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Do You Have Anything to Hide? Infidelity-Related Behaviors on Social Media Sites and Marital Satisfaction

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Abstract

Social media provides one route to behaviors that may be potentially harmful to romantic relationships, such as communicating with alternative partners, which can sometimes create relationship conflict, breakups, or divorce. Limited empirical evidence exists concerning social media infidelity-related behaviors and marital relationships. This study examined whether married/cohabiting individuals are using social media sites to engage in online infidelity-related behaviors and to what extent this related to relationship satisfaction, ambivalence, and relational attachment characteristics as reported by 338 married/cohabiting individuals from 176 families. Only a small percentage of married/cohabiting couples reported engaging in social media infidelity-related behaviors; however, more engagement in infidelity-related behaviors on social media was significantly related to lower relationship satisfaction, higher relationship ambivalence, and greater attachment avoidance and anxiety in both women and men. Additionally, attachment anxiety and gender interacted with relationship satisfaction in predicting online infidelity-related behaviors when controlling for other variables. Implications are discussed.

Keywords

social media use; social networking; infidelity behaviors; relationship satisfaction; relationship ambivalence; attachment

1. Introduction

According to Pew statistics, 65% of American adults use social media, and this has risen substantially over the last decade (Perrin, 2015). Alongside this rapid growth, relationship

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researchers began investigating how social media is used within relationships, especially romantic relationships. Much of this research has portrayed social networking as a potential threat to existing romantic relationships, as it provides a vehicle for communicating with alternative partners through friend requests, commenting on others' posts or pictures, covert communication, or even engaging in cybersex (Cravens & Whiting, 2014; Dibble & Drouin, 2014; Dibble, Drouin, Aune, & Boller, 2015; Drouin, Miller, & Dibble, 2014; Drouin, Miller, & Dibble, 2015). Accordingly, researchers have shown that social media and/or the conflict and jealousy that arises from social media use is associated with relationship conflict, breakups, and even divorce (Clayton, 2014; Clayton, Nagurney, & Smith, 2013; Cravens, Leckie, & Whiting, 2013; Fox, Osborn, & Warber, 2014; Ridgway & Clayton, 2016; Valenzuela, Halpern, & Katz, 2014).

Although the empirical literature related to social media and relationships has expanded greatly over the past few years, much of this research has been conducted with young adults; research on problematic social networking behaviors within married couples is sparse. Although media sources report that Facebook has been cited in one third of U.S. divorces (Lupkin, 2012), only a limited number of studies have examined problematic online infidelity-related (IR) behaviors (e.g., engaging in cybersex, befriending romantic interests or attractive alternative partners) among couples. The few empirical studies that have examined IR behaviors have focused on accounts of those who found their partners cheating (Cravens et al., 2013) or characteristics of individuals who have sought extra-marital relationships via chat rooms (Dew, Brubaker, & Hays, 2006). Together, these studies suggest that online environments may provide a ripe venue for online IR behaviors. There is also some evidence that technology usage generally can interfere with relationships, potentially causing conflict and lower relationship satisfaction, even among married couples (McDaniel & Coyne, 2016; Roberts & David, 2016). Moreover, a recent study involving couples showed that a greater amount of social networking use (more specifically, Facebook maintenance behaviors) was related to lower levels of partner love (Northrup & Smith, 2016). In this exploratory study, we extended these inquiries to examine whether married/cohabiting individuals are using social networking to engage in online IR behaviors, and to what extent this relates to relationship satisfaction, ambivalence, and relational attachment characteristics. More specifically, our goals were to conceptualize and measure social media IR behaviors among primarily married couples, examine these behaviors as an outcome of relationship satisfaction and ambivalence, and examine whether attachment anxiety moderates the relationship between relationship satisfaction and ambivalence and engagement in social media IR behaviors.

1.1. Social Networking Usage and Romantic Relationships

A growing body of research has examined the potential negative effects of social media usage on romantic relationships. In a seminal study on the topic, Clayton et al. (2013) found that Facebook usage predicted negative relationship outcomes (e.g., cheating, breakup, and divorce), but that this association was mediated by Facebook-related conflict and moderated by relationship length. In other words, Facebook usage predicted negative relationship outcomes especially when there was conflict surrounding this usage, but only among those who had been in their relationships for three years or less. Clayton (2014) found similar

results with regard to Twitter use: Higher usage was related to negative relationship outcomes, and this association was mediated by Twitter-use conflict. However, in this case, relationship length did not moderate the indirect effect of social media usage on negative relationship outcomes. Regardless of relationship length, those who used Twitter more often were more likely to have Twitter-related conflict, and this predicted negative relationship outcomes. More recently, Ridgway and Clayton (2016) extended this inquiry to yet another social networking venue and found that posting selfies on Instagram was related to Instagram-related conflict, which in turn was related to negative relationship outcomes. This link between social networking usage and negative relationship outcomes was also supported by a recent, national survey (Valenzuela et al., 2014). Valenzuela et al., (2014) found that Facebook penetration rate predicted higher rates of divorce across 43 U.S. states, even after controlling for other potential divorce factors (e.g., income and unemployment). Moreover, social networking use predicted lower marital quality, marital dissatisfaction, and marital trouble (Valenzuela et al., 2014).

Another avenue of research has focused more specifically on the potential sources of online and/or social-networking-related relationship conflict. For example, 920 married couples in Helsper and Whitty's (2010) study reported that falling in love, engaging in cybersex, flirting, and revealing personal details to other parties were the most agreed-upon online infidelity behaviors. More specific to social networking, Cravens et al. (2013) found the following Facebook-related infidelity behaviors most consistently reported: friending one's ex-partner, private messaging, commenting on attractive user's pictures, and posting an inaccurate relationship status. Additionally, other recent studies examined two potential sources of conflict (i.e., befriending romantic interests and attractive alternatives within Facebook friends lists) and their associations with relationship investment characteristics (Drouin et al., 2014; Drouin et al., 2015). Drouin et al. (2014) found that the frequency of friending attractive alternatives during the relationship, but not simply the number of attractive alternatives contained in one's friends list, related to lower levels of relationship commitment. In a follow-up experiment, Drouin et al. (2015) found that Facebook friends lists served as memory primers for sexual and committed relationship alternatives: Those who used Facebook (as opposed to memory) to identify potential relationship partners identified more alternatives, specifically sexual alternatives.

Combined, these studies present empirical evidence that there are multiple avenues through which individuals can communicate with others online in ways that are perceived to be infidelity-related or problematic to relationships. More specifically, the elements of social network communication that are most consistently labeled as problematic include befriending past partners (or alternative partners), flirtation, secrecy, and engaging in deep or sexual conversations with others online. However, although these online behaviors have been identified as potential threats to fidelity and researchers have begun to link these behaviors to aspects of relationship investment, no known research has examined whether engagement in online IR behaviors is related to marital dissatisfaction or ambivalence.

1.2. Infidelity-Related Online Behaviors and Relationship Outcomes

For decades, researchers have been exploring the role of relationship satisfaction in infidelity. Within cross-sectional studies, the results have been rather consistent: Relationship dissatisfaction is related to a range of IR behaviors, including both emotional and sexual extradyadic interactions (e.g., Drigotas, Safstrom, & Gentilia, 1999; Roscoe, Cavanaugh, & Kennedy, 1998; Shaw, Rhoades, Allen, Stanley, & Markman, 2013; Whisman, Gordon, & Chatav, 2007). Meanwhile, relationship ambivalence, or the experience of both positive and negative sentiment about the same relationship (Luescher & Pilemer, 1998), has been little explored as a correlate of IR behaviors. Relationship ambivalence may develop in response to past relationship conflict or transgressions in the relationship, such as disagreements or acts of betrayal (Birditt, Miller, Fingerman, & Lefkowitz, 2009). These acts of betrayal could include suspicions or confirmations of a partner's infidelity, which has been shown to be predictive of one's own infidelity behaviors (Whisman et al., 2007). In sum, when individuals feel ambivalent about their committed partner for any reason, they may be more likely to engage in infidelity behaviors. Extending these findings to an online environment, we expected that both of these relationship characteristics—dissatisfaction and ambivalence—may be related to engagement in online IR behaviors. More specifically, we expected:

> *H1: Those with lower levels of relationship satisfaction and higher levels of ambivalence would engage in more social media IR behaviors*.

Additionally, we wanted to explore attachment orientation as a predictor of engagement in social media IR behaviors. Attachment research was originally based on observations of infants' attachments to their caregivers (e.g., Ainsworth, Blehar, Waters, & Wall, 1978); however, a number of researchers in the last few decades have suggested that attachment characteristics influence adults' relationship interactions (Bartholomew & Horowitz, 1991; Brennan, Clark, & Shaver, 1998; Hazan & Shaver, 1987; Mikulincer & Shaver, 2003; 2007; DeWall et al., 2011). According to these researchers, those who display secure attachment patterns are comfortable depending on others and having others depend on them, and they typically build close, intimate relationships with romantic partners. Meanwhile, those who display insecure attachment patterns exhibit high levels of attachment avoidance or attachment anxiety (Brennan et al., 1998).

Those with high levels of attachment avoidance often display an air of detachment and need for independence within their romantic relationships. In accordance with this, researchers have shown that those who are high in avoidance keep an emotional distance from their partners, and they are also more likely to engage in casual sex, where physical and emotional intimacy are not necessarily intertwined (Brennan & Shaver, 1995; Feeney & Noller, 1990; Gentzler & Kerns, 2004; Schmitt, 2005). Additionally, those high in attachment avoidance express less commitment to their romantic partners (DeWall et al., 2011), and attachment avoidance, in addition to lower levels of commitment, predicts both emotional and sexual infidelity (DeWall et al., 2011; Drigotas et al., 1999).

Meanwhile, those with high levels of attachment anxiety have an intense need for closeness and fear of losing their romantic partner. In order to keep their partners, those high in

anxiety often use hyperactivating strategies—or behavioral attempts to draw their partners closer (Mikulincer & Shaver, 2003; 2007). These hyperactivating strategies may include engaging in IR behaviors to incite jealousy in their romantic partners (e.g., Guerrero, Andersen, Jorgensen, Spitzberg, & Eloy, 1995). Alternatively, those with high levels of attachment anxiety might seek intimacy outside of their relationship when they feel that their (high) needs for intimacy are not being met by a current partner (Drigotas et al., 1999; Mikulincer & Shaver, 2013) or when they feel that they might lose their partner and try to compensate by establishing a relationship with a new potential partner (Drouin et al., 2015).

Thus, both attachment avoidance and attachment anxiety have been linked with IR behaviors in empirical studies, however, much of this research (e.g., DeWall et al., 2011; Drigotas et al., 1999) has focused on unmarried dating adults, whose relationship dynamics may differ substantially from those who are in more committed relationships. In a more recent study of married individuals, Russel, Baker, and McNulty (2013) found that attachment anxiety, but not attachment avoidance, predicted infidelity among married couples. Thus, in our study, we sought to further examine the links between attachment characteristics and IR behaviors among married/cohabiting couples. In accordance with the findings from Russell et al. (2013), we expected:

> *H2: Attachment anxiety would predict social media IR behaviors in this married sample*.

Finally, we also examined attachment characteristics and gender as moderators in the relationships between relationship satisfaction, ambivalence, and engagement in social media IR behaviors. Several researchers have noted that there are sex differences in the ways in which attachment characteristics interact with infidelity behaviors. As an example, Allen and Baucom (2004) found that among women, an anxious attachment style was predictive of engaging in infidelity behaviors, but among men, an avoidant attachment style was predictive of engaging in infidelity. Moreover, Drigota et al. (1999) found that women who have an anxious attachment style may engage in infidelity behaviors if they believe their emotional needs are being unfulfilled by their committed partner. Thus, both attachment characteristics and sex were explored as potential moderators in the relationship between satisfaction, ambivalence and engaging in social media IR behaviors.

1.3. Current Study

In sum, the goals of the current, exploratory study were to: (1) develop a brief measure of social media IR behaviors, (2) explore the prevalence of social media IR behaviors among individuals in a married/cohabiting sample, and (3) examine the relationships between engaging in social media IR behaviors, relationship satisfaction and ambivalence, and attachment anxiety and avoidance.

2. Method

2.1. Participants & Procedure

The data in this study were collected as part of a larger project on parenting and daily family life (*Daily Family Life Project*; McDaniel, 2016). We recruited *both* parents (mother and

father) from families who had at least one young child via a database of families in a Northeastern U.S. state, announcements on parenting websites and listservs, and announcements in the local community. This multi-pronged recruitment strategy was utilized to obtain a sample of families throughout the U.S. After completing informed consent, participation then consisted of an initial online survey and subsequent follow-up online surveys at 1, 3, and 6 months. Participants who completed their survey were entered into a drawing for one of three $100 gift cards at each time point. At baseline, 183 heterosexual couples (including both partners/spouses) were recruited into the study, exceeding our original goal of 150 couples based on a priori power analyses for our planned between-person and within-person analyses. In the present study, our analytic sample consisted of 338 individuals (173 wives and 165 husbands) from 176 families (due to missing data on 10 wives and 18 husbands). Couples were currently living together in the United States and had a child age 5 or younger. Due to a slight modification of the focus of the study after its inception, measures pertaining to online IR behaviors were added part way through the study. We therefore utilized data for each family from the first time they received the items. Thus, 65% (n = 220) of the data came from families at baseline, 14% (n = 46) from month 1, and 21% (n = 72) from month 3.

Our analytic sample resided in these U.S. regions: 55% Northeast, 17% West, 14% Midwest, and 14% South. The majority of participants were Caucasian (92%) and married (96%[1]), and 73% had a college degree. The mean age of wives was 31.59 years old (SD = 4.44; *Range* = 20 to 42), and the mean age of husbands was 33.26 (SD = 5.05; *Range* = 22 to 52). Participants self-reported their yearly household income, with the median income being $69,500 ($SD$ = $39,500; *Range* = $0 to $250,000) with 20% indicating some form of state or federal assistance (e.g., medical assistance, food stamps). The participants had been in relationships with their current partners for 10.02 years on average (SD = 4.05; *Range* = 2 to 23 years). The participants in our final analytic sample as compared with our baseline recruited sample were more likely to be Caucasian (χ^2 (1) = 23.72, p < .001), married (χ^2 (1) = 33.25, p < .001) and to have received at least some college education (χ^2 (1) = 14.12, p < .001).

2.2. Measures

2.2.1. Social Media Infidelity-Related Behaviors (SMIRB)—IR behaviors on social networking sites were measured with a series of questions we created specifically for this study based on a review of the relevant literature (e.g., Cravens et al., 2013; Drouin et al., 2014; Drouin et al., 2015; Helsper & Whitty, 2010; Hertlein, 2012). In creating this measure, we included the types of behaviors in which those who are unfaithful might engage (such as feeling uncomfortable, hiding information/being secretive, forming emotional connections with others instead of one's partner, messaging past significant others, and getting defensive). Similar behaviors have also been measured in other studies of online and offline infidelity (e.g., Cravens & Whiting, 2014; Dibble & Drouin, 2014; Dibble, Drouin, Aune, & Boller, 2015; Drouin, Miller, & Dibble, 2014; Drouin, Miller, & Dibble, 2015; Helsper &

[1]Although 4% of the couples were not legally married, they were in long-standing, cohabiting partnerships (average relationship length = 5.88 years), were raising at least one child together, and reported similar levels of relationship satisfaction and ambivalence to married couples. Thus, for parsimony, we henceforth refer to them as married.

Whitty, 2010). These questions form the *Social Media Infidelity-Related Behaviors* (SMIRB) scale, which contains 7 items (e.g., "If my spouse/partner asked me about my chats, comments, and messages to others on social networking sites, there are some messages I would like to hide from him/her"). [See Table 1 for all 7 items.] Participants rated their agreement on a 6-point scale (1 = *strongly disagree*, 6 = *strongly agree*). Items were averaged to create an overall IR behavior score with higher scores representing greater tendency to engage in these behaviors (α = .90 for women, .85 for men). We provide other relevant statistics for this measure in the Results section.

2.2.2. Relationship Satisfaction—Participants completed the *Quality of Marriage Index* (QMI; Norton, 1983) to measure their relationship satisfaction. For inclusivity across marital status, we changed the wording from "spouse" to "partner" and from "marriage" to "relationship." The QMI, although having the word "quality" in its name, is generally considered a global assessment of relationship *satisfaction*, which includes five satisfaction items (e.g., "My relationship with my partner makes me happy") on a 7-point scale (1 = *very strongly disagree*, 7 = *very strongly agree*) and one overall happiness item on 10-point scale (1 = *unhappy*, 10 = *perfectly happy*). Additionally, the QMI has been shown to correlate highly with other measures of relationship satisfaction, such as the Couple Satisfaction Index (CSI; Funk & Rogge, 2007). Higher scores indicate greater relationship satisfaction. The QMI had high internal consistency (α = .96 for women, .95 for men) and functioned well for both married (α = .95) and cohabiting individuals (α = .95) in our sample. The QMI has been successfully used in prior relationship research with mixed marital status samples (e.g., Cowan et al., 2009; Feinberg et al., 2010).

2.2.3. Relationship Ambivalence—To measure relationship ambivalence, 3 items (e.g., "How ambivalent or unsure are you about continuing in the relationship with your partner?") from Braiker and Kelley's (1979) ambivalence subscale were rated by participants. The ambivalence subscale uses a 7-point scale (1 = *not very much or just a little*, 7 = *very much or a lot*), with higher scores indicating greater relationship ambivalence or uncertainty. These items showed good internal consistency (α = .85 for women, .88 for men).

2.2.4. Attachment in Romantic Relationships—To measure adult romantic attachment, participants completed the *Experiences in Close Relationship Scale-Short Form* (ECR-S; Wei, Russell, Mallinckrodt, & Vogel, 2007). The ECR-S asks participants to rate 12 statements on a 7-point scale (1 = *disagree strongly*, 7 = *agree strongly*) concerning how they feel in romantic relationships. Six statements measured attachment anxiety (e.g., "I worry that romantic partners won't care about me as much as I care about them") and six measured attachment avoidance (e.g., "I am nervous when partners get too close"). As a result of low correlation with the other 5 anxiety items, the item "I do not often worry about being abandoned" was dropped (similar to Ruppel & Curran, 2012). A higher score indicates greater anxiety or greater avoidance (Anxiety α = .72 for women and .78 for men; Avoidance α = .83 for women and .78 for men).

2.2.5. Control Variables—We included the following controls: participant age, education (not college graduate = 1), family income, race/ethnicity (not Caucasian = 1), number of

children (more than one child = 1), relationship length in years, and marital status (not married = 1).

3. Results

3.1. Measure of Social Media IR Behaviors

As explained in the measures section, we created 7 items (see Table 1) from a review of the relevant literature on unfaithfulness in relationship. We then explored whether these items loaded together by performing a principal components analysis. This revealed one factor that accounted for 62% of the variance in the entire sample, 67% of the variance for women, and 58% of the variance for men. Individual factor loadings for the entire sample and factor loadings and descriptives for women and men are listed in Table 1. All loadings were above . 53.

3.2. Prevalence of Online IR Behaviors

Paired samples t-tests showed no significant differences between men's and women's engagement in the various IR behaviors (see Table 1); therefore, we report combined prevalence statistics (i.e., participants who indicated *somewhat agree*, *agree*, or *strongly agree*) for each item. Overall, 12% ($n = 42$) would feel uncomfortable if spouse/partner read their messages, 5% ($n = 17$) sometimes wonder whether spouse/partner would be upset if read messages, 6% ($n = 20$) say there are some messages they want to hide, 7% ($n = 24$) sometimes share emotional or intimate information with others instead of spouse/partner, 6% ($n = 19$) sometimes like to chat or message old romantic partners, 6% ($n = 20$) get defensive or angry if disturbed while online, and 5% ($n = 16$) sometimes hide the things they say to others online.

3.3. Associations Between IR Behaviors and Relationship Satisfaction, Ambivalence, and Attachment

Greater IR behavior on social networking was significantly related to lower relationship satisfaction and greater ambivalence as well as greater attachment avoidance and anxiety in both women and men (see Table 2). To examine our hypotheses further, we used multilevel modeling (SAS Proc Mixed) to account for the nested nature of our data (spouses/partners within families). We ran two models predicting online IR behavior: Model 1 with relationship satisfaction as the predictor, and Model 2 with relationship ambivalence as the predictor (see unstandardized estimates in Table 3). Both attachment anxiety and avoidance were included as predictors and moderators. Gender was entered as a moderator (coded 1 = male, 0 = female) to test for differences in predictions for males and females. Controls (e.g., participant age, household income, ethnicity, etc.) were also included, and we ultimately removed nonsignificant interactions from the final models to increase parsimony and the interpretability of lower order terms that were significant.

3.3.1. Relationship Satisfaction and Ambivalence—In support of H1 and as shown in Table 3, lower levels of relationship satisfaction (Model 1; $b = -0.03$, $p < .001$; Cohen's $f^2 = .08$) and higher levels of ambivalence (Model 2; $b = 0.26$, $p < .001$; Cohen's $f^2 = .15$) predicted greater social media IR behavior.

3.3.2. Attachment avoidance and anxiety—In support of H2 and as shown in Table 3, greater attachment anxiety predicted greater social media IR behavior (in Model 1 and Model 2; *bs* = 0.11 and 0.10, *ps* < .01; Cohen's f^2 = .05). Moreover, attachment avoidance did not predict IR behavior.

3.3.3. Moderation by Attachment Anxiety and Gender—As shown in Table 3, attachment anxiety and gender significantly interacted with relationship satisfaction in predicting IR behavior (*b* = 0.02, *p* = .02; Cohen's f^2 = .02). We plotted this interaction in Figure 1. We explored this three-way interaction using the PROCESS macro (Hayes, 2013) and obtained Johnson-Neyman regions of significance. For men with average or lower levels of attachment anxiety, higher relationship satisfaction related to less IR behavior, and within this group of men (54% of men) the strength of the relation between relationship satisfaction and IR behavior became stronger the lower their anxiety. For men with above average levels of attachment anxiety (46% of men), there was no association between relationship satisfaction and IR behavior. In contrast, relationship satisfaction was not associated with IR behavior in women whose anxiety levels were very low (i.e., lower than 1 standard deviation below the average anxiety level; 16% of women). However, for most women (whose anxiety levels were 1 standard deviation below average and higher; 84% of women), higher relationship satisfaction predicted less IR behavior. Additionally, within these women (and in contrast to men) the strength of the association between relationship satisfaction and IR behavior becomes stronger as anxiety levels increase.

4. Discussion

Social networking behaviors have been a subject of recent inquiry as a potential source of relationship dissatisfaction, conflict, and dissolution (Clayton, 2014; Clayton et al., 2013; Cravens et al., 2013; Fox et al., 2014; Ridgway & Clayton, 2016; Valenzuela et al., 2014). However, the existing research has focused mainly on general social networking use, and few studies have examined the specific social networking behaviors that may be problematic in romantic relationships. Therefore, we examined the prevalence of specific types of potentially problematic IR social networking behaviors among married/cohabiting couples, and whether engaging in online IR behaviors related to relationship satisfaction, ambivalence, and attachment.

In our sample, only a small percentage of partners reported engaging in social media IR behaviors. Although 12% indicated that they would be uncomfortable if their partner read their messages, fewer than 10% of partners stated that they had: shared intimate information with others online, chatted with ex-relationship partners, engaged in behaviors online that they would hide from their partner, hidden their chats from their partners, gotten defensive or angry when their partner interrupted their online behavior, or thought that their partners might be upset if they read through their online correspondence. These results suggest that few married/cohabiting individuals engage in online IR behaviors. As research has shown that social media use is associated with relational conflict and dissolution (Clayton, 2014; Clayton et al., 2013; Cravens et al., 2013; Fox et al., 2014; Ridgway & Clayton, 2016; Valenzuela et al., 2014) and lower levels of love (Northrup & Smith, 2016), these low

prevalence statistics were somewhat surprising as presumably, IR behaviors are the source of some of this conflict. However, there are a few potential explanations for these findings.

First, most of these previous studies on social media use and relationship conflict/dissolution were conducted with single college students, who may have experienced SNS-related conflict and negative outcomes in a past or current relationship. In contrast, this study specifically examined primarily married couples who had volunteered to participate in a longitudinal study of family life. Consequently, negative relationship dynamics (e.g., IR behaviors) and outcomes (i.e., conflict and dissolution) may be less likely to exist among these couples, who chose *together* to participate in this study. Second, their willingness to participate in this study may be reflective of a greater level of openness and commitment than a couple who would not choose to participate in such a study, and the study's duration and intensity may have lessened the likelihood that people would admit to IR behaviors in self-reports (e.g., social desirability). Therefore, our prevalence statistics likely represent a conservative estimate of these types of behaviors within married/cohabiting couples. Finally, our results suggest that there are components of social media usage that are not infidelity related that might be contributing to relational conflict among married couples. In fact, some researchers have suggested that social media and technology conflict may exist among couples simply because one is choosing to engage with technology over engaging with one's partner (McDaniel & Coyne, 2016; Roberts & David, 2016). As such, the relationship between technology and/or social media use and marital conflict is likely nuanced, comprised of both IR behaviors and general usage patterns that interfere with couple satisfaction.

More importantly, our analyses showed that married/cohabiting individuals who were less satisfied and more ambivalent in their relationship were more likely to engage in IR social media behaviors. Valenzuela et al. (2014) found that higher overall Facebook usage predicted lower levels of marital satisfaction and greater incidence of divorce, postulating that social media may provide social support for those in unhappy marriages, offering opportunities for cheating behaviors that may cause conflict and erode marital quality. In this study, we examined relationship satisfaction and ambivalence as *predictors* of IR behaviors, on the assumption that engagement in IR behaviors may be the problematic aspect of social media usage, that relationship satisfaction and ambivalence are more stable traits, and that social media IR behaviors may be more transient behaviors. With consideration for Valenzuela et al. (2014) we suggest that this relationship is likely bi-directional; those in less satisfied relationships likely seek out these types of online interactions with others, and these interactions, in turn, may cause lower levels of satisfaction. In the future, we intend to fill gaps in the literature with analyses of relationship directionality.

Finally, although both attachment anxiety and avoidance were positively related to social media IR behaviors, only attachment anxiety emerged as a unique, significant predictor once other variables (e.g., relationship satisfaction or ambivalence) were controlled. These findings align with Russell et al. (2013), who found that among married couples, attachment anxiety but not attachment avoidance, predicts infidelity. This study offers an extension to prior work, showing that similar relationship characteristics might influence both offline and online IR behaviors. However, the results from our study do not elucidate whether those who

are anxiously attached are engaging in IR behaviors as hyperactivating strategies to incite jealousy in their partners (Guerrero, et al., 1995; Mikulincer & Shaver, 2003; 2007) or to line up a potential partner in case their current relationship fails (Drouin et al., 2015). Thus, future research should more directly address the motivations behind engagement in these IR behaviors, especially among those with insecure attachment patterns. Additionally, attachment anxiety and gender were moderators in the relationship between relationship satisfaction and social media IR behaviors. For men with *lower* attachment anxiety (i.e., more secure attachment styles), higher levels of satisfaction predicted lower levels of social media IR behaviors. On the contrary, most of the women in our sample and especially those with *higher* attachment anxiety demonstrated this pattern. Perhaps, for men, there is more linear alignment between secure attachment, marital satisfaction, and fidelity, but for women, the relationship is more complex. It is possible, for women, that fear of losing one's partner is greater for those who are highly satisfied in their relationships, and this fear may keep them from engaging in online IR behavior. Again, this is a direction for future inquiry.

4.1. Limitations and Conclusion

As mentioned, the participants from this study were volunteers from a longitudinal study of family life who were fairly well-educated and in stable relationships, and these individuals may be less likely to have engaged in or reported online IR behaviors. However, there was enough variance in online IR behaviors that we were able to examine relations between relationship quality and IR behaviors. In general, our effect sizes were small to medium (as indicated by the f^2 statistics; Cohen, 1988), which suggests that there are other factors that also predict online IR behavior that should be explored. Additionally, our measure of social media IR behaviors was limited to seven items. There are likely other online behaviors that might indicate or facilitate infidelity, and we look to future studies to help elucidate those behaviors.

Despite these limitations, our study adds to a growing body of literature on social media and relationships. Overall, few married/cohabiting individuals reported engaging in the social media infidelity-related (IR) behaviors we measured. However, those who were less satisfied and more ambivalent in their relationships engaged in them more often. Moreover, attachment anxiety interacted in a complex way, with the strength of the association between IR behavior and relationship satisfaction becoming stronger for men low in anxiety but for women high in anxiety. In sum, similar characteristics appear to influence both offline and online IR behaviors, and our study offers an important initial inquiry into the nature of those characteristics and behaviors among stable married/cohabiting couples.

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Highlights

- Measured infidelity-related (IR) behaviors on social media sites in married couples.
- Only about 5% to 12% of married individuals reported IR behavior.
- Less relationally satisfied and more ambivalent individuals engaged in IR behavior.
- Attachment anxiety predicted greater IR behavior.
- Effect of relationship satisfaction depended on gender and attachment anxiety.

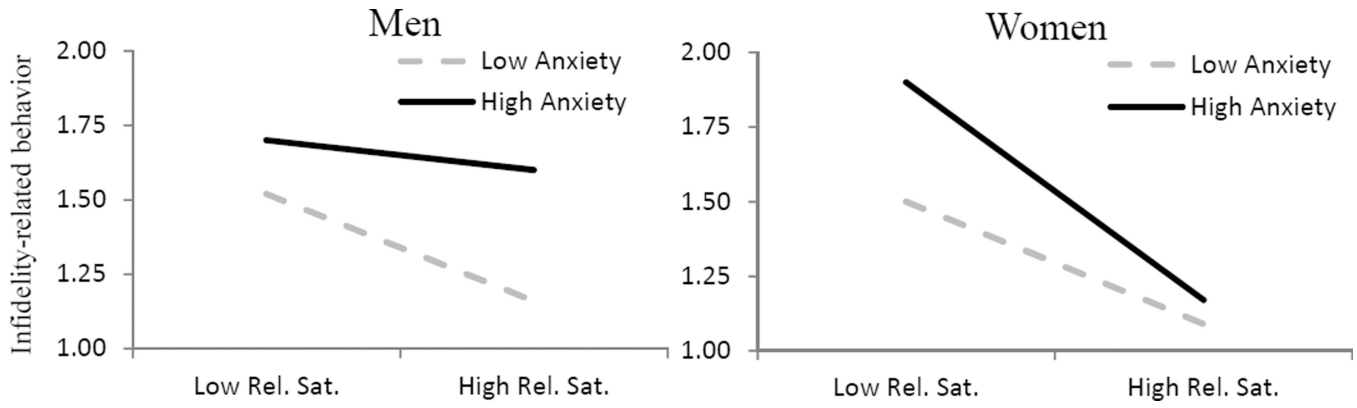

Figure 1.

Predicted values of social media infidelity-related behavior at high and low (1 SD above and 1 SD below mean) values of relationship satisfaction, moderated by attachment anxiety and gender. High anxiety is 1 SD above mean (black line) and low anxiety is 1 SD below mean (gray dashed line).

Table 1

Items, Factor Loadings, and Descriptives for Women and Men on the Social Media Infidelity-Related Behaviors (SMIRB) Measure.

Item		*Entire Sample*	*Women*			*Men*			*Comparing Women and Men*	
		Factor Loading	**Factor Loading**	**Mean**	**Std. Dev.**	**Factor Loading**	**Mean**	**Std. Dev.**	***t*-value**	***p*-value**
1.	I would feel uncomfortable if my spouse/partner read my chats, comments, and messages to others on social networking sites.	.59	.62	1.76	(1.36)	.57	1.84	(1.46)	0.66	0.51
2.	I sometimes wonder whether my spouse/partner would be upset if he/she read my chats, comments, or messages to others on social networking sites.	.83	.92	1.47	(0.93)	.72	1.46	(0.89)	0.00	1.00
3.	If my spouse/partner asked me about my chats, comments, and messages to others on social networking sites, there are some messages I would like to hide from him/her.	.91	.92	1.44	(0.92)	.91	1.47	(0.91)	0.47	0.64
4.	Sometimes, instead of going to my spouse/partner, I share deep emotional or intimate information with others online.	.85	.85	1.45	(1.05)	.85	1.41	(0.91)	−0.26	0.79
5.	I sometimes like to chat or message old romantic partners online or on social networking sites.	.79	.85	1.35	(0.91)	.70	1.28	(0.71)	−1.22	0.22
6.	If my spouse/partner disturbs or interrupts me while I am online, I sometimes get defensive or angry.	.55	.53	1.43	(0.87)	.57	1.45	(0.91)	0.07	0.94
7.	I sometimes hide the things I say to others online from my spouse/partner.	.92	.93	1.32	(0.79)	.92	1.38	(0.87)	0.59	0.56

Note. Items were answered on a 6-point scale: (1) Strongly disagree, (2) disagree, (3) somewhat disagree, (4) somewhat agree, (5) agree, and (6) strongly agree. Mean differences between women and men were tested using pairwise t-tests. No significant mean differences were found.

Table 2

Descriptives and bivariate correlations between study variables

	Women					*Men*				
Variable	**Infidelity-related behavior**	**Rel. Sat.**	**Rel. Ambiv.**	**Avoidance**	**Anxiety**	**Infidelity-related behavior**	**Rel. Sat.**	**Rel. Ambiv.**	**Avoidance**	**Anxiety**
Women										
Infidelity-related behavior	(.90)									
Relationship satisfaction	−.37***	(.96)								
Relationship ambivalence	.49***	−.66***	(.85)							
Attachment avoidance	.27***	−.62***	.42***	(.83)						
Attachment anxiety	.29***	−.29***	.19*	.26***	(.72)					
Men										
Infidelity-related behavior	.15*	−.17*	.12	.16*	.04	(.85)				
Relationship satisfaction	−.22**	.53***	−.31***	−.39***	−.14	−.32***	(.95)			
Relationship ambivalence	.18*	−.35***	.27***	.26***	.00	.50***	−.60***	(.88)		
Attachment avoidance	.23**	−.41***	.20**	.36***	.24**	.34***	−.57***	.50***	(.78)	
Attachment anxiety	.18*	−.14	.06	.31***	−.03	.29***	−.26***	.21**	.29***	(.78)
Mean	1.46	38.89	1.45	1.87	3.15	1.47	37.99	1.39	2.28	3.06
SD	0.78	6.61	1.12	0.88	1.15	0.71	6.91	0.99	0.96	1.24

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

N = 173 women and 165 men (from 176 families). Cronbach's alphas are presented on the diagonal.

Table 3

Multilevel models of social media infidelity-related behaviors predicted by relationship satisfaction, ambivalence, and attachment avoidance and anxiety

	Model 1: Relationship Satisfaction as Predictor		**Model 2: Relationship Ambivalence as Predictor**	
Fixed effects	***b***	**(*SE*)**	***b***	**(*SE*)**
Intercept	1.55***	(.11)	1.56***	(.11)
Gender	0.003	(.07)	−0.003	(.07)
Control Variables				
Age	0.009	(.009)	0.01	(.009)
Family income	0.001	(.001)	0.001	(.001)
Not Caucasian	0.25	(.13)	0.18	(.13)
Not college graduate	−0.09	(.09)	−0.04	(.09)
Multiple children	0.06	(.07)	0.03	(.07)
Marital status	0.31	(.21)	0.20	(.20)
Relationship length	−0.02	(.01)	−0.01	(.01)
Relationship satisfaction or ambivalence, attachment avoidance and anxiety, and interactions with gender				
RQ (Satisfaction or ambivalence)	**−0.03*** **	**(.008)**	**0.26*** **	**(.04)**
Avoidance	0.08	(.05)	0.07	(.04)
Anxiety	**0.11****	**(.04)**	**0.10*** **	**(.03)**
RQ X Gender	0.01	(.01)	--	--
Avoidance X Gender	--	--	--	--
Anxiety X Gender	-0.009	(.06)	--	--
RQ X Avoidance	--	--	--	--
RQ X Anxiety	-0.01	(.007)	--	--
RQ X Avoidance X Gender	--	--	--	--
RQ X Anxiety X Gender	**0.02***	**(.009)**	--	--

Note:

*** p < .001,

** p < .01,

* p < .05.

RQ = Relationship satisfaction in Model 1 and relationship ambivalence in Model 2. Gender is coded 0 = female and 1 = male; for interactions, the main effect is for women, and the interaction is the value to add to the main effect in order to get the effect for men. Non-significant interactions were trimmed and are marked with a "--". Control variables were coded as follows: Gender (1 = male, 0 = female), Not Caucasian (0 = Caucasian, 1 = other race), Not college graduate (1 = college grad., 0 = less education than college grad.), Multiple children (1 = multiple children, 0 = only one child in family), and marital status (1 = living together, not married, 0 = married). Except for the above mentioned controls, all other variables were grand mean centered. Family income was in $1,000 units.