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To cite this article: Cindy M. Meston, Bridget K. Freihart, Courtney L. Crosby, Kyle R. Stephenson & Paul D. Trapnell (2024) Psychometric Evaluation and Adaptation of the Five-Factor Sexual Satisfaction Scale (SSS-W) for Use in Men: The Sexual Satisfaction Scale (SSS), Journal of Sex & Marital Therapy, 50:2, 216-229, DOI: [10.1080/0092623X.2023.2270205](https://doi.org/10.1080/0092623X.2023.2270205)

To link to this article: <https://doi.org/10.1080/0092623X.2023.2270205>



Published online: 24 Oct 2023.



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METHOD



## Psychometric Evaluation and Adaptation of the Five-Factor Sexual Satisfaction Scale (SSS-W) for Use in Men: The Sexual Satisfaction Scale (SSS)

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### ABSTRACT

The Sexual Satisfaction Scale for Women (SSS-W) is a psychometrically sound, widely used instrument for assessing sexual satisfaction and distress in women. Because the majority of scale items are gender nonspecific, numerous researchers have adapted this scale for use in male samples. The goal of the current study was to assess the reliability and validity of a slightly modified version of the SSS-W in a male sample ( $N=268$ ). A Confirmatory Factor Analysis of five previously established factors provided evidence for consistency of internal structure in men. The adapted scale (SSS) exhibited acceptable test-retest reliability, as well as evidence for validity based on relationships with theoretically predicted variables. Taken together, there is evidence to suggest that the SSS may be a reliable and valid psychometric tool for the measurement of sexual satisfaction and distress in both men and women.

The Sexual Satisfaction Scale for Women (SSS-W; Meston & Trapnell, 2005) is a brief, 30-item measure of sexual satisfaction and sexual distress, composed of five domains supported by factor analyses: contentment, communication, compatibility, relational concern, personal concern. The SSS-W was among the first psychometrically validated tools to distinguish between interpersonal and intrapersonal aspects of sexual satisfaction, with two relational subscales (communication, compatibility) and one personal subscale (contentment). Research suggests individuals differentiate between personal sexual well-being (i.e., personal satisfaction with overall sexual quality) and relational/dyadic sexual well-being (i.e., satisfaction with one's sexual relationship) when considering their overall satisfaction levels (Pascoal, Narciso, & Pereira, 2014). Sexual distress is a criterion for diagnosing sexual dysfunction (American Psychiatric Association, 2013). The SSS-W contains two distinct subscales to distinguish between personal and relational sexual distress. Research suggests sexual satisfaction and distress are related but distinct constructs (Stephenson & Meston, 2010). Scales that differentiate between negatively valenced distress and positively valenced satisfaction have demonstrated better psychometric qualities (Shaw & Rogge, 2016), and the separate measurement of these factors facilitates an examination of how they may differ in terms of their predictors and consequences (e.g., Stephenson & Welch, 2020).

The SSS-W exhibits sound psychometric properties and has a demonstrated ability to differentiate between sexually functional and dysfunctional women on each of the five SSS-W domains and total score (Meston & Trapnell, 2005). The SSS-W has been used widely in the female sexuality literature (e.g., Andac & Aslan, 2017; Blais, Geiser, & Cruz, 2018; Çetin & Aslan, 2022;

King et al., 2023; Peixoto & Lopes, 2023a, 2023b; Pujols, Meston, & Seal, 2010; Witherow et al., 2017) and has been translated into seven other languages (Carlotto, Câmara, Otto, & Kauffmann, 2009; Çetin & Asian, 2018; Kfoury, Barakat, Hallit, & Saliba, 2023; Lee, Hu, Lin, & Tseng, 2019a; Lee, Hu, Meston, Lin, & Tseng, 2019b; Nimbi, Tripodi, Rossi, & Simonelli, 2018; Ruiz de Viñaspre-Hernández et al., 2021).

Of the thirty SSS-W items, twenty-eight items are gender nonspecific (e.g., “My sexual difficulties make me feel unfulfilled,” “I often feel something is missing from my present sex life”). As such, an increasing number of researchers have adapted the SSS-W for use in a male population by simply rewording the two gender specific items (i.e., “I’m worried that my partner views me as less of a woman because of my sexual difficulties,” “My partner has no difficulty talking about their deepest feelings and emotions when I want him to”) (e.g., Botta, Nimbi, Tripodi, Silvaggi, & Simonelli, 2019; Freihart & Meston, 2019; Nimbi, Tripodi, Rossi, Michetti, & Simonelli, 2019; Nimbi et al., 2018; Stephenson, Truong, & Shimazu, 2018). The goal of the current study was to assess the psychometric properties of the adapted SSS-W for use in men. As the adapted scale is non gender specific, we refer to it as the Sexual Satisfaction Scale (SSS). Having a psychometrically sound version of this scale for use in a male population would allow researchers to utilize the scale in dyadic heterosexual contexts and examine sex differences in predictors of sexual satisfaction and distress.

Our specific study aims were to (1) test whether the original five-factor structure held when the items were modified to be applicable for men, (2) establish evidence for validity by examining associations between the SSS and the sexual satisfaction subscale of the International Index of Erectile Functioning (IIEF, Rosen et al., 1997), (3) establish evidence for validity by examining associations between the SSS and the Couples Satisfaction Index (CSI) (Funk & Rogge, 2007), (4) examine test-retest reliability for a subset of men, and (5) assess whether the SSS can reliably differentiate between men with and without sexual function concerns indicated by the established clinical cutoff of the IIEF (Cappelleri et al., 1999).

## Method

### *Participants and procedures*

Data from two separate studies, conducted between January 2015 and January 2018, were compiled (Meston et al., 2020; Stephenson et al., 2018). In one study, men were recruited from Amazon’s Mechanical Turk (MTurk; <http://www.mturk.com>) to complete an online survey ( $n=227$ ). Men were eligible to participate if they were (1) at least 18 years old, (2) fluent in English, and (3) sexually active within the past four weeks. For the present analysis, men were excluded if they failed three out of five attention check items ( $n=120$ ), if they did not endorse being in a committed heterosexual relationship ( $n=28$ ), and if they failed to respond to all items included on the SSS or IIEF scales ( $n=8$ ) resulting in a final sample of ( $n=71$ ).

In the other study, men ( $n=243$ ) were recruited from online postings and newspaper advertisements in the United States. Online posting sites included MTurk, Craigslist.com, and Facebook.com. Men were eligible to participate if they were (1) at least 18 years old, (2) fluent in English, (3) sexually active within the past four weeks, (4) in a committed, heterosexual relationship. Participants were excluded if they failed to respond to all items included on the SSS or IIEF scales ( $n=9$ ), if they failed either of two attention checks ( $n=12$ ), if they failed to provide information on what type of relationship they were in ( $n=4$ ), or if they were not in some form of committed romantic relationship (e.g., single and not dating;  $n=21$ ) resulting in a final sample of ( $n=197$ ). A subset of this sample ( $n=46$ ) also completed measures again one month after their initial study participation in order to assess test-retest reliability.

For both studies, attention checks were embedded throughout the survey and presented to participants in a standardized and consistent way (e.g., in between the same items on different study questionnaires). These items asked participants to select a predetermined answer choice

(e.g., “For this question, select slightly disagree.”) to ensure that they were paying attention. Participants were assured that their answers to these questions would not affect their compensation in any way, but that their answers would be used to conduct more accurate analyses. Participants were compensated for their time *via* the online platforms (approximately \$1.50/survey).

The final analytic sample included 268 men ranging in age from 19 to 75 ( $M=37.28$ ,  $SD=10.78$ ). A majority of participants were in a dating relationship with one or more partners (50.00%), Caucasian (70.50%), and heterosexual (94.40%; see [Table 1](#) for participant characteristics). All participants were located within the United States and provided informed consent before participation began. Study procedures were approved by the Institutional Review Boards of either the University of Texas at Austin or California State University Monterey Bay and Willamette University.

### Scale adaptation

The SSS was adapted by the first author for a non-gender specific population through minor changes to language implying gender specificity. Indeed, the only difference between the scales is two places where the language is slightly modified to be applicable to a broader population (i.e., “I’m worried that my partner views me as less of a woman because of my sexual difficulties” was modified to “I’m worried that my partner views me as less of a woman/man because of my sexual difficulties,” and “my partner has no difficulty talking about their deepest feelings and emotions when I want him to” was modified to “my partner has no difficulty talking about their deepest feelings and emotions when I want him/her to.”).

### Measures

#### Sexual satisfaction and distress

Sexual satisfaction and distress were measured using an adapted version of the Sexual Satisfaction Scale for Women (SSS-W) that had been modified to be non-gender specific (SSS; see [Appendix](#) for the full questionnaire) (Meston & Trapnell, 2005; Meston, unpublished data). The SSS is

**Table 1.** Participant characteristics.

	Whole Sample ( $n=268$ )	Erectile Concerns ( $n=103$ )	No Erectile Concerns ( $n=165$ )
Age ( $M$ , $SD$ )	37.28 (10.78)	39.00 (12.20)	36.20 (9.69)
Relationship status (%)			
In a committed relationship with one or more partners	47.40 %	48.50 %	46.70 %
Married	50.00 %	48.50 %	50.90 %
Living with partner	2.60 %	3.00 %	2.40 %
Sexual Orientation (%)			
Heterosexual	94.40%	91.30%	96.40%
Bisexual	2.60%	2.90%	2.40%
Homosexual or Lesbian	2.20%	4.90%	0.60%
Other	0.80%	.90%	0.60%
Ethnicity (%)			
Caucasian	70.50%	65.00%	73.90%
African American	12.30%	16.50%	9.70%
Hispanic/Latino	6.70%	7.80%	6.10%
Asian	6.70%	8.70%	5.50%
Native American	0.40%	0.00%	0.60%
Other	3.40%	2.00%	4.20%
IEEF subscale scores ( $M$ , $SD$ )			
Erectile function	25.00 (6.23)	18.50 (5.52)	29.00 (1.27)
Orgasmic function	8.10 (2.39)	6.69 (2.64)	8.98 (1.72)
Sexual desire	6.90 (2.01)	6.23 (1.77)	7.32 (2.05)
Intercourse satisfaction	10.30 (3.24)	8.28 (3.26)	11.60 (2.51)
Overall satisfaction	6.74 (2.38)	5.56 (2.07)	7.47 (2.26)

comprised of 30-items, and asks participants to indicate the extent to which they agree or disagree with each item using a scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). This scale measures sexual well-being and includes the following subscales: contentment, communication, compatibility, relational concerns, and personal concerns.

In its original validation study, the SSW-W demonstrated acceptable psychometric properties, including high internal consistency (ranging from  $\alpha = .72$  to  $\alpha = .91$  in a control sample) and moderate test-retest reliability in women with ( $r = .62$  to  $.79$ ) and without ( $r = .59$  to  $.79$ ) sexual dysfunction. The scoring procedures for the SSS-W and SSS are identical, as are the subscales (see [Appendix](#)).

### **Sexual function**

Sexual function was measured with the International Index of Erectile Dysfunction (IIEF; (Rosen et al., 1997). The 15-item IIEF contains five factors, including erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction, and has demonstrated impressive internal consistency (ranging from  $\alpha = .73$  to  $\alpha = .99$  across the original validation studies; see Rosen et al., 1997). It has been found that scores below 25 on the Erectile Function subscale of the IIEF reliably discriminate between men with and without Erectile Dysfunction (Cappelleri et al., 1999). This 15-item measure includes a variety of response options, a majority of them ranging from 0 to 5. For the specific response options of each question, please see Rosen et al. (1997).

### **Relationship satisfaction**

A subset of the final analytic sample (those from the second study;  $n=197$ ) reported their level of relationship satisfaction through the Couples Satisfaction Index (CSI; (Funk & Rogge, 2007). The CSI is a 16-item measure with high internal reliability ( $\alpha = .98$ ) and the ability to discriminate reliably between couples experiencing relational distress and non-distressed couples. It has also been shown to have better measurement precision than other popular measures of relationship satisfaction (Funk & Rogge, 2007). This 16-item measure is a shorter version of the original 32-item measure and includes a variety of response options. For the specific response options of each question, please see Funk and Rogge (2007).

### **Data analysis**

#### **Missing data**

None of the variables included in the analysis had missing data.

#### **Factor analysis**

Internal factor structure of the SSS was assessed through a confirmatory factor analysis (CFA) using maximum likelihood estimation with robust standard errors (MLR). All analyses were conducted in R with the lavaan package (Rosseel, 2012). It should be noted that it is recommended there be a 10:1 ratio of sample size to number of variables used for factor analyses (Hair, Black, Babin, & Anderson, 2014). For the present study this would suggest a sample size of 300 (30 variables x 10). Our final sample size was 268, suggesting that our sample was somewhat below common guidelines for psychometric studies.

#### **Validity**

To establish evidence for convergent validity, the five-factor SSS was correlated with the five subscales of the IIEF for the full sample. To establish evidence for divergent validity, we correlated our five-factor measure with a total score on the CSI ( $\alpha = .98$ ) for a subset of our original sample ( $n=197$ ).

To assess whether the SSS has the sensitivity to differentiate between men with and without sexual difficulties, we first distinguished between men with and without erectile concerns, as classified by a score of 25 or lower on the IIEF (Cappelleri et al., 1999; Rosen et al., 1997). Using this cut off, 38.43% of ( $n=103$ ) men in our sample had erectile concerns while 61.57% ( $n=165$ ) did not. We next assessed the intercorrelations of the five domains of sexual satisfaction for each erectile group independently.

### **Test-retest reliability**

A subset of our original sample ( $n=46$ ) completed the SSS at two separate time points, with a one-month delay between study sessions. To assess test-retest reliability, we conducted a stability correlation between the two measurements for participants who were in a committed, heterosexual relationship at both measurement points ( $n=36$ ).

## **Results**

### **Factor analysis**

The CFA indicated that a five-factor structure fit the data just slightly below the recommended .95 cutoff for good fit,  $\chi^2(395, N=268) = 952.678, p < .001, CFI=0.890, RMSEA=0.079$ . All items loaded at 0.30 or higher onto one of the five factors (see Table 2 for the final items and standardized factor loadings).

The internal consistency of all 30 items was quite high (ranging from  $\alpha = .81$  to  $\alpha = .93$  for the individual subscales, and  $\alpha = .95$  for the overall scale; see Table 3 for the reliabilities of each factor). When analyzing the thirty items of the SSS together, reliability analyses suggested not to drop any of the items ( $\alpha=0.95$ ; Guttman's  $\lambda_2 = .95$ ; split-half reliability using 10,000 simulations = 0.9527469). As a result, all 30 items were retained.

Additionally, there were significant positive correlations between all five factors of sexual satisfaction and distress. The largest between-factor correlation was between personal concern and relational concern and the smallest correlation was between relational concern and communication ( $r = .81, p < .001$ ;  $r = .43, p < .001$ , respectively; see Table 3).

### **Validity**

#### **Sexual satisfaction and distress**

The highest correlation between the five domains of sexual satisfaction and the IIEF subscales (consistency ranging from  $\alpha = .78$  to  $\alpha = .92$ ) was between contentment and overall satisfaction ( $r = .80, p < .001$ ) and the lowest correlation was between compatibility and sexual desire ( $r = .17, p < .001$ ) (see Table 4). As predicted, the highest correlation with a total score of sexual satisfaction on the SSS was the overall satisfaction subscale of the IIEF ( $r = .73, p < .001$ ).

#### **Relationship satisfaction**

As predicted, there was a strong correlation between a total score of sexual satisfaction and distress on the SSS (reliability for the subscales ranging from  $\alpha = .81$  to  $\alpha = .92$ ) and the CSI ( $r = .68, p < .001$ ); however, the correlations between the CSI and our five factors varied (see Table 5). For example, the lowest correlation between the CSI and the five-factors of the SSS was among the relational concern domain ( $r = .36, p < .001$ ). This suggests the SSS is capturing a unique type of relationally-focused *sexual* well-being that is not being captured by a scale of overall relational satisfaction.

**Table 2.** Standardized factor loadings for the whole sample.

Items	Factors				
	Contentment	Communication	Compatibility	Relational concern	Personal concern
SSS 1	0.83				
SSS 4	0.79				
SSS 2	0.78				
SSS 5	0.62				
SSS 3	0.58				
SSS 6	0.30				
SSS 10		0.81			
SSS 8		0.77			
SSS 7		0.75			
SSS 12		0.60			
SSS 9		0.57			
SSS 11		0.40			
SSS 15			0.88		
SSS 16			0.91		
SSS 18			0.91		
SSS 14			0.82		
SSS 13			0.72		
SSS 17			0.66		
SSS 19				0.92	
SSS 20				0.92	
SSS 24				0.87	
SSS 22				0.83	
SSS 23				0.78	
SSS 21				0.58	
SSS 28					0.89
SSS 26					0.87
SSS 25					0.85
SSS 30					0.85
SSS 29					0.81
SSS 27					0.45

**Table 3.** Between-factor correlations for the whole sample.

	Factors of sexual satisfaction					Total satisfaction ( $\alpha = .95$ )
	Contentment ( $\alpha = .81$ )	Communication ( $\alpha = .82$ )	Compatibility ( $\alpha = .92$ )	Relational concern ( $\alpha = .93$ )	Personal concern ( $\alpha = .91$ )	
1. Contentment	—					
2. Communication	0.54***	—				
3. Compatibility	0.57***	0.75***	—			
4. Relational concern	0.66***	0.43***	0.44***	—		
5. Personal concern	0.71***	0.43***	0.49***	0.81***	—	
6. Total satisfaction	0.85***	0.81***	0.85***	0.76***	0.79***	—

Note. See full scale in [Appendix](#) for scoring instructions.

**Erectile function**

On average, correlations among the five factors of sexual satisfaction were lower for men with erectile concerns than men without erectile concerns (see [Table 6](#)). We further examined group differences on overall levels of sexual satisfaction by conducting a t-test between the two groups. Results revealed that men with erectile concerns ( $M = 72.20, SD = 18.44$ ) had significantly lower levels of overall sexual satisfaction than men without erectile concerns ( $M = 89.03, SD = 19.32$ ); ( $t(224.18) = -7.13, p < .001$ ; 95% CI [-21.47, -12.17]; Cohen's  $d = -0.89$ ). The lack of overlap between the 95% confidence intervals and zero further indicates that there is a statistically significant difference between the two groups on overall levels of sexual satisfaction of the SSS.

**Table 4.** Evidence for validity based on correlations with related measures for the whole sample ( $N = 268$ ).

	Factors of sexual satisfaction					Total sexual satisfaction
	Contentment	Communication	Compatibility	Relational concern	Personal concern	
<i>IIEF</i>						
Erectile function ( $\alpha = .88$ )	0.41***	0.24***	0.22***	0.47***	0.42***	0.40***
Orgasmic ( $\alpha = .92$ )	0.34***	0.22***	0.19**	0.36***	0.40***	0.35***
Sexual desire ( $\alpha = .88$ )	0.45***	0.24***	0.17**	0.46***	0.37***	0.39***
Intercourse satisfaction ( $\alpha = .78$ )	0.60***	0.44***	0.47***	0.41***	0.49***	0.59***
Overall satisfaction ( $\alpha = .89$ )	0.80***	0.47***	0.53***	0.54***	0.62***	0.73***

**Table 5.** Evidence for validity based on correlations with CSI for a subset of our original sample ( $n = 197$ ) on the Couple's Satisfaction Index.

	Factors of sexual satisfaction					Total sexual satisfaction ( $\alpha = .95$ )
	Contentment ( $\alpha = .85$ )	Communication ( $\alpha = .81$ )	Compatibility ( $\alpha = .92$ )	Relational concern ( $\alpha = .92$ )	Personal concern ( $\alpha = .88$ )	
CSI total score ( $\alpha = .98$ )	0.54***	0.64***	0.64***	0.36***	0.41***	0.68***

**Table 6.** Evidence for validity based on differences in SSS scores between men with and without ED concerns.

	Factors of sexual satisfaction					Total sexual satisfaction
	Contentment	Communication	Compatibility	Relational concern	Personal concern	
<b>Men without ED concerns</b>						
Contentment ( $\alpha = .77$ )	—					
Communication ( $\alpha = .82$ )	0.61***	—				
Compatibility ( $\alpha = .93$ )	0.61***	0.72***	—			
Relational concern ( $\alpha = .91$ )	0.57***	0.40***	0.41***	—		
Personal concern ( $\alpha = .90$ )	0.60***	0.39***	0.43***	0.79***	—	
Total sexual satisfaction	0.84***	0.81***	0.85***	0.71***™	0.72***	—
<b>Men with ED concerns</b>						
Contentment ( $\alpha = .77$ )	—					
Communication ( $\alpha = .81$ )	0.37***	—				
Compatibility ( $\alpha = .90$ )	0.42***	0.76***	—			
Relational concern ( $\alpha = .89$ )	0.57***	0.38***	0.38***	—		
Personal concern ( $\alpha = .86$ )	0.72***	0.42***	0.51***	0.71***	—	
Total sexual satisfaction	0.74***	0.81***	0.86***	0.69***	0.78***	—

### Test-retest reliability

All five factors were significantly correlated across time (see Table 7). The most reliable factor was compatibility ( $r = 0.94$ ,  $p < .001$ ) and the least reliable factor was relational concerns ( $r = 0.70$ ,  $p < .001$ ). These results suggest that the measurement of sexual satisfaction is consistent across time.

### Discussion

The goal of the present analyses was to determine if the desirable psychometric properties of the SSS-W (Meston & Trapnell, 2005) were maintained when modified to be gender nonspecific (SSS) and tested in a male sample. A confirmatory factor analysis suggested that a five-factor



**Table 7.** Test-retest reliability of the five factors after one month for a subset ( $n = 36$ ) of participants.

	Test-retest 1 month ( $n = 36$ )	
	Pearson's $r$	
Contentment	0.74***	
Communication	0.83***	
Compatibility	0.94***	
Relational concern	0.70***	
Personal concern	0.75***	
Total sexual satisfaction	0.87***	

Note. Probability values have been adjusted for multiple tests.

model sufficiently fit the data, with an extremely high level of internal consistency and test-retest reliability estimates in the good to excellent range for all factors. Evidence for convergent validity was established through strong correlations with the sexual satisfaction subscale of the IIEF. While a strong correlation was similarly found between the SSS and a measure of relationship satisfaction, variations in the factor correlations suggest that the SSS likely captures a separate component of satisfaction that may be unique to the sexual aspects of relationships. Significant differences in sexual satisfaction and distress emerged between men above and below the clinical cutoff on the IIEF, suggesting that the SSS may be sensitive enough to detect differences in clinically-relevant phenomena, like sexual function concerns. Taken together, there is preliminary evidence for the SSS's validity and reliability in measuring sexual satisfaction and distress in men.

The SSS seems to mirror—and in some cases outperform—the psychometric properties of the SSS-W reported in the original validation study (Meston & Trapnell, 2005). For instance, the overall internal consistency of the SSS-W was far lower than the internal consistency observed in the present analysis. Similarly, the test-retest reliability estimates observed across the factors of the SSS are somewhat higher than those reported in the validation of the SSS-W. Also similar to the SSS-W validation study, the observed intercorrelation of factors were theoretically consistent; the satisfaction subscales correlated most strongly with each other and least strongly with subscales measuring distress. Overall, these findings suggest that, in terms of reliability, the SSS may perform at least as well as the SSS-W.

Evidence was found for the validity of using the SSS to measure sexual satisfaction and distress in men, with a strong correlation observed between the SSS total score and the satisfaction subscale of the IIEF. Similarly, on a factor level, the strongest observed correlation was between the satisfaction subscale of the IIEF and the contentment subscale of the SSS, the factor which most directly measures positively valenced subjective sexual well-being. This close alignment suggests that the SSS is, indeed, measuring sexual satisfaction as opposed to a related, potentially confounded construct.

Further evidence for validity was established through correlations between the factors of the SSS and the CSI. Notably, research has consistently found a considerable overlap between measures of sexual and relationship satisfaction, with correlations more commonly ranging between 0.40-0.60 (e.g., Fallah et al., 2018; McNulty, Wenner, & Fisher, 2016). In the present analysis, the correlation between the SSS total score and CSI was slightly higher than what is typically observed. This finding is theoretically interpretable; the SSS intentionally includes relational elements to facilitate an understanding of the interpersonal aspects of sexual quality and is thus more relational in nature than some other sexual satisfaction and distress scales. While it is possible that this overlap suggests the SSS is inadvertently tapping relational satisfaction, an examination of the factor-level correlations between the CSI and SSS provides evidence that the SSS measures a related but distinct construct. For instance, the sexual distress subscales, which are most theoretically distinct from relationship satisfaction, demonstrated the lowest overall correlations with the CSI. Similarly, the relational sexual satisfaction subscales (compatibility and communication) correlated more strongly with the CSI than the personal sexual satisfaction subscale (contentment), suggesting that the SSS has the sensitivity to distinguish between personal and relational sexual satisfaction.

The overall sensitivity of the instrument in measuring conceptually-related phenomena was established by splitting the sample between men above and below the clinical cutoff for erectile concerns on the IIEF and examining differences in sexual satisfaction and distress. Statistically significant differences emerged with regards to total satisfaction and distress such that men below the clinical cutoff reported less overall sexual satisfaction. This suggests that the SSS has the capacity to capture theoretically-predicted relationships, such as reduced sexual quality among those who report lower sexual function. Interestingly, the intercorrelations between factors were stronger in men without erectile concerns. In the validation of the SSS-W, women with clinically-diagnosed female sexual dysfunction similarly showed weaker intercorrelations between scale factors (Meston & Trapnell, 2005). It is possible, therefore, that sexual satisfaction may be a less unified or cohesive psychological construct for individuals with sexual function concerns. Indeed, research has shown that individuals with sexual dysfunction are more likely to attribute sexual concerns to themselves rather than to their relationships (Stephenson & Meston, 2016), and as a result, may experience fluctuations in sexual satisfaction that are related to internal factors like sexual self-schemas (Nobre & Pinto-Gouveia, 2006). For those without sexual dysfunction, on the other hand, sex may be more likely to be viewed as an extension of the broader relationship and may therefore be more cohesive, as well as more closely tied to overall relational quality.

While the current results suggest that the SSS exhibits sound psychometric properties and has demonstrated evidence for validity and reliability in the measurement of sexual satisfaction and distress in men, a study limitation warrants mention. The items from the original SSS-W were selected based on both prior literature and interviews with women diagnosed with clinical sexual dysfunction (Meston & Trapnell, 2005). Because the SSS was adapted directly from the SSS-W, the items were not developed specifically for a male population. Moreover, we did not conduct focus groups to determine whether the questionnaire content and wording of the original SSS-W scale were relevant to men and whether specific items germane to male sexuality should also be included. As a result, the SSS may include less relevant item content than would be the case if the scale were developed for men specifically.

Two additional study limitations should be noted. First, our analyses were limited to individuals in committed heterosexual relationships, and as a consequence, the validity of the SSS for LGBTQ+ or unpartnered individuals remains unclear. In particular, this scale is unlikely to reliably capture sexual satisfaction among individuals who are not in a consistent relationship, as many of the items pertain to the quality of sexual partnerships. Second, although we attempted to broaden the age range, demographic distribution, and overall size of our sample by merging two datasets, it is possible that our CFA was underpowered. More specifically, Hair et al. (2014) suggests a minimum sample size equal to the number of covariances or correlations in the matrix. Certainly, there is preference for a sample of at least ten participants per parameter. In this study, we had approximately 8.93 participants per response item, suggesting that our sample was somewhat below common guidelines for psychometric studies.

In conclusion, this study provides psychometric support for the use of an adapted version of the SSS-W (the SSS) for assessing sexual satisfaction and distress in a male population. Unlike the SSS-W, the SSS does not contain gender specific items, thus we recommend future research use the SSS scale for assessing satisfaction in both male and female populations. This will allow researchers to utilize the scale in dyadic heterosexual contexts and examine sex differences in predictors of sexual satisfaction and distress. Future research is needed to examine whether the strong psychometric properties of the SSS-W hold true for women in the newly adapted SSS.

## Disclosure statement

No potential conflict of interest was reported by the authors.

## Funding

The author(s) reported there is no funding associated with the work featured in this article.

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## Appendix

### The Sexual Satisfaction Scale (SSS)

Question	Response Options
Q1: I feel content with the way my present sex life is.	1 = Strongly disagree 2 = Disagree a little 3 = Neither agree or disagree 4 = Agree a little 5 = Strongly agree
Q2: I often feel something is missing from my present sex life.	5 = Strongly disagree 4 = Disagree a little 3 = Neither agree or disagree 2 = Agree a little 1 = Strongly agree
Q3: I often feel I don't have enough emotional closeness in my sex life.	5 = Strongly disagree 4 = Disagree a little 3 = Neither agree or disagree 2 = Agree a little 1 = Strongly agree
Q4: I feel content with how often I presently have sexual intimacy (kissing, intercourse, etc.) in my life.	1 = Strongly disagree 2 = Disagree a little 3 = Neither agree or disagree 4 = Agree a little 5 = Strongly agree

Question	Response Options
Q5: I don't have <i>any</i> important problems or concerns about sex (arousal, orgasm, frequency, compatibility, communication, etc.).	1 = Strongly disagree 2 = Disagree a little 3 = Neither agree or disagree 4 = Agree a little 5 = Strongly agree
Q6: Overall, how satisfactory or unsatisfactory is your present sex life?	5 = Completely satisfactory 4 = Very satisfactory 3 = Reasonable satisfactory 2 = Not very satisfactory 1 = Not at all satisfactory
Q7: My partner often gets defensive when I try discussing sex.	5 = Strongly disagree 4 = Disagree a little 3 = Neither agree or disagree 2 = Agree a little 1 = Strongly agree
Q8: My partner and I do not discuss sex openly enough with each other, or do not discuss sex often enough.	5 = Strongly disagree 4 = Disagree a little 3 = Neither agree or disagree 2 = Agree a little 1 = Strongly agree
Q9: I usually feel completely comfortable discussing sex whenever my partner wants to.	1 = Strongly disagree 2 = Disagree a little 3 = Neither agree or disagree 4 = Agree a little 5 = Strongly agree
Q10: My partner usually feels completely comfortable discussing sex whenever I want to.	1 = Strongly disagree 2 = Disagree a little 3 = Neither agree or disagree 4 = Agree a little 5 = Strongly agree
Q11: I have no difficulty talking about my deepest feelings and emotions when my partner wants me to.	1 = Strongly disagree 2 = Disagree a little 3 = Neither agree or disagree 4 = Agree a little 5 = Strongly agree
Q12: My partner has no difficulty talking about their deepest feelings and emotions when I want him/her to.	1 = Strongly disagree 2 = Disagree a little 3 = Neither agree or disagree 4 = Agree a little 5 = Strongly agree
Q13: I often feel my partner isn't sensitive or aware enough about my sexual likes and desires.	5 = Strongly disagree 4 = Disagree a little 3 = Neither agree or disagree 2 = Agree a little 1 = Strongly agree
Q14: I often feel that my partner and I are not sexually compatible enough.	5 = Strongly disagree 4 = Disagree a little 3 = Neither agree or disagree 2 = Agree a little 1 = Strongly agree
Q15: I often feel that my partner's beliefs and attitudes about sex are too different from mine.	5 = Strongly disagree 4 = Disagree a little 3 = Neither agree or disagree 2 = Agree a little 1 = Strongly agree
Q16: I sometimes think my partner and I are mismatched in needs and desires concerning sexual intimacy.	5 = Strongly disagree 4 = Disagree a little 3 = Neither agree or disagree 2 = Agree a little 1 = Strongly agree
Q17: I sometimes feel that my partner and I might not be physically attracted to each other enough.	5 = Strongly disagree 4 = Disagree a little 3 = Neither agree or disagree 2 = Agree a little 1 = Strongly agree

Question	Response Options
Q18: I sometimes think my partner and I are mismatched in our sexual styles and preferences.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q19: I'm worried that my partner will become frustrated with my sexual difficulties.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q20: I'm worried that my sexual difficulties will adversely affect my relationship.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q21: I'm worried that my partner may have an affair because of my sexual difficulties.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q22: I'm worried that my partner is sexually unfulfilled.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q23: I'm worried that my partner views me as less of a man/woman because of my sexual difficulties.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q24: I feel like I've disappointed my partner by having sexual difficulties.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q25: My sexual difficulties are frustrating to me.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q26: My sexual difficulties make me feel sexually unfulfilled.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q27: I'm worried that my sexual difficulties might cause me to seek sexual fulfillment outside my relationship.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q28: I'm so distressed about my sexual difficulties that it affects the way I feel about myself.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q29: I'm so distressed about my sexual difficulties that it affects my own well-being.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree
Q30: My sexual difficulties annoy and anger me.	5= Strongly disagree 4= Disagree a little 3= Neither agree or disagree 2= Agree a little 1= Strongly agree

### **Scoring system**

Domain	Questions	Score Range
Contentment	1,2,3,4,5,6	6-30
Communication	7,8,9,10,11,12	6-30
Compatibility	13,14,15,16,17,18	6-30
Concern – Interpersonal	19,20,21,22,23,24	6-30
Concern – Personal	25,26,27,28,29,30	6-30

Note: Individual domain scores are computed by adding the scores of the individual items that comprise the domain. Full Scale Score = (Contentment + Communication + Compatibility + (Interpersonal Concern + Personal Concern)/