**Attachment anxiety and problematic social media use: The mediating role of well-being**

Running head: Attachment, well-being, and social media

**Abstract**

Insecure attachment is associated with a myriad of maladaptive outcomes including low well-being and problematic internet use. The lack of research investigating the roles that interpersonal attachment styles and psychological well-being play in problematic social media use is surprising. To address this gap, 915 young people aged 18-25 years (*M* = 20.19, *SD* = 1.58) completed an online survey measuring attachment styles, psychological well-being, and problematic social media use. We found that both greater attachment anxiety and less avoidance in attachment relationships were associated with problematic use of social media. The data further indicated that there was a significant indirect effect of attachment anxiety on problematic social media use via general feelings of psychological well-being suggesting that individuals characterised by anxious attachment styles may be using social media as a means of enhancing psychological well-being. Although the cross-sectional nature of the study means that causality cannot be assumed, as psychological well-being was found to be negatively associated with problematic social media use, our findings bolster calls for the promotion of methods and interventions to enhance young people’s well-being.

*Keywords***:** attachment anxiety; attachment avoidance; psychological well-being; problematic social media use

**1. Introduction**

Insecure attachment is associated with a myriad of maladaptive outcomes including low well-being (Kafetsios & Sideridis, 2006) and problematic internet use (Jia & Jia, 2016). The main aspects of problematic internet use include cognitive preoccupation with the internet, an inability to control internet use, and continued use despite negative consequences (Gámez-Guadix, Villa-George, & Calvete, 2012). Problematic use can be generalised or specific in nature. Generalised problematic use is conceptualised as general, multidimensional overuse of the internet, whereas specific problematic usage involves overuse of a specific function of the internet (Davis, 2001). Little is known about the association between attachment styles and specific types of problematic use; however, social media plays a central role in the social lives of young people (Allen, Ryan, Gray, McInerney, & Waters, 2014) and these platforms may be particularly attractive to individuals who are anxious in close personal relationships. Furthermore, little is known about the factors that might mediate the association between adult attachment and problematic social media use. Psychological well-being, defined broadly in terms of the degree to which a person is functioning well (Ryff, 1989), is associated with attachment styles (Kafetsios & Sideridis, 2006), and specific aspects of psychological well-being, such as levels of autonomy, environmental mastery, and positive relations with others, have been found to be negatively associated with problematic internet use (Casale, Lecchi, & Fioravanti, 2015). The purpose of the present study was to explore the contribution of adult attachment and psychological well-being to problematic social media use, and the possible mediating role of psychological well-being in the relationship between attachment anxiety and problematic social media use.

**1.1 Attachment theory**

Attachment theory is a developmental theory of psychological functioning concerning the emotional bond that forms between an infant and her/his primary caregiver (Bowlby, 1969, 1973). Attachment theory proposes that infants develop interpersonal expectations or internal working models of the self and others through interactions with primary caregivers (Bowlby, 1973). The working models that individuals develop are carried forward into adulthood (Bowlby, 1969), and form the basis of future relationships, which, in turn, determine well-being (Bowlby, 1973; Sroufe, 2005). A positive working model is formed when the primary caregiver is seen as responsive, accessible, and trustworthy, resulting in a secure attachment style. This attachment style is characterised by positive beliefs about the self and others, and in Bowlby’s exposition of attachment theory, he emphasised the importance of relational bonds with people who are available, sensitive, and supportive in times of need to individuals’ psychological well-being (Bowlby, 1973, 1988).

Conversely, when the primary caregiver is inconsistent or unavailable, this leads to a negative working model, producing insecure attachment styles. Working models of insecure attachment are characterised along two orthogonal dimensions referred to as attachment anxiety and avoidance (Brennan, Clark, & Shaver, 1998). An anxious attachment style, characterised by a negative model of the self, develops when the primary caregiver is experienced as inconsistent (i.e., being sensitive and responsive to an infant’s needs sometimes yet presenting as insensitive and unresponsive at other times). Individuals who experience inconsistent parenting tend to hyperactivate their attachment system as adults, which results in exaggerated reactions to distress in an attempt to acquire comfort and support (Mikulincer, Shaver, & Pereg, 2003). An avoidant attachment style, characterised by a positive model of the self and a negative model of others, develops when a primary caregiver is experienced as unresponsive and unavailable. Individuals characterised by avoidant attachment styles deactivate their attachment needs, tend to be overly self-reliant, and prefer to remain distant from others (Mikulincer et al., 2003). Beliefs about the self and others play a crucial role in the quality of adult relationships, and have implications for psychological well-being which may be particularly relevant in specific contexts where close relationships are integral to identity and functioning. One such context is emerging adulthood, defined as the period between the ages of 18 and 25 (Arnett, 2000). Empirical evidence supports the idea that adult attachment contributes to a sense of well-being, as attachment security has been associated with higher levels of overall well-being, whereas attachment insecurity has been found to be inversely related to well-being (Kafetsios & Sideridis, 2006; Karreman & Vingerhoets, 2012; Wei, Liao, Ku, & Shaffer, 2011).

**1.2 Attachment styles and internet use**

Recently, there has been a growing interest in the role attachment plays in problematic internet use. Although both anxious and avoidant attachment dimensions have been found to predict problematic internet use (Shin, Kim, & Jang, 2011), more recent research suggests that only anxious attachment is involved in the development of problematic internet use (Jia & Jia, 2016; Şenormancı, Şenormancı, Güçlü, & Konkan, 2014). More specifically, research has consistently linked anxious attachment difficulties concerning preoccupation with relationships to problematic internet use (Schimmenti & Caretti, 2017; Schimmenti, Passanisi, Gervasi, Manzella, & Famà, 2014). However, the term problematic internet use has been criticised for being too vague, and given the nuances afforded to different aspects of internet domains, internet use should not be treated as a monolithic activity (Bergmark, Bergmark, & Findahl, 2011; Shen & Williams, 2011). Indeed, people may overuse particular online activities, such as social networking, rather than the internet per se (van Rooij, Ferguson, van de Mheen, & Schoenmakers, 2017).

Social networking, the most popular form of social media, plays a central role in young people’s social lives (Allen et al., 2014). As social media is generally used to foster and maintain relationships, an individual’s attachment style may affect their use of these social platforms. As attachment anxiety is associated with hyperactivating strategies (e.g., being overly dependent on others), these individuals may exhibit higher levels of problematic social media usage as they may overuse social media in an attempt to seek comfort and belongingness online. Conversely, as attachment avoidance is associated with deactivating strategies (e.g., down-regulating needs for closeness), these individuals may be less likely to exhibit high levels of problematic use as social media is often associated with socially-oriented activities. Thus, these individuals may avoid social media as they would face-to-face interactions, tending to eschew developing and maintaining relationships.

**1.3 Well-being and internet use**

Further to exploring the role of attachment in the context of internet use, researchers have also examined the relationship between several indices of well-being and problematic internet usage. A conceptual distinction has been made between subjective well-being, defined in terms of pleasure or happiness, and psychological well-being, defined more broadly in terms of human functioning (Ryff, 1989). Ryff’s widely used taxonomy of psychological well-being (Ryff, 1989) comprises six dimensions: self-acceptance (being able to positively evaluate oneself and one’s past life), autonomy (being able to evaluate oneself by personal standards and not look to others for approval), purpose in life (having goals and a sense of direction), positive relationships with others (having warm and trusting interactions with other people), environmental mastery (being able to manage, change, or improve the environment to meet one’s specific needs), and personal growth (being open to new experiences). Using this taxonomy, levels of autonomy, environmental mastery, and positive relations with others have been found to be negatively associated with problematic internet use (Casale et al., 2015). A negative association has also been found between life satisfaction and problematic internet use (Bozoglan, Demirer, & Sahin, 2013; Lachmann, Sariyska, Kannen, Cooper, & Montag, 2016), and individuals classified as problematic or maladaptive internet users were less likely to report high subjective well-being (Mei, Yau, Chai, Guo, & Potenza, 2016).

However, in the few studies that explore the association between positive functioning and problematic internet usage, central emphasis has been afforded to short-term affective well-being at the expense of focusing on the way in which an individual interacts with the world, such as having a sense of purpose and direction, achieving satisfying relationships with others, and gaining a sense of self-realisation. Low psychological well-being may be related to problematic social media use as young people may overuse social media to achieve greater autonomy in terms of endorsement of one’s own behaviour and higher self-direction and/or sense of mastery. In this way, young people may feel that social media can help them build relationships or to relate better with other people. Furthermore, as the attachment system underlies the formation and maintenance of relational bonds in adolescence and adulthood (Bowlby, 1988), it is possible that attachment anxiety influences problematic social media use indirectly through feelings of psychological well-being (Mikulincer & Shaver, 2007).

**1.4 The present study**

Although social media plays a central role in young people’s lives (Allen et al., 2014), much of the existing research in this area has been compromised by a failure to differentiate different types of internet activity. In order to redress the dominant focus on generalised problematic internet use in prior literature, the purpose of the present study was to explore the contribution of adult attachment and psychological well-being to problematic social media use, and the possible mediating role of psychological well-being in the relationship between attachment anxiety and problematic social media use. On the basis of recent findings exploring generalised overuse of the internet, we predicted that:

1. attachment anxiety will be positively associated with problematic social media use, whereas attachment avoidance will not be associated with problematic social media use.
2. psychological well-being will be negatively associated with problematic social media use.
3. attachment anxiety will influence problematic social media use indirectly through general feelings of psychological well-being.

**2. Methods**

*2.1. Participants*

The sample comprised 915 young adults (68% female, *n* = 626) aged 18 to 25 years (*M* = 20.19, *SD* = 1.58). Participants were recruited through posts on social media platforms. Ethical approval was obtained from the University’s ethics committee.

*2.2. Measures*

*2.2.1. The Relationship Questionnaire (Bartholomew & Horowitz, 1991)*

The Relationship Questionnaire (RQ) is a 4-item scale containing statements describing each of the four attachment styles including: secure, preoccupied, dismissing, and fearful. Participants rated how well each description reflected their general relationship style on a 7-point scale (1 = not at all like me; 7 = very much like me). In line with the developers’ recommendations, scores on the four attachment pattern ratings were combined to form scores on two underlying attachment dimensions: attachment anxiety and attachment avoidance. The anxiety dimension was obtained by summing the ratings of the two attachment patterns with negative self models (preoccupied and fearful) and subtracting the ratings of the two patterns with positive self models (secure and dismissing). The avoidance dimension rating was obtained by summing the ratings of the two attachment patterns with negative other models (dismissing and fearful) and subtracting the ratings of the two patterns with positive other models (secure and preoccupied). The scale has an acceptable, moderate, test–retest reliability (Griffin & Bartholomew, 1994), and good discriminant and face validity (Ravitz, Maunder, Hunter, Sthankiya, & Lancee, 2010).

*2.2.2. Ryff’s Psychological Well-Being Scales (Ryff, 1989)*

The 18-item version of Ryff’s Psychological Well-Being Scales (PWBS) comprises six dimensions: self-acceptance, autonomy, purpose in life, positive relations with others, environmental mastery, and personal growth (Ryff, 1989). Each item was rated on a 6-point Likert scale (1 = strongly disagree; 6 = strongly agree) and the overall psychological well-being score was obtained by summing the responses of all 18 items. Internal consistency for this study was *α* = .78. Ryff’s PWBS is one of the most widely used survey instruments to measure well-being (Abbott, Ploubidis, Huppert, Kuh, & Croudace, 2010; Huta & Waterman, 2014).

*2.2.3. Bergen Social Media Addiction Scale (Andreassen, Pallesen, & Griffiths, 2017)*

To assess problematic use of social media, the Bergen Social Media Addiction Scale (BSMAS) was used. The BSMAS is a modified version of the previously validated Bergen Facebook Addiction Scale (BFAS; Andreassen, TorbjØrn, Brunborg, & Pallesen, 2012). The original scale (BFAS) specifically assessed problematic Facebook use in the past twelve months and has shown good psychometric properties across studies. In the current version, the word *Facebook* was replaced with *Social Media* and social media was defined in the scale instructions as “*Facebook, Twitter, Instagram etc.*”. The BSMAScomprises six items reflecting each of the six addiction components: salience, mood modification, tolerance, withdrawal, conflict, and relapse (Griffiths, 2005). Each item was rated on a 5-point Likert scale (1 = very rarely; 5 = very often) and the BSMAS score was obtained by summing the responses of all items. The BSMAS is a psychometrically valid scale (Bányai et al., 2017) with internal consistency for this study of *α* = .83.

*2.3. Procedure*

Participants completed an online survey comprising the RQ, the PWBS, and the BSMAS. Participants first provided basic descriptive information about themselves including age and gender. All participants provided informed consent after reading the study information sheet and then ticking a consent checkbox before completing the measures.

*2.4. Statistical analyses*

Only participants who completed the survey in its entirety (*n*=915) were included in the analysis (254 participants from an original 1169 were excluded from the analysis due to missing data substantial enough to compromise meaningful inclusion or not satisfying the inclusion criteria in relation to age). Descriptive statistics were computed for all variables. Pearson’s correlation coefficients were computed between the main variables of interest to investigate the associations. Before the regression analysis was conducted, a log-transformation was conducted on the dependent variable to ensure it met parametric assumptions. A hierarchical regression analysis was conducted to assess the contributions of attachment anxiety, attachment avoidance, and psychological well-being to explaining problematic social media use.

Mediation was assessed in SPSS using model 4 of the PROCESS extension (Hayes, 2012). A simple mediation analysis was conducted to investigate the hypothesised relationship that anxious attachment (IV) affects problematic social media use (DV) via its effects on general feelings of psychological well-being. PROCESS was used to compare the direct effect (IV-DV; controlling for the mediator) with the total effect of the IV on the DV, including the indirect pathway via the mediator. Mediation was assessed via bootstrapping with 10,000 resamples. Bias-corrected confidence intervals for indirect effects via the mediator were examined.

**3. Results**

*3.1 Preliminary analyses*

Descriptive characteristics of the final sample (*n* = 915) and the inter-correlations between the key variables are shown in Table 1.

*3.2 Hierarchical regression analysis*

Hierarchical regression analysis assessed the contributions of attachment dimensions and psychological well-being to explaining problematic social media use (see Table 2). In the model, age and gender were entered first to account for any effects of these variables. In the second step, attachment anxiety and avoidance were entered. In the third step, psychological well-being was entered. The overall regression model predicted approximately 15% of variance in problematic social media use, *R*2 = .15, *F*(5, 909) = 32.05, *p* <.001.

*3.3 Mediation analysis*

A simple mediation analysis (Figure 1) indicated a significant total effect of anxious attachment on problematic social media use, *b*(*SE*) = .29 (.03), *p* < .001. There was a significant indirect effect of attachment anxiety on problematic social media use via psychological well-being, *b*(*SE*) = .13 (.02), 95% *CI* [09, .17]. Effect size indices indicated that 45% of the total effect of anxious attachment on problematic social media use was mediated through psychological well-being. Thus, psychological well-being partially mediated the relationship between anxious attachment and problematic social media use.

-.12 (.02), *p*<.001

-1.09 (.07), *p*<.001

Psychological well-being

Anxious attachment

.29 (.03), *p*<.001

Problematic social media use

[.16 (.04), *p*<.001]

**Figure 1**. A simple mediation analysis showing anxious attachment as the independent variable (IV), problematic social media use as the dependent variable (DV), and psychological well-being as the mediator. Values are unstandardised regression coefficients (SEs in parentheses) and associated p values.

**4. Discussion**

The purpose of the present study was to explore the contribution of adult attachment and psychological well-being to problematic social media use, as well as the mediating role of psychological well-being in the relationship between attachment anxiety and problematic social media. In line with our first hypothesis grounded in attachment theory, there was a positive association between attachment anxiety and problematic social media use. As social media enables perpetual contact and enhanced control over self-presentation, these sites may facilitate the development and maintenance of interpersonal relationships for individuals characterised by attachment anxiety. As these individuals have a high need for social affiliation but find it hard to form social connections in the offline world, social media may afford a sense of connection that satisfies their needs for belonging, social feedback, and social validation. Contrary to hypothesis one, there was a negative association between avoidant attachment and problematic social media use; however, this finding is consistent with the characteristics associated with this form of insecure attachment. Attachment avoidance was associated with less problematic social media use as these individuals have a tendency to suppress relational concerns, and are characterised by an excessive need for self-reliance and a preference for distance from others. Thus, these individuals may avoid social media altogether.

In line with our second hypothesis, psychological well-being was negatively associated with problematic social media use in this sample. Further to this, we tested a theoretically-driven model hypothesising that the association between attachment anxiety and problematic social media use would be mediated by general feelings of psychological well-being. In line with our predictions, attachment anxiety predicted psychological well-being, which sequentially predicted problematic social media use. Taken together, the present findings suggest that people who are anxiously attached and those who experience low well-being may be high-risk individuals and this information can usefully inform interventions.

The focus of any intervention should be on the underlying problems that prompt problematic usage, as surface interventions such as a forced reduction in social media use are unlikely to be successful in overcoming this problem behaviour (Kardefelt-Winther, 2017). Finding purposeful and meaningful offline activities may prevent young people from overusing social media to seek momentary pleasure, and examples of such meaningful pursuits may include volunteering, drama, or arts-based activities (Aked & Thompson, 2011).

In clinical settings, a specific psychotherapeutic strategy has been developed to enhance well-being, namely Well-being Therapy (Fava & Ruini, 2003). This specific strategy, based on Ryff’s multidimensional model of psychological well-being (Ryff, 1989), has been modified and implemented in school settings. The school-based protocol was designed to teach children and adolescents about the importance of well-being, with particular emphasis on positive interpersonal relationships, purpose in life, and self-acceptance, and demonstrated increases in psychological well-being (Ruini, Belaise, Brombin, Caffo, & Fava, 2006; Ruini et al., 2009). Interventions like this can help young people establish purpose and meaning in life, which may subsequently reduce their reliance on social media.

Our findings should be considered in light of several limitations. We deliberately targeted younger participants at risk of problematic social media use but these participants were self-selected through social media. Second, participants may have responded in socially desirable ways. Last, the cross-sectional design of the study limits the conclusions that can be drawn, particularly with reference to the mediator-dependent variable relationship.

In conclusion, greater attachment anxiety, less avoidance in attachment relationships, and low psychological well-being were associated with problematic use of social media. As individuals characterised by attachment anxiety appear to be using social media to enhance feelings of well-being, our findings bolster calls for a focus on enhancing psychological well-being. As attachment theory provides a fruitful theoretical framework for understanding why certain individuals are vulnerable, future investigations should continue to explore attachment processes with a view to developing a lifespan model of problematic social media use.

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