# Attachment Insecurity and Sexual and Relational Experiences in Saudi Arabian Women

THE JOURNAL OF
SEXUAL MEDICINE

ORIGINAL RESEARCH & REVIEWS

PSYCHOLOGY

# Attachment Insecurity and Sexual and Relational Experiences in Saudi Arabian Women: The Role of Perceived Partner Responsiveness and Sexual Assertiveness

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## ABSTRACT

**Background:** Attachment and intimacy play an important role in shaping sexual and relational experiences. Yet, their interrelation has rarely been investigated in the context of sexual problems and never been tested in Saudi Arabian women.

**Aim:** The present study examined the interrelations of attachment orientation and sexual function, distress, satisfaction, and relational satisfaction in a sample of Saudi Arabian women and explored whether this link can be explained by 2 important aspects of (sexual) intimacy, namely perceived partner responsiveness (PPR) and sexual assertiveness.

**Method:** This is a cross-sectional, observational study in a sample of 50 heterosexual women with sexual problems and 50 control women without problems, who completed an Arabic version of questionnaires on attachment orientation, sexual assertiveness, PPR, relationship satisfaction, sexual satisfaction, sexual distress, and sexual function.

**Results:** We found that both attachment anxiety and sexual refusal showed a significant association with the level of sexual function, sexual distress, and sexual satisfaction ($P < .01$) in the clinical group. No mediating effects of sexual refusal were found. In the control group, sexual function, sexual distress, and sexual satisfaction were predicted by attachment avoidance ($P < .01$). Level of sexual function was also predicted by sexual initiation ($P < .05$). PPR fully mediated the association between attachment anxiety and relational satisfaction in the clinical group ($P < .01$), while in the control group the link between attachment avoidance and relational satisfaction was only partially mediated by PPR ($P < .01$).

**Strengths & Limitations:** This study offers unique information on relational and sexual functioning in a culture in which sexual expression and intimate behavior are restricted, particularly in women.

**Clinical Implications:** Perceiving the partner as being more responsive is an important target of intervention to increase satisfaction with the relationship.

**Conclusions:** Our results suggest that attachment anxiety and low sexual assertiveness, as indicated by lower tendencies to refuse sex when not desired, play a significant role in predicting negative sexual experiences in women who cope with sexual difficulties. **Attaky A, Kok G, Dewitte M. Attachment Insecurity and Sexual and Relational Experiences in Saudi Arabian Women: The Role of Perceived Partner Responsiveness and Sexual Assertiveness. J Sex Med 2020;17:1383–1394.**



**Key Words:** Attachment; Relationships; Interpersonal; Perceived Partner Responsiveness; Sexual Assertiveness; Sexual Function; Saudi Arabia

Received September 10, 2019. Accepted February 29, 2020.

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https://doi.org/10.1016/j.jsxm.2020.02.029

Relational intimacy is a key aspect of sexuality because the level of intimacy and commitment between partners will likely determine whether or not individuals engage in sex and how much satisfaction they gain from it.[1,2] It has been theorized that intimacy depends on 2 important processes,[2,3] namely self-disclosure and partner responsiveness.[4] Although both components of intimacy determine the context in which sexual interactions take place, research on their association with sexual responding is scarce. When transferring these concepts to the field of sexuality, one could argue that self-disclosure is conceptually related to sexual assertiveness.[5,6] The latter refers to the ability to openly communicate thoughts, choices, feelings, and preferences about sexuality.[4] Open communication is essential to refuse sex when not desired and initiate sex when desired. Sexual refusal and sexual initiation are the 2 central aspects of being sexually assertive.[7] Research has shown that sexually assertive women report higher frequencies of sexual activity and orgasms, and greater marital and sexual satisfaction.[7] There are also indications that greater (verbal) sexual self-disclosure, sexual assertive communication, and non-verbal sexual communication are associated with greater sexual satisfaction, in both men and women.[8−10] The ability to self-disclose is thus essential to develop healthy and functional sexuality as it may protect individuals from risky sexual behavior as well as sexual problems.[11−13]

In addition to sexual assertiveness, perceived partner responsiveness (PPR) also plays an important role in shaping sexual interactions. That is, satisfying sex requires partners to respond to one another's needs, which allows them to feel validated, cared for, and understood.[5,14] Perceiving the partner as understanding and validating encourages sexual desire and sexual approach behavior because sexual interactions with responsive partners enhance intimate experiences.[15] In contrast, people who perceive their partners as unresponsive may avoid sexual activity, thereby forgoing the potential intimacy provided by sex. There is some evidence that the perception of greater emotional support and feeling validated by the partner is associated with less sexual difficulties, more sexual satisfaction, and more relationship satisfaction.[16,17]

At present, little is known about how PPR and sexual assertiveness are implicated in sexual and relational experiences. Attachment theory may offer more insight into the mechanisms by which both determinants of intimacy shape sexual responses. The basic idea of the attachment theory is that experiences with primary caregivers and significant others throughout life are stored in mental representations that influence our thoughts, feelings, and behaviors in later relationships.[18,19] Positive and negative attachment experiences lead to, respectively, secure and insecure (ie, anxious and avoidant) attachment orientations which will determine the level of intimacy one desires in romantic relationships.

During the past decades, the link between attachment and sexuality has received increasing attention, with the majority of research focusing on how sexual responding varies as a function of attachment orientation. Research has shown that secure attachment is generally associated with positive sexual outcomes such as comfort with expressing affection and sexuality, sexual confidence, openness to sexual activities, and more positive emotions in sexual relationships.[20,21] Anxiously attached individuals tend to use sex to satisfy their (unmet) attachment and intimacy needs. Accordingly, attachment anxiety is found to be associated with less positive and more negative emotions during sex,[20,22,23] lower levels of sexual arousal and sexual satisfaction,[22,24] less frequent orgasm in women,[22] and higher levels of sexual anxiety.[25] Because of their low (sexual) self-confidence and their fear of rejection and abandonment, they are less open to communicate about their sexual needs and preferences.[25,26] They tend to sacrifice their own sexual needs, are sexually compliant, and prefer pleasing the partner over their own sexual enjoyment.[22,27] Attachment avoidance is also associated with more negative and less positive emotions during sex, lower levels of sexual arousal and orgasm, lower sexual satisfaction, and doubts about their sexual capacities.[1,22] Given their need for emotional distance, they tend to dismiss their partner's needs, show limited expressions of affection and intimacy, and are less open to communicate about sexual wishes.

Although evidence on the impact of attachment orientation on sexual and relational outcomes is accumulating, more research is needed to understand how these processes interact with each other because the results are currently inconsistent.[22,25,27] To resolve this issue, the present study goes beyond simply establishing the association of attachment, sex, and relationships by examining the processes that might underlie this link. Based on the interpersonal process model of intimacy, we ascribe a central role to PPR and sexual assertiveness.[11,13] Linking attachment and sexuality to PPR and sexual assertiveness is both heuristically and empirically valid. The perception of partner responsiveness plays a central role in adult attachment theory.[2,18] That is, when faced with threat, people will seek proximity toward their attachment figure as a means to attain security. The perception of the attachment figure as being available or not will eventually determine whether or not a sense of security will be attained and this sense of security is essential to create opportunities for sexual exploration. Drawing on the attachment theory, it is assumed that both attachment anxiety and avoidance are associated with perceiving the partner as less available and responsive, which has been confirmed in empirical studies.[28]

Also the link between attachment and sexual assertiveness makes theoretical sense because one's attachment orientation will determine how openly one can talk about sexual needs in light of seeking reassurance or fearing rejection. Previous work has found, for example, that individuals with more insecure attachments disclose fewer thoughts and feelings about their relationship[29] and are less assertive to express their sexual needs.[10,25] Anxiously attached adolescents were found to show less assertiveness by having sex to avoid the partner's rejection,[26] while

avoidantly attached individuals did not communicate their sexual needs because they care little for their partner's feelings.[30] Although there is clear evidence showing that sexual assertiveness is an important variable in understanding the association between attachment and sexual outcomes,[31] the results are not straightforward. In several studies, it has been shown that sexual assertiveness mediated the association between attachment orientation and sexual satisfaction for both women and men.[32] Other studies could not establish such a mediating effect.[13] More research is needed to unravel these associations. Studying how sexual assertiveness is involved in shaping the association between attachment and sexual and relational outcomes is especially relevant in a sample of Saudi Arabian women. These women are often discouraged to express their sexual needs and learn to restrict themselves sexually. They also tend to comply to their partner's sexual wishes out of obligation or fear of losing the partner.[27,33]

This study also wants to address 2 important shortcomings of previous research. First, current evidence on the link between attachment and sexuality is biased by the fact that samples include mainly sexually satisfied and functional participants, most often young adult students. We lack studies in which clinical and community samples are used. Secondly, the interrelations of attachment, intimacy, and sexuality have so far been explored in western populations, leaving whether and how these variables interrelate in a Middle East sample, Saudi Arabia in specific, unexplored. This offers unique information on relational and sexual functioning in a culture in which sexual expression and intimate behavior are restricted, particularly in women. Traditional beliefs in Arabian populations are male-dominant, which implies that there is less attention for studying and treating female sexual dysfunction. Moreover, due to a lack of sex education and openness to publicly talk about sexuality, and a cultural restriction to discuss sexual concerns outside the relationship, sexual responding in Saudi women is a highly sensitive, yet important and clearly understudied, topic.[34,35]

## THE CURRENT STUDY

The present study aimed to examine the link between individual differences in attachment orientation and sexual function, distress, sexual satisfaction, and relational satisfaction, and to explore whether this link can be explained by 2 important aspects of (sexual) intimacy, namely PPR and sexual assertiveness. We examined these interrelations in a sample of Saudi Arabian women and included both a clinical sample consulting for sexual problems and a non-clinical control sample. By including 2 samples, we can explore whether attachment and intimacy play a different role in determining sexual and relational responding when encountering sexual problems.

Based on previous research,[15,23,31] we predicted that attachment anxiety and avoidance will be characterized by lower sexual function, more sexual distress, less sexual and relational satisfaction, as well as lower sexual assertiveness, and lower PPR.[31,36] We also predicted that sexual assertiveness will be associated with more negative sexual and relational outcome variables. Furthermore, we explored whether sexual assertiveness mediates the link between attachment and sexual and relational outcome variables. Based on previous work,[31,32] we hypothesized that sexual assertiveness acts as a mediator between attachment anxiety and sexual and relational variables. We also predicted an important role of PPR and expected that lower PPR will be associated with more negative outcome variables. In addition, we explored the mediating role of PPR in determining the association between attachment and these outcomes. We expected PPR to act as a mediator between attachment anxiety and sexual and relational variables. Because issues of intimacy and attachment insecurity are probably more pertinent in women consulting with sexual problems, we expected that the aforementioned associations will be found mainly in a clinical sample compared to a non-clinical sample.

## METHOD

### Participants

This is a cross-sectional, observational study that was carried out among patients attending the outpatient clinic at Mutmaena Medical Center in Riyadh city. About 60% of them were seeking treatment for their sexual or marital problems, about 30% were referred by other colleagues in the center, and about 10% were referred by other colleagues outside the center. This sample was not formally diagnosed with sexual dysfunction but did report considerable sexual concerns. We also recruited a control group of women without sexual complaints, by relying on the relatives of patients attending the center, and women working in the center or on the personal network of the research team. We are aware that this is not a matched or a selected sample that allows systematic comparison with the clinical group. Yet, this convenience sample does provide a valid opportunity to compare the determinants and underlying structure of sexual responses between women with and without sexual problems. Data were collected from March to December 2017. We recruited a clinical group and a control group of women. In total, we recruited 120 women. Of the clinical groups, 13 women refused to participate, mainly due to lack of cooperation, shyness, and fear of confidentiality and privacy (despite our efforts to guarantee confidential responding). And 3 women refused to participate because their partners refused participation. This brought the clinical sample to 50 women. Of the control group, 4 women refused because their questionnaires were not completed, which brought the total control sample to 50 women. Power analyses, based on detecting a medium effect size, showed that a sample of 45 couples is sufficient to detect reliable effects.

The inclusion criteria for both samples were as follows: (i) Arabic married women living in Saudi Arabia and aged between 18 and 50 years; (ii) able to give consent, and (iii) able to read and understand the Arabic language.

Participants were excluded when they had:

i. Comorbid physical disorders: diabetes mellitus, hypertension, symptoms that suggest of alcoholic cirrhosis, a clinical diagnosis of endocrine disorders, other systemic illnesses, history of genito-urinary surgery, and neurologic or spinal cord lesions.
ii. Comorbid psychiatric disorders: schizophrenia, delusional disorder, anxiety disorders, and mood disorders including dysthymia. Patients who had symptoms of depression or anxiety not fulfilling a syndromal diagnosis were included in the study.
iii. Substance use.
iv. Use of drugs affecting sexual function (antipsychotics, antidepressants, antihypertensive, etc).
v. Pregnant women.
vi. Menopausal women.

Informed consent was obtained from all particpants and ethical approval was obtained from the institutional review boards of the medical center where the research took place.

## Procedure

All women were informed that participation was strictly voluntary with no adverse effects whatsoever. Refusing to participate would have no negative effects on treatment, neither would it deny the possibility of any further treatment. Participants were also informed that the information they provided would be completely anonymous as no names or other identifiers would be collected on the surveys. Participants were interviewed alone in a comfortable, private environment in the center. They were informed that they had the right to ask to stop recording at any time during the interview. They were also informed that they had the right not to answer a question and could withdraw at any stage without given reasons. All the information given was treated as confidential with the data handled only by the research team. The participants did not gain financial benefit from this study. The research findings did not disclose any personal information of the participants that took part in the study; coded numbers or letters were used, and no actual names revealed. All the transcripts and data were stored securely in a locked cabinet. After reading and signing the informed consent form, participants completed the Arabic version of questionnaires in the clinic (in the cabinet of the researcher or the cabinet of a colleague who was absent at the time of research) or at home.

## Materials

Demographic variables were collected via standardized questions asking about age, parity, employment status, educational level, duration of the marriage, consanguinity, and history of traumatic events such as sexual harassment. Then, we presented women with a series of standardized questionnaires to measure sexual function, sexual distress, sexual assertiveness, sexual satisfaction, relational satisfaction, PPR, and attachment orientation.

All relevant questionnaires were translated into Arabic language using a back-translation procedure, including expert translation and preliminary pilot testing. During the translation process, simple formal Arabic was used to make the questionnaires clear and understandable. The Arabic translation of all questionnaires was judged by 10 women for clarity and conformity with the local culture. As far as we know, the questionnaires we used have not been applied yet in a Saudi environment, although few of them have already been applied to other Arabian environments. Unfortunately, we did not include any other validity testing (eg, content, discriminant, and construct validity).

To measure the sexual functioning of women, we used the Female Sexual Function Index.[37] The index includes 19 items that tap into the women's sexual experiences over the last 4 weeks. The 19 questions covered 6 domains: desire, arousal, lubrication, orgasm, satisfaction, and pain. Responses to each question are scored either 0 (no sexual activity) or 1 (suggestive of dysfunction) to 5 (suggestive of normal sexual activity). The total score was obtained by summing the 6 domain scores and, based on previous norms, cutoff scores are set at $< 26$. Lower scores indicate a greater severity of sexual problems. In the current study, the internal consistency of the total score of the Female Sexual Function Index revealed a high reliability, $\alpha = 0.94$.

Sexual satisfaction was measured by using the Index of Sexual Satisfaction.[38] This scale measures the degree of dissatisfaction in the sexual component of a relationship. It includes 25 items that are scored on a 7-point Likert scale going from none of the time to all of the time. Scores on the total scale were obtained by adding all domain scores. Higher scores indicated greater degrees of sexual discord. In the current study, the internal consistency of the Index of Sexual Satisfaction was good, $\alpha = 0.66$.

To measure sexual distress, we made use of the Female Sexual Distress Scale,[39] which was developed to provide a standardized, quantitative measure of sexually related personal distress in women. Women were asked to rate 13 items in terms of frequency, ranging from 0 (never) to 4 (always). Items were summed to create a total score ranging from 0 to 52, with higher scores indicating more sexually related distress. The internal consistency of the total score of the Female Sexual Distress Scale was high, $\alpha = 0.91$.

To measure sexual assertiveness, we used the Sexual Assertiveness Scale (SAS).[11] Only the subscales of initiation and refusal were used. These SAS subscales include 15 items that are scored on a 5-point Likert scale, ranging from 1 (never) to 5 (always). Items were summed to create a total score with a higher score indicating greater sexual assertiveness. The internal consistency of both SAS initiation and SAS refusal was good, $\alpha = 0.61-0.70$.

To measure attachment orientation, we used the Experiences in Close Relationships Scale-Revised (ECR-R) version.[40] This questionnaire includes 36 items that are scored on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly

**Table 1.** Sociodemographic characteristics of the clinical and control group

| | Group | | |
|---|---|---|---|
| | Clinical %* | Control %* | Total % |
| Consanguity | | | |
| No | 46 | 56 | 51 |
| Yes | 54 | 44 | 49 |
| Employment status | | | |
| Unemployed | 58 | 58 | 58 |
| Employed | 42 | 42 | 42 |
| Education level | | | |
| University | 60 | 58 | 59 |
| Secondary | 34 | 32 | 33 |
| Primary | 6 | 10 | 8 |
| Number of wives | | | |
| 1 | 80 | 84 | 82 |
| 2 | 20 | 14 | 17 |
| 3 | 0 | 2 | 1 |
| Number of marriages | | | |
| 1 | 86 | 96 | 91 |
| 2 | 12 | 4 | 8 |
| 5 | 2 | 0 | 1 |
| Age, mean (SD)* | 30.86 (7.61) | 30.70 (6.91) | |
| Duration of marriage, mean (SD) | 8.28 (6.93) | 8.55 (6.42) | |

*Values are expressed as No. (%) or mean ± SD.

agree). The ECR-R provides a score on the 2 dimensions of Anxiety and Avoidance. The internal consistency of both ECR-R Anxiety, $\alpha = 0.89$, and ECR-R Avoidance, $\alpha = 0.88$, was high.

General relationship satisfaction was measured using the Revised Dyadic Adjustment Scale,[41] which is a self-report questionnaire that assesses several dimensions of couple relationships. This includes 14 items, asking the respondents to rate certain aspects of her/his relationship on a 5 or 6-point scale. Items were summed to create a total score, with higher scores indicating greater relationship satisfaction and lower scores indicating lower relationship satisfaction. In the current study, the internal consistency of the total score of Revised Dyadic Adjustment Scale was good, $\alpha = 0.76$.

Finally, we included a measure of PPR.[42] The Perceived Partner Responsiveness Scale is composed of 18 items that assess 3 factors which characterize a responsive relationship: feeling validated, feeling understood, and feeling that personal needs are being met. Each item can be answered on a 9-point Likert scale ranging from 1 (not at all) to 9 (completely true). Items were summed to create a total score, with higher scores reflecting greater PPR. The internal consistency of the total score of PPR was high, $\alpha = 0.94$.

## Data Analyses

We first analyzed potential group differences regarding the main outcome variables and examined associations of attachment, sexual assertiveness, PPR, and sexual and relational outcomes. Next, we tested several mediation models to examine whether the association between attachment dimensions and the outcome variables would be mediated by sexual assertiveness and PPR. A separate model was tested for each of the outcome variables. Because of power issues, we tested the regression models separately in the clinical and control group and we ran separate models for each of the mediators. In order to formally test whether sexual assertiveness (consisting of 2 components: refusal and initiation) and PPR mediated the association of attachment anxiety and avoidance with sexual function, sexual distress, sexual satisfaction, and relational satisfaction, the outcome was regressed on the attachment dimensions and the mediator. In the first step, attachment anxiety and avoidance were regressed on the outcome variable. In the second step, attachment anxiety and avoidance were regressed on the outcome variable together with the mediators sexual assertiveness and PPR. In case (one of) the attachment scores as well as (one of) the mediators yielded a significant association with the outcome variable, a mediation analysis was conducted to test whether the association between attachment and outcome variables would be fully or partially mediated by sexual assertiveness or PPR. Mediation was tested using the PROCESS procedure for SPSS (SPSS Inc, Chicago, IL).[43]

# RESULTS

## Demographic Information

The demographic information of our sample is presented in Table 1. No group differences were found regarding the demographic variables, all $P$ values $> .10$.

**Table 2.** Means and SD of the main variables in women of the clinical and control group

| Variable group | | Mean | SD | *T* |
|---|---|---|---|---|
| SAS refusal | Clinical | 17.30 | 3.90 | 0.88* |
| | Control | 18.70 | 2.77 | |
| SAS initiation | Clinical | 18.80 | 2.26 | 0.81* |
| | Control | 18.38 | 2.87 | |
| Sexual satisfaction | Clinical | 102.36 | 19.64 | −3.32* |
| | Control | 115.34 | 19.42 | |
| Relationship satisfaction | Clinical | 30.78 | 9.66 | −3.41* |
| | Control | 37.58 | 10.22 | |
| Attachment avoidance | Clinical | 4.15 | 0.55 | 4.52* |
| | Control | 3.67 | 0.51 | |
| Attachment anxiety | Clinical | 3.44 | 0.95 | −3.71* |
| | Control | 4.08 | 0.74 | |
| Sexual function | Clinical | 16.66 | 5.41 | −4.89* |
| | Control | 22.48 | 19.64 | |
| PPR | Clinical | 73.64 | 35.66 | −5.18* |
| | Control | 111.40 | 37.11 | |
| Sexual distress | Clinical | 26.78 | 11.55 | 1.84 |
| | Control | 22.50 | 11.71 | |

PPR = perceived partner responsiveness; SAS= Sexual Assertiveness Scale.
*$P < .01$.

## Group Differences in Outcome Variables

The means and SDs of the main variables of interest are reported in Table 2. We compared the clinical and control group on the main variables using independent t-tests. As presented in Table 2, we found significant group differences regarding sexual function, sexual assertiveness (ie, refusal, initiation), sexual distress, sexual satisfaction, relationship satisfaction, PPR, and attachment dimensions. In general, the clinical group reported lower sexual function, lower sexual and relational satisfaction, less PPR, less sexual initiation, more sexual refusal, more attachment avoidance, and less attachment anxiety than the control group. No significant differences were found with regard to sexual distress between groups.

## Associations of Attachment, Intimacy Variables, and Sexual and Relational Outcomes

We first calculated Pearson correlations for interrelations of attachment dimensions, sexual assertiveness, PPR, and the outcome variables (sexual function, sexual distress, sexual satisfaction, and relationship satisfaction). As can be seen in Table 3, several associations reached significance, both in the clinical and control group. Next, the outcome variables were regressed on the attachment dimensions and the mediator.

### Clinical Group

Regarding sexual function, a significant association was found with attachment anxiety, $\beta = 0.48$, $P = .00$. Also, sexual refusal showed a significant association with sexual function, $\beta = 0.29$, $P = .03$. With this mediator being included in the regression equation, the association between attachment anxiety and sexual function remained significant, $\beta = 0.34$, $P = .03$. This shows that there is a direct association between attachment anxiety and sexual function, $B = 2.70$, $t = 3.13$, $P = .00$, which was not mediated by sexual refusal, $B = -0.50$, $t = -2.34$, $P = .02$. Both attachment anxiety and sexual refusal have independent (additive) effects on sexual function. No other significant associations were found, all $\beta$ values $< 0.29$, all $P$ values $> .10$.

Regarding sexual distress, the association with attachment anxiety almost reached significance, $\beta = 0.31$, $P = .06$. No other significant associations were found, all $\beta$ values $< 0.27$, all $P$ values $> .10$.

Regarding sexual satisfaction, a significant association was found with attachment anxiety, $\beta = 0.57$, $P = .00$. Also, sexual refusal showed a significant association with sexual satisfaction, $\beta = -0.30$, $P = .01$. With this mediator being included in the regression equation, the association between attachment anxiety and sexual satisfaction remained significant, $\beta = 0.48$, $P = .00$. This indicates that there is a direct association between attachment anxiety and sexual satisfaction, $B = 9.59$, $t = 3.99$, $P = .00$, which was not mediated by sexual refusal, $B = -1.67$, $t = -2.83$, $P = .00$. Both attachment anxiety and sexual refusal have independent (additive) effects on sexual satisfaction. No other significant associations were found, all $\beta$ values $< 0.14$, all $P$ values $> .10$.

Regarding relational satisfaction, a significant association was found with attachment anxiety, $\beta = 0.31$, $P = .05$. In addition, a significant association was found with sexual initiation, $\beta = 0.29$, $P = .05$, and PPR, $\beta = 0.56$, $P = .00$. With PPR being included in the regression equation, the association between attachment anxiety and relational satisfaction was no longer significant, $\beta = 0.17$, $P = .26$. To formally evaluate

**Table 3.** Correlational analyses between the variables of interest in the clinical and control group

| | Clinical group | | | | | | | | Control group | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sexual satisfaction | Relationship satisfaction | Sexual distress | SAS initiation | SAS refusal | PPR | Attachment avoidance | Attachment anxiety | Sexual satisfaction | Relationship satisfaction | Sexual distress | SAS initiation | SAS refusal | PPR | Attachment avoidance | Attachment anxiety |
| Sexual function | 0.63** | 0.15 | −0.11 | 0.04 | −0.45** | 0.37** | −0.21 | 0.52** | 0.71** | 0.42** | −0.61** | 0.22 | −0.11 | 0.31* | −0.45** | 0.31* |
| Sexual satisfaction | | 0.21 | 0.01 | 0.14 | −0.51** | 0.33* | −0.32* | 0.59** | | 0.31* | −0.61** | 0.12 | −0.09 | 0.26 | −0.55** | 0.28* |
| Relationship satisfaction | | | 0.36** | 0.27 | −0.15 | 0.61** | −0.32* | 0.36* | | | −0.46** | 0.14 | 0.17 | 0.68** | −0.52** | 0.21 |
| Sexual distress | | | | 0.19 | −0.18 | 0.23 | −0.09 | 0.25 | | | | −0.18 | −0.28* | −0.34* | 0.27 | 0.06 |
| SAS initiation | | | | | −0.16 | 0.51** | −0.21 | −0.09 | | | | | 0.13 | 0.44** | 0.04 | −0.2 |
| SAS refusal | | | | | | −0.26 | 0.19 | 0.37** | | | | | | 0.19 | 0.14 | −0.32* |
| PPR | | | | | | | −0.48** | 0.38** | | | | | | | −0.49** | 0.08 |
| Attachment avoidance | | | | | | | | −0.41** | | | | | | | | −0.51** |

PPR = perceived partner responsiveness; SAS = Sexual Assertiveness Scale.
*$P < .05$, **$P < .01$.

whether PPR (partly) mediated the association between attachment anxiety and relational satisfaction, the standard error of the mediated effect was bootstrapped. PPR proved to be an independent and significant mediator, $\beta = 0.15$, $t = 4.57$, $P = .00$. No other significant associations were found, all $\beta$ values $< 0.27$, all $P$ values $> .10$.

### Control Group

Regarding sexual function, a significant association was found with attachment avoidance, $\beta = -0.44$, $P = .00$. Also, sexual initiation showed a significant association with sexual function, $\beta = 0.28$, $P = .03$. With this mediator being included in the regression equation, the association between attachment avoidance and sexual function remained significant, $\beta = -0.41$, $P = .03$. This indicates a direct association between attachment avoidance and sexual function, $B = -4.91$, $t = -3.77$, $P = .00$, which was not mediated by sexual initiation, $B = 0.46$, $t = 1.98$, $P = .05$. Both attachment avoidance and sexual initiation had independent (additive) effects on sexual function. No other significant associations were found, all $\beta$ values $< 0.15$, all $P$ values $> .10$.

Regarding sexual distress, a significant association was found with attachment avoidance, $\beta = 0.43$, $P = .01$. The association with sexual refusal almost reached significance, $\beta = -0.27$, $P = .06$. With this mediator being included in the regression equation, the association with attachment avoidance was no longer significant, $\beta = -0.27$, $P = .07$. To formally evaluate whether sexual refusal (partly) mediated the association between attachment avoidance and sexual distress, the standard error of the mediated effect was bootstrapped. Both sexual refusal, $B = -1.39$, $t = -2.46$, $P = .02$, and attachment avoidance, $B = 7.34$, $t = 2.44$, $P = .02$, proved to be independent and significant predictors. No other significant associations were found, all $\beta$ values $< 0.28$, all $P$ values $> .10$.

Regarding sexual satisfaction, a significant association was found with attachment avoidance, $\beta = -0.59$, $P = .00$. No other significant associations were found, all $\beta$ values $< -0.23$, all $P$ values $> .10$.

Regarding relational satisfaction, a significant association was found between attachment avoidance, $\beta = -0.63$, $P = .00$. In addition, a marginally significant association was found with sexual refusal, $\beta = 0.25$, $P = .05$, and a significant association with PPR, $\beta = 0.60$, $P = .00$. With PPR being included in the regression equation, the association between attachment avoidance and relational satisfaction was no longer significant, $\beta = -0.21$, $P = .16$. To formally evaluate whether PPR (partly) mediated the association between attachment avoidance and relational satisfaction, the standard error of the mediated effect was bootstrapped. PPR was found to partially mediate the association between attachment avoidance and relational satisfaction, $\beta = 0.15$, $t = 4.80$, $P = .00$, because the association with attachment remained significant but became significantly smaller, $\beta = -4.91$, $t = -2.12$, $P = .04$.

## DISCUSSION

The present study aimed at deepening our understanding of the association of adult attachment, intimacy, and sexuality. More specifically, we (i) examined possible mediators of the link between attachment and sexual/relational responding, thereby focusing on key components of intimacy; (ii) examined these interrelations in a sample of Saudi Arabian women; (iii) and included both a clinical and non-clinical sample to explore whether similar or different patterns can be observed. Interestingly, we found that attachment anxiety played a significant role in explaining sexual and relational outcome variables in the clinical group, whereas in the control group, attachment avoidance was more central. In addition, sexual refusal had more explanatory value in the clinical group, whereas the control group showed stronger associations with sexual initiation. This might suggest that women in the clinical group are more concerned with avoiding sexual refusal, whereas women in the control group feel more comfortable to express their sexuality and thus take more initiative to engage in sex. Concretely, we found that both attachment anxiety and sexual refusal showed a significant association with the level of sexual function, sexual distress, and sexual satisfaction in the clinical group. No mediating effects of sexual refusal were found. In the control group, sexual function, sexual distress, and sexual satisfaction were predicted by attachment avoidance. Level of sexual function was also predicted by sexual initiation. PPR fully mediated the association between attachment anxiety and relational satisfaction in the clinical group, while in the control group, the link between attachment avoidance and relational satisfaction was only partially mediated by PPR.

In terms of sexuality outcomes, we found that, in women who consult for sexual problems, higher levels of attachment anxiety were associated with lower levels of sexual function, more sexual distress, and less sexual satisfaction. Our results corroborate with previous research showing that attachment anxiety interferes with several aspects of sexual function and sexual satisfaction.[44–46] It is generally assumed that anxiously attached women use sexual activity to satisfy their underlying attachment needs.[46] This may be particularly the case in Saudi Arabian women who worry about not being able to satisfy their partner, thereby fearing the risk of losing him. Moreover, having a sexual dysfunction may be highly stressful for Saudi women because they experience social pressure to engage in sexual relations as well as a strong pressure to conceive. Such pressure might worsen sexual dysfunction and exacerbate the tendency of anxiously attached women to carry on sex-related worries.[31,47] This is also indicated by the observed association between attachment anxiety and sexual distress, suggesting that anxiously attached women who face sexual problems may be particularly vulnerable to experience sexual encounters as a negative and distressing interaction because these are often associated with fears of rejection.[48–50] Note that the clinical group showed, in general, lower levels of attachment anxiety than the control group, which was rather unexpected. Research has shown that sexual problems are more common among anxiously attached individuals because their constant worries about rejection and abandonment would interfere with their sexual response.[2]

With regard to the non-clinical group, only attachment avoidance was associated with sexual outcomes. This is in concordance with results from past studies showing significant relationships between attachment avoidance and sexual function.[25,51] It suggests that women, who feel uncomfortable with closeness, use sex to avoid deeper commitment and to maximize control even in intimate interactions. This could partly be explained by cultural issues, inclining avoidant women to decouple sexual interactions from relational issues, thereby pursuing non-relational goals in the sexual realm.[52–54]

Our results also showed that higher scores on sexual refusal predicted lower levels of sexual function and less sexual satisfaction in the clinical group. This corroborates with other studies showing that sexual refusal is an important indicator of sexual functioning and satisfaction.[7,11,55] Sexual refusal in women may result in less sexual activity, which may create more sexual distance between partners, thereby promoting sexual dysfunction and dissatisfaction.

Again, culture may exacerbate these tendencies. Saudi Arabian women tend to lack sexual assertiveness to express their sexual wishes and sexual boundaries. By prioritizing the partner's needs over their own needs and feeling restricted to express their own sexual wishes, women may experience sexual activity as less rewarding, thereby increasing the tendency to refuse sexual initiation by their partner.[56,57] The dominant cultural norms in Saudi Arabia restrict self-realization in women, especially on a sexual level, making it difficult for women to refuse unwanted sexual behaviors.

In the non-clinical group, sexual refusal had less explanatory value. It was sexual initiation that showed a significant association with sexual function. This suggests that women without clinical problems feel more comfortable to express their sexuality and thus take more initiative to engage in sex, which results in better sexual function. Likewise, having a better sexual function may also increase the tendency of women to initiate sexuality because they expect reward instead of distress. On the other hand, we need to consider that sexual initiation in Saudi Arabian women may be driven by worries about being accepted and validated, which is manifested in a need to please the partner and be sexually appealing for him.[36]

After establishing the link between sexual assertiveness and sexual outcomes, we also explored whether sexual assertiveness would mediate the associations between attachment and sexual experiences. In none of the groups, sexual refusal had a mediating effect, which seems to indicate that both attachment and sexual assertiveness are independent determinants of the sexual experiences of Saudi Arabian women. This result is in concordance with previous work showing that sexual assertiveness did not mediate the association between attachment anxiety and sexual functioning,[45] but it does contradict with another study showing that

sexual assertiveness is important to understand the association between attachment and sexual outcomes.[31] It could be that the pressure to sexually please the partner in Saudi Arabian women makes sexual difficulties inherently threatening and anxiety-provoking, which triggers attachment insecurity at the emotional level and (lack of) sexual assertiveness at the behavioral level.[58]

Considering the role of PPR, this variable seemed particularly relevant to predict relational outcomes. The finding that the link between attachment anxiety and relational satisfaction was determined by how responsive women perceive their partner to be, complies with previous theoretical and empirical evidence that ascribes a central role to feeling validated and supported by one's partner.[10,20,21] This seems particularly the case in anxiously attached women who cope with sexual difficulties. Given their extreme need for approval and reassurance,[54,59,60] perceiving the partner as less available than wanted or needed may negatively affect their general evaluation of the relationship.[22] The mediating role of PPR also suggests that perceived intimacy might potentially protect anxious women from feeling dissatisfied. When the partner is perceived as reacting in a facilitative way to their bids of proximity, anxious women's insecurities about the relationship may be counteracted.[50] Note that PPR refers to women's appraisal and does not necessarily reflect the actual responses of the partner. Although women may be fairly accurate in judging signs of availability, emotional events may bias their perception of partner behavior. Future research should explore the level of correspondence between perceived and actual partner responsiveness. In women who show less sexual problems, perceiving the partner as responsive also played an important role in buffering the negative relational feelings of insecurely attached women, but in this group it seemed that mainly the more avoidantly attached women benefited from it. It could be that having a partner who is perceived as being more available when needed, lowers their defense strategy to keep him at (an emotional) distance, which may enhance the relational climate and mask feelings of dissatisfaction.

### Limitations

Although this paper offers unique information on the relational and sexual functioning of Saudi Arabian women, there are several limitations that need to be considered. The generalization of our results is limited. Future research is needed to determine whether the results are generalizable to women in other areas in the Middle East and with a wider range of age and relationship duration. Although we did have sufficient power to test simple regression models including attachment dimensions as predictor and sexual assertiveness or PPR as mediator, we did not have enough power to run a composite model, including all predictors and mediators on all outcome variables. Also, due to power issues, we did not perform a between-group analysis. That is, we did not explicitly compare our models between the clinical and control groups but tested the models in each group separately to guarantee enough power. Note that, despite these power limitations, we did find theoretically meaningful results.

Our sample may have been biased by self-selection, as women who are generally less assertive may have refused to participate. We also lacked a matched control group, which should be addressed in future research. We focused on PPR and sexual assertiveness in women to explain the link between attachment and sexual and relational outcomes. Other explanatory mechanisms may be relevant to consider as well, such as communication, support, or conflict management. In addition, we might consider including more direct measures of sexual self-disclosure to study the link between intimacy and attachment. Note that observational or qualitative designs would be better suited to reveal the specific role of open communication and self-disclosure in the context of sexual relationships, although this would be challenging in a closed community as Saudi Arabia. The cross-sectional design of our study implies that no causal inferences between the variables can be drawn. Future studies using prospective, longitudinal designs or daily diary measures are needed to unravel the interrelation of attachment, intimacy, and sexual experiences and examine possible bidirectional connections between the variables.

## CONCLUSION

The present study suggests that attachment anxiety and low sexual assertiveness, as indicated by lower tendencies to refuse sex when not desired, play a significant role in predicting negative sexual experiences in women who cope with sexual difficulties. We also found evidence that PPR is a key determinant of feeling satisfied with the relationship. In addition to treating insecure attachment and sexual dysfunctions, clinical interventions should be directed at increasing feelings of being validated and understood by the partner and learning to be comfortable with initiating and refusing sexual contact. Moreover, understanding women to notice signals of partner responsiveness—so they feel more cared for and supported—may be an essential therapeutic tool to protect insecurely attached women from experiencing dissatisfaction with their relationship. In general, our results clearly show that clinical interventions need to target the relational climate as well when treating sexual dysfunctions and dissatisfaction.

## ACKNOWLEDGMENTS

We would like to thank Prof Tariq Al Habib (Mutmaena Medical Center) for his help in collecting the study data and special thanks to the participants who enrolled in the study.

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*Conflict of Interest:* The authors report no conflicts of interest.

*Funding:* None.

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