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How does attachment affect help-seeking in people with paranoia and psychosis? The role of emotion regulation, self-stigma, and perceived support

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ABSTRACT

Longer duration of untreated psychosis causes significant human and healthcare costs. Attachment avoidance and anxiety contribute to delays in help-seeking and help-acceptance in individuals with both non-clinical and clinical paranoia, though underlying mechanisms remain unclear. The aim of the study was to examine how attachment affects help-seeking and help-acceptance in people with paranoia. We recruited a non-clinical sample with paranoia ($N = 501$) and a clinical psychosis sample ($N = 120$), and found that attachment avoidance predicted reduced help-seeking and help-acceptance intentions in both groups, while attachment anxiety predicted lower social help-seeking in the clinical group. Emotion regulation did not mediate associations between attachment and help-seeking/acceptance. Self-stigma regarding help-seeking and mental illness mediated these associations in both groups, while perceived availability of help mediated the link between avoidance and help-seeking/acceptance in the non-clinical group. This is the first study to show that self-stigma and perceived help availability delay help-seeking in paranoia. Further research should investigate causal effects of attachment on self-stigma and perceived support, and so help-seeking.

1. Introduction

Seeking help from professional and social resources is an important coping behaviour to improve wellbeing and reduce likelihood of long-term negative effects of mental health problems (Rickwood et al., 2007; Wilson et al., 2011). For people with psychosis, there are significant barriers to help-seeking, resulting in treatment delays. 'Duration of Untreated Psychosis' (DUP) is associated with poorer prognosis (Birchwood et al., 2013) and considerable treatment costs (Chaiyakunapruk et al., 2016). To reduce DUP, researchers have investigated systemic (e.g., Birchwood et al., 2013; Skrobinska et al., 2024a) and individual factors (e.g., Newman-Taylor et al., 2021; Skrobinska et al., 2024b) that influence help-seeking and help-acceptance in clinical and analogue groups.

Increasingly, current psychological research targets specific symptoms of psychosis, given conceptual concerns about the validity of the schizophrenia diagnosis (Bentall et al., 2009), recent statistical modelling (Jimeno et al., 2020), and evidence that this approach is likely to improve the impact of therapeutic interventions (Lincoln and Peters, 2019; Newman-Taylor and Bentall, 2024). Paranoia is one of the most common symptoms across the psychosis spectrum, reported by approximately 90 % of people with psychosis (Moutoussis et al., 2007). Paranoia describes a continuum of hostile interpersonal beliefs from transient suspicious thoughts (non-clinical paranoia) to persecutory delusions (clinical paranoia; Freeman et al., 2005). Individuals with paranoia report more social evaluative concerns, including a sense of interpersonal vulnerability, fear of rejection, and a belief that the world is dangerous (Freeman et al., 2005), as well as cognitive biases, including hostile attribution, jumping to conclusions, and belief inflexibility (Freeman et al., 2002).

Paranoia makes it difficult for people to appraise events accurately and select effective ways to manage distress, including seeking and accepting help. In this context, help-seeking refers to an adaptive coping response to mental health difficulties involving the search for external support (Mechanic, 1962). Help acceptance describes the willingness to accept emotional and practical help and advice, and is likely to be a key element of effective engagement with services for people with psychosis (Skrobinska et al., 2024b). Help-seeking incorporates the appraisal of a

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mental health problem as requiring support, a willingness to seek help, awareness of social norms that encourage such behaviour, accessibility of appropriate support, and selection of sources of help (Rickwood et al., 2007). People with early psychosis typically request help first from family or close friends (Fridgen et al., 2013), and general practitioners and psychiatrists are the first choice when seeking formal help (Hu et al., 2021). Individuals with paranoia are likely to utilise more avoidant coping strategies (Melo and Bentall, 2010) and be less likely to engage in initial and ongoing help-seeking behaviours when distressed (Bird et al., 2017; Lu et al., 2017), leading to longer DUP (Birnbaum et al., 2017). To our knowledge, no studies have examined predictors and mediators of help-seeking intentions in people with paranoia to date.

Attachment style may explain individual differences in help-seeking in non-clinical and clinical populations (Dozier, 1990; McGonagle et al., 2021; Shaver and Mikulincer, 2002). Individuals' experiences with early parental figures shape internal working models of self, others, and relationships (Bowlby, 1969). Caregivers' behaviours at times of distress influence expectations regarding the reliability and responsiveness of others, and worthiness of care of the self. Internal working models differentiate attachment styles and determine the likelihood of seeking protection and contact with significant others when distressed (Collins and Feeney, 2000). Furthermore, these models guide interpersonal relationships and affect mental health outcomes into adulthood (Collins and Read, 1990; Mikulincer and Shaver, 2016). Attachment style is typically measured along two dimensions: avoidance of intimacy, and anxiety concerning abandonment (Brennan et al., 1998).

Securely attached individuals, shaped by responsive attachment figures, have a positive self and other view (Ainsworth et al., 1978; Bartholomew and Horowitz, 1991), making them more likely to seek help (Irkörücü and Demir, 2015). Attachment avoidance stems from distrust of others due to caregiver rejection (Ainsworth et al., 1978), reducing help-seeking (Vogel and Wei, 2005). Those with attachment anxiety may excessively seek help for security but fear rejection which can reduce help-seeking (Mikulincer and Shaver, 2016; Vogel and Wei, 2005). In people with psychosis, mixed evidence shows associations between attachment insecurity and service engagement including help-seeking behaviours (Dozier, 1990; Gumley et al., 2014; Macinnes et al., 2016). Newman-Taylor et al. (2021) and Sood et al. (2021) examined the role of attachment in help-seeking in people with non-clinical paranoia. These studies showed that secure attachment priming led to an increase in help-seeking intentions, whereas avoidant and anxious priming led to a decrease in help-seeking (Sood et al., 2021). Skrobinska et al. (2024b) used a similar design and found the same patterns of help-seeking and help-acceptance in people with psychosis. These experimental studies show that attachment *causally* affects help-seeking in non-clinical paranoia and psychosis, and are consistent with the work of Tait et al. (2004) who found that people with psychosis who were insecurely attached engage less well with services. Together, these studies indicate that for people with paranoia, insecure attachment is likely to contribute to delays in initial and ongoing help-seeking and help-acceptance behaviours, which are necessary for 'full dose' treatments.

Importantly, the mechanisms involved in the relationship between attachment and help-seeking have not yet been isolated, limiting therapeutic endeavours to mitigate the detrimental effect of insecure attachment on help-seeking in non-clinical and clinical populations. Candidate mechanisms include emotion regulation (ER), self-stigma, and perceived availability of help.

1.1. Emotion regulation

Emotion regulation (ER) involves monitoring and modifying emotional responses, for example by using conscious, cognitive strategies in the face of stress or aversive events. Anxiously attached individuals use hyperactivating strategies such as rumination, to amplify emotions and signal needs in ways that are often ineffective (Wei et al., 2005). Avoidantly attached individuals use deactivating strategies, suppressing emotions to avoid vulnerability, which hinders help-seeking (Mikulincer and Shaver, 2019). Emotional suppression also reduces willingness to bear social costs, limiting social and professional support-seeking (Ciarrochi et al., 2003; Pourmand, 2021). In people with a diagnosis of schizophrenia, Kimhy et al. (2012) and O' Driscoll et al. (2014) found that the use of more suppression and less reappraisal resulted in increased difficulty utilising social resources to guide adaptive behaviour. However, the role of ER in attachment and help-seeking in non-clinical paranoia and psychosis is unknown.

1.2. Self-stigma

Self-stigma involves shame about mental illness and/or seeking help, often influenced by societal beliefs equating mental illness with weakness (Vogel et al., 2013). Self-stigma of mental illness and help-seeking are distinct, and each uniquely predicts lower help-seeking intentions (Tucker et al., 2013). Securely attached individuals with psychosis experience less self-stigma than those with anxious or avoidant attachment (Restek-Petrovi, 2015). Self-stigma also delays help-seeking and reduces treatment adherence in people with psychosis (Carrara and Ventura, 2018).

Mediation studies focus on general population samples and investigate self-stigma of professional help-seeking generally. Anxiously attached individuals report elevated self-stigma of professional help-seeking, which in turn predicts reduced help-seeking intentions (Cheng et al., 2015; Fonseca et al., 2018). There are mixed results for attachment avoidance. Fonseca et al. (2018) found that avoidant attachment was associated with increased stigma of professional help-seeking, which in turn, predicted lower intentions to seek professional help. However, Cheng et al. (2015) failed to find this mediating pathway. No studies have examined self-stigma in the relationship between attachment and help-seeking in people with non-clinical paranoia or psychosis.

1.3. Perceived availability of help

Perceived availability of social help refers to expectations about the amount, type, and quality of help people can access from family and friends (Dour et al., 2014; Hupcey, 1998). People with secure attachment expect more support to be available from others than those with insecure attachment (Ognibene and Collins, 1998). Greater perceived availability of help is associated with more positive help-seeking attitudes in the general population (Bretherton, 2022; Punla et al., 2022) and increased help-seeking behaviours in people with early psychosis (Fridgen et al., 2013). Interestingly, Bretherton (2022) found that higher levels of social support predicted *less use* of mental health services in the general population, highlighting the need to examine the effect of perceived social help on both social and professional help-seeking.

Perceived availability of help may mediate the link between attachment style and help-seeking. Securely attached individuals perceive more support and seek more social help (Ognibene and Collins, 1998). This relationship remains unexplored in non-clinical paranoia and psychosis.

1.4. Summary and current study

In summary, people with non-clinical paranoia and psychosis may delay or fail to engage in the help-seeking behaviours needed to access and benefit from indicated treatments due to problematic ER and self-stigma, and perceived availability of help. Attachment insecurity, common in non-clinical paranoia and psychosis, may contribute to delayed or disrupted help-seeking via these factors. No studies have tested these associations in these populations.

Previous research has focused on single sources of help (e.g., professionals) and specific aspects of stigma (e.g., self-stigma regarding

accessing professional help). The current study examines a new model of help-seeking and acceptance in non-clinical paranoia (Study 1) and clinical psychosis (Study 2) - see Fig. 1. We hypothesised that attachment anxiety and avoidance would negatively affect social and professional help-seeking intentions and help acceptance, mediated by emotion regulation, self-stigma, and perceived help availability.

1. Greater attachment avoidance will predict more use of deactivating ER strategies (suppression and distraction) and so less professional and social help-seeking intentions and help acceptance.
2. Greater attachment anxiety will predict more use of hyperactivating ER strategies (rumination and catastrophisation), and so less professional and social help-seeking intentions and help acceptance.
3. Greater attachment anxiety and avoidance anxiety will predict higher levels of self-stigma (of mental illness, seeking professional help, and seeking social help) and so less professional and social help-seeking intentions and help acceptance.
4. Greater attachment anxiety and avoidance will predict lower levels of perceived availability of social help and so less professional and social help-seeking intentions and help acceptance.

2. Study 1

2.1. Method

2.1.1. Participants

We recruited adults from the general population with high levels of paranoia via Prolific[1] and SONA.[2] Participants scoring ≥53 (1*SD* above the original sample mean, following Bullock et al., 2016) on the Paranoia Scale (Fenigstein and Vanable, 1992) were eligible. A total of 2207 people were screened, 707 were eligible, and 505 completed the study. Four participants completed the study twice; we removed their second participation data. The final sample comprised 501 participants (340 females, 150 males, 9 non-binary, 2 did not answer), aged 18 to 68 years ($M = 34.64$, $SD = 11.23$). The majority[3] were from the United Kingdom (431; 86.0 %) and Europe (29; 5.8 %), and identified as White (409; 81.6 %). Kline (2015) recommends a sample size of 10–20 participants per parameter estimated (we had 14 participants per parameter).

2.1.2. Measures

2.1.2.1. Attachment. The Experiences in Close Relationships Inventory-Short form (ECR-12; Lafontaine et al., 2016) is a 12-item measure of attachment orientation, comprising two subscales measuring attachment anxiety and attachment avoidance. Participants rated items on a 7-point scale from 1 (*disagree strongly*) to 7 (*agree strongly*). Higher scores indicate greater attachment anxiety (α = 0.82; α = 0.82 in original study) or avoidance (α = 0.86; α = 0.89 in original study).

2.1.2.2. Help-seeking. The Help Seeking Measure (HSM-MH; Sood et al., 2021, adapted for mental health concerns) is a 6-item measure developed for this research to assess help-seeking intentions. Three items measure social help-seeking intentions and three measure professional help-seeking intentions. Participants rated items on a 5-point scale rated from 1 (*not at all*) to 5 (*extremely*). Higher scores indicate higher likelihood of seeking social (α = 0.92, α = 0.89 in original study) and professional help (α = 0.96; α = 0.89 in original study).

2.1.2.3. Help acceptance. The Help Acceptance Measure–Trait (HAM-T; Skrobinska et al., 2024b) has 4-items assessing willingness to accept emotional and practical help and advice. Participants rated items on a 5-point scale from 1 (*not at all*) to 5 (*extremely*). Higher scores indicate greater help-acceptance (α = 0.85; α = 0.88 in original study).

2.1.2.4. Paranoia. The Paranoia Scale (PS; Fenigstein and Vanable, 1992) is a 20-item measure of non-clinical paranoia. Participants rated items on a 5-point scale from 1 (*not at all applicable to me*) to 5 (*extremely applicable to me*). Higher scores demonstrate higher levels of paranoia (α = 0.69; α = 0.84 in original study).

2.1.2.5. Emotion regulation. The Cognitive Emotion Regulation Measure (CERQ; adapted by Sood et al., 2021) assesses cognitive emotion regulation strategies in response to negative or unpleasant events, and comprises 6 subscales. We used the rumination and catastrophising subscales (4 items each) and the distraction and suppression subscales (2 items each). Participants rated items on a 5-point scale from 1 (*almost never*) to 5 (*almost always*). Higher scores for rumination and catastrophising indicate greater likelihood of using hyperactivating ER strategies (α = 0.86). Higher scores for suppression and distraction indicate greater likelihood of using deactivating ER strategies (α = 0.76).

2.1.2.6. Self-stigma of seeking professional help. The Self-stigma of Seeking Professional Help Measure (adapted from Vogel et al., 2006) has 10-items. Participants rated items on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate more self-stigma for seeking professional help (α = 0.89; α = 0.82 in original study).

2.1.2.7. Self-stigma of seeking social help. The Self-stigma of Seeking Social Help Measure (SSOSH; adapted from Vogel et al., 2006) comprises 10 items. Participants rated items on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate greater self-stigma regarding social help-seeking (α = 0.92; α = 0.82 in original study).

2.1.2.8. Self-stigma of mental illness. The 'apply to self' subscale[4] of the Self-Stigma of Mental Illness Scale-Short Form (SSMIS-SF; adapted from Corrigan et al. (2012) includes 5 items. Participants rated items on a 9-point scale from 1 (*I strongly disagree*) to 9 (*I strongly agree*). Higher scores indicate greater self-stigma regarding mental illness (α = 0.75; α = 0.74 in original study).

2.1.2.9. Perceived availability of help. The Multidimensional Scale of Perceived Social Support (MSPSS; adapted from Zimet et al., 1988) assesses perceived availability of help. Participants rated 9 items on a 7-point scale from 1 (*very strongly agree*) to 7 (*very strongly disagree*). Higher scores indicate higher perceived availability of help (α = 0.96; α = 0.85 in original study).

2.1.3. Procedure

The study had two parts and was conducted online via Prolific and SONA. In Part 1, participants provided consent, demographics (age, gender, ethnicity, and nationality), and completed the Paranoia Scale pre-screen (Fenigstein and Vanable, 1992). After 4–7 days, participants with high paranoia were invited to Part 2, when they completed measures of attachment, professional and social help-seeking, help acceptance, cognitive ER, self-stigma (regarding mental illness, seeking professional help, and seeking social help), and perceived availability of

[1] We paid £1.68 in line with Prolific guidelines to participants from Prolific.
[2] We granted 5 credits to participants from SONA.
[3] See supplementary material for detailed demographics for Study 1.
[4] We only used the "apply to self" subscale from the self-stigma of mental illness scales as it was most relevant to the study aim. This deviated from the pre-registration that included the use of four subscales (awareness of stereotypes, agreement on stereotypes, apply stereotypes to self, and harm on self-esteem).

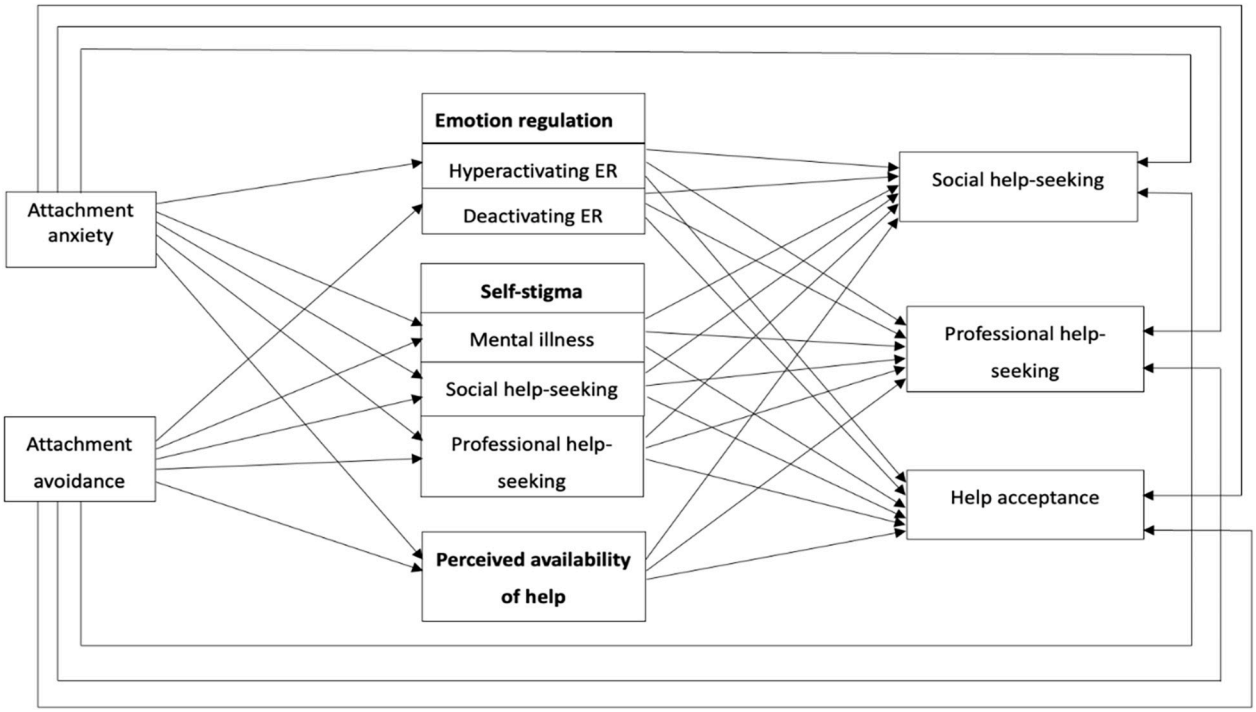

Fig. 1. Hypothesised mediation models of relationship between attachment dimensions and help-seeking and acceptance.

help, in this order. Finally, participants were debriefed, thanked, paid/given credits following Prolific and SONA guidelines. Given the psychological vulnerability of the sample, we also provided contact details for support in the event of any distress or need for mental health advice (e.g., MIND).

2.1.4. Data analysis

We first tested assumptions of path analysis.[5] Rumination and catastrophisation ($r(499) = 0.49$, $p < .01$) were combined to assess hyperactivating ER because they were moderately correlated, are both forms of repetitive negative thinking that intensify emotional distress (Garnefski et al., 2001; Nolen-Hoeksema et al., 2008), and are both implicated in anxious attachment (Mikulincer and Shaver, 2016). Distraction and suppression ($r(499) = 0.49$, $p < .01$) were combined to assess deactivating ER because they were moderately correlated, are both forms of internal avoidance that function to diminish the conscious experience or outward expression of negative emotions (Aldao et al., 2010; Gross, 1998), and are both implicated in avoidant attachment (Mikulincer and Shaver, 2016).

We conducted a path analysis[6] using SPSS AMOS version 29 (Arbuckle, 2022) to examine the full mediation model (Fig. 1). We assumed potential correlations of measurement errors between self-stigma of seeking social help and professional help, and between professional and social help-seeking intentions, given conceptual overlap. Similarly, we assumed correlations of measurement errors between professional help-seeking and help-acceptance, and social help-seeking and help-acceptance due to similar item wording.[7] We used 95 % bootstrap confidence intervals (CI) with 5000 bootstrapped samples to interpret indirect effects.

2.2. Results[8]

The initial model produced a good fit to the data, $\chi^2(17, N = 501) = 68.13$, $p < .001$, CFI = 0.97; SRMR = 0.05; RMSEA = 0.078, CFI above 0.95, and SRMR below 0.08 (Hu and Bentler, 1998). There were significant negative direct effects of avoidance, but not anxiety, on social help-seeking, professional help-seeking, and help acceptance intentions. Greater attachment avoidance predicted less social and professional help-seeking, and help-acceptance intentions.

We found no direct effect of attachment anxiety on help-seeking or acceptance, though there were several indirect effects, shown below (Table 1). We also found significant mediators of the effect of avoidance on help-seeking and acceptance intentions[9] (Table 1).

2.2.1.1. Social help-seeking. We found indirect effects of attachment anxiety on social help-seeking intentions via self-stigma of social help-seeking ($\beta = -0.05$, $p < .001$) and self-stigma of mental illness ($\beta = 0.01$, $p < .05$). The effect of attachment anxiety on social help-seeking intentions is due to greater self-stigma regarding both social help-seeking and mental illness.

In addition to the direct negative effect of attachment avoidance on social help-seeking intentions, there was also an indirect effect via self-stigma of social help-seeking ($\beta = -0.12$, $p < .001$) and perceived availability of help ($\beta = -0.09$, $p < .001$). Participants with greater attachment avoidance reported less perceived availability of help and more stigma of seeking social help, which, in turn, predicted lower social help-seeking intentions. Self-stigma of mental illness did not mediate the link between attachment avoidance and social help-seeking intentions.

[5] See supplementary material for details of assumption examination.

[6] To elucidate the complex mediation model, we used path analysis. This deviated from the pre-registration that suggested using PROCESS for analysis.

[7] See supplementary material for the comparison between model with and without correlated errors.

[8] See supplementary material (Table 1 and Fig. 1) for descriptive statistics and correlations between variables, and effects of the mediation model in Study 1.

[9] See supplementary material (Table 2) for the percentage of variance accounted for by the attachment, ER, self-stigma, perceived availability of help.

Table 1
Direct and indirect effects of attachment dimensions on help-seeking/acceptance through cognitive ER, self-stigma, perceived availability of help.

Effect	Estimate	SE	Lower 95 % CI	Upper 95 % CI	*p*
Social help-seeking					
Direct effect of anxiety	−0.01	0.04	−0.09	0.07	.79
Direct effect of avoidance	−0.40	0.05	−0.49	−0.30	.000
Indirect effect of anxiety					
Total	−0.05	0.03	−0.10	−0.002	.04
Hyperactivating ER	0.004	0.02	−0.03	0.03	.83
Self-stigma of social help-seek	−0.05	0.01	−0.08	−0.02	.000
Self-stigma of professional help- seek	0.004	0.01	−0.01	0.02	.49
Self-stigma of mental illness	0.01	0.01	0.000	0.02	.049
Perceived availability of help	−0.01	0.01	−0.03	0.001	.07
Indirect effect of avoidance					
Total	−0.24	0.03	−0.31	−0.18	.000
Deactivating ER	−0.01	0.01	−0.02	0.01	.22
Self-stigma of social help-seeking	−0.12	0.02	−0.16	−0.07	.000
Self-stigma of professional help-seeking	0.01	0.02	−0.02	0.04	.54
Self-stigma of mental illness	0.01	0.01	0.000	0.025	.06
Perceived availability of help	−0.09	0.02	−0.14	−0.06	.000
Professional help-seeking					
Direct effect of anxiety	0.03	0.05	−0.07	0.12	.58
Direct effect of avoidance	−0.16	0.06	−0.27	−0.05	.003
Indirect effect of anxiety					
Total	0.01	0.03	−0.07	0.04	.59
Hyperactivating ER	0.03	0.02	−0.01	0.07	.12
Self-stigma of social help-seeking	0.02	0.01	−0.002	0.04	.09
Self-stigma of professional help-seeking	−0.05	0.02	−0.09	−0.02	.001
Self-stigma of mental illness	0.002	0.01	−0.009	0.01	.62
Perceived availability of help	−0.01	0.01	−0.02	0.000	.07
Indirect effect of avoidance					
Total	−0.18	0.04	−0.26	−0.11	.000
Deactivating ER	−0.01	0.01	−0.03	0.003	.14
Self-stigma of social help-seeking	0.04	0.03	−0.01	0.09	.12
Self-stigma of professional help-seeking	−0.14	0.03	−0.19	−0.09	.000
Self-stigma of mental illness	0.003	0.01	−0.01	0.02	.70
Perceived availability of help	−0.05	0.02	−0.10	−0.003	.04
Help acceptance					
Direct effect of anxiety	0.02	0.05	−0.07	0.11	.69
Direct effect of avoidance	−0.23	0.06	−0.34	−0.12	.000
Indirect effect of anxiety					
Total	−0.05	0.03	−0.10	0.01	.09
Hyperactivating ER	0.01	0.01	−0.02	0.04	.37
Self-stigma of social help-seeking	−0.02	0.01	−0.05	−0.01	.000
Self-stigma of professional help-seeking	−0.01	0.01	−0.03	−0.002	.02
Self-stigma of mental illness	0.003	0.01	−0.005	0.01	.45
Perceived availability of help	−0.01	0.01	−0.02	0.001	.07
Indirect effect of avoidance					
Total	−0.23	0.04	−0.31	−0.16	.000
Deactivating ER	0.01	0.01	0.001	0.03	.04
Self-stigma of social help-seeking	−0.07	0.02	−0.10	−0.03	.001
Self-stigma of professional help-seeking	−0.03	0.02	−0.06	−0.004	.03
Self-stigma of mental illness	0.004	0.01	−0.01	0.02	.51
Perceived availability of help	−0.06	0.02	−0.11	−0.03	.001

Furthermore, hyperactivating ER, deactivating ER, and self-stigma of professional help-seeking did not mediate links between attachment anxiety or avoidance and social help-seeking intentions (Table 1).

2.2.1.2. Professional help-seeking. There were indirect effects of anxiety ($\beta = -0.05$, $p = .001$) and avoidance ($\beta = -0.14$, $p < .001$) via self-stigma of professional help-seeking on professional help-seeking intentions (Table 1). Both attachment anxiety and avoidance were associated with higher self-stigma of professional help-seeking, which, in turn, was associated with less professional help-seeking intentions. Attachment avoidance had an indirect effect via perceived availability of help ($\beta = -0.05$, $p < .05$). Participants with greater attachment avoidance reported less perceived availability of help, which, in turn, predicted lower professional help-seeking intentions. There were no indirect effects of anxiety and avoidance via deactivating ER, self-stigma of mental illness or self-stigma of social help-seeking.

2.2.1.3. Help acceptance. Attachment anxiety had an indirect effect through self-stigma of professional ($\beta = -0.01$, $p < .05$) and social help-seeking ($\beta = -0.02$, $p < .001$), but not hyperactivating ER, self-stigma of mental illness, or perceived availability of help. Participants with greater attachment anxiety reported higher levels of self-stigma of professional and social help-seeking which, in turn, predicted lower help acceptance intentions.

Attachment avoidance had an indirect effect through self-stigma of social help-seeking ($\beta = -0.07$, $p = .001$), self-stigma of professional help ($\beta = -0.03$, $p < .05$), and perceived availability of help ($\beta = -0.06$, $p = .001$), but not deactivating ER or self-stigma of mental illness. Participants with greater attachment avoidance reported higher levels of self-stigma of professional and social help-seeking, and less perceived availability of help which, in turn, predicted lower help-acceptance intentions.

3. Study 2

3.1. Method

3.1.1. Participants

We invited 359 adults to take part in the study, via Prolific. Inclusion criteria were: self-reported diagnosis of psychosis and confirmation of who provided the diagnosis, duration of psychosis, current medication and other treatments.[10] Of these, 131 participated though 11 did not complete the study. The final sample comprised 120 participants: 49 female, 53 male, 17 non-binary, and 1 who did not disclose their gender. Participants were aged 20–59 years ($M = 32.86$, $SD = 9.74$). The majority[11] were from the United States (74; 61.7 %) and United Kingdom

[10] Participants were asked: diagnosis of mental health problems, duration of psychosis, who diagnosed them, whether they take medication for this problem (as prescribed by a healthcare professional), and whether they receive any other support for this problem from mental health services.

[11] See supplementary material for detailed demographics for Study 2.

(37; 30.8 %), and identified as White (93; 77.5 %). Kline (2015) recommends a sample size for testing mediation of 10–20 participants per parameter (we had 12 participants per parameter).

3.1.2. Measures

We used the same scales as in Study 1 to measure attachment (anxiety α = 0.88, avoidance α = 0.87), cognitive ER (hyperactivating ER α = 0.86, deactivating ER α = 0.81), social (α = 0.91) and professional help-seeking (α = 0.96), help acceptance (α = 0.89), self-stigma (professional help-seeking α = 0.94, social help-seeking α = 0.95, mental illness: α = 0.80)), perceived availability of help (α = 0.96).

3.1.2.1. Paranoia. The Revised Green et al. Paranoid Thoughts Scale (R-GPTS; Freeman et al., 2021) is an 18-item measure of clinical paranoia: 8 items assess ideas of reference and 10 items assess ideas of persecution. Participants rated items on a 5-point scale from 0 (*not at all*) to 4 (*totally*). Higher totals indicate higher paranoia (α = 0.95; α > 0.90 in original study).

3.1.3. Procedure

The study was conducted online. After providing informed consent, participants reported: Prolific ID, demographics (age, gender, ethnicity, and nationality), paranoia, attachment, professional and social help-seeking, help acceptance, ER, self-stigma, and perceived availability of help, in this order. Finally, participants were debriefed, thanked, paid following Prolific guidelines.[12] Given the psychological vulnerability of the sample, we also provided contact details for support in the event of any distress or need for mental health advice (e.g., MIND).

3.1.4. Data analysis

Due to the smaller size of the clinical sample compared to the non-clinical sample in Study 1, we conducted parallel and simple mediation analyses[13] using SPSS PROCESS version 4.3 (Hayes, 2022) with bootstrapping (95 % CIs, 5000 bootstrapped samples) to examine the mediating effects of ER strategies, self-stigma, and perceived availability of help, respectively.

3.2. Results[14]

Participants reported high levels of paranoia comparable to samples recruited via clinical pathways; ideas of reference (M = 14.18, SD = 8.85) showed elevated paranoia, and ideas of persecution (M = 15.58, SD = 12.52) showed moderately severe paranoia, above the cut-off for likely clinical persecutory ideation (Freeman et al., 2021). Rumination and catastrophisation ($r(433)$ = 0.49, p < .01) and distraction and suppression ($r(433)$ = 0.53, p < .01) were moderately correlated and so combined into hyperactivating (α = 0.86) and deactivating ER (α = 0.81).

We conducted nine mediation analyses to test whether cognitive ER, self-stigma, and perceived availability of help mediated the effects of attachment on help-seeking and acceptance. Results showed direct negative effects of attachment anxiety and avoidance on social help-seeking intentions (Table 2).

There were also indirect effects of anxiety (β = −0.10, 95 % CI [−0.19, −0.02]) and avoidance (β = −0.16, 95 % CI [−0.29, −0.04]) on social help-seeking intentions via self-stigma of social help-seeking, but not via cognitive ER, self-stigma of professional help-seeking and mental illness, or perceived availability of help (Table 3). Participants with greater anxiety and avoidance reported greater self-stigma of social help-seeking which, in turn, predicted less social help-seeking intentions

Table 2
Direct and indirect effects of attachment dimensions on social help-seeking, professional help-seeking, and help-acceptance via possible mediators.

Effect	β	SE	Lower 95 % CI	Upper 95 % CI	*p*
Self-stigma					
Social help-seeking					
Direct effect of anxiety	−0.02	0.06	−0.13	0.09	.66
Direct effect of avoidance	−0.38	0.06	−0.50	−0.26	.00
Indirect effect of anxiety					
Self-stigma of social help-seeking	−0.10	0.04	−0.19	−0.02	
Self-stigma of professional help-seeking	0.02	0.02	−0.02	0.07	
Self-stigma of mental illness	−0.03	0.03	−0.10	0.03	
Indirect effect of avoidance					
Self-stigma of social help-seeking	−0.16	0.06	−0.29	−0.04	
Self-stigma of professional help-seeking	0.04	0.04	−0.04	0.12	
Self-stigma of mental illness	−0.03	0.03	−0.10	0.03	
Cognitive ER					
Social help-seeking					
Direct effect of anxiety	−0.11	0.05	−0.22	0.001	.06
Direct effect of avoidance	−0.49	0.05	−0.60	−0.38	.00
Indirect effect of anxiety					
Hyperactivating ER	−0.01	0.03	−0.08	0.06	
Indirect effect of avoidance					
Deactivating ER	−0.01	0.03	−0.07	0.05	
Perceived availability of help					
Social help-seeking					
Direct effect of anxiety	−0.09	0.05	−0.22	−0.19	.01
Direct effect of avoidance	−0.39	0.06	−0.51	−0.26	.00
Indirect effect of anxiety					
Perceived availability of help	−0.03	0.02	−0.08	0.01	
Indirect effect of avoidance					
Perceived availability of help	−0.14	0.07	−0.28	0.01	
Self-stigma					
Professional help-seeking					
Direct effect of anxiety	0.04	0.08	−0.11	0.20	.56
Direct effect of avoidance	−0.10	0.08	−0.26	0.07	.25
Indirect effect of anxiety					
Self-stigma of social help-seeking	0.02	0.06	−0.08	0.15	
Self-stigma of professional help-seeking	−0.05	0.03	−0.13	0.003	
Self-stigma of mental illness	−0.13	0.05	−0.23	−0.05	
Indirect effect of avoidance					
Self-stigma of social help-seeking	0.03	0.09	−0.14	0.21	
Self-stigma of professional help-seeking	−0.09	0.06	−0.24	0.01	
Self-stigma of mental illness	−0.12	0.05	−0.23	−0.04	
Cognitive ER					
Professional help-seeking					
Direct effect of anxiety	−0.09	0.08	−0.24	0.07	.27
Direct effect of avoidance	−0.26	0.08	−0.41	−0.11	.00
Indirect effect of anxiety					
Hyperactivating ER	0.01	0.03	−0.06	0.07	
Indirect effect of avoidance					
Deactivating ER	0.02	0.04	−0.05	0.10	
Perceived availability of help					
Professional help-seeking					

(*continued on next page*)

[12] We paid £1.68 in line with Prolific guidelines to participants from Prolific.
[13] See supplementary material for details of assumption examination.
[14] See supplementary material (Table 3) for the descriptive statistics and correlations between variables in Study 2.

Table 2 (*continued*)

Effect	β	SE	Lower 95 % CI	Upper 95 % CI	*p*
Direct effect of anxiety	−0.06	0.07	−0.21	0.08	.38
Direct effect of avoidance	−0.16	0.09	−0.35	0.02	.08
Indirect effect of anxiety					
Perceived availability of help	−0.02	0.02	−0.07	0.02	
Indirect effect of avoidance					
Perceived availability of help	−0.10	0.08	−0.27	0.07	
Self-stigma					
Help acceptance					
Direct effect of anxiety	0.05	0.08	−0.11	0.20	.56
Direct effect of avoidance	−0.22	0.06	−0.34	−0.11	.00
Indirect effect of anxiety					
Self-stigma of social help-seeking	−0.04	0.05	−0.13	0.06	
Self-stigma of professional help-seeking	−0.02	0.03	−0.09	0.02	
Self-stigma of mental illness	−0.08	0.04	−0.17	−0.02	
Indirect effect of avoidance					
Self-stigma of social help-seeking	−0.06	0.08	−0.22	0.10	
Self-stigma of professional help-seeking	−0.05	0.05	−0.16	0.05	
Self-stigma of mental illness	−0.08	0.04	−0.16	−0.01	
Cognitive ER					
Help acceptance					
Direct effect of anxiety	−0.03	0.05	−0.13	0.08	.63
Direct effect of avoidance	−0.36	0.05	−0.47	−0.26	.00
Indirect effect of anxiety					
Hyperactivating ER	−0.03	0.03	−0.11	0.01	
Indirect effect of avoidance					
Deactivating ER	0.04	0.04	−0.02	0.12	
Perceived availability of help					
Help acceptance					
Direct effect of anxiety	−0.03	0.05	−0.13	0.07	.52
Direct effect of avoidance	−0.27	0.06	−0.40	−0.15	.00
Indirect effect of anxiety					
Perceived availability of help	−0.02	0.02	−0.06	0.01	
Indirect effect of avoidance					
Perceived availability of help	−0.11	0.07	−0.25	0.03	

(Fig. 2).

There were direct negative effects of avoidance on professional help-seeking and help acceptance, but not of attachment anxiety (Table 2). Higher levels of attachment avoidance predicted less professional help-seeking and help-acceptance intentions.

There were indirect effects of the avoidance - professional help-seeking association ($\beta = -0.12$, 95 % CI [−0.23, −0.04]) and the avoidance - help-acceptance association ($\beta = -0.08$, 95 % CI [−0.16, −0.01]) through self-stigma of mental illness (Table 2). Participants with greater avoidance reported greater self-stigma of mental illness which, in turn, predicted less professional help-seeking and help acceptance intentions (Fig. 2).

There was no indirect effect of attachment anxiety and avoidance on social help-seeking, professional help-seeking, or help acceptance through cognitive ER or perceived availability of help (Table 2). ER strategies and perceived availability of help did not mediate the association between attachment dimensions and help-seeking/acceptance intentions (Fig. 3).

4. Discussion

We aimed to expand our theoretical understanding of the mechanisms involved in the association between attachment dimensions and help-seeking/acceptance intentions for people with non-clinical paranoia and psychosis. Consistent with hypothesis 1, higher attachment avoidance predicted less professional and social help-seeking intentions and less help-acceptance intentions in people with non-clinical paranoia and in people with psychosis. In line with previous research (Skrobinska et al., 2024b; Sood et al., 2021), this suggests an inhibitory effect of attachment avoidance in help-seeking/acceptance. Our study is the first to show that difficulties accepting help are associated with avoidance of intimacy in people with non-clinical paranoia.

We found that attachment anxiety predicted less social help-seeking intentions in the clinical group only. Contrary to previous findings for undergraduates (Shaffer et al., 2006; Vogel et al., 2006), we found that attachment anxiety was not associated with professional help-seeking intentions. This is probably due to the activation of conflicting motives for desire for help and fear of rejection, resulting in ambivalence toward seeking and accepting help. Our results suggest there are different patterns of help-seeking intentions in people with psychosis compared with the general population, who usually increase dependence on others and are more likely to seek help in times of need (Mikulincer and Shaver, 2003; Vogel and Wei, 2005). This novel finding demonstrates the influence of attachment anxiety on social help-seeking intentions in people with psychosis.

The results also offer new insights into the relationship between attachment and help-seeking/acceptance intentions in paranoia by exploring the mechanisms involved. In contrast to hypothesis 2 and previous findings in college students (Romanson, 2018), cognitive ER strategies did *not* mediate the attachment and help-seeking/acceptance relationship in either sample. Methodological differences may explain the different results; Romanson (2018) focused on online help-seeking, while our research focused on mediators (e.g., self-stigma) in paranoid individuals when seeking and receiving in-person help. Additionally, ER strategies may interact with paranoia specific biases (rather than acting in isolation); future research should examine these interactions.

This is the first study to distinguish the effects of different types of self-stigma (stigma of social help-seeking, professional help-seeking, and mental illness). We demonstrate, as predicted (hypothesis 2), the mediating effects of self-stigma in both samples, with distinct patterns. The results show that individuals with high levels of attachment anxiety or avoidance have greater self-stigma, and, in turn, less help-seeking/acceptance intentions. In line with Cheng et al. (2015) and Fonseca et al. (2018), these results suggest that insecurely attached individuals may be preoccupied with others' opinions about disclosing emotional distress to professionals, resulting in a reluctance to seek help from professionals. Our study is the first to show that self-stigma of social help-seeking, professional help-seeking, and mental illness are each important barriers for both non-clinical and clinical groups with elevated paranoia, who are also insecurely attached, in seeking and accepting help.

Interestingly, self-stigma of social and professional help-seeking and mental illness played different roles in the two samples. In the non-clinical group, self-stigma of social help-seeking mediated the association between attachment and social help-seeking/help-acceptance intentions; self-stigma of professional help-seeking mediated the association between attachment and professional help-seeking/help-acceptance intentions; and self-stigma of mental illness mediated the link between attachment anxiety and social help-seeking intentions. In the clinical sample, self-stigma of social help-seeking mediated the association between attachment and social help-seeking intentions; and self-stigma of mental illness mediated the association between attachment and professional help-seeking/help-acceptance intentions. In both samples, self-stigma of social help-seeking (not of mental illness) predicted social help-seeking intentions. A key difference was that

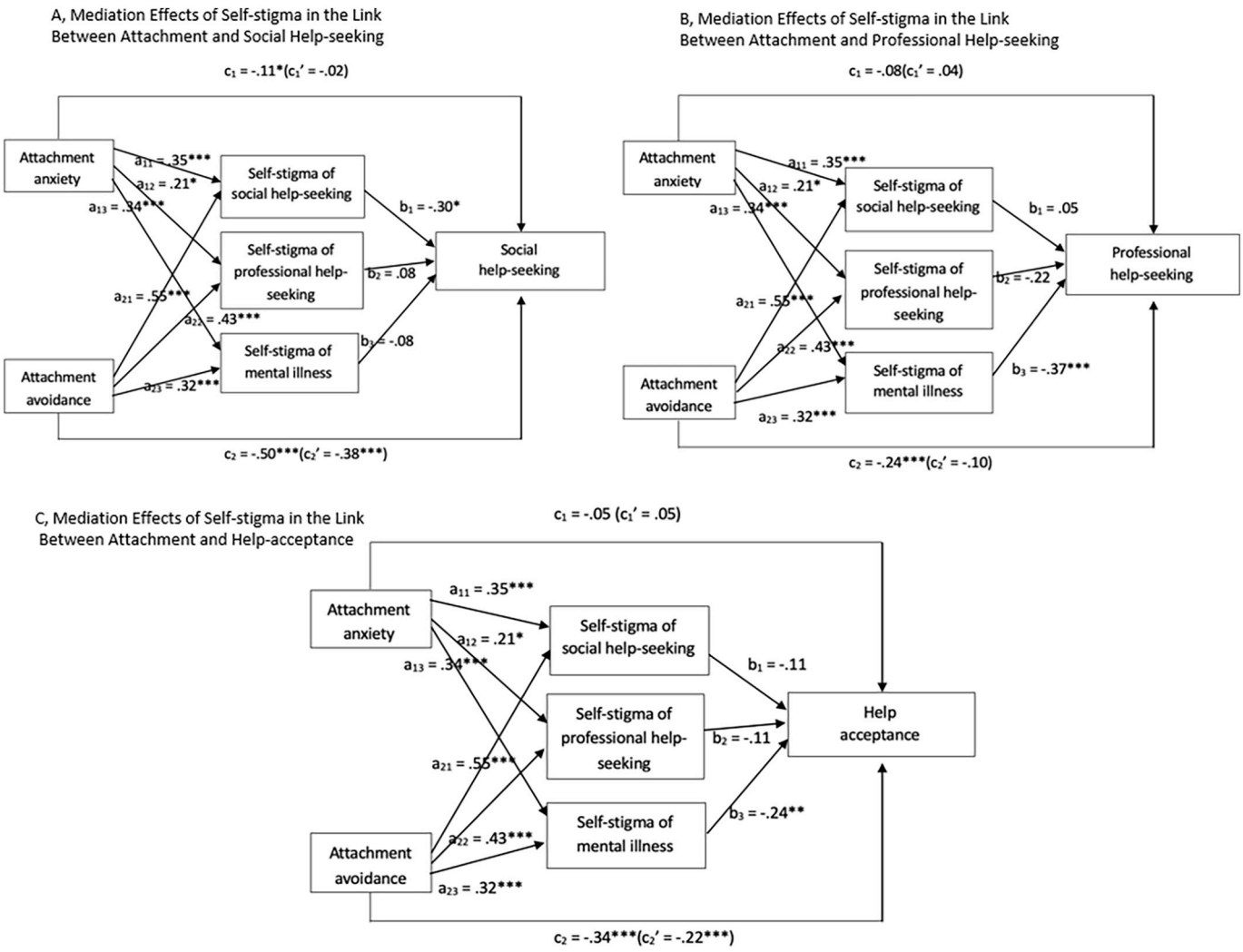

Fig. 2. Mediating effects of self-stigma. *Note.* a = effects of attachment dimensions on mediators, b = effects of mediators on help-seeking/acceptance, c = total effect, c' = direct effect; values are standardized; *$p < .05$. **$p < .01$. ***$p < .001$.

professional help-seeking was predicted by self-stigma of professional help-seeking in the non-clinical group, and self-stigma of mental illness in the clinical group. These novel findings provide evidence for the suggestion made by Tucker et al. (2013), that it is the self-stigma of help-seeking (rather than mental illness alone) that explains behavioural intentions.

In the current study, through differentiating social help-seeking intentions and professional help-seeking intentions, we show for the first time the mediating effect of self-stigma of social help-seeking on the association between attachment and social help-seeking intentions in non-clinical and clinical paranoia, and the mediating effect of self-stigma of professional help-seeking on the association between attachment and professional help-seeking intentions in non-clinical paranoia. The nonsignificant mediating effect of self-stigma of social help-seeking on professional help-seeking intentions suggests that, even if individuals with paranoia feel shame about approaching close others for help with their mental health problems, they may not instead turn to professional help. The results extend previous research (Carrara and Ventura, 2018; Vrbova et al., 2016) by distinguishing self-stigma of help-seeking, and demonstrating the role of specific aspects of stigma in clinical and non-clinical groups with elevated paranoia, for the first time.

As expected (hypothesis 4), perceived availability of help mediated the link between attachment avoidance and reduced help-seeking/acceptance intentions in non-clinical paranoia. Attachment avoidance, but not anxiety, was linked to lower perceived availability of help, and, in turn, less help-seeking intentions. This is consistent with Ognibene and Collins (1998) and evidences the role of perceived availability of help for people with non-clinical paranoia specifically. In the clinical group, perceived availability of help did not mediate help-seeking intentions, possibly due to people's mistrust and fear of others overriding any awareness of potential support available to those who are avoidantly attached.

4.1. Strengths and limitations

The use of path analysis in Study 1 allows simultaneous analysis of standardised direct and indirect effects of mediators within the hypothesised model. Although we tested directional paths that were grounded in the theoretical model (Bowlby, 1969) and previous research (Cheng et al., 2015; Ognibene and Collins, 1998; Romanson, 2018), the current studies were cross-sectional. Future research should utilise experimental designs that manipulate attachment dimensions (e.g., via attachment imagery priming) and the mediators we have identified (self-stigma and perceived availability of support) to test causal effects. We were unable to run the same analyses in the two groups due

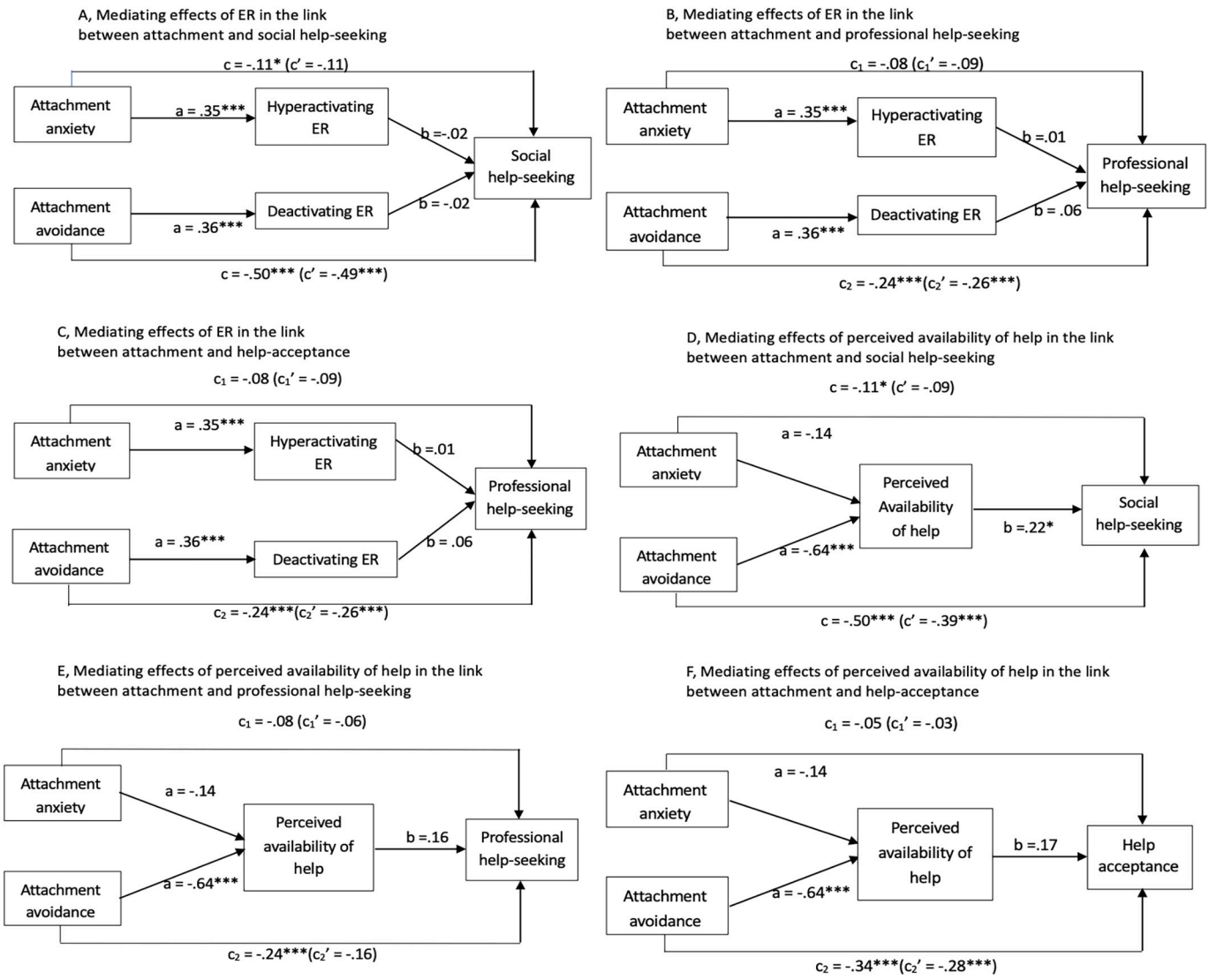

Fig. 3. Mediating effects of ER and perceived availability of help. *Note.* a = effects of attachment dimensions on mediators, b = effects of mediators on help-seeking/acceptance, c = total effect, c′ = direct effect; values are standardized; *$p < .05$. **$p < .01$. ***$p < .001$.

to the sample size of the clinical group. However, we did conduct additional analyses in the non-clinical group (as used with the clinical group) which yielded the same results.[15] Our clinical sample was based on a self-reported psychosis diagnosis, which is a limitation, and while this is common practice in psychosis research (e.g., Skrobinska et al., 2024b; Tiller et al., 2025), future studies should replicate our findings with clinical samples whose status is confirmed by clinicians and/or recruited via treatment programmes. We used a measure of cognitive ER strategies, warranting further investigation with a broader measure that assesses other means of regulating emotion. Future research might also utilise other attachment measures such as the Psychosis Attachment Measure (PAM-R; Pollard et al., 2020) which also measures disorganised attachment. Previous studies have examined causality from attachment to psychosis, and future research should examine causality from psychosis to attachment behaviours.

4.2. Implications

The current studies show that attachment dimensions are associated with help-seeking and help-acceptance intentions in people with non-clinical paranoia and people with psychosis characterised by clinical levels of paranoia, and via different patterns of mediators. In order to facilitate help-seeking and acceptance in both groups, we need to assess attachment style and target likely mediators, particularly specific aspects of self-stigma.

In clinical groups, people who are insecurely attached are particularly vulnerable to not engaging or dropping out of treatments prematurely (Berry and Danquah, 2016), thereby extending DUP. Clinicians should address self-stigma of help-seeking in the very early stages of the assessment process, to improve and retain engagement with services, and reduce drop-out rates (Doyle et al., 2014; Kreyenbuhl et al., 2009; Richardson et al., 2019). While the psychological literature emphasises the importance of engagement when working with people with psychosis (e.g., Chadwick, 2006; McGonagle et al., 2021; Morrison et al., 2016; Wood et al., 2018), clinicians do not routinely address self-stigma of help-seeking; our results suggest that this should be a priority.

For individuals with non-clinical paranoia, educational and outreach programmes should target the *stigma of seeking help* specifically. To date, such programmes have focused on stigma associated with mental illness. Our results indicate that normalising the act of *help-seeking* should be a priority, given the prevalence of insecure attachment in people with sub-

[15] See supplementary material for the results of PROCESS analysis (Table 4).

clinical levels of paranoia. Health promotion campaigns would not need to be specific to paranoia, and could be extended to a range of mental health conditions for which people hesitate to seek help. Such an approach may be particularly beneficial in university settings given increased reporting of mental health problems among students and organisational concerns about how best to respond (Newman-Taylor et al., 2018). This aligns with anti-stigma campaigns that promote greater openness about mental ill-health, more social contact between people with and without mental health conditions, and accurate and positive representations of people experiencing mental health difficulties (e.g., in film) to correct misinformation (Henderson et al., 2017; World Health Organisation, n.d). Our results indicate that anti-stigma campaigns should also prioritise the *stigma of seeking and accepting help* for mental health problems.

4.3. Conclusion

The current research demonstrates the link between insecure attachment and help-seeking/acceptance intentions, and identifies self-stigma and perceived availability of help as key mediators underlying these associations. Our findings extend the theoretical literature and highlight clinical, educational and policy implications. Future studies should explore causality and the effects of interventions addressing self-stigma and perceived availability of support in people with non-clinical paranoia and psychosis.

Transparency and openness

All data, analysis code, and research materials are accessible via https://osf.io/3jrch/. The study was pre-registered on the Open Science Framework (https://osf.io/fg5be).

CRediT authorship contribution statement

Wenjin Liu: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Katherine B. Carnelley:** Writing – review & editing, Validation, Supervision, Methodology, Funding acquisition, Conceptualization. **Katherine Newman-Taylor:** Writing – review & editing, Validation, Supervision, Methodology, Funding acquisition, Conceptualization.

Ethics

This research received approval (reference number: 80735.A1) from the Research Ethics Committee of the University of Southampton on August 15th 2023.

Declaration of Generative AI and AI-assisted technologies in the writing process

No artificial intelligence assisted technologies were used in this article.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Wenjin Liu reports financial support was provided by Chinese Scholarship Council and University of Southampton. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.schres.2025.08.017.

References

Ainsworth, M.D.S., Blehar, M.C., Waters, E., Wall, S., 1978. Patterns of Attachment: A Psychological Study of the Strange Situation, 391. Lawrence Erlbaum, p. xviii.

Aldao, A., Nolen-Hoeksema, S., Schweizer, S., 2010. Emotion-regulation strategies across psychopathology: A meta-analytic review. Clin. Psychol. Rev. 30 (2), 217–237. https://doi.org/10.1016/j.cpr.2009.11.004.

Arbuckle, J.L., 2022. IBM® SPSS® Amos™ User's Guide.

Bartholomew, K., Horowitz, L.M., 1991. Attachment styles among young adults: A test of a four-category model. J. Pers. Soc. Psychol. 61, 226–244. https://doi.org/10.1037/0022-3514.61.2.226.

Bentall, R.P., Rowse, G., Shryane, N., Kinderman, P., Howard, R., Blackwood, N., Moore, R., Corcoran, R., 2009. The cognitive and affective structure of paranoid delusions: a transdiagnostic investigation of patients with schizophrenia spectrum disorders and depression. Arch. Gen. Psychiatry 66 (3), 236–247. https://doi.org/10.1001/archgenpsychiatry.2009.1.

Berry, K., Danquah, A., 2016. Attachment-informed therapy for adults: Towards a unifying perspective on practice. Psychol. Psychother. Theory Res. Pract. 89 (1), 15–32. https://doi.org/10.1111/papt.12063.

Birchwood, M., Connor, C., Lester, H., Patterson, P., Freemantle, N., Marshall, M., Fowler, D., Lewis, S., Jones, P., Amos, T., 2013. Reducing duration of untreated psychosis: Care pathways to early intervention in psychosis services. Br. J. Psychiatry 203 (1), 58–64.

Bird, J.C., Waite, F., Rowsell, E., Fergusson, E.C., Freeman, D., 2017. Cognitive, affective, and social factors maintaining paranoia in adolescents with mental health problems: A longitudinal study. Psychiatry Res. 257, 34–39.

Birnbaum, M.L., Wan, C.R., Broussard, B., Compton, M.T., 2017. Associations between duration of untreated psychosis and domains of positive and negative symptoms. Early Interv. Psychiatry 11 (5), 375–382. https://doi.org/10.1111/eip.12256.

Bowlby, J., 1969. Attachment and Loss. 1: Attachment, 2. ed. Basic Books.

Brennan, K.A., Clark, C.L., Shaver, P.R., 1998. Self-report measurement of adult attachment: an integrative overview. In: Attachment Theory and Close Relationships. The Guilford Press, pp. 46–76.

Bretherton, S.J., 2022. The Influence of Social Support, Help-Seeking Attitudes and Help-Seeking Intentions on Older Australians' use of Mental Health Services for Depression and Anxiety Symptoms. Int. J. Aging Hum. Dev. 95 (3), 308–325. https://doi.org/10.1177/00914150211050882.

Bullock, G., Newman-Taylor, K., Stopa, L., 2016. The role of mental imagery in non-clinical paranoia. J. Behav. Ther. Exp. Psychiatry 50, 264–268. https://doi.org/10.1016/j.jbtep.2015.10.002.

Carrara, B.S., Ventura, C.A.A., 2018. Self-stigma, mentally ill persons and health services: An integrative review of literature. Arch. Psychiatr. Nurs. 32 (2), 317–324.

Chadwick, P., 2006. Person-Based Cognitive Therapy for Distressing Psychosis, 1st ed. Wiley. https://doi.org/10.1002/9780470713075.

Chaiyakunapruk, N., Chong, H.Y., Teoh, S.L., Wu, D.B.C., Kotirum, S., Chiou, C.F., 2016. Global economic burden of schizophrenia: a systematic review. Neuropsychiatr. Dis. Treat., 357 https://doi.org/10.2147/NDT.S96649.

Cheng, H.L., McDermott, R.C., Lopez, F.G., 2015. Mental health, self-stigma, and help-seeking intentions among emerging adults: an attachment perspective. Couns. Psychol. 43 (3), 463–487.

Ciarrochi, J., Wilson, C.J., Deane, F.P., Rickwood, D., 2003. Do difficulties with emotions inhibit help-seeking in adolescence? The role of age and emotional competence in predicting help-seeking intentions. Couns. Psychol. Q. 16 (2), 103–120. https://doi.org/10.1080/0951507031000152632.

Collins, N., Feeney, B., 2000. A safe haven: an attachment theory perspective on support seeking and caregiving in intimate relationships. J. Pers. Soc. Psychol. 78, 1053–1073. https://doi.org/10.1037/0022-3514.78.6.1053.

Collins, N.L., Read, S.J., 1990. Adult attachment, working models, and relationship quality in dating couples. J. Pers. Soc. Psychol. 58, 644–663. https://doi.org/10.1037/0022-3514.58.4.644.

Corrigan, P.W., Michaels, P.J., Vega, E., Gause, M., Watson, A.C., Rusch, N., 2012. Self-stigma of mental illness scale-short form: reliability and validity. Psychiatry Res. 199 (1), 65–69. https://doi.org/10.1016/j.psychres.2012.04.009.

Dour, H.J., Wiley, J.F., Roy-Byrne, P., Stein, M.B., Sullivan, G., Sherbourne, C.D., Bystritsky, A., Rose, R.D., Craske, M.G., 2014. Perceived social support mediates anxiety and depressive symptom changes following primary care intervention. Depress. Anxiety 31 (5), 436–442. https://doi.org/10.1002/da.22216.

Doyle, R., Turner, N., Fanning, F., Brennan, D., Renwick, L., Lawlor, E., Clarke, M., 2014. First-episode psychosis and disengagement from treatment: a systematic review. Psychiatr. Serv. 65 (5), 603–611. https://doi.org/10.1176/appi.ps.201200570.

Dozier, M., 1990. Attachment organization and treatment use for adults with serious psychopathological disorders. Dev. Psychopathol. 2 (1), 47–60. https://doi.org/10.1017/S0954579400000584.

Fenigstein, A., Vanable, P.A., 1992. Paranoia and self-consciousness. J. Pers. Soc. Psychol. 62 (1), 129.

Fonseca, A., Moura-Ramos, M., Canavarro, M.C., 2018. Attachment and mental help-seeking in the perinatal period: the role of stigma. Community Ment. Health J. 54 (1), 92–101. https://doi.org/10.1007/s10597-017-0138-3.

Freeman, D., Garety, P.A., Kuipers, E., Fowler, D., Bebbington, P.E., 2002. A cognitive model of persecutory delusions. British Journal of Clinical Psychology 41 (4), 331–347. https://doi.org/10.1348/014466502760387461.
Freeman, D., Garety, P.A., Bebbington, P.E., Smith, B., Rollinson, R., Fowler, D., Kuipers, E., Ray, K., Dunn, G., 2005. Psychological investigation of the structure of paranoia in a non-clinical population. Br. J. Psychiatry 186 (5), 427–435.
Freeman, D., Loe, B.S., Kingdon, D., Startup, H., Molodynski, A., Rosebrock, L., Brown, P., Sheaves, B., Waite, F., Bird, J.C., 2021. The revised Green et al., paranoid thoughts scale (R-GPTS): psychometric properties, severity ranges, and clinical cut-offs. Psychol. Med. 51 (2), 244–253. https://doi.org/10.1017/S0033291719003155.
Fridgen, G.J., Aston, J., Gschwandtner, U., Pflueger, M., Zimmermann, R., Studerus, E., Stieglitz, R.D., Riecher-Rössler, A., 2013. Help-seeking and pathways to care in the early stages of psychosis. Soc. Psychiatry Psychiatr. Epidemiol. 48 (7), 1033–1043. https://doi.org/10.1007/s00127-012-0628-0.
Garnefski, N., Kraaij, V., Spinhoven, P., 2001. Negative life events, cognitive emotion regulation and emotional problems. Personal. Individ. Differ. 30 (8), 1311–1327. https://doi.org/10.1016/S0191-8869(00)00113-6.
Gross, J.J., 1998. The emerging field of emotion regulation: an integrative review. Rev. Gen. Psychol. 2 (3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271.
Gumley, A.I., Taylor, H.E.F., Schwannauer, M., MacBeth, A., 2014. A systematic review of attachment and psychosis: measurement, construct validity and outcomes. Acta Psychiatr. Scand. 129 (4), 257–274.
Hayes, A.F., 2022. Introduction to Mediation, Moderation, and Conditional Process Analysis: Third Edition: A Regression-Based Approach. Guilford Press. In: https://www.guilford.com/books/Introduction-to-Mediation-Moderation-and-Conditional-Process-Analysis/Andrew-Hayes/9781462549030.
Henderson, C., Robinson, E., Evans-Lacko, S., Thornicroft, G., 2017. Relationships between anti-stigma programme awareness, disclosure comfort and intended help-seeking regarding a mental health problem. Br. J. Psychiatry 211 (5), 316–322. https://doi.org/10.1192/bjp.bp.116.195867.
Hu, L., Bentler, P.M., 1998. Fit indices in covariance structure modeling: sensitivity to underparameterized model misspecification. Psychol. Methods 3 (4), 424–453. https://doi.org/10.1037/1082-989X.3.4.424.
Hu, J., Zheng, Q., Zhang, Y., Liu, C., Tian, X., Liu, X., Wang, D., Ma, J., 2021. Help-seeking behavior of individuals with schizophrenia in the general population of Hunan, China. Sci. Rep. 11 (1), 1. https://doi.org/10.1038/s41598-021-01819-w.
Hupcey, J.E., 1998. Social support: assessing conceptual coherence. Qual. Health Res. 8 (3), 304–318. https://doi.org/10.1177/104973239800800302.
Irkörücü, A., Demir, A., 2015. The effect of attachment styles on attitude towards help seeking. Mersin Üniversitesi Eğitim Fakültesi Dergisi 11 (3). https://doi.org/10.17860/efd.87991.
Jimeno, N., Gomez-Pilar, J., Poza, J., Hornero, R., Vogeley, K., Meisenzahl, E., Haidl, T., Rosen, M., Klosterkötter, J., Schultze-Lutter, F., 2020. Main symptomatic treatment targets in suspected and early psychosis: new insights from network analysis. Schizophr. Bull. 46 (4), 884–895. https://doi.org/10.1093/schbul/sbz140.
Kimhy, D., Vakhrusheva, J., Jobson-Ahmed, L., Tarrier, N., Malasoina, D., Gross, J.J., 2012. Emotional awareness and regulation in individuals with schizophrenia: implications for social functioning. Psychiatry Res. 200 (2), 193–201. https://doi.org/10.1016/j.psychres.2012.05.029.
Kline, R.B., 2015. Principles and Practice of Structural Equation Modeling. Guilford publications.
Kreyenbuhl, J., Nossel, I.R., Dixon, L.B., 2009. Disengagement from mental health treatment among individuals with schizophrenia and strategies for facilitating connections to care: a review of the literature. Schizophr. Bull. 35 (4), 696–703. https://doi.org/10.1093/schbul/sbp046.
Lafontaine, M.F., Brassard, A., Lussier, Y., Valois, P., Shaver, P.R., Johnson, S.M., 2016. Selecting the Best Items for a Short-Form of the Experiences in Close Relationships Questionnaire. Eur. J. Psychol. Assess. 32 (2), 140–154. https://doi.org/10.1027/1015-5759/a000243.
Lincoln, T.M., Peters, E., 2019. A systematic review and discussion of symptom specific cognitive behavioural approaches to delusions and hallucinations. Schizophr. Res. 203, 66–79. https://doi.org/10.1016/j.schres.2017.12.014.
Lu, W., Mueser, K.T., Rosenberg, S.D., Yanos, P.T., Mahmoud, N., 2017. Posttraumatic reactions to psychosis: a qualitative analysis. Front. Psych. 8. https://doi.org/10.3389/fpsyt.2017.00129.
Macinnes, M., Macpherson, G., Austin, J., Schwannauer, M., 2016. Examining the effect of childhood trauma on psychological distress, risk of violence and engagement, in forensic mental health. Psychiatry Res. 246, 314–320. https://doi.org/10.1016/j.psychres.2016.09.054.
McGonagle, G., Bucci, S., Varese, F., Raphael, J., Berry, K., 2021. Is adult attachment associated with engagement with services? A systematic literature review. J. Ment. Health 30 (5), 607–618. https://doi.org/10.1080/09638237.2019.1608922.
Mechanic, D., 1962. Students Under Stress: A Study of the Social Psychology of Adaptation, 231. Free Press Glencoe, p. vi.
Melo, S.S., Bentall, R.P., 2010. Coping in subclinical paranoia: a two nations study. Psychol. Psychother. Theory Res. Pract. 83 (4), 407–420.
Mikulincer, M., Shaver, P., 2003. The attachment behavioral system in adulthood: activation, psychodynamics, and interpersonal processes. Adv. Exp. Soc. Psychol. 35, 53–152. https://doi.org/10.1016/S0065-2601(03)01002-5.
Mikulincer, M., Shaver, P.R., 2016. Attachment in Adulthood: Structure, Dynamics, and Change, 2nd ed. Guilford Press.
Mikulincer, M., Shaver, P.R., 2019. Attachment orientations and emotion regulation. Curr. Opin. Psychol. 25, 6–10. https://doi.org/10.1016/j.copsyc.2018.02.006.
Morrison, A.P., Burke, E., Murphy, E., Pyle, M., Bowe, S., Varese, F., Dunn, G., Chapman, N., Hutton, P., Welford, M., Wood, L.J., 2016. Cognitive therapy for internalised stigma in people experiencing psychosis: a pilot randomised controlled trial. Psychiatry Res. 240, 96–102. https://doi.org/10.1016/j.psychres.2016.04.024.
Moutoussis, M., Williams, J., Dayan, P., Bentall, R.P., 2007. Persecutory delusions and the conditioned avoidance paradigm: towards an integration of the psychology and biology of paranoia. Cogn. Neuropsychiatry 12 (6), 495–510. https://doi.org/10.1080/13546800701566686.
Newman-Taylor, K., Bentall, R., 2024. Cognitive behavioural therapy for psychosis: the end of the line or time for a new approach? Psychol. Psychother. Theory Res. Pract. 97 (1), 4–18. https://doi.org/10.1111/papt.12498.
Newman-Taylor, K., Kemp, A., Potter, H., Au-Yeung, S.K., 2018. An online investigation of imagery to attenuate paranoia in college students. J. Child Fam. Stud. 27 (3), 853–859. https://doi.org/10.1007/s10826-017-0934-y.
Newman-Taylor, K., Sood, M., Rowe, A.C., Carnelley, K.B., 2021. The impact of repeated attachment priming on paranoia, mood and help-seeking intentions in an analogue sample. Brain Sci. 11 (10), 1257.
Nolen-Hoeksema, S., Wisco, B.E., Lyubomirsky, S., 2008. Rethinking rumination. Perspect. Psychol. Sci. 3 (5), 400–424. https://doi.org/10.1111/j.1745-6924.2008.00088.x.
O' Driscoll, C., Laing, J., Mason, O., 2014. Cognitive emotion regulation strategies, alexithymia and dissociation in schizophrenia, a review and meta-analysis. Clin. Psychol. Rev. 34 (6), 482–495. https://doi.org/10.1016/j.cpr.2014.07.002.
Ognibene, T.C., Collins, N.L., 1998. Adult attachment styles, perceived social support and coping strategies. J. Soc. Pers. Relat. 15 (3), 323–345. https://doi.org/10.1177/0265407598153002.
Pollard, C., Bucci, S., MacBeth, A., Berry, K., 2020. The revised psychosis attachment measure: measuring disorganised attachment. Br. J. Clin. Psychol. 59 (3), 335–353. https://doi.org/10.1111/bjc.12249.
Pourmand, V., 2021. Cultural Differences in Emotion Regulation and Social Support Seeking.
Punla, N.F.D., Regalado, D.R.B., Navarro, R.M., 2022. Perceived social support as moderator between self-stigma and help-seeking attitudes. Globus: An International Journal of Medical Science, Engineering & Technology 11 (1). https://doi.org/10.46360/globus.met.320221014.
Restek-Petrovi, B., 2015. Personality characteristics of psychotic patients as possible motivating factors for participating in group psychotherapy. Psychiatr. Danub. 27.
Richardson, T., Dasyam, B., Courtney, H., White, L., Tedbury, J., Butt, J., Newman-Taylor, K., 2019. Predictors of disengagement from cognitive behavioural therapy for psychosis in a National Health Service setting: a retrospective evaluation. Br. J. Clin. Psychol. 58 (4), 440–451. https://doi.org/10.1111/bjc.12222.
Rickwood, D.J., Deane, F.P., Wilson, C.J., 2007. When and how do young people seek professional help for mental health problems? Med. J. Aust. 187 (S7), S35–S39. https://doi.org/10.5694/j.1326-5377.2007.tb01334.x.
Romanson, E., 2018. The Role of Attachment, Emotion Regulation, and Distress Disclosure in Seeking Help Online in Emerging Adults. Doctoral dissertation. University of Windsor. https://scholar.uwindsor.ca/research-result-summaries/26.
Shaffer, P.A., Vogel, D.L., Wei, M., 2006. The mediating roles of anticipated risks, anticipated benefits, and attitudes on the decision to seek professional help: an attachment perspective. J. Couns. Psychol. 53 (4), 442.
Shaver, P.R., Mikulincer, M., 2002. Attachment-related psychodynamics. Attach. Hum. Dev. 4 (2), 133–161.
Skrobinska, L., Newman-Taylor, K., Carnelley, K., 2024a. Psychosis and help-seeking behaviour–a systematic review of the literature. Psychol. Psychother. n/a (n/a). https://doi.org/10.1111/papt.12531.
Skrobinska, L., Newman-Taylor, K., Carnelley, K., 2024b. Secure attachment imagery facilitates help-seeking and help-acceptance in psychosis. Psychol. Psychother. Theory Res. Pract. 97 (3). https://doi.org/10.1111/papt.12530.
Sood, M., Carnelley, K., Newman-Taylor, K., 2021. How does attachment imagery for paranoia work? Cognitive fusion and beliefs about self and others mediate the impact on paranoia and anxiety. Psychol. Psychother. Theory Res. Pract. 94 (4), 973–993.
Tait, L., Birchwood, M., Petertrower, 2004. Adapting to the challenge of psychosis: personal resilience and the use of sealing-over (avoidant) coping strategies. Br. J. Psychiatry 185 (5), 410–415. https://doi.org/10.1192/bjp.185.5.410.
Tiller, J., Maguire, T., Newman-Taylor, K., 2025. Attachment style predicts emotion regulation, help-seeking, and recovery in psychosis. Mental Health Science 3 (1), e70002. https://doi.org/10.1002/mhs2.70002.
Tucker, J.R., Hammer, J.H., Vogel, D.L., Bitman, R.L., Wade, N.G., Maier, E.J., 2013. Disentangling self-stigma: are mental illness and help-seeking self-stigmas different? J. Couns. Psychol. 60 (4), 520–531. https://doi.org/10.1037/a0033555.
Vogel, D.L., Wei, M., 2005. Adult attachment and help-seeking intent: the mediating roles of psychological distress and perceived social support. J. Couns. Psychol. 52 (3), 347.
Vogel, D.L., Wade, N.G., Haake, S., 2006. Measuring the self-stigma associated with seeking psychological help. J. Couns. Psychol. 53 (3), 325.
Vogel, D.L., Bitman, R.L., Hammer, J.H., Wade, N.G., 2013. Is stigma internalized? The longitudinal impact of public stigma on self-stigma. J. Couns. Psychol. 60, 311–316. https://doi.org/10.1037/a0031889.
Vrbova, K., Kamaradova, D., Latalova, K., Ociskova, M., Prasko, J., Mainerova, B., Cinculova, A., Kubinek, R., Tichackova, A., 2016. Self-Stigma and adherence to medication in patients with psychotic disorders – cross-sectional study. Eur. Psychiatry 33 (S1), s265. https://doi.org/10.1016/j.eurpsy.2016.01.688.
Wei, M., Vogel, D.L., Ku, T.Y., Zakalik, R.A., 2005. Adult attachment, affect regulation, negative mood, and interpersonal problems: the mediating roles of emotional reactivity and emotional cutoff. J. Couns. Psychol. 52 (1), 14–24. https://doi.org/10.1037/0022-0167.52.1.14.

Wilson, C.J., Bushnell, J.A., Caputi, P., 2011. Early access and help seeking: practice implications and new initiatives. Early Interv. Psychiatry 5 (s1), 34–39. https://doi.org/10.1111/j.1751-7893.2010.00238.x.

Wood, L., Byrne, R., Enache, G., Morrison, A.P., 2018. A brief cognitive therapy intervention for internalised stigma in acute inpatients who experience psychosis: a feasibility randomised controlled trial. Psychiatry Res. 262, 303–310. https://doi.org/10.1016/j.psychres.2017.12.030.

World Health, Organisation. The Overwhelming Case for Ending Stigma and Discrimination in Mental Health. https://www.who.int/europe/news/item/26-06-2024-the-overwhelming-case-for-ending-stigma-and-discrimination-in-mental-health.

Zimet, G.D., Dahlem, N.W., Zimet, S.G., Farley, G.K., 1988. The multidimensional scale of perceived social support. J. Pers. Assess. 52 (1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2.