eprints@whiterose.ac.uk
https://eprints.whiterose.ac.uk/

Priming Attachment Security Improves Attitudes towards a Range of Therapies

Abigail Millings*[1], a.millings@sheffield.ac.uk

Katherine B. Carnelley[2] k.carnelley@soton.ac.uk

Kate Cavanagh[3] kate.cavanagh@sussex.ac.uk

Anna Wilderpsin[1] arwilderspin@gmail.com

Hannah Wiseman[2] hannahwiseman1@hotmail.co.uk

Angela C. Rowe[4], a.c.rowe@bristol.ac.uk

*Corresponding author

[1] University of Sheffield, Western Bank, Sheffield, UK, S10 2TP

[2] University of Southampton, Highfield Campus, Southampton, UK, SO17 1BJ, phone: +44 (0)23 80593004

[3] University of Sussex, Brighton, UK, BN1 9RH

[4] University of Bristol, 12a Priory Road, Bristol, UK, BS8 1TU

Word count (excluding abstract, references, tables, figures) 8000

Abstract

We sought to understand how attachment orientation influenced attitudes towards different types of psychological therapies. In 2 studies, we i) examined attachment orientation as a predictor of attitudes towards different therapies; and ii) tested whether attachment security priming could improve attitudes. Study 1 (n=339) found associations between attachment orientation and attitudes towards, and likelihood of using different therapies. Positive and negative attitudes about different therapies mediated the relationship between attachment avoidance and likelihood of use. Study 2 (n=412) showed that primed security (versus neutral-prime) improved attitudes towards relational, non-relational and distanced-relational therapies for those with a fearful-avoidant attachment orientation. For relational and distanced-relational therapies, the mechanism of this effect was increased cognitive openness. Attachment orientation is a determinant of therapy attitudes and anticipated help-seeking behaviour. Priming security may promote open-minded decision making about some therapies. Findings are discussed with relevance to attachment theory, research and clinical practice.

Priming Attachment Security Improves Attitudes towards a Range of Therapies

Evidence-based interventions are available for common mental health problems, but a large treatment gap remains (Shafran et al., 2009). Automated interventions using technology can help bridge this gap (Cavanagh & Millings, 2013). Initiatives such as 'Improving Access to Psychological Therapies' in the UK reserve resource-intensive treatment for the most severe cases, offering 'low intensity' therapies, such as book or web-based self-help and guided self-help, first (Clark, 2011). Mobile phone apps for mental health are also now routinely recommended throughout the NHS (Bennion, Hardy, Moore, & Millings, 2017). This trend is also evident in specialised services, such as counselling services in Higher Education, where services are turning to alternatives to face-to-face therapy to meet increased demand (Broglia, Millings, & Barkham, 2017a). Whilst most people prefer face-to-face therapy (Musiat, Goldstone, & Tarrier, 2014), lower intensity interventions are positively received (Kaltenthaler et al., 2008). For some, the anonymity and convenience of Internet-delivered self-help may actually be preferable (Marks & Cavanagh, 2009). On this basis, it is important to identify predictors of attitudes towards therapies beyond face-to-face interventions.

Attachment orientations reflect affect regulation strategies and should predict beliefs and attitudes towards a wide range of therapies; we examine this. We further experimentally manipulate attachment security using an easily-delivered priming procedure (e.g. Rowe & Carnelley, 2003) known to have a range of positive psychological effects. We explore its role in improving attitudes towards therapies through the mechanism of cognitive openness.

Attachment and attitudes towards therapies

Attachment orientation predicts views regarding therapy (Vogel & Wei, 2005). Attachment theory explains individuals' willingness and ability to depend on and trust others and the extent to which they are self-reliant versus support-seeking (Bartholomew &

Horowitz, 1991). Through repeated experience with caregivers, people form internalised working models about the availability and trustworthiness of others, the value of the self, and likely responses from caregivers to disclosures of negative emotions (Bowlby, 1969; Mikulincer & Shaver, 2016). 'Attachment orientations' are measured along two dimensions, attachment avoidance and attachment anxiety (Bartholomew & Shaver, 1998; Brennan, Clark, & Shaver, 1998), which map onto four distinct attachment styles (Bartholomew & Horowitz, 1991; Bartholomew & Shaver, 1998; Brennan et al., 1998). Attachment avoidance refers to avoidance of intimacy, and attachment anxiety refers to anxiety about abandonment (Brennan et al., 1998). If caregivers are experienced as available and responsive, an individual will develop a secure attachment orientation (Bartholomew & Horowitz, 1991), characterised by low scores on both dimensions (Bartholomew & Shaver, 1998). Secure attachment enables an individual to effectively utilise other people for emotional support. It is associated with better mental health (Mikulincer & Shaver, 2016), openness to experience (Noftle & Shaver, 2006), cognitive openness (Mikulincer & Arad, 1999), greater comfort in seeking therapy, and the ability to form more positive relationships with therapists (Slade, 2008), relative to attachment insecurity.

When caregivers are consistently rejecting and unavailable, individuals learn to regulate negative affect by deactivating their attachment system, and develop a dismissing-avoidant attachment orientation (Bartholomew & Horowitz, 1991) – they score highly in attachment avoidance but low in attachment anxiety (Bartholomew & Shaver, 1998). Dismissing-avoidant individuals are self-reliant. They avoid emotional intimacy and help-seeking (Bartholomew & Horowitz, 1991; Mikulincer & Shaver, 2016). Attachment avoidance has been associated with negative views of therapy (Lopez, Melendez, Sauer, Berger, & Wyssmann, 1998), discomfort with self-disclosure in therapeutic relationships (Dozier, 1990), and less likelihood of seeking therapy (Riggs, Jacobovitz, & Hazen, 2002;

Vogel & Wei, 2005). This is concerning because research highlights links between attachment avoidance and susceptibility to (Wei, Mallinckrodt, Russell, & Abraham, 2004; Williams & Riskind, 2004) mental health problems (see Mikulincer & Shaver, 2016, for a review), hence those potentially in need of therapy are those most likely to reject it. Perhaps non-relational self-help approaches would suit avoidant individuals.

When caregivers are inconsistently available, individuals develop a preoccupied attachment orientation (Bartholomew & Horowitz, 1991). Such individuals score highly on attachment anxiety but low on attachment avoidance (Bartholomew & Shaver, 1998), have a hyperactivating affect regulation strategy, and are concerned about abandonment (Ainsworth, Blehar, Waters, & Wall, 1978). Preoccupied attachment is related to vulnerabilities towards (Williams & Riskind, 2004) and symptoms of anxiety and depression (Mikulincer & Shaver, 2016). Importantly, those higher in attachment anxiety are among those most likely to seek psychological support (Vogel & Wei, 2005). Once in therapy, they experience dependent and turbulent therapeutic relationships (Eames & Roth, 2000; Slade, 2008; Woodhouse, Schlosser, Crook, Ligiéro, & Gelso, 2003). Due to their chronic focus on relational availability, preoccupied individuals might reject non-relational therapies. This is yet to be examined.

The fourth attachment style is fearful-avoidant (Bartholomew & Horowitz, 1991) characterised by high attachment avoidance and anxiety (Bartholomew & Shaver, 1998). There is little evidence concerning the attitudes towards therapy of fearful-avoidant individuals. They oscillate between anxious and avoidant affect regulation strategies (Bartholomew & Horowitz, 1991). Two explanations of fearful-avoidant orientation exist (Simpson & Rholes, 2002). Firstly, fearful-avoidant attachment may represent a less avoidant orientation than dismissing avoidance, because their avoidant defences sometimes give way to support-seeking. Secondly, fearful-avoidance may be akin to disorganised attachment in

childhood (Main & Hesse, 1990) whereby individuals exhibit a "blend of contradictory, abortive approach/avoidance behaviours" (Simpson & Rholes, 2002, p. 225). These individuals may be the hardest to engage in any form of therapy, because of the tension between wanting to establish closeness and being afraid of rejection.

Attachment orientation is important in determining attitudes towards traditional therapy, but how it predicts attitudes towards the broader range of therapies now offered is yet to be explored. Furthermore, the precise mechanisms by which attachment orientation affects attitudes towards therapy requires elucidation. Due to the aforementioned links between secure attachment and cognitive openness (Mikulincer & Arad, 1999), it is reasonable to propose that cognitive openness could play a role in the formation of attitudes towards therapies. From an attachment perspective, cognitive openness is a key feature of exploratory behaviour (Ainsworth et al., 1978) that facilitates mastery of the environment, new skills, and tolerating distressing thoughts. In relation to attitudes, cognitive openness enables the appraisal and assimilation of new information into existing mental models. Research has found that insecure attachment is associated with cognitive rigidity and closure, meaning that the assimilation of new information into existing schemata is difficult (Mikulincer, 1997). This has implications for attitude formation. Attachment insecurity is also associated with low cognitive openness in the context of relationships and relationship-related information (Mikulincer & Arad, 1999). For those with a preoccupied or fearful attachment style, both high in attachment anxiety, there may be a perceived threat inherent in taking on board new or inconsistent relationship information. For those with a dismissing or fearful attachment style, both of which are high in attachment avoidance, low cognitive openness may reflect a defensive avoidant strategy to insulate self-views from potentially challenging information (Mikulincer & Arad, 1999). By contrast, cognitive openness is higher in individuals with greater attachment security, and in individuals who have

experienced a temporary increase in felt-security via security priming (Mikulincer & Arad, 1999). Because cognitive openness is intrinsically linked with both the attachment and exploratory systems, it likely plays an important role in shaping attitudes towards different types of relational versus non-relational therapies and is therefore a potential mechanism by which priming attachment security might improve attitudes to relational, non-relational, and distanced-relational therapies. By testing the capacity of priming security to improve attitudes towards therapies via the mechanism of cognitive openness, we lay the groundwork for a possible tool to promote open-minded decision-making about therapy options. Such a tool could, for example, be used by referring practitioners (e.g. GPs or triaging counsellors) prior to initial therapy sessions, or embedded in 'pre-therapy' interventions (Delgadillo, Moreea, Murphy, Ali, & Swift, 2015; Oldham, Kellett, Miles, & Sheeran, 2012).

As discussed above, there exists a range of therapies. In traditional, face-to-face therapy, the therapeutic relationship between client and therapist is viewed as central to the therapeutic process (Bordin, 1994). We therefore regard therapies involving direct contact with another person, face-to-face or by telephone, as relational therapies. In therapies defined as 'low intensity' such as self-help books, or Internet-delivered self-help, (Clark, 2011), the centrality of a therapeutic relationship with a therapist is different from face to face therapy (Cavanagh & Millings, 2013); it is either reduced (in supported self-help) or non-existent (pure self-help). We conceptualise therapies without a therapeutic relationship as non-relational therapies, and those with some support (to use self-help), or distanced support (online or email), as distanced-relational therapies. Categorising therapies in this way enables us to use attachment theory to formulate hypotheses regarding therapy attitudes.

Current Research

Researchers have explored the importance of attitudes towards face-to-face therapy (Vogel & Wester, 2003) in predicting likelihood of seeking therapy (Vogel, Wester, Wei, &

Boysen, 2005), and attitudes towards e-therapies (Klein & Cook, 2010). Our research makes a novel departure from this literature in two ways. Firstly, we examine the role of attachment orientation as a predictor of attitudes towards a much broader range of therapies than solely face-to-face, more representative of contemporary mental health service offerings. Secondly, using an experimental paradigm to increase attachment security temporarily, by priming, we attempt to shift attitudes towards different therapies to be more positive. We speculate that priming attachment security will render participants more open minded about considering different forms of therapy.

We predict that highly avoidant individuals (dismissing-avoidant) will reject relational therapies that involve disclosure and emotional intimacy and prefer non-relational therapies, which do not involve a therapeutic relationship. Equally, we predict that those high in anxiety (preoccupied) will favour relational therapies for the opportunities for emotional intimacy brought by face-to-face contact, over non-relational self-help therapies. Given that those with a fearful style are high in both avoidance and anxiety, their oscillation between approaching and avoiding relationships might lead to negative views towards therapy generally, because relational therapies will challenge their avoidance of intimacy, and non-relational therapies will fail to meet their (unmet) attachment needs. We expect those with a secure attachment orientation (low avoidance and low anxiety) to have the most positive views about both relational and non-relational therapies, reflecting their comfort with intimacy and balanced approach to support seeking. We do not have any basis for anticipating attitudes towards distanced-relational therapies, in which the immediacy of the face-to-face therapeutic relationship is attenuated by geographical and potentially temporal distance (Cavanagh & Millings, 2013).

In Study 1, we examine attachment orientation as a predictor of beliefs about the harmfulness/helpfulness of relational, non-relational and distanced-relational therapies, and

likelihood of using them. We examine whether attitudes mediate between attachment orientation and harmful/helpful beliefs and likelihood of use. In Study 2, we experimentally examine whether negative attitudes towards some therapies can be improved through priming attachment security, via the mechanism of cognitive openness.

Study 1

We tested whether individuals with different attachment orientations differentially endorsed positive and negative attitudes towards different forms of therapy. We hypothesised that i) those with a dismissing attachment orientation (low anxiety, high avoidance) would have less belief in the helpfulness of relational therapies; ii) those with a preoccupied attachment orientation (high anxiety, low avoidance) would have greater belief in the helpfulness of relational therapies; iii) those with a dismissing attachment orientation (low anxiety, high avoidance) would have lower likelihood of using relational therapies, and iv) those with a preoccupied attachment orientation (high anxiety, low avoidance) would have greater likelihood of using relational therapies. Given the lack of previous research on attitudes towards non-relational and distanced-relational therapies, we made no specific hypotheses about helpfulness beliefs or likelihood of using these therapies.

Building on past work (Shaffer, Vogel, & Wei, 2006; Vogel, Wade, & Hackler, 2008; Vogel et al., 2005; Vogel & Wei, 2005; Vogel & Wester, 2003), we sought to test whether i) both positive and negative attitudes predicted perceived helpfulness and likelihood of using relational, non-relational, and distanced-relational therapies, and ii) whether attitudes mediated the relationship between attachment orientations and likelihood of therapy use.

Method

Participants. Participants (n= 339) were undergraduates at a British university, 84% were female, 16% male (1 undisclosed gender), 75% British, aged 18-51 years (M = 20.71,

SD = 4.3) (1 participant did not report age) who participated in exchange for course credit. Because guidelines for power calculations for mediation (Fritz & Mackinnon, 2015) do not cover multiple mediator models, we use Kline's (2016) recommendation of a ratio of 20 cases to 1 parameter estimated in SEM models. We estimate 7 parameters in our multiple mediation model, suggesting 140 participants were required for sufficient power; our sample size exceeds this.

Measures.

Demographics. Participants reported their gender, age, and ethnicity.

Attachment. We measured attachment orientation with the Experiences in Close Relationships scale (ECR, Brennan et al., 1998). It has two subscales (18 items each): attachment avoidance (e.g., 'I am nervous when others get too close to me', α = .89) and attachment anxiety (e.g., 'I need a lot of reassurance that I am loved by those close to me', α = .94). Items were rated from 1 (strongly disagree) to 7 (strongly agree). Items measured general, rather than romantic attachment style (Rowe & Carnelley, 2003). Researchers have previously examined the interaction term between avoidance and anxiety as a way of mapping the superior measurement afforded by a dimensional approach onto Bartholomew and Horowitz's (1991) 4-style conceptual space (Collins & Feeney, 2004, Study 2; Hepper & Carnelley, 2012).

Helpfulness and likelihood of use. We adapted Klein and Cook's (2010) scale for future use of therapy. It asks respondents whether they believe a range of mental health services would be helpful or harmful and the extent to which they feel likely to use each service in the future. We asked participants to consider relational therapies (face-to-face therapy with a psychologist/or psychological therapist, psychiatrist, or counsellor; talking to a telephone counsellor[1]; ongoing monitoring with GP to see how I'm doing; group therapy in a

small group (3-8 people) with a counsellor or psychological therapist; group therapy in a large group (8 or more people) with a counsellor or psychological therapist; and support group meetings facilitated by people with experience of similar difficulties), non-relational therapies (using a self-help book on my own; using an information/educational website; using a self-help internet-based treatment program on my own; and using a smart phone app to help my mood on my own) and distanced-relational therapies (using a self-help book with regular support from a therapist on the phone or by email; using an Internet-based treatment program with regular support from a therapist by phone or by email; using a smart phone app to help my mood with regular support from a therapist on the phone or by email; online counselling (having email or instant messaging correspondence with a therapist); and joining an online social network or community of people with similar difficulties).

Participants were asked to consider each way of getting help in the event of having problems with depressed mood or anxious feelings, and rate each item, according to their perception of its helpfulness, from 1 (harmful) to 5 (helpful), and according to their likelihood of using each one, from 1 (not at all) to 5 (very likely). Helpfulness and likelihood of use were collapsed within therapeutic groups (relational, non-relational, and distanced-relational therapies). Reliabilities for harmfulness/helpfulness for relational, non-relational, and distanced-relational groupings were .83, .89, and .84, respectively. Reliabilities for likelihood of use were .85, .87, and .87, respectively.

Attitudes. Attitudes towards relational, non-relational and distanced-relational therapies were measured using scales designed for this study (Appendix A, supplementary material). We created both a positive and negative attitudes subscale for each therapy grouping. Attitudes items were not equivalent across groupings due to the need to tailor each set to the therapy grouping (items about non-relational therapies do not apply to relational therapies). Participants rated the

extent to which they agreed with a set of statements about each therapy group, from 1 (strongly disagree) to 5 (strongly agree).

Relational. Participants responded to 12 positive statements (α =.90) about relational therapies, tapping the following constructs: being cared for; acceptance; interpersonal process as useful; safe place; and building relationships (example item: "These therapies allow you to trust in another *person"*). Participants also responded to 18 negative statements (α =.88) tapping the following constructs: disclosure; dependence; control over thoughts/feelings; logistics; usefulness; knowledge of me; credibility; and fear of judgment (example item: *"I would worry about being judged in these kinds of therapies"*).

Non-relational. Participants responded to 17 positive statements (α=.88) about non-relational therapies that tapped the following constructs: disclosure; knowledge of me; learning skills; control over thoughts/feelings; logistics; acceptance; and self-reliance (example item: *"These therapies allow me to be self-sufficient"*). Negative attitudes (13 items, α=.90) covered the following constructs: credibility concerns; knowledge concerns; lack of relationship; feedback; one size doesn't fit all; and motivation (example item: *"In these kinds of therapies it can be hard to stay motivated when you're on your own*.").

Distanced-relational. Participants responded to 15 positive items (α=.91) about distanced-relational therapies, covering the following constructs: support at a safe distance; interpersonal process easier at a distance; control; writing being useful; credibility; logistics; and disclosure at a safe distance (example item: "A benefit of these kinds of therapies is that you can stay more *anonymous"*). Negative attitudes (9 items, α=.87) covered the following constructs: disclosure to a faceless person; distance makes relationship processes harder; trust/judgment/acceptance; and missing nonverbal communication (example item: *"In these therapies the therapist can't see the expressions on my face s*o *they'll never understand how I'm feeling"*).

Procedure. Participants provided informed consent and completed measures online in the order listed above; then were debriefed.

Results

Descriptive statistics (Table 1) show that generally, participants were below the mid-point on avoidance and anxiety. Therapy ratings ranged from mildly unhelpful to mildly helpful, attitudes towards therapies were mostly positive but also mildly negative, and participants reported being somewhat likely to use them.

We regressed each variable (helpfulness, positive and negative attitudes, and likelihood of using relational, non-relational, and distanced-relational therapies) onto attachment avoidance and attachment anxiety. Results (Table 2) showed that those high in attachment avoidance (dismissing attachment orientation) perceived relational therapies as less helpful ($\beta = -.33$, $p < .01$), were less likely to use relational therapies ($\beta = -.29$, $p < .01$), and overall had less positive attitudes towards relational therapies ($\beta = -.42$, $p < .01$) and more negative attitudes towards relational therapies ($\beta = .38$, $p < .01$). Furthermore, those high in avoidance had fewer negative attitudes towards non-relational therapies ($\beta = -.20$, $p < .01$). Those high in attachment anxiety (preoccupied attachment orientation) showed mixed feelings towards relational therapies; they were higher in both positive ($\beta = .12$, $p < .05$) and negative ($\beta = .14$, $p < .01$) attitudes toward them. Anxiety was generally unrelated to attitudes toward non-relational and distanced-relational therapies.

To map the dimensions of avoidance and anxiety onto Bartholomew's 4-style model, we also examined whether the interaction between anxiety and avoidance added to the prediction of our criterion variables (interaction entered at Step 2). Researchers have previously undertaken this analysis both with the dimensions of avoidance and anxiety from the ECR (Collins & Feeney, 2004, Study 2; Hepper & Carnelley, 2012) as well as equivalent

subscales from alternative measures (Collins & Feeney, 2004, Study 1; Collins, Ford, Guichard, & Allard, 2006; Pereg & Mikulincer, 2004). The interaction term was significant for positive attitudes towards relational therapies only (β= .11, p = .03; Overall $F_{atStep2}(3,335)$ = 23.25, p < .001, R^2=.17; $F_{of\ Change}(1,335)$ = 4.88, p = .03, R^2_{change}=.01). Simple slope analyses (Figure 1,) showed that the effect of anxiety at high avoidance was significant (β= .13, p = .002), but was not significant at low avoidance (β = .01, p = .85). Furthermore, the effect of avoidance at low anxiety was significant (β = -.31, p = .0001) and at high anxiety (β = -.18, p = .0001). These results show that preoccupied individuals reported more positive attitudes towards relational therapies than did fearful individuals, secure individuals reported more positive attitudes towards relational therapies than did dismissing individuals, fearful individuals reported more positive attitudes towards relational therapies than did dismissing individuals, and secure and preoccupied individuals did not differ.

Mediational Analysis

We examined the extent to which attitudes toward relational therapies mediated the link between avoidance (while controlling for anxiety) and likelihood of using relational therapies using PROCESS for SPSS (Hayes, 2013) , which provides unstandardised betas (Model summary: F(4,334)=28.14, p < .0001, R^2 = .25). Bootstrapping analyses (5,000 bootstrap samples) showed that the link between attachment avoidance and likelihood of using relational therapies was mediated by low positive attitudes, B = -.12, SE=.03, 95% CI = (-.19, -.07) and high negative attitudes, B = -.06, SE=.02, 95% CI = (-.11, -.02). (Figure 2). The indirect effect of positive attitudes could not be distinguished from the indirect effect of negative attitudes in terms of magnitude, B = -.05, SE=.04, 95% CI = (-.14, +.02).

Discussion

In Study 1 we found theoretically congruent associations between attachment, perceptions of harmfulness/helpfulness of different therapies, attitudes towards different therapies, and likelihood of using them, which were broadly in support of our hypotheses. Those high (versus low) in attachment avoidance found relational therapies unhelpful/ harmful and were less likely to use them due to their low positive attitudes and their negative attitudes toward them. The effect of avoidance on positive attitudes toward relational therapies was moderated attachment anxiety, such that dismissing avoidant individuals (high avoidance, low anxiety) reported the least positive attitudes, significantly different from fearful-avoidant (high avoidance, high anxiety) and secure individuals (low avoidance, low anxiety); and fearful individuals' attitudes were lower than those of preoccupied individuals (high anxiety, low avoidance). Furthermore, those high (versus low) in avoidance reported relatively lower negative attitudes towards non-relational therapies, suggesting that they could find these sorts of interventions acceptable. Those individuals high (versus low) in attachment anxiety showed mixed feelings toward relational therapies, reporting more positive and negative attitudes toward them. These mixed feelings may contribute to the frequent ruptures found in face-to-face therapies for those high in attachment anxiety. (Eames & Roth, 2000)

Study 2

Having found links between attachment insecurity and negative attitudes toward relational therapies, can we change them? While it could be argued that those with negative attitudes towards therapies will simply avoid seeking help, the fact remains that if negative attitudes are underpinned by attachment insecurity, then such individuals are at greater risk of mental ill-health (Mikulincer & Shaver, 2016). Furthermore, Paige and Mansell (2013) note that the while the decision to seek therapy is often an ambivalent one (people hold both positive and negative attitudes towards therapy), different motivations are dominant at

different temporal points in the help-seeking process. Approach motivations are dominant at the point of initially seeking help (e.g. making an appointment, perhaps with GP), but avoid motivations become dominant as the first therapy appointment becomes more proximal, potentially causing would-be clients to not attend (Paige & Mansell, 2013). Interventions which could improve attitudes towards a range of therapies could promote engagement and reduce wasted appointments (Oldham et al., 2012) In Study 2, we explore whether a simple attachment security prime (versus a neutral prime) improves attitudes towards relational, non-relational, and distanced-relational therapies.

Attachment security priming temporarily activates a sense of attachment security, such that cognitions, emotions and behaviour become aligned with the secure attachment orientation (Carnelley & Rowe, 2010). Security priming has a number of positive personal and inter-personal effects, such as enhancing positive self-views, relationship expectations (Carnelley & Rowe, 2010) and cognitive openness towards new information generally, and relationship-related information specifically (Mikulincer, 1997; Mikulincer & Arad, 1999). We here examined cognitive openness as a potential mediator between attachment security and attitudes to relational, non-relational, and distanced-relational therapies. We expected that elevating cognitive openness through security priming would provide the mechanism by which attitudes towards therapies would be made more positive.

Based on Study 1, we hypothesised that there would be differences in attitudes towards relational therapy as a function of attachment orientation. We expected those in the neutral priming group with a dismissing avoidant (high avoidance, low anxiety) or fearful-avoidant (high avoidance, high anxiety) attachment orientation to have less positive and more negative attitudes towards relational and non-relational therapies than those with a preoccupied (low avoidance, high anxiety) or secure (low avoidance, low anxiety) attachment orientation. We expected that in the security priming group, the attitudes of those with a

dismissing avoidant (high avoidance, low anxiety) or fearful-avoidant (high avoidance, high anxiety) attachment orientation towards relational and non-relational therapies would be more positive and less negative and that the mechanism for this change would be increased cognitive openness. There were no significant relationships between attachment dimensions and attitudes towards distanced-relational therapies in Study 1. However, we anticipated that priming attachment security could still result in higher positive and lower negative attitudes. This is because while priming attachment security can differentially affect individuals with different attachment styles (Mallinckrodt, 2007; Taubman - Ben-Ari & Mikulincer, 2007), some research has found no interaction between primed attachment style and dispositional style (Rowe & Carnelley, 2003) . We therefore made no specific predictions regarding the impact or interaction with dispositional style of the security prime on attitudes towards distanced-relational therapies, but took an exploratory approach.

Method

Participants

Participants were recruited online via a British university research volunteers' mailing lists and snowballing, for course credits or a prize draw (£20 Amazon voucher). Part 1 of the study was completed by 704 participants. Part 2 was completed by 432 participants. Twenty participants mentioned an attachment figure during the neutral priming task, and were excluded. Data from 412 participants were used in analyses; they were aged 18-73 (M=25.16, SD=9.55), 74% were female. Most (71%) were British and (78%) students. We estimated 15 parameters suggesting a necessary sample size of 300 for sufficient power (Kline, 2016); our sample exceeded this.

Measures

Attachment. Attachment orientation was measured using the short-form, 12-item version (Wei, Russell, Mallinckrodt, & Vogel, 2007) of the Study 1 measure. Reliabilities for avoidance and anxiety were .69 and .74.

Past therapy experiences. We used the same lists of therapies as in Study 1. Participants were also asked whether they had received these types of therapies, and if so, which.

Felt-security. A short felt-security measure was administered as a manipulation check prior to the completion of the remaining measures. We used the top three loading items (e.g. *"I feel loved"*) of the security scale from the State Adult Attachment Measure (Gillath, Hart, Noftle, & Stockdale, 2009). Participants rated items from 1 (strongly disagree) to 7 (strongly agree) (α= .89).

Cognitive openness. Existing measures of openness measure the construct as a trait, and are lengthy. We needed to tap state cognitive openness, very briefly. We therefore created a three-item measure of state cognitive openness: "I am feeling open-minded right now"; "I would rather not have my ideas challenged right now" (reversed); and "I would be happy to explore new ideas right now." Participants rated items from 1 (strongly disagree) to 7 (strongly agree) (α = .66).

Attitudes towards different therapies. We shortened our previously created measure of attitudes towards different therapies using factor analysis of Study 1 data. Our final item set comprised 5 positive (α= .84) and 10 negative (α=.80) relational therapies items; 11 positive (α= .85) and 6 negative (α=.86) non-relational therapies items, and 8 positive (α= .83) and 5 negative (α=.88) distanced-relational therapies items (see Appendix A). Items were rated from 1 (strongly disagree) to 7 (strongly agree).

Priming Tasks

We used a procedure based on Bartz and Lydon's (2004). Participants were provided with a description of a secure relationship (Bartholomew & Horowitz, 1991) and asked to think of someone with whom they have an important and meaningful relationship that matched the description. Participants were asked to write a couple of paragraphs or as much as they could about the relationship.

In the neutral prime condition, participants were asked to think about an occasion where they visited a supermarket alone to conduct a weekly shop (Mikulincer & Shaver, 2001). Participants were asked to write a couple of paragraphs or as much as they could about their trip.

Procedure

Data were collected online. Participants provided informed consent, and completed measures of attachment and experiences of therapies. One week later, participants were randomly allocated to priming condition (attachment security vs. neutral), and completed measures of felt-security, cognitive openness, and attitudes towards different therapies, before being debriefed.

Analytic Strategy

We assessed the effects of the security (versus neutral) prime on attitudes towards therapies while: i) accounting for any effects of dispositional avoidance and anxiety; ii) allowing effects to be direct, or indirect via cognitive openness. Priming security may affect individuals differently as a function of their chronic accessibility of secure working models (Mallinckrodt, 2007; Taubman - Ben-Ari & Mikulincer, 2007), which is defined by their attachment orientation. A model that fully accounts for this possibility, therefore, is one which takes into account participants' dispositional attachment orientation (levels of avoidance and anxiety), as well as whether they received the security prime or the neutral prime. By testing the 3-way interaction between avoidance, anxiety, and priming group, we

are able to capture whether there are differences in the effect of the prime according to an individual's combination of avoidance and anxiety scores. Researchers have previously examined 3-way interactions such as this to investigate differences in the way individuals with the 4 attachment styles proposed by Bartholomew and Horowitz (1991) respond to an experimental manipulation with 2 levels, such as ours (Collins & Feeney, 2004, Study 1; Pereg & Mikulincer, 2004).

We applied conditional process analysis (Hayes, 2013), using the PROCESS macro in SPSS version 21. Specifically, we used Model 12 (Hayes, 2013), which tests the direct effects of one variable (X) on another variable (Y), the indirect effects of X on Y via a third variable (M), while allowing both the direct and indirect effects to be moderated by an additional two variables (W and Z). Figure 3 illustrates this model conceptually and statistically. Where highest order interactions were significant, we deconstructed them using simple slopes and examined the relevant betas and confidence intervals at 1SD below and 1SD above the mean for each moderator, to establish the conditions and direction of the effects.

Results

Descriptive statistics can be found in Table 1. On average, participants were below the mid-point on avoidance and anxiety. Attitudes towards therapies were mostly positive but also mildly to moderately negative. Felt-security was relatively high and cognitive openness was moderate. **Previous experience of therapy.** Overall, 54% of our sample had not previously experienced any kind of therapy, and 46% had previously experienced one or more types of therapy (Table 3).

Manipulation check. The security primed group (M=5.92, SD=1.16) scored higher than the neutral primed group (M=5.46, SD=1.25) on felt security (t(410)= -3.90, p < .001), thus the priming manipulation was successful.

Cognitive openness as a mechanism. There was a non-significant trend difference in cognitive openness between the neutral-primed group (M=4.75, SD=.921) and the security-primed group (M=4.91, SD=.928) (t(410)= -1.80, p =.07). Due to the possibility of interaction effects between the prime and attachment avoidance and anxiety on cognitive openness, we retained this potential mediator in the main analyses despite the difference not reaching statistical significance.

Conditional process analyses. Taking each of the 6 attitudes variables in turn, we tested the main and interaction effects of prime, avoidance, and anxiety, while allowing indirect effects via cognitive openness. Models are illustrated in Figure 4. Statistics for both direct and indirect effects are reported in the text. For direct effects, unstandardised beta (B), SE, t, and a p-value are provided. For indirect effects, B, SE and 95% confidence intervals estimated by bootstrapping 5000 samples are reported.

Cognitive openness. We found non-significant trend relationships between cognitive openness and: priming group (B=1.07, SE=.56, t=1.92, p=.06); the interaction between priming group and anxiety (B=-.28, SE=.15, t=-1.87, p=.06); and the interaction between priming group and avoidance (B=-.34, SE=.18, t=-1.83, p=.07). The interaction between priming group and anxiety and avoidance was significant (B=.10, SE=.05, t=1.96, p=.05). Breaking this interaction down using PROCESS model 3 revealed a non-significant trend positive effect of the security prime on cognitive openness when both avoidance and anxiety were high, representing those with a fearful attachment orientation (B=.12, SE= .08, t=1.66, p=.09).

Positive attitudes towards relational therapies. We found a significant negative relationship between avoidance and positive attitudes towards relational therapies (B= -.59, SE= .18, t= -3.31, p = .001), and cognitive openness and positive attitudes towards relational therapies (B= .14, SE=.05, t=2.89, p=.004) such that individuals lower in avoidance and

higher in cognitive openness were likely to have higher positive attitudes towards relational therapies (Figure 4, pane A). There was also a non-significant trend effect of the interaction between anxiety and avoidance (B=.08, SE=.05, t=1.74, p=.08).

Although the three-way interaction (between prime, avoidance, and anxiety) did not have a significant direct effect, there was a significant indirect effect via cognitive openness on positive attitudes towards relational therapies, B=.01, SE= .01, 95% CI = +.00, +.04. When this interaction was probed by looking at the effects of security prime compared to neutral for each level (-1SD, Mean, +1SD) of both moderators (avoidance and anxiety) the only significant combination was high avoidance, high anxiety, B=.02, SE=.01, 95% CI = +.00, +.06, indicating that cognitive openness was a significant mediator between security prime (compared to neutral) and attitudes towards relational therapies for those with a fearful attachment style only, such that those in the security prime group had more positive attitudes towards relational therapies, via the mechanism of higher cognitive openness, than those in the neutral prime group.

Negative attitudes towards relational therapies. We found a significant positive relationship between avoidance and negative attitudes towards relational therapies (B=.61, SE=.17, t=3.70, p < .001), and between anxiety and negative attitudes towards relational therapies (B=.31, SE=.14, t=2.24, p=.03) such that those with higher avoidance or higher anxiety had more negative views about relational therapies (Figure 4, pane B). We also found a negative relationship between cognitive openness and negative attitudes towards relational therapies (B=-.16, SE=.04, t=-3.49, p=<.001), such that those with higher cognitive openness had lower negative attitudes towards relational therapies. The relationship between the interaction between avoidance and anxiety, and negative attitudes towards relational therapies was also significant (B=-.11, SE=.04, t=2.45, p=.01). Finally, the three-way interaction

between priming group, avoidance, and anxiety showed a non-significant trend effect on negative attitudes towards relational therapies (B=.-.07, SE=.04, t=-1.65, p=.09).

The indirect effect of the three-way interaction via cognitive openness was significant - cognitive openness mediated between the three-way interaction between prime, avoidance, and anxiety, and negative attitudes towards relational therapies, B= -.01, SE= .01, 95% CI= -.04, -.00. Probing this interaction revealed the only significant component to be high avoidance and high anxiety, for which the secure prime had a negative effect, B= -.20, SE = -.01, 95% CI = -.06, -.00. Thus, the security prime decreased negative attitudes toward relational therapies in those scoring high in both avoidance and anxiety (representative of a fearful attachment style) only, due to increased cognitive openness.

Positive attitudes towards non-relational therapies. There were no significant direct or indirect effects on positive attitudes towards non-relational therapies.

Negative attitudes towards non-relational therapies. The interaction between anxiety and priming group showed a non-significant trend effect on negative attitudes towards non-relational therapies (B=.30, SE=.17, t=1.78, p=.08). The three-way interaction between prime, anxiety and avoidance had a negative direct effect on negative attitudes towards non-relational therapies (B= -.11, SE=.05, t= 2.13, p = .03), such that the security prime had an effect when both anxiety and avoidance were high (fearful-avoidance) (B=-.27, SE=.08, t=3.22, p=.001) and showed a non-significant trend effect when anxiety was at mean level and avoidance was high (B=-.13, SE=.07, t=-1.78, p=.07) (Figure 4, pane C). However, the indirect effect, via cognitive openness, was not significant (no mediation occurred).

Positive attitudes towards distanced-relational therapies. Positive attitudes towards distanced-relational therapies were positively associated with cognitive openness (B= .12, SE=.04, t= 2.99, p = .003) (Figure 4, pane D). No other variables were significantly associated with positive attitudes towards distanced-relational therapies.

Although the direct effect of the three-way interaction between prime, anxiety, and avoidance on positive attitudes towards distanced-relational therapies was not significant, there was evidence of an indirect effect from this interaction via cognitive openness, B= .01, SE= .01, CI= +.00, +.03. Breaking this interaction down revealed that the only significant combination was again for high avoidance and high anxiety, B= .02, SE=.01, CI= +.00, +.05, indicating that the security prime (compared to neutral) had a positive effect on attitudes towards distanced-relational therapies for those scoring highly in both avoidance and anxiety (representative of fearful attachment style) via increased cognitive openness.

Negative attitudes towards distanced-relational therapies. There were no significant direct or indirect effects on negative attitudes towards distanced-relational therapies.

Discussion

Attachment anxiety was associated with negative attitudes towards relational therapies. This is surprising given that anxious individuals desire closeness and emotional intimacy, which arguably characterise the therapeutic relationship.

Attachment avoidance was associated with less positive attitudes towards relational therapies and distanced-relational therapies, and more negative attitudes towards relational therapies. Somewhat surprisingly, avoidance had no significant main effects on either positive or negative attitudes towards non-relational therapies. Also, surprisingly, there was no significant relationship between avoidance and cognitive openness.

There was a trend towards the security prime group showing higher cognitive openness than the neutral prime group, as expected. Cognitive openness was also significantly predicted by the three-way interaction between avoidance, anxiety, and priming group, such that those in the secure prime group with high avoidance and, high anxiety (reflecting fearful attachment style) had higher cognitive openness. Only for this group did

24

cognitive openness serve to mediate the effect of the secure prime (compared to neutral) on: i) both positive and negative attitudes towards relational therapies; ii) positive attitudes towards distanced-relational therapies. The prime was therefore effective in improving their attitudes towards all three kinds of therapies. For relational and distanced-relational therapies, cognitive openness was the mechanism by which this worked. The prime also reduced negative attitudes towards non-relational therapies (a direct effect).

There are several interesting issues to discuss. Two key issues are a) how the prime worked; and b) why it affected those scoring high in both avoidance and anxiety specifically. The felt-security manipulation check implied that the prime had worked as intended, increasing felt-security relative to the neutral prime. Furthermore, the security prime resulted in higher cognitive openness (a trend effect), but did not directly impact attitudes towards therapies as a main effect. The interactions between priming group and attachment orientation tell a more complex story. The three-way interaction term prime X avoidance X anxiety had a significant effect on cognitive openness, such that those with high avoidance and high anxiety (fearful attachment style) who were in the security prime group reported higher cognitive openness. Furthermore, higher cognitive openness was the mediator for subsequent improved attitudes towards relational and distanced-relational therapies for this group. Security priming worked differently for those with high avoidance and high anxiety (a fearful attachment style) relative to those with other attachment styles.

One possible explanation is that avoidance and anxiety effectively cancel each other out. When those high in avoidance also have high anxiety, their avoidant tendencies are tempered, making it easier for them to move towards attachment security by priming than it would be for those high in avoidance alone. Some support for this comes from Study 1 that showed that fearful individuals, high in both avoidance and anxiety, reported more positive attitudes towards relational therapies than those high in avoidance but low in anxiety. This

supports Simpson and Rholes' (2002, p.224) notion: "since fearful-avoidants deactivate the attachment system less fully than dismissive-avoidants, they may be closer to attachment security than dismissive-avoidants." Furthermore, while Mikulincer and Shaver (2016) highlight that fearful-avoidance may be akin to disorganised attachment, this is most likely where both avoidance and anxiety scores are extremely high. It is possible, that then, in our samples, a combination of moderately high avoidance and moderately high anxiety predicted less extreme views about therapy.

An alternative explanation is that our non-clinical sample may not have been sufficiently insecure to benefit substantially from the security prime. Comparably high (+1SD) insecurity on both attachment dimensions was maybe required to fully impact our DVs. However, security priming usually has positive effects regardless of dispositional attachment style (Gillath, Selcuk, & Shaver, 2008). That said, the absence of three-way interactions in previous priming research (e.g., Mikulincer & Shaver, 2001) might be due to the primarily lab-based nature of such studies. Labour-intensive, laboratory-based, priming studies tend to have smaller sample sizes than ours, and therefore might not have sufficient power to detect a three-way interaction.

Repeated priming of attachment security has been found to reduce attachment anxiety, but not avoidance (Carnelley & Rowe, 2007). This might be because a security prime involves focussing on feelings in a relationship – which may come more easily to those high in anxiety than those high in avoidance. This might imply that security priming works better on the emotional features of anxiety than on avoidance. That fearful-avoidance (high avoidance and high anxiety) has been argued to contain the emotional features of attachment anxiety, but the behavioural features of attachment avoidance (Mikulincer & Shaver, 2016), might further explain these findings. Furthermore, security primes may influence therapy attitudes more when the attachment system is activated, a direction for future research.

General Discussion

Across two studies we find that attachment orientation was predictive of attitudes and likelihood of using relational and non-relational therapies. Furthermore, attachment security priming improved the attitudes of those scoring highly in both avoidance and anxiety towards i) relational and distanced-relational therapies via the mechanism of cognitive openness, and ii) non-relational therapies directly, or via a mechanism unmeasured in our study.

One goal of this research was to examine the predictors of views about a wide range of therapies, and to find out whether people's attitudes towards different therapies could be improved. In particular, given current economical drivers towards low intensity therapies, it is important to identify the barriers that might prevent people from engaging with non-relational therapies.

The majority of our findings have been for relational therapies. It may be that only relational therapies evoke strong beliefs and attitudes – perhaps the emotional intimacy involved in them is the very feature that evokes anticipatory reactions, rather than the therapy per se. Research on the acceptability of non-relational therapies has often been conducted as a comparison with more traditional forms of (relational) therapy (e.g., Klein & Cook, 2010). Such an approach may have the effect of attenuating opinions towards non-relational therapies because relational therapies may be a) better understood and therefore easier to conceptualise, and b) more emotionally evocative and salient. Future research could seek to examine antecedents of views regarding a range of non-relational therapies in their own right, rather than in (implicit) comparison to relational therapies, for example by using a between-participants design and randomly allocating participants to a set of therapies (relational or non-relational) to evaluate. That said, we found that the security prime served to increase positive attitudes to non-relational therapies directly (or via an unmeasured mechanism) and distanced-relational therapies indirectly, via the mechanism of cognitive openness. Given

increasing use of the Internet (Andrews & Williams, 2014) and focus on self-management (Geelen, Franssen, & Geelen, 2017) in health service delivery, it is of importance that a simple security priming manipulation can promote open-mindedness and thus generate more positive appraisals of distanced-relational therapies.

Our most prominent findings were those for relational therapies. Those high in attachment avoidance were more likely to perceive relational therapies as harmful rather than helpful, held more negative and less positive attitudes about relational therapies, and reported less likelihood of using them. These findings are consistent with previous research (Vogel & Wei, 2005), and reflect distrust of others and avoidance of emotional intimacy. Relational therapies involve forming a relationship with another person, disclosing emotional information to them, and trusting their ability to respond helpfully. Avoidant individuals have learned through their experiences with caregivers that others cannot be trusted to be emotionally available, and that their best recourse in times of stress is to rely exclusively on the self (Mikulincer & Shaver, 2016). Engagement in relational therapies is likely to be unappealing to such individuals. Our finding that avoidance predicted beliefs in the harmfulness rather than helpfulness of relational therapies reflects this.

Attachment anxiety, on the other hand, was related to having mixed feelings about relational therapies. Those high in anxiety (the preoccupied style) inconsistently had more positive attitudes towards relational therapies (Study 1 but not 2) and had more negative attitudes towards relational therapies (Studies 1 and 2). High anxious individuals seek emotional support intensely and overtly (Mikulincer & Shaver, 2016). This tallies with anxious individuals' positive attitudes towards relational therapies, which offer emotional intimacy and a supportive relationship. However, because they have received inconsistent care, they remain preoccupied by fear of abandonment, which means they will find it difficult to trust in the availability of the other in relational therapies. This unease with trust is likely to

permeate their positivity towards relational therapies. Thus, anxious individuals can have both positive and negative attitudes towards relational therapies, and our inconsistent findings across two samples may reflect this ambivalence.

That we were able to improve attitudes towards relational therapies offers promise for future research as well as having practical implications. Our security prime improved attitudes only for those scoring highly in avoidance and anxiety. This might be because the combination of avoidance and anxiety means that avoidant tendencies are tempered by anxiety, such that the prime, which solely avoidant individuals may find difficult to engage with, can work on those high in both avoidance and anxiety. GPs or triaging counsellors could use security primes with clients scoring highly in avoidance and anxiety to improve their attitudes towards therapies in advance of referring them to psychological services. Paige and Mansell (2013) highlight that the risk of not attending a first therapy appointment is driven by negative attitudes and avoidance motivations, so any simple interventions that could fit into the referral pathway with the potential to reduce 'did not attend' rates would be welcomed.

A limitation of our research is the sampling: mainly female student volunteers, not actively help-seeking at the time. Almost half our sample, however, had experience of at least one of the therapies listed, while few had experienced distanced-relational therapies. When deciding to seek a particular kind of therapy, it can often be the case that the person does not have prior experience of that therapy. Thus, our data provide useful insight into attitudes towards a range of therapies even though, not all participants had experienced all the therapies. It would be beneficial for future research to examine an actively help-seeking sample, and also to use a clinical sample, perhaps from therapy waiting lists.

That our sample were students is also a limitation, but research suggests that the student population represents a vulnerable group (Royal College of Psychiatrists, 2011), with

greater prevalence of mental health problems than the general population (Stallman, 2010) and poor help-seeking (Eisenberg, Goldstein, & Gollust, 2007). When they do seek help, as many as 90% have clinically significant levels of distress (Broglia, Millings, & Barkham, 2017b). Student counselling services are using a broader range of therapies, such as those covered in our studies, to meet the increased demand (Broglia et al., 2017a). Understanding and changing attitudes towards a range of therapies is therefore useful for services embedded in Higher Education Institutions, and more broadly in the NHS.

In conclusion, we have extended previous research in finding that attachment orientation is linked with attitudes towards a range of relational therapies, in theoretically congruent ways. We have also broken new ground by discovering that priming attachment security can improve the attitudes of those with a fearful attachment style towards relational, non-relational, and distanced-relational therapies, and that the mechanism of cognitive openness mediates some of these effects. Future work should explore the effects of priming attachment security in a help-seeking sample, and acceptability of different therapies in practice.

Footnotes

[1]Although telephone counselling could also be perceived as distanced-relational, we felt it had more in common with relational therapies given that in distanced-relational therapies the client might have no direct contact with the therapist, and the therapeutic work takes place outside of the therapist-client relationship, which is not the case for telephone counselling.

References

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). Patterns of attachment: A psychological study of the Strange Situation. Hillsdale, NJ: Erlbaum.

Andrews, G., & Williams, A. D. (2014). Up-scaling clinician assisted internet cognitive behavioural therapy (iCBT) for depression: A model for dissemination into primary care. Clinical Psychology Review. http://doi.org/10.1016/j.cpr.2014.05.006

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. Journal of Personality and Social Psychology, 61(2), 226–244. http://doi.org/10.1037//0022-3514.61.2.226

Bartholomew, K., & Shaver, P. R. (1998). Methods of assessing adult attachment do they converge? In J. A. Simpson & W. S. Rholes (Eds.), Attachment theory and close relationships (pp. 25–45). New York: Guilford Press.

Bartz, J. A., & Lydon, J. E. (2004). Close relationships and the working self-concept: implicit and explicit effects of priming attachment on agency and communion. Personality & Social Psychology Bulletin, 30(11), 1389–401. http://doi.org/10.1177/0146167204264245

Bennion, M. R., Hardy, G., Moore, R. K., & Millings, A. (2017). E-therapies in England for stress, anxiety or depression: What is being used in the NHS? A survey of mental health services. BMJ Open, 7(1). http://doi.org/10.1136/bmjopen-2016-014844

Bordin, E. S. (1994). Theory and research on the therapeutic working alliance: New directions. In A. O. Horvath & L. S. Greenberg (Eds.), The working alliance: Theory, research, and practice (pp. 13–37). New York: Wiley.

Bowlby, J. (1969). Attachment and loss. 1. Attachment. New York: Basic Books.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult

attachment: An integrative overview. In W. S. Rholes & J. A. Simpson (Eds.),

Attachment theory and close relationships (pp. 46–76). New York: Guilford Press.

Broglia, E., Millings, A., & Barkham, M. (2017a). Challenges to addressing student mental

health in embedded counselling services: a survey of UK higher and further education

institutions. British Journal of Guidance and Counselling.

http://doi.org/10.1080/03069885.2017.1370695

Broglia, E., Millings, A., & Barkham, M. (2017b). The Counseling Center Assessment of

Psychological Symptoms (CCAPS-62): Acceptance, feasibility, and initial psychometric

properties in a UK student population. Clinical Psychology and Psychotherapy, 24(5).

http://doi.org/10.1002/cpp.2070

Carnelley, K. B., & Rowe, A. C. (2007). Repeated priming of attachment security influences

later views of self and relationships. Personal Relationships, 14(2), 307–320.

http://doi.org/10.1111/j.1475-6811.2007.00156.x

Carnelley, K. B., & Rowe, A. C. (2010). Priming a sense of security: What goes through

people's minds? Journal of Social and Personal Relationships, 27(2), 253–261.

http://doi.org/10.1177/0265407509360901

Cavanagh, K., & Millings, A. (2013). (Inter)personal computing: The role of the therapeutic

relationship in e-mental health. Journal of Contemporary Psychotherapy, 43(4), 197–

206. http://doi.org/10.1007/s10879-013-9242-z

Clark, D. M. (2011). Implementing NICE guidelines for the psychological treatment of

depression and anxiety disorders: the IAPT experience. International Review of

Psychiatry, 23(4), 318–27. http://doi.org/10.3109/09540261.2011.606803

Collins, N. L., & Feeney, B. C. (2004). Working models of attachment shape perceptions of social support: Evidence from experimental and observational studies. Journal of Personality and Social Psychology, 87(3), 363–383. http://doi.org/10.1037/0022-3514.87.3.363

Collins, N. L., Ford, M. B., Guichard, A. M. C., & Allard, L. M. (2006). Working models of attachment and attribution processes in intimate relationships. Personality and Social Psychology Bulletin, 32(2), 201–219. http://doi.org/10.1177/0146167205280907

Delgadillo, J., Moreea, O., Murphy, E., Ali, S., & Swift, J. K. (2015). Can Low-Cost Strategies Improve Attendance Rates in Brief Psychological Therapy? Double-Blind Randomized Controlled Trial. Journal of Clinical Psychology, 71(12), 1139–1152. http://doi.org/10.1002/jclp.22228

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

Eames, V., & Roth, A. (2000). Patient attachment orientation and the early working alliance - A study of patient and therapist reports of alliance quality and ruptures. Psychotherapy Research, 10(4), 421–434. http://doi.org/10.1093/ptr/10.4.421

Eisenberg, D., Goldstein, E., & Gollust, S. (2007). Help-seeking and access to mental health care in a university student population. Medical Care, 45(7), 594–601. http://doi.org/10.1097/MLR.0b013e31803bb4c1

Fritz, M. S., & Mackinnon, D. P. (2015). Required Sample Size to Detect the Mediated Effect. Psychological Science, 18(3), 233–239. http://doi.org/10.1111/j.1467-9280.2007.01882.x

Geelen, S. Van, Franssen, G., & Geelen, S. Van. (2017). Management of the self: An interdisciplinary approach to self-management in psychiatry and psychosomatic medicine. Philosophy, Psychiatry, & Psychology, 24(2), 109–113. http://doi.org/https://doi.org/10.1353/ppp.2017.0016

Gillath, O., Hart, J., Noftle, E. E., & Stockdale, G. D. (2009). Development and validation of a state adult attachment measure (SAAM). Journal of Research in Personality, 43(3), 362–373. http://doi.org/10.1016/j.jrp.2008.12.009

Gillath, O., Selcuk, E., & Shaver, P. R. (2008). Moving toward a secure attachment Style: Can repeated security priming help? Social and Personality Psychology Compass, 2(4), 1651–1666. http://doi.org/10.1111/j.1751-9004.2008.00120.x

Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Guilford Press.

Hepper, E. G., & Carnelley, K. B. (2012). The self-esteem roller coaster: Adult attachment moderates the impact of daily feedback. Personal Relationships, 19(3), 504–520. http://doi.org/10.1111/j.1475-6811.2011.01375.x

Kaltenthaler, E., Sutcliffe, P., Parry, G., Beverley, C., Rees, A., & Ferriter, M. (2008). The acceptability to patients of computerized cognitive behaviour therapy for depression: a systematic review. Psychological Medicine, 38(11), 1521–30. http://doi.org/10.1017/S0033291707002607

Klein, B., & Cook, S. (2010). Preferences for e-mental health services amongst an online Australian sample. Electronic Journal of Applied Psychology, 6(1), 27–38.

Kline, R. B. (2016). Principles and practices of structural equation modeling (4th ed.). New York: The Guilford Press.

Lopez, F. G., Melendez, M. C., Sauer, E. M., Berger, E., & Wyssmann, J. (1998). Internal working models, self-reported problems, and help-seeking attitudes among college students. Journal of Counseling Psychology, 45(1), 79–83. http://doi.org/10.1037//0022-0167.45.1.79

Main, M., & Hesse, E. (1990). Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened and/or frightening parental behavior the linking mechanism? In M. T. Greenberg, D. Cicchetti, & M. E. Cummings (Eds.), Attachment in the preschool years: Theory, research, and intervention (pp. 161–182). Chicago: University of Chicago Press.

Mallinckrodt, B. (2007). A Call to Broaden and Build Mikulincer and Shaver's Work on the Benefits of Priming Attachment Security. Psychological Inquiry, 18(3), 168–172. http://doi.org/10.1080/10478400701512877

Marks, I., & Cavanagh, K. (2009). Computer-aided psychological treatments: evolving issues. Annual Review of Clinical Psychology, 5, 121–41. http://doi.org/10.1146/annurev.clinpsy.032408.153538

Mikulincer, M. (1997). Adult attachment style and information processing: Individual differences in curiosity and cognitive closure. Journal of Personality and Social Psychology, 72(5), 1217–1230. http://doi.org/10.1037/0022-3514.72.5.1217

Mikulincer, M., & Arad, D. (1999). Attachment working models and cognitive openness in close relationships: A test of chronic and temporary accessibility effects. Journal of Personality and Social Psychology, 77(4), 710–725. http://doi.org/10.1037/0022-3514.77.4.710

Mikulincer, M., & Shaver, P. R. (2001). Attachment theory and intergroup bias: Evidence

that priming the secure base schema attenuates negative reactions to out-groups. Journal

of Personality and Social Psychology, 81(1), 97–115. http://doi.org/10.1037//0022-

3514.81.1.97

Mikulincer, M., & Shaver, P. R. (2016). Attachment in adulthood: structure, dynamics, and

change (2nd ed.). New York: Guilford Press.

Musiat, P., Goldstone, P., & Tarrier, N. (2014). Understanding the acceptability of e-mental

health - attitudes and expectations towards computerised self-help treatments for mental

health problems. BMC Psychiatry, 14(1), 109. http://doi.org/10.1186/1471-244X-14-109

Noftle, E. E., & Shaver, P. R. (2006). Attachment dimensions and the big five personality

traits: Associations and comparative ability to predict relationship quality. Journal of

Research in Personality, 40(2), 179–208. http://doi.org/10.1016/j.jrp.2004.11.003

Oldham, M., Kellett, S., Miles, E., & Sheeran, P. (2012). Interventions to increase attendance

at psychotherapy: A meta-analysis of randomized controlled trials. Journal of

Consulting and Clinical Psychology, 80(5), 928–939. http://doi.org/10.1037/a0029630

Paige, L., & Mansell, W. (2013). To attend or not attend? A critical review of the factors

impacting on initial appointment attendance from an approach-avoidance perspective.

Journal of Mental Health, 22(1), 72–82. http://doi.org/10.3109/09638237.2012.705924

Pereg, D., & Mikulincer, M. (2004). Attachment Style and the Regulation of Negative Affect:

Exploring Individual Differences in Mood Congruency Effects on Memory and

Judgment. Personality and Social Psychology Bulletin, 30(1), 67–80.

http://doi.org/10.1177/0146167203258852

Riggs, S. A., Jacobovitz, D., & Hazen, N. (2002). Adult attachment and history of

psychotherapy in a normative sample. Psychotherapy: Theory, Research, Practice,

Training, 39, 344–353. http://doi.org/10.1037/0033-3204.39.4.344

Rowe, A. C., & Carnelley, K. B. (2003). Attachment style differences in the processing of attachment-relevant information: Primed-style effects on recall, interpersonal expectations, and affect. Personal Relationships, 10(1), 59–75. http://doi.org/10.1111/1475-6811.00036

Royal College of Psychiatrists. (2011). Mental health of students in higher education Royal College of Psychiatrists. Retrieved from https://www.rcpsych.ac.uk/publications/collegereports/cr/cr166.aspx

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. Journal of Counseling Psychology, 53(4), 442–452. http://doi.org/10.1037/0022-0167.53.4.442

Shafran, R., Clark, D. M., Fairburn, C. G., Arntz, A., Barlow, D. H., Ehlers, A., … Wilson, G. T. (2009). Mind the gap: Improving the dissemination of CBT. Behaviour Research and Therapy, 47(11), 902–9. http://doi.org/10.1016/j.brat.2009.07.003

Simpson, J. A., & Rholes, W. S. (2002). Fearful-avoidance, disorganization, and multiple working models: some directions for future theory and research. Attachment & Human Development, 4(2), 223–9. http://doi.org/10.1080/14616730210154207

Slade, A. (2008). The implications of attachment theory and research for adult psychotherapy: Research and clinical perspectives. In Handbook of attachment: Theory, research, and clinical applications (pp. 762–782). New York: Guilford Press.

Stallman, H. M. (2010). Psychological distress in university students: A comparison with general population data. Australian Psychologist, 45(4), 249–257.

http://doi.org/10.1080/00050067.2010.482109

Taubman - Ben-Ari, O., & Mikulincer, M. (2007). The effects of dispositional attachment

orientations and contextual priming of attachment security on reckless driving.

Transportation Research Part F: Traffic Psychology and Behaviour, 10(2), 123–138.

http://doi.org/10.1016/j.trf.2006.08.002

Vogel, D. L., Wade, N. G., & Hackler, A. H. (2008). Emotional expression and the decision

to seek therapy: The mediating roles of the anticipated benefits and risks. Journal of

Social and Clinical Psychology, 27(3), 254–279.

http://doi.org/10.1521/jscp.2008.27.3.254

Vogel, D. L., & Wei, M. (2005). Adult attachment and help-seeking intent: The mediating

roles of psychological distress and perceived social support. Journal of Counseling

Psychology, 52(3), 347–357. http://doi.org/10.1037/0022-0167.52.3.347

Vogel, D. L., & Wester, S. R. (2003). To seek help or not to seek help: The risks of self-

disclosure. Journal of Counseling Psychology, 50(3), 351–361.

http://doi.org/10.1037/0022-0167.50.3.351

Vogel, D. L., Wester, S. R., Wei, M., & Boysen, G. A. (2005). The role of outcome

expectations and attitudes on decisions to seek professional help. Journal of Counseling

Psychology, 52(4), 459–470. http://doi.org/10.1037/0022-0167.52.4.459

Wei, M., Mallinckrodt, B., Russell, D. W., & Abraham, W. T. (2004). Maladaptive

perfectionism as a mediator and moderator between adult attachment and depressive

mood. Journal of Counseling Psychology, 51(2), 201–212. http://doi.org/10.1037/0022-

0167.51.2.201

Wei, M., Russell, D. W., Mallinckrodt, B., & Vogel, D. L. (2007). The Experiences in Close

Relationship Scale (ECR)-short form: reliability, validity, and factor structure. Journal of Personality Assessment, 88(2), 187–204. http://doi.org/10.1080/00223890701268041

Williams, N. L., & Riskind, J. H. (2004). Adult romantic attachment and cognitive vulnerabilities to anxiety and depression: Examining the interpersonal basis of vulnerability models. Journal of Cognitive Psychotherapy, 18(1), 7–24. http://doi.org/10.1891/jcop.18.1.7.28047

Woodhouse, S. S., Schlosser, L. Z., Crook, R. E., Ligiéro, D. P., & Gelso, C. J. (2003). Client attachment to therapist: Relations to transference and client recollections of parental caregiving. Journal of Counseling Psychology, 50(4), 395–408. http://doi.org/10.1037/0022-0167.50.4.395

Table 1

Descriptive statistics for Studies 1 and 2

Variable	Study 1 M (SD)	Study 2 M (SD)
Avoidance	3.06 (1.03)	3.01 (.91)
Anxiety	3.50 (1.13)	3.67 (1.00)
Helpful/harmful Relational	3.44 (0.69)	-
Helpful/harmful Non-Relational	2.58 (0.88)	-
Helpful/harmful Distanced-Relational	3.05 (0.81)	-
Likelihood of Using Relational	2.89 (0.87)	-
Likelihood of Using Non-Relational	2.67 (1.09)	-
Likelihood of Using Distanced-Relational	2.55 (1.02)	-
Positive towards Relational	3.74 (0.61)	5.36 (.920)
Negative towards Relational	2.60 (0.60)	3.61 (.86)
Positive towards Non-relational	3.60 (0.56)	4.99 (.81)
Negative towards Non-relational	3.91 (0.64)	5.25 (.98)
Positive towards Distanced-Relational	3.75 (0.62)	5.23 (.754)
Negative towards Distanced-Relational	3.55 (0.69)	4.74 (1.18)
Felt Security	-	5.70 (1.23)
Cognitive Openness	-	4.83 (.93)

Table 2

Regressions for perceptions of helpfulness, likelihood of using relational, non-relational, and distance-relational therapies and positive and negative attitudes towards relational, non-relational, and distanced-relational therapies for Study 1.

Criterion variable	Avoidance	Anxiety	F	R^2
Helpfulness of Relational	-.33**	-.02	$F(2,337)=21.44$***	.11
Helpfulness Non-relational	.08	.05	$F(2,337)=1.99$	.01
Helpfulness Distanced-Rel.	-.02	.02	$F(2,337)=0.09$	.00
Likelihood of using Relational	-.30**	.07	$F(2,337)=14.30$***	.08
Likelihood of using Non-Rel.	-.04	.10	$F(2,337)=1.34$	.01
Likelihood of using Distanced-Rel.	-.10^	.07	$F(2,337)=1.79$	.01
Positive towards Relational	-.42**	.11*	$F(2,338)=31.90$***	.16
Negative towards Relational	.38**	.14**	$F(2,338)=42.11$***	.20
Positive towards Non-Relational	.04	-.01	$F(2,338)=0.21$	.00
Negative towards Non-Relational	-.20**	-.01	$F(2,338)=7.33$***	.04
Positive towards Distanced-Rel.	-.07	.01	$F(2,338)=0.65$	.00
Negative towards Distanced-Rel.	-.06	.04	$F(2,338)=0.63$	.00

Note: β= standardised beta, ^p = .07, *p<.05, **p<.01, ***p<.001

Table 3

Experiences of previous therapies: Study 2

Types of Therapy	Ever Previously Experienced	
	Yes n (%)	No n (%)
Relational	122 (30)	290 (70)
Non-Relational	99 (24)	313 (76)
Distanced-Relational	20 (5)	392 (95)

Note: Percentages add up to 100% horizontally, but not vertically, because participants were

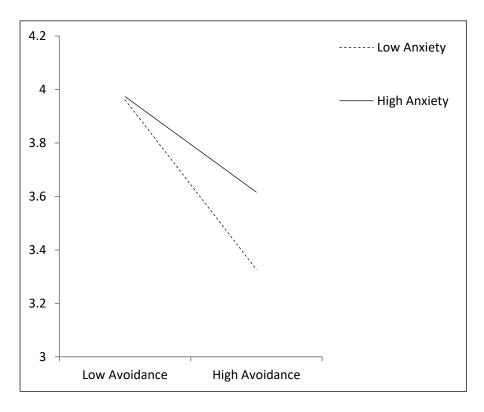able to report having experienced multiple therapy types.

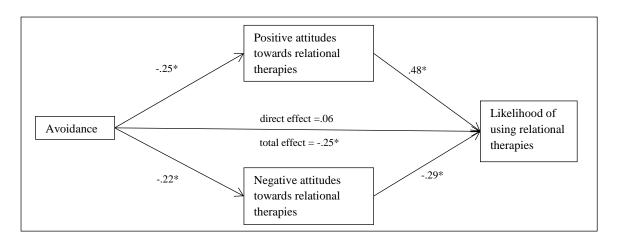Figure 1. Study 1 simple slopes for positive attitudes towards relational therapies.

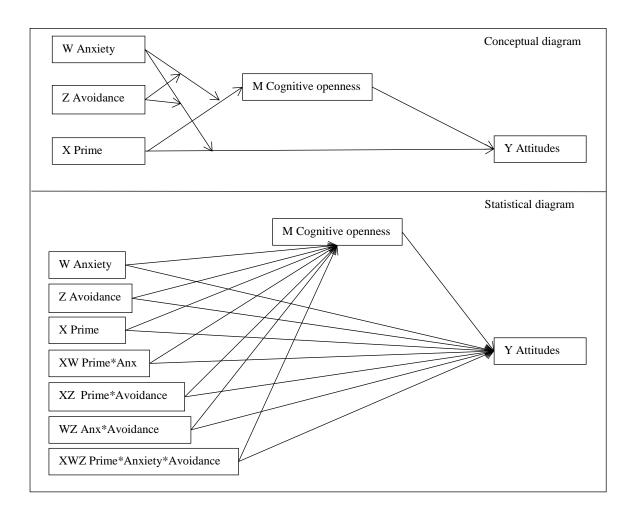Figure 2. Study 1 multiple mediation analyses showing unstandardized coefficients. (*p<.001)

Figure 3. Conceptual (top pane) and statistical (bottom pane) diagrams of Study 2 model.
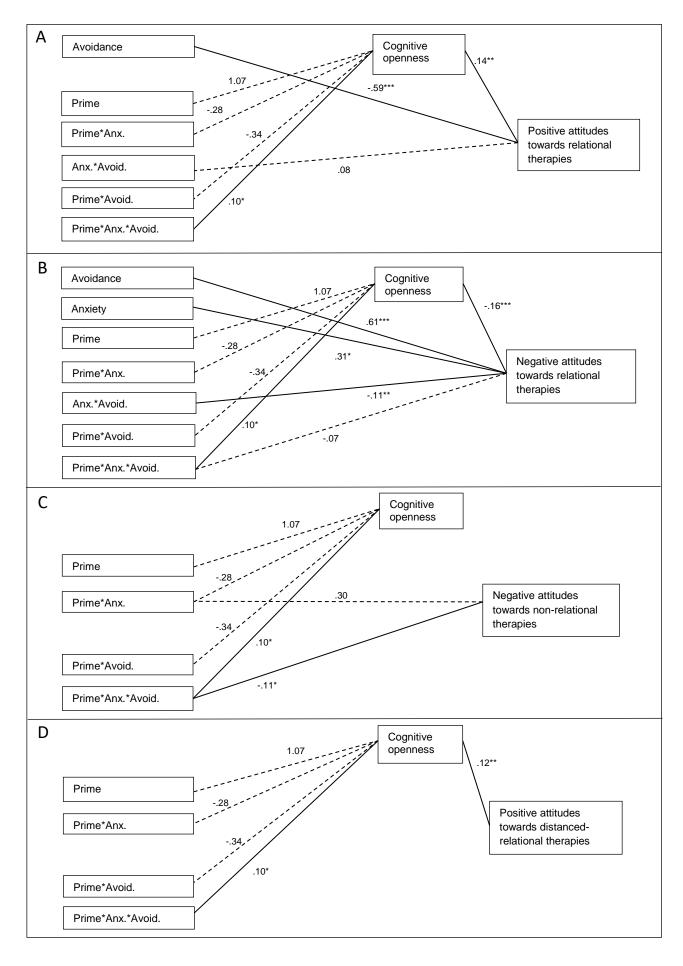
Figure 4. Study 2 models for attitudes towards relational, non-relational, and distanced-relational therapies, showing unstandardized betas. Pane A depicts the model predicting positive attitudes towards relational therapies; pane B depicts the model predicting negative attitudes towards relational therapies; pane C depicts the model predicting negative attitudes towards non-relational therapies; pane D depicts the model predicting positive attitudes towards distanced-relational therapies. Significant direct effects are represented by solid lines (***p≤.001, **p≤.01, *p≤.05) and non-significant direct effects are represented by dashed lines (p < .1)