Your cheating heart is just afraid of ending up alone: Fear of being single mediates the relationship between attachment anxiety and infidelity☆

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ABSTRACT

Despite their detrimental effects, acts of infidelity are common. Several individual differences, including attachment orientations, have been linked to infidelity behaviors. Yet, the mechanisms underlying the relationship between attachment anxiety and infidelity are not well understood. This deserves attention, as the positive association between chronic worry about being abandoned and engaging in infidelity, which inherently increases the risk of being left by the partner, poses a paradox. Studying an online community sample (N = 233, 52.8% female, M_age = 36.73, Range_age = 20–70) using self-report measures, we aim to offer an explanation to this conundrum by hypothesizing that the relationship between attachment anxiety and infidelity behaviors is mediated by fear of being single (i.e., the concern about being left without a partner). We found that those who have greater attachment anxiety showed increased fear of being single, which in turn predicted greater infidelity behaviors. The associations held after controlling for sex, age, and relationship length. Results suggest that people high on attachment anxiety are more likely to be involved in extradyadic relationships due to their high fear of being single, possibly as a bet-hedging strategy to minimize future risk of being single. Findings are discussed vis-à-vis implications for couples counseling.

1. Introduction

Of the darker sides of romantic relationships, infidelity is arguably among the most hurtful. Broadly speaking, infidelity describes a violation of relationship norms governing exclusivity. Infidelity has consistently been shown to have destructive effects on both the partners and the relationship, such as increased risk for both mental (e.g., anxiety, depression) and physical (e.g., STDs) health problems, decreased self-esteem, damaged trust in partner, domestic violence, breakup, and divorce (see Blow and Hartnett, 2005 and Fincham and May, 2017 for reviews). In this regard, understanding the nature of infidelity behaviors is important to identify the factors putting couples at risk.

Past work has extensively studied personality factors that predict engaging in acts of infidelity. Individuals high on extraversion, neuroticism, narcissism, and psychopathy report higher levels of infidelity behaviors (e.g., Altgelt et al., 2018; Jones and Weiser, 2014). Conversely, high agreeableness and conscientiousness have been associated with lower levels of infidelity (e.g., Barta and Kiene, 2005). In addition to these personality factors, several individual differences have also been identified as contributing factors in infidelity behaviors. An unrestricted sociosexual orientation (Wilson et al., 2011), higher sensation seeking (Lalasz and Weigel, 2011), and lower trait self-control (Gailliot and Baumeister, 2007) have been linked with higher frequencies of engaging in acts of infidelity.

Another key individual difference factor in close relationships, attachment orientation, has also received attention in research on infidelity recently. Specifically, several empirical studies have shown that attachment anxiety reliably predicts engaging in acts of infidelity (e.g., Pereira et al., 2014; Russell et al., 2013). Yet, the mechanisms underlying this relationship between attachment anxiety and infidelity remain unexplored.

In the present study, our aim is to fill this gap and shed light on the mechanisms through which attachment anxiety is related to acts of infidelity. Here, we test a novel hypothesis that attachment anxiety predicts infidelity behaviors through the pathway of an individual's concern about being without a relationship partner (i.e., fear of being single). In what follows, we first briefly review past studies examining the links between attachment anxiety and infidelity. Then we introduce fear of being single as a potential mediator in this relationship.

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1.1. Attachment anxiety and infidelity

The attachment behavioral system is argued to function with individual differences stemming from experiences with significant others, which shape later relationships (Bowby, 1982). Specifically, attachment anxiety is characterized with worry about the availability and responsiveness of the attachment figure, hypersensitivity about being abandoned, and preoccupation with closeness (see Shaver and Mikulincer, 2002). People high on attachment anxiety are chronically afraid that their partners are not going to be available and responsive to them when needed, and they constantly worry about being rejected and abandoned by their partners.

Attachment orientation has been shown to predict several critical relationship components, such as relationship quality, commitment, responsiveness, support provision, and conflict resolution (see Mikulincer and Shaver, 2016 for a review). In particular, attachment anxiety has been consistently related to several negative relationship outcomes, such as lower satisfaction (Feeney, 2016) and trust (Simpson, 1990), higher perceived conflict (Brassard et al., 2009), dysfunctional response to conflict (Feeney and Karantzazas, 2017), and negative affect (Molero et al., 2017). Hence, attachment anxiety emerges as a crucial factor to be explored in the study of what puts relationship well-being at risk. Accordingly, attachment anxiety has also been studied in the context of being unfaithful, another deleterious phenomenon for romantic relationships. Results of these studies show that people high on anxiety report having more affairs (Bogaert and Sadava, 2002; Russell et al., 2013), score higher on measures of emotional and physical infidelity (Perreira et al., 2014), and engage in acts of online infidelity more frequently (Ferron et al., 2017; McDaniel et al., 2017).

Although the links between attachment anxiety and acts of infidelity have been well established, to the best of our knowledge, there is currently no work examining the psychological mechanism through which attachment anxiety predicts infidelity behaviors. Arguably, this is an important angle that deserves attention because the findings showing that people high on attachment anxiety are more likely to cheat on their partners pose somewhat of a paradox. Attachment anxiety is characterized with elevated concern about abandonment, which makes individuals constantly seek proximity to their partners and cling to them (Brennan and Shaver, 1995). Why do people who are so afraid that their partners might leave them engage in more acts of infidelity, which inherently put the relationship at risk? Several studies in attachment literature suggest that attachment anxiety is related to approach tendencies, such as engaging in higher relationship-focused disclosure (Tan et al., 2012), desiring more intimacy and commitment (Mikulincer and Erev, 1991), and being more willing to make sacrifices for the relationship (Impett and Gordon, 2010). It seems counterintuitive that anxiously attached people who want to be close to their partners would engage in infidelity behaviors that could potentially push their partners further away. Here, we reason that these seemingly contradictory findings could be reconciled by investigating another personality tendency that individuals high on attachment have: fear of being single.

1.2. Fear of being single as a mediator between attachment anxiety and infidelity

General concern, anxiety, or distress regarding the state of being without a romantic partner is defined as fear of being single (Spielmann et al., 2013). Being in a relationship is ubiquitous in adult life and societal norms still pervasively communicate that individuals who have a partner are happier, more adjusted, and have more meaningful lives when compared to people who are single (DePaulo and Morris, 2005). Many people cite being in a happy romantic relationship as an important life goal (Roberts and Robins, 2000). Societal pressures and intrinsic motivations for partnering up can frequently lead to feelings of distress associated with singleness (Schwartzberg et al., 1995). Fear of being single is conceptualized as a trait-like individual difference that captures this concern related to being unable to attain or maintain a romantic relationship, ending up alone, and feeling inadequate (Spielmann et al., 2013). Even though fear of being single has been more commonly studied among people who do not have partners, individuals in romantic relationships can also report this state of anxiety as it pertains to the distress of being single in the future (George et al., 2020; Spielmann et al., 2016).

Attachment anxiety can render individuals more likely to experience fear of being single. Early experiences with inconsistent attachment figures, who fulfilled attachment needs at certain times but were unresponsive to others, are theorized to lead to a hyperactivation of the attachment system and subsequent development of attachment anxiety (Bowby, 1969/1982, 1973, 1980; Shaver and Mikulincer, 2002). People high on attachment anxiety have a negative model of self, where they regard themselves as unworthy of love and support, hence they constantly fear they are going to be rebuffed or abandoned by relationship partners (Bartholomew and Horowitz, 1991; Mikulincer and Shaver, 2016). This preoccupation with being abandoned by attachment figures may lead to an elevated fear of being single, which is essentially a globalized worry about being left without a relationship partner in life. Indeed, research has shown that attachment anxiety reliably predicts higher levels of fear of being single (George et al., 2020; Spielmann et al., 2013; Spielmann et al., 2016; Spielmann et al., 2020; Weiskirk, 2017).

Although attachment anxiety and fear of being single have been shown to be correlated, it is important to note that they tap into distinct psychological constructs. Attachment anxiety refers to an individual's concern about the availability and responsiveness of relationship partners. People high on attachment anxiety are consistently preoccupied with the quality of care they receive in romantic relationships. They are afraid that their partners are not going to be there for them when needed and that they might be likely to abandon them. Fear of being single, on the other hand, reflects the concern about one's own relationship status, specifically about being left without a romantic partner, so it taps into the worry about one's own relational state. All in all, attachment anxiety reflects the general mental representations about relationship partners and how available and responsive they are; whereas fear of being single reflects thoughts and feelings pertaining to a specific relationship status, chiefly driven by the experience of singleness, such as loneliness and social judgment. Therefore, while investigating relationship dynamics, fear of being single can add a level of specificity not captured by trait attachment anxiety. Indeed, prior research has shown that fear of being single is a distinct psychological construct than attachment anxiety, loading onto separate factors (Spielmann et al., 2013) and that it is a predictor of several relational outcomes, such as settling for unsatisfactory relationships, lowering dating standards, and longing for ex-partners that have been unresponsive, above and beyond the effect of attachment anxiety (George et al., 2020; Spielmann et al., 2013; Spielmann et al., 2016; Spielmann et al., 2020).

Here we argue that fear of being single, fueled by a chronic preoccupation with the availability and responsiveness of romantic partners stemming from attachment anxiety, can in turn lead the way to being unfaithful. Risk regulation in close relationships is theorized to balance the danger of being rejected and hurt with the reward of enjoying intimacy and commitment based on cues signaling partner's positive regard (Murray et al., 2006). Signals of potential rejection by the partner are said to evoke the contingency of decreasing dependence on the partner, which protects the self. Individuals with low self-esteem have been shown to be hypervigilant in this regulatory system and be
more likely to engage in behaviors such as relationship withdrawal and partner derogation upon even minimal relationship threats (Murray et al., 1998). In a similar vein, people who are high on fear of being single have also been shown to be hypersensitive to rejection cues (Spielmann et al., 2013), therefore are more likely to believe that their partners are going to leave them. As the perceived relationship threat increases reports of desire for alternative partners (Birnbaum et al., 2019), this heightened perception of rejection might increase proneness to infidelity. Intense worry about being left without a relationship might sow the seeds of having a “back-up plan” by being involved with alternative partners in case the current partner does leave, and hence being more likely to engage in infidelity behaviors. 

Empirical evidence from studies on motivations for infidelity provides support for this conjecture. In a descriptive study conducted with young adults, 33% of the participants reported they have been unfaithful to their partner because they were insecure about how steady and reliable their current relationship was, and 14% cited wanting to see if they were attractive to others as their reason for infidelity (Feldman and Cauffman, 1999). In another study on reasons for infidelity, neglect, as measured by items tapping into lack of attention from the current partner and the perception that the current relationship is in trouble, was cited as the second most common motive for infidelity (Barta and Kiene, 2005). These findings suggest that people who think their partner might be about to leave them seem to have motivation to check if they have alternatives and engage in acts of infidelity, presumably to engage in a hedging strategy. This motivation might be especially exacerbated by fear of being single, as this concern entails the perception of being left without any partners as overly threatening. Building on these prior findings, we reason that high concern about being single can motivate individuals with chronic worry about being abandoned by their partners to seek alternatives so that they do not end up without a relationship, and therefore act as a pathway between attachment anxiety and engaging in acts of infidelity, presumably to engage in a hedging strategy. This motivation might be especially exacerbated by fear of being single, as this concern entails the perception of being left without any partners as overly threatening. 

2. Method

2.1. Participants and procedure

In the present study we used a dataset from a larger project on infidelity and personality traits. Participants (N = 309) were recruited through Amazon Mechanical Turk (MTurk). For the purposes of the current study, only the data of the participants who were in a relationship were used (N = 233, 52.8% female, M_age = 36.73, SD_age = 10.62, Range_age = 20–70). The mean relationship length was 7.70 years (SD = 8.98, median = 4.17, range = 0.08–54) (see Supplementary Materials for detailed information on participants and recruitment procedure).

2.2. Materials

2.2.1. Experiences in close relationships scale-short form (ECR-S; Wei et al., 2007)

Participants rated six items measuring attachment anxiety by tapping into concern about abandonment (e.g., “I worry that romantic partners won’t care about me as much as I care about them”) on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) (α = 0.76).

2.2.2. Fear of being single scale (FBSS; Spielmann et al., 2013)

Participants rated six items measuring distress regarding the state of being left without a romantic partner (e.g., “I feel anxious when I think about being single forever”) on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) (α = 0.89).

2.2.3. Infidelity behaviors

Participants gave dichotomous responses (0 = no, 1 = yes,) to a self-report measure adapted from Fincham et al. (2010) assessing whether they engaged in six extradyadic behaviors (e.g., going on a date, kissing, having sexual intercourse) with someone other than their romantic partner. A composite score was calculated as the sum of all items so that higher scores reflected higher levels of infidelity behaviors.

3. Results

The inspection of skewness (< 1.00) and kurtosis (< 2.00) values, histograms with normal curves and bivariate scatterplots revealed that the dataset satisfied the assumptions of normality and linearity. The examination of the values for tolerance (< 1.00) and variance inflation factors (< 2.00) did not indicate concern for multicollinearity. All in all, the dataset was deemed suitable for further statistical analysis.

We also conducted a series of t-tests to examine possible sex differences among the main study variables. As shown in Table 1, there were no significant sex differences in attachment anxiety and fear of being single. Males reported significantly higher frequency of infidelity behaviors as compared to females.

Next, we conducted bivariate correlation analyses to investigate the associations between the main study variables. The results showed that attachment anxiety was positively correlated with both fear of being single and infidelity behaviors (see Table 2). Fear of being single was also positively related to infidelity behaviors. Older participants reported lower levels of attachment anxiety and fear of being single.

Finally, to test our hypothesis predicting attachment anxiety is related to infidelity behaviors through the pathway of fear of being single, we conducted a mediation analysis using PROCESS macro for SPSS (Model 4; Hayes, 2018). We entered sex, age, and relationship length as covariates to the model and utilized 5000 bootstrapped samples. As the present study employed participants from a larger project, a power analysis based the available sample size was conducted using the methods of Schoemann et al. (2017). Adequate power to detect a significant effect was achieved for the mediation model (0.82).

Supporting our hypothesis, the results showed that attachment anxiety predicts infidelity behaviors through fear of being single (indirect effect: $b = 0.16, SE = 0.09, 95% CI [0.01, 0.34]) (see Fig. 1). Participants higher on attachment anxiety reported higher levels of fear of being single ($b = 0.75, SE = 0.07, 95% CI [0.63, 0.88]), which in turn predicted higher reports of engaging in acts of infidelity ($b = 0.21, SE = 0.11, 95% CI [0.01, 0.42]). The direct effect of attachment anxiety on infidelity behaviors remained significant ($b = 0.41, SE = 0.13, 95% CI [0.15, 0.67]) even after entering fear of being single as a
Attachment Anxiety factors that predict infidelity behaviors have been studied quite extensively (Spielmann et al., 2013), showing interest in less responsive and less attractive potential partners (Spielmann et al., 2013), and longing for ex-partners and attempting to renew failed relationships (Spielmann et al., 2016). The results of the present study build on these findings by showing that excessive worry about being left without a partner might pose another risk that can get in the way of happy and healthy affiliations, by paradoxically jeopardizing current relationships via increased risk of being unfaithful to the current partner.

Our findings suggesting attachment anxiety can lead the way to infidelity via a global fear of being single are also in line previous work showing the ambivalent nature of attachment anxiety. Even though people high on attachment anxiety report that they desire more intimacy and commitment than they currently have in their relationship (Mikulincer and Shaver, 1991), they also consistently score lower on measures of commitment (see Mikulincer and Shaver, 2016 for a review). This seemingly contradictory stems from anxiously attached people's avoidance goals: They report desiring to maintain a relationship to avoid potential losses resulting from relationship dissolution (Dandurand et al., 2013). Their chronic preoccupation with abandonment, which fuels fears of being left without a relationship, seems to put people high on attachment anxiety at risk for being unfaithful. Indeed, a recent study has shown that participants high on attachment anxiety are more likely to solicit connections with romantic affiliations, by paradoxically jeopardizing current relationships via in- creased risk of being unfaithful to the current partner.

The findings of the present study should be approached with caution due to its limitations. The cross-sectional nature of the data renders deriving causal conclusions from it not possible, so future work should employ experimental designs to investigate the effects of elevated anxiety on fear of being single and consequently on infidelity. Similarly, reciprocal effects cannot be ascertained from the data at hand and future studies should test alternative models where fear of being single is investigated as the predictor, rather than the mediator. In addition, other personality factors, such as moral identity, could be playing important roles in whether fear of being single qualifies the relationship of this trait with infidelity behaviors, so future studies should examine these potential moderators. Another important factor in infidelity behaviors can be the type of relationship: Whether people are married, engaged, or simply dating could have an effect on their likelihood of

### Table 2

Descriptive statistics (mean, standard deviation, range) and bivariate correlations for the main study variables.

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<td>1. Sex</td>
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<td>2. Age</td>
<td>0.13*</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Attachment anxiety</td>
<td>−0.03</td>
<td>−0.28***</td>
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<tr>
<td>4. Fear of being single</td>
<td>−0.07</td>
<td>−0.29***</td>
<td>0.66***</td>
<td></td>
<td></td>
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<tr>
<td>5. Infidelity behaviors</td>
<td>−0.15*</td>
<td>0.12</td>
<td>0.37***</td>
<td>0.35***</td>
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<tr>
<td>Mean</td>
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<td>3.34</td>
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<tr>
<td>SD</td>
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<td>1.36</td>
<td>1.69</td>
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<tr>
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<td>20−70</td>
<td>1.00−6.33</td>
<td>1.00−6.83</td>
<td>0.00−6.00</td>
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Note. Sex is coded as Male = −1, Female = 1.

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

![Fig. 1. Fear of being single mediating the relationship between attachment anxiety and infidelity behaviors.](image)

**Note:** Values represent unstandardized regression coefficients.
engaging in infidelity, so investigating this angle in future work could be informative. It should also be noted that fear of being single emerged as a partial mediator of the association between attachment anxiety and infidelity, which suggests there might be other potential mediators in this relationship that remains to be explored by future research.

The present work has important implications both for relationship science and couples therapy. The findings make an important contribution to the literature by uncovering fear of being single as a pathway through which attachment anxiety relates to infidelity. These results can be beneficial for practitioners in couples counseling as infidelity is among the leading reasons why people seek couples therapy (Glass and Wright, 1988). As this pervasive problem has also been associated with many adverse outcomes, preventing acts of unfaithfulness may be a very fruitful endeavor. Clients with high attachment anxiety can be identified as a target intervention group where strategies to manage the excessive worry about being left without a partner are offered. In addition, security priming to boost secure attachment within the current relationship (Gillath et al., 2008) could be utilized as potential buffering strategies for these individuals under risk.

CRediT authorship contribution statement

Ezgi Sakman: Conceptualization, Methodology, Resources, Investigation, Writing - original draft, Formal analysis. Betul Urganci: Conceptualization, Methodology, Resources, Investigation, Writing - review & editing. Barış Sevi: Conceptualization, Methodology, Resources, Investigation, Writing - review & editing.

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Appendix A. Supplementary data

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