

Master Thesis

Sexual Satisfaction De-attached?

The Mediating Role of Fears of Intimacy in the Relationship between Insecure Adult
Attachment and Sexual Satisfaction



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Abstract

Research on insecure adult attachment (i.e., attachment anxiety and avoidance) indicates that insecurely attached individuals experience less sexual satisfaction. Given the relative rigidity of attachment, the current study set out to add to existing literature on more therapeutically applicable attachment-related constructs contributing to sexual dissatisfaction. We aimed to determine whether five distinct fears of intimacy partially mediate the relationship between insecure adult attachment and sexual satisfaction, through three hypotheses: (1) Attachment anxiety and avoidance predict fears of intimacy; (2) Fears of intimacy predict diminished sexual satisfaction; (3) Fears of intimacy partially mediate the relationship between the dimensions of insecure adult attachment and sexual satisfaction. Participants (N = 701) completed an online questionnaire battery containing measures of insecure adult attachment, fears of intimacy and sexual satisfaction. The results of two single multiple mediation models partially supported the hypotheses. More precisely, the results indicate that attachment anxiety and avoidance may contribute to the development of fear of merger, fear of attack, fear of exposure, fear of abandonment and fear of one's own destructive impulses. In turn, fearing merger, attack and exposure results in the experience of less sexual satisfaction. However, only fear of merger and fear of exposure were found to mediate the negative relationships between attachment anxiety and avoidance and sexual satisfaction. Fear of abandonment was unexpectedly found to lead to increased sexual satisfaction, suppressing the negative influence of attachment anxiety on sexual satisfaction. The remaining fears of intimacy appeared to not have a mediating effect. These findings are discussed, in addition to important limitations, practical implications and directions for future research.

Keywords: attachment anxiety, attachment avoidance, fears of intimacy, sexual satisfaction.

Sexual Satisfaction De-attached? The Mediating Role of Fears of Intimacy in the Relationship between Insecure Adult Attachment and Sexual Satisfaction

Over the past decades, the adult attachment theory has dominated the study of sexuality and of relationships in general (Hazan & Shaver, 1987; Mikulincer & Goodman, 2006). According to Bowlby's original attachment theory (1973, 1982), the quality of relationships with primary caregivers in infancy and childhood form lifelong patterns of relating to others. Once formed, attachment-related emotions, expectations, goals and behavioral strategies are likely to persist and influence an array of aspects within adult intimate relationships, including sex (Mikulincer & Shaver, 2007). Given that sexual satisfaction strongly contributes to the experience of relationship satisfaction (Edwards & Booth, 1994; Greeley, 1991; Haavio-Mannila & Kontula, 1997; Henderson-King & Veroff, 1994; Lawrance & Byers, 1995; Oggins, Leber & Veroff, 1993), thereby affecting the continuity of a relationship, insight into the influence of insecure attachment on sex is deemed important.

Previous research on adult attachment, which varies along the dimensions of attachment anxiety (i.e., the extent to which individuals worry about the availability and responsiveness of their partners) and attachment avoidance (i.e., the extent to which individuals are comfortable with closeness and emotional intimacy in relationships), concludes that insecurely attached individuals experience less sexual satisfaction (Birnbaum, 2007; Butzer & Campbell, 2008; Davis et al., 2006). In elaboration, attachment anxiety and avoidance are associated with negative feelings during sex (Birnbaum, Reis, Mikulincer, Gillath & Orpaz, 2006; Birnbaum, 2007; Gentzler & Kerns, 2006; Tracy, Shaver, Albino & Cooper, 2003), aversive or ambivalent sexual cognitions (Birnbaum et al., 2006; Birnbaum, 2007), and less physical or emotional satisfaction with one's sex life (Davis et al., 2006). Despite the extensiveness of former research, we are of opinion that the relative rigidity of attachment may impede on therapeutic interventions (Diehl, Elnick, Bourbeau & Labouvie-Vief, 1998; Hamilton, 2000; Hazan & Shaver, 1987; Lewis, Feiring & Rosenthal, 2000; Waters et al., 2000; Weinfield, Sroufe & Egeland, 2000). However, attachment-related constructs, such as emotions, may be more malleable. Therefore, research on the influence of these corollaries of attachment on sex is especially important for practical implications.

In search of more therapeutically applicable factors, the study of Davis and colleagues (2006) is of interest. Davis et al. (2006) focused on the mediating pathways through which an insecure attachment style leads to diminished sexual satisfaction. Although a number of important mediators, such as inhibited sexual communication and sexual anxiety, were

uncovered in this study, much remains unknown about more specific attachment-related factors contributing to sexual dissatisfaction. The current thesis aims to add to existing literature by gaining insight into an additional set of possible mediators, namely fears of intimacy (i.e., the subjective experience of anxiety or fear at the prospect of distinct aspects of an intimate relationship). These attachment-related emotions are considered to be more accessible and therefore more easily targeted in therapy, given that they offer in-depth formulations of distinct fears that create feelings of anxiety and possibly influence sexual satisfaction in relationships. Therefore, the present study aims to determine whether fears of intimacy partially mediate the relationship between insecure adult attachment (i.e., attachment anxiety and avoidance) and sexual satisfaction, through three hypotheses: (1) Insecure adult attachment predicts fears of intimacy; (2) Fears of intimacy predict diminished sexual satisfaction; (3) Fears of intimacy partially mediate the relationship between insecure adult attachment and sexual satisfaction. In order to substantiate these hypotheses, the following sections elaborate on the existing associations between the considered constructs.

Insecure adult attachment and fears of intimacy

In order for fears of intimacy to partially mediate the relationship between adult attachment and sexual satisfaction, insecure attachment needs to predict fears of intimacy. Therefore, the current thesis first aims to determine the nature of the association between these constructs.

Given that intimacy and fears hereof can be defined in a number of ways, we shall elaborate on our choice. Although all definitions include a feeling of closeness and affection (Perlman & Fehr, 1987), the conceptualization of intimacy varies broadly. According to Vangelisti and Beck (2007), intimacy can be viewed as a capacity that varies between individuals, as a behavioral motivator, as a quality of interpersonal relationships or as a form of social interaction. The latter conceptualization states that intimacy develops through communication between partners (Reis & Shaver, 1988). In accordance to this definition, fear of intimacy is commonly defined as the (due to fear) inhibited capacity of an individual to exchange thoughts and feelings of personal significance with an individual who is highly valued (Descutner & Thelen, 1991). However, in our opinion, which follows Waring and Chelune's (1983) conclusion, self-disclosure and intimacy are not the same construct; self-disclosure is a determinant of the level of intimacy. We therefore advocate a more comprehensive definition of fears of intimacy, namely: the subjective experience of anxiety or fear at the prospect of distinct aspects of an intimate relationship. This broad definition allows the concept of fear of intimacy to entail a wide number of specific fears associated with close

relationships, such as the fear to lose autonomy, the fear of abandonment, the fear to lose control, the fear of self-disclosure and the fear of being deceived or hurt by a partner (Carter & Sokol, 1988; Feldman, 1979; Hatfield & Rapson, 1993; Sheehan, 1989). An although dated, still useful typology of distinct intimacy fears was set out by Feldman (1979) in his theory of marital conflict and intimacy. According to Feldman (1979), the longing for intimacy is a basic human desire and the primary reason for forming a romantic relationship. Based on his clinical observations and grounded in the literature of psychodynamic theorists such as Freud, Klein and Erikson, Feldman subdivided the fear of intimacy into five types of fear: fear of merger (i.e., the fear of losing one's individuality within the dyadic relationship), fear of attack (i.e., the fear of being deceived within the relationship), fear of exposure, (i.e., the fear of self-disclosure towards ones partner), fear of abandonment (i.e., the fear of being rejected and abandoned) and fear of one's own destructive impulses (i.e., the fear of not being able to control oneself physically and emotionally in the dyadic relationship).

Although fear of intimacy is known to be related to both attachment anxiety and attachment avoidance (Doi & Thelen, 1993), the nature of the relationship remains unclear. Research stating that insecure attachment, and especially attachment anxiety, is capable of predicting dysfunctional attributions, destructive behavior and negative affect in intimate relationships (Campbell, Simpson, Boldy & Kashy, 2005; Popovic, 2005; Simpson, 1990; Stackert & Bursik, 2003; Sümer & Cozzarelli, 2004) suggests that an insecure attachment style is fertile ground for the development of numerous detrimental intrapersonal factors. Based hereon, we predict that insecure adult attachment influences the formation of distinct intimacy fears within relationships. This suggested causality is in line with the, in our view, more dispositional nature of attachment and more situational nature of fear. More precisely, for the majority of people the attachment style developed in infancy remains relatively stable into young adulthood (Hamilton, 2000; Lewis et al., 2000; Waters et al., 2000; Weinfield et al., 2000) and across the life span (Diehl et al., 1998; Hazan & Shaver, 1987). This indicates that an insecure adult attachment style is likely to precede the formation of intimacy fears

In short, as a precondition to mediation, the current thesis hypothesizes that specific fears of intimacy are predicted by attachment anxiety and attachment avoidance.

Fears of intimacy and sexual satisfaction

Another prerequisite of mediation is an established negative relationship between fears of intimacy and sexual satisfaction. Therefore, the second aim of the current study is to determine whether fears of intimacy predict diminished sexual satisfaction.

Given the aforementioned associations between (a) insecure adult attachment and sexual satisfaction and (b) insecure adult attachment and fears of intimacy, it is likely that fears of intimacy are related to sexual satisfaction. However, to the authors' knowledge, the direct relationship between fears of intimacy and sexual satisfaction has barely been examined. The only found study including the direct effect of fear of intimacy on sexual satisfaction, focused solely on a clinical population. Montesi et al. (2012) explored why socially anxious individuals experience less sexual satisfaction than non-anxious individuals. Within this study, it was found that higher levels of fear of intimacy predict significantly less sexual satisfaction. Although this finding may not generalize to the general population, given the focus on socially anxious individuals, it is in line with our hypothesis.

In order to further substantiate the hypothesis, the relationship between derivatives of fears of intimacy (e.g., a lack of intimacy and increased intimacy) and sexuality are taken into account as well. This approach is taken, given that fears of intimacy may compromise the beneficial effects that intimacy has on sexuality. More specifically, individuals more fearful of intimacy are found to lack a desired level of intimacy, whereas those less fearful are relatively satisfied with their relational closeness (Mashek & Sherman, 2004). This lack of intimacy is likely to influence the degree of sexual satisfaction experienced, given that markers of a lack of intimacy are often present in sexually inactive marriages (Donnelly, 1993). In accordance with this, Rubin and Campbell (2012) found that daily increases in intimacy predict higher levels of relationship passion, higher probability of sexual intercourse and more sexual satisfaction within the relationship. Therefore, fears of intimacy may contribute to sexual dissatisfaction by impeding on the beneficial effects of intimacy on sex.

In conclusion, the discussed research leans towards the likelihood of higher fears of intimacy contributing to a lower degree of sexual satisfaction. In order to confirm this precondition to mediation, the current study aims to determine whether this is the case.

Mediation through fears of intimacy

In conclusion, in order for fears of intimacy to mediate the relationship, insecure adult attachment must predict fears of intimacy and these fears must, in turn, result in sexual dissatisfaction. Following aforementioned hypotheses and literature, our final hypothesis states that fears of intimacy partially mediate the relationship between attachment anxiety and attachment avoidance and sexual satisfaction.

Method

Participants

The research sample consisted of 701 participants recruited from the general population of the Netherlands. This is the remainder of a sample of 1270 participants who initiated, but of which approximately 45% failed to complete the questionnaire battery. This relatively high drop-out rate is acceptable given the widespread recruitment of participants through various channels. Other than the requirement of completing the questionnaire, there were no exclusion criteria. Of the final sample approximately 70% was female and 30% was male. The sample consisted of 201 (29%) singles and 500 (71%) individuals currently in a relationship. The age of the participants ranged from 16 to 72 years ($M = 34.4$ years, $SD = 13.1$).

Measures

Adult attachment. The shortened Dutch version of the Experiences in Close Relationships Questionnaire–Revised (ECR–R; Fraley, Waller, & Brennan, 2000) was used to assess the adult attachment dimensions of anxiety and avoidance. The shortened ECR-R is a 11-item self-report questionnaire containing 5 items measuring anxiety (e.g., “I worry that romantic partners won’t care about me as much as I care about them” and “I worry a lot about my relationships”) and 6 items measuring avoidance (e.g., “I get uncomfortable when a romantic partner wants to be very close” and “It’s easy for me to be affectionate with my partner”). Participants rated each item on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). To circumvent a response set bias potential, items are phrased both positively and negatively. The scales of anxiety and avoidance were created by averaging the responses for each participant across the, respectively, 5 and 6 items. Higher mean scores indicate greater anxiety and avoidance. The reliability of the anxiety and avoidance subscales were found to be satisfactory, with respectively Cronbach’s $\alpha = .85$ and Cronbach’s $\alpha = .89$.

Fears of intimacy. The Dutch version of the Fear of Close and Personal Relationships Questionnaire (FCPRQ; Sheehan, 1989, Verspui et al., unpublished manuscript) was used to assess fears of intimacy. This 16-item self-report scale was based on Feldman’s theory of marital conflict and intimacy (1979) and designed to measure the subjective experience of anxiety or fear with regard to five specific aspects of intimate relationships. The five types of fear are represented by five subscales: (1) Fear of merger, i.e. the fear of losing one’s individuality within the dyadic relationship (e.g., “I worry about being fenced in, restrained,

suffocated or trapped”); (2) Fear of attack, i.e. the fear of being deceived within the relationship (e.g., “I trust my partner not to deliberately do or say something to hurt me”); (3) Fear of exposure, i.e. the fear of self-disclosure towards ones partner (e.g., “I feel free to say whatever I am thinking to my partner”); (4) Fear of abandonment, i.e. the fear of being abandoned (e.g., “I worry that my partner will leave me”); (5) Fear of one’s own destructive impulses, i.e. the fear of not being able to control oneself physically and emotionally in the dyadic relationship (e.g., “When I experience intense feelings I worry about being destructive”). Responses were rated on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items were phrased both positively and negatively to offset the potential for response set bias. The subscales were created by averaging the responses for each participant across the corresponding items. Higher mean scores indicate a higher level of fears of intimacy. The reliability of the overall scale was found to be satisfactory (Cronbach’s $\alpha = .81$). The reliability of the subscales ranged from questionable to acceptable, with respectively in abovementioned order, Cronbach’s α of .78, .47, .66, .66, .62.

Sexual satisfaction. The *Rutgers Nisso sexual satisfaction questionnaire* (2006) was used to measure satisfaction with the sexual relationship. This 4-item scale was developed by the Rutgers Nisso Groep, a Dutch knowledge center for sexuality, with items such as “In general I am satisfied with the quality of my sex life” and “In general I am satisfied with the emotional aspects of my sex life”. Participants rated each item on a 5-point Likert scale, ranging from 1 (extremely dissatisfied) to 5 (extremely satisfied). The scale was created by averaging the responses for each participant across the 4 items. Higher mean scores indicate greater sexual satisfaction. The reliability of the scale was found to be satisfactory (Cronbach’s $\alpha = .84$).

Procedure

Participants were recruited through various mediums: social networking websites such as ‘Hyves’, forums of popular magazines and by e-mail. In addition, over 500 flyers were distributed in public places such as the university, railway stations and several counseling practices. All those approached were invited to participate in a larger study on intimacy. The research goal was presented as gaining insight into thoughts and feelings related to intimacy and fear of intimacy in order to promote intimacy and satisfaction within relationships. Participation and completion of the questionnaire battery were encouraged by the offering of optional feedback about relational maintenance strategies and irrational relationship beliefs, as well as by the raffling off of three dinner vouchers for two amongst participants who

completed the questionnaire honestly. Participants were given the link to a webpage (www.intimiteitenrelaties.nl) hosting the online questionnaire battery and could fill in the questionnaire at a for them convenient time.

Before the questionnaire commenced, participants were given brief instructions. Given that the questionnaire battery contained a number of questionnaires related to intimacy, participants were informed that some questions may seem familiar, but that it is important to answer each question with a fresh mindset and with their general lifestyle and manner of thinking in mind. Single participants were asked to answer certain questions with their most recent relationship in mind, given that they currently were not involved in a romantic relationship. All participants were informed that the questionnaire was conducted by an automatic system and that privacy was guaranteed, in order to prevent socially desirable answers. As a research topic, sexuality is especially susceptible to social desirability, due to the fact that many find sexuality to be a private or embarrassing subject (Van Lankveld & Laan, 2009). Participants were asked to fill in the questionnaire whilst alone and were repeatedly encouraged to be honest in answering the questions.

Statistical analyses

Acquired data was automatically transferred from NetQuestionnaires to SPSS 21.0 for analysis. In order to test the hypotheses, single multiple mediation analyses were used. This procedure fits our hypotheses, given that it takes simultaneous mediation by multiple variables into account (Preacher & Hayes, 2008).

In order to uncover the differential effects of the attachment dimensions, the hypothesized model was tested through two single multiple mediation models: one focusing on attachment anxiety and the other on attachment avoidance (see Figure 1). This was necessary, given that linear regression equations allow for only one predictor (Preacher & Hayes, 2008). The single multiple mediation models follow Baron and Kenny's (1986) causal steps strategy to mediation, making it possible to test all three hypotheses. In this approach mediation is determined by examining the significance of the paths between variables in four consecutive steps of regression analyses (see Figure 1). In the first step the significance of the direct path between the predictor and outcome measure (i.e., path *c*) is established. In the second step the significance of the direct paths between the predictor and the mediators (i.e., paths *a*) are established. This step covers the testing of the first hypothesis. In the third step, whilst controlling for the predictor, the significance of the paths between the mediators and the outcome measure (i.e., paths *b'*) are established. A significant *b'* indicates that there is a

relationship between the mediator and the outcome measure that is not accounted for by the predictor. It is not uncommon to first determine the significance of the direct paths between the mediators and the outcome measure (i.e., path *b*). In order to test the second hypothesis, one additional multiple regression analysis shall be performed to this end. These first three steps test the preconditions of mediation. In the fourth and final step, the significance of the indirect path between the predictor, mediators and the outcome measure (i.e., path *c'*) is established. Mediation is supported if path *c'* is represented by a lower coefficient than path *c* and if paths *b'* remain significant.

With the inclusion of multiple mediators, the number of paths increases (see Figure 1). In our analysis, all pathways were determined within one simple multiple mediation model per predictor, in preference to two sets of seventeen separate simple mediation models. This reduces the likelihood of parameter bias due to omitted variables (Judd & Kenny, 1981). In addition, it allows one to determine to what extent specific mediator variables mediate the relationship between the predictor and outcome measure, whilst taking the presence of other mediators in the model into account (Preacher & Hayes, 2008). This was deemed important, given the likelihood of relatively high correlations between the distinct fears.

All necessary assumptions for regression were checked and confirmed in advance.

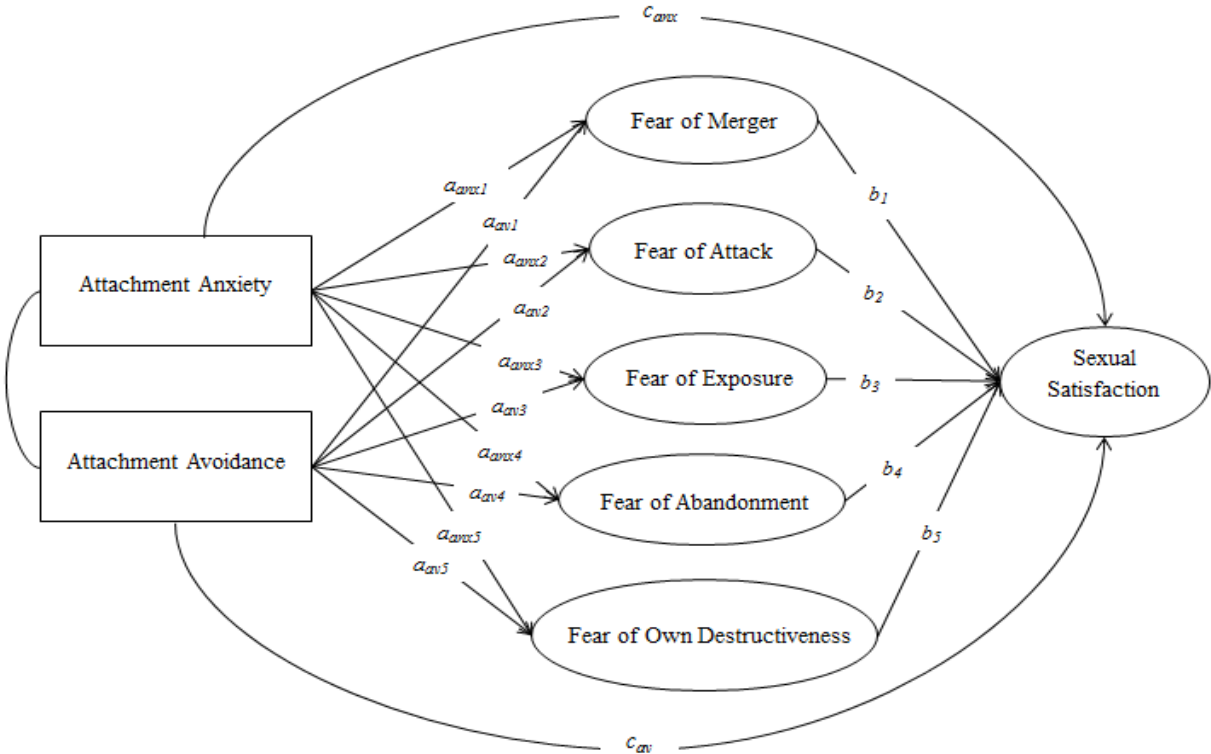


Figure 1. Pathways of the preconditional steps of two multiple mediation models separately associating anxious attachment (abbreviated as *anx*) and avoidant attachment (abbreviated as *av*) with sexual satisfaction through five fears of intimacy as measured by the FCPRQ.

Results

Preliminary analyses

Descriptive statistics for the demographic variables of gender, relationship status and age on insecure adult attachment, fears of intimacy and sexual satisfaction are presented in Table 1. In general, the research population appeared to be only moderately insecurely attached. Participants were found to have intermediate levels of attachment anxiety and slightly lower levels of attachment avoidance. The fact that our participants appear to be relatively securely attached is in line with the finding that, on average, our participants are sexually satisfied. With regard to fears of intimacy, it can be stated that the current population has intermediary levels of intimacy fears. Our population most strongly feared merger and abandonment, and experienced slightly less fear of exposure. The fears of attack and one's own destructive impulses were found to be relatively low in the current population. The nature of the differences between the demographic groups were determined by an independent-samples T-tests for gender and relationship status and a Pearson correlation for age.

First, no significant gender differences were found for insecure adult attachment, fears of intimacy and sexual satisfaction. More specifically, there are no gender differences in attachment anxiety ($t [699] = 0.20, p > .05$) or attachment avoidance ($t [699] = 0.71, p > .05$). In addition, no gender differences were found for the fears of intimacy. Men and women do not significantly differ on level of fear of merger ($t [699] = 1.40, p > .05$), fear of attack ($t [699] = - 0.54, p > .05$), fear of exposure ($t [699] = 1.92, p > .05$), fear of abandonment ($t [699] = - 0.95, p > .05$) or fear of one's own destructive impulses ($t [699] = - 1.65, p > .05$). Finally, no gender differences were found for sexual satisfaction, $t (699) = 0.34, p > .05$. It can be concluded that, within the current sample, men and women experience comparable levels of insecure adult attachment, fears of intimacy and sexual satisfaction.

Secondly, it was found that the levels of insecure adult attachment, fears of intimacy and sexual satisfaction significantly differed between single individuals and those in a relationship. More precisely, singles ($M = 2.86, SD = 0.75$) experienced significantly higher levels of attachment anxiety than individuals in a relationship ($M = 2.04, SD = 0.72$), $t (699) = - 13.54, p < .001$. Singles ($M = 2.14, SD = 0.63$) also experienced higher levels of attachment avoidance than individuals in a relationship ($M = 1.72, SD = 0.57$), $t (699) = - 8.42, p < .001$. Regarding fears of intimacy, singles experienced higher levels of all five fears of intimacy (see Table 1). The mean differences were significant for fear of merger ($t [320] = 1.40, p < .001$), fear of attack ($t [699] = - 7.23, p < .001$), fear of exposure ($t [699] = - 4.41, p < .001$),

fear of abandonment ($t [699] = - 5.72, p < .001$) and fear of one's own destructive impulses ($t [699] = - 2.49, p < .001$). Levene's test indicated unequal variances for fear of merger ($F = 12.86, p < .001$), therefore degrees of freedom were adjusted from 699 to 320. Finally, single individuals ($M = 3.22, SD = 0.76$) experience significantly less sexual satisfaction than individuals in a relationship ($M = 3.84, SD = 0.76$), $t (699) = 9.70, p < .001$). In conclusion, single individuals are found to have higher levels of attachment anxiety, attachment avoidance and fears of intimacy, and to experience less sexual satisfaction than individuals in a relationship. However, it must be taken into account that single participants answered the questions with their most recent relationship in mind, whereas those in a relationship reflected on their current state. This may have confounded these results.

Thirdly, significant negative relationships between age and a number of variables were found. More precisely, there was a significant negative association between age and attachment anxiety ($r = - .12, p < .01$), fear of abandonment ($r = - .08, p < .05$), and sexual satisfaction ($r = - .25, p < .001$). This indicates that the older participants have lower levels of attachment anxiety and fear of abandonment and experience less sexual satisfaction. No significant relationships were found for age and attachment avoidance or the remaining four fears of intimacy.

Since it was found that certain demographic variables show varying levels of insecure adult attachment, fears of intimacy and sexual satisfaction, all further analysis were controlled for relationship status and age. In addition to aforementioned preliminary analyses, a Pearson correlation was conducted in order to determine the nature of the relationship between attachment anxiety and avoidance in the current study. Given that attachment anxiety and avoidance are proposed to represent relatively orthogonal dimensions of a model of adult attachment (Brennan, Clark & Shaver, 1998), they are expected to be only minimally associated. However, we found a significant positive relationship between the dimensions of insecure adult attachment ($r = .52, p < .001$). This entails that more anxiously attached individuals score higher on the attachment avoidance dimension as well. This finding shall be further discussed at a later point.

Table 1. Descriptive statistics for gender, relationship status and age on insecure adult attachment, fears of intimacy and sexual satisfaction

	Attachment Anxiety	Attachment Avoidance	Fear of Merger	Fear of Attack	Fear of Exposure	Fear of Abandonment	Fear of Own Destructiveness	Sexual Satisfaction
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
<u>Gender</u>								
Men (N=212)	2.28 (0.82)	1.87 (0.64)	2.35 (0.84)	1.70 (0.62)	2.04 (0.60)	2.51 (0.89)	1.78 (0.68)	3.68 (0.85)
Women (N=489)	2.27 (0.82)	1.83 (0.61)	2.25 (0.85)	1.73 (0.64)	1.96 (0.53)	2.58 (0.84)	1.87 (0.65)	3.65 (0.80)
<u>Relationship status</u>								
Single (N=201)	2.86 (0.75)	2.14 (0.63)	2.75 (0.89)	1.98 (0.67)	2.13 (0.51)	2.84 (0.85)	1.94 (0.66)	3.22 (0.76)
In a relationship (N=500)	2.04 (0.72)	1.72 (0.57)	2.09 (0.75)	1.61 (0.58)	1.93 (0.56)	2.45 (0.83)	1.80 (0.66)	3.84 (0.76)
<u>Age</u>								
16-35 (N=448)	2.35 (0.81)	1.89 (0.66)	2.31 (0.81)	1.76 (0.64)	1.97 (0.54)	2.71 (0.84)	1.87 (0.65)	3.73 (0.77)
36-54 (N=190)	2.26 (0.86)	1.80 (0.61)	2.32 (0.89)	1.67 (0.64)	2.00 (0.55)	2.44 (0.86)	1.81 (0.71)	3.50 (0.86)
55-72 (N=63)	1.98 (0.70)	1.79 (0.61)	2.04 (0.92)	1.66 (0.57)	2.06 (0.61)	2.02 (0.63)	1.79 (0.62)	3.67 (0.84)

Note. Higher scores indicate higher levels of insecure adult attachment, fears of intimacy and sexual satisfaction on a 5-point Likert scale.

Main analyses

The current study conducted two single multiple mediation models and a multiple linear regression analysis in order to test the following hypotheses: (1) Attachment anxiety and attachment avoidance predict distinct fears of intimacy; (2) Fears of intimacy predict diminished sexual satisfaction; (3) Fears of intimacy partially mediate the relationship between the dimensions of insecure adult attachment and sexual satisfaction. Given that linear regression equations allow for only one predictor, the three hypotheses were tested separately for attachment anxiety and attachment avoidance.

Attachment anxiety, fears of intimacy and sexual satisfaction

To determine whether the five fears of intimacy partially mediate the relationship between attachment anxiety and sexual satisfaction, the previously described causal steps strategy was conducted with a single multiple mediation model, whilst controlling for the demographic variables. The testing of the two preceding hypotheses are included within the four steps.

In the first step, the significance of the direct path between attachment anxiety and sexual satisfaction (i.e., path c_{anx}) was confirmed ($B = -0.24, p < .001$). It can be stated that a higher level of attachment anxiety significantly predicts a lower level of sexual satisfaction (see Figure 2). This implies that a more anxious attachment contributes to the experience of less sexual satisfaction.

In the second step, the first hypothesis was tested by establishing the direct pathways between attachment anxiety and fear of merger (i.e., path a_{anx1}), fear of attack (i.e., path a_{anx2}), fear of exposure (i.e., path a_{anx3}), fear of abandonment (i.e., path a_{anx4}) and fear of one's own destructive impulses (i.e., path a_{anx5}). All relationships were found to be significant and in the hypothesized direction, all $ps < .001$ (see Figure 2). This means that the hypothesis of a higher level of attachment anxiety predicting higher levels of fears of intimacy is confirmed, suggesting that attachment anxiety may contribute to the development of fears of intimacy.

Before proceeding to the third step, the direct relationships between the five intimacy fears and sexual satisfaction were established. This second hypothesis was tested with a multiple linear regression, in which all intimacy fears were simultaneously entered as predictors and sexual satisfaction as outcome variable, whilst controlling for the demographic variables. As hypothesized, fear of merger (i.e., b_1), fear of attack (i.e., b_2) and fear of exposure (i.e., b_3) significantly predicted lower sexual satisfaction, all $ps < .05$ (see Figure 2). Unexpectedly, a higher fear of abandonment significantly predicted the experience of more sexual satisfaction (i.e., b_4 ; $B = 0.10, p < .05$). The fear of one's own destructive impulses

(i.e., b_5) did not significantly predict sexual satisfaction (see Figure 2). Therefore, the second hypothesis is only partly confirmed: fear of merger, fear of attack and fear of exposure significantly predict lower levels of sexual satisfaction, indicating that fearing merger, attack and exposure contributes to the experience of less sexual satisfaction. Unexpectedly, fear of one's own destructive impulses was non-significant in the prediction and fear of abandonment was found to predict higher levels of sexual satisfaction (see Figure 2), suggesting that fearing abandonment contributes to the experience of more sexual satisfaction.

In the third step, the previous analysis was repeated, whilst controlling for attachment anxiety. It was found that a significant relationship, not accounted for by attachment anxiety, exists between fear of merger (i.e., $b_{anx}'_1$), fear of exposure (i.e., $b_{anx}'_3$), fear of abandonment (i.e., $b_{anx}'_4$) and sexual satisfaction, all $ps < .01$ (see Table 2). This means that the associations between these three intimacy fears and sexual satisfaction are not caused by attachment anxiety. Fear of attack (i.e., $b_{anx}'_2$) and fear of one's own destructive impulses (i.e., $b_{anx}'_5$) did not significantly predict sexual satisfaction (see Table 2). The latter finding is in accordance with the results of hypothesis two, and the former indicating that the aforementioned significant relationship between fear of attack and sexual satisfaction (see Figure 2) can be accounted for by attachment anxiety. This makes the possibility of mediation through fear of attack and fear of one's own destructive impulses unlikely. However, MacKinnon, Fairchild and Fritz (2007) argue that mediation remains possible despite a lack of significance in one of the preconditional steps. Therefore, all five fears were included in the following step.

In the fourth and final step, we examined the extent to which fear of merger, fear of attack, fear of exposure, fear of abandonment and fear of one's own destructive impulses mediate the relationship between attachment anxiety and sexual satisfaction. As predicted, attachment anxiety predicted sexual satisfaction less strongly when the five fears of intimacy were held constant (i.e., path c_{anx}' , $B = -0.19$, $p < .001$) than when they were not (i.e., path c_{anx} , $B = -0.24$, $p < .001$). An estimation of the significance of this mediation with the bootstrap method¹ suggests that, when taking all mediators into account, fears of intimacy do not significantly partially mediate the relationship between attachment anxiety and sexual

¹ The bootstrap method of Preacher and Hayes (2004) was used to estimate the indirect effect and bias-corrected 95% confidence interval (CI) for each individual mediator and for all the mediators as a group, based on 1000 bootstrap samples using a Statistical Package for the Social Sciences (SPSS) macro (<http://www.comm.ohio-state.edu/ahayes/SPSS%20programs/indirect.htm>). This methodology is regarded superior to a normal theory approach, given that it does not require that the sampling distribution of the indirect effect be normal (Shrout and Bolger, 2002; Preacher and Hayes, 2004).

satisfaction (95% CI = - 0.14, 0.02). However, the significance of the separate mediators must be taken into account as well. Fear of attack and fear of one's own destructive impulses failed to significantly predict sexual satisfaction in the final step (see Table 2; respectively, 95% CI = - 0.08, 0.03; 95% CI = - 0.04, 0.07). It is concluded that these two fears do not mediate the relationship between attachment anxiety and sexual satisfaction. In contrast, the *b*' paths of fear of merger, fear of exposure and fear of abandonment remained significant in the final step (see Table 2). This significance is confirmed by the bootstrap method (respectively, 95% CI = - 0.10, - 0.01; 95% CI = - 0.11, - 0.04; 95% CI = 0.04, 0.18), indicating partial mediation through these three fears. However, in accordance to the finding of hypothesis two, the relationship between fear of abandonment and sexual satisfaction remained positive ($B = 0.20$, $p < .01$), indicating that fear of abandonment suppresses the negative relationship between attachment anxiety and sexual satisfaction. Within a mediation model, a suppression effect entails that the direct and mediated effect of an independent variable on a dependent variable have opposite signs (Cliff & Earleywine, 1994; Davis, 1985; Tzelgov & Henik, 1991). In conclusion, the third hypothesis is in part confirmed: the negative relationship between attachment anxiety and sexual satisfaction is partially mediated by fear of merger and fear of exposure. This suggests that attachment anxiety may contribute to the development of fear of merger and fear of exposure which, in turn, result in diminished sexual satisfaction. Fear of abandonment was unexpectedly found to suppress the negative relationship between attachment anxiety and sexual satisfaction through mediation. This indicates that fearing abandonment alters the negative influence of attachment anxiety on sexual satisfaction. More precisely, anxiously attached individuals with higher levels of fear abandonment shall experience more sexual satisfaction than those with lower levels.

Attachment avoidance, fears of intimacy and sexual satisfaction

The second single multiple mediation model included attachment avoidance as predictor in order to determine whether fears of intimacy partially mediate the relationship between attachment avoidance and sexual satisfaction, whilst controlling for the demographic variables. The preceding hypotheses of attachment avoidance predicting intimacy fears and intimacy fears predicting lower sexual satisfaction are tested within the causal steps strategy.

In the first step, the significance of the direct path between attachment avoidance and sexual satisfaction (i.e., path c_{av}) was confirmed ($B = - 0.46$, $p < .001$). A higher level of attachment avoidance significantly predicts a lower level of sexual satisfaction (see Figure 2), implying that an avoidant attachment contributes to the experience of less sexual satisfaction.

In the second step, the first hypothesis was tested by determining the direct pathways between attachment avoidance and fear of merger (i.e., path a_{av1}), fear of attack (i.e., path a_{av2}), fear of exposure (i.e., path a_{av3}), fear of abandonment (i.e., path a_{av4}) and fear of one's own destructive impulses (i.e., path a_{av5}). All pathways were found to be significant, all $ps < .001$ (see Figure 2). A higher level of attachment avoidance significantly predicts higher levels of all five fears, confirming the first hypothesis. These results suggest that attachment avoidance may contribute to the development of fears of intimacy.

Before proceeding to the third step, the results regarding the direct relationships between intimacy fears and sexual satisfaction, discussed in the first single multiple mediation model, are repeated. The second hypothesis was in part confirmed: fear of merger, fear of attack and fear of exposure were found to significantly predict lower levels of sexual satisfaction (see Figure 2), indicating that fearing merger, attack and exposure contribute to the experience of less sexual satisfaction. However, the fear of one's own destructive impulses did not predict sexual satisfaction and fear of abandonment unexpectedly predicted higher levels of sexual satisfaction (see Figure 2), suggesting that fearing abandonment contributes to the experience of more sexual satisfaction.

In the third step, the significance of the pathways between the five fears of intimacy and sexual satisfaction were determined, whilst controlling for attachment avoidance. As expected, a significant relationship, not accounted for by attachment avoidance, exists between fear of merger (i.e., $b_{anx'1}$) and fear of exposure (i.e., $b_{anx'3}$) and sexual satisfaction, both $ps < .05$ (see Table 2). This means that the associations between fear of merger and fear of exposure and sexual satisfaction are not caused by attachment avoidance. The findings regarding the remaining three fears of intimacy were not as hypothesized (see Table 2). Fear of attack, fear of abandonment and fear of one's own destructive impulses no longer significantly predict sexual satisfaction (see Table 2, respectively, $b_{av'2}$, $b_{av'4}$ and $b_{av'5}$). It appears that the aforementioned significant relationships between fear of attack and fear of abandonment and sexual satisfaction (see Figure 2) can be accounted for by attachment avoidance. Despite the fact that this strongly reduces the likelihood of mediation through these fears, all fears were included in the following step (MacKinnon et al., 2007).

In the fourth and final step, we examined the extent to which fear of merger, fear of attack, fear of exposure, fear of abandonment and fear of one's own destructive impulses mediate the relationship between attachment avoidance and sexual satisfaction (i.e., path $c_{av'}$). As predicted, attachment avoidance predicted sexual satisfaction less strongly when the five fears of intimacy were held constant (i.e., path $c_{av'}$, $B = -0.35$, $p < .001$) than when they were

Table 2. Unstandardized regression coefficients (B) and standard errors ($SE B$) of the pathways tested in the final steps of multiple mediation with attachment anxiety (abbr. as anx) and avoidance (abbr. as av) as predictors.

	Path	B	$SE B$
Attachment Anxiety	$b_{anx}'_1$	- 0.16**	0.05
	$b_{anx}'_2$	- 0.07	0.07
	$b_{anx}'_3$	- 0.31***	0.07
	$b_{anx}'_4$	0.20**	0.07
	$b_{anx}'_5$	0.02	0.07
	c_{anx}'	- 0.19***	0.05
Attachment Avoidance	$b_{av}'_1$	- 0.12*	0.05
	$b_{av}'_2$	- 0.01	0.07
	$b_{av}'_3$	- 0.17*	0.07
	$b_{av}'_4$	0.09	0.06
	$b_{av}'_5$	0.01	0.07
	c_{av}'	- 0.35***	0.06

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

not (i.e., path c_{av} , $B = - 0.46$, $p < .001$). An estimation of the significance of this mediation with the bootstrap method suggests that fears of intimacy significantly partially mediate the negative relationship between attachment avoidance and sexual satisfaction (95% CI = - 0.19, - 0.02). When taking the significance of the separate mediators (i.e., b_{av}') into account, it becomes apparent that fear of attack, fear of abandonment and fear of one's own destructive impulses fail to significantly predict sexual satisfaction in the final step (see Table 2; respectively, 95% CI = - 0.08, 0.08; 95% CI = - 0.01, 0.07; 95% CI = - 0.04, 0.06). It is concluded that these three fears do not mediate the relationship between attachment anxiety and sexual satisfaction. Fear of merger and fear of exposure, however, did significantly partially mediate the relationship between attachment avoidance and sexual satisfaction (see Table 2). This significance is confirmed by the bootstrap method (respectively, 95% CI = - 0.12, - 0.01; 95% CI = - 0.16, - 0.01). It is concluded that attachment avoidance may contribute to the development of fear of merger and fear of exposure which, in turn, result in diminished sexual satisfaction.

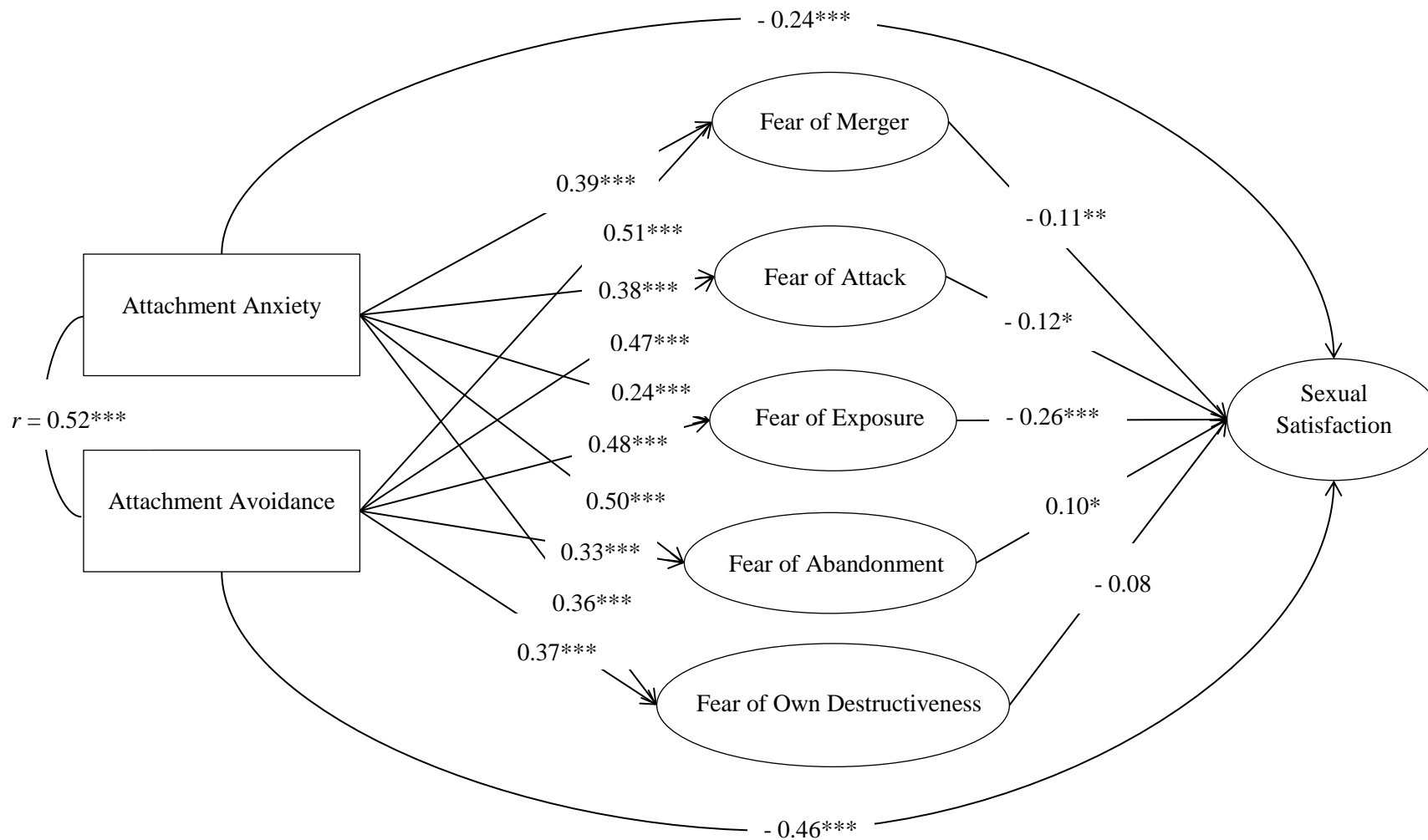


Figure 2. Unstandardized path coefficients of the preconditional steps associating anxious and avoidant attachment with fears of intimacy and fears of intimacy with sexual satisfaction. (Note: * $p < .05$, ** $p < .01$, *** $p < .001$).

Conclusions and Discussion

In search of more therapeutically applicable attachment-related factors contributing to sexual dissatisfaction, we aimed to determine whether distinct fears of intimacy partially mediate the relationship between insecure adult attachment and sexual satisfaction. In accordance to previous research, the current study states that an insecure adult attachment contributes to the experience of diminished sexual satisfaction. Moreover, this relationship was found to be mediated by a few, but not all, fears of intimacy. More specifically, only fear of merger and fear of exposure mediated the negative relationship between insecure adult attachment and sexual satisfaction. Fear of abandonment unexpectedly suppressed the relationship between attachment anxiety and sexual satisfaction. To fully understand the mediating role of fears of intimacy, the results regarding the three consecutive hypotheses shall be discussed below. First, the relationship between insecure adult attachment and fears of intimacy shall be discussed; subsequently, the relationships between fears of intimacy and sexual satisfaction; and finally, the comprehensive relationship between insecure adult attachment, fears of intimacy and sexual satisfaction. Furthermore, methodological limitations, practical implications and directions for future research are considered.

Insecure adult attachment and fears of intimacy

In line with literature stating that an insecure adult attachment forms a foundation from which numerous unfavorable intrapersonal factors can develop (Campbell et al., 2005; Popovic, 2005; Simpson, 1990; Stackert & Bursik, 2003; Sümer & Cozzarelli, 2004), the results of the first hypothesis of this study suggest that fears of intimacy may be corollaries of insecure adult attachment as well. More specifically, it was found that individuals with a more anxious or avoidant attachment style are more likely to experience a fear of losing their sense of individuality (i.e., fear of merger), a fear of being deceived within the relationship (i.e., fear of attack), a fear of self-disclosure towards their partner (i.e., fear of exposure), a fear of being abandoned (i.e., fear of abandonment) and a fear of not being able to control themselves physically and emotionally in the relationship (i.e., fear of one's own destructive impulses). In short, insecure adult attachment appears to contribute to the development of fears of intimacy.

Fears of intimacy and sexual satisfaction

Given that increased intimacy in a relationship is associated with higher levels of sexual satisfaction (Donnelly, 1993; Rubin & Campbell, 2012), and that intimately fearful

individuals lack desired levels of intimacy (Mashek & Sherman, 2004), fearing intimacy is likely to compromise the beneficial effects of intimacy on sexuality. In accordance with this, the results regarding the second hypothesis suggest that experiencing certain fears of intimacy influences the level of sexual satisfaction. More specifically, fearing a loss of individuality (i.e., fear of merger), fearing being deceived within the relationship (i.e., fear of attack) and fearing self-disclosure towards one's partner (i.e., fear of exposure) contributes to the experience of less sexual satisfaction. The findings regarding the fear of one's own destructive impulses and fear of abandonment were, however, not in line with aforementioned literature and the hypotheses. These last two findings are discussed in further detail below.

First, fearing not being able to control oneself physically and emotionally in the relationship (i.e., fear of one's own destructive impulses) appears to not affect the level of experienced sexual satisfaction. At first notice this seems surprising, given that previous research indicates that issues with control influence sexual satisfaction (Allen & Atkins, 2005; Basson et al., 2005; Georgiadis et al., 2006). On the one hand, being able to let go of control is considered to be an important part of the sexual experience. On the other hand, the perception of having more internal control is associated with increased levels of sexual satisfaction during intercourse (Catania, McDermott & Wood, 1984). Given that fearing a loss of control implies both the perception of a possible lack of control and an unwillingness to let go of control, it remains unexpected that no association was found. However, this unexpected finding may be explained by the possibility that fearing loss of control diversely influences different aspects of intimacy. More precisely, our concept of control applied to the overall emotionally intimate relationship, whereas aforementioned studies focused on the sexually intimate relationship. In short, although previous research indicates that fearing a lack of self-control with regard to the sexually intimate relationship contributes to sexual dissatisfaction, our study states that fearing a lack of control over oneself with regard to the entire emotionally intimate relationship does not influence sexual dissatisfaction.

Secondly, fearing abandonment was unexpectedly found to contribute to increased sexual satisfaction. This non-hypothesized finding can be explained by taking the especially strong association between this intimacy fear and attachment anxiety into account (Verspui et al., unpublished manuscript). An anxious attachment is known to carry with it a strong fear of abandonment, given that it reflects an individual's negative view of self (i.e., belief that one is unworthy of responsiveness from others) (Brennan et al., 1998). Although attachment anxiety in general is found to predict diminished sexual satisfaction, studies show an ambivalent relationship between attachment anxiety and sex. More precisely, Birnbaum et al. (2006)

found that attachment anxiety is related to an ambivalent construal of the sexual experience: anxiously attached individuals have both negative and positive associations with sex. In addition, unlike attachment avoidance, attachment anxiety is found to be positively related to sexual passion (Davis, Shaver & Vernon, 2004). These findings are most likely influenced by the sexual motives of those anxiously attached: anxious individuals, who highly fear abandonment, report having sex to reduce insecurity, establish intense closeness and please their partner (Impett, Gordon & Strachman 2008; Schachner & Shaver, 2004). Therefore, sex may be fueled by a fear of abandonment and, in turn, act as a reassurance for anxiously attached individuals by forming proof that their partner will not abandon them. The fulfilling of these sexual motives is likely to lead to the experience of more sexual satisfaction. These findings shall be elaborated on in the discussion of the final hypothesis.

The mediating role of fears of intimacy

The previous hypotheses are preconditional to the overall aim of the current study: determining whether fears of intimacy partially mediate the relationship between insecure adult attachment and sexual satisfaction. As mentioned before, it was found that fear of merger and fear of exposure partially mediate the negative relationship. This is in line with the former findings: attachment anxiety and avoidance contribute to the development of a fear of merger and exposure, which, in turn, result in diminished sexual satisfaction. However, the remaining intimacy fears did not mediate the relationship as expected, and are discussed.

First, attachment anxiety was found to contribute to the development of fear of abandonment, which, in turn, unexpectedly resulted in increased sexual satisfaction. More precisely, anxiously attached individuals that more strongly fear abandonment experience more sexual satisfaction than those with a lower fear of abandonment. This coincides with the finding of the second hypothesis regarding fear of abandonment. We previously discussed the ambivalent attitude towards sex and the sexual motives of those anxiously attached to explain how fearing abandonment might lead to increased sexual satisfaction. However, in general and within this study, attachment anxiety has been found to predict diminished sexual satisfaction. This seemingly contradictory finding is possible, given that fear of abandonment is only one of the associates of attachment anxiety. Attachment anxiety is also represented by fear of rejection, jealousy and preoccupation with relationships (Brennan et al., 1998), which may lead to decreased sexual satisfaction. Our results suggest that attachment anxiety may contribute to a fearing of abandonment, which, in turn, buffers against the negative effect of attachment anxiety as a whole on sexual satisfaction. Sex may reassure the anxious individual

that their partner will not abandon them, leading to the experience of relatively more sexual satisfaction.

The findings that fear of attack and fear of one's own destructive impulses do not mediate the relationship between insecure adult attachment and sexual satisfaction were relatively unexpected as well. However, the conclusions regarding the second hypothesis explain the lack of mediation through fear of one's own destructive impulses. Given that a fear of not being able to control oneself physically and emotionally does not influence sexual satisfaction, it is impossible for this intimacy fear to mediate the relationship.

The finding regarding fear of attack was more surprising, given the conclusions of the previous hypotheses. Although attachment anxiety and avoidance predict a fear of attack, and fear of attack predicts diminished sexual satisfaction, this intimacy fear does not mediate the relationship. According to our results fear of attack has no influence on sexual satisfaction other than that directly caused by insecure adult attachment. Given that this intimacy fear appears to be a corollary of insecure adult attachment, commonality is expected and found: both anxiously and avoidant attached individuals have difficulty trusting others (Hazan & Shaver; 1987; Mikulincer, 1998; Simpson, 1990). However, our results indicate that the overlap between these constructs with regard to the influence on sexual satisfaction is so great that fear of attack has no independent influence. Therefore, fear of attack does not mediate the relationships between attachment anxiety and avoidance and sexual satisfaction.

Methodological limitations

Although these results offer interesting new insights, they must be interpreted in the context of several limitations. Firstly, only self-report measures were used, making it difficult to discern how these constructs may manifest in actual behavior.

Secondly, although the causal steps approach to multiple mediation implies causality, concrete inferences cannot be made. Spirtes, Glymour and Scheines' (1993) equivalent model criticism states that other models may explain the data equally well. For example, if X, M, and Y are measured simultaneously, M may mediate the relationship between X and Y, but other models may be possible as well (e.g., X may mediate the M to Y relationship or M and Y may both cause X). Given the early initial formation of attachment styles and the relative stability hereof (Diehl et al., 1998; Hamilton, 2000; Hazan & Shaver, 1987; Lewis et al., 2000; Waters et al., 2000; Weinfield et al., 2000), it remains likely that an insecure adult attachment style precedes the formation of intimacy fears. In order to strongly infer whether

attachment styles do in fact temporally precede fears of intimacy, a study using a prospective design is imperative.

Thirdly, no conclusions can be drawn regarding the combined effects of attachment anxiety and avoidance, given that the implemented statistical method allowed for only one predictor per model (Preacher & Hayes, 2008). According to Brennan and colleagues (1998) attachment anxiety and avoidance represent relatively orthogonal dimensions of adult attachment. However, within our study the dimensions were found to be strongly associated: more anxiously attached individuals also scored higher on attachment avoidance. Although prior studies using the ECR-R have found positive correlations between the attachment dimensions as well (Butzer & Campbell, 2008; Sibley, Fischer & Liu, 2005), this finding was unexpected. Statistically controlling for the overlap may lead to different findings than those of the current study. A replication with a statistical method in which attachment anxiety and avoidance simultaneously predict fears of intimacy and sexual satisfaction is recommended.

Practical implications and directions for future research

Despite these limitations, our study adds to previous findings on the mediating pathways through which insecure adult attachment leads to diminished sexual satisfaction. In addition to the mediators uncovered in previous research, a number of distinct fears of intimacy partially mediate the relationship between insecure adult attachment and sexual satisfaction. This has practical implications, given that fears of intimacy are expected to be more accessible and therefore more easily targeted in therapy than insecure adult attachment. A focus on specific fears offers a stronger foundation from which to explore the underlying dysfunctional cognitions involved in sexual dissatisfaction, which can be addressed in cognitive-behavioral therapy (Beck, 1976). Future research should explore this assumption in a clinical setting in order to determine whether therapeutically targeting a fear of merger and fear of exposure increases sexual satisfaction in insecurely attached individuals. With regard to fear of abandonment, therapists should focus on guiding clients to a healthier view of themselves and their relationship in order to promote sexual satisfaction.

Despite a number of interesting findings, our intimacy fears were not all related to sexual satisfaction as expected. This raises interesting questions for future research on fears of intimacy. Although the current study approached fears of intimacy from a broader perspective, we still focused solely on fears of emotional intimacy. However, intimacy is said to be made up out of a number of dimensions, including emotional and sexual intimacy (Schaefer & Olson, 1981; Tolstedt & Stokes, 1983). Both forms of intimacy influence sexual

satisfaction and are known to influence each other as well (e.g., Greeff & Malherbe, 2001; Waite & Joyner, 2001). Some of our results raise questions about whether insecurely attached individuals view emotional and sexual intimacy as distinctly different. It is debatable whether for some individuals fears of emotional intimacy are of less influence on the experience of sexual satisfaction than fears of sexual intimacy, and vice versa. For instance, the fear of not being able to control oneself appears to influence sexual satisfaction differently when the control applies to the emotionally rather than the sexually intimate relationship. Insight into fears of sexual intimacy, in addition to fears of emotional intimacy, may lead to an even greater understanding of the indirect relationships between insecure adult attachment and sexual satisfaction. A useful framework from which to explore this, is Reis and Shaver's interpersonal process model (1988). According to Reis and Shaver (1988), emotional intimacy is established through interactive components, such as self-disclosure and perceived partner responsiveness, and is influenced by intrapersonal factors, such as the motives, needs, goals and fears of each partner. It has, however, not yet been determined whether sexual intimacy is the product of a transactional, interpersonal process as well. We propose an expansion of Reis and Shaver's model to explain the formation of sexual intimacy and satisfaction, in addition to emotional intimacy. Considering this model would add to current research by expanding emotional intimacy with sexual intimacy and by not solely focusing on individual perception, but by taking the interpersonal process in which two individuals interact with each other into account. Given that this model acknowledges the influence of intrapersonal factors, fears of both sexual and emotional intimacy can be considered as well, offering a more comprehensive understanding of the processes involved in sexual dissatisfaction.

References

- Allen, E. S., & Atkins, D. C. (2005). The multidimensional and developmental nature of infidelity: Practical applications. *Journal of Clinical Psychology, 61*, 1371–1382.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality & Social Psychology, 51*, 1173–1182.
- Basson, R., Althof, S., Davis, S., Fugl-Meyer, K., Goldstein, I., Leiblum, S., Meston, C., Rosen, R., & Wagner, G. (2004). Summary of the recommendations on sexual dysfunctions in women. *The Journal of Sexual Medicine, 1*, 24–34.
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.
- Birnbaum, G. E. (2007). Attachment orientations, sexual functioning, relationship satisfaction in a community sample of women. *Journal of Social and Personal Relationships, 24*, 21–35.
- Birnbaum, G. E., Reis, H. T., Mikulincer, M., Gillath, O., & Orpaz, A. (2006). When sex is more than just sex: Attachment orientations, sexual experience, and relationship quality. *Journal of Personality and Social Psychology, 91*, 929–943.
- Bowlby, J. (1973). *Attachment and loss: Separation, anxiety and anger*. New York: Basic Books.
- Bowlby, J. (1982). *Attachment*. New York: Basic Books
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York: Guilford Press.
- Butzer, B., & Campbell, L. (2008). Adult attachment, sexual satisfaction, and relationship satisfaction: A study of married couples. *Personal Relationships, 15*, 141–154
- Catania, J. A., McDermott, L. J., & Wood, J. A. (1984). Assessment of locus of control: Situational specificity in the sexual context. *Journal of Sex Research, 20*, 310–324.
- Campbell, L., Simpson, J. A., Boldry, J., & Kashy, D. A. (2005). Perceptions of conflict and support in romantic relationships: The role of attachment anxiety. *Journal of Personality and Social Psychology, 88*, 510–531.
- Carter, S., & Sokol, J., (1988). *Men who can't love*. New York: Penguin Group.
- Cliff, N., & Earleywine, M. (1994). All Predictors Are ‘Mediators’ Unless the Other Predictor Is a ‘Suppressor’. *Unpublished manuscript*.
- Davis, M. D. (1985). *The logic of causal order*. Sage University Paper Series on Quantitative Applications in the Social Sciences. Thousand Oaks: Sage Publications.
- Davis, D., Shaver, P. R., & Vernon, M. L. (2004). Attachment style and subjective motivations for sex. *Personality and Social Psychology Bulletin, 30*, 1076–1090.

- Davis, D., Shaver, P. R., Widaman, K. F., Vernon, M. L., Follette, W. C., & Beitz, K. (2006). ‘‘I can’t get no satisfaction’’: Insecure attachment, inhibited sexual communication, and sexual dissatisfaction. *Personal Relationships, 13*, 465–483.
- Descutner, C. J., & Thelen, M. H. (1991). Development and validation of a Fear-of-Intimacy Scale. *Psychological Assessment, 3*, 218–225.
- Diehl, M., Elnick, A. B., Bourbeau, L. S., & Labouvie-Vief, G. (1998). Adult attachment styles: Their relations to family context and personality. *Journal of Personality and Social Psychology, 74*, 1656–1669.
- Doi, S. C., & Thelen, M. H. (1993). The Fear of Intimacy Scale: Replication and extension. *Psychological Assessment, 5*, 377–383.
- Donnelly, D. A. (1993). Sexually inactive marriages. *Journal of Sex Research, 30*, 171–179.
- Edwards, J. N., & Booth, A. (1994). Sexuality, marriage, and well-being: The middle years. In A. S. Rossi (Ed.), *Sexuality across the life course* (pp. 233–259). Chicago: University of Chicago Press.
- Feldman, L. B. (1979). Marital Conflict and Marital Intimacy: An Integrative Psychodynamic-Behavioral-Systemic Model. *Family Process, 18*, 69–78.
- Gentzler, A. L., & Kerns, K. A. (2004). Associations between insecure attachment and sexual experiences. *Personal Relationships, 11*, 249–265.
- Georgiadis, J. R., Reinders, A. A. T., Paans, A. M., Renken, R., & Kortekaas, R. (2009). Men versus women on sexual brain function: prominent differences during tactile genital stimulation, but not during orgasm. *Human brain mapping, 30*, 3089–3101.
- Greeley, A. M. (1991). *Faithful attraction: Discovering intimacy, love, and fidelity in American marriage*. New York: Doherty.
- Greeff, A.P., & Malherbe, H.L. (2001). Intimacy and marital satisfaction in spouses. *Journal of Sex & Marital Therapy, 27*, 247–255.
- Haavio-Mannila, E., & Kontula, O. (1997). Correlates of increased sexual satisfaction. *Archives of Sexual Behavior, 26*, 399–419.
- Hatfield, E., & Rapson, R.L. (1993). *Love, sex and intimacy: their psychology, biology and history*. New York: Harper Collins College Publishers.
- Hamilton, C. E. (2000). Continuity and discontinuity of attachment from infancy through adolescence. *Child Development, 71*, 690–694.
- Hazan, C. & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511–524.
- Henderson-King, D. H., & Veroff, J. (1994). Sexual satisfaction and marital well-being in the first years of marriages. *Journal of Social and Personal Relationships, 11*, 509–534.

- Impett, E. A., Gordon, A. M., & Strachman, A. (2008). Attachment and daily sexual goals: A study of dating couples. *Personal Relationships, 15*, 375–390.
- Lawrance, K., & Byers, E. S. (1995). Sexual satisfaction in long-term heterosexual relationships: Interpersonal exchange model of sexual satisfaction. *Personal Relationships, 2*, 267–285.
- Lewis, M., Feiring, C., & Rosenthal, S. (2000). Attachment over time. *Child Development, 71*, 707–720.
- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual review of psychology, 58*, 593–614.
- Mashek, D. J., & Sherman, M. D. (2004). Desiring less closeness with intimate others. In D. J. Mashek & A. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 343–356). Mahwah: Erlbaum.
- Mikulincer, M. (1998). Attachment working models and the sense of trust: An exploration of interaction goals and affect regulation. *Journal of Personality and Social Psychology, 74*, 1209–1224.
- Mikulincer, M., & Goodman, G. S. (2006). *Dynamics of romantic love: Attachment, caregiving, and sex*. New York: Guilford Press.
- Montesi, J. L., Conner, B. T., Gordon, E. A., Fauber, R. L., Kim, K. H., & Heimberg, R. G. (2013). On the relationship among social anxiety, intimacy, sexual communication, and sexual satisfaction in young couples. *Archives of sexual behavior, 42*, 81–91.
- Oggins, J., Leber, D., & Veroff, J. (1993). Race and gender differences in black and white newlyweds' perceptions of sexual and marital relationships. *The Journal of Sex Research, 30*, 152–160.
- Perlman, D., & Fehr, B. (1987). The development of intimate relationships. In D. Perlman & S. W. Duck (Eds.), *Intimate relationships: Development, dynamics and deterioration* (pp. 13–42). Beverly Hills: Sage Publications.
- Popovic, M. (2005). Intimacy and its relevance in human functioning. *Sexual and Relationship Therapy, 20*, 31–49.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*, 717–731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods, 40*, 879–891.
- Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck (Ed.), *Handbook of personal relationships* (pp. 367–389). Chichester: Wiley & Sons.

- Rubin, H., & Campbell, L. (2012). Day-to-Day Changes in Intimacy Predict Heightened Relationship Passion, Sexual Occurrence, and Sexual Satisfaction A Dyadic Diary Analysis. *Social Psychological and Personality Science*, 3, 224–231.
- Schachner, D. A., & Shaver, P. R. (2004). Attachment dimensions and sexual motives. *Personal Relationships*, 11, 179–195.
- Schaefer, M. T., & Olson, D. H. (1981). Diagnosing intimacy: The PAIR inventory. *Journal of Marital and Family Therapy*, 7, 47–60.
- Sheehan, P. L. (1989). Relationships among combat trauma, fear of close and personal relationships, and intimacy. *Unpublished doctoral dissertation*.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 422–445.
- Sibley, C. G., Fischer, R., & Liu, J. H. (2005). Reliability and validity of the Revised Experiences in Close Relationships (ECR-R) self-report measure of adult romantic attachment. *Personality and Social Psychology Bulletin*, 31, 1524–1536.
- Simpson, J.A. (1990). Influence of Attachment Styles on Romantic Relationships. *Journal of Personality and Social Psychology*, 59, 971–980.
- Spirtes, P., Glymour, C. N., & Scheines, R. (1993). *Causation, Prediction, and Search*. New York: Springer-Verlag.
- Stackert, R. A., & Bursik, K. (2003). Why am I unsatisfied? Adult attachment still, gendered irrational relationships beliefs, and young adult romantic relationship satisfaction. *Personality and Individual Differences*, 34, 1419–1429.
- Sümer, N., & Cozzarelli, C. (2004). The impact of adult attachment on partner and self-attributions and relationship quality. *Personal Relationships*, 11, 355–371.
- Tracy, J. L., Shaver, P. R., Albino, A. W., & Cooper, M. L. (2003). Attachment styles and adolescent sexuality. In P. Florsheim (Ed.), *Adolescent romance and sexual behavior: Theory, research, and practical implications* (pp. 137–159). Mahwah: Erlbaum.
- Tolstedt, B. E., & Stokes, J. P. (1983). Relation of verbal, affective, and physical intimacy to marital satisfaction. *Journal of Counseling Psychology*, 30, 573–580.
- Tzelgov, J., & Henik, A. (1991). Suppression situations in psychological research: Definitions, implications, and applications. *Psychological Bulletin*, 109, 524–536.
- Vangelisti, A. L. & Beck, G. (2007). Intimacy and fear of intimacy. In L. L'Abate (Ed.), *Low-cost approaches to promote physical and mental health* (pp. 395–414). New York: Springer.
- Verspui, E. C. B., et al. (2013). Psychometric properties of the Fear of Close and Personal Relationships Questionnaire. *Unpublished manuscript*.

- Waite, L. J., & Joyner, K. (2001). Emotional satisfaction and physical pleasure in sexual unions: Time horizon, sexual behavior, and sexual exclusivity. *Journal of Marriage and Family*, *63*, 247–264.
- Waring, E. M., & Chelune, G. J. (1983). Marital intimacy and self-disclosure. *Journal of Clinical Psychology*, *39*, 183–190.
- Waters, E., Merrick, S., Treboux, D., Crowell, J., & Albersheim, L. (2000). Attachment security in infancy and early adulthood: A twenty-year longitudinal study. *Child Development*, *71*, 684–689.
- Weinfield, N. S., Sroufe, L. A., & Egeland, B. (2000). Attachment from infancy to early adulthood in a high-risk sample: Continuity, discontinuity, and their correlates. *Child Development*, *71*, 695–702.