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# Secure attachment imagery facilitates help-seeking and help-acceptance in psychosis

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## Abstract

**Objectives:** People with psychosis delay accessing recommended treatments, resulting in poor healthcare outcomes and increased risk of relapse. Means of improving help-seeking and help-acceptance could reduce duration of untreated psychosis (DUP). This study examined the role of attachment style in help-seeking and help-acceptance in psychosis.

**Design:** We used an experimental design to test the effect of attachment imagery priming on help-seeking and help-acceptance intentions, in a sample with self-reported psychosis. The independent variables were attachment imagery condition (secure vs. avoidant) and time (pre- vs. post-prime). The dependent variables were state paranoia, help-seeking intentions and help-acceptance intentions.

**Methods:** We used an online research platform to recruit people with psychosis ($n = 61$). Participants were randomly allocated to the secure or avoidant attachment priming condition. All completed measures of state paranoia, help-seeking, and help-acceptance, before and after priming.

**Results:** In comparison with the avoidant condition, secure attachment imagery resulted in reduced paranoia and increased help-seeking and acceptance intentions, all with large effect sizes.

**Conclusions:** This is the first study to use an experimental design to assess the role of attachment style in help-seeking and help-acceptance in a clinical sample. Attachment style is causally linked to behavioural intentions that contribute to DUP. Clinicians should assess attachment and help-seeking and acceptance, highlight these in formulation, and prioritise in treatment planning. Interventions that enhance

help-seeking and acceptance could improve access to recommended treatments and reduce DUP.

# INTRODUCTION

People with psychosis typically seek help 12–24 months after the onset of initial symptoms (Boonstra et al., 2012), and often struggle to remain engaged in services, as reflected in high dropout rates for recommended treatments (Doyle et al., 2014; Kreyenbuhl et al., 2009) including psychological therapies (e.g. Richardson et al., 2019). Delays to help-seeking and disruptions to help-acceptance contribute to duration of untreated psychosis (DUP; Birchwood et al., 2013), which is associated with poor recovery outcomes (Boonstra et al., 2012; Penttilä et al., 2014) and high healthcare costs (Chaiyakunapruk et al., 2016; Groff et al., 2021).

Delays to help-seeking and disruptions to help-acceptance are likely to be due to multiple demographic, social, health and service-related factors (cf. Birchwood et al., 2013; Tiller et al., 2023). The great majority of people with a diagnosis of schizophrenia experience paranoia in the form of persecutory delusions (Moutoussis et al., 2007), and pervasive mistrust of others is likely to affect willingness to access services and engage in recommended treatments. Additionally, considerable variation in help-seeking (Birchwood et al., 2013) suggests that other factors are likely to compound the effects of paranoia on help-seeking in people with psychosis. Attachment style (Ainsworth et al., 1978; Bowlby, 1969) has been identified as a key factor in help-seeking and acceptance decisions and service engagement more broadly (Berry et al., 2007; Gumley et al., 2014; Tait et al., 2004), but this has not been tested experimentally.

Having experienced sensitive and reliable early care, individuals with a *secure* attachment style have learnt to regulate their emotions, feel secure in close relationships, and be willing and able to seek help when needed (Ainsworth et al., 1978). In contrast, following inconsistent early care, people with an *insecure-anxious* attachment have learnt to escalate their emotions to demonstrate their needs, fear abandonment and seek support and reassurance excessively. Finally, having experienced repeated rejection or neglect from attachment figures, those with an *insecure-avoidant* style have learnt to suppress their distress and avoid relying on others (Hazan & Shaver, 2017; Mikulincer & Shaver, 2016). Individuals with an avoidant attachment style struggle to trust others and to seek and accept offers of support in adulthood, making them particularly vulnerable to delays in accessing mental health interventions (Adams et al., 2018).

People with psychosis report high levels of early interpersonal adversity (Varese et al., 2012), which affects the ability to develop secure attachments in adulthood (Lyons-Ruth & Block, 1996). Understandably, therefore, people with psychosis (Bucci et al., 2017; Harder, 2014) and clinical levels of paranoia (Berry et al., 2008; Tait et al., 2004) are more likely to have an insecure attachment style, and attachment insecurity is associated with both severity of psychosis (Berry et al., 2008; Bucci et al., 2017; Partridge et al., 2022) and paranoia in the context of psychosis (Lavin et al., 2019; Sood et al., 2022).

Attachment avoidance is associated with interpersonal behaviours likely to delay help-seeking and disrupt help-acceptance. Attachment avoidance is associated with difficulties building therapeutic relationships and utilising recommended treatments in people with severe mental health conditions (Dozier, 1990) and poor service engagement in psychosis (Tait et al., 2004), and is causally implicated in lower levels of help-seeking in non-clinical paranoia (Sood et al., 2021). The literature is inconsistent for anxious attachment and help-seeking – some studies have found positive (Berry et al., 2008; Caspers et al., 2006) and others have found negative associations (Dozier, 1990; Vogel & Wei, 2005). This may be due to the conflicting motives of seeking security and protection (Dewitte et al., 2008; Vogel & Wei, 2005) and fearing rejection and abandonment (Kural & Kovacs, 2022) characteristic of anxious attachment, resulting in ambivalence in help-seeking.

Experimental studies are required to test causal relationships. Attachment priming is an effective experimental procedure that temporarily induces an attachment style by activating specific mental representations in memory (Baldwin et al., 1996). Importantly, people show cognitive, affective and behavioural changes in line with the primed attachment irrespective of their usual (trait) attachment style (Rowe et al., 2020). Studies have demonstrated the impact of security priming on paranoia and help-seeking intentions in analogue samples (Newman-Taylor et al., 2021; Sood et al., 2021). The causal role of attachment style on help-seeking and acceptance has not been tested in people with psychosis.

## Aims and hypotheses

We aimed to test the role of attachment style in paranoia, help-seeking and help-acceptance intentions in a clinical sample with self-reported psychosis. We examined the impact of attachment imagery priming (secure vs. avoidant) on state paranoia, help-seeking intentions and help-acceptance intentions. We compared secure and avoidant attachment given consistency of past findings for these attachment styles, and hypothesised that:

1. secure attachment priming will reduce state paranoia and increase help-seeking and help-acceptance intentions from pre- (Time 1) to post-prime (Time 2),
2. at Time 2, participants in the secure attachment prime condition will report lower state paranoia and higher help-seeking and help-acceptance intentions compared with those in the avoidant attachment prime condition,
3. at Time 2, participants in the secure attachment prime condition will report higher felt security (post-prime manipulation check) compared with those in the avoidant attachment prime condition.

## METHOD

We received ethical approval from the University of Southampton (ethics ID: 71766) and pre-registered the study on the Open Science Framework (https://osf.io/29nhw).

## Design

We used an experimental design with one between-subject independent variable (attachment imagery prime: secure vs. avoidant), and one within-subject independent variable (time: pre vs. post). The dependent variables were: (1) state paranoia, (2) state help-seeking intentions and (3) state help-acceptance intentions. The sample size was determined by a priori G*Power analysis which indicated that 54 participants were required to detect a medium (0.25) effect size and obtain 95% power at $p < .05$, following Sood et al. (2021).

## Participants

We recruited adults (age $\geq 18$ years) with self-reported psychosis and who were able to respond to questionnaires in English through the online research platform Prolific,[1] targeting a research pool of 119

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[1]Prolific is a research platform where participants receive a small financial reward for their data. Due to the incentive, the dropout rate is low (Palan & Schitter, 2018). Participants were paid £1.50 per survey in line with Prolific guidelines.

**TABLE 1**  Descriptive statistics for demographic characteristics and trait paranoia.

| Demographic characteristic | Descriptive statistic | Demographic characteristic | Descriptive statistic |
|---|---|---|---|
| Gender: $n$ (%) | | Ethnicity: $n$ (%) | |
| Female | 32 (52.5) | Asian | 1 (1.6) |
| Male | 21 (34.4) | Black Caribbean | 2 (3.3) |
| Non-binary | 7 (11.5) | White British | 52 (85.2) |
| Prefer not to answer | 1 (1.6) | White other | 3 (4.9) |
| Nationality: $n$ (%) | | Mixed | 2 (3.3) |
| British | 59 (96.8) | Prefer not to answer | 1 (1.6) |
| British/American | 1 (1.6) | | |
| Prefer not to answer | 1 (1.6) | | |
| **Measure of trait paranoia** | **Descriptive statistic** | **Clinical psychosis group (for comparison of severity of paranoia)**[a] | |
| Paranoia R-GPTS: $M$ (SD) | | | |
| Persecution subscale | 16.59 (12.13) | 13.70 (13.00) | |
| Reference subscale | 15.05 (8.12) | 15.80 (7.42) | |

[a]Clinical population (Freeman et al., 2019): 1804 adult participants with psychotic disorder recruited from clinical settings. R-GPTS = Revised Green et al. Paranoid Thoughts Scale (Freeman et al., 2019). Persecution subscale: average (0–4), elevated (5–10), moderately severe (11–17), severe (18–27) and very severe (28+). Reference subscale: average (0–9), elevated (10–15), moderately severe (16–20), severe (21–24) and very severe (25+).

people who had previously expressed an interest in research participation. Sixty-two people opted into the study. Of these, one person reported holding the imagery prime in mind for 0% of time and so was excluded from analyses. The final sample included 61 participants with an age range of 20–60 years ($M = 33.44$; SD = 10.80). Table 1 gives descriptive statistics for demographic characteristics and trait paranoia, and shows that the current sample reported similar or higher levels of paranoia compared with other clinical research samples (cf. Freeman et al., 2019).

## Materials

## Demographics

We used a brief questionnaire designed for the study to assess age, gender, ethnicity and nationality.

## Trait measures

### *Attachment*

The Short-Form of the Experiences in Close Relationships Scale (ECR-12; Lafontaine et al., 2016) has 12 items and yields two subscales: attachment anxiety (6 items) and attachment avoidance (6 items). Participants rate items on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). The anxiety subscale has good reliability ($\alpha = 0.81$) and the avoidance subscale has acceptable reliability ($\alpha = 0.79$). In the current sample, reliability was good for anxiety ($\alpha = 0.88$) and excellent for avoidance ($\alpha = 0.92$).

The Psychosis Attachment Measure-Revised (PAM-R; Pollard et al., 2020) has 26 items[2] and yields three subscales: attachment anxiety (8 items), attachment avoidance (6 items) and attachment disorganisation (9 items). Participants rate items on a 4-point Likert scale ($0 = not\ at\ all$ to $3 = very\ much$). The anxiety subscale has good reliability ($a = 0.87$), the avoidance subscale has acceptable reliability ($a = 0.79$) and the disorganised subscale has good reliability ($a = .89$). In the current sample, reliability was excellent for anxiety ($a = 0.91$), acceptable for avoidance ($a = 0.79$) and excellent for disorganisation ($a = 0.93$).

We used both the ECR-12 and PAM-R to allow comparisons across studies as most research in the area use one of these.

### Paranoia

The Revised Green et al. Paranoid Thoughts Scale (R-GPTS; Freeman et al., 2019) has 18 items and yields two subscales: ideas of reference (8 items) and ideas of persecution (10 items). Participants rate items on a 5-point Likert scale ($0 = not\ at\ all$ to $4 = totally$). Both subscales have excellent reliability ($\alpha s > 0.90$). In the current sample, reliability was good for the reference subscale ($\alpha = 0.89$) and excellent for the persecution subscale ($\alpha = 0.94$).

### Help-seeking

The Help-Seeking Measure-Trait[3] (HSM-T; following the HSM-S, Sood et al., 2021) has three items and measures usual (trait) help-seeking intentions when feeling upset. Participants rate items on a 5-point Likert scale ($1 = not\ at\ all$ to $5 = extremely$). Internal reliability was excellent in the current sample ($\alpha = 0.93$) (See Appendix S1).

### Help-acceptance

We developed the Help Acceptance Measure-Trait (HAM-T) for the current study (following the HSM-S; Sood et al., 2021). The HAM-T has four items and measures usual (trait) help-acceptance intentions when feeling upset. Participants rate on a 5-point Likert scale ($1 = not\ at\ all$ to $5 = extremely$) how likely they are to accept emotional support and practical help, be willing to receive advice about their problems, and be willing to accept help to make decisions. The scale had good reliability ($\alpha = 0.88$) in the current sample (See Appendix S1).

### Hallucinations

The Trait Auditory and Visual Hallucinations scale (Sood et al., 2024) has four items and measures the extent to which participants experience auditory and visual hallucinations. Participants rate items on a 5-point Likert scale ($1 = never$ to $5 = almost\ always$). In the current sample, the measure showed good reliability ($\alpha = 0.88$). This scale was used to describe the sample and as a potential covariate, as paranoia and hallucinations often co-occur (Nuevo et al., 2013), and hallucinatory experience could affect the dependent variables (cf. Maher, 2006) (See Appendix S1).

## State measures

### Paranoia

The Adapted Paranoia Checklist (APC; Schlier et al., 2016) has five items and measures current paranoia. Participants rate how much each statement applies to them 'at the moment' on an 11-point Likert scale ($0 = not\ at\ all$ to $10 = very\ much$). Reliability is good ($\alpha = 0.88$) and was excellent at both Time 1 ($\alpha = 0.91$) and Time 2 ($\alpha = 0.90$) in the current sample.

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[2]Following Berry (personal communication), 23 of the 26 items included in Pollard et al.'s (2020) original article were included in the present analyses as the original factor analysis showed that three items did not load highly on any factor.

[3]See Appendix S1 for trait and state help-seeking and help-acceptance measures.

*Help-seeking*

The Help-Seeking Measure-State (HSM-S; Sood et al., 2021) has three items and measures current (state) help-seeking intentions. Participants rate on a 5-point Likert scale (1 = *not at all* to 5 = *extremely*) how likely they are to contact others, talk to others, or ask for help if they were feeling upset in the present moment. Internal reliability is good ($\alpha = 0.89$) and was excellent at both time points in the current sample ($\alpha s = 0.91$) (See Appendix S1).

*Help-acceptance*

We developed the Help Acceptance Measure-State (HAM-S) for the current study (following the HSM-S; Sood et al., 2021). The HAM-S has four items and measures current (state) help-acceptance intentions. Participants rate on a 5-point Likert scale (1 = *not at all* to 5 = *extremely*) how likely they are to accept emotional support and practical help, be willing to receive advice about their problems, and be willing to accept help to make decisions, if they were feeling upset at the present moment. The scale had good reliability at both Time 1 ($\alpha = 0.86$) and Time 2 ($\alpha = 0.88$) in the current sample (See Appendix S1).

## Experimental manipulation

We used 3-min audio recordings of attachment imagery scripts to prime secure and avoidant attachment styles (following Sood et al., 2021).[4] Participants are asked to imagine a time when they were with another individual and felt safe, secure and trusting (secure attachment) or nervous and uncomfortable when the other person tried to be close to them (avoidant attachment). Participants are asked to recall a specific situation and prompted to hold the image in mind as vividly as possible.

## Manipulation checks

We used the Felt Security scale (Luke et al., 2012), vividness of imagery (1 = *not at all* to 10 = *very much*) and time spent holding the image in mind (0%–100%) as manipulation checks. For the Felt Security scale, participants rate how strongly they feel each of six items (comforted, secure, supported, safe, loved and protected) on a 6-point Likert scale (1 = *not at all* to 6 = *very much*) in the current moment ($\alpha = 0.97$; Sood et al., 2021). Internal reliability was excellent in the current study ($\alpha = 0.95$).

## Procedure

Part 1 of the study involved giving informed consent and completing demographic questions and trait measures. Participants were then informed that they would be contacted to complete Part 2 2–5 days later. The delay between Parts 1 and 2 was to avoid any inadvertent priming effects of the trait measures influencing the experimental paradigm.

We asked participants to complete Part 2 alone, on a computer with unmuted sound, in a quiet space without distractions. Participants were randomised through Qualtrics and allocated to the secure or insecure-avoidant attachment priming condition. They completed the state measures, listened to the audio recording, then repeated the state measures, manipulation checks (felt security, vividness of prime imagery and percentage of time imagery was held in mind) and a mood repair task (to list the five best things in their life). Finally, participants were debriefed and thanked.

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[4]Secure and avoidant attachment priming scripts/audios are available from the authors on reasonable request.

**TABLE 2**  Descriptive statistics for demographic characteristics and trait measures by group.

| Variable | Secure ($N=30$) M (SD) | Avoidant ($N=31$) M (SD) |
|---|---|---|
| Age | 35.70 (11.20) | 31.26 (10.09) |
| Trait paranoia (R-GPTS persecution subscale) | 15.23 (11.79) | 17.90 (12.50) |
| Trait paranoia (R-GPTS reference subscale) | 14.60 (8.38) | 15.48 (7.98) |
| Trait anxious attachment (ECR-12) | 4.96 (1.52) | 5.01 (1.42) |
| Trait avoidant attachment (ECR-12) | 4.18 (1.57) | 4.46 (1.39) |
| Trait anxious attachment (PAM-R) | 2.71 (0.88) | 2.75 (0.81) |
| Trait avoidant attachment (PAM-R) | 2.84 (0.69) | 2.90 (0.64) |
| Trait disorganised attachment (PAM-R) | 2.59 (0.95) | 2.48 (0.79) |
| Trait help-seeking (HSM-T) | 2.61 (0.94) | 2.56 (1.08) |
| Trait help-acceptance (HAM-T) | 2.96 (0.81) | 2.79 (1.04) |
| Trait hallucinations (AVHS) | 4.69 (1.54) | 3.90 (1.79) |

Abbreviations: AVHS, Auditory and Visual Hallucinations Scale; ECR-12, Experiences in Close Relationships – short form; HAM-T, Help Acceptance Measure-Trait; HSM-T, Help-Seeking Measure-Trait; PAM-R, Psychosis Attachment Measure- Revised.

## Data analysis

We used SPSS 28 for all analyses. Participants with more than 5% of data missing from any single measure were excluded (Tabachnick & Fidell, 2013), as were participants with any data missing from Part 2 or who had not completed the prime. Nineteen were excluded in total.

We checked assumptions by inspecting histograms and completing normality tests (Field, 2018). The data were mostly normally distributed (Shapiro–Wilk $p > .05$). The persecution paranoia subscale was not normally distributed for both secure ($p = .041$) and avoidant groups ($p = .035$), as expected given recruitment criteria. As this variable was used to describe the sample and identify any pre-manipulation differences between groups, we did not use transformations. There were no outliers (no studentised residuals greater than ±3).

We used one-way analyses of variance (ANOVAs) to test pre-manipulation group differences on demographic characteristics, trait measures and manipulation checks, and chi-square for gender. We then conducted two-way mixed-model ANOVAs, with one between-subject factor (prime condition: secure vs. insecure-avoidant attachment imagery) and one within-subject factor (time: pre- vs. post-manipulation). The primed groups did not differ in trait hallucinations, and so we did not include this as a covariate in our analyses.

## RESULTS

### Pre-manipulation between-group differences

Table 2 gives descriptive statistics for demographic and trait measures pre-prime. There were no differences between the groups in terms of age or any trait measures ($p > .05$) or gender ($\chi^2 (3) = 2.82, p = .42$).

### Manipulation checks

We found no differences between groups in vividness of imagery, $F(1, 60) = 0.12, p = .733$, or time the image was held in mind, $F(1, 60) = 0.19, p = .664$. As predicted, felt security was effectively manipulated,

**TABLE 3** Descriptive statistics for state measures at Time 1 (pre-prime) and Time 2 (post-prime).

| | Secure (N = 30) | | Avoidant (N = 31) | |
| | Time 1 | Time 2 | Time 1 | Time 2 |
| Variable | M (SD) | M (SD) | M (SD) | M (SD) |
| --- | --- | --- | --- | --- |
| State paranoia (APC) | 28.37 (12.00) | 23.53 (12.39) | 32.10 (13.92) | 34.26 (11.95) |
| Help-seeking (HSM-S) | 2.49 (1.12) | 2.77 (1.23) | 2.61 (0.95) | 2.30 (0.96) |
| Help-acceptance (HAM-S) | 2.97 (0.88) | 3.19 (0.95) | 2.89 (1.02) | 2.52 (0.98) |

Abbreviations: APC, Adapted Paranoia Checklist; HAM-S, Help Acceptance Measure-State; HSM-S, Help-Seeking Measure-State.
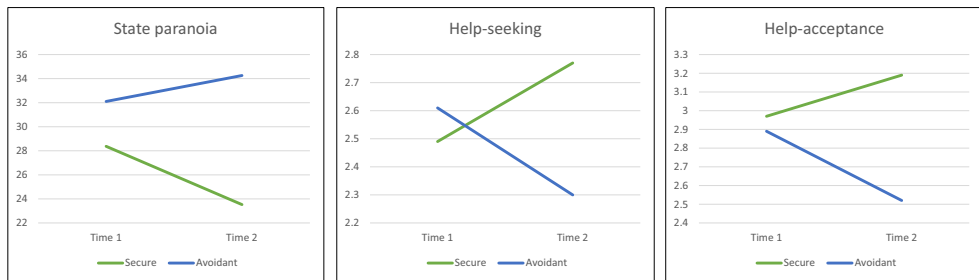


**FIGURE 1** Interaction between time and attachment condition for state paranoia, help-seeking and help-acceptance.

$F(1, 60) = 23.73$, $p < .001$; the secure attachment group reported higher felt security ($M = 3.69$; SD = 1.44) than the avoidant attachment group ($M = 2.23$; SD = 0.86) post-prime.

## Impact of attachment imagery priming

Table 3 shows descriptive statistics for state measures at Time 1 (pre-prime) and Time 2 (post-prime) for both conditions.

### Paranoia

There was no main effect of time, $F(1, 59) = 2.41$, $p = .126$, partial $\eta^2 = 0.04$, a main effect of condition, $F(1, 59) = 5.40$, $p = .024$, partial $\eta^2 = 0.08$, and a significant time by condition interaction, $F(1, 59) = 16.48$, $p < .001$, partial $\eta^2 = 0.22$ (see Figure 1). Pairwise comparisons showed that there was no difference between groups at Time 1 ($p = .268$; 95% CI: −2.94 to 10.40) and a difference at Time 2 ($p = .001$; 95% CI: 4.49 to 16.96). Following attachment imagery priming, participants in the secure condition showed a decrease in paranoia ($p < .001$, 95% CI: 2.38 to 7.29) and those in the avoidant condition showed a trend level increase ($p = .079$; 95% CI: −4.58 to 0.26).

### Help-seeking

There was no main effect of time, $F(1, 59) = 0.47$, $p = .828$, partial $\eta^2 = 0.001$ or condition, $F(1, 59) = 0.42$, $p = .518$, partial $\eta^2 = 0.007$ and a significant time by condition interaction, $F(1, 59) = 14.21$, $p < .001$, partial $\eta^2 = 0.19$ (see Figure 1). Pairwise comparisons showed that there was no difference between groups

at Time 1 ($p = .643$; 95% CI: −0.66 to 0.41) or Time 2 ($p = .104$; 95% CI: −0.1 to 1.03). However, as predicted, participants in the secure condition showed an increase in help-seeking pre- to post-prime ($p = .016$; 95% CI: −0.5 to −0.06), and those in the avoidant condition showed a decrease in help-seeking pre- to post-prime ($p = .006$; 95% CI: 0.09 to 0.53).

## Help-acceptance

There was no main effect of time, $F(1, 59) = 1.11$, $p = .297$, partial $\eta^2 = 0.018$ or condition, $F(1, 59) = 2.56$, $p = .115$, partial $\eta^2 = 0.04$ and a significant time by condition interaction, $F(1, 59) = 18.49$, $p < .001$, partial $\eta^2 = 0.24$ (see Figure 1). Pairwise comparisons showed that there was no difference between groups at Time 1 ($p = .746$; 95% CI: −0.57 to 0.41) and a difference at Time 2 ($p = .008$; 95% CI: −1.17 to −0.18). Following attachment imagery priming, participants in the secure condition showed an increase in help-acceptance ($p = .026$; 95% CI: −0.42 to −0.03) and those in the avoidant condition showed a decrease in help-acceptance ($p < .001$; 95% CI: 0.18 to 0.57).

## DISCUSSION

This is the first study to examine the causal effect of attachment style on help-seeking and help-acceptance intentions in a clinical sample. As predicted, we found that secure attachment leads to decreased levels of paranoia, and increased levels of help-seeking and help-acceptance intentions, and that insecure-avoidant attachment leads to increased levels of paranoia, and decreased levels of help-seeking and help-acceptance intentions, all with large effects (following Cohen, 1973). The manipulation checks showed that the primes were effective, indicating that our results were due to the successful activation of secure and avoidant attachment styles.

The experimental design allows us to infer causal rather than associative relationships between attachment style and paranoia, help-seeking and help-acceptance. Our findings are consistent with previous experimental studies demonstrating the role of attachment on paranoia in analogue groups (e.g. Bullock et al., 2016; Newman-Taylor et al., 2017; Sood & Newman-Taylor, 2020) and in preliminary single-case clinical studies (Newman-Taylor, 2020; Pitfield et al., 2020), and extends these to evidence the impact on help-seeking and acceptance in a clinical sample. This is the first study to show that secure attachment increases help-seeking intentions, and avoidant attachment decreases help-seeking intentions, in a clinical sample, consistent with previous non-clinical research (Newman-Taylor et al., 2021; Sood et al., 2021), and the first to show that secure attachment increases help-acceptance intentions, and avoidant attachment decreases help-acceptance intentions, in a clinical sample.

These results provide experimental evidence for the suggestion that people with psychosis and insecure-avoidant attachment are particularly vulnerable to prolonged DUP due to poorer help-seeking and acceptance intentions (cf. Tait et al., 2004).

The fact that we can induce attachment styles suggests that while trait attachment patterns may endure and pre-dispose people to predictable behavioural responses to threat, these may be influenced in the short term (cf. Rowe et al., 2020). The current results demonstrate this for people with self-reported psychosis with high levels of paranoia. The primes manipulate working models associated with the induced attachment style, leading participants to act in ways consistent with these styles (cf. Sood et al., 2022). We assume that the secure-prime induction exerts effects on paranoia and help-seeking and acceptance by eliciting a sense of interpersonal safety, and this is supported by the manipulation check. It is not yet clear how long these effects last, though repeated primes are likely to have stronger effects over time (Rowe et al., 2020). Future studies should examine how we might support people to adopt the induction task into their daily routine, and whether this translates into actual behaviour change.

A key limitation is the recruitment of a self-identified psychosis sample. While severity of paranoia was comparable to a clinical comparison group recruited via healthcare settings, future research should

verify participants' mental health conditions. We used an experimental paradigm which often raises questions about ecological validity, however, the current manipulation has been used in preliminary case studies, suggesting that this can be used in routine clinical practice (e.g. Pitfield et al., 2020). We did not control for hallucinatory experience as there were no differences between groups. Most participants were White British which limits generalizability of the results (Garza et al., 2017).

## Service and clinical implications

Attachment style is causally linked to behavioural intentions that contribute to DUP. If we assessed attachment and help-seeking and acceptance intentions early in our clinical contacts, we would be able to anticipate ambivalence towards accessing recommended treatments and target assertive engagement efforts towards people with an avoidant attachment style, who are most likely not to access recommended treatments. Attachment can be assessed using established measures such as the ECR-12 (Lafontaine et al., 2016) and the PAM-R (Pollard et al., 2020). Help-seeking and acceptance can be assessed using the Help-Seeking Measure-Trait (see Appendix S1). Insecure attachment and/or hesitance to seek and accept help at times of need can be named in individuals' psychological formulation as the basis for reflection and to inform collaborative treatment planning. People scoring highly on insecure attachment are likely to benefit from attempts to foster relational safety, for example, through consistency of therapeutic relationships, and imagery such as the felt-security task (cf. Newman-Taylor, 2020) which can be woven into psychological therapies.

The needs of this group raise challenges for services that fail to provide consistent multi-disciplinary care, whether due to service pressures or duty systems that expect people in distress to seek and accept help from clinicians they have never met. Our results support what clinicians know – that our services do not work well for many people with psychosis – and explains that this is in part due to attachment style.

## CONCLUSION

This is the first study to demonstrate the role of attachment style on help-seeking and help-acceptance intentions in people with psychosis. Attachment style is causally linked to behavioural intentions that contribute to DUP, which in turn predicts clinical outcomes and healthcare costs. Routine assessment of attachment style and targeted interventions that enhance help-seeking and acceptance could improve access to and engagement in recommended treatments and thereby reduce DUP.

### CONFLICT OF INTEREST STATEMENT
None.

### DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the corresponding author upon reasonable request.

## ETHICS STATEMENT

This work has been carried out in accordance with the Declaration of Helsinki. Informed consent was obtained from all participants and privacy rights were observed throughout.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

**Appendix S1**

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