

**The Relationship Between Sexual Self-Esteem and Sexual Satisfaction in Dutch Adult Women and
Men: The Mediating Role of Sexual Assertiveness**

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Abstract

Sexual satisfaction (SS) is an important aspect of people's sexual wellbeing and has been shown to bolster relational and overall wellbeing. Yet, SS is frequently investigated from a perspective of preventing dysfunction rather than enhancing wellbeing. Positive Psychology theory posits that sexual self-esteem (SSE) may play a crucial role in forming sexually satisfying partnerships by enabling people to be sexually assertive and thus facilitate more sexually pleasurable experiences. The present study aimed at further understanding this mechanism by investigating the mediating role of sexual assertiveness (SA) in the relationship between SSE and SS in men and women. In a cross-sectional design, 303 women and 85 men from the Netherlands completed an online survey measuring SSE, SA, and SS. Analyses revealed significant positive bivariate correlations between all study variables for both men and women. Significant results of a mediation analysis showed that SA partially mediated the association between SSE and SS. A subsequent moderated mediation analysis revealed that gender did not moderate any of the associations between SSE, SA, and SS. These findings corroborate prior research into the relationships between SSE, SA, and SS and suggest that there are no meaningful gender differences regarding the examined mechanism behind SS. The results indicate SSE and SA as suitable intervention points for enhancing SS.

Keywords: Sexual satisfaction, sexual self-esteem, sexual assertiveness

The Relationship Between Sexual Self-Esteem and Sexual Satisfaction in Dutch Adult Women and Men: The Mediating Role of Sexual Assertiveness

Sexual satisfaction (SS; i.e., a subjective feeling of contentment regarding one's sexual experiences and relationships; Freihart et al., 2020; Ménard, 2014) is an important part of human wellbeing. Research shows that SS is strongly associated with general wellbeing (Davison et al., 2009; Freihart et al., 2020; Holmberg et al., 2010; Holt et al., 2020; Whipple et al., 2007; Zheng et al., 2020) and predicts relationship satisfaction (Cupach & Comstock, 1990; Byers, 2005; Fallis et al., 2016; Rausch & Rettenberger, 2021). As such, research aiming to better understand SS and its underlying mechanisms is vital, as it can provide a basis for developing interventions to increase feelings of SS, in turn improving people's general and relational wellbeing. Many studies examining SS aim to understand sexual difficulties and dysfunction, pursuing the goal of reducing distress and risks associated with sexual behaviour (e.g., Abdolmanafi et al., 2016; Brassard et al., 2012; Leivo et al., 2022; Vanwesenbeeck et al., 2014). While this approach is certainly worthwhile, research has shown that experiencing sexual dysfunction does not necessarily go hand in hand with being sexually dissatisfied (Ferenidou et al., 2008; King et al., 2007). Thus, in order to cultivate opportunities for everyone to pursue satisfying sexual experiences, we need to look at SS through a lens of sexual enhancement, rather than dysfunction.

One field of psychology that lends itself well to this enhancement-perspective is *positive psychology*. Unlike traditional pathology-focused approaches to clinical psychology, positive psychology studies the positive aspects of human experience and integrates those with our understanding of distress alleviation (Duckworth et al., 2005; Linley et al., 2006; Seligman, 2002). In the context of sexual health and wellbeing, positive psychology research typically explores how sexuality enables happiness and wellbeing through pleasurable, satisfying experiences and how to foster such experiences (Impett et al., 2013; Williams et al., 2015). As such, unravelling the determinants of SS is an important focus in this field.

Just as positive psychology theorists frequently pinpoint self-esteem as a central facet of general wellbeing (e.g. Mruk, 2013), *sexual self-esteem* (SSE) is widely considered a contributing factor to sexual wellbeing (Anderson, 2013; Galinsky & Sonenstein, 2011; Impett et al., 2013). While self-esteem can be understood as a subjective feeling or belief of one's overall worth as a person (Mruk, 2008; Rosenberg, 1965), SSE is characterized as the subjective appraisal of one's value as a sexual partner, including sexual competence, skills, and sexual self-acceptance (Firoozi et al., 2016; Ménard, 2014; Snell et al., 1993). High general self-esteem is intrinsically linked to feeling good about oneself and satisfied with one's life overall (Diener & Diener, 1995). Given this and considering the parallels between general and sexual self-esteem, it seems logical that high SSE would facilitate satisfaction with the sexual aspects of one's life. In fact, prior research found strong associations between SSE and SS (Higgins et al., 2011; Ménard & Offman, 2009; Peixoto et al., 2018). Additionally, poor SSE was identified as one of the main mediating factors between attachment insecurity and sexual dissatisfaction (Brassard et al., 2013; Lafortune et al., 2022), implying that SSE plays a formative role in one's experience of SS. These findings highlight the role that SSE plays in understanding SS, however the mechanisms underlying this association are not yet fully understood. In this paper, sexual assertiveness is investigated as a mechanism explaining how SSE relates to SS.

In a review on positive sexuality, Anderson (2013) states that SSE facilitates the ability to "request or refuse to engage in specific sexual activities, (...) and to communicate openly with [one's] partner (...) about matters of sexuality" (p.209). In other words, they conceptualize SSE as the basis for sexually assertive behaviour, implying that positive effects of SSE may function through increased sexual assertiveness. We define *sexual assertiveness* (SA) as a facet of sexual communication which encompasses self-disclosure of sexual needs and the ability to actively make requests and initiate desired sexual behaviours with a partner (Ménard, 2014; Shafer, 1977). In line with the theoretical implications, a study by Oattes and Offman (2007) found a significant positive relationship between SSE and SA, in that SSE predicted individuals' ability to communicate with their partner about

sexually satisfying behaviours. While there is no research as of yet from which we can draw a clear conclusion about the direction of this relation, theory suggests that SSE might predict SA.

Since SA goes beyond talking about sexual preferences to include the initiation of sexual behaviours, Ménard and Offman (2009) argued that it bears a higher interpersonal risk (e.g. rejection) compared to merely verbal exchanges. According to Epstein (1985, in Mruk, 2013), a person's capacity for taking interpersonal risks is dependent on their general self-esteem. This theory posits that positive self-esteem protects a person's self-image against negative reactions from others, thus having higher self-esteem makes a person more able to engage in behaviours that are accompanied by interpersonal risks. Assuming that this notion can be applied to interpersonal risks in the sexual realm, it suggests itself that positive SSE may provide a person with the necessary basis to feel more capable of engaging in sexually assertive behaviour despite the risk of rejection. Thus, it is likely that SSE functions as a basis for SA to occur, while SA may act as the behavioural mechanism through which SSE brings about higher SS within sexual partnerships.

In line with these assumptions, prior research showed significant associations between SA and SS in women (Bridges et al., 2004; Hurlbert, 1991) as well as in mixed gender samples (Haavio-Mannila & Kontula, 1997; Lettenberger, 2011; Ménard & Offman, 2009), where individuals with higher levels of SA also indicated greater satisfaction with their sexual experiences. While not all research into SS mentions SA specifically, positive psychology theorists commonly acknowledge the significant role that sexual communication plays in cultivating satisfying sexual experiences (Anderson, 2013; Impett et al., 2013; Williams et al., 2015). Additionally, several studies found associations between dyadic communication and SS within romantic relationships, underlining the importance of communicating sexual preferences with a partner (Babin, 2012; Frederick et al., 2017; MacNeil & Byers, 2005, 2009; Markman et al., 1993; Rausch & Rettenberger, 2021; Velten & Margraf, 2017). Given these theoretical and evidence-based implications, it is likely that SSE bolstering SA would in turn be related to an increase in SS.

Several researchers' findings support the notion that SSE impacts SS through SA. A study by Babin (2012) showed that nonverbal communication during sex mediated the association between SSE and SS in a sample of men and women with mixed sexual orientations. Individuals with higher SSE reported more nonverbal communication and in turn higher degrees of SS. Another mixed sample study by Ménard and Offman (2009) found SA to be a partial mediator in the relationship between SSE and SS. The authors argued that higher levels of SSE make individuals more capable of sexual assertion, thus enabling higher degrees of SS through increased SA. In line with this, a study using a sample of heterosexual women found strong associations between general self-esteem and SA, as well as SA and SS (May & Johnston, 2022). They identified SA as a mediator in the relationship between self-esteem and SS. To summarize, multiple studies hint at the potential role of SA as a mediating factor connecting SSE and SS in female and mixed samples. However, research concerning the specific associations between SSE, SA, and SS is sparse. We need to fully understand the determinants and underlying mechanisms of SS to enable future interventions to be successful in helping people build a positive and satisfying sex life. As a part of gaining more insight into the workings of SS, this article explores the role that gender may play in the associations between SSE, SA, and SS.

It is important to note that as of yet, few studies have tested for gender differences in the associations between SSE, SA and SS, and their results seem overall inconclusive. Some studies report gender differences in SS (i.e., men generally report slightly higher levels than women; Petersen & Hyde, 2010). However, there are mixed results regarding the prevalence of SSE (sometimes men report higher levels, e.g. Peixoto et al., 2018; sometimes there are no differences, e.g. Oattes & Offman, 2007) and SA (sometimes men display higher levels of SA than women, e.g. Byers & Heinlein, 1989; Gomez & Marin, 1996; sometimes no gender differences are found, e.g. Lettenberger, 2011; Parham et al., 2015). Beyond differences in prevalence between genders, self-esteem may be influential to SS for both men and women, though the precise nature of the association varies between sources (e.g. a larger effect size for men, Higgins et al., 2011; Self-esteem predicts less

facets of SS for men than for women, Galinsky & Sonenstein, 2011). SA has been found to be associated with SS regardless of gender, however to our knowledge there is only one study which investigated this (Peixoto et al., 2018). We aim to shed a light on how gender may affect SS and the relationships investigated in this study, in order to assess whether it needs to be taken into account in the making of subsequent interventions.

The Current Study

The current study investigated the relationships between SSE, SA, and SS in men and women. Based on previous findings regarding the associations between SSE, SA, and SS, it was expected that higher levels of SSE would be associated with more SS (Higgins et al., 2011; Lafortune et al., 2022; Ménard & Offman, 2009; Peixoto et al., 2018) and a larger degree of SA would be associated with higher SS (Haavio-Mannila & Kontula, 1997; May & Johnston, 2022; Ménard & Offman, 2009). Further, it was hypothesized that higher levels of SSE would be associated with greater SA (Oattes & Offman, 2007) and that SA would mediate the relationship between SSE and SS, so that higher levels of SSE would be associated with more SS through heightened SA (May & Johnston, 2022; Ménard & Offman, 2009). Finally, since prior findings on the role of gender have been conflicting (e.g. Peixoto et al., 2018; Petersen & Hyde, 2010; Rostosky et al., 2008) and a possible moderating role of gender on these relationships was rarely investigated, gender was included in this study as an exploratory moderator. While we examined gender as a moderator on each path of the model, no specific moderating effects of gender on the associations between SSE and SS, SSE and SA, or SA and SS, were expected. See Figure 1 for a schematic summary of the proposed effects.

Method

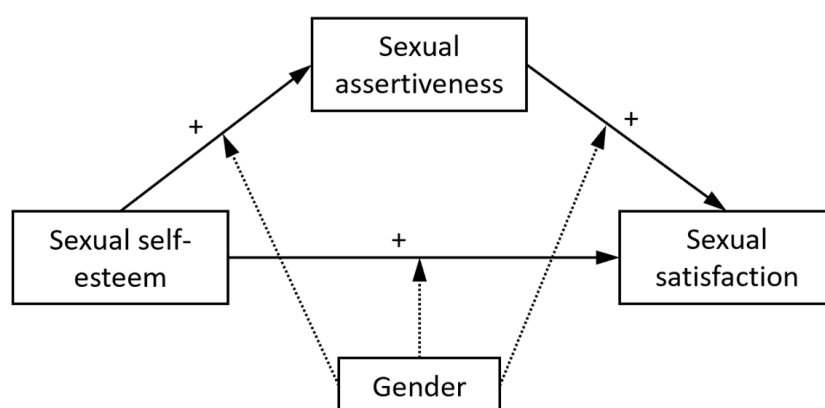
Participants and Procedure

This study was part of a larger research project on sexual well-being in romantic relationships. Only the information relevant to the current study is presented here. Participants were recruited using convenience sampling through Utrecht University's test subject pool (i.e., the SONA system) and via social media (e.g., WhatsApp, LinkedIn, and Facebook). After signing up, they

received a weblink for the online survey created with Qualtrics. Participants had to be at least 18 years old, live in the Netherlands, and currently be in a romantic relationship in which they are sexually active in order to participate. They could choose to complete the study in English or Dutch. After participants opened the link to the online survey, they were provided with information about the study and completed an informed consent form, in which voluntary participation, anonymity, and professional data handling were assured. Participants were also ensured that in case of premature discontinuation of participation, their data would not be used. Participants gave active consent to participate in the study by ticking a box and could withdraw their consent by not completing the survey. They were asked to provide demographic information before filling in questionnaires measuring SS, SA, and SSE. Lastly, participants were presented with debriefing information and Utrecht University students were given the opportunity to claim one course credit for their participation through the SONA system. There was no compensation for other participants. It took about 45 minutes to complete the entire survey, including other questionnaires that were part of the larger research project. The study was approved by the Ethics Committee of the Faculty of Social and Behavioural Sciences of Utrecht University (FETC # 23-0668).

Figure 1

Schematic Summary of the Hypothesized Associations Between Study Variables



Note. Dashed lines represent the potential moderating role of gender in this model.

According to sample size calculations (Faul et al., 2007; Fritz & MacKinnon, 2007), a minimum of 71 participants per gender would be required for detecting medium to large effects (considering guidelines from Cohen, 1988, p. 412) with $\alpha = .05$ and 80% power. The estimated effect size was informed by the effects found in similar prior studies (Babin, 2012; Brassard et al., 2013; Calogero & Thompson, 2009; Lafortune et al., 2022; May & Johnston, 2022; Ménard & Offman, 2009).

Out of the total 869 responses, 464 were excluded from analyses because they were incomplete and another 16 were excluded because they did not pass the attention checks. Since this study focused on men and women, participants who identified otherwise ($n = 1$) were excluded. The final sample consisted of 388 participants of whom 85.8% completed the survey in Dutch. Table 1 shows the demographic characteristics of the sample.

Materials

This study made use of Dutch translations of the below mentioned scales, which were created by Dutch native speakers affiliated with the study.

Sexual Satisfaction

SS within the romantic relationship was measured with the Global Measure of Sexual Satisfaction (GMSEX; Lawrence & Byers, 1995). Respondents were asked to rate their perception of their current sexual relationship on five 7-point scales with two anchor points (Bad-Good, Unpleasant-Pleasant, Negative-Positive, Unsatisfying-Satisfying, Worthless-Valuable) in conjunction with the question "In general, how would you describe your sexual relationship with your partner?". Prior studies found the GMSEX to be strongly reliable (Cronbach's $\alpha > .90$) and a suitable scale to measure self-perception of one's sexual relationship (Byers & Cohen, 2017; Mark et al., 2014; Quinn-Nilas, 2022). A total score of SS could range from 5 to 35 and was calculated by summing up all item scores, so that a higher total score corresponded to greater SS. Cronbach's alpha was good in the current study ($\alpha = .88$; Gliem & Gliem, 2003).

Sexual Self-Esteem

SSE was assessed with the Sexual Esteem subscale of the Multidimensional Sexuality Questionnaire (MSQ-SE; Snell et al., 1993), which is comprised of 5 items (e.g. “I am a pretty good sexual partner”) that are each rated on a 5-point Likert scale (1 = “not at all characteristic of me” to 5 = “very characteristic of me”). Total scores were calculated by summing up the scores on all items and ranged from 5-25, where higher scores represent higher SSE. Research by Snell and colleagues (1993) showed the subscale’s good internal consistency (Cronbach’s $\alpha = .86$) and test-retest reliability ($\alpha = .85$), as well as adequate concurrent, discriminant and convergent validity. In the current sample, Cronbach’s alpha for this scale was excellent ($\alpha = .90$; Gliem & Gliem, 2003).

Sexual Assertiveness

The Sexual Assertiveness subscale of the Multidimensional Sexuality Questionnaire (MSQ-SA; Snell et al., 1993) was used to assess participants’ tendencies to be assertive about their sex life. The scale consists of 5 items (e.g. “I do not hesitate to ask for what I want in a sexual relationship”) which participants rated on a 5-point Likert scale (1 = “not at all characteristic of me” to 5 = “very characteristic of me”). Four items of this subscale were administered¹ and two items were reverse-coded. Total scores were calculated by summing up the scores on the four items and ranged from 4-20, with higher scores indicating higher levels of SA. Prior research demonstrated sufficient internal consistency (Cronbach’s $\alpha = .77$) and test-retest reliability ($\alpha = .65$), as well as adequate concurrent, discriminant and convergent validity (Snell et al., 1993). Cronbach’s alpha for the 4-item scale used in this study was good ($\alpha = .80$; Gliem & Gliem, 2003).

Statistical Analysis

Statistical analyses were carried out using IBM SPSS version 29. First, bivariate correlations between the study variables were examined using Pearson correlation coefficients. Next, the PROCESS macro tool version 4.3 (Hayes, 2022) was used to carry out a mediation analysis with SSE as

¹ Due to an earlier mistake in creating the online survey, the fifth item of this scale “When it comes to sex, I usually ask for what I want” was not displayed to the participants.

Table 1*Demographic Characteristics of the Study Sample (N=388)*

Characteristic	<i>n</i>	%	<i>M</i>	<i>SD</i>	Range
Age			23.80	6.74	18-64
Sex					
Male	85	21.9			
Female	303	78.1			
Sexual orientation					
Heterosexual	320	82.5			
Homosexual	15	3.9			
Bisexual	48	12.4			
Other	5	1.3			
Highest current or completed education					
Secondary school	38	9.8			
Lower vocational education (MBO)	12	3.1			
Higher vocational education (HBO)	46	11.9			
University	292	75.3			
Duration of current relationship					
< 1 month	3	0.8			
1-3 months	23	5.9			
3-6 months	33	8.5			
6 months - 1 year	49	12.6			
1-2 years	86	22.2			
2-5 years	126	32.5			
5-10 years	54	13.9			
10-20 years	8	2.1			
>20 years	6	1.5			
Married or in a registered partnership ^a	20	5.2			
Cohabiting with partner ^a	109	28.1			

^a Reflects the number and percentage of participants answering “yes” to this question.

independent variable, SA as mediator and SS as dependent variable (Model 4). The mediation analysis estimated the total, direct, and indirect effect of SSE on SS using a number of sub-analyses. First, a simple regression analysis estimating the effect of SSE on SA was conducted. Second, the total and direct effect were determined using a hierarchical regression analysis in which SSE and SS were entered in the first step and SA in the second step. The total effect refers to the relationship between SSE and SS (first step), and the direct effect refers to that same relationship while controlling for SA (second step). Third, the indirect effect of SSE on SS via SA and its significance was estimated using bootstrap analysis with 5000 bootstrap samples and bias-corrected 95% confidence intervals. Absence of the value 0 within these confidence intervals indicated a significant mediating role of SA

(i.e., the indirect effect). Lastly, a moderated mediation analysis was carried out using Model 59 (Hayes, 2022) with SSE as dependent variable, SA as mediator, SS as dependent variable, and gender as moderator. This analysis tested for a moderation of gender on each path of the mediation model by estimating conditional direct and indirect effects of SSE on SS through SA, using bootstrap analysis with 5000 bootstrap samples and bias-corrected 95% confidence intervals. A conditional effect is significant if the value 0 is absent within the respective confidence interval, indicating a moderating role of gender on the respective path of the mediation. Further, an index of moderated mediation showed the differences between conditional indirect effects. Absence of the value 0 in the confidence intervals of this index indicates a significant moderated mediation effect. All model coefficients will be reported in completely standardized form, with the exception of the coefficients of the conditional direct and indirect effects, which will be reported in unstandardized form.

Results

Means, Standard Deviations, and Bivariate Correlations

The means and standard deviations and the bivariate correlations between the study variables per gender are shown in Table 2. As expected, SSE, SA, and SS were all significantly and positively correlated with one another. According to guidelines by Cohen (1988, p. 412), the correlation coefficients between SSE and SA indicate large effect sizes for male and female participants. The correlations between SA and SS were medium for men and small for women, while correlations between SSE and SS were large for men and medium for women.

Total, Direct, and Indirect Effects of SSE on SS Through SA

The assumptions of multiple regression analysis (i.e. normality, linearity, homoscedasticity, independence, multicollinearity) were tested and all assumptions but normality of residuals were met. Since the residuals only slightly deviated from a normal distribution and regression-based analyses are robust against non-severe violations of normality (Hayes, 2022), the data was not transformed. Figure 2 illustrates the results of the regression analyses. The simple regression analysis

Table 2*Means, SDs, and Bivariate Correlations Between the Study Variables per Gender*

Variable	Men			Women			1	2	3
	<i>M</i>	<i>SD</i>	Min. – Max.	<i>M</i>	<i>SD</i>	Min. – Max.			
1. Sexual self-esteem	18.20	4.43	5 - 25	16.05	4.43	5 - 25	-	.52*	.30*
2. Sexual assertiveness	13.96	3.35	5 - 20	13.19	3.70	4 - 20	.53*	-	.27*
3. Sexual satisfaction	29.15	4.68	12 - 35	29.19	4.96	10 - 35	.52*	.43*	-

Note. Bivariate correlations are reported separately for men and women. Values for female participants are written in bold font.

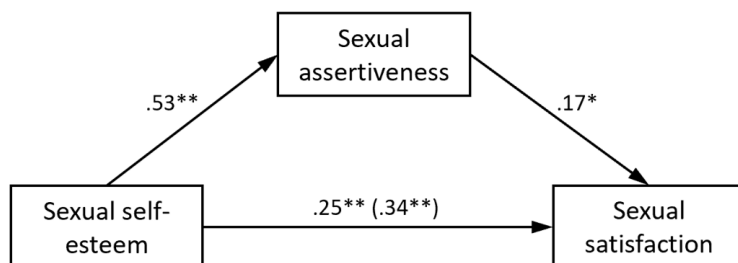
* $p < .01$.

showed a significant positive effect of SSE on SA, indicating that more SSE was associated with greater SA. Twenty-eight percent of the variance in SA could be explained, $F(1,386) = 149.91$, $p < .001$.

The hierarchical regression analysis showed a significant positive total effect (step 1) and a significant positive direct effect (step 2) of SSE on SS. This indicates that higher levels of SSE were related to higher levels of SS, regardless of whether levels of SA were being controlled for. Additionally, step 2 of the analysis revealed a significant positive direct effect of SSE on SA, meaning that higher levels of SSE were associated with more SA. Step 2 also showed a significant positive direct effect of SA on SS, indicating that a larger degree of SA was associated with greater SS. These findings are in line with our expectations. In step 1 when only considering SSE, 11.5% of the variance in SS could be explained, $F(1,386) = 50.05$, $p < .001$. In step 2, considering SSE and SA, 13.5% of variance in SS was explained, $F(2,385) = 30.17$, $p < .001$.

Figure 2

Results of the Hierarchical Regression Analysis Examining the Total and Direct Effects of Sexual Self-Esteem on Sexual Satisfaction Through Sexual Assertiveness



Note. Total effects are presented in parentheses. All coefficients are reported in standardized form.

* $p < .01$. ** $p < .001$.

As expected, the bootstrap analysis revealed a significant positive indirect effect of SSE on SS through SA ($\beta = .09$, BCa 95%CI [.032, .151]). Thus, higher levels of SSE were associated with more SS through a larger degree of SA.

The Role of Gender

The results of the bootstrap analysis showed that the conditional indirect effect of SSE on SA, $B = .04$, 95%CI [-.129, .207], as well as the conditional indirect effect of SA on SS, $B = -.09$, 95%CI [-.438, .289], were both not significant. Similarly, the conditional direct effect of SSE on SS was not significant, $B = -.18$, 95%CI [-.452, .089]. Further, there was no significant moderated mediation as indicated by the presence of 0 within the confidence intervals of the index of moderated mediation, $B = -.03$, 95%CI [-.193, .129]. Thus, gender did not have a moderating role in any path of the mediation.

Discussion

This study investigated the relationships between SSE, SA, and SS, as well as the role of gender in these relationships. In line with expectations and prior findings (Haavio-Mannila & Kontula, 1997; Lafortune et al., 2022; Peixoto et al., 2018), greater SSE, as well as more SA, were each

significantly associated with experiencing a larger degree of SS. As expected, higher levels of SSE were significantly associated with more SA and SA partially mediated the relationship between SSE and SS. These results are in line with findings from prior research identifying SA as a mediating mechanism in the relationship between SSE and SS (May & Johnston, 2022; Ménard & Offman, 2009; Oattes & Offman, 2007). Thus, our findings corroborate the theory that positive SSE enables people to engage in sexually assertive behaviour, which in turn helps to facilitate more sexually satisfying experiences with a partner.

Regarding the role of gender, we found significant bivariate correlations between all study variables for both men and women. While there were gender differences in correlation sizes so that SSE and SA were each more strongly correlated with SS in men compared to women, this was likely caused by differences in sample size between the two groups. Our sample consisted of over 3 times as many women as men, meaning that correlations within the female group are likely more representative of their respective population than those of the male group (Schönbrodt & Perugini, 2013). Due to these disparities in group size, we could not reliably test whether these gender differences in correlation sizes were significant. Further results indicate that gender did not moderate any path of the mediation, meaning that the strength and direction of the relationships between SSE, SA, and SS were not impacted by a person's gender. This is in line with previous studies that found significant relationships between general self-esteem and SS (Higgins et al., 2011; Galinsky & Sonenstein, 2011), as well as SA and SS (Peixoto et al., 2018), in both men and women. Contrary to an extensive meta-analysis stating that men generally report slightly higher SS than women (Petersen & Hyde, 2010), men and women reported on average equally high amounts of SS in the current study. This lack of gender differences in our study could be explained by our Dutch sample, since living in a country with high gender equity such as the Netherlands tends to coincide with less gender differences in sexuality research (Petersen & Hyde, 2010). While it is possible that a sample from another country would yield different results regarding the role of gender in these relationships, more research is necessary to draw such conclusions. As we included gender as an exploratory factor

in this study, we hope that our findings will be helpful in generating new hypotheses about the role of gender in mechanisms that shape sexually satisfying experiences.

Overall, these results contribute to a better understanding of SS by highlighting the involvement of SSE and SA in the formation of sexually satisfying encounters. Additionally, our findings add to the growing body of research into the mechanisms behind SS and indicate SSE and SA as possible points of intervention to help people establish more satisfying sex lives. However, the mechanism explored in this study explained only 13.5% of the variance in SS, showing that there are more mechanisms at play in satisfying sexual experiences. This highlights the need for future research to not only test interventions targeting SSE and SA, but also to examine other mechanisms shaping SS. Prior studies suggest insecure attachment and sexual anxiety as possible factors of interest, since both have been identified as determinants of sexual dissatisfaction (e.g. Brassard et al., 2012; Brassard et al., 2013; Davis et al., 2006; Lafortune et al., 2022; Rausch & Rettenberger, 2021). Future studies may also want to focus on the role of negative distracting thoughts during sexual interactions, for instance related to body-image, sexual performance pressure, or sexual guilt, seeing that such thoughts have previously been linked to decreased SSE and sexual dissatisfaction (Abdolmanafi et al., 2016; van den Brink et al., 2018; Calogero & Thompson, 2009; Rausch & Rettenberger, 2021; Khaddouma et al., 2015). Taking these factors into account when studying mechanisms that shape sexual experiences would help to expand our understanding of positive sexuality further than the current study could.

The results of this study bring forth some notable implications. Our findings indicated that a person's sense of self-esteem as a sexual partner is meaningfully associated with feeling sexually satisfied within a romantic relationship through one's ability to act in sexually assertive ways, regardless of one's gender. Thus, interventions that effectively boost SSE may prove useful for women and men in nurturing the ability to assert their sexual needs and in turn facilitate more satisfying sexual encounters. For example, mindfulness-based interventions have been shown to boost SSE and marital intimacy, and have been linked to heightened SS and relationship satisfaction

(Dunkley et al., 2015; Khazaeian et al., 2023; Lazaridou & Kalogianni, 2013; Leavitt et al., 2019).

However to our knowledge, no prior research into the effectiveness of mindfulness-based interventions for boosting SSE has examined how these interventions impact SA. We encourage future studies on the effectiveness of such interventions to include secondary outcomes like increased SA and SS.

Limitations

Some limitations need to be acknowledged. Our sample was fairly homogeneous, consisting predominantly of highly educated, young, heterosexual women. Thus, results may not be representative of the general Dutch population, limiting the generalizability of our findings (Jager et al., 2017). Further, the present study used a cross-sectional design, which does not allow for drawing sound conclusions about directionality of effects or their development over time (Rindfleisch et al., 2008). Last, our data demonstrated a ceiling effect, with mean SS scores being exceptionally close to the maximum possible score. This may have been caused by the homogenous sample, as young age and high education level tend to coincide with greater SS (Rausch & Rettenberger, 2021).

Alternatively, it is possible that the scale used to measure SS in this study did not manage to capture a large enough range of positive sexual experiences, as the words used to describe the positive anchor points (i.e., good, pleasant, positive, satisfying, valuable) may have been construed by participants as less exceptionally positive than intended. Future research would benefit from using heterogeneous samples to achieve better generalizability of results and to ensure that demographic factors such as age or education level do not influence the range of scores. Additionally, further research on positive sexuality would benefit from longitudinal study designs, as they allow conclusions about directionality and gauge long-term effects of interventions. Last, we encourage future studies to ensure that their measures can capture a good range of both negative and positive experiences in order to avoid ceiling effects.

Conclusion

Despite the limitations, our findings indicate that SSE and SA meaningfully shape satisfying sexual experiences and that SA partially mediates the relationship between SSE and SS, regardless of a person's gender. This study adds to the existing body of research on SS by reproducing findings from previous research (e.g., May & Johnston, 2022; Ménard & Offman, 2009) in a Dutch population and by exploring the role of gender in the examined relationships. Given that SS is closely related to relationship satisfaction and overall wellbeing (Fallis et al., 2016; Holmberg et al., 2010), it is important to further study what constitutes satisfying sexual experiences and develop interventions that can help people build satisfying sex lives.

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