To scroll or not to scroll: Examining social media as a mediator for attachment security and internal stress

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ABSTRACT

Because attachment insecurity is associated with higher reports of social media (SM) use, and SM use has been shown to reduce the quality of interpersonal interactions, it is possible that SM use may mediate the association between attachment insecurity and experiences of internal stress (i.e., stress within a relationship). The present study uses daily diary data from 154 participants currently in a romantic relationship. Both concurrent (same day) and lagged (next day) effects were examined. Attachment anxiety was positively associated with experiences of internal stress on day 2 (concurrent effect) and day 3 (lagged effect). Partial support was found for associations with attachment avoidance; those reporting higher attachment avoidance reported higher internal stress on day 3 (lagged effect), but not on day 2 (concurrent effect). SM use did not mediate the association between insecure attachment and internal stress, as hypothesized. Implications and future directions are presented.

Keywords: *Insecure attachment, Internal stress, Romantic relationships, Social media use.*

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Highlights of this paper

- The present study uses daily diary data from 154 participants currently in a romantic relationship to examine the concurrent and cross-lagged effects of attachment insecurity on internal stress.
- Attachment anxiety was positively associated with experiences of internal stress on day 2 (concurrent effect) and day 3 (lagged effect).
- However, this relationship was not mediated by social media use.

1. INTRODUCTION

Perceptions of romantic relationship quality are associated with individuals' health and wellbeing across the lifespan (Dush & Amato, 2005; Langlais, Anderson, & Greene, 2016; Riggle, Rostosky, & Horne, 2010; Viejo, Ortega-Ruiz, & Sánchez, 2015). Yet, maintaining a high-quality romantic relationship can be challenging due to partners needing to be considerate of themselves, their partner, and the goals of their relationship (Kelley & Thibaut, 1978). Because humans are, by nature, self-interested, prioritizing partner- or relationship-oriented goals can create internal stress (Randall & Bodenmann, 2009a). Correspondingly, couples who experience internal stress (Merz, Meuwly, Randall, & Bodenmann, 2014) are at heightened risk for reductions in relationship quality (Breitenstein, Milek, Nussbeck, Davila, & Bodenmann, 2018; Ledermann, Bodenmann, Rudaz, & Bradbury, 2010). Thus, it remains imperative to identify characteristics that are most likely to predict internal stress in order to promote high quality relationships. A potential variable that could impact internal stress in a relationship is social media. Studies have shown that certain behaviors on social media, such as stalking and excessive posting, can lead to internal stress (Seidman, Langlais, & Havens, 2019). Therefore, the goal of this study is to understand how attachment anxiety and avoidance impacts internal stress in relationships, and whether or not social media mediates this relationship.

Individuals with insecure attachment orientations – high in attachment anxiety or avoidance – are at heightened risk for experiencing internal stress and stress-related reductions in relationship quality. Specifically, those with insecure attachment orientations are more likely to experience relationship mistrust or fear (Shaver & Mikulincer, 2007), such as someone in a long-distance romantic relationship who experience stress when their partner is not proximal to them. Internal stress can certainly manifest directly within the relationship (e.g., stress from partners' actions, mismatched goals). However, internal stress is often preceded by stressors outside of the relationship (i.e., external stress), such as stress from work, lack of free time, and friends (Randall & Bodenmann, 2009b) which can spill- or crossover into the relationship (Totenhagen, Randall, Cooper, Tao, & Walsh, 2017). Although there is evidence for some predictors of internal stressors within relationships, it is not clear what other factors may contribute to experiences of internal stress with insecurely attached individuals.

One contributor could be social media use, which has been shown to subsequently heighten stress (Rus & Tiemensma, 2017) reduce life satisfaction (Kross et al., 2013; Leung & Lee, 2005) and hinder relationship quality (Przybylski & Weinstein, 2013; Sbarra, Briskin, & Slatcher, 2019; Spencer, Lambertsen, Hubler, & Burr, 2017). As such, it is possible that heightened social media use is one external factor by which individuals with insecure attachment may experience heightened internal stress; indeed, attachment insecurity has been consistently linked with maladaptive internet and social media use, which is defined as four or more hours per day on social media sites (Tutgun-Ünal, 2020). Too much time on social media may limit face-to-face interactions, which are viewed as better for relationship quality than online interactions (D'Arienzo, Boursier, & Griffiths, 2019). In other words, it is possible that engaging with social media, particularly excessive social media use, may be a source of internal stress for insecurely attached individuals.

The present study aims to examine *whether* (direct effect) and *how* (indirect effect) insecure attachment orientations may be associated with increases in reports of internal stress across consecutive days. Specifically, using daily diary measures, the present study explores whether insecure attachment styles are associated with increases in

internal stress across two consecutive days, and whether any such associations between attachment styles and internal stress are indirectly associated with increases in social media use.

1.1. An Overview of Attachment Insecurity

To best understand individuals' close relationship behaviors, how both past and present relational experiences shape their understanding of how relationships progress should be considered. According to attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Anestis, Soberay, Gutierrez, Hernández, & Joiner, 2014; Bowlby, 1969) individuals' relationship behaviors are a result of internal working models of security and safety that developed during their early interactions with their primary caregivers (Collins & Allard, 2001). These internal working models, or schemas, shape the ways in which individuals interact with close others (e.g., romantic partners) and guide individuals' expectations about security and dependability within these relationships (Hazan & Shaver, 1987).

While the majority of individuals hold schemas of past primary caregivers or adult romantic partners as being responsive during times of stress (i.e., "securely attached" individuals), over 40% of individuals hold schemas with more uncertainty about their caregivers' and partners' responsiveness (Ainsworth et al., 1978; Hazan & Shaver, 1987; Sumden, 2014). These individuals are broadly considered "insecurely attached," yet can be categorized further by their specific experiences with caregiver warmth and responsiveness (i.e., insecure-anxious, insecure-avoidant) (Ainsworth et al., 1978). In other words, an individuals' attachment orientation is conceptualized based on their position regarding avoidance and anxiety. Avoidance is understood as a dislike of emotional or physical intimacy, with a lesser chance of providing emotional comfort to others (Mikulincer & Shaver, 2016). Individuals who are anxiously attached receive unpredictable and inconsistent comfort from their caregivers. Therefore, this prompts disassociation from others and a state of hypervigilance regarding signs of rejection and abandonment (Mikulincer & Shaver, 2016). On one hand, the *anxious* type typically received unpredictable or inconsistent comfort from caregivers during infancy (Main, Kaplan, & Cassidy, 1985) in adulthood, anxiously attached individuals can be described as wanting more closeness than others, while simultaneously fearing that their bids for closeness will scare others away (Hazan & Shaver, 1987). On the other hand, *avoidant* individuals were typically denied comfort from caregivers during infancy (Main et al., 1985) and consequently have difficulty trusting and being close to others in adulthood (Hazan & Shaver, 1987).

1.2. Attachment Security and Insecurity

Given insecurely attached individuals' perceived uncertainty surrounding their partners' responsiveness, it is understandable that they often experience heightened (negative) emotional reactivity (Simpson & Rholes, 1994; Simpson & Rholes, 2012) and reduced relationship quality (Shaver & Mikulincer, 2007; Simpson & Rholes, 2017) during stressful situations. Moreover, research shows that insecurely attached individuals are more likely to report aggression and interpersonal problems in their dating relationships (Bookwala & Zdaniuk, 1998). Individuals who have insecure attachment, either anxious and/or avoidant, seek support less, experience more frequent interpersonal conflict, and report cognitive biases that would cast their romantic partner in a negative light (Chopik, Nuttall, & Oh, 2022). Similarly, insecure individuals may ruminate on the negative features of their close relationships, which often exacerbates the perceptions of conflict. A meta-analysis concluded that attachment anxiety is moderately associated with negative emotion, conflict, and destructive interactions, while attachment avoidance is moderately associated with negative emotion and destructive interactions (Li & Chan, 2012). Further, individuals who are insecurely attached may be more likely to experience internal stress because they often choose romantic partners whose needs are incompatible with their own (Frazier, Byer, Fischer, Wright, & DeBord, 1996; Holmes & Johnson, 2009). For

example, anxious individuals often seek excessive reassurance from their romantic partners and avoidant individuals usually experience more romantic breakups (Feeney & Noller, 1990). Furthermore, adult attachment style has shown to be a reliable predictor for relationship outcomes.

In addition to measuring individuals' insecure attachment orientations and experiences of internal stress, which is stress that is experienced internally compared to external stress that comes from one's environment (Randall & Bodenmann, 2009b) it also remains important to identify potential sources of such stress. For instance, does stress manifest directly between insecurely attached individuals and their partner (e.g., due to partner conflict or mismatch), or do characteristics specific to insecurely attached individuals increase the likelihood of having stressors undermine their relationship? Previous research demonstrates that sources of internal stress are, often times, external (Randall & Bodenmann, 2017) specifically arising from stress spillover and crossover (LeBlanc, Frost, & Wright, 2015; Totenhagen et al., 2017). Stress spillover occurs when stress from one context is transferred to another (e.g., stress at work spilling over into a romantic relationship), while stress crossover occurs when one individual's stress transfers to their partner (Totenhagen et al., 2017). Thus, researchers are eager to identify potential contributors by which insecure attachment could be associated with relationship stress, which includes social media use. Overall, adult attachment style has been shown to be a reliable predictor for relationship outcomes.

1.3. Social Media, Stress, and Attachment

Social media, which is utilized by approximately 77% of the population in the United States and 4.65 billion people globally (Kepios, 2022; Smith & Anderson, 2018) significantly undermines romantic relationship quality (Przybylski & Weinstein, 2013; Sbarra et al., 2019; Spencer et al., 2017). Specifically, increased social media use is known to predict heightened technostress, stress and/or psychosomatic impairments that have stem from excessive exposure to technology (McDaniel & Coyne, 2016) and can lead to decreased levels of happiness (Brooks, 2015). Further, spending time on social media can distract from meaningful partner interactions (Lenhart & Duggan, 2014) heighten partners' risks of engaging in demand-withdraw and criticism-defense communication patterns (Spencer et al., 2017) and increase relationship conflict (Dew & Tulane, 2015; McDaniel & Coyne, 2016; Roberts & David, 2016; Spencer et al., 2017). Furthermore, spending excessive amounts of time on social media, defined as problematic social media use (Meshi & Ellithorpe, 2021) may lead an individual to become more fixated on their social media presence than their own individual or relational wellbeing (Akram & Kumar, 2017; Satici, Kayis, & Griffiths, 2021). A notable consequence of excessive social media use is the mental health of individuals. When used excessively, excessive social media use creates stress by promoting jealousy in relationships, negatively impacting well-being rather than coping with stresss (Satici et al., 2021) as some research suggests that social media use (if not excessive) can be used as a means of support (Randall & Bodenmann, 2009b). Moreover, smartphones, the means by which many accesses social media, have been shown to decrease partners' empathy (Misra, Cheng, Genevie, & Yuan, 2014) and increase relational uncertainty (Lapierre & Lewis, 2018) as they represent distractions that draw attention away from the current interaction (Sbarra et al., 2019). Taken together, these findings support the notion that social media helps explain the internal stress experienced by the average romantic partner.

Compared to those with secure attachment styles, individuals with insecure attachment orientations are at an even higher risk of experiencing negative consequences of social media for relationship quality. First, insecurely attached individuals are at increased risk of having problematic social media use (D'Arienzo et al., 2019; Monacis, de Palo, Griffiths, & Sinatra, 2017a; Monacis, de Palo, Griffiths, & Sinatra, 2017b). Spending too much time online or relying on social media for interactions is likely to detract away from meaningful interactions in one's relationship, which could hinder the quality of that relationship. Second, researchers argue that insecurely attached individuals

attempt to compensate for their relationship fears with online engagement (Savci & Aysan, 2016) because they view online platforms as safe spaces to fulfill their belongingness needs (Rom & Alfasi, 2014) . Although social media may be used for social support, relying too much on social media may increase stress within relationships.

Attachment anxiety is associated with increased social media use (Andangsari, Gumilar, & Godwin, 2013; Hart, Nailling, Bizer, & Collins, 2015; Liu, Shi, Liu, & Sheng, 2013; Longua Peterson, Giguere, & Sherman, 2017; Oldmeadow, Quinn, & Kowert, 2013) and a deeper understanding of these findings demonstrate how social media use may indirectly predict internal stress for anxiously attached individuals. For instance, anxiously attached individuals tend to use Facebook, which is the most popular social media cite globally (Kepios, 2022) for sources of feedback (Hart et al., 2015) and comfort primarily during times of stress (Oldmeadow et al., 2013). Yet, excessive use of social media use, common with insecurely attached individuals, is associated with more relationship conflict (Stöven & Herzberg, 2020). Thus, such attention-seeking behaviors have been significantly associated with reductions in relationship satisfaction (Sened, Bar-Kalifa, Pshedetzky-Shochat, Gleason, & Rafaeli, 2020) and can be thought to significantly undermine these individuals' goals in their relationships (Locke, 2008) and heighten internal stress.

The possibility of the contribution to internal stress from social media use is not as straightforward for those with avoidant attachment. While studies have shown that avoidant attachment is significantly correlated with heightened social media use (Blackwell, Leaman, Tramposch, Osborne, & Liss, 2017; Hart et al., 2015; Monacis et al., 2017a) avoidant users tend to feel connected to others' profiles without being hypervigilant due to closeness concerns (Stöven & Herzberg, 2020). Avoidant individuals spend less time on Facebook because they tend to be introverted and prefer privacy (Hart et al., 2015). Additionally, avoidant attachment is only associated with higher social media use when individuals are also high in attachment anxiety (Blackwell et al., 2017).

For the present study, the researchers hypothesize that individuals who are insecurely attached will experience heightened internal stress across consecutive days (Hypothesis 1). Second, the researchers hypothesize that social media use would indirectly contribute to experiences of internal stress for anxiously attached individuals (Hypothesis 2a), but not avoidantly attached individuals (Hypothesis 2b). Specifically, the researchers predicted that individuals with higher levels of attachment anxiety would spend more time on social media, which would result in greater experiences of internal stress over two consecutive days (i.e., daily internal stress; Hypothesis 2a). The researchers predicted that individuals with higher levels of attachment avoidance would experience higher levels of internal stress, but this stress would not be indirectly explained through more time on social media (Hypothesis 2b).

2. METHOD

2.1. Participants

Participants were recruited in the Midwest and Southwest United States from online advertisements on Facebook or announcements by faculty within the principal investigators' respective psychology departments, resulting in a mixture of college students and community participants. Student participants had the chance to participate in lieu of one of their major course assignments, and community participants were compensated with Amazon gift cards. Eligibility criteria required that participants were at least 18 years old and had at least one active social media account.

Following recruitment, 296 individuals emailed the research team to express interest in participating. Of those interested, 32 individuals chose not to participate in the study and three individuals were deemed ineligible. The study retained a final sample size of 261 participants. Because the present study examines stress in romantic relationships, the researchers limited the larger sample to those identifying as currently in romantic relationships, and single participants were subsequently removed ($n = 67$). Additionally, in order to achieve power for analyses (Bolger, Stadler, & Laurenceau, 2012) the researchers only used data for the first three days of the study (baseline measures plus two

consecutive days; thus, only participants who provided data on all three of these days, and were in a romantic relationship, were included in the study. The present study includes a final sample size of 154 participants, which includes 118 females (76.6%) and 36 males (23.4%). Participants ranged in age from 18 to 68 years (*Mean* = 28.03, *Standard Deviation* = 10.25). A majority of the sample identified as non-Hispanic White (N = 123, 80.4%), while 12 (7.8%) identified as Latino/a, eight (5.2%) as Asian/Asian American, three (2.0%) as African American, and seven (4.6%) as "Other"; one participant did not list their race. Regarding educational status, 18 reported having a high school education (11.6%), two reported completing a professional program (1.3%), 80 reported having some college (51.9%), 39 reported having an undergraduate degree (25.3%), and 15 reported having a graduate degree (9.7%).

A majority of participants identified as heterosexual (N = 143, 92.9%), while nine (5.8%) reported being bisexual, and two (1.3%) reported being in a same-sex relationship. The average relationship length was 6.15 years (SD = 7.07 years, *range* = less than one month to 43 years). A majority of participants reported their relationship status as "being in a committed relationship" (N = 86, 55.8%), 61 reported being married (39.6%), and seven reported being engaged (4.5%). It should be noted that married participants reported significantly lower levels of attachment anxiety than those in committed relationships or engaged participants (M = 3.03, SD = 1.11; M = 3.59, SD = 1.21, respectively; $F(153) = 4.36$, $p < 0.05$); however, no other significant differences were found based on relationship status.

2.2. Procedures

If deemed eligible, the research team responded to each prospective participant by detailing the procedures of the study and a four-digit code that participants would use for each daily online survey, which would help organize the data by participant. Participants were sent a link to complete a daily survey shortly after 9:00 pm in the time zone in which they were recruited. Participants were asked to respond to the surveys before going to sleep that night, or first thing in the morning when they woke up. Participants provided their consent on the first page of each online survey. The first daily survey (day 1, or "baseline") was a 30-minute survey assessing self-reported demographics, attachment style, and relationship quality. Participants then completed a brief 15-minute survey for nine consecutive days that asked about social media use and stress in their romantic relationships (as well as other variables not associated with the current investigation). The respective university's institutional review board approved the larger study in its entirety.

2.3. Measures

Attachment style. This variable was assessed using the Experience in Close Relationships (ECR) – Short Form (Wei, Russell, Mallinckrodt, & Vogel, 2007) administered on Day 1 (hereafter "baseline"). The ECR contains a total of 12 items and two subscales to reflect attachment anxiety (6 items) and avoidance (6 items). Participants responded to these items using a 7-point Likert scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. Sample items for attachment anxiety include, "I need a lot of reassurance that I am loved by my partner" and "I find that my partner(s) don't want to get as close as I would like." Sample items for attachment avoidance include, "I want to get close to my partner, but I keep pulling back" and "I am nervous when partners get too close to me." Both the attachment anxiety and avoidance subscales showed adequate reliability, $\alpha = 0.72$ and $\alpha = 0.81$, respectively, and were significantly correlated, $r = 0.38$, $p < 0.01$. Internal stress. This variable was measured with the internal stress subscale of the Multidimensional Stress Scale for Couples (Bodenmann, 2007) and was administered daily. Participants responded to 10 items using a 4-point Likert scale ranging from 1 = *not at all* to 4 = *strongly*. Sample items include, "Difference of opinion with your partner (e.g., conflicts, disputes)" and "Difficult personality of your partner (e.g., short temper, low reliability, dishonesty)." Stress for Day 2 and Day 3 were used as dependent variables, as the sample size was high

enough to achieve adequate power for analyses. Reliability for the internal stress scale was acceptable for day 2 and day 3 ($\alpha = 0.82$ and 0.85, respectively).

Social media use. This variable was measured by asking participants to report how many minutes they spent on Facebook, Snapchat, Instagram, and Twitter each day. More precisely, participants were asked, "How many minutes did you spend on [social media platform] today?" Minutes on each social media platform were summed together to create a single measure of social media use for each day. For the current study, only data from Day 2 was used.

Control variables. Participants' age, gender, length of romantic relationship, and relationship quality were controlled for in the present study. Participants answered their age and length of their relationship as open-ended questions on the baseline survey, and participants responded to a close-ended question regarding their gender (all participants indicated that they were either male or female, although other options such as transgender were provided). Relationship quality was measured using the Perceived Relationship Quality Components Inventory (Fletcher, Simpson, & Thomas, 2000) administered at baseline. The PRQC consists of 18 items rated on a 7-point Likert scale ranging from 1 = *not at all* to 7 = *extremely*. Sample items include, "How passionate is your relationship?" and "How happy are you with your relationship?" Reliability for this measure was acceptable with $\alpha = 0.95$. All of the control variables were regressed on internal stress for day 2 and day 3.

2.4. Data Analysis

Structural equation modeling techniques were used via Mplus v7.4 (Muthén & Muthén, 2015) to address the hypotheses of this study. Mplus handles missing dating using full maximum likelihood (FML), which allows the covariance structure to fit the data for each participant without relying on pairwise or listwise deletion. This approach is preferred as it can generalize results to the study population using all data available (Kline, 2011). This approach allows us to assess the magnitude and significance of the relationships among the exogenous and endogenous variables. A distinct advantage of using structural equation modeling is that direct and indirect effects can be tested simultaneously, which is not possible when using ordinary least squares regression approach (Stage, Carter, & Nora, 2004). All inferences for the indirect effects were based on the Mplus estimation of indirect effects and bootstrapped confidence intervals (2000 bootstraps). Additionally, although control variables (age, gender [dichotomized], education, and relationship length) were regressed on the independent variable, they were not significant and therefore, are not included in the final model.

Table 1. Descriptive statistics and correlations of study variables (N = 154).

Study variables	*M*	*SD*	Range	1	2	3	4	5	6
1. Attachment anxiety	3.38	1.21	1.17 - 6.83	---	0.38**	0.41**	0.35**	0.27**	-0.16
2. Attachment avoidance	2.09	1.04	1.00 - 5.50		---	0.24**	0.48**	0.16	-0.61**
3. Internal stress - day 2	1.39	0.46	1.00 - 3.33			---	0.55**	0.13	-0.28**
4. Internal stress - day 3	1.35	0.48	1.00 - 3.67				---	0.06	-0.38**
5. Social media use - day 2	88.41	79.20	5.00 - 510.00					---	-0.08
6. Relationship quality	6.06	0.92	2.56 - 7.00						---

Note: Attachment security is measured on a scale of 1 to 7, with higher scores indicating more anxiety or avoidance. Stress is measured on a scale of 1 to 4, with higher scores indicating more stress. Social media use is measured in minutes. Relationship quality is measured on a scale of 1 to 7, with higher scores indicating higher relationship quality. ** $p < 0.01$.

3. RESULTS

This study examined whether (i.e., direct effect) and how (i.e., indirect effect) attachment avoidance and anxiety are associated reports of internal stress. The conceptual model is presented in Figure 1 and results are depicted in Figure 2. Descriptive characteristics and correlations of study variables are presented in Table 1.

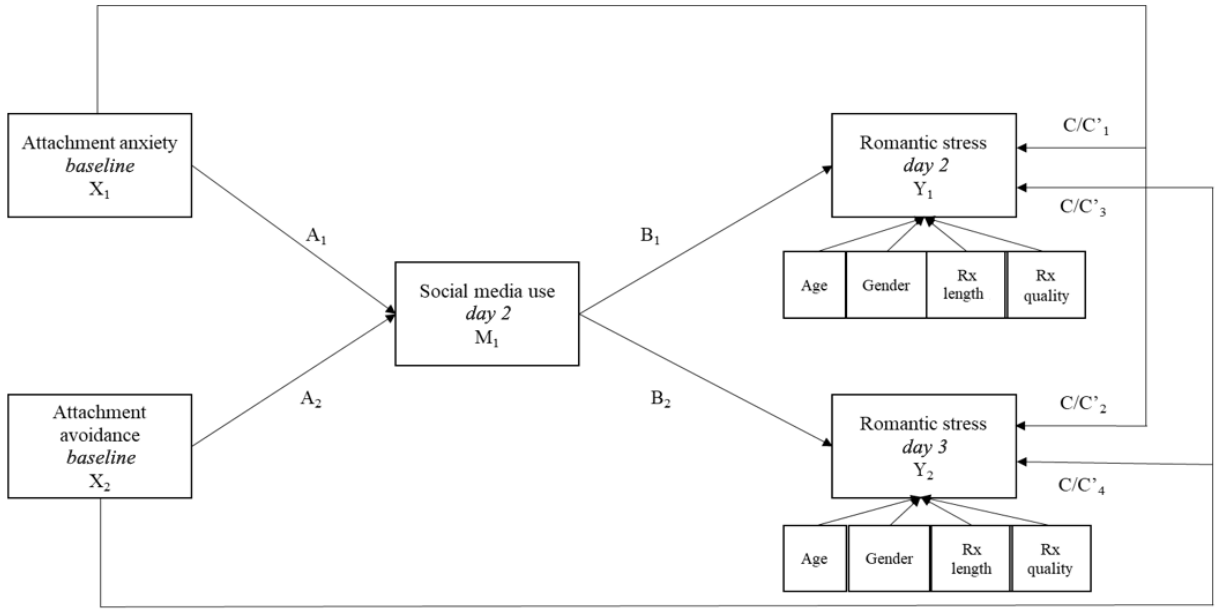

Figure 1. Conceptual model for the indirect effect of social media use (Day 2) on the relations between attachment anxiety and avoidance subsequent (i.e., days 2 and 3) romantic stress.

Note: N=158. All covariates (i.e., age, gender, relationship length, relationship quality) were collected at the baseline assessment. Rx= Relationship.

First, the direct effect of (baseline) attachment anxiety and avoidance on subsequent (i.e., days 2 and 3) internal stress was examined. It was hypothesized that attachment anxiety and avoidance would be significantly positively associated with day 2 (concurrent) and day 3 (lagged) internal stress. Results indicated a direct concurrent ($p < 0.001$) and lagged effect ($p < 0.01$) of attachment anxiety and subsequent internal stress. In other words, individuals with greater baseline attachment anxiety exhibited higher levels of internal stress on days 2 and 3. In addition, results indicated a direct lagged effect of attachment avoidance and subsequent internal stress ($p < 0.05$), but not a concurrent effect ($p = 0.71$). In other words, individuals with greater baseline attachment avoidance exhibited higher levels of subsequent internal stress on day 3. Individuals with greater baseline attachment avoidance did not, however, exhibit higher levels of subsequent internal stress on day 2.

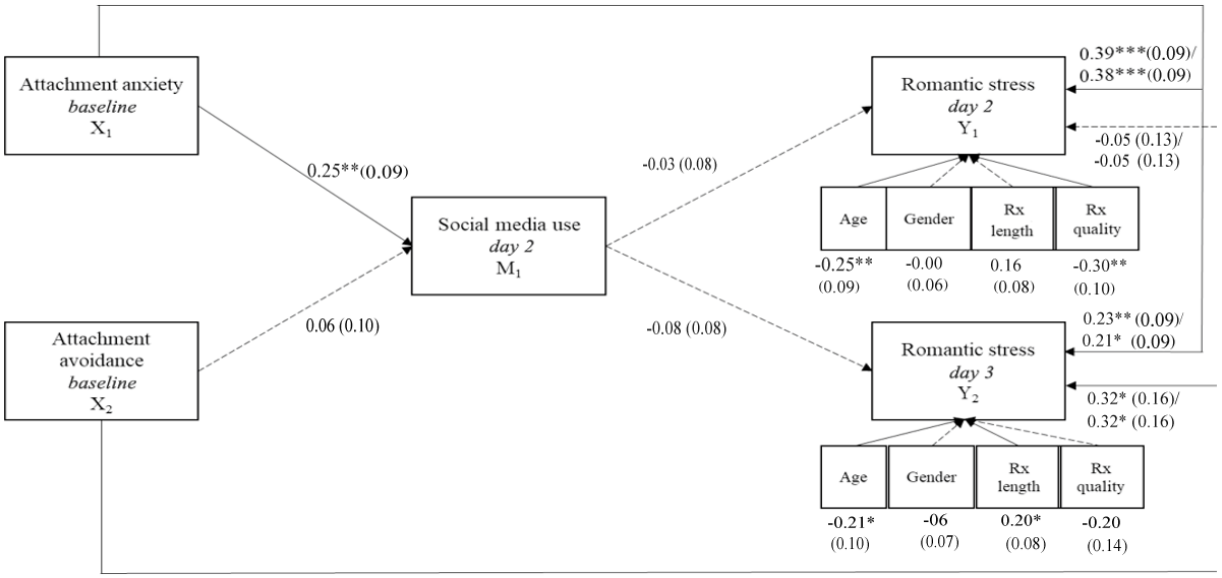

Figure 2. Results for the indirect effect of social media use (Day 2) on the relations between attachment anxiety and avoidance subsequent (i.e., days 2 and 3) romantic stress.

Note: N=158. Bold lines indicate significant pathways. Dashed lines indicate insignificant pathways. All covariates (i.e., age, gender, relationship length, relationship quality) were collected at the baseline assessment. Rx= Relationship. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.01$.

Next, the indirect effect of social media use (day 2) on the association between attachment anxiety and avoidance and subsequent same- (concurrent) and next-day (lagged) internal stress was examined. It was hypothesized that attachment anxiety would be significantly positively associated with subsequent internal stress via increases in same-day social media use, while attachment avoidance would not be significantly positively associated with internal stress through same-day social media use. The model fit was good (χ^2 (4) = 7.17 p = 0.13; comparative fit index (CFI) = 0.98; root-mean-square error of approximation (RMSEA) = 0.07 [CI: 0.00, 0.16]; standardized root mean square residual (SRMR) = 0.04).

For the predictor to mediator paths, a significant concurrent effect was found for attachment anxiety and internal stress, but not attachment avoidance. Specifically, attachment anxiety was significantly associated with increases in same-day social media use ($p < 0.01$). On the other hand, attachment avoidance was not significantly associated with increases in same-day social media use. Approximately 8% of the variance in social media use was explained by attachment anxiety and avoidance. For the mediator to outcome paths, no significant concurrent or lagged pathways was observed. In other words, social media use was not significantly associated with increases in same- or next-day internal stress. Results indicated several significant covariates for our dependent variables, such that age ($p < 0.01$) and relationship quality ($p < 0.01$) were significantly associated with internal stress on day 2 (concurrent effect), while age ($p < .05$) and relationship length ($p < 0.05$) were significantly associated with internal stress on day 3 (lagged effect). Approximately 26% of the variance in day 2 internal stress, and 32% of the variance in day 3 internal stress, were explained by the predictors (i.e., attachment anxiety and avoidance), mediator (i.e., social media use) and covariates (i.e., age, gender, relationship length, and relationship quality) that preceded them.

Finally, the indirect effect of social media use on the association between attachment anxiety and avoidance and subsequent internal stress was examined. While it was hypothesized that the direct relations between attachment anxiety and subsequent internal stress would be transmitted by greater social media use, but not for attachment avoidance, no evidence of significant indirect concurrent or lagged effects were found. Results of these tests are presented in Table 2.

Table 2. Tests of indirect effects for path analysis models (N = 154).

	Mplus estimate of indirect effects			
Paths	**Direct**	**Total**	**Indirect**	**95% CI indirect**
Attachment anxiety → Social media use → Internal stress (Day 2)	0.39*** (0.09)	0.38*** (0.09)	-0.01 (0.02)	-0.05 - 0.03
Attachment anxiety → Social media use → Internal stress (Day 3)	0.23** (0.09)	0.21* (0.09)	-0.02 (0.02)	-0.06 - 0.02
Attachment avoidance → Social media use → Internal stress (Day 2)	-0.05 (0.13)	-0.05 (0.13)	-0.00 (0.01)	-0.02 - 0.02
Attachment avoidance → Social media use → Internal stress (Day 3)	0.32* (0.16)	0.32* (0.16)	-0.01 (0.01)	-0.03 - 0.02

Note: Attachment anxiety and avoidance were measured at the initial "baseline" assessment. Social media use was measured on day 2. Mplus estimates of indirect effects reflect standardized coefficients. CI = confidence interval. *p < 0.05. **p < 0.01. ***p < 0.001.

Results indicated a significant total effect of initial attachment anxiety and subsequent internal stress on days 2 ($p < 0.001$) and 3 ($p < 0.05$). In other words, after accounting for the control variables, individuals with greater attachment anxiety still exhibited higher levels of subsequent concurrent and lagged internal stress when compared with those with less attachment anxiety. Results also indicate a significant total effect of attachment avoidance and subsequent internal stress on day 3 ($p < 0.05$). In other words, individuals with greater attachment avoidance still exhibit higher levels of subsequent lagged internal stress when compared with those with less attachment avoidance.

4. DISCUSSION

Given how so many people in the United States actively use social media (Kepios, 2022) it is important to understand the direct and indirect effects of attachment insecurity and social media use on individuals' internal stress. The results of this study revealed direct effects of attachment anxiety and avoidance on individuals' experiences of daily internal stress were examined. Attachment anxiety was positively associated with experiences of internal stress on days 2 and 3 (concurrent and lagged effects), while attachment avoidance was positively associated with experiences of internal stress on day 3 (lagged effect), but not day 2.

Second, the researchers examined whether social media use indirectly explained the association between attachment insecurity (i.e., anxiety and avoidance) and internal stress across two consecutive days. No significant indirect concurrent or lagged effects were found; both attachment anxiety and avoidance did not predict internal stress via social media use on days 2 or 3.

4.1. Direct Effect of Attachment Insecurity and Internal Stress

As hypothesized, individuals' self-reported attachment anxiety was positively associated with experiences of daily internal stress on both days (concurrent and lagged effects). Individuals high in attachment anxiety generally perceive relationships as unstable as they hold negative views of themselves, but positive views of their partner (Simpson & Rholes, 2017). As a result, they often overcompensate when trying to obtain more relational security from their partner, which in turn causes more stress at the thought of not being good enough or their partner leaving the relationship. Further, these findings are in line with prior research noting that those with attachment anxiety are more likely to report greater personal distress (e.g., stress, jealousy, conflict) concerning a romantic partner over consecutive days (Selterman & Drigotas, 2009) potentially from not feeling enough closeness (Dewitte, De Houwer, Buysse, & Koster, 2008). Preoccupied individuals, those high in attachment anxiety, often seek excessive reassurance seeking, which when sought too much can lead to conflict and stress (Stöven & Herzberg, 2020).

As hypothesized, attachment avoidance also was positively associated with individuals' experiences of daily internal stress on day 3 (lagged effect), but not on day 2. Individuals high in attachment avoidance prefer to portray an image of independence (Girme, Overall, Simpson, & Fletcher, 2015) and tend to downplay negative thoughts (Simpson & Rholes, 2017) . Perhaps, per the measure of daily internal stress, avoidantly attached individuals initially downplayed their stressful experiences on day 2 but reported their stress more accurately on day 3. Prior research indicates that those high in attachment avoidance are likely to experience increased depression and distancing when their partners provide them with daily low-to-moderate levels of support (Girme et al., 2015). While the current study does not directly examine perceptions of partner support, avoidantly attached participants likely experienced events across the two days, which lead to increases in reported internal stress.

4.2. Indirect Effect of Attachment Insecurity and Internal Stress through Social Media Use

Social media use was not significantly associated with internal stress or relationship quality in the present sample. This lack of significance was surprising given previous research that has found excessive social media use a distraction from meaningful relational interactions (Lenhart & Duggan, 2014; Sbarra et al., 2019) and decreases in relationship certainty (Lapierre & Lewis, 2018). One possible explanation for the null result could be explained by how this was measured. The researchers examined time on social media as a composite of how many minutes were spent each day across multiple social media platforms. Further, each social media platform has different primary functions which may have influenced the current study's outcomes. However, the researchers did not examine how participants were engaging with social media. Individuals may passively scroll through posts or actively engage in commenting, liking,

or sharing behaviors. Having a clearer understanding of the specific uses of specific social media platforms may help determine if social media use is directly associated with increased internal stress and disrupted relational quality.

The test of the mediation effect of social media on internal stress was not significant. Said differently, the amount of time spent on social media did not indirectly predict experiences of internal stress for individuals with an insecure attachment. While the researchers did predict this effect for individuals high in attachment avoidance given their proclivity for independence and preference for privacy (Hart et al., 2015) the null result for attachment anxiety is worth exploring.

Previous research suggests that those with an insecure attachment are at a heightened risk of engaging in problematic social media use (D'Arienzo et al., 2019; Monacis et al., 2017a; Monacis et al., 2017b; Rao & Madan, 2013). Specifically, anxiously attached individuals tend to use social media at higher rates, particularly for feedback- (Hart et al., 2015) attention- (Rom & Alfasi, 2014) and comfort-seeking (Oldmeadow et al., 2013) behaviors, especially during times of stress. This type of behavior is associated with disruptions in relationship quality (Sened et al., 2020) and the undermining of relationship-goals (Locke, 2008). However, the current study did not explore the specific ways participants were utilizing social media, as social media has often been equated to a 'double-edged sword,' such that users are able to experience both negative (e.g., depression, anxiety) and positive (e.g., social support) effects (Keles, McCrae, & Grealish, 2020) based on their online behavior.

Previous research also suggests insecurely (particularly anxiously) attached individuals are likely to engage in electronic intrusion, or the monitoring of their partner's social media presence (Reed, Tolman, & Safyer, 2015). This monitoring can be problematic in romantic relationships as the affordances of social media (e.g., persistence, visibility) may exacerbate feelings of jealousy and increase concern over relational threats (Frampton & Fox, 2018). Therefore, it is likely that individuals high in attachment anxiety will experience higher levels of internal stress when actively monitoring their partner online. However, it is also possible that participants high in attachment anxiety utilized social media for socially supportive purposes, which has been shown to help reduce feelings of loneliness (Benoit & DiTommaso, 2020). Thus, in the current sample, it is possible that anxiously attached individuals' internal stress was not explained by time spent using social media because it did not capture the specific activities participants engaged in.

4.3. Limitations, Future Directions, and Conclusions

This study has several limitations. First, most of the sample was female (76.6%) and non-Hispanic White (80.4%), which limits the study's generalizability. Further, there were several recruitment limitations including the use of primarily college students enrolled in psychology courses in the United States, and the snowball sampling technique. Additionally, social media use was measured in time spent on each platform, which only provided a snapshot as to *how long* participants used social media, but not for *what purposes*, which did not lead to an understanding of specific instances that may explain internal stress at greater rates.

Notable future directions include testing the proposed model of attachment insecurity and experiences of daily internal stress via social media with a dyadic sample that can account for both partners' attachment styles and social media use behaviors over a longer span of time. The present study only examined one partner across two days but did not examine the interplay between both partners' attachment and their perceptions of their partners' social media use. Previous research suggests that individuals may prefer partners with similar attachment styles (Frazier et al., 1996). Further, the use of social media in-and-of itself may represent a relational distractor (Sbarra et al., 2019). Thus, future research that examines how two partners high in attachment anxiety experience internal stress as mediated by specific social media behaviors on a daily basis will likely yield rich theoretical and practical discoveries.

Given the rise of technology and social media use (Smith & Anderson, 2018) relational communication scholars are encouraged to conduct research that will help elucidate the functions that these platforms may have for those with an insecure attachment, given these individuals are already more prone to experiencing relational distress and disruptions in relational quality (Holmes & Johnson, 2009; Shaver & Mikulincer, 2007). Although social media use did not indirectly explain reports of internal stress for insecurely attached individuals, with the known associations of social media use on psychological distress (Keles et al., 2020) its associations with internal stress deserve more attention.

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