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Using Attachment Theory to Understand University Students' Barriers to Seeking Help for Mental Health Difficulties and Develop Interventions

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Declaration

I, the author, confirm that the Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not been previously presented for an award at this, or any other, university.

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Thesis Abstract

This thesis aims to understand why only about one in four students would seek help if they experience difficulty in mental health (Thomas et al., 2014), followed by developing and employing multi-theory approaches in an attempt to improve student willingness to seek help.

Chapter 1 discusses key theories around help-seeking, such as Attachment theory and the Theory of Planned Behaviour and its variations, as well as other commonly researched barriers to seeking help. Chapter 2 attempts to provide a more comprehensive understanding of how individual differences in attachment orientation are associated with emotion regulation (Study 1) and examines whether individual differences in attachment orientation, in conjunction with the Prototype Willingness Model, could help understand: i) the key aspects predicting intentions and willingness to seek help; ii) do intentions and willingness predict actual help-seeking behaviour; iii) what are the key aspects influencing attitudes to seek help; iv) can emotion regulation mechanisms help us understand the relationship between attachment orientation and attitudes to seek help (Study 2). Findings suggest that the attachment perspective can enhance the socio-cognitive understanding of help-seeking. Emotion regulation strategies (e.g., rumination about the past) and known barriers to seeking help (i.e., self-sigma) also play an important role in understanding how attachment orientation is associated with the Prototype Willingness Model.

The second part of the thesis focuses on developing interventions to increase willingness to seek help. Chapter 3 presents two studies that use priming techniques in an effort to increase participants' attachment security. While typical attachment security priming focusing on increasing security towards close relationships showed limited effects on willingness to seek help (Study 3), a more tailored priming approach towards seeking help from

a professional reduced willingness to seek help across the whole intervention group (Study 4). Potential mechanisms behind this are further discussed in the discussion of Study 4. Chapter 4 is a general discussion which provides a basis for future research and practical implementations in real-world interventions.

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Chapter One: Introduction

1.1. Introduction

1.1.1. Why focusing on help-seeking is important?

Difficulties with mental health are on the rise among university students (Lewis & Bolton, 2023). Almost 50% of students in the UK experience difficulties with their mental health during the course of their studies (Gorczynski et al., 2017). Good mental health and well-being are vital for academic success. Students who have good mental wellness (i.e. experience less stress) tend to perform academically better (Keech et al., 2018).

To tackle the issue, most universities in the UK provide free-of-charge access to counselling services for their students (Broglia et al., 2018). However, even though evidence suggests that such services can reduce students' psychological difficulties (Murray et al., 2016), only one in four students intend to seek help if they experience stress, anxiety, or depression (Thomas et al., 2014). It is therefore important to understand what factors are associated with students' intentions to seek help to inform our understanding of the issue and to inform interventions designed to promote (appropriate) help-seeking.

1.1.2. Chapter overview

This introductory chapter briefly discusses why focusing on university students' help-seeking for mental health problems is important and what research has been done up to date. A summary of current literature is presented, providing a foundation for the rationale for studies 1 and 2, which aimed to develop a comprehensive model for understanding help-seeking behaviour. As such, this chapter consists of the following key parts: i) classic approaches to understanding help-seeking, covering barriers to seeking help followed by socio-cognitive

theories predicting help-seeking, explaining why understanding barriers and cognitions is not enough; ii) individual differences in attachment orientation, how it affects help-seeking, and how attachment theory could help to explain the help-seeking processes described in socio-cognitive models such as Prototype Willingness Model (PWM); iii) emotion regulation processes as a potential explanation of how individual differences in attachment orientation may be related to aspects of PWM, such as attitudes towards therapy.

1.2. Classic approaches to understanding help-seeking

1.2.1. Barriers to seeking help

Early research on help-seeking for mental health problems primarily focused on identifying individual barriers or facilitators to seek help. Barriers refer to the obstacles that individuals may face, which may prevent them from attempting to seek help or support for mental health problems or delay reaching out for professional assistance, whilst facilitators refer to factors that positively influence help-seeking.

Gulliver et al, (2010), A systematic review on perceived barriers and facilitators to mental health help-seeking in young people, revealed that the most commonly addressed barriers are: i) stigmatising barriers, including both public (negative societal beliefs about mental health) and self-stigma (i.e. seeing seeking help as a sign of personal weakness); ii) lack of confidentiality and trust of mental health professionals or systems; iii) difficulties identifying symptoms of mental illness and lack of knowledge about mental health services (individuals may not recognise the signs of difficulties in mental health they may be experiencing, or they may not be aware that help is available); iv) Self-reliance (handling their problems on their

own); v) difficulties to express emotions; and vi) external factors such as not having enough time or not being able to afford the costs etc.

Less research has been done on facilitators for seeking help, and the few key aspects that have been identified that may improve help-seeking are positive past experiences with help-seeking, having social support and encouragement from others, trusting the provider, and having positive relationships with staff (Gulliver et al., 2010). This suggests that facilitators of help-seeking are primarily based on previous positive experiences, meaning that in order to improve willingness to seek help in individuals who have not sought help before, we may need to focus more on how to address the barriers and other mechanisms hindering help-seeking that are not based on prior experiences. Aiming to understand intentions and willingness to seek help more in-depth, a few social cognition theories have been widely used, such as the Health Belief Model (HBM) (Rosenstock, 1974), the Theory of Planned Behaviour (TPB) (Ajzen, 1991), and the Prototype Willingness Model (PWM) (Gibbons et al., 1998).

1.2.2. Social cognition theories on seeking help

1.2.2.1. Health Belief Model

In the 1950s, Hochbaum, Kegeles, Leventhal, and Rosenstock worked on developing the Health Belief Model to be used in public health services (Rosenstock, 1974). The model proposed that for an individual to take action on a particular health-related outcome, they would need to perceive susceptibility, severity, benefits, and barriers related to that outcome and feel prompted or cued to take action. (Rosenstock, 1974). In terms of help-seeking, theoretically, a person who is more likely to seek help could be viewed as someone: i) who recognises that they (an individual) have a problem (perceived susceptibility); ii) believes that the problem is serious (perceived severity); ii) believes that seeking help would benefit them (perceived

benefits); iii) believes that there are not many barriers to seeking help (perceived barriers) and feels the positive influence to seek help from, for example media or family (cues to action) (Henshaw & Freedman-Doan, 2009).

However, studies on help-seeking intentions and behaviour that utilised HBM showed no associations between perceived susceptibility and intentions to seek help (Kim & Zane, 2016; Langley et al., 2018, 2021; O'Connor et al., 2014). The same studies also found that perceived benefits of help-seeking are the only consistent positive predictor of intentions to seek help (Kim & Zane, 2016; Langley et al., 2018, 2021; O'Connor et al., 2014). However, it should be noted that the perception of benefits may vary between different demographics; for example, in one study, Asian Americans saw fewer benefits in seeking help and, in return, had lower intentions of seeking help when compared to Caucasian Americans (Kim & Zane, 2016).

However, other aspects of HMB had even more mixed results; for example, only one study found that perceived severity was negatively associated with help-seeking intentions (Kim & Zane, 2016), whilst others did not find significant associations (Langley et al., 2018, 2021; O'Connor et al., 2014).

Whilst HMB may seem practical by integrating barriers to seeking help that previously have been found significant in predicting help-seeking, only half of the reviewed studies found that perceived barriers (i.e., social and self-stigma) negatively affect help-seeking intentions (Kim & Zane, 2016). One of the reasons could be that HMB focuses on quantity rather than quality of barriers (Langley et al., 2018), which is also a limiting factor in how much HMB can help us understand the mechanisms behind the lack of seeking help in times of need.

1.2.2.2. Theory of Planned Behaviour

Theory of Planned Behaviour, on the other hand, proposes that intentions to seek help or any other behaviour per se are determined by their attitudes towards that behaviour, subjective norms (social/societal perceptions about the behaviour) and perceived behavioural control (perceived ability to engage in a behaviour) (Ajzen, 1991). For example, in a help-seeking setting, if an individual believes that help-seeking is generally positive and beneficial (attitudes towards seeking help) and perceives that the significant others, such as family and friends, would support the decision of seeking help (subjective norms), followed by having resources available such counselling services at the university and skills to contact them (perceived behavioural control), such individual would be more likely to seek help.

A recent scoping review on adults' mental health help-seeking from the TPB perspective that included 39 studies that identified predictors of intentions to seek help revealed that attitudes were a significant predictor in 90% of the studies, followed by perceived behavioural control (87%), and subjective norms (59%), (Adams et al., 2022). Seven out of 8 studies that looked at help-seeking behaviour found that intentions were a significant predictor of the actual help-seeking, and 6 of them also found that perceived behavioural control was a significant predictor of the help-seeking as well (Adams et al., 2022), meaning that overall TPB is a relatively good predictor of intentions to seek help.

In terms of incorporating barriers to seeking help in TPB, a few studies successfully looked at barriers such as social/public stigma (Vogel et al., 2005, 2007), self-disclosure (Vogel et al., 2005) and self-stigma (Vogel et al., 2006, 2007) that were significantly associated with attitudes towards seeking professional help and in turn intentions (Vogel et al., 2005, 2006) or willingness (Vogel et al., 2007) to seek help.

1.2.2.3. Prototype Willingness Model

The Prototype Willingness Model by Gibbons et al. (1998) expands the traditional TPB by suggesting two distinct pathways leading to health-related behaviours: i) reasoned action, which essentially is a variation of TPB and is based on past behaviour, attitudes, and subjective norms that predict intentions and consequently the behaviour; and ii) a social reaction pathway, which emphasises that a particular behaviour can also be influenced by the reactive response to social cues without prior intentions. It does so by a) adding the role of social cognition, namely prototypes, which are mental representations (positive or negative) of typical people who engage in the behaviour. And b) adding willingness as a more heuristic, experiential predictor of the behaviour, even if there is no clear intention to engage in behaviour from the reasoned action perspective (Gerrard et al., 2008). Regarding help-seeking, someone with positive mental representations (prototypes) of a potential help-seeker (e.g., good, kind, strong, etc.) may be more willing to seek help.

One study aimed to assess the effectiveness of the PWM in the scenario of seeking professional psychological help; the results showed the social reaction pathway that consists of attitudes, subjective norms, and prototypes significantly predicted help-seeking decisions via a mediating role of willingness whilst intentions did not offer a significant explanation for the variance in such decisions (Hammer & Vogel, 2013), suggesting that PWM might be a better approach in understanding help-seeking than TPB alone.

1.2.3. The limitations of classic approaches to understanding help-seeking

Identifying the different barriers to help-seeking is a logical starting point for improving help-seeking, and identified barriers can also be incorporated into social cognition models, which provide more comprehensive approaches to help-seeking than barriers alone. However, the

problem with looking only at individual barriers to seeking help or social cognition models is that the mechanisms behind those aspects can be complex and multifaceted, varying from person to person and influenced by various social constructs and personal factors that are not captured. For example, it is known from the studies described above that positive attitudes towards seeking help are likely to increase intentions to seek help; however, what is unknown is how such attitudes are formed and whether there are some personality traits or individual differences, such as those identified by attachment theory, (Bowlby, 1969; Ainsworth et al., 1978) that shape the way we think about certain things in life, in this case, help-seeking for mental health problems.

1.3. Individual differences in attachment

1.3.1. Attachment theory

Attachment theory argues that early attachment experiences form the foundation of how individuals approach and act in relational interactions with others throughout their lives (Bowlby, 1988). There are two conceptualisations of attachment: infant-parent-related attachment and adult attachment (Shaver & Mikulincer, 2002). The present study focuses on social-cognitive conceptualisations of adult attachment (Shaver & Mikulincer, 2009), however, in order to understand this, it is necessary to briefly examine infant attachment. Bowlby (1969) had noticed the critical role of the relationship between infants and their caregivers in development, and Ainsworth et al. (1978) identified the individual differences that resulted from different kinds of caregiving experiences. Bowlby (1988) argued that attachment is an enduring psychological bond between individuals.

Such bonds can be either secure or insecure; according to Ainsworth et al. (1978), secure attachment develops in response to sensitive and responsive care. This form of

attachment develops when a child's needs are met, paving the way for healthy relational dynamics in the future. Avoidant attachment style develops in response to rejecting and unavailable care, making children learn to protect themselves by suppressing their needs and becoming overly independent. Ambivalent attachment style, on the other hand, develops in response to inconsistent care - sometimes available, sometimes not, which can lead to higher dependence on their caregivers. All of these are organised strategies for maintaining the availability of the caregiver.

Later, an additional kind of attachment pattern was identified – disorganised attachment (Main & Solomon, 1986). Unlike organised attachment strategies, disorganised attachment develops when a caregiver is also a source of fear or when the child perceives that the caregiver cannot protect them, such as in a domestic abuse situation, resulting in an attachment style that lacks a clear strategy, leading to erratic emotional experiences and behaviours (Hesse & Main, 2000).

In adulthood, social-cognitive models of attachment orientation view attachment (in)security along two dimensions: attachment-related anxiety and attachment-related avoidance (Mikulincer & Shaver, 2019). Attachment anxiety is the fear of being abandoned by relationship partners (e.g., a romantic partner, parents, or close friends), while attachment avoidance is the fear of intimacy (i.e., the fear of being emotionally intimate with someone) (Brennan et al., 1998).

Lower levels of both attachment anxiety and avoidance characterise secure attachment (Brennan et al., 1998), which leads people to feel confident about getting support from a relationship when needed (Mikulincer & Shaver, 2004) and is associated with broad benefits such as better self-acceptance, personal growth and healthier interpersonal relationships in general (Homan, 2018), and, more generally, greater life satisfaction (Guarnieri et al., 2015).

However, insecure attachment is more complex. Early studies categorised people with insecure attachment into two subgroups: (i) avoidant and (ii) anxious/ambivalent (Hazan & Shaver, 1987) and later expanded into three styles: (i) preoccupied (high levels of attachment anxiety, low levels of attachment avoidance), (ii) dismissive-avoidant (high levels of attachment avoidance, low levels of attachment anxiety), and (iii) fearful-avoidant (high levels of both domains: avoidance and anxiety) (Bartholomew & Horowitz, 1991). However, while the four (including secure) attachment styles map conceptually to bisected dimensions of avoidance and anxiety, current studies typically measure attachment orientation via the two continuous dimensions because treating these dimensions as dichotomous variables can be problematic. For example, there are no clear-cut points where low levels of avoidance or anxiety end and high levels start (Fraley et al., 2015). Hence, the following explanation of attachment insecurity is also based on the two-dimensional model.

Insecurity, as indicated by high scores on one of the attachment dimensions (either anxiety or avoidance), can also be considered organised attachment insecurity (Paetzold et al., 2015). The most unpredictable attachment orientation, on the other hand, is indicated by higher scores on both attachment anxiety and avoidance and may be considered as a disorganised attachment: Early research with infants suggested that fearful-avoidant attachment style from the categorical model of adult attachment (higher attachment anxiety and higher attachment avoidance) had similar conceptual patterns to attachment disorganisation (Simpson & Rholes, 2002). However, some studies suggested that disorganisation reflects a lack of coherence and confusion in attachment-related behaviours rather than a fearful attachment and has stronger associations with mental health illnesses (George & West, 1999).

A recent approach to disorganised attachment in adulthood defined it as a ‘fear of romantic figures in general’ (Paetzold et al., 2015, *p*. 150). People with disorganised attachment

style seek closeness to attachment figures when they feel distressed, but the seeking of closeness seems to lack coherence and is often interrupted due to the fear that the attachment figure will cause unpleasant feelings or distance themselves (Paetzold et al., 2015). This leads to chaotic and confusing behaviour – seeking proximity from the attachment figure/s and distancing from them at the same or close time point – leading to incomplete approaches (Paetzold et al., 2015). Although recent research suggests that disorganisation is a separate construct from attachment anxiety and avoidance, there is a lack of research on how exactly attachment disorganisation is related to the dimensions of avoidance and anxiety and to what extent it shares any overlap with fearful attachment from the categorical model (higher attachment anxiety and higher attachment avoidance).

From a broader perspective, attachment theory is developed on the idea that individuals develop mental or internal working models based on their early interactions with caregivers and represent expectations about the availability and responsiveness of others in relationships (Mikulincer & Shaver, 2019). Such models can be categorised as global/dispositional attachment styles such as secure, anxious, or avoidant, which are overarching patterns that reflect individuals' general tendencies in forming relationships and regulating their emotions and are thought to be relatively stable across the lifespan (Pinquart et al., 2013; Verhage et al., 2016).

On the other hand, relationship-specific attachment styles recognise that individuals may have different attachment patterns within specific relationships; for instance, someone might display a different attachment style with work colleagues from their attachment style in romantic relationships (Greškovičová & Lisá, 2023). These variations highlight the flexibility and context-specific nature of attachment styles, emphasising that attachment styles are not strictly rigid but can adapt to different relational contexts.

1.3.2. Seeking help for mental health problems

From an attachment perspective, securely attached individuals (i.e., those with lower levels of attachment anxiety and avoidance) are more likely to seek support when needed (Mikulincer & Shaver, 2019). Although most studies looking at support seeking in the Mikulincer and Shaver (2019) review focused on support seeking from attachment figures such as close friends or romantic partners, such does not necessarily mean that results would be the same for help-seeking for mental health problems from professional sources.

However, some studies examined relationships between attachment orientation and aspects related to help-seeking mental health from professional sources. For instance, help-seeking intentions are likely to differ across attachment orientation: i) higher levels of attachment anxiety are associated with better intentions or willingness to seek psychological help (Cheng et al., 2015; Shaffer et al., 2006; Vogel & Wei, 2005); ii) higher levels of attachment avoidance are associated with lower intentions or willingness to seek help (Lopez et al., 1998; Vogel & Wei, 2005) as well as least positive attitudes towards seeking help (Irkörücü & Demir, 2015) and relational therapies (Millings et al., 2019).

Fearful-avoidant/disorganised individuals who score higher on both attachment anxiety and attachment avoidance showed less positive attitudes towards seeking help (Irkörücü & Demir, 2015) and attitudes towards relational therapies (Millings et al., 2019).

1.3.3. Links to social cognition theories

A few studies looked at the relationships between attachment orientation and attitudes towards seeking help/ therapy (Irkörücü & Demir, 2015; Millings et al., 2019; Shaffer et al., 2006), which is one of the key components of both the Theory of Planned Behaviour and the Prototype

Willingness model in predicting intentions and willingness for an actual behaviour (Ajzen, 1991; Gibbons et al., 1998) in this case seeking help for mental health problems.

Perceived benefits are one of the key mechanisms of the Health Belief Model (Rosenstock, 1974). Significant indirect effects were also found, with attachment anxiety positively affecting anticipated benefits and, in turn, attitudes towards seeking help and, in turn, intentions to seek help, whilst avoidance was found to reduce anticipated benefits and, in turn, positive attitudes towards seeking help and in turn intentions (Shaffer et al., 2006).

Whilst no studies looking at help-seeking for mental health problems attempted to combine both dimensions of attachment theory and all aspects of TPB or PWM in one model, there is evidence of successful integrative models based on previous research. Significant relationships between attachment orientation and theory of planned behaviour variables have been found for other behaviours, such as underage drinking, where peer attachment was significantly associated with subjective norms and behavioural control, whilst maternal attachment was significantly associated with attitudes and behavioural control (Lac et al., 2013). Examining cardiac medication adherence, researchers found that attachment anxiety had significant interactions with attitudes and perceived behavioural control (Peleg et al., 2017). Finally, models predicting intimate behaviour in romantic relationships accounted for significantly more variance when adding attachment orientation (Monteoliva et al., 2014). To understand better how attachment theory may be linked to social cognition theories, the processes involved in emotion regulation maybe used.

1.4. Emotion regulation

1.4.1. Classic approach

The way that people regulate their emotions can influence outcomes in many life domains, including interpersonal functioning, relationships, well-being (Gross & John, 2003), academic and job performance (Brackett & Salovey, 2006; Mohamad & Jais, 2016), levels of self-esteem and life satisfaction (John & Gross, 2004), mental health (Aldao et al., 2010; Berking & Wupperman, 2012; T. Hu et al., 2014), and possibly the extent to which people seek help. Gross (1998) defined emotion regulation as processes by which individuals manifest which emotions they have, timing when they have them, and how they experience and express these emotions.

The two most commonly researched strategies for emotion regulation are expressive suppression and cognitive reappraisal (Cutuli, 2014; Gross & John, 2003). Cognitive reappraisal is an antecedent-focused strategy, allowing a person to regulate emotion by adapting or modifying how they think about situations or their response to them (Aldao et al., 2010; Gross & John, 2003). Multiple studies have revealed the advantages of reappraisal on psychological domains, such as having a more positive emotional experience (Gross & John, 2003), better abilities to solve problems (Aldao et al., 2010) and improved general well-being (Haga et al., 2009). In contrast, expressive suppression is a response-focused strategy and is used to neutralise any emotional experience and behaviour in the presence of a stressful event (Gross & John, 2003). According to Gross and John, such distancing from emotional experience has several side effects: it might lead to unresolved situations. Furthermore, people who use expressive suppression tend to suppress not only negative emotions but positive ones as well; therefore, it is not surprising that increased levels of expressive suppression predict negative well-being (Haga et al., 2009) and psychopathology (Aldao et al., 2010).

Previous research has also identified other strategies used in emotion regulation, such as self-blame, blaming others, acceptance, rumination, positive refocusing, etc. (Garnefski & Kraaij, 2007). Some authors have suggested that it might be helpful to categorise these strategies as adaptive and maladaptive (Aldao et al., 2010; Aldao & Nolen-Hoeksema, 2010; Lasa-Aristu et al., 2019). The idea authors suggest that strategies such as expressive suppression, rumination, self-blame, and catastrophising are maladaptive due to the negative outcomes of using them, while strategies such as acceptance, positive reappraisal, and positive refocusing tend to lead to positive outcomes and are, therefore adaptive.

Adaptive coping strategies seem beneficial for maintaining and improving mental health; for instance, a systematic review showed that positive reappraisal is consistently related to improved mental health across studies (Nowlan et al., 2015). Maladaptive strategies have opposite outcomes; for instance, they were significantly associated with psychopathology related to anxiety disorders and alcohol use pre and post-treatment (Conklin et al., 2015).

1.4.2. Contemporary approaches

Emotion regulation strategies can also be categorised as hyperactivating or deactivating. Hyperactivating strategies are characterised by an exaggerated or intense response to distress, often involving heightened emotional expressions and seeking excessive proximity and reassurance from others, whilst deactivating strategies involve minimising or suppressing emotional expressions, self-reliance, and downplaying the importance of seeking support from others, even in distressing situations (Mikulincer et al., 2003).

However, the strategies people use to regulate their emotions is just one of the processes involved in emotion regulation. Gratz and Roemer (2004) suggested a more complex view of emotion regulation. They suggested that successful emotion regulation involves five main

processes: (i) being aware and able to understand one's emotions; (ii) being able to accept emotions (positive and negative); (iii) being able to engage in goal-directed behaviour; (iv) being able to control impulses; and finally (v) being able to use adaptive emotion regulation strategies. Difficulties with any of these processes are considered as emotion dysregulation or having difficulties in emotion regulation. Research has revealed links between difficulties in emotion regulation and increased risks of various psychopathological disorders such as depression, anxiety-related disorders, substance use, eating disorders, borderline personality disorder, etc. (Berking & Wupperman, 2012; Harrison et al., 2010; Salters-Pedneault et al., 2006).

Like Gratz and Roemer (2004), the action control perspective on emotion regulation (Webb et al., 2012) also suggests that emotion regulation involves more than what strategies people use to regulate their emotions. The action control perspective proposed that emotion regulation involves three self-regulatory tasks: (i) The need for regulation should be identified, (ii) the decision whether and how to regulate must be made, and (iii) a regulation strategy must be enacted (Webb et al., 2012).

1.4.3. Relationship with attachment theory

Individual differences in attachment are closely related to emotion regulation. For example, according to Mikulincer and Shaver (2019), a secure attachment style is associated with better abilities to identify and describe emotions and use adaptive emotion regulation strategies, while insecure attachment is associated with less use of positive emotion regulation strategies and higher use of maladaptive strategies. Also, those with attachment anxiety might consider only a few strategies to deal with emotions at a selection of an emotion regulation

strategy stage (Eldesouky & Gross, 2019) as they feel that they lack sufficient coping resources (Karreman & Vingerhoets, 2012).

Studies and systematic reviews of the relationship between attachment styles and mental health-related issues such as binge eating (Shakory et al., 2015) and depression (Malik et al., 2015) have found that difficulties in emotion regulation might mediate the relationship between attachment orientation and psychopathology/health behaviours. For example, a systematic review by Malik et al. (2015) revealed that hyperactivating strategies mediated the relationship between insecure attachment and depression.

1.4.4. Potential mediator between attachment and social cognition theories

As discussed, attachment avoidance is associated with deactivating strategies such as suppressing emotion-related experiences (Mikulincer & Shaver, 2019). Such strategies also have links to several negative outcomes, such as a lack of self-disclosure, lack of support-seeking, and difficulties solving interpersonal conflicts (Mikulincer & Shaver, 2007). Emotional expression has also been found to have significant indirect associations with attitudes towards therapy and willingness to seek help via anticipated risks and benefits (Vogel et al., 2008), suggesting that emotional expression could explain how attachment orientation is associated with attitudes towards seeking help.

Whilst there is not much research to date on whether other aspects of emotion regulation could mediate the relationships between attachment orientation and conceptual aspects related to seeking help, such as attitudes towards seeking help, research highlighting the negative impact of poor emotion regulation on mental health indicates that research looking at the relationships between attachment orientation, emotion regulation and help-seeking could prove useful. For example, attachment anxiety is associated with the use of hyperactivating strategies

and the need for unreasonable amounts of attention from attachment figures (Mikulincer & Shaver, 2019), which may also explain why higher scores on anxiety tend to lead to higher intentions/willingness to seek help. For example, those who feel more needy (preoccupied attachment style) may also consider seeking support from a mental health professional for their unmet needs. Therefore, there may be some links suggesting that emotion regulation strategies may have significant links between attachment and attitudes towards therapy.

1.5. Conclusions

i) Current evidence shows that the TPB (also related to the reasoned action pathway in PWM) consistently proves that attitudes and perceived behavioural control followed by subjective norms are the key predictors of help-seeking intentions (Adams et al., 2022)

ii) In the PWM, willingness is a better predictor of help-seeking decisions than intentions (Hammer & Vogel, 2013).

iii) There is some evidence that developing an integrated approach of social cognitive theories and individual differences in attachment orientation may benefit the help-seeking research field (Lac et al., 2013; Monteoliva et al., 2014; Peleg et al., 2017).

iv) There is some indirect evidence that emotional expression, and therefore other emotion regulation aspects (potentially), could play a role in understanding how attachment is associated with attitudes towards seeking help (Vogel et al., 2008).

v) Attitudes is one of the key predictors in the TPB and PWM (Ajzen, 1991; Gibbons et al., 1998). In the context of help-seeking, previous research has

found attitudes to be predicted by individual difference factors such as attachment orientation (Millings et al., 2019) and psychological barriers to help-seeking, such as stigma and self-stigma (Vogel et al., 2007). This suggests that building a broader model of help-seeking that adds both attachment orientation and psychological barriers to help-seeking to the PWM could prove useful for developing a more comprehensive understanding of how people choose to seek or not to seek help in times of need.

1.6. The aims of the thesis

This thesis has two primary aims: The primary objective of the initial phase is to investigate the potential augmentation of social cognition theories, specifically the Prototype Willingness Model, by incorporating individual differences in attachment orientation. This exploration aims to determine whether combining attachment considerations with existing social cognition frameworks leads to a more comprehensive model of help-seeking behaviour. The focus is on understanding how attachment orientation influences attitudes toward seeking help. The studies in this thesis aim to assess whether emotion regulation and specific individual barriers mediate the relationship between attachment orientation and attitudes toward seeking help. By examining these mediating factors, the research aims to understand the pathways through which attachment styles may impact the willingness to seek help. This multifaceted approach allows for a more nuanced understanding of the interplay between attachment, social cognition, and help-seeking behaviour, contributing to a more comprehensive theoretical framework. The second part of the thesis aims to provide an overview of potential interventions to increase willingness to seek help, followed by developing and testing attachment theory-based experiments to increase willingness to seek help for mental health problems.

Chapter Two: Understanding barriers to seeking help for mental health problems

2.1. Introduction

The literature review outlined above suggests that social cognition models such as the Theory of Planned Behaviour showed being successful at predicting help-seeking intentions predominantly via attitudes (Adams et al., 2022), followed by enhanced TPB models such as Prototype Willingness Model (with added social reaction pathway (Gibbons et al., 1998)) suggesting that including one's prototypes (their perception of a potential help-seeker) provides a better model to understand help-seeking (Hammer & Vogel, 2013).

However, understanding individuals' beliefs, such as attitudes towards counselling, is just one part of the processes involved in whether someone would or would not be willing to seek help. Individual differences, such as individual differences in attachment, also play an important role (i.e., those who are more avoidant are less likely to have intentions or be willing to seek help, and those who are more anxiously attached are more likely to be willing to seek help (Cheng et al., 2015; Shaffer et al., 2006; Vogel & Wei, 2005)), meaning that attachment avoidance, in particular, plays an important role in understanding what may hinder help-seeking decisions. Building a model that combines individual differences in attachment orientation and PWM may help to understand how differences in attachment orientations (attachment anxiety and avoidance) may affect social cognitions, namely attitudes, subjective and descriptive norms, prototypes, prototypes similarity and, in turn, intentions/willingness to seek help and actual help-seeking behaviour.

Previous studies that combined individual differences in attachment style/orientation and socio-cognitive theories on other health behaviours found significant associations between attachment and attitudes (Lac et al., 2013; Peleg et al., 2017). Unfortunately, no previous

research has been done on the mechanisms behind these associations. One way to understand such mechanisms is to look at potential barriers to seeking help as mediators; for example, difficulties in self-disclosure are associated with both attachment orientation (Cruddas et al., 2012) and socio-cognitive aspects of help-seeking (Vogel et al., 2005), so are stigma tendencies (Nursel Topkaya et al., 2016; Vogel et al., 2007).

The other potential link between attachment and attitudes towards seeking help could be emotion regulation, especially in understanding why those who score higher on avoidance are at the risk of not seeking help in times of need. For example, emotional expression is important in predicting attitudes towards therapy (Vogel et al., 2008). However, suppression of emotions is one of the key strategies associated with attachment avoidance, meaning that those who are more avoidant are less likely to express their emotions (Mikulincer & Shaver, 2019).

However, the strategies people use to understand emotions are a limited way of understanding how one regulates emotions. According to the action control perspective, emotion regulation involves three processes: (i) The need for regulation should be identified, (ii) the decision whether and how to regulate must be made, and (iii) a regulation strategy must be enacted (Webb et al., 2012). Unfortunately, there is not much research done on how these processes are associated with attachment orientation and whether understanding the relationships between these processes and attachment could, for example, help to understand better how attachment orientation is associated with help-seeking; a decision was made to conduct Study 1 (pre-study for Study 2) focusing on relationships between attachment and other emotion regulation aspects including the ACP, followed by Study 2, aiming to develop a working model using attachment theory, Prototype Willingness Model, emotional regulation

and key barriers to seeking help that are also related to individual differences in attachment, namely difficulties in self-disclosure and stigma.

2.2. Study 1: Relationship between attachment and emotion regulation

2.2.1. The Present Research

Study 1 has three main aims. First, research on the relationship between attachment orientation and emotion regulation has tended to focus on what strategies people use to regulate their emotions. However, as the literature review above illustrates, emotion regulation is likely to involve a number of additional processes, including whether people decide to regulate their emotions and what strategies they select. No research to date has sought to systematically investigate the relationship between individual differences in attachment and the three tasks identified as central to regulating emotions from the Action Control Perspective (Webb et al., 2012). Therefore, the first aim of the present research is to measure the different aspects of emotion regulation and explore theoretical and measurement overlaps between them. Second, the study will examine the relationship between attachment avoidance, anxiety, and disorganisation (see below) on the one hand and emotion regulation on the other. By so doing, this study will provide a more comprehensive understanding of how individual differences in attachment style influence emotion regulation.

The third aim is to include the measure of disorganised attachment in adulthood (Paetzold et al., 2015) and test it against the interaction between attachment anxiety and avoidance, which should potentially capture fearful-avoidant/disorganised attachment. This aims to determine whether to use disorganised attachment in the models predicting help-seeking.

2.2.2. Method

2.2.2.1. Participants

Three hundred thirty-nine undergraduate and postgraduate students studying at universities in the United Kingdom took part in the study and completed an online questionnaire. 79.1% of the participants were female, 15.6% were male, the rest were self-described (e.g., non-binary), or they preferred not to tell their gender. The sample was young adults (M = 24.98; SD = 8.41) from a mainly white ethnic group (84.4%).

2.2.2.2. Procedure

Ethical approval was obtained from The Research Ethics Committee in the Department of Psychology at The University of Sheffield (#023957) prior to data collection. This study adopted a cross-sectional questionnaire design and was advertised online for university students studying in the United Kingdom via the following sources: a mailing list of student research volunteers at the University of Sheffield, the psychology undergraduate participant scheme at the University of Sheffield, and paid Facebook advertisements targeted to students studying in the UK. Participants completed the survey on the Qualtrics system, and an information sheet and consent form were provided at the beginning of the survey. All data were collected anonymously.

2.2.2.3. Materials

Demographics. Participants were asked to provide information about their gender, age, relationship status, and ethnicity.

Participants responded to all survey items using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Attachment orientation

Two scales measured adults' attachment orientation: (i) The Experiences in Close Relationship Scale-Short Form (ECR-S) (Lafontaine et al., 2016). This short-form scale contains 12 items, 6 measuring attachment-related avoidance (e.g. 'I don't feel comfortable opening up to others') and 6 measuring attachment-related anxiety (e.g. 'I worry that people won't care about me as much as care about them'). The measure produced good internal reliability for both anxiety and avoidance ($\alpha = .88$ and $\alpha = .86$, respectively). The second measure was (ii) The Disorganised Attachment in Adulthood scale (Paetzold et al., 2015) – a 9-item scale that measures attachment disorganisation in adults which reflects the fear of relationships (e.g. 'Fear is a common feeling in close relationships'). Questions from this scale were adapted from romantic relationships to close relationships in general. Respondents were instructed to indicate how they feel in general about their relationships. The measure produced good internal reliability ($\alpha = .89$).

Coping strategies

To measure cognitive coping strategies, the Cognitive Emotion Regulation Questionnaire (CERQ) (Garnefski & Kraaij, 2007) was employed. The 36-item scale measures the extent to which participants use nine cognitive coping strategies that have been associated with psychopathology: Self-blame (e.g. 'I feel that I am the one to blame for it'), acceptance (e.g. 'I think that I have to accept that this has happened'), rumination (e.g. 'I often think about how I feel about what I have experienced'), positive refocusing (e.g. 'I think of something nice instead of what has happened'), refocus on planning (e.g. 'I think about how I can best cope with the situation'), positive reappraisal (e.g. 'I think that the situation also has its positive sides'), putting into perspective (e.g. 'I think that other people go through much worse

experiences'), catastrophizing (e.g. 'I continually think how horrible the situation has been'), and blaming others (e.g. 'I feel that others are responsible for what has happened').

Emotion Regulation

Emotional suppression was measured by the Emotion Regulation Questionnaire (ERQ) (Gross & John, 2003) (e.g. 'I control my emotions by not expressing them').

Emotion dysregulation was measured by The Difficulties in Emotion Regulation Scale Short Form (DERS-SF) (Kaufman et al., 2016). The DERS-SF contains 18 items organised into six subscales: Strategies (e.g. 'When I'm upset, I believe there is nothing I can do to make myself feel better'), nonacceptance (e.g. 'When I'm upset, I become irritated with myself for feeling that way'), impulse (e.g. 'When I'm upset, I lose control over my behaviour'), goals (e.g. 'When I'm upset, I have difficulty focusing on other things'), awareness (e.g. 'When I'm upset, I acknowledge my emotions'), and clarity (e.g. 'I am confused about how I feel').

Problems that people might experience with the three self-regulatory tasks related to emotion regulation: identification (e.g., 'I easily recognise my emotions as I experience them'), selection of strategy (e.g. 'I know what I need to do to keep my feelings in check'), and implementation (e.g. 'Even when I know how to control my feelings, I cannot act on that knowledge'), using the Problems in Emotion Regulation Questionnaire (PIRES) (Webb et al., 2017) were also measured.

2.2.3. Approach to analysis

Firstly, a factor analysis was conducted for all the items related to emotion regulation to investigate their conceptual structure and identify overlap between the measures. A sample size of >300 is considered a good sample size to conduct a factor analysis (Comrey & Lee, 2013).

Factor analysis (FA) was chosen over principal component analysis (PCA) because FA accesses common variations of the sources rather than simply explaining the amount of accountable variance (Carpenter, 2018). Furthermore, FA provides more generalizable models for confirmatory factor analysis (Worthington & Whittaker, 2006).

Principal axis factoring (PAF) with Promax rotation was used for factor extraction. PAF is the most common method for factor analysis with data that was not normally distributed (Carpenter, 2018), as was the case for some items in the dataset. Oblique rotation was used as the factors are expected to be substantially correlated (Carpenter, 2018). Promax as an oblique rotation method was chosen because it is argued to be the most robust method (Thompson, 2004). Following Carpenter (2018), the optimal number of factors was determined using SPSS packages for Parallel Analysis (PA) and Minimum Average Partials (MAP) tests were used (O'connor, 2000). Items within the factors were evaluated using Carpenter's (2018) suggestions for scale development by removing items with weak loadings ($\leq$.32), strong cross-loadings onto two or more factors, removing factors with three or fewer items, and Cronbach's alpha reliability levels less than .70.

Correlations were then used to examine the relationships between attachment dimensions (attachment anxiety, attachment avoidance, and attachment disorganisation) and factors reflecting aspects of emotion regulation extracted from the factor analysis. Three-step hierarchical regression analysis was used to investigate the relationship between attachment dimensions and the use of aspects of emotion regulation. In the first step, attachment anxiety and attachment avoidance were entered; in the second step, the interaction between attachment anxiety and avoidance was entered; and in the last step, disorganised attachment was entered. All predicting values were mean-centred.

2.2.4. Results

Kaiser-Meyer-Olkin (KMO) test of sampling adequacy and Bartlett's Test of Sphericity were used to verify the factorability of the data. KMO score was .90, and Bartlett's Test of Sphericity was significant ($p < .001$); such results indicate that factor analysis might be useful with this data (Carpenter, 2018). Parallel Analysis (PA) and Minimum Average Partials (MAP) tests suggested a 12-factor solution. The measures reflecting aspects of emotion regulation were therefore entered into a Principal axis factor analysis with Promax rotation, forcing into the 12-factor solution. However, the three items ('I am confused about how I feel'; 'I am always quick to recognize when I am not feeling how I want to'; and 'I can quickly identify when I am not feeling how I want to feel') from the 12th factor had cross-loadings onto the 1st factor and also seemed to reflect the ability to identify emotions. The decision was, therefore, made to extract an 11-factor solution in which these items loaded alongside those in Factor 1. Table 1 shows the factor loadings and communalities for the final solution.

Factor 1 was labelled 'Ability to identify emotions' as it was loaded on by items reflecting people's abilities to identify their feelings. The factor contained 12 items, and internal consistency was excellent ($\alpha = .91$). These items were from the identification subscale of the PIRES (e.g., 'I am aware of my emotions as I experience them') and the awareness (e.g., 'When I'm upset, I acknowledge my emotions') and clarity ('I have no idea how I am feeling') subscales of the DERS.

Factor 2 was labelled 'Positive reappraisal'. This factor contained ten items ($\alpha = .89$) and reflected the ability to look for positive outcomes of the negative situation. The factor was loaded by items from the 'positive reappraisal'(e.g. 'I think that the situation also has its positive sides'), 'refocus on planning' (e.g., 'I think about a plan of what I can do best'); and 'focus on thought' subscales of the CERQ.

Factor 3 was labelled ‘Ability to control emotions’ (9 items, α = .90) and reflected participants' ability to control their own emotions. It was loaded by items from the ‘implementation’ and ‘selection’ subscales of the PIRES (e.g., ‘I leave it too late to get a grip on my feelings’ and ‘I know how to control my emotions’, respectively), and the ‘impulse’ and ‘strategies’ subscales of the DERS (e.g. ‘When I’m upset, I become out of control’ and ‘When I’m upset, it takes me a long time to feel better’, respectively).

Factor 4 was labelled ‘Rumination about the past’ (6 items, α = .85) and reflected the extent to which participants focused on negative feelings associated with past experiences. The factor was loaded by the items from ‘focus on thought’, ‘catastrophizing’, and ‘self-blame’ subscales of the CERQ (e.g., ‘I am preoccupied with what I think and feel about what I have experienced’; ‘I continually think how horrible the situation has been’; and ‘I think about the mistakes I have made in this matter’, respectively).

Factor 5 was labelled ‘Expressive suppression’ (4 items, α = .93) and reflected the use of expressive emotional suppression as measured by the ERQ (e.g., ‘I make sure not to express my emotions’; ‘I am careful not to express my emotions’).

Factor 6 was labelled ‘Non-acceptance, guilt, and self-blame’ (7 items, α = .86) and reflected the extent to which participants were hard on themselves by self-blaming and feeling guilty for feeling that way. The factor was loaded by items from the ‘non-acceptance’ and ‘strategies’ subscales of the DERS (e.g. ‘When I’m upset, I feel guilty for feeling that way’) as well as the ‘self-blame’ subscale from the CERQ (‘I feel that I am the one to blame for it’).

Factors 7, 8, and 10 were each loaded on by subscales of the CERQ. Factor 7 was labelled ‘Positive refocusing’ (4 items, α = .86) and reflected thinking about positive things instead of the stressful and/or negative situation that has happened. Factor 8 was labelled ‘Blaming others’ (4 items, α = .81) and reflected blaming others for the situation. Factor 10

was labelled ‘Acceptance’ (3 items, α = .81) and reflected a person’s ability to accept the situation that has happened.

Factor 9 was labelled ‘Putting into perspective’ (5 items, α = .77) and was loaded with items from the ‘putting into perspective’ subscales of the CERQ and one item from the ‘catastrophizing’ subscale of the CERQ. This factor reflected the perception that things or the situation could have been much worse (e.g., ‘I think that other people go through much worse experiences’; ‘I tell myself that there are worse things in life’).

Finally, Factor 11 was labelled ‘Difficulties in concentrating on other things’ (3 items, α = .92). It contained items from the ‘goals’ subscale of the DERS questionnaire. However, difficulties concentrating on other things better reflected questions such as ‘When I’m upset, I have difficulty concentrating’ and ‘When I’m upset, I have difficulty focusing on other things’.

Table 1 *Factor loadings and communalities based on a principal axis factoring with Promax rotation for 70 items measuring emotion regulation (N = 339).*

Factor	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Item **Factor label**	Ability to identify emotions	Positive reappraisal	Ability to control emotions	Rumination about the past	Expressive suppression	Non-acceptance, guilt, self-blame	Positive refocusing	Blaming others	Putting into perspective	Acceptance	Difficulties concentrating on other things
I easily recognise my emotions as I experience them.	.95										
I can quickly identify how I am feeling.	.85										
I am aware of my emotions as I experience them.	.81										
It takes me a long time to figure out how I feel.	-.75										
I have difficulty making sense out of my feelings.	.69										
I have no idea how I am feeling.	-.68										
I am confused about how I feel.	-.66										
I am always quick to recognize when I am not feeling how I want to.	.66										
I can quickly identify when I am not feeling how I want to feel.	.63										

Factor	1	2	3	4	5	6	7	8	9	10	11
I know immediately when my feelings are out of line.	.49										
I pay attention to how I feel.	.43										
When I'm upset, I acknowledge my emotions.	.40										
I think about a plan of what I can do best		.82									
I think about how I can best cope with the situation.		.81									
I think that the situation also has its positive sides.		.75									
I think I can learn something from the situation.		.75									
I think that I can become a stronger person as a result of what has happened.		.71									
I think about how to change the situation.		.70									
I look for the positive sides to the matter.		.67									
I think of what I can do best.		.63									
I want to understand why I feel the way I do about what I have experienced.		.54		.38							
~~I care about what I am feeling.~~		~~.41~~		~~.33~~							
When I'm upset, I believe there is nothing I can do to make myself feel better.		-.35									
Even when I know how to control my feelings, I cannot act on that knowledge.			.84								
I miss opportunities to control my feelings.			.78								
When I'm upset, I have difficulty controlling my behaviours.			.72								
I know how to control my emotions.			-.67								
When I'm upset, I lose control over my behaviour.			.67								

Factor	1	2	3	4	5	6	7	8	9	10	11
I leave it too late to get a grip on my feelings.			.67								
When I'm upset, I become out of control.			.57								
I know what I need to do to keep my feelings in check.			-.47								
When I'm upset, it takes me a long time to feel better.			.36								
I dwell upon the feelings the situation has evoked in me.				.73							
I am preoccupied with what I think and feel about what I have experienced.				.73							
I often think about how I feel about what I have experienced.		.34		.72							
I continually think how horrible the situation has been.				.70							
I keep thinking about how terrible it is what I have experienced.				.60							
I think about the mistakes I have made in this matter.				.46							
~~I think that I cannot change anything about it.~~		~~.36~~		~~.36~~							
I make sure not to express my emotions.					.90						
I am careful not to express my emotions.					.88						
I keep my emotions to myself.					.85						
I control my emotions by not expressing them.					.85						
When I'm upset, I feel guilty for feeling that way.						.80					
I feel that I am the one to blame for it.						.76					
When I'm upset, I become irritated with myself for feeling that way.						.70					
When I'm upset, I become embarrassed for feeling that way.						.69					
I feel that I am the one who is responsible for what has happened.						.58					
I think that basically the cause must lie within myself.				.32		.53					

Factor	1	2	3	4	5	6	7	8	9	10	11
When I'm upset, I believe that I will end up feeling very depressed.						.37					
I think of pleasant things that have nothing to do with it.							.77				
I think of something nice instead of what has happened.							.77				
I think of nicer things than what I have experienced.							.74				
I think about pleasant experiences.							.67				
I feel that others are to blame for it.								.91			
I feel that basically the cause lies with others.								.86			
I feel that others are responsible for what has happened.								.84			
I think about the mistakes others have made in this matter.								.48			
I think that other people go through much worse experiences.									.86		
I tell myself that there are worse things in life.									.72		
I think that it all could have been much worse.									.55		
I often think that what I have experienced is the worst that can happen to a person.									-.51		
I think that it hasn't been too bad compared to other things.									.480		
~~I often think that what I have experienced is much worse than what others have experienced.~~				~~.37~~					~~.40~~		
I think that I have to accept the situation.										.80	
I think that I have to accept that this has happened.										.73	
I think that I must learn to live with it.										.68	
When I'm upset, I have difficulty getting work done.											.77

Factor	1	2	3	4	5	6	7	8	9	10	11
When I’m upset, I have difficulty concentrating.											.73
When I’m upset, I have difficulty focusing on other things.											.61

Note. Factor loadings < .32 are suppressed. Items that were not included in the factors due to high cross-loadings are marked as ~~strikethrough.~~

To identify the relationships between individual differences in attachment orientation and factors reflecting aspects of emotion regulation, firstly, the items with negative scores were reversed, and then the mean scores were calculated for all factors. Bivariate correlations were then computed between each attachment domain and each factor reflecting an aspect of emotion regulation. All factors had statistically significant relationships with one or more attachment domains (see Table 2). To permit comparison with previous studies, the correlations between attachment styles and original subscales of each measure of emotion regulation were calculated and compared (See Appendix 1).

Table 2 *Correlations between factors reflecting aspects of emotion regulation and attachment domains*

Factor	Attachment Anxiety	Attachment Avoidance	Attachment Disorganisation
1. Ability to identify emotions	-.31**	-.52**	-.45**
2. Positive reappraisal	-.37**	-.33**	-.30**
3. Ability to control emotions	-.47**	-.26**	-.42**
4. Rumination about the past	.44**	.10	.31**
5. Expressive suppression	.10	.63**	.27**
6. Non-acceptance, guilt, self-blame	.52**	.27**	.42**
7. Positive refocusing	-.16**	-.12*	-.09
8. Blaming others	.08	-.01	.17**
9. Putting into perspective	-.22**	-.07	-.10
10. Acceptance	.03	.02	.13*
11. Concentration difficulties	.40**	.21**	.31**

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

Attachment anxiety was negatively correlated with the ability to identify emotions (r = -.31, p = ≤ .001); positive reappraisal (r = -.37, p = ≤ .001); the ability to control emotions (r = -.47, p = ≤ .001); positive refocusing (r = -.16, p = ≤ .001); and the extent to which participants reported putting things into perspective (r = -.22, p = ≤ .01); and positively correlated with rumination about the past (r = .44, p = ≤ .001); non-acceptance and self-blame (r = .52, p = ≤ .001); and concentration difficulties (r = .40, p = ≤ .001).

Attachment avoidance was negatively correlated with the ability to identify emotions (r = -.515, p = ≤ 0.001); positive reappraisal (r = -.33, p = ≤ .001); and the ability to control emotions (r = -.26, p = ≤ 0.001); but positively correlated with expressive suppression (r = .63, p = ≤ .001); non-acceptance and self-blame (r = .27, p = ≤ 0.001); positive refocusing (r = -.12, p = ≤ .05); and concentration difficulties (r = .21, p = ≤ .001).

Disorganised attachment was negatively correlated with the ability to identify emotions (r = -.45, p = ≤ .001); positive reappraisal (r = -.30, p = ≤ .001); and the ability to control emotions (r = -.42, p = ≤ .001), but positively correlated with rumination about the past (r = .31, p = ≤ .001); expressive suppression (r = .27, p = ≤ .001); non-acceptance and self-blame (r = .42, p = ≤ .001); the tendency to blame others (r = .17, p = ≤ .001); acceptance (r = .13, p = ≤ .05); and concentration difficulties (r = .31, p = ≤ .001).

The next stage of the analysis aimed to provide a more comprehensive understanding of the relationships between attachment styles and aspects of emotion regulation by conducting a three-step hierarchical regression analysis that allowed us to (i) compare the relative strength of the associations between attachment domains and aspects of emotion regulation in a single analysis and (ii) consider potential interactions between attachment domains, notably, attachment anxiety and attachment avoidance, as considered in previous research (Millings et al., 2019). In the first step, attachment anxiety and attachment avoidance were entered; in the second step, the interaction between

attachment anxiety and avoidance was entered; and in the last step, disorganised attachment was entered. All predicting values were mean-centred. Tables 3 to 13 present the results of these regression analyses for each factor reflecting an aspect of emotion regulation.

Table 3 *Hierarchical Regression of Factor 1: 'Ability to identify emotions' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	-21**	-.21**	-.16**
Attachment avoidance	-.47**	-.47**	-.38**
Anxiety x avoidance		-.01	-.01
Disorganised attachment			-.21**
R^2	.31**	31**	34**
F	74.83	49.75	42.90
ΔR^2	.31**	.00	.03**
F for change in R^2	74.83	.01	15.77

*Note: *p < .05. **p < .001.*

In all three steps, attachment anxiety and attachment avoidance were significant predictors of the ability to identify emotions. The final model revealed that attachment avoidance (β = -.38, p < .001) was the strongest predictor of the ability to identify one's own emotions, followed by disorganised attachment (β = -.21; p < .001), and attachment anxiety (β = -.16. p < .001). The final model accounted for 34% of the variance. The interaction between attachment anxiety and avoidance did not improve the prediction.

Table 4 *Hierarchical Regression of Factor 2: 'Positive reappraisal' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	-.32**	-.32**	-.30**
Attachment avoidance	-.27**	-.27**	-.23**
Anxiety x avoidance		-.02	-.02
Disorganised attachment			-.05
R^2	.21**	.21**	.21**
F	43.88	29.24	22.53
ΔR^2	.21**	.00	.01
F for change in R^2	43.88	.19	2.10

*Note: *p < .05. **p < .001.*

Use of positive reappraisal was predicted only by attachment anxiety (β = -.32, p < .001) and attachment avoidance (β = -.23, p < .001).

Table 5 *Hierarchical Regression of Factor 3 'Ability to control emotions' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	-.44**	-.44**	-.37**
Attachment avoidance	-.17**	-.17**	-.06
Anxiety x avoidance			-.01
Disorganised attachment			-.26**
R^2	.25**	.25**	.30**
F	56.04	37.36	35.24
ΔR^2	.25**	.00	.05**
F for change in R^2	56.04	.23	21.89

*Note: *p < .05. **p < .001.*

Hierarchical regression of the ability to control emotions on predictors revealed that, in the final step, higher levels of attachment anxiety (β = -.44, p < .001) was the strongest predictor of the lack of ability to control own emotions, followed by higher levels of disorganised attachment (β = -.26; p < .001), however, attachment avoidance did not predict the ability to control emotions after disorganised attachment was added to the model.

Table 6 *Hierarchical Regression of Factor 4: 'Rumination about the past' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	.44**	.44**	.40**
Attachment avoidance	.01	.00	
Anxiety x avoidance		.11*	.12*
Disorganised attachment			.22**
R^2	.20**	.21*	.24**
F	41.36	29.55	26.69
ΔR^2	.20**	.01*	.03**
F for change in R^2	41.36	5.00	14.52

*Note: *p < .05. **p < .001.*

Rumination about the past was significantly predicted by attachment anxiety in step 1 (β = .44, p < .001), and the addition of the interaction term (β = .11, p < 0.05) in step 2 increased the variance by 1% and further improved in step 3 by adding disorganised attachment (β = .22, p < .001) adding 3% of the variance. The final model accounted for 24% of the variance. The interaction term was decomposed using simple slopes analysis. Analysis showed that attachment anxiety was significantly associated with rumination at both high and low levels of attachment avoidance (β = .51, p < .001); (β = .29, p < 0.001) respectively; however, attachment avoidance only had a significant negative relationship with rumination when participants also had low levels of anxiety (β = .-21, p < .05), suggesting that dismissive-avoidant individuals are less likely to ruminate about the past.

Table 7 *Hierarchical Regression of Factor 5: 'Expressive suppression' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	-.03	-.03	-.02
Attachment avoidance	.63**	.63**	.64**
Anxiety x avoidance		.00	.00
Disorganised attachment			-.03
R^2	.39**	.39**	.39**
F	108.07	71.83	53.86
ΔR^2	.39**	.00	.00
F for change in R^2	108.07	.00	.00

*Note: *p < .05. **p < .001.*

Expressive suppression was only predicted by attachment avoidance (β = .63; p < .001).

Table 8 *Hierarchical Regression Analysis of Factor 6: 'Non-acceptance, guilt, self-blame' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	.48**	.48**	.42**
Attachment avoidance	.17**	.17**	.07
Anxiety x avoidance		.00	.01
Disorganised attachment			.23**
R^2	.30**	.30**	.33**
F			
ΔR^2	.30**	.00	.04**
F for change in R^2	70.18	.00	18.91**

*Note: *p < .05. **p < .001.*

Hierarchical regression of the factor 'Non-acceptance, guilt, self-blame' revealed that, in the final step of the analysis, attachment anxiety (β = -.42, p < .001) was the strongest predictor, followed by disorganised attachment (β = .23; p < .001), however, attachment avoidance did not account for significant prediction variance after disorganised attachment was added to the model. The final model accounted for 33% of predicting variance, 3% higher than only attachment anxiety and avoidance were taken together.

Table 9 *Hierarchical Regression Analysis of Factor 7: 'Positive refocusing' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	-.14*	-.16*	-.16*
Attachment avoidance	-.09	-.08	-.08
Anxiety x avoidance		-.14*	-.14*
Disorganised attachment			.00
R^2	.03*	.05*	.05*
F	5.62	6.00	4.48
ΔR^2	.03*	.02*	.00
F for change in R^2	5.62	6.57	.00

*Note: *p < .05. **p < .001.*

Positive refocusing was significantly predicted by attachment anxiety in step 1 (β = -.14, p < .05), and the model improved by the addition of the interaction term in step 2 (β = -.14, p < .05), increasing the variance by 2%. Disorganised attachment did not improve the prediction in the final model. The final model accounted for 5% of the variance.

The interaction term was decomposed using simple slopes analysis. Analysis showed that attachment avoidance only had a significant negative relationship with positive refocusing when participants also had high levels of anxiety (β = .-21, p < .05), suggesting that fearful avoidant individuals are less likely to use positive refocusing as a strategy to regulate their emotions.

Table 10 *Hierarchical Regression of Factor 8 'Blaming others' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	.08	.08	.02
Attachment avoidance	-.03	-.02	-.12
Anxiety x avoidance		-.02	-.01
Disorganised attachment			.22**
R^2	.01	.01	.04*
F	1.07	.74	3.48
ΔR^2	.01	.00	.03*
F for change in R^2	1.07	.09	11.63

*Note: *p < .05. **p < .001.*

Blaming others was only predicted by disorganised attachment ($\beta = .22$; $p < .05$) in step three, accounting for 4% of the variance.

Table 11 *Hierarchical Regression of Factor 9: 'Putting into perspective' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	-.22**	-.22**	-.21**
Attachment avoidance	-.02	-.02	-.02
Anxiety x avoidance		-.04	-.04
Disorganised attachment			-.02
R^2	.05**	.05**	.05**
F	8.72	6.01	4.51
ΔR^2	.05**	.00	.00
F for change in R^2	8.72	.61	.05

*Note: *p < .05. **p < .001.*

Throughout all steps, putting into perspective was only predicted by attachment anxiety (β = -.22; $p < 0.01$) and accounted for 5% of the variance.

Table 12 *Hierarchical Regression Analysis of Factor 10: 'Acceptance' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	.03	.03	-.02
Attachment avoidance	.01	.01	-.06
Anxiety x avoidance		-.02	-.02
Disorganised attachment			.16*
R^2	.00	.00	.02*
F	.19	.19	1.67
ΔR^2	.00	.00	.02*
F for change in R^2	.19	.20	6.07

*Note: *p < .05. **p < .001.*

Acceptance was only predicted by disorganised attachment ($\beta = .16$; $p < .05$) in step three and accounted for 2% of variance.

Table 13 *Hierarchical Regression of Factor 11: 'Concentration difficulties' on individual differences in attachment (N =339)*

	Step 1	Step 2	Step 3
Variable	*β*	*β*	*β*
Attachment anxiety	.38**	.39**	.34**
Attachment avoidance	.14**	.13*	.06
Anxiety x avoidance		.10	.11*
Disorganised attachment			.17**
R^2	.18**	.19**	.21**
F	36.73	26.03	21.92
ΔR^2	.18**	.01	.02*
F for change in R^2	36.73	3.97	7.98

*Note: *p < .05. **p < .01.*

Concentration difficulties were significantly predicted by attachment anxiety in step 1 (β = .38, p < .001) and avoidance (β = .14, p < .05). In step 3, after adding disorganised attachment (β = .11, p < .001), the attachment avoidance became insignificant, and the interaction term between anxiety and avoidance became significant instead (β = .11, p < .05) adding 3% of variance. The final model accounted for 21% of the variance.

The interaction term was decomposed using simple slopes analysis. Analysis showed that attachment avoidance only had a significant positive association with concentration difficulties when participants also had high levels of anxiety (β = .16, p < .05), suggesting that fearful avoidant individuals are more likely to struggle to concentrate on other things than the difficulty they may be experiencing.

2.2.5. Discussion

2.2.5.1. Study overview

Study 1 aimed to provide a more comprehensive understanding of how individual differences in attachment style are associated with emotion regulation. Instead of assuming that emotion regulation is a unitary process reflecting what strategies people use to regulate their emotions, we drew on contemporary perspectives on emotion regulation (e.g., The action control perspective) to distinguish multiple processes involved in emotion regulation (e.g., identifying the need to regulate emotions, selecting a strategy to do so, and then implementing that strategy, (Webb et al., 2012). The first part of the discussion discusses findings on whether current emotion regulation aspects tap into the processes defined by ACP. The second part of the discussion is about the relationships between attachment domains and emotion regulation factors. Furthermore, a self-report measure of disorganised attachment (Paetzold et al., 2015) was included to examine associations between disorganised attachment and emotion regulation.

2.2.5.2. Processes of emotion regulation

The analysis suggested that existing measures of emotion regulation reflect eleven separable aspects of emotion regulation. These processes confirmed the distinction between identifying emotions (Factor 1), the use of different strategies for regulating emotions (Factor 2 and Factors 4 to 11), and the ability to control emotions, which includes selecting and implementing strategies and resisting impulses (Factor 3). Such findings support the idea that emotion regulation is not a unitary process and theoretical frameworks that point to the importance of considering different aspects of emotion regulation (Gross, 2015; Webb et al., 2012); although it should be noted that the analysis in present study did not distinguish between the process of selecting and implementing strategies, as the Action Control Perspective does. It should also be noted that the factor reflecting participants' ability to identify their emotions (i.e., Factor 1) reflected a self-reported ability to identify emotions rather

than identifying the need to regulate as described by the action control perspective. Such findings imply the need to develop a scale reflecting the need to regulate emotions proposed by the action control perspective if such a process is indeed deemed important in understanding emotion regulation.

The findings also suggest some overlap between measures of emotion regulation. For instance, the factor reflecting participants' ability to identify their emotions was loaded by items from three previously established subscales, including the 'identification' subscale of the PIRES, the 'awareness' subscale of the DERS, and the 'clarity' subscale of the DERS. These findings suggest that the awareness and clarity subscales of the DERS may measure similar aspects of ER and, taken together with the finding that measures from the 'goals' and 'strategies' subscales of the DERS both loaded on Factor 11, which was labelled 'concentration difficulties' suggest that the DERS scale could reflect four instead of six processes (i.e., the ability to identify emotions, the ability to control emotions, non-acceptance, and concentration difficulties) (Medrano & Trogolo, 2016). Such divergence from the original DERS measure, as found in the present research and by Medrano and Trogolo (2016), could be explained by Gratz and Roemer (2004) aims to develop a theory-based measure and explore their proposed constructs rather than use a bottom-up, data-driven approach. However, such an approach revealed some overlap between subscales and makes it questionable whether it is valuable to distinguish aspects such as awareness and clarity from each other.

On the other hand, four of the identified factors (Emotion suppression, Positive refocusing, Blaming others, and Concentration difficulties) that were loaded by the same items as in subscales of the original scales (i.e., the ERQ, CERQ, and DERS, respectively) supported the idea that they were distinct from other subscales. Furthermore, two factors (Putting into perspective and Acceptance) were primarily loaded on by the respective items from the CERQ and had only one item from the other measures. The benefits of data-driven approach to understanding emotion regulation and its measurement is that it is possible to identify different aspects of emotion regulation, along with

potential ways to measure these aspects. To evaluate this approach, future research should focus on confirmatory factor analysis.

2.2.5.3. Relationships between attachment and emotion regulation

The second aim of the present research was to explore whether and how individual differences in attachment orientation (namely, anxious, avoidant and disorganised dimensions of attachment orientation) are associated with the use of different emotion regulation strategies and other processes involved in emotion regulation. Study findings suggested that higher levels of any attachment insecurity are associated with being less able to identify (Factor 1) and control (Factor 3) own emotions. Previous research supports this idea, finding that secure attachment (i.e., lower levels of attachment anxiety and attachment avoidance) was associated with better awareness of and clarity around emotions (Marganska et al., 2013). Similarly, higher levels of attachment anxiety and attachment avoidance were associated (separately) with a lack of awareness and lack of clarity (Han & Lee, 2017).

The relationship between attachment insecurity or disorganisation and difficulties controlling emotions supports findings from a previous study using the DERS scale, where an inability to control impulsive behaviour was found to be associated with preoccupied (higher levels of attachment anxiety) and fearful-avoidant (higher anxiety and higher avoidance) attachment styles (Marganska et al., 2013). Han and Lee (2017) study looking into attachment dimensions as two continuous variables found that higher levels of attachment anxiety and attachment avoidance were associated with difficulties with impulse control; something that is likely to reflect a similar process to emotion control. Taken together, these findings suggest that any kind of insecure attachment is likely to be associated with difficulties identifying and controlling emotions. The findings also suggest that disorganised attachment may be a better predictor of the ability to control emotions than attachment avoidance, as attachment avoidance became insignificant when disorganisation was entered into the

model, which may suggest that the measure of attachment disorganisation might capture some aspects of attachment avoidance.

With respect to how individual differences in attachment related to the specific strategies that people used to regulate their emotions, analysis revealed that at least one of the three attachment styles (anxious, avoidant, and/or disorganised) was associated with the extent to which participants reported using each of the specific emotion regulation strategies identified by measures: positive reappraisal (factor 2), rumination about the past/catastrophizing (factor 4), expressive suppression (factor 5), non-acceptance, guilt, and self-blame (factor 6), positive refocusing (factor 7), blaming others (factor 8), putting into perspective (factor 9), situational acceptance (factor 10), and concentration difficulties (factor 11). The direction of the associations suggests that greater attachment insecurity on attachment dimensions (i.e., high levels of anxiety, avoidance, or disorganisation) tended to be negatively associated with the use of what are typically viewed as adaptive strategies (Lasa-Aristu et al., 2019), and positively associated with what are typically viewed as maladaptive strategies (i.e., these people are more likely to ruminate, suppressive their emotions, fail to accept them, feel guilty and blame themselves and others, and have difficulties concentrating).

Other studies have reported similar relationships between attachment and positive reappraisal. For instance, an Austrian study of 531 undergraduates also found significant relationships between attachment anxiety, attachment avoidance and the use of positive reappraisal (Troyer & Greitemeyer, 2018). Another study measuring cognitive reappraisal found similar results, finding that both attachment avoidance and attachment anxiety were negatively associated with cognitive reappraisal (Poncy, 2017). In addition to these findings, higher levels of attachment disorganisation have also been associated with lower levels of cognitive reappraisal (Stevenson et al., 2019). However, the regression analysis from the present study revealed that disorganised attachment did not increase the variance explaining the use of reappraisal after entering attachment anxiety and avoidance. Taken together, it seems that people with lower levels of attachment insecurities are more likely and / or

able to see challenging situations as an opportunity rather than a negative event (positive reappraisal). This might be because those who are more securely attached are more empathetic and understand the situation better (Troyer & Greitemeyer, 2018). However, some contrary results were found from a recent study looking at emotion regulation, attachment styles and cyberbullying where attachment avoidance and attachment disorganisation did not account for significant association with reappraisal, but attachment security itself was positively related (Worsley et al., 2019).

The present study revealed that higher levels of attachment anxiety were associated with less use of positive refocusing and putting things into perspective. These findings support those from a recent previous study, which suggested that only attachment anxiety was related to lower levels of positive refocusing (Worsley et al., 2019). The difference between positive reappraisal and refocusing is that refocusing involves distraction, for example, thinking about different issues than the actual event or outcome (Garnefski & Kraaij, 2007). People with higher levels of attachment anxiety tend to use hyperactivating strategies, making it difficult for them to stop focusing on the distressing situation (Mikulincer & Shaver, 2019). Unlike Worsley et al. (2019), who did not find associations between avoidance and positive refocusing, the present research found that attachment avoidance was associated with positive refocusing, but only when individuals also scored higher on attachment anxiety. Although it should be noted, that Worsley et al., (2019) did not consider interaction between anxiety and avoidance.

The strategy – acceptance – was positively related to levels of attachment disorganisation (but not to levels of attachment anxiety or avoidance), suggesting that participants with a more disorganised attachment style are more likely to accept negative emotional situations. This may seem surprising; however, acceptance is not necessarily positive, it rather reflects cognitive situational acceptance and could reflect the passivity towards the situation (e.g., ‘I think that I have to accept the situation’), not necessarily an adaptive, accepting, and open emotional response to it.

The present research found that attachment avoidance is the main predictor of expressive suppression, accounting for 39% of the variance. The explanation is that avoidant people tend to use deactivating strategies such as emotion suppression to escape from stressful events or situations (Fraley & Shaver, 1997; Mikulincer & Shaver, 2019). Furthermore, evidence suggests that avoidant people are not likely to disclose their feelings to others and thus likely to employ expressive suppression (avoiding disclosure) (Garrison et al., 2014). Regarding the relationship between disorganized attachment style and expressive suppression, those with a disorganised attachment style tend to have ambivalent feelings towards people they are close to. Even though they seek proximity, they tend to avoid attachment figures due to insecurity caused by negative previous experiences (Paetzold et al., 2015). Such ambivalent tendencies might explain why disorganised attachment and expressive suppression were only moderately correlated and did not significantly improve the prediction model, even though disorganised people have some similar patterns to those who are avoidant in terms of suppression.

A few studies have suggested that not only are those who are avoidant or disorganised more likely to suppress their emotions, but those who have higher attachment anxiety are as well (Karreman & Vingerhoets, 2012; Troyer & Greitemeyer, 2018). For example, Prosen and Vitulić (2016) found that students who had both higher attachment anxiety and higher attachment avoidance (i.e., a fearful attachment style) used emotional suppression more than did securely attached (low attachment avoidance and attachment anxiety) or dismissive students (with higher attachment avoidance). However, the present study did not find such a relationship between attachment anxiety and expressive suppression. Inconsistencies across the studies might be explained by a recent analysis suggesting that results from the studies that take a dimensional perspective on the attachment domains seem more consistent than studies using four categorical attachment styles (Fraley et al., 2015). On the other hand, there is an argument that preoccupied individuals with higher attachment anxiety tend to use more avoidant strategies than those with secure attachment (Prosen & Vitulić, 2016); this could

explain why some studies found that attachment anxiety was also associated with expressive suppression.

In the present study, attachment anxiety and attachment disorganisation were positively related to rumination (factor 4), and attachment avoidance was negatively associated when participants also had low levels of anxiety (dismissive-avoidant). This is consistent with the similar relationships reported by (Garrison et al., 2014). One explanation for this is, as mentioned previously, that people with higher levels of attachment anxiety are actively distressed by the negative situation (Mikulincer & Shaver, 2019), likely because they are less likely to use adaptive strategies such as positive reappraisal or positive refocusing as supported by the present study. Unsurprisingly, those with higher levels of attachment disorganisation tend to ruminate about the past, given that a disorganised attachment style overlaps with both attachment avoidance and attachment anxiety (Paetzold et al., 2015; Simpson & Rholes, 2002). This could be explained by disorganised individuals' preoccupation with negative experiences (Paetzold et al., 2015).

The present research found that higher levels of attachment disorganisation, anxiety, and avoidance were associated with higher levels of non-acceptance, guilt, and self-blame. Marganska et al. (2013) found similar results in a study looking at adult attachment, emotion regulation and symptoms of depression and generalised anxiety disorder. Specifically, both preoccupied attachment and avoidant attachment styles were related to a lack of acceptance of negative emotions. Similarly, Han and Lee (2017) found that attachment anxiety and avoidance were associated with a lack of acceptance. Although, Ascone et al. (2020) found that only attachment anxiety is associated with self-blame. Self-blame is common when a person is overwhelmed by fear of abandonment or feeling vulnerable or helpless (George & West, 1999). By nature, self-blame is a hyperactivating strategy and is likely to be related to attachment anxiety more than dismissive avoidance (Ascone et al., 2020), which, in a way, is supported by the prediction model in the present study, where attachment avoidance became not significant predictor after adding attachment disorganisation.

Only attachment disorganisation was associated with blaming others. Disorganised attachment reflects the willingness to seek proximity from those you are close to; however, this process is often incoherent and cannot be completed, leading the person to have ambivalent feelings about the attachment figure (Paetzold et al., 2015). Therefore, the disorganised person may continuously try and fail in seeking relatedness, but because of this unresolved 'failure', they blame both themselves and their attachment figure.

Findings from the present study also suggested that attachment disorganisation, attachment anxiety and attachment avoidance were related to more concentration difficulties. Although in the model where disorganised attachment was added, avoidance only had a significant association with concentration difficulties when participants also scored higher on attachment anxiety meaning supporting results from a previous study using the 'Goals' subscale of the DERS (which comprised part of conceptualisation of concentration difficulties in the present study) found that preoccupied (characterised by higher levels of attachment anxiety) and fearful-avoidant (characterised by higher anxiety and higher avoidance) attachment styles were associated with an inability to pursue goals, while a dismissive-avoidant style was not significantly associated with the ability to pursue goals (Marganska et al., 2013). It seems that attachment insecurities could reduce focus/concentration on other life domains, perhaps due to less use of adaptive strategies. That is, those who have higher levels of attachment anxiety tend to be preoccupied with a negative situation, get emotional and focus on the negative feelings rather than looking for a solution (Fraley & Shaver, 1997). Avoidant people would rather escape distressful situations than solve them (Mikulincer & Shaver, 2019); however, in modern society, people are unlikely to achieve goals without experiencing distress and solving relevant problems. For instance, insecure attachment was also associated with less use of cognitive/positive reappraisal, which, according to previous research, is highly associated with better problem-solving skills (Aldao et al., 2010).

2.2.5.4. Implications for future research

The present study revealed some overlaps between measures of emotion regulation as well as questioned the importance of having several different subscales with closely related meanings (e.g., 'Awareness' and 'Clarity' from DERS). Therefore, a reduced number of subscales could lead to the development of a shorter measure that still reflects many different aspects of emotion regulation, for example, using the first three items with the highest loadings on each factor.

Secondly, this study looked at relationships between attachment disorganisation and emotion regulation domains, providing a more comprehensive understanding of how individual differences in attachment could be related and may predict the use of different strategies related to emotion regulation. It should be noted that it was one of the first studies looking at relationships between disorganised attachment and emotion regulation. However, results suggest that the attachment disorganisation measure (Paetzold et al., 2015) that was used may only capture a part of attachment disorganisation; results between interaction term of attachment anxiety and avoidance that may identify fearful-avoidant/disorganised attachment were inconsistent with the ones from disorganised attachment measure. Therefore, the decision was made to drop disorganised attachment from further studies in this thesis.

2.3. Study 2: Predicting help-seeking

2.3.1. Introduction

Study 2 tests how and why attachment orientation is associated with help-seeking (i.e., via emotion regulation and people's beliefs about help-seeking). As discussed in the chapter introduction, from the socio-cognitive perspective, the Prototype Willingness Model (Gibbons et al., 1998) is potentially the most comprehensive model for understanding how people's beliefs influence help-seeking for mental health difficulties (Hammer & Vogel, 2013). From individual differences, differences in attachment orientation also have strong links to attitudes, intentions and willingness (that are also some of the key aspects of PWM) to seek help (Cheng et al., 2015; Lopez et al., 1998; Millings et al., 2019; Vogel & Wei, 2005). Particularly, those who are more avoidant are less likely to have intentions or be willing to seek help, and those who are more anxiously attached typically have higher intentions or willingness to seek help (Cheng et al., 2015; Shaffer et al., 2006; Vogel & Wei, 2005).

To understand how attachment is associated with PWM, first, it should be noted that attitudes is the most significant predictor of intentions and willingness to seek help in the Theory of Planned Behaviour based models (Adams et al., 2022) such as PWM. Some key barriers to seeking help (have been previously associated with both socio-cognitive aspects, such as attitudes towards help-seeking and attachment. Stigma is associated with both attitudes towards seeking professional help (Vogel et al., 2005, 2007) and attachment in general (Nursel Topkaya et al., 2016). Self-disclosure is also associated with socio-cognitive beliefs (Vogel et al., 2005) and attachment (Cruddas et al., 2012).

The other possible link between individual differences in attachment orientation and attitudes towards seeking help could be emotion regulation, which was also discussed in Chapter 1. For example, expressive suppression, one of the key emotion regulation strategies used by those who are more avoidant (Mikulincer & Shaver, 2019), is also associated with attitudes towards therapy (Vogel et al., 2008). Study 1 expanded this research to examine how attachment orientations are associated

with other aspects of emotion regulation. Eleven different aspects (e.g., inability to identify emotions, blaming others) of emotion regulation measured and examined the relationship between attachment on the one hand and emotion regulation on the other. Each of emotion regulation aspects were associated with at least one of the attachment traits suggesting relatively strong links between attachment and emotion regulation.

2.3.2. The present study

The present study aims to extend this research to provide a more comprehensive understanding of how individual differences in attachment orientation are associated with help-seeking intentions, willingness to seek help, actual help-seeking behaviour, and, if so, via what mechanisms. Potential mechanisms are explored by (i) considering the relationship between attachment orientation and the Prototype Willingness Model affect intentions and willingness to seek help and help-seeking behaviour; ii) exploring whether the relationship between attachment and PWM could be better explained by barriers to seeking help related to both attachment and PWM such as difficulties in self-disclosure and stigma; (iii) exploring whether the relationship between attachment and PWM could be better explained by differences in how people regulate emotions.

The assumption of a causal direction from attachment orientation to lower levels of the model is justified by the idea that these early attachment styles become foundational for developing subsequent psychological processes. Emotion regulation strategies, intentions, and other aspects of the model are likely influenced by the internal working models established in early life; for example, individuals with secure attachment styles may develop more adaptive emotion regulation strategies, while those with insecure attachment styles may exhibit different patterns of emotional regulation (Mikulincer & Shaver, 2019). The temporal sequence in which attachment orientation is typically believed to form earlier in life than emotion regulation strategies and intentions supports the proposed

causal direction. This assumption aligns with the notion that early attachment experiences are a template for later socio-emotional development.

To achieve this (as seen in Figure 1), PWM was used as a central base of the model:

i) Past help-seeking predicts attitudes, norms (subjective and descriptive), prototypes and prototype similarity, intentions and willingness. Past help-seeking also predicts barriers to seeking help (self-stigma, public stigma, difficulties in self-disclosure).

ii) Attitudes and norms predict intentions;

iii) Attitudes, norms, prototypes, and prototype similarity predict willingness;

iv) Intentions and willingness predict actual help-seeking

Attachment predicts:

i) PWM (attitudes, norms, prototypes, prototype similarity, intentions, willingness)

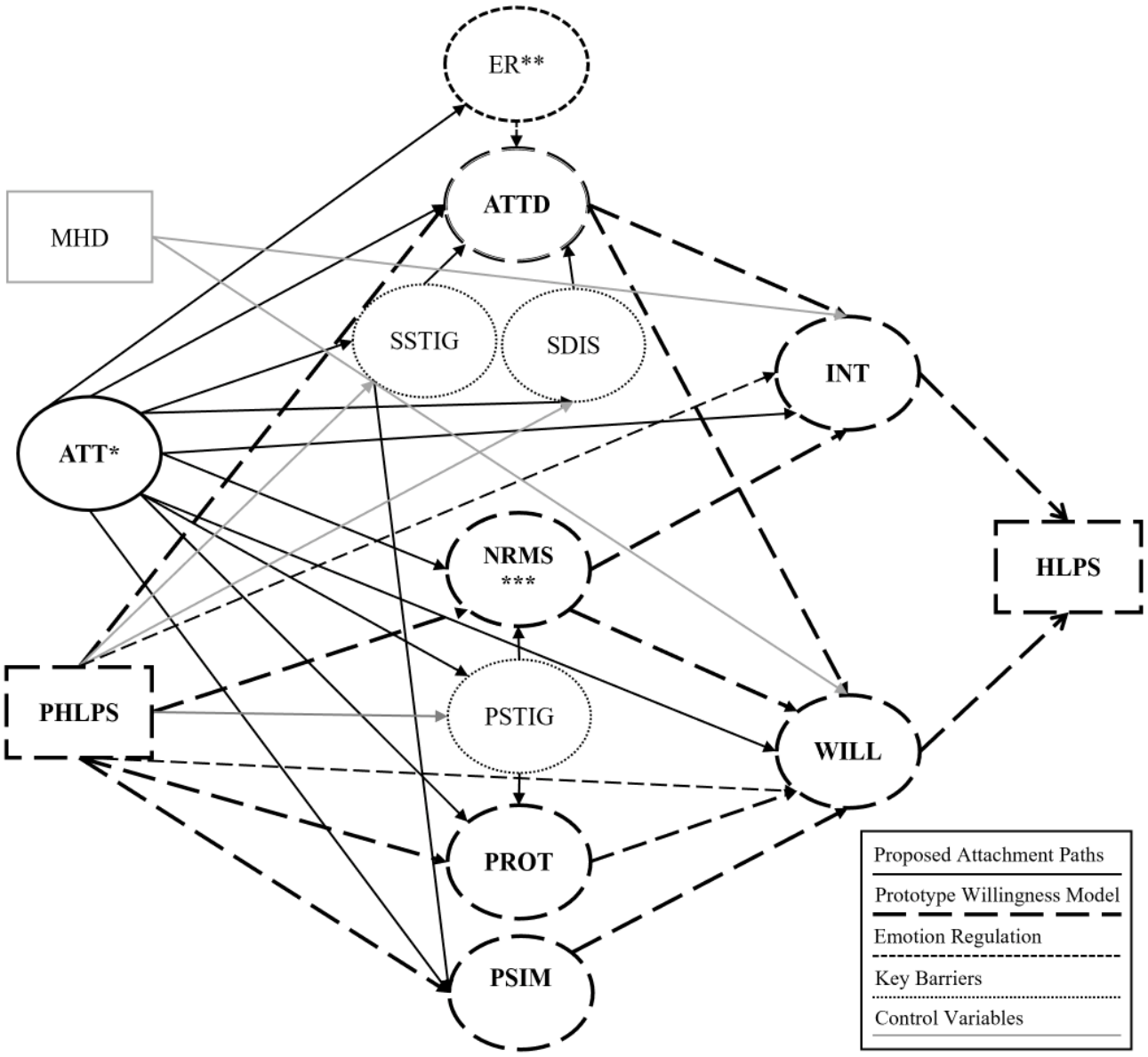
ii) Emotion regulation aspects

iii) Barriers to seeking help (difficulties in self-disclosure, self-stigma and public stigma)

Because attitudes are identified as the key aspect in predicting intentions to seek help in TPB-based models (Adams et al., 2022), attitudes were a central figure to focus on individual experiences such as emotion regulation, self-stigma and difficulties in self-disclosure as potential mediators between attachment and PWM; except for public stigma, which reflects more on beliefs about societal norms and societal image of a potential help-seeker than individual beliefs about personal experiences, therefore, public stigma was associated with norms and prototypes.

It should be noted that self-stigma was also associated with prototype similarity, which reflects whether an individual identifies themselves as a prototypical help-seeker. The prediction of

intentions and willingness to seek help was controlled by difficulties in mental health (whether an individual was potentially experiencing difficulty with their mental at the time of the study).



Abbreviations: MHD, potential mental health difficulty; ATT*, attachment orientation; PHLPS, past help-seeking; ER, 11 emotion regulation aspects; ATTD, attitudes; SSTIG, self-stigma; SDIS, difficulties in self-disclosure; NRMS** norms (subjective norms and descriptive norms); PSTIG, public stigma; PROT, prototypes; PSIM, prototype similarity; INT, intentions to seek help; WILL, willingness to seek help: HLPS, help-seeking behaviour. Square shapes reflect binary variables; Oval shapes reflect continuous variables.

Figure 1 Proposed primary model for predicting intentions and willingness to seek help and actual help-seeking behaviour based on individual differences in attachment orientation and key help-seeking aspects associated with the Prototype Willingness Model.

2.3.3. Methodology

2.3.3.1. Participants

During 2020-21, effectively around the time of the COVID-19 pandemic, 638 undergraduate and postgraduate students studying in the UK completed the survey; of those, 487 were fully completed. Two surveys had odd missing items and were included in the data analysis, and 149 were incomplete and, therefore, withdrawn from the study. Students were recruited primarily using the participant recruitment service Prolific. Initially, the University of Sheffield email distribution lists and advertising study social media websites such as Facebook and Instagram were used, accounting for only 21.7% of acquired participants. Three hundred and sixty-eight 6-month follow-ups were received, and 188 successfully linked to their previous data using anonymous code (see procedure). The vast majority of participants were undergraduates (69%), followed by postgraduate taught (18%) and postgraduate research (12%) students. Participants were predominantly females (69%). Most participants were Caucasian (72%), with a mean age of 24.73 (min = 18, max = 54, SD = 7.45).

2.3.3.2. Procedure

All participants completed an online questionnaire hosted by Qualtrics. Participants were first provided informed consent and then they created an anonymous code using the following instructions:

1. The month of your birth (0-12) (e.g., 01 for January);
2. The first letter of your first name (e.g., A);
3. The first three letters of your primary school (e.g., ARB)

EXAMPLE: ‘01AARB’

Participants were asked to complete a battery of measures (timepoint 1), and six months later, participants were contacted and asked to complete two final measures (timepoint 2). At timepoint 1, participants completed the following measures: attachment orientation; attitudes toward seeking psychological help; norms; self-stigma; public stigma; prototypes; prototype similarity; help-seeking

intentions; willingness to seek help; emotion regulation; difficulties in self-disclosure; past help-seeking behaviour; and mental health symptoms; randomised. These were followed by demographic questions about age, gender, student status, level of study, ethnicity and marital/relationship status. At timepoint 2, participants re-created their code and completed a measure of experiences of personal/emotional problems and a measure of help-seeking behaviour in the last six months.

2.3.3.3. Measures

Sample items from all the measures described below can be found in Table 15. Unless stated below, participants responded to survey items using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Attachment orientation. The 12-item Experiences in Close Relationship Scale – Short From (ECR-S) (Lafontaine et al., 2016) was used to measure attachment anxiety and attachment avoidance. The measure produced good internal reliability for both ($\alpha = .82$, $\alpha = .88$, respectively). Items were reworded to focus on close relationships in general rather than romantic relationships (e.g., (Rowe & Carnelley, 2003).

Attitudes. The 10-item Attitudes Toward Seeking Professional Psychological Help – Short form ATSPPH-SF was used to measure attitudes toward seeking professional psychological help. (Fischer & Farina, 1995). The measure produced acceptable internal reliability ($\alpha = .72$).

Norms. The 10-item measure was borrowed from Hammer & Vogel (2013) study assessing the Utility of the Willingness/Prototype Model in Predicting Help-Seeking Decisions and was used to measure subjective and descriptive norms. The measure asks how important others would think about help-seeking if there was an issue related to mental health. The measure produced good internal reliability for both ($\alpha = .86$, $\alpha = .93$, respectively).

Self-stigma. The 10-item Self-Stigma of Seeking Help (SSOSH) scale (Vogel et al., 2006)was used to measure self-stigma. The measure produced good internal reliability ($\alpha = .87$).

Public stigma. The 5-item Stigma Scale for Receiving Psychological Help (SSRPH) (Komiya et al., 2000) was used to measure public stigma. The word psychologist was changed to professional to reflect any mental health professional rather than only psychologists. The measure produced good internal reliability (α = .80).

Prototypes. A 16-item (8 positives and 8 negatives) measure to capture prototypes. Participants were asked to imagine a typical person who seeks help from a mental health professional, and to what extent do the following characteristics describe this person? (Participants answered using a 7-point Likert scale from 'not at all' to 'extremely'). Negative items were Needy, Dependent, Lazy, Attention-seeking, Scared, Indecisive, Pessimistic, Weird. Positive items were Proactive, Brave, Practical, Aware, Confident, Smart, Optimistic, and Normal. For analysis, positive prototypes were reversed into negative ones, meaning a higher score indicated more negative ones. The measure produced good internal reliability (α = .86).

Prototype similarity. A 2-item measure to capture prototype similarity: (i) In general, how similar are you to the type of person who would get an appointment with a mental health professional if needed? (7-point Likert scale ranging from not at all similar to very similar). (ii) Do the characteristics that describe the type of person who seeks help also describe you? (7-point Likert scale ranging from definitely no to definitely yes). The measure produced good internal reliability (α = .83).

Intentions. The 5-item measure of help-seeking intentions was also borrowed from the same study as subjective and descriptive norms (Hammer & Vogel, 2013). Participants were asked to indicate their response by choosing the number (1 – 7) that best describes their intentions to seek help in the next six months. The measure produced excellent internal reliability (α = .98).

Willingness to seek help. 6-scenarios adapted from the extended version of the General Help-Seeking Questionnaire– the GHSQ (Wilson et al., 2005) vignette version (Wilson et al., (Forthcoming)) were used to measure willingness to seek help for a range of mental health problems.

Scenarios measured willingness to seek help for personal or emotional problems, stress, anxiety, depression, substance misuse, and psychosis. Two scenarios to reflect losing motivation for studying and academic distress were added*. Participants were asked to indicate their willingness in the range (1-7) to seek help from each of the following sources of help that are listed below, assuming that each was available to them:

a) A University Counselling Service

b) A University Well-being Service

c) Mental health professionals outside the university (e.g., a psychologist, counsellor, or well-being specialist).

d) GP (doctor)

The highest score from the scores of all potential help sources for each scenario was chosen, as all of these sources are credible sources of seeking professional help for difficulties with mental health; therefore, for this analysis, there was no focus on the participant preferences for the source. For example, if someone scored six on willingness to seek help for depression from counselling services but only four from GP, it would still be coded as six on willingness to seek help for depression. Reliability analysis of calculated scores produced good internal reliability ($\alpha = .89$).

*The two scenarios reflecting academic distress were created:

(i) Imagine that, during the last couple of months, you have started feeling less confident in terms of your studies. You have lacked motivation to fulfil tasks required by the university. The joy of studying has disappeared, and it is getting harder and harder to concentrate on assignments and meet deadlines. How willing would you be to seek help from the following sources?

(ii) Imagine that you are very motivated to get university work done well. You always prepare for exams and assignments. However, during the last couple of months, you have felt that your stress levels have increased by a substantial amount and that this has a negative effect on your academic work. How willing would you be to seek help from the following sources?

Emotion regulation. The 33-item emotion regulation measure was taken from Study 1, chapter 1. Based on the factor analysis conducted in study 1, three items with the highest factor loadings of each of the 11 factors reflecting emotion regulation aspects were chosen. The factors: the ability to identify emotions (α = .88); positive reappraisal (α = .72); inability to control emotions (α = .80); rumination about the past (α = .76); expressive suppression (α = .87); guilt, self-blame for feeling upset(α = .77); positive refocusing (α = .85); blaming others (α = .86); putting into perspective (α = .80); acceptance (α = .77); concentration difficulties when being upset (α = .91).

Difficulties in self-disclosure. The 3-item subscale from the Barriers to Seeking Psychological Help Scale for College Students scale (Topkaya et al., 2016) was used to measure difficulties in self-disclosure. The measure produced good internal reliability (α = .80).

Past help-seeking behaviour. Three questions to capture past help-seeking were created:

(i) Have you ever made an appointment with university counselling services?

(ii) Have you ever attended a university counselling service?

(iii) Have you ever consulted a mental health professional outside the university (e.g., a psychologist, counsellor, or well-being specialist)?

Participants were asked to answer 'no or yes' on each. If participants answered any of these questions as yes, it was coded that participants were engaged in past help-seeking behaviour; if participants answered all of these questions as no, it was coded the answer that participants did not engage in past help-seeking behaviour.

Mental health. The 34-item Counselling Centre Assessment of Psychological Symptoms (CCAPS-34) (Locke et al., 2012) was used to measure seven subscales related to psychological symptoms and distress in students: depression, generalized anxiety, social anxiety, academic distress, alcohol use, eating concerns, hostility. The measure appears suitable for use in clinical and research settings with students from a non-clinical sample (Locke et al., 2012). Only the more extended, full version of CCAPS (CCAPS-62) has been validity tested in the UK and appears to have validity to be

used in the UK without requiring revision (Broglia et al., 2017), but as CCAPS-34 is directly related to CCAPS-62, a decision was made to proceed using this measure.

To identify potential difficulties in mental health, the SPSS syntax provided with the manual and the SPSS v27 statistical package were used to calculate raw scores. Then, high-cut points of raw scores on each of the seven subscales from the CCAPS-2019 manual were used to determine potential difficulties with mental health. Anyone who scored higher than a high cut point on any of the seven difficulties was coded as someone potentially experiencing difficulty with mental health at the initial data collection, and their data was used in the models below.

Past help-seeking. Participants were asked to indicate whether they have ever made an appointment with university counselling services, have ever attended a university counselling services, and have ever consulted a mental health professional outside the university (e.g., a psychologist, counsellor, or well-being specialist). Participants answered no or yes. If they answered 'yes' to any of these questions, an assumption was made that they have previously sought professional help for personal, emotional or other mental health problems.

Experiences of personal/emotional problems. Participants were asked to indicate whether participants had encountered personal or emotional problems during the last six months. Participants answered no or yes.

Help-seeking behaviour. Participants were asked whether they had sought help from the list of mental health/support services available. Participants had to choose between 'No, I have not sought help or did not need help' and the list of the following options: Yes

a) From a university counselling service

b) A university well-being service

c) Mental health professionals outside the university (e.g., a psychologist, counsellor, or well-being specialist).

d) GP (doctor)

e) An online mental health service (such as counselling via phone or video call).

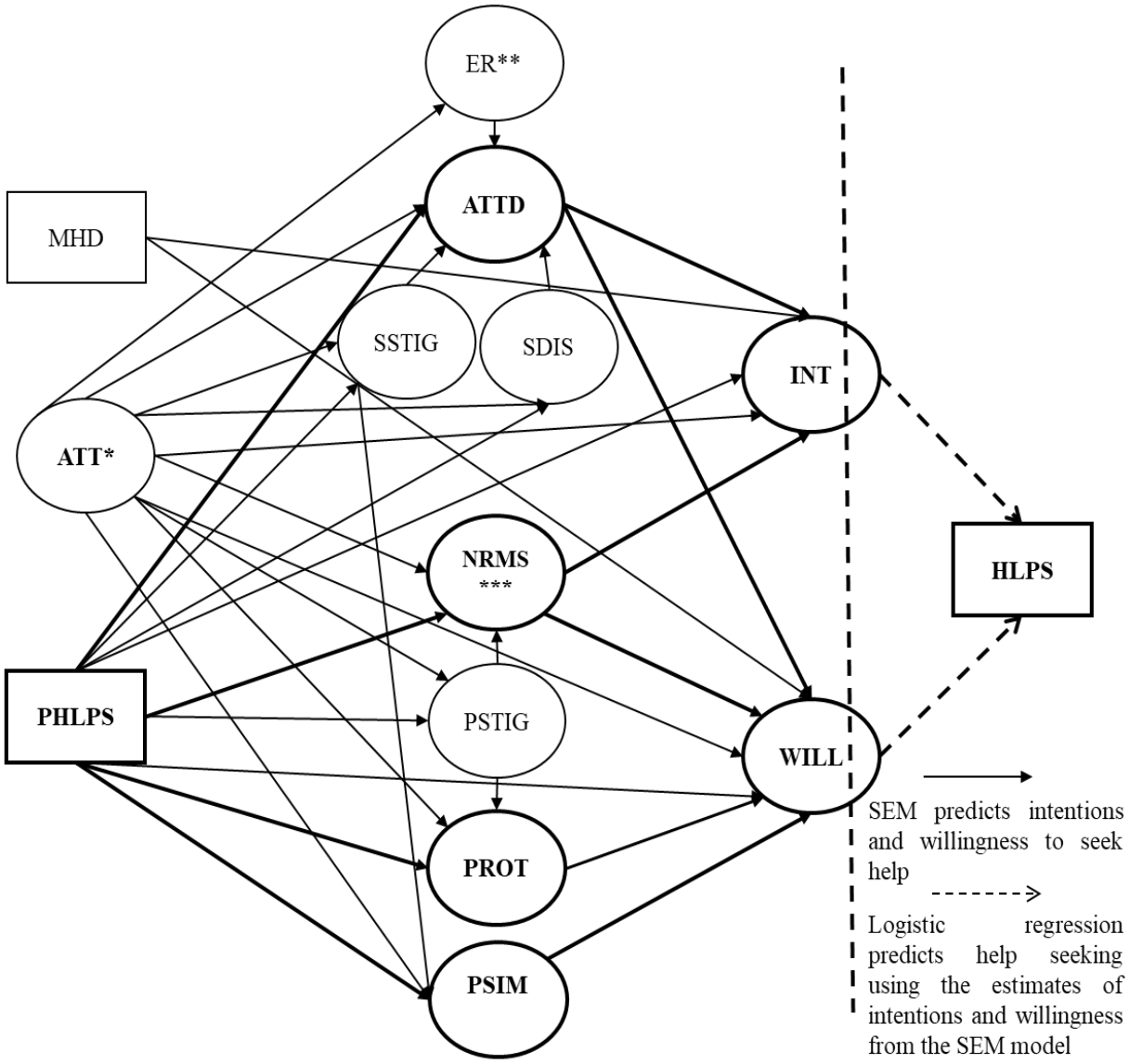
The latter was especially relevant during COVID-19 times. If a participant answered no, it was coded that the participant did not seek help; if a participant chose any of the 'yes' options, it was coded that the participant did seek help.

2.3.4. Analytic strategy

Before proceeding with SEM modelling, an apriori power analysis using the apriori sample size calculator for structural equation models (Soper, 2019) based on (Cohen, 1988; Westland, 2010) was used, expecting small to medium effect (.20) a recommended minimum sample size of 588 participants to detect an effect based on 80% desired statistical power and a .05 probability level. Due to the unexpectedly higher amount of incomplete surveys, the approach to analysis was guided by the structural features of the dataset and the need to conserve statistical power; therefore the following adjustments were proposed: i) abandon attachment disorganisation from Study 1 and rely only on widely researched key attachment theory aspects namely attachment anxiety and attachment avoidance; ii) because the focus of the study is the mediational links between attachment and attitudes towards seeking help, specifically, via emotion regulation, the decision was made that the best approach was to build a model including all 11 aspects of emotion regulation, and then respecify the model by removing those emotion regulation aspects which did not add significant value to the model.

Due to high attrition to the follow-up and that the main outcome variable, help-seeking behaviour at six months was fundamentally binary (i.e., participants either did or did not seek help in the interval between surveys), the decision was made to use separate analytical techniques for predicting intentions/willingness to seek help and actual help-seeking behaviour. Main outcomes (intentions and willingness to seek help) were predicted using structural equation modelling (SEM). Then, the predicted estimates of intentions and willingness from the SEM were used in a logistic stepwise regression predicting actual help-seeking behaviour amongst those participants who

completed follow-up and indicated that they experienced a personal or emotional difficulty during the last six months. Both analyses are represented in Figure 2.



Bold lines indicate PWM. Dashed paths indicate a logistic regression path. Abbreviations: MHD, potential mental health difficulty; ATT*, attachment orientations; PHLPS, past help-seeking; ER, 11 emotion regulation aspects; ATTD, attitudes; SSTIG, self-stigma; SDIS, difficulties in self-disclosure; NRMS** norms (subjective norms and descriptive norms); PSTIG, public stigma; PROT, prototypes; PSIM, prototype similarity; INT, intentions to seek help; WILL, willingness to seek help: HLPS, help-seeking behaviour.

Figure 2 Proposed primary model for predicting intentions and willingness to seek help based on individual differences in attachment and key help-seeking aspects associated with prototype willingness model followed by binominal logistic regression predicting actual help-seeking.

The Jamovi graphic user interface (The jamovi project, 2022) for R programming language for statistical computing (R Core Team, 2021) was used to conduct analyses. The SEMLj jamovi module (Gallucci & Jentschke, 2021) was used to conduct SEM. It uses lavaan (Rosseel, 2012), an R package commonly used for structural equation modelling.

In SEM, each model factor was measured by the items indicating their corresponding factor. For each model, maximum likelihood modelling with no missing data was used. At first, a confirmatory factor analysis was used to evaluate the measurement part of the models. Acceptable model fit was established by removing factors with loadings below .5 and allowing covariances between error terms of the items that represent similar aspects of a latent variable discussed in the measurement model part.

The null hypothesis for the hypothesized main effects was rejected if $p < .05$. A recommended bootstrapping method was used to inspect the indirect effects' significance (Shrout & Bolger, 2002). As done in similar studies (i.e. (Hammer & Vogel, 2013), SEMLj was instructed to make 10,000 bootstrap draws and produce bias-corrected bootstrap confidence intervals. The null hypothesis was rejected if the 95% confidence interval did not include zero.

The fit of the models was reported using two absolute fit indices: The chi-square statistic and the Root Mean Square Error of Approximation (RMSEA), followed by incremental fit indices: the Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI). We primarily relied on RMSEA, CFI and TLI because the Chi-square statistic is sensitive to a larger sample size (Byrne, 2010). Values $> .9$ for CFI and TLI and $<= .05$ for RMSEA were taken to indicate acceptable model fit (L. Hu & Bentler, 1999).

To predict actual help-seeking behaviour, estimates of intentions and willingness to seek help from the generated post-estimation of the respective models were used. As mentioned before, to control for the potential need for help-seeking, during the follow-up, participants were also asked whether they had experienced personal or emotional problems in the last six months (N=139).

2.3.5. Results

2.3.5.1. Missing data

Excluding participants who dropped out, only two cases had 0.2% (1 value) each missing; therefore, SEM analysis based on maximum likelihood excluded cases with missing items by default.

2.3.5.2. Sample characteristics

Based on the CCAPS-34, 82% of the 489 participants potentially were experiencing mental health difficulties at the time of initial data collection. The most common difficulties related to concerns about eating and/or depression (51% and 48% of students, respectively). The follow-up data is also consistent with a high proportion of students experiencing difficulties: 73.4% (N = 139) out of 188 participants self-reported that they had experienced personal or emotional problems in the last six months. Of those, 69 sought help, and 70 did not; hence, in this sample, only half of the university students who may have been experiencing psychological difficulties sought help. It must be noted that of those who sought help during the 6-month follow-up, 75% of participants (N = 52) had already had help-seeking experience before (past help-seeking), and about half of the total participants in the study (49%) indicated that they had not sought professional help for mental health ever.

2.3.5.3. Correlations

Table 14 *Correlations between factors in the models*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 ANX	—																					
2 AVD	-.07	—																				
3 ATTID	.12*	-.3***	—																			
4 SNORMS	.1*	-.24***	.34***	—																		
5 DNORMS	.01	-.14**	.15***	.62***	—																	
6 PROT	-.05	.18***	-.32***	-.23***	-.07	—																
7 PSIM	.19***	-.2***	.4***	.17***	.09	-.23***	—															
8 INT	.33***	-.06	.33***	.14**	.08	.01	.33***	—														
9 WILL	.08	-.33***	.52***	.3***	.17***	-.21***	.34***	.23***	—													
10 SSTIG	.07	.21***	-.56***	-.19***	-.01	.33***	-.17***	-.1*	-.28***	—												
11 PSTIG	.1*	.14**	-.28***	-.22***	-.11*	.37***	-.08	.05	-.12*	.49***	—											
12 SDIS	.13**	.32***	-.42***	-.18***	-.06	.19***	-.12***	-.06	-.26***	.46***	.24***	—										
13 ERIDT	-.09*	-.17***	.09*	.04	-.07	-.09	.03	-.11*	.04	-.1*	-.06	-.1*	—									
14 ERPR	-.17***	-.18***	.01	.04	.02	-.07	0	-.23***	.08	-.07	-.11*	-.11*	.39***	—								
15 ERCON	.39***	0	0	.04	-.01	.05	.11*	.31***	-.03	.18***	.16***	.2***	-.05	-.17***	—							
16 ERRM	.41***	-.13**	.2***	.12*	-.04	-.11*	.17***	.25***	.1*	.07	.08	.07	.17***	-.02	.49***	—						
17 ERES	.02	.52***	-.23***	-.13**	-.02	.1*	-.15***	-.05	-.19***	.23***	.18***	.31***	.03	.04	.12**	.07	—					
18 ERGSB	.42***	.02	.05	.09*	.07	-.06	.16***	.27***	.01	.22***	.12**	.2***	-.04	-.11*	.5***	.53***	.16***	—				
19 ERPOR	-.16***	-.03	-.11*	-.06	-.08	.04	-.09*	-.14**	-.06	.04	-.03	.06	.21***	.48***	-.06	-.09	.11*	-.1*	—			
20 ERBO	.16***	.01	-.16***	-.08	.01	.11*	-.01	0	.01	.2***	.18***	.12**	.07	.08	.33***	.23***	.18***	.17***	.18***	—		
21 ERPIP	-.02	-.06	-.02	.06	-.03	-.1*	-.01	-.12**	-.09	.02	-.06	.06	.27***	.43***	-.03	.06	.18***	.15**	.35***	-.01	—	
22 ERACC	.05	-.04	-.01	.05	-.02	-.02	.04	-.11*	-.04	.08	-.01	.04	.27***	.41***	.08	.16***	.21***	.22***	.21***	.03	.45***	—
23 ERCD	.36***	-.05	.2***	.1*	-.01	-.13**	.22***	.22***	.1*	.01	-.02	.08	.07	-.07	.54***	.58***	.12**	.51***	-.1*	.16***	.11*	.15***

Note: *$p < .05$,** $p < .01$,*** $p < .001$

Abbreviations: ANX, attachment anxiety; AVD, attachment avoidance; ATTID, attitudes; SNORMS, subjective norms; DNORMS, descriptive norms; PROT, prototypes; PSIM, prototype similarity; INT, intentions to seek help; WILL, willingness to seek help; SSTIG, self-stigma; PSTIG, public stigma; SDIS, difficulties in self-disclosure; ERIDT, ability to identify emotions; ERPR, positive reappraisal; ERCON, inability to control emotions; ERRM, rumination about the past; ERES, expressive suppression; ERGSB, guilt and self-blame; ERPOR, positive refocusing; ERBO, blaming others; ERPIP, putting into a positive perspective; ERACC, acceptance of the situation; ERCD, difficulties to concentrate when upset.

Table 14 shows the correlations between PWM, individual differences in attachment and emotion regulation and help-seeking barriers. Attachment anxiety and avoidance were not significantly correlated (r = -.07), suggesting they measure highly different attachment constructs. Most correlations between the aspects of PWM are significant. Significant correlations vary between (r = .11) and (r = .61) and indicate positive relationships that measure related but distinct constructs of behavioural beliefs about help-seeking. Only prototypes had negative correlations with other PWM aspects because a higher score on the measure of prototype evaluation indicates more negative beliefs about the prototypical person who seeks help. In contrast, high scores on the other measures reflect more positive beliefs about help-seeking.

2.3.5.4. Measurement model

The initial measurement model predicting intentions and willingness to see help provided an unacceptable fit to the data, $\chi 2(10861) = 6074$, $p < .001$; CFI = .85, TLI = .84, RMSEA = .04. To improve the goodness of fit of the measurement model, items with standardized factor loadings below the recommended minimum of .50 (Byrne, 2010) were

removed. Modification indices were also inspected, which suggested that a few items within subscales were highly correlated and, therefore, would benefit from adding a covariance between those items. For example, two willingness to seek help aspects related to academic distress, namely lack of motivation for studying and academic distress, were highly related; therefore, a covariance between them was added. Similarly, three more covariances were added between two items in the subscale of public stigma, two items in the measure of attitudes and two items in the measure of prototypes that reflected similar aspects of the measures.

Then, the respecified measurement to predict intentions and willingness to seek help was tested again, $\chi 2(1385) = 2708.84$, $p < .001$; CFI = 0.91, TLI = 0.90, RMSEA = .04 and provided an acceptable fit to the data. Table 15 shows standardised loadings of each item onto their respective factors.

Table 15 *Loadings of each item on their respective factors in the final measurement model of the primary model.*

		β
Attachment Anxiety		
Item 1	I worry that people won't care about me as much as care about them	0.72
Item 2	I worry a fair amount about losing my relationships	0.78
Item 3	I worry about being abandoned	0.82
Item 4	I worry about being alone	0.71
Item 5	I need a lot of reassurance that I am loved by those close to me	0.71
Item 6	If I can't get those close to me to show interest in me, I get upset or angry	0.57
Attachment Avoidance		
Item 1	I feel comfortable depending on others (R)	0.53
Item 2	I usually discuss my problems and concerns with those close to me (R)	0.86

		β
Item 3	I tell those close to me just about everything (R)	0.77
Item 4	I don't mind asking others for comfort, advice, or help (R)	0.69
Item 5	I don't feel comfortable opening up to others	0.59
Item 6	I feel comfortable sharing my private thoughts and feelings with those I am close to (R)	0.77
Attitudes		
Item 1	Would obtain professional help if having a mental breakdown	0.54
Item 2	Talking about psychological problems is a poor way to solve emotional problems (R)	0.56
Item 3	Would find relief in psychotherapy if in emotional crisis	0.74
Item 4	Would obtain psychological help if upset for a long time	0.66
Item 5	Might want counselling in the future	0.65
Item 6	Psychotherapy would not have value for me (R)	0.74
Item 7	A person should work out his/her problems without counselling (R)	0.55
Subjective Norms		
Item 1	Most people who are important to me would think that I should seek help from a mental health professional in the next 6 months	0.88
Item 2	Most people who are important to me would expect me to seek help from a mental health professional in the next 6 months	0.70
Item 3	The people in my life whose opinions I value would approve of my seeking help from a mental health professional in the next 6 months	0.69
Item 4	People who mean something to me would think that I should seek help from a mental health professional in the next 6 months	0.90
Item 5	People who are important to me would wish for me to seek help from a mental health professional in the next 6 months	0.89
Descriptive Norms		
Item 1	Most people who are important to me, if they were dealing with this issue, would seek help from a mental health professional in the next 6 months	0.88

		β
Item 2	The people in my life whose opinions I value, if they were dealing with this issue, would seek help from a mental health professional in the next 6 months	0.86
Item 3	People who mean something to me, if they were dealing with this issue, would seek help from a mental health professional in the next 6 months	0.87
Item 4	People who are important to me, if they were dealing with this issue, would seek help from a mental health professional in the next 6 months	0.85
Prototypes		
Item 1	Needy	0.60
Item 2	Lazy	0.70
Item 3	Attention-seeking	0.61
Item 4	Indecisive	0.56
Item 5	Weird	0.70
Item 6	Proactive (R)	0.59
Item 7	Brave (R)	0.60
Item 8	Practical (R)	0.54
Item 9	Smart (R)	0.56
Item 10	Normal (R)	0.58
Prototypes Similarity		
Item 1	In general, how similar are you to the type of person who would see a mental health professional if needed?	0.97
Item 2	Do the characteristics that describe the type of person who seek-help describe you?	0.73
Intentions		
Item 1	I intend to seek help from a mental health professional in the next 6 months	0.98
Item 2	I will try to seek help from a mental health professional in the next 6 months	0.97

		β
Item 3	I plan to seek help from a mental health professional in the next 6 months	0.97
Item 4	I will make an effort to seek help from a mental health professional in the next 6 months	0.97
Item 5	I want to seek help from a mental health professional in the next 6 months	0.89
Willingness		
Item 1	…to seek help for a personal or emotional problem	0.71
Item 2	…to seek help for stress	0.70
Item 3	…to seek help for anxiety	0.84
Item 4	…to seek help for depression	0.84
Item 5	…to seek help for substance misuse	0.72
Item 6	…to seek help for psychosis	0.51
Item 7	…to seek help for a lack of motivation for studying	0.67
Item 8	…to seek help for academic distress	0.63
Self-Stigma		
Item 1	I would feel inadequate if I went to a therapist for psychological help	0.86
Item 2	My self-confidence would NOT be threatened if I sought professional help (R)	0.58
Item 3	Seeking psychological help would make me feel less intelligent	0.75
Item 4	It would make me feel inferior to ask a therapist for help	0.86
Item 5	I would feel okay about myself if I made the choice to seek professional help (R)	0.65
Item 6	If I went to a therapist, I would be less satisfied with myself	0.84
Item 7	I would feel worse about myself if I could not solve my own problems	0.57
Public Stigma		
Item 1	It is a sign of personal weakness or inadequacy to see a professional for emotional or interpersonal problems	0.88

		β
Item 2	People will see a person in a less favourable way if they come to know that he/she has seen a professional for psychological help	0.53
Item 3	It is advisable for a person to hide the fact that he/she has seen a professional for psychological help from other people	0.66
Item 4	People tend to like those who are receiving professional psychological help less	0.52
Difficulties in Self-Disclosure		
Item 1	I would feel ashamed to tell my problems to the professional giving psychological help	0.77
Item 2	I would refuse to give information about my private problems (sex, violence, etc), even to a professional	0.72
Item 3	I would have difficulty in sharing my problems with a stranger even though he is a professional	0.77
Ability to identify emotions		
Item 1	I easily recognise my emotions as I experience them	0.89
Item 2	I can quickly identify how I am feeling	0.84
Item 3	I am aware of my emotions as I experience them	0.82
Positive Reappraisal		
Item 1	I think about a plan of what I can do best	0.70
Item 2	I think about how I can best cope with the situation	0.73
Item 3	I think that the situation also has its positive sides	0.63
Inability to control emotions		
Item 1	Even when I know how to control my feelings, I cannot act on that knowledge	0.75
Item 2	I miss opportunities to control my feelings	0.75
Item 3	When I'm upset, I have difficulty controlling my behaviour	0.76
	Rumination	
Item 1	I dwell upon the feelings that the situation has evoked in me	0.75
Item 2	I am preoccupied with what I think and feel about what I have experienced	0.79
Item 3	I often think about how I feel about what I have experienced	0.62

		β
Expressive Suppression		
Item 1	I make sure not to express my emotions	0.80
Item 2	I am careful not to express my emotions	0.86
Item 3	I keep my emotions to myself	0.83
	Guilt / Self-blame	
Item 1	When I'm upset, I feel guilty for feeling that way	0.80
Item 2	I feel that I am the one to blame for the negative or unpleasant event	0.57
Item 3	When I'm upset, I become irritated with myself for feeling that way	0.83
Positive Refocusing		
Item 1	I think of pleasant things that have nothing to do with the negative or unpleasant event	0.77
Item 2	I think of something nice instead of what has happened	0.85
Item 3	I think of nicer things than what I have experienced	0.80
Blaming Others		
Item 1	I feel that others are to blame for the negative or unpleasant event	0.86
Item 2	I feel that basically the cause lies with others	0.77
Item 3	I feel that others are responsible for what has happened	0.86
	Putting into Perspective	
Item 1	I think that other people go through much worse experiences	0.71
Item 2	I tell myself that there are worse things in life	0.78
Item 3	I think that it all could have been much worse	0.77
Acceptance		
Item 1	I think that I have to accept the situation	0.79
Item 2	I think that I have to accept that this has happened	0.77
Item 3	I think that I must learn to live with the negative or unpleasant event	0.65
Concentration difficulties when being upset		
Item 1	When I'm upset, I have difficulty getting work done	0.86
Item 2	When I'm upset, I have difficulty concentrating	0.88
Item 3	When I'm upset, I have difficulty focusing on other things	0.90

Note. R- represents reversed items.

2.3.5.5. Structural model

The initial model predicting intentions and willingness to seek help, including all 11 aspects of emotion regulation, provided a relatively unacceptable fit to the data, $\chi 2(8391) = 4919$, $p < .001$; CFI = 0.89, TLI = 0.88, RMSEA = .04. Therefore, the decision was made to respecify the model by removing the aspects of emotion regulation that did not predict attitudes to seeking help. It is worth noting that residual covariances between factors of the prototype willingness model and between aspects of emotion regulation were added.

The respecified model only included two emotion regulation aspects from the initial model (blaming others and ruminating about the past). The model provided an acceptable fit to data: $\chi 2(4862) = 2631$, $p < .001$; CFI = 0.90, TLI = 0.90, RMSEA = .04. Table 16 shows the results of the model depicting regression paths, followed by Figure 3 visualising only significant paths. Whether participants who experienced personal or emotional problems in the last six months sought help was analysed using logistic regression, where factor estimates of intentions and willingness accounting for the structural model were entered to predict actual help-seeking behaviour.

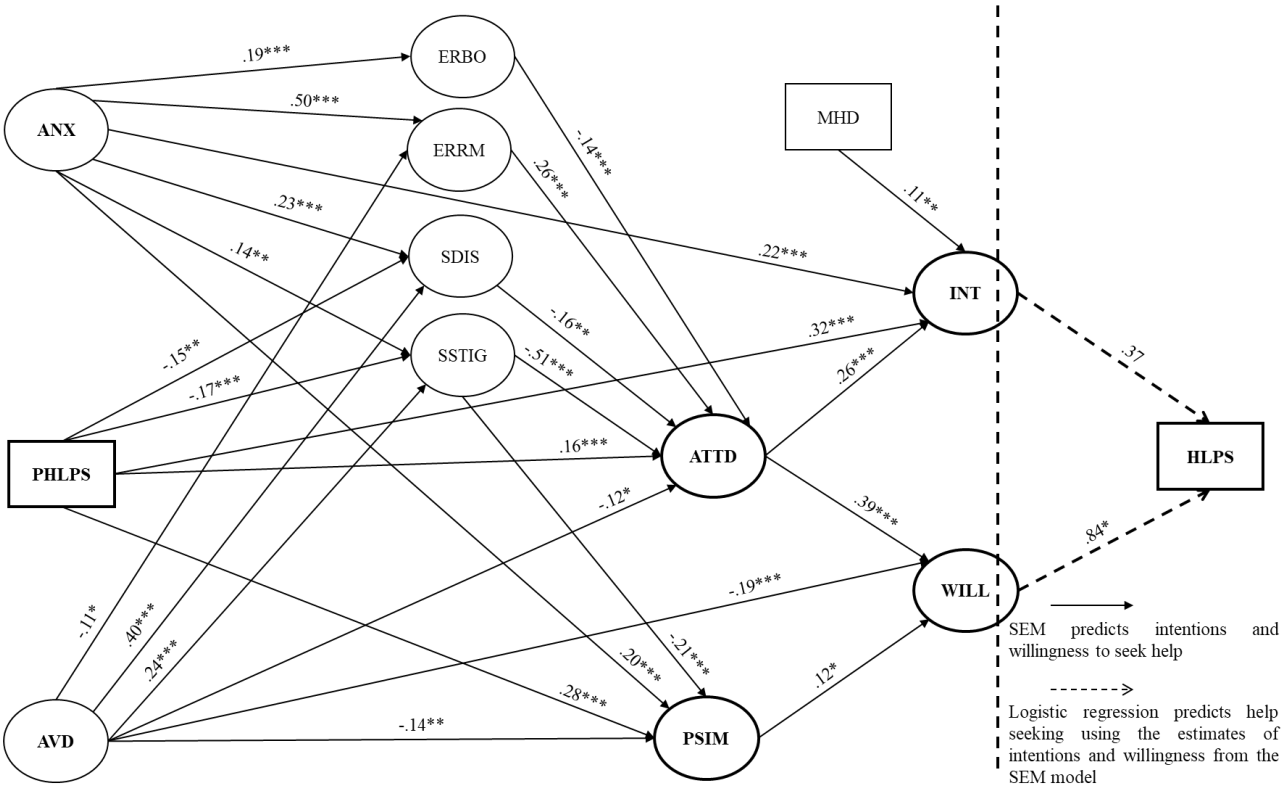
Table 16 *Results of the final respecified model*

	B	*SE B*	*β*
Rumination			
Attachment Anxiety	.43	.05	.50***
Attachment Avoidance	-.14	.07	-.11*
Blaming Others			
Attachment Anxiety	.17	.05	.19***
Attachment Avoidance	.05	.07	.04
Self-Stigma			
Attachment Anxiety	.14	.05	.14**
Attachment Avoidance	.37	.08	.24***

	B	*SE B*	*β*
Past Help-seeking	-.45	.12	-.17***
Public Stigma			
Attachment Anxiety	.06	.05	.07
Attachment Avoidance	.31	.08	.22***
Past Help-seeking	-.08	.12	-.03
Difficulties in Self-Disclosure			
Attachment Anxiety	.26	.06	.23***
Attachment Avoidance	.69	.10	.40***
Past Help-seeking	-.45	.14	-.15**
Attitudes			
Past Help-seeking	.26	.07	.16***
Attachment Anxiety	.05	.03	.08
Attachment Avoidance	-.11	.04	-.12*
Self-Stigma	-.31	.04	-.51***
Difficulties in Self-Disclosure	-.09	.03	-.16**
Rumination	.18	.04	.26***
Blaming Others	-.10	.03	-.14***
Subjective Norms			
Past Help-seeking	.12	.11	.05
Attachment Anxiety	.09	.04	.09
Attachment Avoidance	-.30	.07	-.21***
Public Stigma	-.22	.05	-.23***
Descriptive Norms			
Past Help-seeking	-.04	.12	-.02
Attachment Anxiety	.01	.05	.01
Attachment Avoidance	-.22	.08	-.15**
Public Stigma	-.04	.05	-.04
Prototypes			
Past Help-seeking	-.15	.09	-.08
Attachment Anxiety	-.04	.03	-.06
Attachment Avoidance	.12	.05	.11*

	B	*SE B*	*β*
Public Stigma	.38	.05	.50***
Prototype Similarity			
Past Help-seeking	.82	.13	.28***
Attachment Anxiety	.23	.05	.20***
Attachment-Avoidance	-.24	.08	-.14**
Self-Stigma	-.23	.05	-.21***
Intentions to Seek Help			
Past Help-seeking	1.26	.16	.32***
Potential Problem	.56	.20	.11**
Attachment Anxiety	.34	.06	.22***
Attachment Avoidance	.09	.10	.04
Attitudes	.63	.13	.26***
Subjective Norms	-.08	.10	-.05
Descriptive Norms	.14	.09	.09
Willingness to Seek Help			
Past Help-seeking	.15	.08	.08
Potential Problem	-.13	.10	-.05
Attachment Anxiety	-.02	.03	-.03
Attachment Avoidance	-.20	.05	-.19***
Attitudes	.44	.07	.39***
Subjective Norms	.06	.05	.08
Descriptive Norms	.02	.04	.03
Prototypes	-.001	.05	-.001
Prototype Similarity	.07	.03	.12*

Note. *$p < .05$, **$p < .01$, ***$p < .001$.



Based on individual differences in attachment, emotion regulation, key barriers of seeking help and prototype willingness model followed by binominal logistic regression predicting actual help-seeking behaviour using intentions and willingness estimates from the model. Dashed paths indicate logistic regression paths. Abbreviations: MHD, potential mental health difficulty; PHLPS, past help-seeking; HLPS, Actual help-seeking (follow-up); ANX, attachment anxiety; AVD, attachment avoidance; ERBO, emotion regulation strategy blaming others; ERRM, emotion regulation strategy rumination about the past; SDIS, difficulties in self-disclosure; SSTIG, self-stigma; ATTD, attitudes; PSIM, prototype similarity; INT, intentions, WILL, willingness. *Note*. $^{**}p < .01$, $^{***}p < .001$.

Figure 3 is a simplified version of Table 16, showing only significant paths solely for visual clarity: SEM model predicting intentions and willingness to seek help:

2.3.5.6. Direct effects

2.3.5.6.1. Predictors of help-seeking behaviour

The analysis revealed that willingness (B = .84; p < 0.03) significantly predicts actual help-seeking behaviour. Intentions did not predict help-seeking behaviour (B = .37; *p* < 0.09).

2.3.5.6.2. Predictors of intentions to seek help

Past help-seeking, attitudes towards seeking help, attachment anxiety and potential problems in mental health were positively associated with intentions to seek help, whilst attachment avoidance, subjective and descriptive norms had no effect.

2.3.5.6.3. Predictors of willingness to seek help

Positive attitudes towards seeking help were positively associated with the willingness to seek help, whilst attachment avoidance was negatively associated with a willingness to seek help. Prototype similarity was also positively associated with willingness to seek help, meaning that someone who sees themselves as the type of person who would seek help is more likely to be willing to seek help.

Past help-seeking, potential mental health problems, attachment anxiety, norms and prototypes did not affect willingness to seek help.

2.3.5.6.4. Predictors of attitudes towards seeking help

Previous help-seeking and rumination were positively associated with attitudes. Self-stigma, difficulties in self-disclosure, emotion regulation strategy – blaming others and attachment avoidance were negatively associated with attitudes. Attachment anxiety had no significant effect on attitudes.

2.3.5.6.5. Predictors of subjective norms

Public stigma and attachment avoidance were negatively associated with subjective norms, whilst past help-seeking and attachment anxiety had no significant effect.

2.3.5.6.6. Predictors of descriptive norms

Attachment avoidance was negatively associated with subjective norms, whilst past help-seeking, attachment anxiety and public stigma had no significant effect.

2.3.5.6.7. Predictors of prototypes

Public stigma and attachment avoidance were positively associated with negative prototypes, whilst past help-seeking and attachment anxiety had no significant effect.

2.3.5.6.8. Predictors of prototype similarity

Past help-seeking and attachment anxiety were positively associated with prototype similarity. Self-stigma and attachment avoidance were negatively associated with prototype similarity.

2.3.5.6.9. Predictors of difficulties in self-disclosure

Past help-seeking was negatively associated with difficulties in self-disclosure, meaning someone who sought help before was less likely to experience difficulties in self-disclosure. Both attachment anxiety and avoidance were associated with higher difficulties.

2.3.5.6.10. Predictors of self-stigma

Past help-seeking was negatively associated with difficulties in self-stigma, meaning someone who has sought help before was less likely to experience difficulties in self-stigma. Both attachment anxiety and avoidance were associated with higher self-stigma.

2.3.5.6.11. Predictors of public stigma

Only attachment avoidance was positively associated with higher public stigma. Attachment anxiety and past help-seeking had no significant effect.

2.3.5.6.12. Predictors of emotion regulation strategy blaming others

Attachment anxiety was positively associated with a tendency to blame others. Attachment avoidance did not have a significant effect.

2.3.5.6.13. Predictors of emotion regulation strategy rumination

Attachment anxiety was significantly associated with more rumination about the past, whilst avoidance was associated with less rumination about the past.

2.3.5.7. Indirect effects

Next, the indirect effects of individual differences in attachment orientation on intentions and willingness to seek help via three key sets of concepts - emotion regulation, beliefs about seeking help as specified by the PWM, and known barriers to seeking help (e.g., self-stigma). The complete list of significant indirect effects is sorted by relative prediction value (*β)* and provided in Appendix 2.

In the present study, significant indirect effects of attachment orientations on intentions and willingness to seek help, uncovering pathways mediated by aspects of emotion regulation and attitudes, were explored. Significant indirect effects, as indicated by the bootstrap estimate of the beta coefficients, suggest that individuals with higher levels of attachment anxiety are more likely to engage in rumination processes, which, in turn, positively impact their attitudes towards seeking help and, in turn, increase both intentions (β = .03, 95% CI [.02, .06]) and willingness to seek help (β = .05, 95% CI [.02, .06]). Meanwhile, the association between attachment avoidance and less rumination about the past led to lower intentions (β = -.01, 95% CI [-.05, -.002]) and lower willingness to seek help (β = -.01, 95% CI [-.03, -.001]) in the same pathways (via rumination and attitudes). The association of attachment anxiety and higher scores of blaming others lead to lower scores of positive attitudes and, in turn, lower scores of both intentions (β = -.01, 95% CI [-.03, -.003]) and willingness to seek help (β = -.01, 95% CI [-.02, -.003]). These indirect effects highlight the intricate interplay between attachment

orientations and emotional processes in shaping individuals' behavioural tendencies towards seeking help for difficulties with mental health.

Next, significant indirect effects of attachment orientations on intentions and willingness to seek help, uncovering pathways mediated by aspects of barriers to seeking help and attitudes, were explored. Results suggest that individuals with higher levels of attachment anxiety are more likely to experience difficulties in self-disclosure, which, in turn, negatively impact their attitudes towards seeking help and, in turn, lower both intentions (β = -.01, 95% CI [-.04, -.003]) and willingness to seek help (β = -.01, 95% CI [-.03, -.002]). The association between attachment avoidance and more difficulties in self-disclosure also led to lower attitudes and, in turn, lower intentions (β = -.02, 95% CI [-.09, -.008]) and lower willingness to seek help (β = -.03, 95% CI [-.06, -.005]).

Individuals with higher levels of attachment anxiety are also more likely to experience higher self-stigma, which, in turn, negatively impacts their attitudes towards seeking help and, in turn, lowers both intentions (β = -.02, 95% CI [-.06, -.008]) and willingness to seek help (β = -.03, 95% CI [-.04, -.006]). The association between attachment avoidance and higher self-stigma also led to lower attitudes and, in turn, lower intentions (β = -.03, 95% CI [-.13, -.04]) and lower willingness to seek help (β = -.05, 95% CI [-.09, -.03]). A similar indirect path of attachment avoidance was identified via self-stigma and prototype similarity. Individuals with higher levels of attachment avoidance are more likely to experience higher self-stigma, which, in turn, negatively impacts how similar they see themselves to a typical help-seeker and, in turn, lowers willingness to seek help (β = -.01, 95% CI [-.02, -.001]).

Attachment anxiety positively affects willingness to seek help via prototype similarity (β = .02, 95% CI [.001, .04]). Attachment avoidance negatively affects willingness to seek help

via attitudes (β = .-.05, 95% CI [-.11, .-.01]); and via prototype similarity (β = .-02, 95% CI [-.06, -.001]). Attachment avoidance also negatively affects intentions via attitudes (β = .-03, 95% CI [-.16, -.02]).

Past help-seeking positively affects intentions to seek help via attitudes (β = .04, 95% CI [.07, .31]). The investigation aimed to explore the indirect impact of past help-seeking behaviours on intentions to seek help, illuminating a pathway mediated by reduced difficulties in self-disclosure and attitudes. The findings indicated an indirect effect (β = .01, 95% CI [.005, .07]). This implies that individuals with a history of seeking help are more likely to experience decreased difficulties related to self-disclosure. This alleviation in self-disclosure challenges positively influences their attitudes toward seeking help, subsequently contributing to heightened intentions to seek help. Similarly, past help-seeking increases intentions to seek help by reducing self-stigma and, therefore, positively influencing attitudes. (β = .02, 95% CI [.04, .18]).

Past help-seeking also positively affects willingness to seek help via prototype similarity (β = .03, 95% CI [.004, .15]). Similarly to the effects on intentions, past help-seeking increases willingness to seek help by reducing difficulties in self-disclosure (β = .01, 95% CI [.003, .15]) and reducing self-stigma (β = .03, 95% CI [.03, .12]), therefore, positively influencing attitudes.

2.3.6. Discussion

2.3.6.1. Approach to findings

Findings reveal significant relationships between the proposed aspects, namely attachment orientations, Prototype Willingness Model, barriers to seeking help and emotion regulation. Therefore, to understand better the way such a combination of theories explains help-seeking, we will discuss findings in the following order: (i) how individual differences in attachment orientation and the Prototype Willingness Model affect help-seeking intentions, willingness to seek help and help-seeking behaviour; ii) how the relationship between attachment orientations and PWM could be better explained by barriers to seek help related to both attachment and PWM (namely, difficulties in self-disclosure public stigma, and self-stigma); (iii) how the relationship between attachment orientations and attitudes could be better explained by differences in how people regulate emotions.

2.3.6.2. How individual differences in attachment and the Prototype Willingness Model affect help-seeking intentions, willingness to seek help and help-seeking behaviour

Previous help-seeking is key in predicting higher intentions to seek help, suggesting that those who have sought help before are more likely to have intentions to seek professional help again; however, it had no effect on willingness to seek help, supporting that willingness may conceptually be different from intentions to seek help and may reflect more general willingness to seek help than planned intentions to seek help. It is also supported by findings in this study showing that having a potential mental health difficulty only affects intentions but not willingness.

Controlling for previous help-seeking aside, positive attitudes towards seeking help in the context of future struggles are by far the most significant predictor of both higher intentions

and willingness to seek help and play a crucial part in mediating the majority of other relationships in predicting intentions and willingness to seek help which is also supported by previous studies and reviews (Adams et al., 2022; Hammer & Vogel, 2013; Vogel et al., 2005). It may suggest that an effort to improve those attitudes could potentially increase intentions and willingness to seek help.

The key element that positively influences attitudes is attachment anxiety. It significantly increases positive attitudes towards seeking help, both directly and overall, in turn positively affecting intentions to seek help. If we look at both the direct and indirect effects of the model, attachment anxiety is one of the key predictors in increasing intentions to seek help as well as supported by previous studies (Vogel & Wei, 2005).

The interesting aspect is that attachment anxiety only affects intentions but not willingness. It could be supported by arguments that approach motivations vary depending on how close or far from the therapy you are (Paige & Mansell, 2013). Attachment anxiety could be considered a more chronic approach to motivation for relationships in which unmet attachment needs can be satisfied; for example, someone feeling upset is likely to have such needs elevated, which could explain why there is a positive effect on intentions to seek help which also may explain why potential difficulties in mental health only associated positively with intentions to seek help, but not willingness.

On the other hand, attachment avoidance is negatively associated with both willingness to seek help and attitudes towards help-seeking, which is consistent with theory and previous research (Mikulincer & Shaver, 2007; Shaver & Mikulincer, 2009) and seems to be the critical aspect in negatively affecting help-seeking in attachment literature (Vogel & Wei, 2005). Those high in avoidance are prone to avoid most situations where forming close emotional relationships with others and emotional intimacy (Bartholomew, 1990) and trusting another person (Fitzpatrick & Lafontaine, 2017). For example, it was found that highly avoidant

individuals are more likely to perceive relational therapies as harmful rather than helpful (Millings et al., 2019).

Unlike in Hammer and Vogel (2013) study, prototypes were not significantly associated with willingness to seek help; however, prototype similarity (which was not included in their study) was, suggesting how similar someone sees themselves to a potential help-seeker is likely to increase willingness to seek help, rather than prototypes alone which is partially supported by meta-analysis looking at reasoned versus reactive prediction of behaviour, where it seems that prototype similarity has the strong relationship with willingness and the expanded TPB models such as PWM can improve explanations by including prototype similarity (Todd et al., 2016).

Subjective and descriptive norms did not predict intentions and willingness to seek help, which is supported by reviews suggesting that norms tend to provide mixed results between studies (Adams et al., 2022); also, in a way, this suggests that individual differences in attachment and individual beliefs about help-seeking are more important than societal beliefs.

The present study also showed that willingness is a more important predictor of help-seeking than intentions, as is also supported by Hammer and Vogel (2013) study. However, due to limitations caused by attrition during follow-up, only intentions and willingness on help-seeking were tested and not the whole model.

2.3.6.3. How the relationship between attachment and PWM could be better explained by barriers to seeking help related to both attachment and PWM

Unsurprisingly, in the present study, attachment avoidance is also a key predictor of more difficulties in self-disclosure and higher self and public stigmas, which is also supported by previous studies (Mikulincer & Nachshon, 1991; Nursel Topkaya et al., 2016), followed by

attachment anxiety. Difficulties in self-disclosure and self-stigma, in particular, affect attitudes towards seeking help and, in return, intentions and willingness to seek help, which is supported by previous studies (Vogel et al., 2005, 2007).

Previous help-seeking potentially plays a protective role against self-stigma and difficulties in self-disclosure, which may result in more positive attitudes towards help-seeking and actual intentions to seek help. Self-stigma was also associated with prototype similarity, whilst public stigma was associated with subjective norms and prototypes, which did not have direct relationships on intentions or willingness to seek help, suggesting that self-stigma is more important than public stigma, which was also suggested in previous studies (Vogel et al., 2007).

2.3.6.4. How the relationship between attachment and attitudes could be better explained by differences in how people regulate emotions

The strongest attachment anxiety-related indirect effects on intentions come via the path of rumination about the past and attitudes on intentions to seek help, suggesting that someone who scores higher in attachment anxiety and is preoccupied with their experiences of emotional problems is more likely to seek help. Those who are more anxiously attached tend to use such hyperactivating strategies and become preoccupied with their negative feelings, such as abandonment, leading to a higher need for reassurance and support (Mikulincer & Shaver, 2019). On the other hand, attachment avoidance was negatively associated with blaming others, which is expected as those scoring higher on avoidance are likely to avoid relational situations (Bartholomew, 1990).

From the attachment perspective, a tendency to blame others was only associated with attachment anxiety; however, it negatively affects attitudes and, in turn, intentions and willingness to seek help, which is self-explanatory in a way; if one thinks that others are the

problem, it is unlikely that they have reached an identification stage of the problem, which is needed before being able to choose a strategy to do something about it and implement it (as defined by action control perspective (Webb et al., 2012)).

2.3.7. Conclusions

i) Willingness is the better predictor of the actual help-seeking than intentions;

ii) Attitudes are the only common predictor of both intentions and willingness to seek help and are central for understanding the relationship between individual differences in attachment style and help-seeking and then emotion regulation, beliefs about seeking help as specified by the PWM, and known barriers to seeking help (e.g., self-stigma);

iii) Attachment anxiety is more of a facilitating trait affecting higher intentions to seek help directly and indirectly. Whilst attachment avoidance is more associated with lower willingness to seek help, suggesting that from the attachment perspective, it is important to focus on avoidance as a significant barrier to better attitudes towards seeking help and higher willingness to seek help;

iv) Self-enhancement-driven motives and beliefs, such as self-stigma and personal attitudes, are more important in predicting intentions and willingness to seek help than social aspects, such as subjective/descriptive norms and public stigma;

v) Past help-seeking is potentially protective against self-stigma and difficulties in self-disclosure, resulting in more positive attitudes and intentions to seek help; therefore, there could be some debate in future research whether help-seeking research should primarily focus on those who have never sought help before;

vi) Willingness to seek help might be more researchable in a broader population as potential difficulties in mental health only affect intentions but not willingness to seek help.

2.3.8. Limitations

Even though using SEM modelling as an analytical approach is a strength, some limitations should be addressed. Due to the actual help-seeking behaviour being a binary variable, followed by a relatively small follow-up sample, the decision had to be made between choosing to perform generalised structural equation modelling with a lack of help-seeking data and less detail of the goodness of the model and comparability of results or separate the logistic part from the conventional SEM model. As the latter was chosen, it could only be tested whether the final part (intentions and willingness) predicts actual help-seeking without controlling whether i.e. attitudes directly affect help-seeking behaviour.

Also, even though there was no high attrition of participants during the 6-month follow-up, the complexity of making the anonymous code by the participants themselves likely led to high data loss due to the impossibility of linking it to the initial survey. Participants were also screened for potential difficulties in mental health; however, to reduce the amount of time needed to complete the survey, a shorter version of the CCAPS-34 scale was used, which only has established validity and clinical scores for the US population (Locke et al., 2012). Moreover, data was collected around the COVID-19 pandemic; there could be some variance regarding how accurately scores may indicate potential psychological difficulties.

2.3.9. Implications for future research

Future research should look forward to learning more about and at the solutions to address aspects negatively affecting attitudes, such as self-stigma and difficulties in self-

disclosure. From an attachment perspective, possibly utilise attachment security priming experiments to address attachment avoidance, as there is some evidence that priming might have a positive effect, at least on those who score higher in both attachment avoidance and anxiety (Millings et al., 2019).

Future research should also emphasise help-seeking patterns amongst those who previously sought help, i.e. used university counselling or other mental health services, versus those who have not. Descriptive and exploratory results also suggest that non-help-seeking might be more prevalent among those who have never sought professional help for mental health. The present study suggests that past help-seeking can reduce negative aspects affecting attitudes towards help-seeking and, in turn, increase willingness to seek help; therefore, it could be argued that future intervention that may provide a brief or counselling-like experience in some way may also reduce attitude related barriers such as self-stigma and potential difficulties in self-disclose.

Chapter Three: Promoting help-seeking using Attachment Security Priming

3.1. Introduction

3.1.1. Recap of correlational studies predicting help-seeking

The previous chapter showed that whether or not someone chooses to seek help is likely to be influenced by individual differences in attachment orientation; namely, higher levels of attachment anxiety were associated with greater intentions to seek help, and higher levels of attachment avoidance were associated with lower willingness to seek help.

3.1.2. The importance of attachment security

A core concept within attachment theory is the idea of the base of attachment security – the sense of safety and assurance one feels due to the consistent and responsive care provided by their attachment figures, such as a parent/caregiver during infancy (Bowlby, 1988) or romantic relationships in adulthood (Bartholomew & Horowitz, 1991). Even though attachment as an individual trait is considered rather stable, evidence suggests that some techniques, such as security priming, when done effectively, may activate mental representations of secure attachment, making one momentarily feel more secure (Mikulincer & Shaver, 2020).

3.1.3. What is attachment security priming?

Before diving into the benefits, it is crucial to understand what attachment security priming is. Attachment security priming refers to the process by which an individual is made to consciously (also known as supraliminal priming) or unconsciously (also known as subliminal priming) recall feelings or experiences of a secure base which can be achieved through various methods, such as recalling a time when one felt loved and supported, viewing

images of close and loving relationships, or reading stories that evoke feelings of security and warmth (Mikulincer & Shaver, 2015). Such primes usually lead to an increased sense of felt security, a positive sense of care and support available, a sense of merging and generally more positive emotions (Carnelley & Rowe, 2010).

3.1.4. The benefits of attachment security priming

Recent systematic reviews and meta-analyses show attachment security priming overall reduced negative effects and increased positive effects across a wide range of outcomes such as health outcomes (e.g., decreased depressive symptoms), behavioural outcomes (e.g., reduced antisocial behaviour), cognitive outcomes (e.g., increased willingness to help others) (Gillath et al., 2022; Heathcote, 2020; Rowe et al., 2020). Despite the reviews showing generally significant results of security prime on desired outcomes regardless of delivery method, it should be noted that the vast majority of studies (71%) on security priming were carried out in laboratories as opposed to out in the field or online (Gillath et al., 2022).

3.1.5. Security priming and help-seeking

Although, currently, there are no studies looking particularly at priming effects on intentions or willingness to seek help, there is evidence that security priming improves attitudes towards therapies among fearful-avoidant participants who score high on both attachment anxiety and avoidance (Millings et al., 2019). Also, Gillath et al. (2022) meta-analysis showed that attachment security priming positively affects seeking emotional support. This might suggest that interventions informed by secure attachment priming experiments could increase the probability that people seek help in times of need.

3.2. Study 3. Can priming attachment security promote help-seeking, including insecurely attached individuals?

3.2.1. Study rationale

The present study investigated whether boosting students' security towards other people increases their willingness to seek help for mental health problems and whether attachment anxiety, avoidance, and the interaction between anxiety and avoidance moderate this effect, as it has been previously suggested that priming might only work on a particular set of attachment traits such as fearful avoidant attachment (Millings et al., 2019).

Willingness to seek help was chosen because study 2 suggested that willingness is a better overall predictor than intentions and is not dependent on whether an individual currently experiences difficulty with mental health or has sought help before. Also, attachment avoidance directly was only associated with willingness to seek help, and research suggests that avoidance is more problematic in terms of help-seeking (Cheng et al., 2015; Lopez et al., 1998; Vogel & Wei, 2005), perhaps because high levels of avoidance are associated with compulsive self-reliance (Mikulincer & Shaver, 2019) and being unlikely to express emotions to others (Gross & John, 2003).

3.2.2. Hypotheses

1. Priming attachment security will increase willingness to seek help for mental health problems.
2. The effect of priming security on willingness to seek help may be moderated by levels of attachment avoidance and attachment anxiety (as well as the interaction between avoidance and anxiety).

3.2.3. Method

Study 3 was pre-registered with Open Science Framework (link: https://doi.org/10.17605/OSF.IO/Y5RDS). It should be noted that in the pre-registration link for publication, a secondary/alternative analysis that includes disorganised attachment is also proposed. However, for the purpose of consistency within the thesis where a decision was made to abandon disorganised attachment due to inconsistent results in comparison to fearful-avoidance attachment (Chapter 2; Study 1), the analysis and results that include disorganised attachment are omitted from the thesis.

The study adopted an online, questionnaire-based, randomised controlled design. Power analysis was conducted using G*Power based on a hierarchical linear multiple regression using a fixed model with seven predictors, with a view to detecting a small-sized increase in R^2 (Cohens $f = 0.02$), with αn error probability of 0.05 and with the desired power set at 0.8. At least 395 participants are required to provide 80% power to detect a small-sized interaction between priming security (vs. control prime) and attachment style in a hierarchical linear regression analysis (see below) because priming attachment security typically has a medium-size effect on mental-health-related outcomes (Heathcote, 2020) and a rather small effect size for seeking emotional support from romantic partners (0.27) (Gillath et al., 2022). Therefore, considering that no previous research has investigated the effect of security priming on willingness to seek help professional help for mental health problems and that primary hypotheses related to an interaction between priming and attachment orientation, a conservative approach was taken and powered the study to detect a small effect of a given predictor (e.g. a main effect of priming or an interaction between priming and attachment orientation) on willingness to seek help.

Prior to analysis, funnel debriefing (Chartrand & Bargh, 1996) was used to check whether participants were aware of the hypotheses and may have acted accordingly. Participants were asked:

What do you think the purpose of the study was?

Do you think any of the tasks that you did were related in any way? If yes, in what way were they related?

Do you think that anything that you did on one task might have affected what you did on any other task? If yes, how do you think it affected you?

3.2.3.1. Participants

Four hundred fifteen university students studying in the UK participated in a randomly assigned experiment using the Qualtrics survey system. 13 cases where participants were aware of hypotheses were removed from the dataset prior to data analysis after checking funnel debrief, leaving 402 cases out of which 193 participants were automatically assigned to the intervention group, and 209 participated in the control group. 69.7% of participants were females, and 29.4% were males; the rest, 0.9%, preferred not to disclose or self-describe their gender. The mean age of participants was 25 years old, and the vast majority of students were undergraduates from a white background (72.1% and 71.6%, respectively).

3.2.3.2. Procedure

Participants were randomly allocated into control (neutral prime) and intervention (secure prime) conditions using the Qualtrics survey system. Participants completed a questionnaire containing the following sections: (i) a block of questions designed to measure attachment orientations, namely, attachment avoidance, attachment anxiety, and disorganised attachment; (ii) an intervention block containing a task designed to prime attachment security

or a neutral prime task (described below) depending on condition; (iii) a block containing questions that serve as a manipulation check; (iv) a block of measures of willingness to seek help for mental health problems and finally (v) a block containing the funnel debrief. In addition, while the blocks of questions were presented in the order described above, measures within the blocks were randomly presented.

3.2.3.3. Measures

The following variables were measured using 7-point Likert scales:

Attachment orientation. The 12-item Experiences in Close Relationship Scale – Short From (ECR-S) (Lafontaine et al., 2016) was used to measure attachment anxiety and attachment avoidance. The measure produced good internal reliability for both anxiety and avoidance ($\alpha = .88$ and $\alpha = .86$, respectively). Items were reworded to focus on close relationships in general rather than romantic relationships (e.g., (Rowe & Carnelley, 2003).

Willingness to seek help. An adapted version of the General Help-Seeking Questionnaire (Wilson et al., 2005) – the GHSQ vignette version (GHSQ-V; forthcoming). The questions measure willingness to seek help for personal or emotional problems (e.g., feeling stressed, depressive, anxious, having problematic relationships, not being able to concentrate on your studies) from various help resources. A single measure of willingness to seek help was computed by combining measures of willingness to seek help from potential sources (i.e., visiting a GP, contacting counselling services, etc.). The measure produced good internal reliability ($\alpha = .81$)

Felt security. A 10-item measure of felt security (Luke et al., 2012) was used as a manipulation check immediately after security or neutral priming. The measure produced excellent internal reliability ($\alpha = .93$)

3.2.3.4. Manipulations

Security priming. The security priming procedure was adapted from Bartz and Lydon's (2004) procedure. Participants were given a description of a secure relationship:

The present study investigates people's views about their relationships. Please take a moment to think about a close relationship that you have with someone (e.g., a partner, parent, sibling, other relative or close friend). It is crucial that the relationship is important and meaningful to you and that your relationship with this person has the following features:

· *You find that it is easy to get close to the other person.*

· *You feel that it is easy to depend on them.*

· *You don't often worry about being abandoned by the other person.*

· *You know that they would be there when you needed them.*

· *You don't worry about the other person getting too close to you.*

· *You feel comfortable around them.*

Then, participants were asked to spend at least 5 minutes writing as much as they could about the relationship:

Please use the space below to write as much as you can about the relationship that you have with the person that you have selected. You will need to spend a minimum of 5 minutes on this task.

You could think about a typical time you spend with them.

For example, what might they do? What does it feel like to be in the presence of this person? What might they say to you? What would you say in response to that? What does this experience mean to you? There are no right or wrong answers, just give as much detail as possible.

Participants in the neutral priming condition were asked to think and spend at least five minutes writing about an occasion when they did some online shopping for themselves. This procedure is partly based on (Mikulincer & Shaver, 2001), where the control task asked participants to write about an occasion when they visited a supermarket alone to conduct weekly shopping. The decision was made to change weekly shopping to online shopping as COVID-19 has increased concern and anxiety around shopping for groceries.

3.2.4. Analysis approach

Two hierarchical multiple regressions were conducted to predict: (i) felt security (manipulation check) and (ii) willingness to seek help (the primary outcome), entering independent variables as follows.

Regression 1: Effect of priming on felt security (manipulation check)

Dependent variable: Felt security

Step 1: Priming condition

Step 2: Attachment avoidance, attachment anxiety

Step 3: Priming condition x attachment anxiety;
Priming condition x attachment avoidance;
Attachment anxiety x attachment avoidance

Step 4: Priming condition X attachment anxiety X attachment avoidance.

Regression 2: Effect of priming on willingness to seek help

Dependent variable: Willingness to seek help

Step 1: Priming condition

Step 2: Attachment avoidance, attachment anxiety

Step 3: Priming condition x attachment anxiety;
Priming condition x attachment avoidance;
Attachment anxiety x attachment avoidance

Step 4: Priming condition X attachment anxiety X attachment avoidance.

3.2.5. Results

3.2.5.1. Priming effects on Felt security

Table 17 *Priming effects on Felt security.*

	Step 1	Step 2	Step 3	Step 4
Variable	*β*	*β*	*β*	*β*
Priming condition	.15*	.15**	.15**	.15**
Attachment anxiety		-.23**	-.24**	-.24*
Attachment avoidance		-.45**	-.44**	-.44*
Priming x anxiety			.01	.01
Priming x avoidance			-.03	-.03
Anxiety x avoidance			-.11*	-.08
Priming x anxiety x avoidance				-.04
R^2	.02*	.27*	.27*	.28*
F	8.63	49.43	25.99	22.28
ΔR^2	.02*	.25*	.01	.001
F for change in R^2	8.63	68.38	2.121	.34

*Note: *p < .05. **p < .001.*

Table 17 shows whether the priming technique used passed the manipulation check. Security priming significantly increased levels of felt security in step 1 and all following steps (β = .15, p < .001), the addition of attachment anxiety (β = -.23, p < .001), and avoidance (β = -.45, p < .001) in step 2 increased the variance by 25%, step 3 and step 4 with interaction terms did not significantly improve the model, therefore the retained model which includes priming

condition, attachment anxiety and avoidance accounted for total of 27% of variance. These results showed that the security prime used passed the manipulation check and positively affected felt security. Both attachment anxiety and attachment avoidance were negatively associated with felt security, as expected.

3.2.5.2. Priming effects on willingness to seek help

Table 18 *Priming effects on willingness to seek help*

	Step 1	Step 2	Step 3	Step 4
Variable	*β*	*β*	*β*	*β*
Priming condition	-.09	-.09	-.10	-.10
Attachment anxiety		-.07	-.23**	-.23**
Attachment avoidance		-.29**	-.36**	-.36**
Priming x anxiety			.23**	.23**
Priming x avoidance			.10	.10
Anxiety x avoidance			.8	.05
Priming x anxiety x avoidance				.03
R^2	.01	.10**	.13**	.14**
F	.06	13.96	10.20	8.8
ΔR^2	0.01	.09**	.04**	.001
F for change in R^2	3.06	19.27	5.92	.24

*Note: *p < .05. **p < .001.*

Table 18 shows whether the priming security towards therapy increased the willingness to seek help for mental health problems. Security priming did not have a significant effect on

willingness to seek help in step 1 and all following steps (β = -.09, p > .05), the addition of attachment anxiety (β = -.07, p > .05), and avoidance (β = -.29, p < .001) in step 2 increased the variance by 9%. The interaction between the priming condition and attachment anxiety in step 3 (β = .23, p < .001) increased the variance by 4%.

The interaction was later decomposed using simple slopes analysis (Figure 4). Security priming decreased willingness to seek help amongst those with lower levels of attachment anxiety (β = -.52, p < .001) and did not have significant effects on those scoring higher on attachment anxiety (β = .15, p > .05). Although it should be noted, that the graphs suggest that those who score higher on anxiety are more likely to be positively affected by security priming.

Step 4, with further interaction terms, did not significantly improve the model; therefore, the retained model, which includes priming condition, attachment anxiety and avoidance, and the interactions between priming and attachment accounted for a total of 13% of the variance. Such results suggest that the security prime did not increase or decrease the willingness to seek help amongst the whole sample. However, slope analysis of the interaction between priming and attachment anxiety suggests that priming attachment security may decrease willingness to seek help amongst those with lower attachment anxiety compared to the control group.

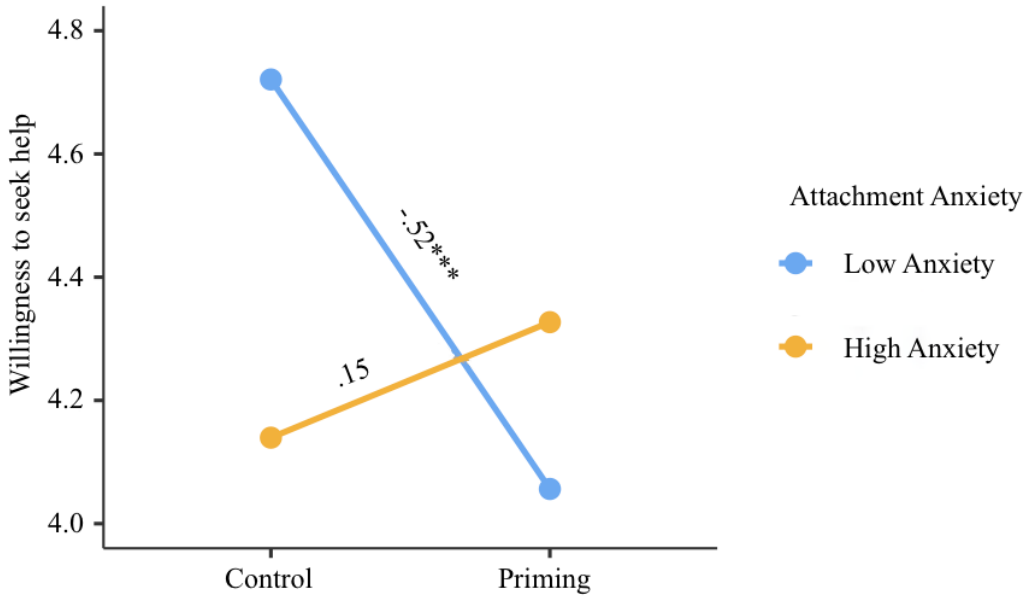


Figure 4 A graphical representation of the interaction between priming attachment security and attachment anxiety.

Abbreviations: Control, control group; Priming, intervention group. Note. *$p < .05$, **$p < .01$, ***$p < .001$.

3.2.6. Discussion

We can see that the prime technique was successful as a security prime and generally increased felt security in the intervention group relative to the control condition. However, priming only had a significant negative effect on willingness to seek help amongst those who scored lower on attachment anxiety and did not have any significant effects on the whole sample as such. It might be because priming security generally makes people feel better, and then if they feel less in need of help, it may lead to a lower willingness to seek help. Some other priming studies have also shown that only participants with lower levels of attachment anxiety were affected by security priming (Taubman - Ben-Ari & Mikulincer, 2007) – the implication being that priming is more affective among those who are more secure beforehand and, therefore, studies should focus more on those with lower attachment security.

Gillath et al. (2022) meta-analysis suggested positive results on support seeking primarily focused on studies looking at support seeking from close relationships such as romantic partners, which is not the same as seeking support from a professional. One of the explanations why lower attachment anxiety in the intervention group was associated with lower willingness to seek help could be that during security priming, participants are reminded of their relationships that presumably are more secure amongst those who score lower on anxiety. Therefore, it is likely that those individuals have a strong support system in place and may not feel the need to look for help elsewhere.

An alternative explanation could be that different attachment orientations respond differently to security priming. For example, even though repeated security priming could alter an individual's overall sense of security and their score on a dispositional measure of attachment anxiety, but is unlikely to influence changes in avoidant attachment (Carnelley & Rowe, 2007), which may explain why an interaction effect for attachment anxiety was found but not for the avoidance. This may suggest a need to develop more tailored priming

experiments aiming to work on attachment avoidance, which is also usually associated with a lower willingness to seek help (i.e. in Study 2). Study 4 (2nd priming study) was introduced below to address these issues.

3.3. Study 4. Can priming security towards psychological counselling increase willingness to seek help?

3.3.1. Introduction

The findings of Study 3 suggested that priming attachment security did not improve willingness to seek help and potentially decreased willingness to seek help amongst those with lower levels of attachment anxiety. As previously discussed in the discussion of Study 3, a more tailored approach specific to counselling may be beneficial to address key issues: i) to differentiate from potential support seeking from close relationships and professional help, as typical attachment security prime might increase willingness to seek help from close relationships such as family or friends (Gillath et al., 2022) instead of professional help; ii) test alternative priming techniques that may affect those who score higher on attachment avoidance as well.

Generally, Study 4 is the same as Study 3 except for the revision of the security prime to address potential barriers to seeking help within the prime and make it more related to psychological counselling. Specifically, rather than asking participants to reflect on a close relationship in which they feel secure, they were asked to imagine a scenario in which they feel secure in sharing their feelings with a stranger, much as they would if attending psychological counselling.

The development of a new prime was based on the results of Study 2, by looking at individual barriers to seeking help for mental health problems (i.e., self-stigma and difficulties in self-disclosure) that were significantly associated with aspects related to help-seeking (i.e., attitudes towards seeking help). The aim was to create a more targeted prime addressing the barriers to seeking help.

A hypothetical scenario was designed to represent what might be experienced if participants were accessing a counsellor (i.e., about the space where the participant has access to someone who would support them without judgment and comparison and who is motivated only by wanting what is best for them). To address self-stigma, participants were told that they would be supported with no judgment and with a motivated person to help. To address difficulties in self-disclosure, participants were told that it would be a safe space to open up and build trust over time. Finally, the decision was made to address confidentiality issues because it is one of the key external barriers to seeking help (Gulliver et al., 2010; Topkaya et al., 2016). Therefore, participants were also told that anything they said would stay between them, and the person would be unconnected to them in any other way.

3.3.2. Method

Study 4 was pre-registered with Open Science Framework (link: https://doi.org/10.17605/OSF.IO/SJ32C). As mentioned in Study 3, for consistency within the thesis, the analysis and results that include disorganised attachment style are omitted from the thesis. For further methods, procedures, measures and analysis approaches, refer to Study 3, as the whole approach is identical apart from the priming manipulation provided below.

3.3.2.1. Manipulations

Please take a moment to think about a hypothetical scenario in which you have access to someone who will support you without judgement or comparison, and who is motivated only by wanting what is best for you. This person is not someone that you know in your everyday life – they are unconnected to anyone you know, and you know they will keep your confidence, meaning that everything that you say to them stays between you and the person.

This person provides you with a safe space where you are able to talk freely about what is on your mind. It is this person's job to listen to you, and you have no sense of debt or obligation to them. After you've seen them a couple of times, you might find it easier and easier to depend on them and to know that they are there for you.

Participants then were asked to spend at least 5 minutes writing as much as they could about the hypothetical scenario:

Please use the space provided to write as much as you can about the experience that you have with the person. You will need to spend a minimum of 5 minutes on this task. You could think about the time you spend with them. Remember there is no right or wrong answer, just give as much detail as possible. For example, what might they do? What does it feel like to be in the presence of this person? What might they say to you? What would you say in response to that? What does this experience mean to you?

Participants in the neutral priming condition were asked to think and spend at least five minutes writing about an occasion when they did some online shopping for themselves. This procedure is partly based on Mikulincer and Shaver (2001) whose control task asked participants to write about an occasion where they visited a supermarket alone to conduct a weekly shopping. The decision was made to change weekly shopping to online shopping as COVID-19 may have increased concern and anxiety around shopping for some people.

3.3.2.2. Participants

Four hundred thirty-one university students studying in the UK participated in a randomly assigned experiment using the Qualtrics survey system. Two hundred six participants were automatically assigned to the intervention group, and 225 participated in the control group. 48% of participants were females, and 49% were males; the rest, 2.4%, preferred not to

disclose or self-describe their gender. The mean age of participants was 26 years old, and the vast majority of students were undergraduates from a white background (71.7% and 74%, respectively).

3.3.3. Results

3.3.3.1. Priming effects on Felt security

Table 19 *Priming effects on Felt security.*

	Step 1	Step 2	Step 3	Step 4
Variable	*β*	*β*	*β*	*β*
Priming condition	-.01	.02	.01	.01
Attachment anxiety		-.23**	-.20*	-.20*
Attachment avoidance		-.41**	-.40**	-.40**
Priming x anxiety			-.04	-.04
Priming x avoidance			-.02	-.02
Anxiety x avoidance			-.05	-.08
Priming x anxiety x avoidance				.03
R^2	.00	.22**	.22	.22
F	.04	39.97	20.29	17.40
ΔR^2	.00	.22**	.00	.00
F for change in R^2	.04	59.93	.70	.24

*Note: *p < .05. **p < .001.*

Table 19 shows whether the priming security towards therapy affected felt security. (N = 431) Security priming did not have a significant effect on felt security in step 1 and all

following steps (β = -.01, SE = .10, p > .05), the addition of attachment anxiety (β = -.23, SE = .03, p < .001), and avoidance (β = -.41, SE = .04 p < .001) in step 2 increased the variance by 22%. Steps 3 and 4 with further interaction terms did not significantly improve the model; therefore, the retained model, which includes priming condition, attachment anxiety and avoidance, accounted for a total of 22% of the variance. Such results suggest security towards therapy did not affect felt security. Both attachment anxiety and attachment avoidance were negatively associated with felt security.

3.3.3.2. Priming effects on willingness to seek help

Table 20 *Priming effects on willingness to seek help*

	Step 1	Step 2	Step 3	Step 4
Variable	*β*	*β*	*β*	*β*
Priming condition	-.14*	-.12*	-.12*	-.12*
Attachment anxiety		-.04	-.07	-.07
Attachment avoidance		-.21**	-.16*	-.16*
Priming x anxiety			.04	.04
Priming x avoidance			-.07	-.07
Anxiety x avoidance			-.03	-.03
Priming x anxiety x avoidance				-.00
R^2	.02*	.06**	.07**	.07**
F	8.11	9.43	4.92	4.21
ΔR^2	.02*	.04**	.00	.00
F for change in R^2	8.11	9.93	.45	.00

*Note: *p < .05. **p < .001.*

Table 20 shows whether the priming security towards therapy improved willingness to seek help for mental health problems (N = 431). Security priming significantly decreased willingness to seek help in step 1 and all following steps (β = -.14, SE = .12, $p < .05$), the addition of attachment anxiety (β = -.04, SE = .64, $p > .05$), and avoidance (β = -.21, SE = .71, $p < .001$) in step 2 increased the variance by 4%, step 3 and step 4 with interaction terms did not significantly improve the model; therefore, the retained model which includes priming condition, attachment anxiety and avoidance accounted for a total of 6% of the variance.

Such results show that the security toward therapy prime decreased willingness to seek help among the sample. Attachment avoidance also negatively affected the willingness to seek help.

3.3.4. Discussion

This study aimed to develop a security prime that was more relevant to the context of seeking professional help and one that directly tackled some of the known barriers to seeking professional help. While some aspects of the wording of the prime came from the same base source used as security prime in Study 3, which has previously been found to be an effective security prime (Bartz & Lydon, 2004), it is possible that the revisions made to the surrounding text negated the impact of the prime on felt security. Indeed, the manipulation check indicated that the prime did not increase felt security as intended, suggesting that this new prime should not be regarded as a security prime.

However, the prime was not without impact - priming negatively affected the willingness to seek help. There are two possible explanations for this finding that focus on how the prime may have produced more negative or more positive feelings in relation to needing to seek help in the first place. One explanation might be that the prime drew attention to a potential scenario in which participants may need to talk to someone about their problem. Although the intention was that the scenario would promote feelings of security and confidence in the help-seeking process, it is possible that it backfired, and the help-seeking scenario described actually made people feel worse because it forced a focus on their problems.

An alternative explanation is that the prime made people feel better about their problems to such an extent that they no longer felt any need to seek help at all. However, it was not possible to test this because any potential mechanisms, other than felt security, which an attachment security prime may have impacted, were not measured.

On the other hand, even though the intervention achieved the opposite of the intended effect, it had a negative effect across the whole intervention group, meaning that the intervention was also affective in those who score higher in attachment avoidance and are less affected by traditional attachment security priming (Gillath et al., 2008). The potential mechanisms behind, such as potential increased self-reliance or avoidance of showing vulnerability (i.e., expressive suppression of emotions (Gross & John, 2003)) that are common in individuals who score higher than avoidance (Mikulincer & Shaver, 2019) might be tested against primes like this in future studies, aiming to understand better how particular primes affect avoidant individuals and in return, may help us understand how to develop effective primes for more avoidant individuals in the future.

3.4. General Discussion

Study 3 aimed to increase willingness to seek help for mental health problems using a classic attachment security priming approach. However, not only did it not increase willingness to seek help, it potentially decreased willingness to seek help amongst those who score lower on attachment anxiety, which is possibly due to those more secure individuals perceive having a strong support system (i.e., romantic partners or close friends) that they can rely on and do not hesitate to do so in times of a need (Shaver & Mikulincer, 2002), meaning that after being reminded about a secure relationship (security prime) they may do not feel the need to seek help from other sources such as mental health professional. Also, findings from Study 3 did not affect other attachment traits, namely higher attachment anxiety and both higher and lower levels of attachment avoidance, suggesting that unlike increasing willingness to seek support from close/romantic relationships, which has been found effective (Gillath et al., 2022), classic priming of attachment security may not translate into higher willingness to seek help from professional sources.

With findings as such, in study 4, a more specific prime was developed that attempted to prime security towards a potential professional counselling scenario. A failed manipulation check against felt attachment security revealed that priming security towards counselling was not an attachment priming; therefore, it should be regarded as a standalone intervention and not a security prime. Nevertheless, the intervention had an effect, although the opposite than intended across the whole intervention group regardless of attachment traits, which suggests good and bad news:

The bad news is the intervention had an undesired effect and lowered participants' willingness to seek help. However, on a more positive side, it decreased willingness across the sample, meaning that any potential trigger that triggered such a response may also apply to those scoring higher on attachment avoidance, which on its own has been a theme throughout

the thesis of resulting in lower willingness to seek help. One way future research could look at the potential mechanism behind this is comparing the qualitative data of participant written responses to both primes and potentially grouping the responses by dichotomous attachment styles: i) secure attachment (low attachment anxiety and low attachment avoidance); ii) preoccupied attachment (high attachment anxiety and low attachment avoidance); iii) avoidant attachment style which is also considered the most problematic in terms of help-seeking (low attachment anxiety and high attachment avoidance); iv) fearful-avoidant (high attachment anxiety and high attachment avoidance) which previously was found to be positively affected by attachment security priming on better attitudes towards counselling (Millings et al., 2019). In such a way, the mixed method approach might be able to identify why classic security priming did not increase willingness to seek help and why a similarly styled but more tailored intervention decreased willingness to seek help.

In addressing the limitations of the priming studies discussed in Chapter 3, it is crucial to recognise a potential challenge in isolating the locus of the priming effects, particularly in the implementation of the prime in Study 4. The manner in which the multifaceted prime was administered might have introduced complexities in pinpointing the specific source of the observed effects. It is advisable for future research to consider employing dismantling methods, which involve systematically breaking down the active components of the prime, to better understand the underlying mechanisms at play. Additionally, utilising mediation methods, particularly with pre-post assessments, could offer valuable insights into the causal paths through which the priming effects unfold. Another limitation of the priming experiments' design is that the direction of the priming effect (e.g., that the attachment security prime would have a stronger effect than dispositional attachment styles) was not included in the preregistration of the studies.

Chapter Four: General Discussion

4.1. Overview

The final chapter of the thesis summarises and considers the implications of the findings for future studies and real-life interventions to increase willingness to seek help. The first part, a summary of research findings, briefly overviews the studies conducted. The second part takes a step-back approach and discusses the implications of the findings for future studies by looking at the findings from a broader perspective in an attempt to discuss not only how to understand and potentially increase willingness to seek help but also what did we learn about the theories and concepts used in the thesis and how future studies might help to answer yet unanswered questions.

4.2. Summary of research findings

4.2.1. Supporting thesis rationale

Difficulties with mental health are on the rise among university students, and around 57% of students in the UK self-report mental health issues (Lewis & Bolton, 2023), which is an increase from previous studies that suggested that just shy of 50% of students in the UK experience difficulties with their mental health during their studies (Gorczynski et al., 2017). It is essential to acknowledge that the results derived from the surveys may not be directly extrapolated to represent the overall prevalence of difficulties within student populations. The participants in this research constitute a self-selecting sample, introducing a potential bias as individuals voluntarily opted to take part. However, the findings offer valuable insights into the perspectives of those who chose to participate. Based on results from Study 2, one could argue that the problem is even at a larger scale; around 73% (self-reported) and 82% (based on CCAPS (Locke et al., 2012)) might be experiencing some difficulty in mental health, such as

depression, anxiety, suffering from eating disorder or academic distress, etc. However, evidence also suggests that only between 25% and 50% of the students intend to seek help if they experience difficulty in mental health (based on Thomas et al. (2014) and the second study of the thesis, respectively). Therefore, this thesis aimed to understand i) why many students in need do not seek help, leading to ii) developing and employing two attachment-based priming experiments in an attempt to improve willingness to seek help.

4.2.2. Predicting help-seeking

Study 1 was a pre-study for Study 2 and looked at the relationships between attachment orientations and emotion regulation. The reason for doing so was that even though attachment is closely related to strategies used in emotion regulation (i.e., reappraisal, suppression of emotions) and support seeking (Mikulincer & Shaver, 2019) and, therefore, potentially could be related to seeking help for mental health difficulties, strategies that people use is just one part of the processes involved in emotion regulation such as identifying the need to regulate emotions, decision making on whether and how to regulate emotions, and only then enacting the strategy (Webb et al., 2012).

Due to the limited research on how different stages of emotion regulation are related to attachment, Study 1 was conducted to investigate those relationships. Study 1 revealed that current measures of emotion regulation did not reflect different stages of emotion regulation, and therefore, only the relationships between attachment dimensions and emotion regulation strategies were identified. Every emotion regulation strategy was associated with at least one of the attachment dimensions, suggesting that attachment orientation and emotion regulation are closely related and might be used together to better understand people's behaviour, such as help-seeking for mental health problems. For example, attachment avoidance was positively associated with expressive suppression of emotions, meaning those scoring higher on

avoidance are less likely to express emotions. In previous studies, emotional expression had positive indirect links (i.e., via anticipated benefits) towards positive attitudes towards therapy and greater willingness to seek help (Vogel et al., 2008). The implication, therefore, is that a lack of emotional expression might be one mechanism by which individual differences in attachment avoidance are associated with being less willing to seek help. However, the challenge in construct validity arises when attempting to differentiate between the natural emotional regulation strategies individuals employ and the intentional suppression of emotions indicative of attachment avoidance. Even though the results showed only a moderate correlation between avoidance and suppression, this blurring of lines might raise the need to review the theoretical framework between attachment avoidance and emotion suppression in future studies.

Study 1 also included a measure of disorganised attachment in adulthood. However, the measure of disorganised attachment was dropped in later studies because of difficulties in interpreting results and concerns regarding what the measure of disorganised attachment (Paetzold et al., 2015) actually captures. Theoretically, a disorganised or inconsistent attachment style reflects a fearful-avoidant attachment style (from the dimensional perspective), which initially is an attachment style that is at the higher end of both attachment anxiety and attachment avoidance continuums (Simpson & Rholes, 2002). Therefore, results in predicting emotion regulation strategies using disorganised attachment should be comparable to the results from interactions between attachment anxiety and attachment avoidance predicting the same emotion regulation strategies. However, in most cases where disorganised attachment was a significant predictor, no significant interactions were found between attachment anxiety and avoidance, suggesting that disorganised attachment may not capture what was considered as fearful-avoidant attachment style. Hence, dropping disorganised attachment style from the further studies.

Study 2 investigated how individual differences in attachment are associated with help-seeking (i.e., via emotion regulation and people's beliefs about help-seeking socio-cognitive theories). To represent socio-cognitive theories, the Prototype Willingness Model (Gibbons et al., 1998) was used because, potentially, it is the most comprehensive Theory of the Planned Behaviour-derived model in understanding how people's beliefs influence help-seeking for mental health difficulties (Hammer & Vogel, 2013). To better understand how a combined model of Attachment theory and PWM predicts intentions and willingness to seek help and how emotion regulation strategies from Study 1 and key barriers to seeking help (stigma and difficulties in self-disclosure) are associated with both attachment and TPB-derived models. Results revealed that socio-cognition theories, the Prototype Willingness Model in this case, can be successfully used with attachment theory, barriers to seeking help and emotion regulation to predict help-seeking for mental health problems.

From an attachment perspective, the key takeaway of Study 2 is that attachment anxiety is generally positively associated with intentions to seek help, suggesting that attachment anxiety could potentially be seen as a facilitator to seek help rather than a barrier. On the other hand, attachment avoidance was associated with a lower willingness to seek help, suggesting that, from an attachment perspective, it is more important to focus on avoidance as a significant barrier to being willing to seek help.

As expected from previous research on help-seeking (Hammer & Vogel, 2013; Vogel et al., 2005, 2007), from the socio-cognitive part of the model, attitudes towards seeking help were one of the key predictors of both intentions and willingness to seek help. Attitudes mediated the relationship between attachment avoidance and willingness to seek help, as well as between emotion regulation strategies, rumination and blaming others and intentions/willingness to seek help. The implication is that attitudes are critical in understanding how people choose to seek or not seek help.

Study 2 also found that self-stigma and difficulties in self-disclosure negatively affect attitudes to seek help and, indirectly, both intentions and willingness to seek help. This is consistent with the research suggesting that self-stigma predicts attitudes towards counselling more than public stigma (Vogel et al., 2007). And self-disclosure significantly predicts attitudes towards seeking professional help (Vogel et al., 2005). Also, it seems that attachment avoidance is the main predictor of higher self-stigma and more difficulties in self-disclosure. Even though previous help-seeking experience is potentially protective against or at least reducing self-stigma and difficulties in self-disclosure, resulting in more positive attitudes and, in turn, intentions and willingness to seek help, results from Study 2 also showed that out of those who sought help during the 6-month follow-up, 75% had sought professional help before, suggesting that it may be harder to reach out to those with no previous help-seeking experience.

In addition to the findings of individual processes such as attitudes and self-stigma being more important than more externally influenced aspects of help-seeking (i.e., norms), willingness was a better and the only significant predictor of help-seeking, which is consistent with the results of Hammer and Vogel's (2013) study looking at PWM model predicting help-seeking decisions, which suggests a shift away from viewing seeking help as a planned behaviour that can be estimated via intentions (e.g., TPB), towards a more reactive perspective such as PWM, which specifically includes the role of social images on self-views (prototype similarity) in predicting willingness to engage in help-seeking behaviour.

One of the reasons may be that according to findings in Study 2, intention to seek help may require some prior experience of help-seeking, but willingness to seek help does not depend on whether a person was experiencing difficulty with mental health and whether they have sought help previously. Given that half of the participants indicated that they have never sought professional help for mental health, that willingness was a better predictor may simply reflect its superior fit to the circumstances of most of the sample.

4.2.3. Increasing willingness to seek help

The research presented in the second half of the thesis investigated whether interventions based on attachment theory could increase willingness to seek help, particularly taking into account that previous research on security priming showed some potential in improving attitudes towards therapy amongst fearful-avoidant individuals (those who score higher on both attachment anxiety and attachment avoidance) (Millings et al., 2019).

Study 3 used a traditional priming technique (based on Bartz & Lydon, 2004 procedure) where participants were given a description of secure relationship and asked to think and write about it in an effort to increase participants' attachment security and consequently their willingness to seek help. The findings suggested that priming attachment security decreased the willingness to seek help amongst those with lower attachment anxiety (who are also potentially more securely attached beforehand). It could be because security priming reminds participants about the safe relationships that they have; therefore, more secure individuals may prefer to rely on someone who is close to them or experience less need for professional help, to begin with as those who are more secure are also less likely to have difficulties in mental health (Mikulincer & Shaver, 2019). Unfortunately, Study 3 did not find any effect of priming attachment security on willingness to seek help among participants with higher scores on attachment avoidance, consistent with research suggesting that attachment security priming may not work well on more avoidant individuals (Gillath et al., 2008).

Study 2 showed that attachment avoidance is likely to be one of the key barriers to willingness to seek help, and the findings of Study 3 suggested that an intervention designed to promote attachment security did not improve willingness to seek help among those with higher avoidance. Therefore, Study 4 developed a more specific prime towards counselling by addressing key barriers that are affected by attachment avoidance, namely self-stigma and

difficulties in self-disclosure, alongside more general barriers, such as mistrust about confidentiality and professionalism. Participants were given the prime towards counselling and asked to think and write about it in an effort to increase participants' attachment security and consequently their willingness to seek help . Unexpectedly, this prime decreased willingness to seek help amongst the whole sample. One explanation might be that the prime drew attention to a potential scenario where participants may need to talk to someone about their problem. Although this was described as a situation in which they would feel secure, the lack of effects on felt security suggests that participants may not have believed this. The negative effects on willingness to seek help suggest that the prime may have made participants more worried and reluctant to seek help.

Although Study 4 found the opposite effect than expected (potentially because the priming task involved a writing task to think about a hypothetical scenario where a participant may have access to someone who will support them), future research could conduct a qualitative analysis of the responses by grouping responses based on attachment styles (secure, preoccupied, dismissive-avoidant, fearful-avoidant). That may help to identify what may have triggered individuals with different attachment styles (including avoidant) to become more unwilling to seek help.

4.3. Implications for future research

4.3.1. Attachment theory

The results from Study 1 suggested that there may be a distinction between fearful avoidant attachment style and disorganised attachment in adulthood. Paetzold et al. (2015) argue that attachment disorganisation is a general fear of romantic relationships rather than a fear of abandonment and fear of intimacy expressed in those scoring higher in attachment anxiety and attachment avoidance, respectively. Authors suggest that those with disorganised

attachment style do not simultaneously feel the need to self-protect and avoid relationships together with the need to approach their romantic figure, meaning that attachment avoidance and attachment anxiety traits may come at different stages of attachment disorganisation. But there is some debate to be had about whether 'fear in romantic relationships' which is what the Paetzold (2015) measure taps, is the entirety of disorganisation in romantic relationships or whether it is just a sub-component of it (e.g., fear of relationships).

4.3.2. Emotion regulation

One of the aims of Study 1 was to find out whether the current measures of emotion regulation could be divided into the stages of emotion regulation as proposed by the Action Control Perspective (Webb et al., 2012). This would have allowed the use of a more contemporary understanding of emotion regulation processes, such as identifying the need to regulate emotions, selecting a strategy to do so, and then implementing that strategy. The initial results (Chapter 2, Study 1) suggested that the measures of emotion regulation did not neatly divide into the stages of emotion regulation as proposed by the Action Control Perspective (Webb et al., 2012); therefore, in subsequent studies in thesis used a classic approach to emotion regulation, reflecting various strategies people use to regulate their emotions. To address the limitation of the use of ACP measure (PIRES (Webb et al., 2017)), future studies should aim to improve the measures of aspects of the ACP. However, they should take into account that capturing which stage of emotion regulation a person is in can be complicated. Presumably, there may be factors that would make people go back and forth between stages of emotion regulation which would make not a linear process, therefore making it hard to be measured using linear measures such as scales.

4.3.3. Implications for predicting help-seeking

One of the key findings of Study 2 is that personal barriers and individual processes are more important in predicting attitudes and, in turn, intentions and willingness to seek help. For example, results from Study 2 suggested that self-stigma is more important than public stigma, which also has been found in previous studies (Vogel et al., 2007); attitudes towards seeking professional help and prototype similarity (whether someone sees themselves as someone who has characteristics of a help-seeker) are important in predicting willingness to seek help, whilst subjective and descriptive norms are not that important which also goes in line with previous studies that show mixed results on subjective norms predicting intentions to seek help (Adams et al., 2022).

Attachment plays an important role in understanding attitudes, intentions and willingness to seek help. Study 2 (Chapter 2) showed that attachment anxiety on its own is a facilitator for intentions to seek help and is in line with some previous studies (Cheng et al., 2015; Shaffer et al., 2006; Vogel & Wei, 2005). However, Study 2 also found that attachment anxiety can indirectly negatively influence intentions or willingness by being associated with a tendency to blame others, higher levels of self-stigma and more difficulties in self-disclosure that negatively affect attitudes towards seeking help. Such complex models show the relationships between attachment and socio-cognitions and the mechanisms behind them. Whether it is the strategies people use to regulate their emotions or barriers to seeking help, understanding the mechanisms behind them might help develop more tailored future interventions to address potential behavioural issues, in this case, lack of willingness to seek help for mental health problems.

On the other hand, avoidance has consistent negative pathways on attitudes and willingness to seek help, suggesting that there is a need for more work on developing more integrative approaches (e.g., that look beyond one concept or theory) to understand what can

be done to help those scoring higher on avoidance. A future study could look at path relationships such as creating models primarily based on attachment avoidance → barriers such as self-stigma and difficulties in self-disclosure → attitudes towards seeking help → willingness to seek help.

As mentioned previously, in Study 2, out of those who sought help during the 6-month follow-up, 75% had sought professional help before, suggesting that it may be harder to reach out to those with no previous help-seeking experience; therefore, there could be some debate in the future research whether help-seeking research should primarily focus on willingness to seek help amongst those who have never sought help before. For example, future studies could look at whether there are distinct student profiles characterized by their mental health status and their willingness to seek help based on whether or not they previously sought help. Such studies could potentially answer if it is the case that a group of students is being affected by mental health difficulties, some of whom have sought help before and, therefore, intend to do so again, while some have never sought help but might be willing to do so, and still, others have never sought help and would never consider doing so? Or whether it is the case that, within this group, the differences in help-seeking intentions/willingness are related to how long a history of mental health problems they have? In other words, are those who would not consider seeking help just earlier in their journey of suffering with mental health?

One of the key limitations of Study 2 was that it was limited by large attrition from the follow-up, which was detrimental to analysing the actual help-seeking behaviour. Considering potential ways to capture actual help-seeking, such as partnering with a university counselling service, may benefit future studies by providing a substantial source of participants and data linked to them.

4.3.4. Increasing willingness to seek help

Study 2 showed that individual differences in attachment are important in understanding how students choose to seek or not to seek help. Therefore, attachment security priming was a logical option for developing an intervention to increase willingness to seek help. Previous studies showed positive effects of priming on support-seeking (Gillath et al., 2022). Millings et al. (2019) showed that priming security improved attitudes towards counselling amongst fearful-avoidant individuals (those who score higher on both attachment anxiety and avoidance), which set a potential path that priming may work on those who score higher on avoidance, at least in some instances.

However, the results from Study 3 revealed that priming may have a very limited effect on willingness to seek professional help for mental health problems. A few key explanations could be that priming studies on support seeking in Gillath et al.'s (2022) meta-analysis looked at support seeking from romantic partners, and there is less research on priming effects on seeking professional help. Also, some priming studies not related to help-seeking suggested that priming is unlikely to work on those who score higher on avoidance (Carnelley & Rowe, 2007; Gillath et al., 2008). Therefore, a conclusion could be drawn that typical security priming may not be the best approach to increase one's willingness to seek help, especially those who score higher on avoidance.

In an attempt to address such issues, Study 4 used a tailored, more specific prime towards counselling, which had the opposite of the intended effect and reduced willingness to seek across the whole sample. There are two key implications for future studies: i) The prime reduced willingness across the whole priming group regardless of the attachment style, meaning that even those who score higher on avoidance were affected; therefore, qualitative analysis on participant responses by attachment style may help to understand whether those who score higher on attachment avoidance were triggered by the same aspects as those who

score higher on attachment anxiety; ii) conduct future studies looking whether mentioning potential barriers to a particular behaviour even in a positive way (i.e., addressing self-stigma, by telling participants that they would be supported with no judgment and by a motivated person to help in an attempt to increase willingness to seek help) would reduce willingness to participate in that behaviour.

Look into new potential techniques to target attachment avoidance. For example, based on Study 2 (Chapter 2) results, avoidance is associated with more difficulties in self-disclosure and self-stigma, resulting in less positive attitudes towards seeking help; therefore, a potential intervention could also target those barriers. A systematic review looking at the effects of self-help interventions reducing self-stigma in people with mental health problems shows promising results, especially knowing that self-help may be a preferred option for those with difficulties in self-disclosure (Mills et al., 2020).

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APPENDICES

APPENDIX no 1: Correlations between attachment dimensions, factors, and the subscales from existing measures that comprised those factors

	Attachment anxiety	Attachment avoidance	Attachment disorganisation
FACTOR 1: ABILITY TO IDENTIFY EMOTIONS	-.31**	-.52**	-.45**
ACP Identification	-.28**	-.48**	-.39**
DERS Awareness	-.11*	-.51**	-.29**
DERS Clarity	-.33**	-.36**	-.49**
FACTOR 2: POSITIVE REAPPRAISAL	-.37**	-.33**	-.30**
CERQ Refocus on planning	-.28**	-.29**	-.25**
CERQ Positive reappraisal	-.34**	-.31**	-.24**
FACTOR 3: ABILITY TO CONTROL EMOTIONS	-.47**	-.26**	-.42**
ACP Implementation	-.44**	-.23**	-.34**
ACP Selection	-.32**	-.25**	-.30**
DERS Impulse	.40**	.16**	.40**
FACTOR 4: RUMINATION ABOUT THE PAST	.44**	.10	.31**
CERQ Focus on thought	.32**	-0.02	.20**
CERQ Catastrophising	.43**	.14**	.41**

FACTOR 5: EXPRESSIVE SUPPRESSION	.10	.63**	.27**
ERQ Suppression	.09	.63**	.27**
FACTOR 6: NON-ACCEPTANCE, GUILT, SELF-BLAME	.52**	.27**	.42**
DERS Nonacceptance	.44**	.28**	.38**
CERQ Self Blame	.39**	.15**	.26**
FACTOR 7: POSITIVE REFOCUSING	-.16**	-.12*	-.09
CERQ Positive refocusing	-.16**	-.12*	-.09
FACTOR 8: BLAMING OTHERS	.08	-.01	.17**
CERQ Blaming others	.08	-.01	.17**
FACTOR 9: PUTTING INTO PERSPECTIVE	-.22**	-.07	-.10
CERQ Putting into perspective	-.16**	-.05	-.02
FACTOR 10: ACCEPTANCE	.03	.02	.13*
CERQ Acceptance	.14**	.11*	.24**
FACTOR 11: CONCENTRATION DIFFICULTIES	.40**	.21**	.31**
DERS Goals	.40**	.21**	.31**
DERS Strategies	.51**	.27**	.45**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

APPENDIX no 2: Significant indirect effects from the model

Indirect effects tested	β	*95% Confidence Intervals*	
		Lower	*Upper*
Self-Stigma ⇒ Attitudes ⇒ Willingness	-.20	-.211	-.078
Self-Stigma ⇒ Attitudes ⇒ Intentions	-.14	-.295	-.111
Rumination ⇒ Attitudes ⇒ Willingness	.10	.043	.139
Rumination ⇒ Attitudes ⇒ Intentions	.07	.059	.201
Past Help-seeking ⇒ Attitudes ⇒ Willingness	.06	.05	.218
Difficulties in Self-Disclosure ⇒ Attitudes ⇒ Willingness	-.06	-.087	-.007
Blaming Others ⇒ Attitudes ⇒ Willingness	-.06	-.084	-.018
Attachment Anxiety ⇒ Rumination ⇒ Attitudes ⇒ Willingness	.05	.018	.064
Attachment Avoidance ⇒ Self-Stigma ⇒ Attitudes ⇒ Willingness	-.05	-.093	-.026
Attachment Avoidance ⇒ Attitudes ⇒ Willingness	-.05	-.111	-.013
Past Help-seeking ⇒ Attitudes ⇒ Intentions	.04	.069	.307
Difficulties in Self-Disclosure ⇒ Attitudes ⇒ Intentions	-.04	-.119	-.011
Blaming Others ⇒ Attitudes ⇒ Intentions	-.04	-.127	-.022
Past Help-seeking ⇒ Self-Stigma ⇒ Attitudes ⇒ Willingness	.03	.026	.124
Attachment Anxiety ⇒ Rumination ⇒ Attitudes ⇒ Intentions	.03	.025	.093
Past Help-seeking ⇒ Prototype Similarity ⇒ Willingness	.03	.004	.146
Attachment Avoidance ⇒ Self-Stigma ⇒ Attitudes ⇒ Intentions	-.03	-.132	-.036
Attachment Avoidance ⇒ Attitudes ⇒ Intentions	-.03	-.157	-.017
Attachment Anxiety ⇒ Self-Stigma ⇒ Attitudes ⇒ Willingness	-.03	-.043	-.006
Attachment Avoidance ⇒ Difficulties in Self-Disclosure ⇒ Attitudes ⇒ Willingness	-.03	-.064	-.005
Self-Stigma ⇒ Prototype Similarity ⇒ Willingness	-.03	-.043	-.002
Attachment Anxiety ⇒ Prototype Similarity ⇒ Willingness	.02	.001	.044
Past Help-seeking ⇒ Self-Stigma ⇒ Attitudes ⇒ Intentions	.02	.036	.177

Indirect effects tested	β	*95% Confidence Intervals*	
		Lower	*Upper*
Attachment Anxiety ⇒ Self-Stigma ⇒ Attitudes ⇒ Intentions	-.02	-.061	-.008
Public Stigma ⇒ Subjective Norms ⇒ Willingness	-.02	-.05	.009
Attachment Avoidance ⇒ Subjective Norms ⇒ Willingness	-.02	-.059	.013
Attachment Avoidance ⇒ Difficulties in Self-Disclosure ⇒ Attitudes ⇒ Intentions	-.02	-.088	-.008
Attachment Avoidance ⇒ Prototype Similarity ⇒ Willingness	-.02	-.056	-.001
Attachment Anxiety ⇒ Difficulties in Self-Disclosure ⇒ Attitudes ⇒ Willingness	-.01	-.026	-.002
Attachment Avoidance ⇒ Descriptive Norms ⇒ Intentions	-.01	-.1	.005
Attachment Anxiety ⇒ Blaming Others ⇒ Attitudes ⇒ Willingness	-.01	-.017	-.003
Attachment Avoidance ⇒ Rumination ⇒ Attitudes ⇒ Willingness	-.01	-.031	-.001
Attachment Anxiety ⇒ Difficulties in Self-Disclosure ⇒ Attitudes ⇒ Intentions	-.01	-.035	-.003
Past Help-seeking ⇒ Difficulties in Self-Disclosure ⇒ Attitudes ⇒ Willingness	.01	.003	.049
Attachment Anxiety ⇒ Blaming Others ⇒ Attitudes ⇒ Intentions	-.01	-.026	-.003
Attachment Avoidance ⇒ Rumination ⇒ Attitudes ⇒ Intentions	-.01	-.045	-.002
Past Help-seeking ⇒ Difficulties in Self-Disclosure ⇒ Attitudes ⇒ Intentions	.01	.005	.067
Attachment Avoidance ⇒ Self-Stigma ⇒ Prototype Similarity ⇒ Willingness	-.01	-.019	-.001