonal trauma and AVHs. In particular, future studies could perhaps recruit a more diverse and representative sample, employing an interview based design and establish attachment using the Adult Attachment Interview (AAI: George, Kaplan, & Main, 1985). Additionally, this would allow for the categorisation of a disorganised style and testing the
CAV model more specifically. Furthermore, future studies might consider using alternative measures of compartmentalisation.

4. Personal Reflections

It is well known that a major component of the ClinPsyD is to engage in a research project. The trainee felt enthusiastic about engaging in a research area that has been a particular interest of theirs for some time. Having said that, there was also a sense of nervousness to work closely with researchers in the field who have a wealth of knowledge. The trainee often felt concerned about their competence and the team’s perception of them. In order to combat this the trainee regularly attended research meetings and kept thorough minutes of the decision-making process. The trainee often engaged in additional reading and had very good organisational skills, ensuring the different stages of the project were completed on time. Staying on top of the process allowed for additional time to be spent on the areas of the research project where the trainee felt less competent, e.g., the critical analysis of the systematic review, and the SPSS analysis in the empirical paper.

Based on the findings of this research project, the trainee has already adjusted their practice on their specialist placement in a secure forensic service. For example, the trainee has offered supervision to nurses who are working with a client suspected to have an avoidant personality. Interestingly this client is engaged in therapy, but does not engage in therapeutic work outside of the 1-hour therapy session a week. Additionally, the staff often struggle with the push-pull relationship they are drawn into with him. Resultantly, the trainee has conducted a session with them on attachment, developing hypotheses as to why the client might be struggling to engage and ways to manage such behaviour going forward. Additionally, the trainee feels that their assessment style and formulations are informed by the results particularly from paper 2. For example, the trainee has been working with a female with a diagnosis of borderline personality disorder with suspected Munchausen’s. The trainee has been able to consider the clients experience of trauma, her attachment style, and the possibility that some of her experiences may be explained by elements of dissociation and how this may have led to the development of AVHs. It is hoped that the trainee’s
formulations continue to improve, are detailed and representative of client’s experiences, and resultantly inform treatment and care from the wider team.

Near the end of the research process the trainee attended two interviews in forensic services in preparation for the end of the course. During the interviews, questions were asked about something that had been read recently, or researched, that had an impact on the trainee’s clinical practice. The trainee took great pleasure in telling the panel about the research conducted on the course and thrived off their enthusiasm to hear about it also. The trainee reflected on this experience and realised they have overcome some of their fears about research. The trainee often thought research was not suited to them, however, now realises that this was a safety behaviour due a fear of incompetence. However, by being guided by supervisors, in a graded exposure way, the trainee feels they have overcome some of those fears and could embark on a similar process again with more confidence. Resultantly, the trainee also reflected on the need for the profession to continue having a curiosity for new and upcoming evidence. In times of austerity, however, when there are competing demands in the NHS and time pressures, one can see how professionals might continue to use the methods they had been taught some years before. It highlighted the particular importance that a clinical psychologist therefore has to improve the psychological mindedness of a service through consultation and inter-disciplinary working. Therefore, it has given the trainee an eagerness to continue professional development and challenge the status quo by contributing to the advancement and understanding of psychological problems and the implementation of psychological interventions in generating new ideas when research and clinical literatures are insufficient.

To conclude, this process has been challenging and rewarding. It required organisation, discipline and motivation to persevere with the competing demands of the course. Additionally, the trainee has learned the value in figuring things out for themselves, particularly to challenge some of the beliefs held about their abilities. Finally, the trainee feels very privileged to have worked with leading researchers in the field and has a huge sense of achievement in contributing to the literature in a subject that they are very passionate about.
5. References


people with psychosis. *Journal of Nervous and Mental Disease, 198*(10), 775-778. doi:http://dx.doi.org/10.1097/NMD.0b013e3181f4b163


Appendices

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MANUSCRIPT STYLE
The language of the journal is English. 12-point type in one of the standard fonts: Times, Helvetica, or Courier is preferred. It is not necessary to double-line space your manuscript. Tables must be on separate pages after the reference list, and not be incorporated into the main text. Figures should be uploaded as separate figure files.

- During the submission process you must enter the full title, short title of up to 70 characters and names and affiliations of all authors. Give the full address, including email, telephone and fax, of the author who is to check the proofs.
- Include the name(s) of any sponsor(s) of the research contained in the paper, along with grant number(s).
- Enter an abstract of up to 250 words for all articles [except book reviews]. An abstract is a concise summary of the whole paper, not just the conclusions, and is understandable without reference to the rest of the paper. It should contain no citation to other published work.
- All articles should include a Key Practitioner Message — 3-5 bullet points summarizing the relevance of the article to practice.
- Include up to six keywords that describe your paper for indexing purposes.

Types of Articles
- Research Articles: Substantial articles making a significant theoretical or empirical contribution.
- Reviews: Articles providing comprehensive reviews or meta-analyses with an emphasis on clinically relevant studies.
- Assessments: Articles reporting useful information and data about new or existing measures.
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REFERENCE STYLE
In-text Citations
The APA system of citing sources indicates the author's last name and the date, in parentheses, within the text of the paper. Cite as follows:

1. A typical citation of an entire work consists of the author's name and the year of publication.
Example: Charlotte and Emily Bronte were polar opposites, not only in their personalities but in their sources of inspiration for writing (Taylor, 1990). Use the last name only in both first and subsequent citations, except when there is more than one author with the same last name. In that case, use the last name and the first initial.

2. If the author is named in the text, only the year is cited.
Example: According to Irene Taylor (1990), the personalities of Charlotte.

3. If both the name of the author and the date are used in the text, parenthetical reference is not necessary.
Example: In a 1989 article, Gould explains Darwin's most successful.

4. Specific citations of pages or chapters follow the year.
Example: Emily Bronte "expressed increasing hostility for the world of human relationships, whether sexual or social" (Taylor, 1988, p. 11).

5. When the reference is to a work by two authors, cite both names each time the reference appears.
Example: Sexual-selection theory often has been used to explore patterns of various insect matings (Alcock & Thornhill, 1983). Alcock and Thornhill (1983) also demonstrate...

6. When the reference is to a work by three to five authors, cite all the authors the first time the reference appears. In a subsequent reference, use the first author's last name followed by et al. (meaning "and others").
Example: Patterns of byzantine intrigue have long plagued the internal politics of community college administration in Texas (Douglas et al., 1997). When the reference is to a work by six or more authors, use only the first author's name followed by et al. in the first and all subsequent references. The only exceptions to this rule are when some confusion might result because of similar names or the same author being cited. In that case, cite enough authors so that the distinction is clear.

7. When the reference is to a work by a corporate author, use the name of the organization as the author.
Example: Retired officers retain access to all of the university's educational and recreational facilities (Columbia University, 1987, p. 54).

8. Personal letters, telephone calls, and other material that cannot be retrieved are not listed in References but are cited in the text.
Example: Jesse Moore (telephone conversation, April 17, 1989) confirmed that the ideas...

9. Parenthetical references may mention more than one work, particularly when ideas have been summarized after drawing from several sources. Multiple citations should
be arranged as follows.

Examples:
  o List two or more works by the same author in order of the date of publication: (Gould, 1987, 1989)
  o Differentiate works by the same author and with the same publication date by adding an identifying letter to each date: (Bloom, 1987a, 1987b)
  o List works by different authors in alphabetical order by last name, and use semicolons to separate the references: (Gould, 1989; Smith, 1983; Tutwiler, 1989).

Reference List

APA – American Psychological Association

References should be prepared according to the Publication Manual of the American Psychological Association (6th edition). This means in text citations should follow the author-date method whereby the author's last name and the year of publication for the source should appear in the text, for example, (Jones, 1998). The complete reference list should appear alphabetically by name at the end of the paper.

A sample of the most common entries in reference lists appears below. Please note that a DOI should be provided for all references where available. For more information about APA referencing style, please refer to the APA FAQ. Please note that for journal articles issue numbers are not included unless each in the volume begins with page one.
Appendix B: EPHPP

COMPONENT RATINGS

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?
1 Very likely
2 Somewhat likely
3 Not likely
4 Can’t tell

(Q2) What percentage of selected individuals agreed to participate?
1 80–100% agreement
2 60–79% agreement
3 less than 60% agreement
4 Not applicable
5 Can’t tell

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<th>RATE THIS SECTION</th>
<th>STRONG</th>
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STUDY DESIGN

Indicate the study design
1 Randomized controlled trial
2 Controlled clinical trial
3 Cohort analytic (two group pre + post)
4 Case-control
5 Cohort (one group pre + post (before and after))
6 Interrupted time series
7 Others specify
8 Can’t tell

Was the study described as randomized? If NO, go to Component C.
No Yes

If Yes, was the method of randomization described? (See dictionary)
No Yes

If Yes, was the method appropriate? (See dictionary)
No Yes
CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?
1  Yes
2  No
3  Can’t tell

The following are examples of confounders:
1  Race
2  Sex
3  Marital status/family
4  Age
5  SES (income or class)
6  Education
7  Health status
8  Pre-intervention score on outcome measure

(Q2) If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?
1  80 – 100% (most)
2  60 – 79% (some)
3  Less than 60% (few or none)
4  Can’t Tell

BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?
1  Yes
2  No
3  Can’t tell

(Q2) Were the study participants aware of the research question?
1  Yes
2  No
3  Can’t tell

DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?
1  Yes
2  No
3  Can’t tell

(Q2) Were data collection tools shown to be reliable?
1  Yes
WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?
1 Yes
2 No
3 Can’t tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80-100%
2 60-79%
3 less than 60%
4 Can’t tell
5 Not Applicable (i.e. Retrospective case-control)

INTERVENTION INTEGRITY

(Q1) What percentage of participants received the allocated intervention or exposure of interest?
1 80-100%
2 60-79%
3 less than 60%
4 Can’t tell

(Q2) Was the consistency of the intervention measured?
1 Yes
2 No
3 Can’t tell

(Q3) Is it likely that subjects received an unintended intervention (contamination or co-intervention) that may influence the results?
4 Yes
5 No
6 Can’t tell

ANALYSES

(Q1) Indicate the unit of allocation (circle one)
community organization/institution practice/office individual

(Q2) Indicate the unit of analysis (circle one)
community organization/institution practice/office individual

(Q3) Are the statistical methods appropriate for the study design?
1 Yes
2 No
3 Can't tell

(Q4) Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?
1 Yes
2 No
3 Can't tell

GLOBAL RATING

COMPONENT RATINGS
Please transcribe the information from the gray boxes on pages 1-4 onto this page. See dictionary on how to rate this section.

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<td>3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>D</th>
<th>BLINDING</th>
<th>STRONG</th>
<th>MODERATE</th>
<th>WEAK</th>
</tr>
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<td></td>
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<table>
<thead>
<tr>
<th>E</th>
<th>DATA COLLECTION METHOD</th>
<th>STRONG</th>
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<th>WEAK</th>
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<tbody>
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<td></td>
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<table>
<thead>
<tr>
<th>F</th>
<th>WITHDRAWALS AND DROPOUTS</th>
<th>STRONG</th>
<th>MODERATE</th>
<th>WEAK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3 Not Applicable</td>
</tr>
</tbody>
</table>

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)
2 MODERATE (one WEAK rating)
3 WEAK (two or more WEAK ratings)

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?
No  Yes

If yes, indicate the reason for the discrepancy

1 Oversight
2 Differences in interpretation of criteria
3 Differences in interpretation of study

Final decision of both reviewers (circle one): 1 STRONG
2 MODERATE
3 WEAK
### Appendix C: Quality Rating

<table>
<thead>
<tr>
<th>Study Name</th>
<th>Selection Bias</th>
<th>Study Design</th>
<th>Confounders</th>
<th>Data collection methods</th>
<th>Withdrawals and drop outs</th>
<th>OVERALL GLOBAL RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berry, Barrowclough &amp; Wearden (2008) UK</td>
<td>Moderate</td>
<td>Weak</td>
<td>Strong</td>
<td>Strong</td>
<td>N/A</td>
<td>Moderate</td>
</tr>
<tr>
<td>Berry, Gregg, Hartwell, &amp; Haddock (2015) UK</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Weak</td>
<td>Strong</td>
<td>Weak</td>
<td>Weak</td>
</tr>
<tr>
<td>Blackburn, Berry &amp; Cohen (2010) UK</td>
<td>Moderate</td>
<td>Weak</td>
<td>Weak</td>
<td>Strong</td>
<td>N/A</td>
<td>Weak</td>
</tr>
<tr>
<td>Catty et al., (2012) UK</td>
<td>Moderate</td>
<td>Weak</td>
<td>Strong</td>
<td>Strong</td>
<td>N/A</td>
<td>Moderate</td>
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<tr>
<td>Cavelti, Homan &amp; Vauth. (2016) Switzerland</td>
<td>Weak</td>
<td>Moderate</td>
<td>Strong</td>
<td>Strong</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Kvrgic et al., (2012) Switzerland</td>
<td>Moderate</td>
<td>Weak</td>
<td>Weak</td>
<td>Strong</td>
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<td>Weak</td>
</tr>
<tr>
<td>Kvrgic, et al., (2013) Switzerland</td>
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<td>Weak</td>
<td>Strong</td>
<td>Strong</td>
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<td>Moderate</td>
</tr>
<tr>
<td>MacBeth, Gumley, Schwannauer &amp; Fisher. (2010) UK</td>
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<td>Weak</td>
<td>Strong</td>
<td>N/A</td>
<td>Weak</td>
</tr>
<tr>
<td>Tait, Birchwood, Trower. (2004) UK</td>
<td>Moderate</td>
<td>Weak</td>
<td>Strong</td>
<td>Strong</td>
<td>N/A</td>
<td>Moderate</td>
</tr>
<tr>
<td>Tyrrell et al. (1999) USA</td>
<td>Moderate</td>
<td>Weak</td>
<td>Strong</td>
<td>Strong</td>
<td>N/A</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
Appendix D: The British Journal of Clinical Psychology

The British Journal of Clinical Psychology publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour through to studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis.

All papers published in The British Journal of Clinical Psychology are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF). The following types of paper are invited:

- Papers reporting original empirical investigations
- Theoretical papers, provided that these are sufficiently related to the empirical data
- Review articles which need not be exhaustive but which should give an interpretation of the state of the research in a given field and, where appropriate, identify its clinical implications
- Brief reports and comments

1. Circulation
The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length
The word limit for papers submitted for consideration to BJCP is 5000 words and any papers that are over this word limit will be returned to the authors. The word limit does not include the abstract, reference list, figures, or tables. Appendices however are included in the word limit. The Editors retain discretion to publish papers beyond this length in cases where the clear and concise expression of the scientific content requires greater length. In such a case, the authors should contact the Editors before submission of the paper.

3. Submission and reviewing
All manuscripts must be submitted via Editorial Manager. The Journal operates a policy of anonymous (double blind) peer review. We also operate a triage process in which submissions that are out of scope or otherwise inappropriate will be rejected by the editors without external peer review to avoid unnecessary delays. Before submitting, please read the terms and conditions of submission and the declaration of competing interests. You may also like to use the Submission Checklist to help you prepare your paper.

4. Manuscript requirements
• Contributions must be typed in double spacing with wide margins. All sheets must be numbered.
• Manuscripts should be preceded by a title page which includes a full list of authors and their affiliations, as well as the corresponding author’s contact details. You may like to use this template. When entering the author names into Editorial Manager, the corresponding author will be asked to provide a CRediT contributor role to classify the role that each author played in creating the manuscript. Please see the Project CRediT website for a list of roles.
• The main document must be anonymous. Please do not mention the authors’ names or affiliations (including in the Method section) and refer to any previous work in the third person.
• Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript but they must be mentioned in the text.
• Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate sheet. The resolution of digital images must be at least 300 dpi. All figures must be mentioned in the text.
• All papers must include a structured abstract of up to 250 words under the headings: Objectives, Methods, Results, Conclusions. Articles which report original scientific research should also include a heading 'Design' before 'Methods'. The 'Methods' section for systematic reviews and theoretical papers should include, as a minimum, a description of the methods the author(s) used to access the literature they drew upon. That is, the abstract should summarize the databases that were consulted and the search terms that were used.
• All Articles must include Practitioner Points – these are 2–4 bullet points to detail the positive clinical implications of the work, with a further 2–4 bullet points outlining cautions or limitations of the study. They should be placed below the abstract, with the heading ‘Practitioner Points’.
• For reference citations, please use APA style. Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full and provide DOI numbers where possible for journal articles.
• SI units must be used for all measurements, rounded off to practical values if appropriate, with the imperial equivalent in parentheses.
• In normal circumstances, effect size should be incorporated.
• Authors are requested to avoid the use of sexist language.
• Authors are responsible for acquiring written permission to publish lengthy quotations, illustrations, etc. for which they do not own copyright. For guidelines on editorial style, please consult the APA Publication Manual published by the American Psychological Association.
If you need more information about submitting your manuscript for publication, please email Melanie Seddon, Managing Editor (bjc@wiley.com) or phone +44 (0) 1243 770 108.
**Appendix E: Measures**

Questionnaire 1 - Demographic questionnaire

<table>
<thead>
<tr>
<th>About You</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Nationality:</td>
</tr>
<tr>
<td>Ethnicity:</td>
</tr>
<tr>
<td>1. White – British</td>
</tr>
<tr>
<td>2. White – Irish</td>
</tr>
<tr>
<td>3. Any other white background</td>
</tr>
<tr>
<td>Mixed:</td>
</tr>
<tr>
<td>4. Mixed - White and Black Caribbean</td>
</tr>
<tr>
<td>5. Mixed - White and Black African</td>
</tr>
<tr>
<td>6. Mixed - White and Asian</td>
</tr>
<tr>
<td>7. Any other mixed background</td>
</tr>
<tr>
<td>Asian or Asian British:</td>
</tr>
<tr>
<td>8. Asian or Asian British – Indian</td>
</tr>
<tr>
<td>9. Asian or Asian British – Pakistani</td>
</tr>
<tr>
<td>10. Asian or Asian British – Bangladeshi</td>
</tr>
<tr>
<td>11. Any other Asian/Asian British background</td>
</tr>
<tr>
<td>Black or Black British:</td>
</tr>
<tr>
<td>12. Black or Black British – Caribbean</td>
</tr>
<tr>
<td>13. Black or Black British – African</td>
</tr>
<tr>
<td>14. Any other Black/Black British background</td>
</tr>
<tr>
<td>Chinese or other ethnic group:</td>
</tr>
<tr>
<td>15. Chinese</td>
</tr>
<tr>
<td>16. Any other (please describe)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sexual orientation</th>
<th>Which of the options best describes how you think of yourself?:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Heterosexual or Straight,</td>
<td></td>
</tr>
<tr>
<td>2. Gay or Lesbian,</td>
<td></td>
</tr>
<tr>
<td>3. Bisexual,</td>
<td></td>
</tr>
<tr>
<td>4. Other</td>
<td></td>
</tr>
<tr>
<td>5. Prefer not to say</td>
<td></td>
</tr>
</tbody>
</table>
First Language: English
Other:

What is your legal marital or same-sex civil partnership status?
1. Never married and never registered a same-sex civil partnership
2. Married
3. Separated, but still legally married
4. Divorced
5. Widowed
6. In a registered same-sex civil partnership
7. Separated, but still legally in a same-sex civil partnership
8. Formerly in a same-sex civil partnership which is now legally dissolved
9. Surviving partner from a same-sex civil partnership

How far did you get in school?
1. Degree level qualification
2. Teaching qualification or HNC/HND, BEC/TEC Higher, BTEC Higher or NVQ level 4
3. 'A'Levels/SCE Higher or ONC/OND/BEC/TEC not higher or City & Guilds Advanced Final Level NVQ level 3
4. 'O'Level passes (Grade A-C if after 1975) or City & Guilds Craft/Ord level or GCSE (Grades A-C) or NVQ level 2
5. CSE Grades 2-5 GCE 'O'level (Grades D & E if after 1975) GCSE (Grades D, E, F, G) or NVQ level 1
6. CSE ungraded
7. Other qualifications (specify)
8. No qualifications

Which of these activities best describes what you are doing at present? (please select one only)
1. Employee
2. Self Employed
3. Unemployed
4. Full-time education at school, college or university
5. Looking after family/home
6. Receipt of sickness or disability benefits
7. Retired
8. Other Inactive

Have you ever received a psychiatric diagnosis?
1. Yes
2. No
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| Have you ever received any of the following diagnosis [select as many as apply]? | No  
Schizophrenia (or “Paranoid Schizophrenia”)  
Schizoaffective Disorder  
Schizophreniform  
Depression with psychotic features (depression with unusual experiences like hallucinations and delusions)  
Delusional Disorder  
Bipolar Disorder with psychotic experiences  
Brief Psychotic Disorder  
Any other disorder which included psychotic experiences  
Other Please state……… |
| Have you ever received antipsychotic medication for any of the following? [Select as many as apply] | No  
Hallucinations (hearing voices, visions)  
Delusions (unusual and sometimes bizarre beliefs)  
Paranoia (excessive or irrational suspiciousness and distrustfulness of others)  
Unusual beliefs |
| Have you ever received mental health support or treatment for any of the following [select as many as apply]? | No  
Hallucinations (hearing voices, visions)  
Delusions (unusual and sometimes bizarre beliefs)  
Paranoia (excessive or irrational suspiciousness and distrustfulness of others)  
Unusual beliefs |
| Have you ever been a patient in hospital for mental health difficulties?  
IF YES: How many times?  
Are you currently in hospital for mental health difficulties? | 1 Yes  
2 No  
1. Yes  
2. No |
| Have you received input from a community mental health team or early intervention service? | 1 Yes  
2 No |
| Are you currently receiving input from a community mental health team or early intervention service? | 1 Yes  
2 No |
Questionnaire 2 - The Brief Betrayal Trauma Survey (BBTS)

*Have each of these events happened to you, and if so, how often?*
*For each item please mark one response in the columns under ‘before 18’ *AND* one mark in the columns ’18 or older’.*

<table>
<thead>
<tr>
<th>Event</th>
<th>Before 18</th>
<th>18 or older</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
<td>One or two times</td>
</tr>
<tr>
<td>Been in a major earthquake, fire, flood, hurricane, or tornado that</td>
<td></td>
<td></td>
</tr>
<tr>
<td>resulted in significant loss of personal property, serious injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to yourself or a significant other, the death of a significant other,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or the fear of your own death.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Been in a major automobile, boat, motorcycle, plane, train, or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>industrial accident that resulted in similar consequences.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Witnessed someone with whom you were very close (such as a parent,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>brother or sister, caretaker, or intimate partner) committing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>suicide, being killed, or being injured by another person so</td>
<td></td>
<td></td>
</tr>
<tr>
<td>severely as to result in marks, bruises, blood, or broken bones.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This might include a close friend in combat.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Witnessed someone with whom you were not so close undergoing a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>similar kind of traumatic event.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Witnessed someone with whom you were very close deliberately attack</td>
<td></td>
<td></td>
</tr>
<tr>
<td>another family member so severely as to result in marks, bruises,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>blood, broken bones, or broken teeth.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You were deliberately attacked that severely by someone with whom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>you were very close.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You were deliberately attacked that severely by someone with whom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>you were not close.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You were made to have some form of sexual contact, such as</td>
<td></td>
<td></td>
</tr>
<tr>
<td>touching or penetration, by someone with whom you were very close</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(such as a parent or lover).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You were made to have such sexual contact by someone with whom you</td>
<td></td>
<td></td>
</tr>
<tr>
<td>were not close.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You were emotionally or psychologically mistreated over a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>significant period of time by someone with whom you were very close</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(such as a parent or lover).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced the death of one of your own children.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced a seriously traumatic event not already covered in any</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of these questions.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Questionnaire 3 – Relationship Questionnaire (RQ)

Please tick only ONE statement that best describes you.

It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don’t worry about being alone or having others not accept me. ☐

I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others. ☐

I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don’t value me as much as I value them. ☐

I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me. ☐

Please rate each of the following according to the extent to which you think each description corresponds to you.

It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don’t worry about being alone or having others not accept me.

1 2 3 4 5 6 7
Not at all like me Somewhat like me Very much like me
I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

1  2  3  4  5  6  7
Not at all  Somewhat  Very like me
like me    like me    much like me

I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don’t value me as much as I value them.

1  2  3  4  5  6  7
Not at all  Somewhat  Very like me
like me    like me    much like me

I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

1  2  3  4  5  6  7
Not at all  Somewhat  Very like me
like me    like me    much like me
Questionnaire 4 - Dissociative Experiences Scale - II (DES-II)

This questionnaire consists of 28 questions about experiences you have had in your daily life. We are interested in how often you have had these experiences. It is important, however, that your answers show how often these experiences happen to you when you are not under the influence of alcohol or drugs.

To answer the questions, please determine to what degree the experience described in the question applies to you and circle the appropriate number to show what percentage of the time you have had the experience.

Example: 0% 10 20 30 40 50 60 70 80 90 100%

1. Some people have the experience of driving a car and suddenly realizing that they don’t remember what has happened during all or part of the trip. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was just said. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

3. Some people have the experience of finding themselves in a place and having no idea how they got there. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

4. Some people have the experience of finding themselves dressed in clothes that they don’t remember putting on. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

5. Some people have the experience of finding new things among their belongings that they do not remember buying. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%
6. Some people sometimes find that they are approached by people that they do not know who call them by another name or insist that they have met them before. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something, and they actually see themselves as though they were looking at another person. Circle a number what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

8. Some people are told that they sometimes do not recognize friends or family members. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). Circle a number to show what percentage of the important events in your life you have no memory for.

0%  10  20  30  40  50  60  70  80  90  100%

10. Some people have the experience of being accused of lying when they do not think that they have lied. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

11. Some people have the experience of looking in a mirror and not recognizing themselves. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

12. Some people sometimes have the experience of feeling that other people, objects, and the world around them are not real. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

13. Some people sometimes have the experience of feeling that their body does not seem to belong to them. Circle a number to show what percentage of the time this happens to you.
14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

18. Some people sometimes find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

19. Some people find that they sometimes are able to ignore pain. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%

20. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. Circle a number to show what percentage of the time this happens to you.

0%  10  20  30  40  50  60  70  80  90  100%
21. Some people sometimes find that when they are alone they talk out loud to themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

22. Some people find that in one situation they may act so differently compared to another situation that they feel almost as if they were two different people. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social interactions, etc.). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about mailing it). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

25. Some people sometimes find evidence that they have done things that they do not remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing. Mark the line to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

27. Some people sometimes find that they hear voices inside their head which tell them to do things or comment on things that they are doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%
28. Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%
Questionnaire 5 - Personality Structure Questionnaire (PSQ)

The aim of this questionnaire is to obtain an account of certain aspects of your personality. People vary greatly in all sorts of ways: the aim of this form is to find out how far you feel yourself to be constant and ‘all of a piece’ or variable and made up of a number of distinct ‘sub-personalities’ or liable to experience yourself as shifting between two or more quite distinct and sharply differentiated states of mind.

Most of us experience ourselves as somewhere between these contrasted ways. A state of mind is recognised by a typical mood, a particular sense of oneself and of others and by how far one is in touch with, and in control of, feelings. Such states are definite, recognisable ways of being; one is either clearly in a given state or one is not. They often affect one quite suddenly; they may be of brief duration or they last for days. Sometimes, but not always, changes of state happen because of a change in circumstances or an event of some kind. Please indicate which description applies to you most closely by shading the appropriate circle.

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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>1. My sense of self is always the same</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. The various people in my life see me in much the same way</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<tr>
<td>3. I have a stable and unchanging sense of myself</td>
<td>O</td>
<td>O</td>
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<tr>
<td>4. I have no sense of opposed sides to my nature</td>
<td>O</td>
<td>O</td>
<td>O</td>
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</tr>
<tr>
<td>5. My mood and sense of self seldom change suddenly</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<td>6. My mood changes are always understandable</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<tr>
<td>7. I never lose control</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>8. I never regret what I have said or done</td>
<td>O</td>
<td>O</td>
<td>O</td>
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</tbody>
</table>
Questionnaire 6 - The Creative Experiences Scale (CES)

Please answer **yes or no** for the final 25 items to let us know if you have experienced the following.

As a child I thought that the dolls, teddy bears, and stuffed animals that I played with were living creatures.

As a child I strongly believed in the existence of dwarves, elves and other fairy tale creatures.

As a child I had my own make believe friend or animal.

As a child I would very easily identify with the main character of a story and/or movie.

As a child I often had the feeling that I was someone else (e.g. a princess, an orphan, etc.).

As a child I was encouraged by adults (parents, grandparents, brothers, sisters) to fully indulge myself in my fantasies or daydreams.

As a child I often felt lonely.

As a child I devoted my time to playing a musical instrument, dancing, acting and/or drawing.

I spend more that half of the day (daytime) daydreaming or fantasising.

Many of my friends and/or relatives do not know that I have such detailed fantasies.

Many of my fantasies have a realistic intensity.

Many of my fantasies are often just as lively as a good movie.

I often confuse fantasies with real memories.

I am never bored because I start fantasising when things get boring.

Sometimes I act as if I am someone else and I completely identify myself with that role.

When I recall my childhood, I have very vivid and lively memories

I can recall many occurrences before the age of three.

When I perceive violence on television, I get so in to it that I get really upset.

When I think of something cold I actually get cold.

When I imagine I have eaten rotten food I really get nauseous.
I often have the feeling that I can predict things that are bound to happen in the future.

I often have the experience of thinking of someone and soon after that particular person calls or shows up.

I sometimes feel that I have had an outer body experience.

When I sing or write something, I sometimes have the feeling that someone or something outside myself directs me.

During my life I have had intense religious experiences, which influenced me in a very strong manner.
Questionnaire 7 - Community Assessment of Psychotic Experiences (CAPE)

1. Do you ever feel sad? (please tick)
   Never ☐   Sometimes ☐   Often ☐   Nearly always ☐
   If you ticked "never", please go to question 2
   If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)
   Not distressed ☐   A bit distressed ☐   Quite distressed ☐   Very distressed ☐

2. Do you ever feel as if people seem to drop hints about you or say things with a double meaning? (please tick)
   Never ☐   Sometimes ☐   Often ☐   Nearly always ☐
   If you ticked "never", please go to question 3
   If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)
   Not distressed ☐   A bit distressed ☐   Quite distressed ☐   Very distressed ☐

3. Do you ever feel that you are not a very animated person? (please tick)
   Never ☐   Sometimes ☐   Often ☐   Nearly always ☐
   If you ticked "never", please go to question 4
   If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)
   Not distressed ☐   A bit distressed ☐   Quite distressed ☐   Very distressed ☐

4. Do you ever feel that you are not much of a talker when you are conversing with other people? (please tick)
Never ☐ Sometimes ☐ Often ☐ Nearly always ☐

If you ticked "never", please go to question 5

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed ☐ A bit distressed ☐ Quite distressed ☐ Very distressed ☐

5. Do you ever feel as if things in magazines or on TV were written especially for you? (please tick)

Never ☐ Sometimes ☐ Often ☐ Nearly always ☐

If you ticked "never", please go to question 6

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed ☐ A bit distressed ☐ Quite distressed ☐ Very distressed ☐

6. Do you ever feel as if some people are not what they seem to be? (please tick)

Never ☐ Sometimes ☐ Often ☐ Nearly always ☐

If you ticked "never", please go to question 7

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed ☐ A bit distressed ☐ Quite distressed ☐ Very distressed ☐

7. Do you ever feel as if you are being persecuted in some way? (please tick)

Never ☐ Sometimes ☐ Often ☐ Nearly always ☐
If you ticked "never", please go to question 8

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed ☐ A bit distressed ☐ Quite distressed ☐ Very distressed ☐

8. Do you ever feel that you experience few or no emotions at important events? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 9

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed ☐ A bit distressed ☐ Quite distressed ☐ Very distressed ☐

9. Do you ever feel pessimistic about everything? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 10

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed ☐ A bit distressed ☐ Quite distressed ☐ Very distressed ☐

10. Do you ever feel as if there is a conspiracy against you? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 11

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed ☐ A bit distressed ☐ Quite distressed ☐ Very distressed ☐
11. Do you ever feel as if you are destined to be someone very important? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 12

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed A bit distressed Quite distressed Very distressed

12. Do you ever feel as if there is no future for you? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 13

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed A bit distressed Quite distressed Very distressed

13. Do you ever feel that you are a very special or unusual person? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 14

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed A bit distressed Quite distressed Very distressed

14. Do you ever feel as if you do not want to live anymore? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 15
If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed         A bit distressed         Quite distressed         Very distressed

15. Do you ever think that people can communicate telepathically? (please tick)

Never   Sometimes   Often   Nearly always

If you ticked "never", please go to question 16

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed         A bit distressed         Quite distressed         Very distressed

16. Do you ever feel that you have no interest to be with other people? (please tick)

Never   Sometimes   Often   Nearly always

If you ticked "never", please go to question 17

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed         A bit distressed         Quite distressed         Very distressed

17. Do you ever feel as if electrical devices such as computers can influence the way you think? (please tick)

Never   Sometimes   Often   Nearly always

If you ticked "never", please go to question 18

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed         A bit distressed         Quite distressed         Very distressed
18. Do you ever feel that you are lacking in motivation to do things? (please tick)

Never       Sometimes       Often       Nearly always

If you ticked "never", please go to question 19

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed       A bit distressed       Quite distressed       Very distressed

19. Do you ever cry about nothing? (please tick)

Never       Sometimes       Often       Nearly always

If you ticked "never", please go to question 20

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed       A bit distressed       Quite distressed       Very distressed

20. Do you believe in the power of witchcraft, voodoo or the occult? (please tick)

Never       Sometimes       Often       Nearly always

If you ticked "never", please go to question 21

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed       A bit distressed       Quite distressed       Very distressed

21. Do you ever feel that you are lacking in energy? (please tick)

Never       Sometimes       Often       Nearly always
If you ticked "never", please go to question 22

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed          A bit distressed       Quite distressed       Very distressed

22. Do you ever feel that people look at you oddly because of your appearance? (please tick)

Never              Sometimes          Often              Nearly always

If you ticked "never", please go to question 23

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed          A bit distressed       Quite distressed       Very distressed

23. Do you ever feel that your mind is empty? (please tick)

Never              Sometimes          Often              Nearly always

If you ticked "never", please go to question 24

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed          A bit distressed       Quite distressed       Very distressed

24. Do you ever feel as if the thoughts in your head are being taken away from you? (please tick)

Never              Sometimes          Often              Nearly always

If you ticked "never", please go to question 25
If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed    A bit distressed    Quite distressed    Very distressed

25. Do you ever feel that you are spending all your days doing nothing? (please tick)

Never    Sometimes    Often    Nearly always

If you ticked "never", please go to question 26

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed    A bit distressed    Quite distressed    Very distressed

26. Do you ever feel as if the thoughts in your head are not your own? (please tick)

Never    Sometimes    Often    Nearly always

If you ticked "never", please go to question 27

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed    A bit distressed    Quite distressed    Very distressed

27. Do you ever feel that your feelings are lacking in intensity? (please tick)

Never    Sometimes    Often    Nearly always

If you ticked "never", please go to question 28

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed    A bit distressed    Quite distressed    Very distressed
28. Have your thoughts ever been so vivid that you were worried other people would hear them? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 29

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed A bit distressed Quite distressed Very distressed

29. Do you ever feel that you are lacking in spontaneity? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 30

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed A bit distressed Quite distressed Very distressed

30. Do you ever hear your own thoughts being echoed back to you? (please tick)

Never Sometimes Often Nearly always

If you ticked "never", please go to question 31

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed A bit distressed Quite distressed Very distressed

31. Do you ever feel as if you are under the control of some force or power other than yourself? (please tick)
Never    Sometimes    Often    Nearly always

If you ticked "never", please go to question 32

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed    A bit distressed    Quite distressed    Very distressed

32. Do you ever feel that your emotions are blunted? (please tick)

Never    Sometimes    Often    Nearly always

If you ticked "never", please go to question 33

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed    A bit distressed    Quite distressed    Very distressed

33. Do you ever hear voices when you are alone? (please tick)

Never    Sometimes    Often    Nearly always

If you ticked "never", please go to question 34

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed    A bit distressed    Quite distressed    Very distressed

34. Do you ever hear voices talking to each other when you are alone? (please tick)

Never    Sometimes    Often    Nearly always

If you ticked "never", please go to question 35

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)
35. Do you ever feel that you are neglecting your appearance or personal hygiene? (please tick)

Never      Sometimes      Often      Nearly always

If you ticked "never", please go to question 36
If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed      A bit distressed      Quite distressed      Very distressed

36. Do you ever feel that you can never get things done? (please tick)

Never      Sometimes      Often      Nearly always

If you ticked "never", please go to question 37
If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed      A bit distressed      Quite distressed      Very distressed

37. Do you ever feel that you have only few hobbies or interests? (please tick)

Never      Sometimes      Often      Nearly always

If you ticked "never", please go to question 38
If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed      A bit distressed      Quite distressed      Very distressed

38. Do you ever feel guilty? (please tick)

Never      Sometimes      Often      Nearly always
If you ticked "never", please go to question 39

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed                  A bit distressed         Quite distressed         Very distressed

39.  Do you ever feel like a failure? (please tick)

Never              Sometimes          Often              Nearly always

If you ticked "never", please go to question 40

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed                  A bit distressed         Quite distressed         Very distressed

40.  Do you ever feel tense? (please tick)

Never              Sometimes          Often              Nearly always

If you ticked "never", you are now ready

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed                  A bit distressed         Quite distressed         Very distressed

41.  Do you ever feel as if a double has taken the place of a family member, friend or acquaintance? (please tick)

Never              Sometimes          Often              Nearly always

If you ticked "never", you are now ready

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed                  A bit distressed         Quite distressed         Very distressed
42. Do you ever see objects, people or animals that other people cannot see? (please tick)

Never       Sometimes       Often       Nearly always

If you ticked "never", you are now ready

If you ticked "sometimes", "often" or "nearly always" please indicate how distressed you are by this experience: (please tick)

Not distressed       A bit distressed       Quite distressed       Very distressed
Appendix F: Ethical approval

Ref: ethics/16175

Dr Katherine Berry, Dr Sandra Bucci  
School of Psychological Sciences  
Faculty of Medical and Human Sciences  
University of Manchester  
M13 9PL

Katherine.berry@manchester.ac.uk / Sandra.bucci@manchester.ac.uk  
Greta.mcgonagle@postgrad.manchester.ac.uk / Hannah.ogden@postgrad.manchester.ac.uk

31 May 2016

Dear Dr Berry, Dr Bucci,

Study title: The role of psychological processes in proneness to voice-hearing and paranoia. (Ref 16175)

Research Ethics Committee 1

Thank you to Greta and Hannah for attending the University Research Ethics Committee meeting held on 28th April 2016 to discuss the above study. I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form and supporting documentation, as submitted to and approved by the Committee.

This approval is effective for a period of five years. If the project continues beyond that period an application for amendment must be submitted for review. Likewise, any proposed changes to the way the research is conducted must be approved via the amendment process (see below). Failure to do so could invalidate the insurance and constitute research misconduct.

You are reminded that, in accordance with University policy, any data carrying personal identifiers must be encrypted when not held on a secure university computer or kept securely as a hard copy in a location which is accessible only to those involved with the research.
**Reporting Requirements:**

You are required to report to us the following:

1. Amendments
2. Breaches and adverse events
3. Notification of Progress/End of the Study

**Feedback**

It is our aim to provide a timely and efficient service that ensures transparent, professional and proportionate ethical review of research with consistent outcomes, which is supported by clear, accessible guidance and training for applicants and committees. In order to assist us with our aim, we would be grateful if you would give your view of the service that you have received from us by completing a feedback sheet [https://survey.manchester.ac.uk/pssweb/index.php/197138/lang-en](https://survey.manchester.ac.uk/pssweb/index.php/197138/lang-en).

We hope the research goes well.

Yours sincerely,

{signature}

Katy Boyle  
Secretary to University Research Ethics Committee 1
Participants Required

THE ROLE OF PSYCHOLOGICAL FACTORS IN PSYCHOTIC TYPE EXPERIENCES

Have you ever had any unusual experiences, like hearing voices, feeling suspicious or unusual beliefs, been diagnosed with psychosis or received any treatment or antipsychotic medication for experiences related to psychosis?

This is a study aimed at exploring what factors influence the development of experiences such as feeling suspicious and hearing distressing voices. Our work will help us to understand more about how these experiences develop and inform treatment development.

Interested?

If you would like to take part, please follow the link to the on-line survey to see if you are eligible.

https://www.psych-ssl.manchester.ac.uk/survey/clin
We expect that completing this survey will take no longer than 1 hour. Upon completion you will have the option to be entered into a **Prize Draw**. Further details can be found on the Participant Information Sheet, available when you access the link. For more information, please contact Greta McGonagle, Trainee Clinical Psychologist, at greta.mcgonagle@postgrad.manchester.ac.uk
Appendix H: Participant information sheet

School of Psychological Sciences
2nd Floor, Zochonis Building
The University of Manchester
Brunswick Street
Manchester
M13 9PL

Participant Information Sheet

The Role of Psychological Factors in Psychotic Type Experiences

You are being invited to take part in a research study looking at what factors influence the development of experiences such as feeling suspicious (paranoia) and hearing voices. Before you decide whether or not you would like to take part in the study please read the following information carefully and understand what taking part would involve for you. Then click the button at the bottom of the page to continue. If you have any questions or queries about taking part in the study, please contact the principal investigator, Greta McGonagle (greta.mcgonagle@postgrad.manchester.ac.uk). You do not have to make the decision straight away, so if you have any doubts or feel unsure please take some time to think it over.

What is the study about?
Psychosis includes experiences such as hearing voices that other people cannot hear and feeling suspicious or paranoid, which involves the feeling that others intend to cause a person harm. It is well known that symptoms of psychosis, such as hearing voices and paranoia, can be a sign of a mental health problem. However, these experiences have also been found to occur in the general population.

Some researchers think that experiences such as dissociation, can make people more likely to report hearing voices or feel more suspicious. Dissociation can be described as an experience where you feel disconnected in some way from the world around you or from yourself. These experiences are common in the general population. Researchers think that there are different types of dissociation, but it is not clear whether these different dissociation experiences make people more likely to report hearing voices and feeling suspicious or paranoid.

The early relationships which people have are also important. When people are young, they develop a sense of how they relate to themselves, others and the world through their relationship with important people in their life such as parents and/or caregivers. Some people grow up feeling afraid of their parent/carer. Some researchers think that frightening
experiences like this can make someone more likely to hear voices and feel suspicious or paranoid. Not everyone that has had negative experiences in childhood go on to develop psychosis and it is possible that there are other reasons people may hear voices or experience feelings of paranoia. Therefore, this study aims to look at the psychological processes involved in the development of voice-hearing and paranoia.

This study will not directly offer you any benefit, but the study addresses a gap in the research on psychosis and psychosis-like experiences. Our work will help to inform our understanding of the development of unusual experiences and help us develop more treatments for distressing experiences.

**Why have I been invited to take part?**

You have been invited to take part because you are over the age of 16 and:

- have a self-reported diagnosis of psychosis, such as schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, psychosis NOS, and so on

  - OR received antipsychotic medication for experiences related to psychosis
  - OR received treatment in a mental health unit / hospital for experiences related to psychosis
  - OR received input from community mental health team or early intervention service for experiences related to psychosis
  - OR received therapeutic input (e.g. CBT therapist, psychologist) for experiences related to psychosis, such as hearing voices, visual hallucinations, paranoid ideation or unusual beliefs.

- are confident with using the English language

**Do I have to take part?**

You do not have to take part. If you decide you would like to, and you continue to the survey, you can also stop at any point throughout the survey if you change your mind. You can withdraw from the study at any time, without giving your reasons.

If you decide you don’t want to continue with the survey after starting it, that’s fine; however, we won’t be able to remove the data you have already given us because it is completely anonymous and we won’t know which data is yours.

**Who can participate?**

Due to the nature of this study we are asking everyone some questions in order to determine whether there is any reason they should not participate. For example, if you have no experience of psychosis, you would not be able to take part.
What will I be asked to do if I take part?
If you agree to take part, you will be directed to an online survey. There are 11 sections to this survey. Some people who take part will be asked to complete all of the questionnaires. Other people will complete some of the questionnaires. This will depend on your answers because two of the questionnaires will only be relevant for some people. We expect that completing this survey will take no longer than 40 minutes.

This survey will ask you questions related to early experiences of trauma, questions about your relationships, about unusual experiences, and about any distress, anxiety and depression. Examples of questions that may be asked are ‘Have you ever deliberately been attacked that severely by someone with whom you were very close’ and ‘Have you ever been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in significant loss of personal property, serious injury to self, or other, the death of a significant other, or the fear of your own death’. Some of the questions in this survey may be very sensitive for you. These include items on childhood bullying, abuse, stressful events, and symptom experiences.

What are the possible disadvantages and risks of taking part?
We do not anticipate that your participation will cause you distress. However, if you do experience distress you may discontinue the survey at any time. At the bottom of this page, and on completion of the survey, there is a list of contact details of various support services that you may contact if you experience distress as a result of participating. In addition, the contact details of the researcher are provided and you can contact the researcher in working hours. If you experience distress out of hours please attend A&E or contact your local crisis team.

What are the possible benefits of taking part?
Taking part in this research is unlikely to help you directly. However, completing the survey may provide you with an opportunity to reflect on your feelings and experiences. Research findings obtained during the study will also help us to better understand the factors involved in psychosis and may potentially be used to improve psychological treatments for people with distressing experiences.

If you would like me to email you a summary of the findings when the study is complete, please fill in your email address in the box provided at the end of the survey, and tick the box ‘summary of findings’.

Reimbursement for my time
Whilst there will be no financial reimbursement, you will have the opportunity to enter your details into a prize draw. The prize is up to £50 of high street vouchers as a token of appreciation. If you would like to be entered into the prize draw we will ask you to provide your email address at the end of the survey and tick ‘prize draw’.

What will happen if I don’t want to carry on with the study?
You can withdraw from the study at any time. We will keep the data collected up to your withdrawal as it is anonymous and it will be impossible to identify the data that is yours.

Will my taking part in the study be kept confidential?
Yes, in accordance with the Data Protection Act of 1998, all information about you will be handled in strict confidence. The data collected during the study will be stored in a secure place and only researchers will have access to it. Data files stored on the computer will be password protected. No names or addresses will be included and participants will be identified only by numbers in any computerised data files used in the analysis of the results. The data you provide will be kept anonymously for a maximum of 10 years on the University’s secure server. It will then be permanently deleted.

If you provide your email address so that you can be entered into the prize draw, or so that we can send you a summary of the findings, then this will be kept in a secure, password protected file. This information will not be attached to the information you provide on the survey and so the data collected will remain anonymous.

What will happen to the results of the research study?
The results of the research will be included in a report that will be submitted for examination by the University of Manchester. The results may also be published within an academic journal, and may be presented at conferences. There will be no personal information about any of the people who participate within any of these reports or presentations.

Who is involved in this research?
The chief investigator of this research is Greta McGonagle:
The University of Manchester
School of Psychological Sciences
2nd Floor, Zochonis Building
Brunswick Street
Manchester
M13 9PL
greta.mcgonagle@postgrad.manchester.ac.uk
Ph: 0161 306 0400
The research supervisor’s details are:
Dr Sandra Bucci
Sandra.Bucci@manchester.ac.uk
Ph: 0161 306 0400

Dr Katherine Berry
Katherine.Berry@manchester.ac.uk
Ph: 0161 306 0400

Where can I obtain further information if I need it?
Should you have any questions regarding this study, please contact Greta McGonagle at greta.mcgonagle@postgrad.manchester.ac.uk.

What if I have questions or want to complain about this study?
If you have any questions or concerns about this study, please contact the researchers who will do their best to answer your questions. If you wish to make a complaint regarding the study please contact the University Research Practice and Governance Coordinator on 0161 275 7583 or 0161 275 8093 or send an email to research.complaints@manchester.ac.uk.

The following is a list of services you may contact for support, advice, or in emergency:

<table>
<thead>
<tr>
<th>Turn2me.org</th>
<th>Sane Line</th>
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<tbody>
<tr>
<td>This is a web space for people to share, discuss and offload personal problems, find support and get useful information.</td>
<td>0845 767 8000 Offering specialist mental health emotional support 6-11pm every day. You can also email through their website.</td>
</tr>
<tr>
<td><a href="http://www.turn2me.org">www.turn2me.org</a></td>
<td><a href="http://www.sane.org.uk">www.sane.org.uk</a></td>
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<th>Rethink</th>
<th>Hearing Voices Network</th>
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<td>0300 5000 927 Open Mon-Fri 10am - 2pm. Rethink provide support, advice and signposting for carers.</td>
<td>0114 271 8210 <a href="mailto:nhvn@hotmail.co.uk">nhvn@hotmail.co.uk</a> Peer support network</td>
</tr>
<tr>
<td><a href="http://www.rethink.org/">http://www.rethink.org/</a></td>
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<tr>
<td>0845 7909090 <a href="mailto:jo@samaritans.org">jo@samaritans.org</a> Open 24 hours a day. They offer confidential emotional support by telephone, email, text, letter and face to face.</td>
<td>111 Open 24 hours a day. They provide health advice and information.</td>
</tr>
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</table>

Thank you for reading this information sheet.
Appendix I: Debrief

The Role of Psychological Factors in Psychotic Type Experiences

Thank you for participating in this study. We hope that you have found it interesting and have not been upset by any of the topics discussed.

Background and aims of this study
Psychosis includes experiences such as hearing voices that other people cannot hear and feeling suspicious or paranoid, which involves the feeling that others intend to cause a person harm. It is well known that symptoms of psychosis, such as hearing voices and paranoia, can be a sign of a mental health problem. However, these experiences have also been found to occur in the general population.

Some researchers think that experiences such as daydreaming and déjà vu, also known as dissociation, can make people more likely to report hearing voices or feel more suspicious. These experiences are common in the general population. Researchers think that there are different types of dissociation, but it is not clear whether these different dissociation experiences make people more likely to report hearing voices and feeling suspicious or paranoid.

The early relationships which people have is also important. When people are young, they develop a sense of how they relate to themselves, others and the world through their relationship with important people in their life such as parents and/or caregivers. Some people grow up feeling afraid of their parent/carer. Some researchers think that frightening experiences like this can make someone more likely to hear voices and feel suspicious or paranoid. Not everyone that has has negative experiences in childhood go on to develop psychosis and it is possible that there are other reasons people may hear voices or experience feelings of paranoia. Therefore, this study aims to look at the psychological processes involved in the development of voice-hearing and paranoia.

This study will not directly offer you any benefit, but the study addresses a gap in the research on psychosis and psychosis-like experiences. Our work will help to inform our
understanding of the development of unusual experiences and help us develop more treatments for distressing experiences.

**Effects of participation**
If you have found any part of this experience to be distressing and need support please use any of the options below.

Speak to your GP.
Speak to your case worker if you have one.
Contact a friend or family member.
There are also a number of organisations listed below that you may wish to contact.

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</tr>
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If you wish to speak to one of the researchers, please contact Greta McGonagle by writing to University of Manchester, Oxford Rd, Manchester M13 9PL or emailing greta.mcgonagle@postgrad.manchester.ac.uk.

Alternatively you can contact Dr Katherine Berry ([katherine.berry@manchester.ac.uk](mailto:katherine.berry@manchester.ac.uk)) or Dr Sandra Bucci ([sandra.bucci@manchester.ac.uk](mailto:sandra.bucci@manchester.ac.uk)), who are the research supervisors.

Thank you again for your participation in this study.
Greta Mc Gonagle
Trainee Clinical Psychologist