



Ego-Centred and Partner/Activity-Focused Sexual Satisfaction: The Role of Self-Esteem and Sexual Assertiveness in Cisgender Heterosexual Women

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Abstract

The gendered disparity in orgasm frequency and sexual satisfaction during partnered sexual activity has implications for wellbeing, mental health, and relationship satisfaction. As such the current study investigated the role of sexual assertiveness and self-esteem as predictors of women's sexual satisfaction, with sexual script theory offering a theoretical framework which may illuminate the problematic female sexual role. It was hypothesised that sexual assertiveness would mediate the positive relationship between self-esteem and both ego-centred and partner/activity-focused sexual satisfaction. Cross-sectional self-report data were collected online from 304 participants aged between 18–68 years who identified as heterosexual women. Results demonstrated that higher sexual assertiveness predicted higher sexual satisfaction, with sexual assertiveness found to mediate the relationship between women's self-esteem and ego-centred sexual satisfaction ($R^2 = .46, p < .001$; $B_{\text{indirect}} = .29, 95\% \text{ BCI} = .267, .523$). Sexual assertiveness was also found to mediate the relationship between self-esteem and partner- and activity-focused sexual satisfaction ($R^2 = .26, p < .001$; $B_{\text{indirect}} = .29, 95\% \text{ BCI} = .191, .400$). Findings offer a foundation for future research and practical applications for practice professionals, mental health practitioners, and sex education programmes.

Keywords Sexual satisfaction · Sexual assertiveness · Self-esteem · Women · Heterosexual · Cisgender · Sexual script theory

Sexual satisfaction has been found to be critical for health, wellbeing, happiness, and relationship satisfaction (Fallis et al., 2016; Flynn et al., 2016; Ménard, 2014). However, within partnered sexual activity, heterosexual women consistently report reduced sexual satisfaction in comparison to men (Holland et al., 2021; Mahar et al., 2020). As reduced sexual satisfaction has been identified as a predictor of depression in women (Carcedo et al., 2020), and women are twice as likely to develop depression than men (Kendler & Gardner, 2014), determining why women experience diminished pleasure is critical for improving mental health and wellbeing.

As one indicator of sexual satisfaction in women (Althof & Needle, 2013), research on achieving orgasm has shown

that approximately 90% of heterosexual men orgasm during partnered sexual activity compared to just 50% of heterosexual women (Galinsky & Sonenstein, 2011; Vannier & O'Sullivan, 2012). Reduced sexual satisfaction is primarily experienced by women within heterosexual sexual interactions, with research indicating that 89% of homosexual men, 88% of bisexual men, 86% of lesbian women and 66% of bisexual women regularly orgasm during partnered sexual activity (Frederick et al., 2018). Therefore, lesbian women orgasm in comparable frequency to men within any manner of sexual context, yet bisexual and heterosexual women experience reduced frequency of orgasms. Considering the normative rates of orgasm experienced by lesbian women during partnered sexual activity, and that 95% of women are physiologically capable of orgasm during masturbation (Puts et al., 2012), reduced sexual satisfaction cannot be attributed to female anatomical justifications.

Sexual satisfaction is a multifaceted experience comprising physiological reactions, attitudes, interpersonal dynamics, and gender-specific socialisation (Carpenter et al., 2009). Two key interrelated dimensions have been identified in describing the conceptualisation of sexual

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satisfaction; ego-centred and partner/activity-focused (Stulhofer et al., 2010). Ego-centred sexual satisfaction relates to personal erotic experience and sensations. Partner- and sexual activity focused describes sexual satisfaction derived from a partner's sexual behaviour, inclusive of range and frequency of sexual activity (Stulhofer et al., 2010).

Although there is ambiguity surrounding reasons for reduced sexual satisfaction (Blair et al., 2017), gendered disparities between cognitive construal and the prioritisation of sexual pleasure could provide clarification (McNulty & Fisher, 2008). Research indicates that behaviours favouring male pleasure such as penile-vaginal intercourse and fellatio are given preference during heterosexual sexual encounters (Blair et al., 2017). Conversely, activities conducive to female orgasm typically involving manual or oral clitoral genital stimulation are less frequently provided by male sexual partners (Bay-Cheng et al., 2009; Blair et al., 2017; Jozkowski & Satinsky, 2013; Wood et al., 2016). Sexual script theory (Simon & Gagnon, 1984) provides an insight into the perceived inconsequence of female pleasure, by describing differential sociocultural expectations surrounding the pursuit of sexual satisfaction for heterosexual men and women (Wiederman, 2005; Wood et al., 2016).

Sexual Script Theory

Analogous to a scripted role written for an actor, sexual scripts for heterosexual gender roles are offered by social messages and media representations of behavioural and appearance expectations (Brown, 2002; Sanchez et al., 2006; van Oosten, 2016). These messages then consciously and subconsciously guide attitudes about an individual's gender role and subsequent sexual behaviour (Dworkin et al., 2007; Emmers-Sommer, 2016; Sanchez et al., 2006). According to sexual script theory (Simon & Gagnon, 1984), heterosexual male scripts portray an expectation to proactively initiate sexual activity and play the dominant masculine role of the receiver of pleasure by pursuing sexual encounters for the sole purpose of self-satisfaction (Armstrong et al., 2012; Vannier & O'Sullivan, 2012). Conversely, heterosexual female scripts depict sexual submissiveness and responsiveness to male desire through acting in the role of the provider of pleasure (Armstrong et al., 2012; Vannier & O'Sullivan, 2012). Sexual objectification is seen to play a central role in the reinforcement of the female sexual script (Simon & Gagnon, 1984), as women are indoctrinated from early childhood to view their bodies as a sexual commodity (Grower & Ward, 2018; Holland et al., 2016; Wiederman, 2005) and associate self-worth on appeasing a mate (Impett et al., 2006; Koval et al., 2019; Sanchez et al., 2005).

Self-Esteem

Experiences of sexual objectification can lead to poor self-esteem as internal states are subjugated by external states, reduced psychological wellbeing (Sanchez et al., 2005), and perceived failure to meet societal standards which can lead to shame (Holland et al., 2016). Poor self-esteem in women has also been associated with reduced awareness of physiological sexual arousal (Moradi & Huang, 2008), reduced sexual wellbeing (Woertman & van den Brink, 2012), and inability to orgasm (Erbil, 2013; Frederick et al., 2018). These findings are supported by research demonstrating that women with high self-esteem are more likely to report higher psychological sexual satisfaction than women with moderate or low levels of self-esteem (e.g., Higgins et al., 2011). Research has additionally demonstrated that women have lower self-esteem than men, and lower self-esteem has been associated with less orgasms and less enjoyment from receiving cunnilingus (Galinsky & Sonenstein, 2011).

Acknowledging the association between sexual behaviour and self-esteem, sexual self-esteem has been identified as a pertinent aspect of sexual health and wellbeing (Maas & Lefkowitz, 2015; Ménard & Offman, 2009; Peixoto et al., 2018). Developed from models of global self-esteem, sexual self-esteem encompasses self-perceived sexual competence and sexual self-acceptance (Calogero & Thompson, 2009; Peixoto et al., 2018), and is limited to self-evaluation within sexual contexts (Calogero & Thompson, 2009; Peixoto et al., 2018). As the pervasive sexual objectification of women encapsulates messages pertaining to overall self-worth and gender expectations, investigation of the role of global self-esteem warrants further investigation.

Sexual Assertiveness

With increased societal acceptance of gender equality (Petersen & Hyde, 2011), increased recognition of gender fluidity (Frederick et al., 2018), synthesis of traditional occupation and familial gender roles (Kowalski & Scheitle, 2020), and exposure to public feminist spokeswomen (van Oosten, 2016), some women are challenging the female sexual script (Emmers-Sommer, 2016; Petersen & Hyde, 2011; van Oosten, 2016). Research indicates that women unconstrained by the female sexual script may achieve sexual satisfaction via more open and assertive communication (Frederick et al., 2018; MacNeil & Byers, 2005; Ménard, 2014). Women with higher levels of autonomy report more partnered orgasms (Galinsky & Sonenstein,

2011), and research indicates that sexual assertiveness is associated with increased sexual satisfaction in women (Anders & Olmstead, 2019; Bridges et al., 2004; Ferroni & Taffe, 1997; Ménard, 2014; Sayyadi et al., 2019).

Sexual assertiveness requires further consideration as a potential mechanism of change that can be utilised to improve sexual satisfaction and overall wellbeing for women. Developed from global measures of assertiveness, sexual assertiveness is defined as actively communicating requests with a partner to evoke specific sexual behaviours (Ménard, 2014). Sexual satisfaction has been described as encompassing the two interrelated dimensions; personal sensations in addition to partner's reactions and sexual activity (Stulhofer et al., 2010). Studies indicate individuals with higher self-esteem report higher levels of sexual assertiveness, which is related to greater sexual satisfaction (e.g., Attaky et al., 2020; Ménard & Offman, 2009). Due to the inherent gender differences in the variables of interest (Frederick et al., 2018; Galinsky & Sonenstein, 2011; Garcia et al., 2014; Maas & Lefkowitz, 2015), understanding these relationships as they relate to heterosexual women could more precisely inform correlates of reduced sexual satisfaction.

Aim and Hypotheses

The current study seeks to investigate why sexual satisfaction may be reduced for heterosexual women during partnered sexual activity. Previous research has highlighted that self-esteem can play an integral role; however, it is possible that one's adherence to sexual scripts and resultant low sexual assertiveness may be the medium through which self-esteem impacts sexual satisfaction. It is hypothesised that, for heterosexual adult women, there will be a positive relationship between their self-esteem and sexual satisfaction such that higher self-esteem will predict higher sexual satisfaction, and further, that this relationship will be mediated by their sexual assertiveness.

Method

Participants and Procedure

A convenience sample of 304 participants were recruited from the general Australian population via posts and paid advertising on social media. To be eligible to take part in the study, participants were required to identify as a cisgender adult woman of heterosexual sexual orientation. No inducements were offered; however, participants could enter an optional prize draw to win one of two \$50.00 gift cards for their time. An a priori power analysis was conducted using G*Power which indicated that the minimum required total sample size was 77, assuming a medium effect size

($f^2 = .15$) with an alpha level of .05, power at .80 and three predictors. Participants were aged between 18 and 68 years ($M = 35.4$ years, $SD = 11.2$). Representative of Australian women in the general population, the predominant ethnicity of participants was White (69%), and the average highest level of education was a bachelor's degree (20%). The sample predominantly self-identified as being in a 'long-term relationship' ($n = 266$; 87.5%) which varied in duration from 1 to 44 years. The remainder of the sample ($n = 38$; 12.5%) self-identified as being in a casual relationship.

Ethical approval was obtained by the Monash University Human Research Ethics Committee. Participants were informed that the study entailed an examination of the role of assertiveness in predicting cisgender heterosexual female sexual satisfaction, then followed a link provided in a Facebook recruitment message to access the survey. Upon obtainment of consent, verification of eligibility was confirmed with a series of questions including: "I am 18 years of age or older" and "What is your current gender identity?". Participants were excluded from the study if they a) identified as a cisgender male, b) had a non-binary gender identity, c) preferred not to state their gender identity, and d) identified with an alternative sexual orientation including being homosexual or bisexual. The survey was located on a secure online platform (Qualtrics) and presented in a standardised survey format, commencing with a measure of sexual satisfaction, followed by sexual assertiveness and finally, self-esteem. Due to the sensitive nature of the survey items, contact details of relevant counselling services and a web address outlining mindfulness activities were provided upon completion in case of distress.

Measures

New Sexual Satisfaction Scale

Sexual satisfaction was measured with the 20-item New Sexual Satisfaction Scale (NSSS; Stulhofer et al., 2010), an instrument designed to measure the idiosyncratic and interpersonal components of sexual satisfaction. To be inclusive of different sexual relationship lengths, participants were instructed to consider their most recent relationship when answering the questions, rather than the original wording of the measure which requires respondents to rate their satisfaction with their sex life in the preceding six months.

The development of the scale was based on a five-dimension, conceptual model. However, exploratory factor analyses did not confirm the proposed conceptual framework but suggested a two-dimensional structure focusing on self ('ego-centred') and other ('partner- and sexual activity-centred') domains, each containing items representing all five conceptual dimensions. Ten items assess ego-centred dimensions of sexual satisfaction (e.g., "The intensity of my sexual

arousal”) and ten items assess partner- and activity-centred dimensions of sexual satisfaction (e.g., “The way my partner takes care of my sexual needs”) using a five-point Likert scale from 1 (*Not at all satisfied*) to 5 (*Extremely satisfied*). Total scores were obtained by summing scores for the two subscales, with higher scores indicating higher ego-centred or partner/ activity-focused sexual satisfaction.

The measure demonstrated excellent internally reliability in the current study, $\alpha = .95$, which was consistent with high internal reliability derived from previous research using a community sample of heterosexual women ($\alpha = .94 - .96$) (Stulhofer et al., 2010). The NSSS was selected to measure the construct of sexual satisfaction due to the scale psychometric properties and suitability for online administration, as moderate convergent validity between a global measure of sexual satisfaction was demonstrated by women completing the survey on an online platform, ($r = .44 - .67$) (Stulhofer et al., 2010).

Hurlbert Index of Sexual Assertiveness

Sexual assertiveness was measured with the 25-item Hurlbert Index of Sexual Assertiveness (HISA; Hurlbert, 1991), an instrument designed to measure the behaviours and cognitions associated with communicating sexual preferences to a partner. Items are completed using a five-point Likert scale from 1 (*All of the time*) to 5 (*Never*). Sample items include “I communicate my sexual desires to my partner” and “I am reluctant to insist that my partner satisfy me (reverse-scored).” A total score was obtained by reversing the scores of 12 items and summing these with the remaining 13 items. Higher scores indicated higher sexual assertiveness. The measure demonstrated excellent internal reliability in the current study, $\alpha = .93$, which was consistent with high internal reliability in a nonclinical sample of heterosexual women ($\alpha = .92$; Hurlbert, 1991). The scale was selected over alternative scales to measure the construct as the HISA quantifies communication within sexual contexts, and sexual assertiveness involves communicating requests for specific sexual acts and desires (Ménard & Offman, 2009).

Rosenberg Self-Esteem Scale

Self-esteem was measured by the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), an instrument designed to measure global perception of self-worth. Ten items (e.g., “On the whole, I am satisfied with myself” and “At times I think I am no good at all”) are completed using a five-point response scale from 0 (*Strongly disagree*) to 4 (*Strongly agree*). After reverse scoring five items, a total score was obtained by summing the ten items, with higher scores indicating higher self-esteem. The RSES (Rosenberg, 1965) has

demonstrated internal reliability in a community sample of sexually active women ($\alpha = .83$; Hatcher & Hall, 2009), as also reflected in the current study ($\alpha = .91$). The scale was selected as a measure of self-esteem as strong convergent validity has been established with a broad range of empirical measures of self-esteem (e.g., Robins et al., 2001).

Results

Data from 304 participants was analysed to explore whether there is statistical support for a positive relationship between women’s self-esteem and sexual satisfaction, and the mediating role of sexual assertiveness. Missing Value Analysis (MVA) was conducted, with Little’s Missing Completely at Random (MCAR) test found to be borderline significant, $\chi^2 = 928.584$, $df = 859$, $p = .049$. With Little’s MCAR test supporting the rejection of the hypothesis that the data were MCAR, investigation into the missing values via a post hoc MVA *t*-test showed no systematic pattern of missingness. As such, the minimal missing values ($n = 25$, .15%) were deemed to be missing at random. As no notable differences were found and the scale reliability estimates were high, the small amount of missing data was replaced using mean substitution to preserve power and minimise bias.

Two mediation analyses were conducted using the Hayes PROCESS Macro for the Statistical Packages for Social Sciences, exploring ego-centred sexual satisfaction and partner/activity-focused sexual satisfaction as the outcomes. Prior to analysis, each model was checked to confirm that the assumptions underlying multiple regression were met. Consistent with the nature of the constructs, some skewness and kurtosis were noted. However, examination of the residual errors suggested reasonable uniformity, and given that transformation of the raw data did not alter the results of the analyses, it was decided to retain the original data and apply bootstrapping and a HC3 adjustment as a caution. All other assumptions were met.

Descriptive scores indicated moderate levels of self-esteem, sexual satisfaction, and sexual assertion relative to other studies. An initial examination of the bivariate relationships between variables revealed associations consistent with expectations. There were medium strength positive associations between self-esteem and sexual assertiveness, ego-centred satisfaction, and partner/activity-focused satisfaction. A positive large association was noted between sexual assertiveness and ego-centred satisfaction and between sexual assertiveness and partner/activity focused satisfaction. Also anticipated, there was a large overlap between ego-centred and partner/activity-focused sexual satisfaction (Table 1).

To test the hypotheses that the relationship between self-esteem and ego-centred sexual satisfaction and self-esteem

Table 1 Means, Standard Deviations, and Correlations Between Measures ($N=304$)

Variable	<i>M</i>	<i>SD</i>	Range	SE	SA	SS-Ego	SS-Partner
Self-esteem (SE)	29.8	5.9	11 – 40				
Sexual assertiveness (SA)	89.9	17.4	37 – 124	.37***			
Sexual satisfaction (SS-Ego)	34.0	9.5	10 – 50	.30***	.68***		
Sexual satisfaction (SS-Partner)	33.1	9.6	10 – 50	.24***	.51***	.71***	

Correlation is significant at *** $p < .001$

and partner/ activity-focused sexual satisfaction would be mediated by sexual assertiveness, two mediated regression analyses were conducted using the Hayes’s PROCESS macro approach of testing the bootstrapped indirect effects to determine mediation of the relationship.

The total model predicting ego-centred satisfaction demonstrated a medium effect, with 46% of the

variance in ego-centred sexual satisfaction explained by self-esteem and sexual assertiveness ($R^2 = .46$, $F(2, 301) = 130.53$, $p < .001$). As noted in Fig. 1 there was no significant direct effect between self-esteem and ego-centred satisfaction ($B = .11$, 95% $CI = -.041, .248$, $p = .158$). Mediation was present with the indirect effect of self-esteem via assertiveness accounting for significant

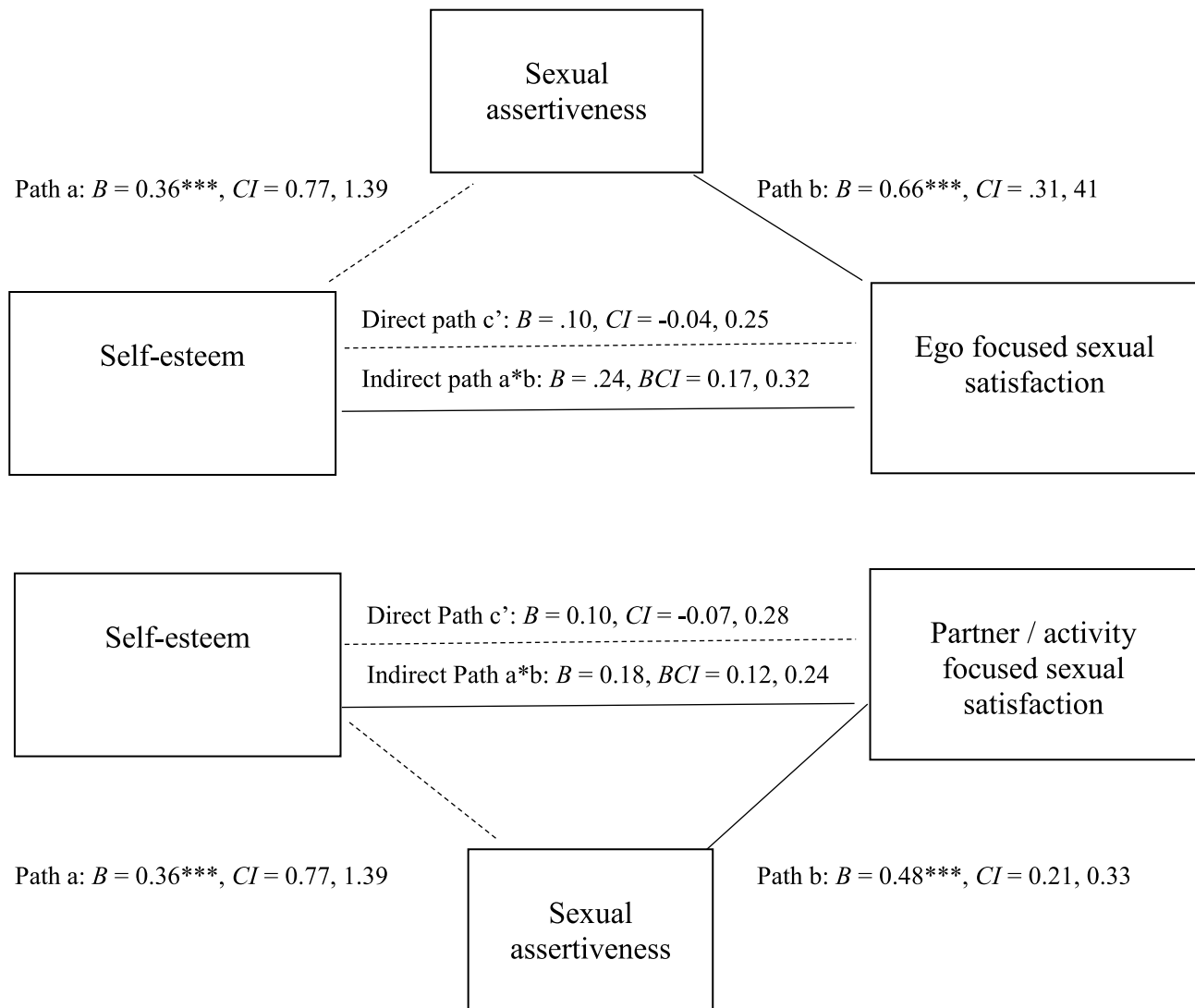


Fig. 1 Standardised regression coefficients for the relationship between self-esteem and sexual satisfaction as mediated by sexual assertiveness (***) $p < .001$

unique variance in ego-centred satisfaction ($B = .29$, 95% $BCI = .267, .523$).

Consistent findings were noted for the partner/activity-focused satisfaction model. The total model showed that 26% of the variance in partner/activity-focused sexual satisfaction was explained by self-esteem and sexual assertiveness ($R^2 = .26$, $F(2, 301) = 53.11$, $p < .001$). There was no significant direct effect between self-esteem and partner/activity-focused satisfaction ($B = 1.05$, 95% $CI = -.066, .276$, $p = .229$). Mediation was present with the indirect effect of self-esteem via assertiveness accounting for significant unique variance in partner/activity-focused satisfaction ($B = .29$, 95% $BCI = .191, .400$). These relationships are illustrated in Fig. 1.

Although not as theoretically compelling, for completeness of model testing given the cross-sectional data the mediator and predictor variables were also reversed to explore an alternative model. The direct relationship between sexual assertiveness and ego-centred satisfaction was significant ($B = .36$, 95% $CI = .31, .41$, $p < .001$) and there was no significant mediation via self-esteem ($B = .02$, $BCI = -.009, .061$). Similarly, the direct relationship between sexual assertiveness and partner/activity-focused satisfaction was significant ($B = .27$, 95% $CI = .21, .33$, $p < .001$) and there was no significant mediation via self-esteem ($B = .02$, $BCI = -.01, .06$).

Discussion

Sexual satisfaction is critical for wellbeing, mental health, and relationship satisfaction (Holt et al., 2020; Ménard & Offman, 2009; Zheng et al., 2020); yet heterosexual women experience considerably less partnered orgasms in comparison to heterosexual men, a fundamental aspect of intimate partner gratification. Addressing this gender disparity in sexual satisfaction, the current study endeavoured to investigate correlates of sexual satisfaction in heterosexual women. Advancing understanding of the gendered context of sexual satisfaction, drawing from research on the female sexual script (Simon & Gagnon, 1984), and the role of sexual assertiveness in sexual satisfaction, the current study examined how sexual assertiveness and self-esteem relate to sexual satisfaction among cisgender heterosexual women.

As expected, a significant positive association was also found between self-esteem and sexual assertion. Further, a positive association between sexual assertiveness and sexual satisfaction was found, such that higher sexual assertiveness predicted higher ego-centred and partner/activity-focused sexual satisfaction. Though a direct association between self-esteem and both ego and partner/activity related sexual satisfaction was not significant, statistical support was found for sexual assertiveness as a potential mediator of this

relationship, suggesting that the impact of self-esteem on sexual satisfaction may occur through sexual assertiveness. Of additional note, sexual assertiveness was more strongly associated with ego-centred sexual satisfaction indicating that women who are more sexually assertive are also more inclined to valuing their sexual experience.

The positive relationship noted between self-esteem and sexual assertiveness in the current study offers a prospective rationale for how the female sexual script (Simon & Gagnon, 1984) may contribute to less sexual satisfaction among women. Sexual script theory postulates that societal norms promote the objectification of women by prioritising aesthetics and performance to please a romantic and/or sexual partner (Holland et al., 2016; Simon & Gagnon, 1984). Communication of equitable partnered sexual outcomes may be compromised in these contexts. The female sexual role does not accommodate for any manner of sexual assertion, as submissiveness is an unequivocally conflicting behaviour to assertiveness. It is suggested that higher levels of self-esteem may overcome the objectified and marginalised female sexual script in order for women to feel entitled to sexual satisfaction. Specifically, high self-esteem in heterosexual women may supersede self-objectifying perceptions that the female body serves as a sexual commodity to please a mate.

Results in the current study are also consistent with former research on female sexual assertiveness as a correlate of partnered orgasm probability (e.g., Bridges et al., 2004; Ferroni & Taffe, 1997; Sayyadi et al., 2019) and more subjective sexual desire (e.g., Hurlbert, 1991). As autonomy is a rudimentary aspect of sexual assertiveness (Anders & Olmstead, 2019), results in the current study indirectly support findings that autonomous women experience more partnered orgasms (Galinsky & Sonenstein, 2011). As the mechanisms behind how autonomy relate to sexual satisfaction are ambiguous (Galinsky & Sonenstein, 2011), findings on sexual assertiveness in the current study suggest that self-assured sexual communication is the key to women expressing desires, regardless of their self-esteem. Additionally, findings in the current study indirectly support research demonstrating that sexual self-disclosure predicts sexual satisfaction and orgasm frequency (e.g., Frederick et al., 2018).

Furthermore, finding that lower sexual assertiveness is predictive of lower sexual satisfaction substantiates the passive female role as proposed by sexual script theory (Simon & Gagnon, 1984). As the female sexual script serves to facilitate male pleasure in response to partner-dominated sexual initiation (Simon & Gagnon, 1984), female pleasure is disregarded (Armstrong et al., 2012; Vannier & O'Sullivan, 2012). In consideration of this inequitable exchange, it is suggested that disassociation from the female sexual script fosters a sense of entitlement to pleasure. Sexual

assertiveness may then provide the direct and open communication required to procure behaviours from a partner that are conducive to orgasm. Hence, rewriting the female sexual script may be a consideration to obtain orgasm equality between genders.

Limitations and Future Research Directions

As the experience of sexual satisfaction can be dynamic (Vowels & Mark, 2020), the results of the current study are to be interpreted with caution given the cross-sectional study design. Longitudinal methodologies may identify variances in sexual satisfaction according to relationship length of time, as reduced orgasm frequency is reported by women in short-term and casual sexual encounters as compared to long-term relationships (Armstrong et al., 2012). Relationship length of time could precede sexual assertion and self-esteem, as sexual assertion could increase over time with heightened comfort, and self-esteem could increase if a woman's self-worth is derived from partnership. Similarly, sexually unassertive women with low self-esteem may be viewed as desirable candidates for casual sex due to low expectations of reciprocal sexual behaviours. A further limitation regarding the cross-sectional causality for mediation is the overlapping variance, and need for this to be considered in the interpretation and replication of the study.

Probability sampling as opposed to convenience sampling methodologies is further suggested for future research to avoid issues with self-selection bias potentially restricting population representativeness. With recruitment advertising broadly stating that the study concerned women and sexual wellbeing, moderately sexually satisfied women may have been attracted to participation as a self-interest exploratory exercise. Likewise, exceptionally sexually unsatisfied women may have been deterred from participation to avoid consciously attending to confronting realities, or fear of deviating from societal expectations of passivity (Simon & Gagnon, 1984).

As the pervasive objectification of women comprises overall self-worth and gender expectations, investigation of the role of global self-esteem in the current study was warranted. Further support for the pertinent role of the female sexual script could be obtained by the inclusion of an assessment of an objectification-related variable or a measure of compliance with the female sexual script. Furthermore, as sexual satisfaction is not a unidimensional experience, additional variables may be implicated in women's sexual satisfaction. Hence, inclusion of additional measures of sexual satisfaction in future research could expand upon findings.

A potential theoretical limitation in the current study concerns female alignment with marginalised societal norms pertaining to sexual satisfaction. Although the female sexual script regards female sexual satisfaction as a function of

the satisfaction offered to men (van Oosten, 2016), there is an expectation of some gratification with this inequitable arrangement. Hence, as the baseline level of female sexual satisfaction is low, women endorsing of the female sexual script (Simon & Gagnon, 1984) may be indoctrinated to perceive that they are sexually satisfied, which could have had implications for response validity to the sexual satisfaction measure in the current study. Determining endorsement of the female sexual script by utilising a measure such as the Patriarchal Beliefs Scale (Yoon et al., 2015) is therefore suggested as a consideration for future research.

Practice Implications

The findings of the current study have implications for improving women's experience of sexual satisfaction. Given the implications of low sexual satisfaction, practice professionals may wish to administer a measure of sexual satisfaction when working with women who are presenting with mood or relationship challenges. Similarly, given their strong predictive utility, exploration of self-esteem and sexual assertiveness clearly offer important vantage points for improving sexual satisfaction experienced by women. That self-esteem impacts ego and partner focused sexual satisfaction via sexual assertiveness offers practical utility, as assertiveness training has been shown to be a simple and effective brief intervention.

The current study contributes to the body of literature on women's sexual satisfaction, with findings offering a foundation for future research and implications for practice. As female sexual pleasure largely remains a taboo subject (Marais, 2019), mental health practitioners have the unique opportunity to contribute to destigmatising female pleasure by normalising conversation about sexual satisfaction, and thus potentially also enhancing confidence in speaking about one's sexual needs. Further, current sex education programs in Western schools predominantly address risk prevention and the active reproductive role of male ejaculation (Coll et al., 2018) however this approach may unintentionally reinforce the passive female sexual script. A focus on self-esteem and assertiveness as they relate to sexual health and wellbeing may be an approach to maximise impact.

Conclusion

The findings of the current study indicate that sexual assertiveness may be one mechanism through which women's self-esteem impacts sexual satisfaction and may partly explain how the female sexual script may perpetuate lower sexual satisfaction among women. Although these findings offer a foundation for future research and practical applications, continued research is required to increase understanding of this component of sexual wellbeing. As

patriarchal sociocultural norms endorsing of the female sexual script is institutional, the substantial task of fostering sexual satisfaction equality requires multifaceted and systemic changes.

Author Contribution The current research project was conducted by Alexandra May, under the supervision of Dr. Kim Johnston while enrolled in Graduate Diploma of Psychology Advanced at Monash University. Both authors contributed to all aspects of the project and article. The authors also acknowledge the contributions of Caitlin O'Sullivan and Julie Kohl for their assistance with recruitment.

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Availability of Data and Material Data collected is stored in accordance with Monash University regulations. Electronic data is stored for five years in LabArchives, which is a secure online platform endorsed by Monash University. In accordance with research protocols, all data will be automatically destroyed after five years.

Declarations

Ethics Approval The project was considered by the Monash University Human Research Ethics Committee. The Committee was satisfied that the proposal meets the requirements of the National Statement on Ethical Conduct in Human Research and has granted approval.

Consent to Participate Participation in this study was completely voluntary and participants were under no obligation to consent to participation. Participants were asked to give consent to participate at the beginning of the questionnaire. Participants were informed that if they indicated yes to this question and submitted the online questionnaire it will be considered that they have given consent to take part in the study. Participants could stop at any time before submitting the questionnaire by simply closing the webpage. Only when participants submitted their questionnaire at the end were their data recorded and compiled into the study. All questionnaires were completed anonymously.

Consent for Publication The authors Alexandra May and Dr. Kim Johnston consent to publication of this manuscript.

Conflict of Interest There is no known conflict of interest.

References

- Althof, S. E., & Needle, R. B. (2013). Psychological and interpersonal dimensions of sexual function and dysfunction in women. *Arab Journal of Urology*, *11*(3), 299–304. <https://doi.org/10.1016/j.aju.2013.04.010>
- Anders, K. M., & Olmstead, S. B. (2019). I hope to remain the same: Continuity and change in college students' sexual possible selves across the first semester. *American Journal of Sexuality Education*, *14*(1), 1–31. <https://doi.org/10.1080/15546128.2018.1520669>
- Armstrong, E. A., England, P., & Fogarty, A. C. K. (2012). Accounting for women's orgasm and sexual enjoyment in college hook-ups and relationships. *American Sociological Review*, *77*(3), 435–462. <https://doi.org/10.1177/0003122412445802>
- Attaky, A., Kok, G., & Dewitte, M. (2020). Attachment insecurity and sexual and relational experiences in Saudi Arabian women: The role of perceived partner responsiveness and sexual assertiveness. *The Journal of Sexual Medicine*, *17*(7), 1383–1394. <https://doi.org/10.1016/j.jsxm.2020.02.029>
- Bay-Cheng, L. Y., Robinson, A. D., & Zucker, A. N. (2009). Behavioral and relational contexts of adolescent desire, wanting, and pleasure: Undergraduate women's retrospective accounts. *The Journal of Sex Research*, *46*(6), 511–524. <https://doi.org/10.1080/00224490902867871>
- Blair, K. L., Cappell, J., & Pukall, C. F. (2017). Differences in frequency and satisfaction of orgasm experiences by sexual activity in same-sex versus mixed-sex relationships. *The Journal of Sex Research*, *55*(6), 719–733. <https://doi.org/10.1080/00224499.2017.1303437>
- Bridges, S. K., Lease, S. H., & Ellison, C. R. (2004). Predicting sexual satisfaction in women: Implications for counselor education and training. *Journal of Counseling and Development*, *82*(2), 158–166. <https://doi.org/10.1002/j.1556-6678.2004.tb00297.x>
- Brown, J. D. (2002). Mass media influences on sexuality. *The Journal of Sex Research*, *39*(1), 42–45. <https://doi.org/10.1080/00224490209552118>
- Calogero, R. M., & Thompson, J. K. (2009). Sexual self-esteem in American and British college women: Relations with self-objectification and eating problems. *Sex Roles*, *60*(3), 160–173. <https://doi.org/10.1007/s11199-008-9517-0>
- Carcedo, R. J., Fernández-Rouco, N., Fernández-Fuertes, A. A., & Martínez-Álvarez, J. L. (2020). Association between sexual satisfaction and depression and anxiety in adolescents and young adults. *International Journal of Environmental Research and Public Health*, *17*(3), 841. <https://doi.org/10.3390/ijerph17030841>
- Carpenter, L. M., Nathanson, C. A., & Kim, Y. J. (2009). Physical women, emotional men: Gender and sexual satisfaction in midlife. *Archives of Sexual Behavior*, *38*(1), 87–107. <https://doi.org/10.1007/s10508-007-9215-y>
- Coll, L., O'Sullivan, M., & Enright, E. (2018). The trouble with normal: (Re)imagining sexuality education with young people. *Sex Education*, *18*(2), 157–171. <https://doi.org/10.1080/14681811.2017.1410699>
- Dworkin, S. L., Beckford, S. T., & Ehrhardt, A. A. (2007). Sexual scripts of women: A longitudinal analysis of participants in a gender-specific HIV/STD prevention intervention. *Archives of Sexual Behavior*, *36*(2), 269–279. <https://doi.org/10.1007/s10508-006-9092-9>
- Emmers-Sommer, T. M. (2016). Do men and women differ in their perceptions of women's and men's saying no when they mean yes to sex? An examination between and within gender. *Sexuality & Culture*, *20*(2), 373–385. <https://doi.org/10.1007/s12119-015-9330-1>
- Erbil, N. (2013). The relationships between sexual function, body image and body mass index among women. *Sexuality and Disability*, *31*(1), 63–70. <https://doi.org/10.1007/s11195-012-9258-4>
- Fallis, E. E., Rehman, U. S., Woody, E. Z., & Purdon, C. (2016). The longitudinal association of relationship satisfaction and sexual satisfaction in long-term relationships. *Journal of Family Psychology*, *30*(7), 822–831. <https://doi.org/10.1037/fam0000205>
- Ferroni, P., & Taffe, J. (1997). Women's emotional well-being: The importance of communicating sexual needs. *Sexual and Marital Therapy*, *12*(2), 127–138. <https://doi.org/10.1080/02674659708408155>
- Flynn, K. E., Lin, L., Bruner, D. W., Cyranowski, J. M., Hahn, E. A., Jeffery, D. D., ... & Weinfurt, K. P. (2016). Sexual satisfaction and the importance of sexual health to quality of life throughout the life course of U.S. adults. *The Journal of Sexual Medicine*, *13*(11), 1642–1650. <https://doi.org/10.1016/j.jsxm.2016.08.011>
- Frederick, D. A., John, H. K. S., Garcia, J. R., & Lloyd, E. A. (2018). Differences in orgasm frequency among gay, lesbian, bisexual and heterosexual men and women in a U.S. national sample. *Archives*

- of *Sexual Behavior*, 47(1), 273–288. <https://doi.org/10.1007/s10508-017-0939-z>
- Galinsky, A. M., & Sonenstein, F. L. (2011). The association between developmental assets and sexual enjoyment among emerging adults. *Journal of Adolescent Health*, 48(6), 610–615. <https://doi.org/10.1016/j.jadohealth.2010.09.008>
- Garcia, J. R., Lloyd, E. A., Wallen, K., & Fisher, H. E. (2014). Variation in orgasm occurrence by sexual orientation in a sample of US singles. *Journal of Sexual Medicine*, 11(11), 2645–2652. <https://doi.org/10.1111/jsm.12669>
- Grower, P., & Ward, M. (2018). Examining the unique contribution of body appreciation to heterosexual women's sexual agency. *Body Image*, 27, 138–147. <https://doi.org/10.1016/j.bodyim.2018.09.003>
- Hatcher, J., & Hall, L. A. (2009). Psychometric properties of the Rosenberg Self-Esteem Scale in African American single mothers. *Issues in Mental Health Nursing*, 30(2), 70–77. <https://doi.org/10.1080/01612840802595113>
- Higgins, J. A., Mullinax, M., Trussell, J., Davidson, J. K., & Moore, N. B. (2011). Sexual satisfaction and sexual health among university students in the United States. *American Journal of Public Health*, 101(9), 1643–1654. <https://doi.org/10.2105/AJPH.2011.300154>
- Holland, E., Koval, P., Stratemeyer, M., Thomson, F., & Haslam, N. (2016). Sexual objectification in women's daily lives: A smartphone ecological momentary assessment study. *British Journal of Social Psychology*, 56(2), 314–333. <https://doi.org/10.1111/bjso.12152>
- Holland, K. J., Silver, K. E., Cipriano, A. E., & Brock, R. L. (2021). Young women's body attitudes and sexual satisfaction: Examining dehumanization and communication as serial multiple mediators. *Psychology of Women Quarterly*, 45(2), 255–266. <https://doi.org/10.1177/0361684321994295>
- Holt, L. L., Chung, Y. B., Janssen, E., & Peterson, Z. D. (2020). Female sexual satisfaction and sexual identity. *Journal of Sex Research*, 58(2), 195–205. <https://doi.org/10.1080/00224499.2020.1784827>
- Hurlbert, D. F. (1991). The role of assertiveness in female sexuality: A comparative study between sexually assertive and sexually nonassertive women. *Journal of Sex & Marital Therapy*, 17(3), 183–190. <https://doi.org/10.1080/00926239108404342>
- Impett, E. A., Schooler, D., & Tolman, D. L. (2006). To be seen and not heard: Femininity ideology and adolescent girls' sexual health. *Archives of Sexual Behavior*, 35(2), 129–142. <https://doi.org/10.1007/s10508-005-9016-0>
- Jozkowski, K. N., & Satinsky, S. A. (2013). A gender discrepancy analysis of heterosexual sexual behaviors in two university samples. *Journal of Community Health*, 38(6), 1157–1165. <https://doi.org/10.1007/s10900-013-9728-3>
- Kendler, K. S., & Gardner, C. O. (2014). Sex differences in the pathways to major depression: A study of opposite-sex twin pairs. *The American Journal of Psychiatry*, 171(4), 426–435. <https://doi.org/10.1176/appi.ajp.2013.13101375>
- Koval, P., Holland, E., Zypur, M. J., Stratemeyer, M., Knight, J. M., Bailen, N. H., ... & Haslam, N. (2019). How does it feel to be treated like an object? Direct and indirect effects of exposure to sexual objectification on women's emotions in daily life. *Journal of Personality and Social Psychology*, 116(6), 885–898. <https://doi.org/10.1037/pspa0000161>
- Kowalski, B. M., & Scheitle, C. P. (2020). Sexual identity and attitudes about gender roles. *Sexuality & Culture*, 24(1), 671–691. <https://doi.org/10.1007/s12119-019-09655-x>
- Maas, M., & Lefkowitz, E. (2015). Sexual esteem in emerging adulthood: Associations with sexual behavior, contraception use, and romantic relationships. *Journal of Sex Research*, 52(7), 795–806. <https://doi.org/10.1080/00224499.2014.945112>
- MacNeil, S., & Byers, E. S. (2005). Dyadic assessment of sexual self-disclosure and sexual satisfaction in heterosexual dating couples. *Journal of Social and Personal Relationships*, 22(2), 169–181. <https://doi.org/10.1177/0265407505050942>
- Mahar, E. A., Mintz, L. B., & Akers, B. M. (2020). Orgasm equality: Scientific findings and societal implications. *Current Sexual Health Reports*, 12(6), 24–23. <https://doi.org/10.1007/s11930-020-00237-9>
- Marais, K. (2019). Calls for pleasure: How African feminists are challenging and unsilencing women's sexualities. *Empowering Women for Gender Equality*, 33(3), 85–95. <https://doi.org/10.1080/10130950.2019.1644960>
- McNulty, J. K., & Fisher, T. D. (2008). Gender differences in response to sexual expectancies and changes in sexual frequency: A short-term longitudinal study of sexual satisfaction in newly married couples. *Archives of Sexual Behavior*, 37(2), 229–240. <https://doi.org/10.1007/s10508-007-9176-1>
- Ménard A. D. (2014). Sexual satisfaction, self-esteem, and assertiveness. In A. C. Michalos (Ed.), *Encyclopedia of Quality of Life and Well-Being Research*. Springer. https://doi.org/10.1007/978-94-007-0753-5_3922
- Ménard, A. D., & Offman, A. (2009). The interrelationships between sexual self-esteem, sexual assertiveness and sexual satisfaction. *The Canadian Journal of Human Sexuality*, 18(1), 35–45.
- Moradi, B., & Huang, Y. (2008). Objectification theory and psychology of women: A decade of advances and future directions. *Psychology of Women Quarterly*, 32(4), 377–398. <https://doi.org/10.1111/j.1471-6402.2008.00452.x>
- Peixoto, M. M., Amarelo-Pires, I., Biscaia, M. S. P., & Machado, P. P. (2018). Sexual self-esteem, sexual functioning and sexual satisfaction in Portuguese heterosexual university students. *Psychology & Sexuality*, 9(4), 305–316. <https://doi.org/10.1080/19419899.2018.1491413>
- Petersen, J. L., & Hyde, J. S. (2011). Gender differences in sexual attitudes and behaviors: A review of meta-analytic results and large datasets. *Journal of Sex Research*, 48(2–3), 149–165. <https://doi.org/10.1080/00224499.2011.551851>
- Puts, D. A., Dawood, K., & Welling, L. L. M. (2012). Why women have orgasms: An evolutionary analysis. *Archives of Sexual Behaviour*, 41(5), 1127–1143. <https://doi.org/10.1007/s10508-012-9967-x>
- Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin*, 27(2), 151–161. <https://doi.org/10.1177/0146167201272002>
- Rosenberg, M. (1965). *Rosenberg Self-Esteem Scale*. Princeton University Press. https://fetzer.org/sites/default/files/images/stories/pdf/selfmeasures/Self_Measures_for_Self-Esteem_ROSENBERG_SELF-ESTEEM.pdf
- Sanchez, D. T., Crocker, J., & Boike, K. R. (2005). Doing gender in the bedroom: Investing in gender norms and the sexual experience. *Personality & Social Psychology Bulletin*, 31(10), 1445–1455. <https://doi.org/10.1177/0146167205277333>
- Sanchez, D. T., Kiefer, A. K., & Ybarra, O. (2006). Sexual submissiveness in women: Costs for sexual autonomy and arousal. *Personality & Social Psychology Bulletin*, 32(4), 512–524. <https://doi.org/10.1177/0146167205282154>
- Sayyadi, F., Golmakani, N., Ebrahimi, M., Saki, A., Karimabadi, A., & Ghorbani, F. (2019). Determination of the effect of sexual assertiveness training on sexual health in married women: A randomized clinical trial. *Iranian Journal of Nursing and Midwifery Research*, 24(4), 274–280. https://doi.org/10.4103/ijnmr.IJNMR_51_17
- Simon, W., & Gagnon, J. (1984). Sexual Scripts. *Society*, 22, 53–60. <https://doi.org/10.1007/BF02701260>
- Stulhofer, A., Busko, V., & Brouillard, P. (2010). Development and bicultural validation of the New Sexual Satisfaction Scale. *The*

- Journal of Sex Research*, 47(4), 257–268. <https://doi.org/10.1080/00224490903100561>
- Vannier, S. A., & O'Sullivan, L. F. (2012). Who gives and who gets: Why, when, and with whom young people engage in oral sex. *Journal of Youth and Adolescence*, 41(5), 572–582. <https://doi.org/10.1007/s10964-012-9745-z>. Medline: 22327462
- van Oosten, J. M. (2016). Sexually explicit internet material and adolescents' sexual uncertainty: The role of disposition-content congruency. *Archives of Sexual Behavior*, 45(4), 1011–1022. <https://doi.org/10.1007/s10508-015-0594-1>
- Vowels, L. M., & Mark, K. P. (2020). Relationship and sexual satisfaction: A longitudinal actor–partner interdependence model approach. *Sexual and Relationship Therapy*, 35(1), 46–59. <https://doi.org/10.1080/14681994.2018.1441991>
- Wiederman, M. W. (2005). The gendered nature of sexual scripts. *The Family Journal*, 13(4), 496–502. <https://doi.org/10.1177/1066480705278729>
- Woertman, L., & van den Brink, F. (2012). Body image and female sexual functioning and behavior: A review. *The Journal of Sex Research*, 49(2–3), 184–211. <https://doi.org/10.1080/00224499.2012.658586>
- Wood, J. R., McKay, A., Komarnicky, T., & Milhausen, R. R. (2016). Was it good for you too? An analysis of gender differences in oral sex practices and pleasure ratings among heterosexual Canadian university students. *The Canadian Journal of Human Sexuality*, 25(1), 21–29. <https://doi.org/10.3138/cjhs.251-A2>
- Yoon, E., Adams, K., Hogge, I., Bruner, J. P., Surya, S., & Bryant, F. B. (2015). Development and validation of the patriarchal beliefs scale. *Journal of Counseling Psychology*, 62(2), 264–279. <https://doi.org/10.1037/cou0000056>
- Zheng, J., Skiba, M. A., Bell, R. J., Islam, R. M., & Davis, S. R. (2020). The prevalence of sexual dysfunctions and sexually related distress in young women: A cross-sectional survey. *Fertility and Sterility*, 113(2), 426–434. <https://doi.org/10.1016/j.fertnstert.2019.09.027>

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