

# Turkish validity and reliability study of male genital self-image scale (MGSIS)

Urologia Journal  
2023, Vol. 90(2) 278–285  
© The Author(s) 2022  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/03915603221127091  
journals.sagepub.com/home/urj



Vesile Koçak<sup>1</sup>, Yasemin Erkal Aksoy<sup>2</sup>  and Sinem Dügeroğlu<sup>3</sup>

## Abstract

**Objective:** This study, which was carried out in order to determine the Turkish validity and reliability of the “Male Genital Self-Image Scale” in a population sample of Turkish men, is of methodological type.

**Methods:** In the study, language, content, construct validity, and reliability methods were used for the intercultural adaptation of the scale. The data collection process of the scale was carried out with 336 men who applied to the Family Medicine Polyclinic of a hospital. In the language and content validity phase, the opinions of experts with technical and cultural knowledge were consulted. The data of the study were collected with the Sociodemographic Characteristics Form and the Male Genital Self-Image Scale.

**Results:** As a result of experts evaluation, the Content Validity Ratio value was determined as 0.83. At the stage of construct validity, the suitability of the single-factor model of the items of the Male Genital Self-Image Scale was tested. It was determined that all items contributed significantly to the factor (0.62–0.92). As a result of the Confirmatory Factor Analysis, the measurement model was statistically validated ( $\chi^2 = 32.083$ ,  $p = 0.001$ ,  $\chi^2/df = 2.917$ , RMSEA = 0.076). The Cronbach’s alpha reliability coefficient was calculated as  $\alpha = 0.92$  in the analysis performed to evaluate the internal consistency of Male Genital Self-Image Scale.

**Conclusion:** The results of the study revealed that Male Genital Self-Image Scale is a valid and reliable tool to evaluate genital self-image in Turkish men.

## Keywords

Male, genital, self-image, validity, reliability

Date received: 3 June 2022; accepted: 30 August 2022

## Introduction

Body image, the image formed in the mind; It consists of how the individual sees himself/herself and his/her perceptions, thoughts, and feelings about his/her body.<sup>1</sup> Perception of physical appearance is an important component of one’s experiences.<sup>2</sup> Body image can result in satisfaction or dissatisfaction by creating a value judgment in the person. Individuals who state that they are less concerned with general body image and who think that they have a socially accepted physical appearance have a higher satisfaction rate. Body image and sexuality are inseparable. It is accepted that a person’s sexual self-concept is directly influenced by that person’s body image.<sup>3</sup> Body image is a concept that can affect sexual interest and satisfaction positively or negatively.<sup>4,5</sup> Having a positive body image is associated with a pleasurable sex life.<sup>6</sup> Individuals with a positive body image have more self-confidence. Accordingly, these people are

more likely to establish close relationships, engage in sexual activity, and enjoy such activities.<sup>3</sup> Genital self-image, which is an important component of body image and a fundamental element of sexual health, defines behaviors and attitudes related to sexual organs.<sup>7</sup> Subjective experience and sexual enjoyment have been shown to be influenced by genital self-image. Negative genital self-image leads to

<sup>1</sup>Department of Obstetrics and Gynecology Nursing, Nursing Faculty of Necmettin Erbakan University, Konya, Turkey

<sup>2</sup>Department of Midwifery, Health Sciences Faculty of Selcuk University, Konya, Turkey

<sup>3</sup>Republic of Turkey Ministry of Health, Kırıkkale High Specialization Hospital, Kırıkkale, Turkey

### Corresponding author:

Yasemin Erkal Aksoy, The Midwifery Department of Health Sciences Faculty, Selcuk University, Konya, 42130, Turkey.  
Email: ebeyaseminerkal@hotmail.com

sexual unresponsiveness and sexual dysfunction.<sup>8</sup> In addition, genital self-image plays a very important role in the development of sexual orientation.<sup>9</sup> It has been shown that there is a positive relationship between a healthy genital self-image and sexual activity, orgasm, and orgasm frequency.<sup>10</sup> Conversely, it has been suggested that a negative genital self-image is associated with problems such as sexual avoidance, embarrassment, anxiety, and dissatisfaction with sexual activity.<sup>7</sup> Men's concerns about their genitals affect their sexual functioning, but the lack of a widely accepted or used scale to measure how men feel about their genitals limits our understanding of these effects.<sup>11,12</sup> While most studies of genital self-image have focused on women, the importance of genital self-image in men has been less explored. Little is known about men's attitudes toward their genitals. For this reason, it is assumed that an appropriate measurement tool is needed to evaluate the genital self-image of men in Turkey.

## Materials and methods

### Aim

This study was planned to determine the Turkish validity and reliability of the "Male Genital Self-Image Scale (MGSIS)" in a population sample of Turkish men.

### Study design

The study is of methodological type. In the study, language, content, construct validity, and reliability methods were used for the intercultural adaptation of the scale.

### Data collection

The population of the study consisted of all men who applied to the Family Medicine Polyclinic of the Faculty of Medicine of a university in Konya/Turkey between December 2021 and February 2022. In validity and reliability studies, it is suggested that 5–10 times the number of items should be taken to determine the sample size so that the analysis can be carried out on a sufficient number of individuals.<sup>13–15</sup> Since there are seven items in the MGSIS, it is sufficient to reach at least 70 people who are 10 times the number of items. However, the recommended sample size for Confirmatory Factor Analysis (CFA) should be at least 300 people.<sup>13,16</sup> It is aimed to reach at least 300 people for CFA analysis. Considering the data loss, 10% more was taken and the first phase of the study was terminated with 336 men. Convenience sampling method, which is a low-cost and easy-to-apply method, was used as the sampling method.<sup>17</sup> In the first stage, verbal consent was obtained from the men who agreed to participate in the study, and data were collected based on their self-report. The questionnaire form was sent online for the second

time 15 days after the first measurement for test-retest analysis to 67 men who shared their contact information. The second phase of the study was terminated with 46 men who filled out the questionnaire for the second time. Males who were literate in Turkish, between the ages of 18 and 60, and who voluntarily agreed to participate in the study were included in the study. Participants who did not fill out the entire questionnaire were not included in the study.

### Data collection tools

The data of the study were collected with the Sociodemographic Characteristics Form and the Male Genital Self-Image Scale.

*Sociodemographic Characteristics Form:* In order to determine the socio-demographic characteristics of the participants, five questions were asked including age, educational status, marital status, employment status and sexual intercourse status.

*Male Genital Self-Image Scale (MGSIS):* MGSIS, developed by Herbenick et al. in 2013, consists of seven items to evaluate men's feelings and beliefs about their sexual organs. All items are a four-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). Total high scores obtained from the scale indicate more positive genital self-image. MGSIS is a valid and reliable measurement tool for men between the ages of 18–60.<sup>18</sup> During the development of the original scale, the fourth and seventh items were removed due to the theoretical similarity of the items. In our study, the 7-item version was used. The scale has no cutoff value and inverse items. The Cronbach's alpha value was calculated as 0.92 in the 5-item version in which item correlations improved. The Turkish form of the scale is given in the appendices (Appendix 1).

### Statistical analysis

Statistical Package for Social Science 25 (SPSS 25.0) and AMOS v20 package programs were used in the statistical evaluation of the data. The number and percentage values of the descriptive findings were calculated. Kolmogorov-Smirnov normality test was used to evaluate whether the scores obtained from the scale were suitable for parametric analysis and it was determined that they fit the normal distribution. During language validation, the translation procedure was performed based on the recommendations of Beaton et al. (2000) for cross-cultural questionnaire adaptations (Figure 1). The main criteria considered were semantic, idiomatic and conceptual equivalence.<sup>19</sup>

The Lawshe technique was used for content validity. In this study, first of all, an expert group was formed, a candidate scale form was prepared and expert opinions were obtained. Then, the content validity index and ratios (CVI: content validity index and CVR: content validity ratio)



**Figure 1.** Cross-cultural adaptation steps.

were calculated with the data obtained. In order to determine the content validity, opinions were obtained from 12 academicians specialized in midwifery and obstetrics nursing. Experts were asked to mark one of the ratings for each of the seven items in the scale. In Lawshe's<sup>20</sup> technique, expert opinions for each item are graded as "the item measures the targeted structure," "the item is related to the structure but unnecessary" and "the item does not measure the targeted structure." In this study, it was scored as 3 for "Suitable," 2 for "Suitable but needed to be corrected" and 1 for "Removed." In addition, if the experts have selected the option to be corrected, "What is your suggestion if your answer should be corrected?"; If they selected the option to be removed, they were asked to write their opinions for each item in the form of "If your answer should be removed, why?" It was decided to take the CVI values of Ayre and Scally<sup>21</sup> as a basis. CVI was calculated by dividing the number of experts who classified an item as "suitable" (S) by the total number of experts, dividing by 2 (N/2) and subtracting 1 from the resulting number.  $CVI = [(S/(N/2)) - 1]$ .<sup>21</sup> This calculation was made for each statement and it was evaluated whether it was suitable according to the table value calculated according to the number of experts.<sup>16</sup> Then the CVR was determined by summing the CVI scores and dividing by the number of items in the scale. In line with the suggestions received, expression integrity was ensured in the scale items. After the suggestions, the scale items what edited were re-scored by the experts. In order for the scale to have content validity, the CVR score must be 0.80 or higher.<sup>15</sup> Factor analysis method was used for construct validity. *Explanatory factor analysis (EFA)* is a method used to reveal how many sub-titles the items in the scale will be grouped under and how they are related to each other. For EFA, the number of samples should be sufficient. Kaiser Meyer Olkin (KMO) sample adequacy test was used to decide that the sample size was sufficient. As the value to be obtained at the end of this test approaches 1, the sample adequacy increases, and as it moves away from 1, it decreases. For EFA, first of all, KMO, which tests the suitability of the data set for factor analysis, and the Barlett Test, which examines the correlation of variables with each other, were applied.<sup>22</sup> Confirmation of a predetermined structure is made with *confirmatory factor analysis (CFA)*, and it is recommended to be used especially in adaptation studies. CFA is a useful analysis for testing the suitability of an existing structure. The structure of the original scale can be distorted with EFA.<sup>23-26</sup> In the evaluation of CFA, common fit indices

used in other versions of the scale and fit indices that are not affected by sample size and parameter estimates were preferred.<sup>27-29</sup> In the validation process of the measurement model, fit indices such as  $\chi^2$ ,  $p$ ,  $\chi^2/df$ , RMSEA, SRMR, TLI, and CFI were used.<sup>30</sup>

In the reliability test of this study, test-retest reliability was examined to evaluate its stability over time. For internal consistency analysis, Cronbach's alpha reliability coefficient, correlation values with split-half method, and correlations between each item and scale score were calculated for item analysis.

### Ethics

Permission was obtained from the author, Debby Herbenick, who developed the scale for Turkish adaptation and use of the Male Genital Self-Image Scale (MGSIS). The permission of Selçuk University Faculty of Health Sciences, Non-Interventional Clinical Research Ethics Committee, dated 29.12.2021 and numbered 2021/1921 was obtained. Verbal consent was obtained in the first stage of the study. In the second stage, which was carried out online, the information and consent form was placed on the first page of the online web base, and the participants were asked to read the "Informed Voluntary Consent Form" and give their consent. It was guaranteed that the contact information of the men participating in the study would not be used in any way other than during the research data collection phase.

### Results

#### Results on descriptive characteristics of men

It was determined that 66.4% of the men participating in the study were between the ages of 18 and 35 and 61.0% of them having undergraduate degrees. It was stated that 45.2% of the men were married and 77.4% of them had sexual partnership (sexually active) (Table 1).

#### Validity

**Results of language validity.** First of all, the English version of MGSIS was translated into Turkish separately by translators from different backgrounds who are fluent in both languages (English and Turkish). Secondly, the reports prepared by both translators were synthesized in order to reconcile any inconsistencies between the two versions.

**Table 1.** Number and percentage distribution of descriptive characteristics of men.

Variables	n (%)
Age groups	
18–35 years	223 (66.4)
36 years and older	113 (33.6)
Education status	
Primary and secondary education	45 (13.4)
Undergraduate	205 (61.0)
Master's degree and above	86 (25.6)
Working status	
Yes	305 (90.8)
No	31 (9.2)
Marital status	
Married	152 (45.2)
Single (Never married, Divorced)	184 (54.8)
Sexual partnership status	
Yes	260 (77.4)
No	76 (22.6)

Thirdly, the scale was translated back into English by two experts who are fluent in both languages, and it was examined whether there was a change in meaning in the expressions of the scale. An expert committee of researchers and translators has been established to ensure cross-cultural equivalence. Translations and reports were reviewed by the expert panel and a Turkish scale form was created. Suggestions and corrections from the experts were compared by the researchers, and the translations thought to best express the item in question were adopted. All items of the scale were reviewed and any inconsistencies were avoided. After this step, a final Turkish version of the scale was produced. The Turkish scale was controlled by an expert in the field of Turkish Language and Literature. Finally, the scale was tested with a pilot application; the data collected in the pilot application were not included in the total data pool.

**Results of content validity.** For content validity in the study, the scores given by the experts to the first items and the CVI value were calculated between 0.50 and 0.83. After re-scoring the scale items what edited in line with the suggestions of the experts, the CVI value was found to be between 0.66 and 1.00, and the CVR value was determined as 0.83.

#### Results of construct validity

**Results of explanatory factor analysis.** KMO=0.91 and Bartlett's test ( $p < 0.001$ ) results of MGSIS show that the sample level is suitable for performing EFA. EFA confirmed that the scale had single-factor (Table 2).

The suitability of the items of the MGSIS to the single-factor model was tested. It was determined that all items contributed significantly to the factor (0.62–0.92) (Table 3).

**Table 2.** KMO and Bartlett's test results of MGSIS.

	MGSIS
KMO	0.910
Bartlett's test of sphericity	
Chi-square	1970,489
df	21
p	<0.001
Factor 1	
Eigenvalues	4.955
Percentage of variance	70.782
Percentage of total variance	70.782

KMO: Kaiser Meyer Olkin; MGSIS: male genital self-image scale.

**Table 3.** Factor loading values of MGSIS.

Items	MGSIS
1. I feel positively about my genitals.	0.87
2. I am satisfied with the appearance of my genitals.	0.86
3. I would feel comfortable letting a sexual partner look at my genitals.	0.83
4. I am satisfied with the size of my genitals.	0.92
5. I think my genitals work the way they are supposed to work.	0.90
6. I feel comfortable letting a healthcare provider examine my genitals.	0.62
7. I am not embarrassed about my genitals.	0.82

MGSIS: male genital self-image scale.

**Results of confirmatory factor analysis.** As a single-factor model, the suitability of the items was tested using CFA and maximum likelihood estimation. It was observed that all items had a significant effect on the single-factor model (0.61–0.92) (Figure 2).

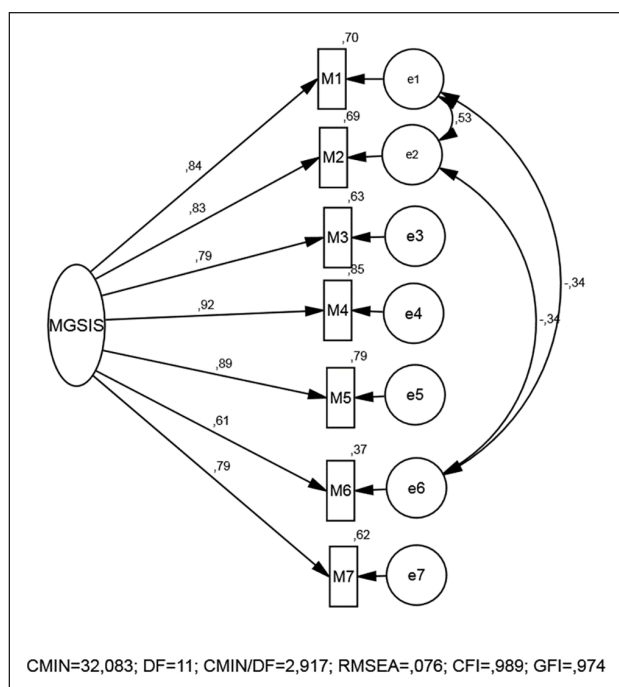
As a result of the analysis, the correction suggestions from the program were examined to improve the values of  $\chi^2=32.083$ ,  $p=0.001$ ,  $\chi^2/df=2.917$ , RMSEA=0.076, and the model was re-tested by adding covariance between the items M1-M2, M1-M6, and M2-M6. With this modification, the measurement model was statistically validated (Table 4).

#### Reliability

**Results of stability over time.** When the first and second measurement scores of the men's MGSIS were compared, it was found that the difference between the means was not statistically significant, and that there was a positive correlation (Table 5).

**Results of internal consistency.** The Cronbach's alpha reliability coefficient was calculated as  $\alpha=0.92$  in the analysis performed to evaluate the internal consistency of the MGSIS, which was adapted to men in the Turkish population.





**Figure 2.** Confirmatory factor analysis results of MGSIS.

**Table 4.** Goodness-of-fit indicators for the MGSIS obtain from CFA.

Fit indices	MGSIS
X <sup>2</sup> /SD (CMIN/DF)	2.917
GFI	0.974
AGFI	0.933
CFI	0.989
NFI	0.984
IFI	0.989
RMSEA	0.076
PNFI	0.515
PGFI	0.383

MGSIS: male genital self-image scale.

In the analysis performed with the Split-Half method, the correlation coefficient of the scale was  $r=0.78$ , the Spearman-Brown correlation value was  $r=0.87$ , and the Guttman Split-Half value was  $r=0.86$ .

**Results of item total score correlation.** The correlation reliability coefficients of the items in the scale were found to be between  $r=0.36$ – $0.85$ . The relationship between item scores and total scale scores was found to be statistically significant (Table 6).

## Discussion

Genital self-image in men is an important component that affects sexuality, and it is very important to determine the

level of genital self-image in men.<sup>5,18,31</sup> For this purpose, first of all, language validity was ensured in order to adapt the MGSIS to Turkish. It was ensured that the scale items were expressed in the most appropriate way at the stage of translation and expert opinions. In the Iranian version of the scale, it was thought that the word partner was disturbing and should be expressed with the word spouse of the faithful partner with whom a lifetime of life was shared.<sup>5</sup> In the same way, in Turkey, as it is close to eastern cultures and is a Muslim country, “spouse” is expressed as a person who has lived together for a long time, while “partner” is mostly used to express informal relations. Thus, in item 3 of the scale, it was decided to express the spouse and partner together in order to obtain data from different participants for the expression “I would feel comfortable letting a sexual partner (my spouse/partner) look at my genitals.”

Content validity is particularly important in validity and reliability studies as it reflects how the items represent the construct to be measured.<sup>32–34</sup> In our study, the Cronbach’s alpha coefficient of the scale was similar to the original scale (0.92), but differently, the Cronbach’s alpha value of the 5-item version of the original scale was given.<sup>18</sup> In the validity and reliability study conducted in Iran, the Cronbach alpha value of the scale was found to be 0.89.<sup>5</sup> While internal consistency assesses the degree of interrelationship between items on a scale, cross-cultural validity examines whether participants from different groups respond similarly to a particular item (measure invariance).<sup>32–34</sup> Beaton et al.<sup>19</sup> recommends that the translators involved should have different profiles, one of which should have technical knowledge and be aware of the concepts to be evaluated, and the other should represent the population of the country in which the instrument is used. In addition, the CVR score must be 0.80 or higher in order to have content validity.<sup>15</sup> While the experts we consulted in our study carry technical and cultural knowledge, the CVR value of the scale is 0.83, which proves that this scale fits the cultural context.

Adequate construct validity is required to ensure that the intended theoretical construct and results are consistent with the hypotheses.<sup>32–34</sup> The suitability of the items of the MGSIS to the single-factor model was tested. It was determined that all items contributed significantly to the factor (0.62–0.92). In the original scale, all items loaded on the factor significantly (0.52–0.91).<sup>18</sup> According to the results of the CFA in the original scale and in the validity and reliability study conducted in Iran, it was observed that the fourth and sixth items in the scale were better adapted after removing them. In our study, instead of removing the items, the correction suggestions for improving the fit values were examined and the covariance was added between the M1-M2, M1-M6, and M2-M6 items, and the model was validated statistically. While doing this, it was thought that the fourth and sixth items, which include the satisfaction of the person with the genital size and the expressions

**Table 5.** Comparison of test-retest mean scores of MGSIS.

	First measurement (n=46)	Second measurement (n=46)	r	p	t	p
	Mean ± SD	Mean ± SD				
MGSIS	21.26 ± 5.33	22.84 ± 3.64	0.73	<0.001	-1.096	0.279

MGSIS: male genital self-image scale.

**Table 6.** Item total score correlations of the MGSIS (n=336).

Items of MGSIS	Mean ± SD	1	2	3	4	5	6	7
Total of MGSIS	22.32 ± 5.35	0.85*	0.84*	0.83*	0.91*	0.89*	0.67*	0.83*
1. I feel positively about my genitals.	3.33 ± 0.87	-	0.85*	0.68*	0.80*	0.72*	0.36*	0.61*
2. I am satisfied with the appearance of my genitals.	3.29 ± 0.85	-	-	0.67*	0.78*	0.73*	0.36*	0.61*
3. I would feel comfortable letting a sexual partner look at my genitals.	3.19 ± 0.93	-	-	-	0.70*	0.70*	0.48*	0.65*
4. I am satisfied with the size of my genitals.	3.24 ± 0.87	-	-	-	-	0.83*	0.53*	0.71*
5. I think my genitals work the way they are supposed to work.	3.26 ± 0.89	-	-	-	-	-	0.54*	0.72*
6. I feel comfortable letting a healthcare provider examine my genitals.	2.78 ± 1.02	-	-	-	-	-	-	0.55*
7. I am not embarrassed about my genitals.	3.20 ± 0.96	-	-	-	-	-	-	-

MGSIS: male genital self-image scale.

Participants rated the scale items from 1 (strongly disagree) to 4 (strongly agree).

\*p < 0.01.

of comfort during the examination of the genitals by the health professional, will be more guiding in clinical research. In the original scale, it was stated that both the short and 7-item long versions of the scale could be used depending on the needs<sup>18</sup>

Good test-retest reliability reflects the internal validity of the outcome measure and ensures that repeated measures remain stable over time.<sup>32-34</sup> In our study, when the first and second measurement scores of MGSIS were compared, it was seen that the difference between the means were not statistically significant, but there was a positive correlation.

This study makes important contributions to the field of genital self-image. The validation and reliability of the scale had been done in Brazil (de Arruda et al<sup>35</sup>), Iran (Saffari et al.<sup>5</sup>) and in the US (Herbenick and Reece<sup>12</sup>). Similarly the scale had been found valid and reliable in all countries. It contributes to research and comparison of the relationships between genital self-image and a diverse range of sexuality-related outcomes in men cross-cultural.

### Limitation

The scale has some limitations. The sample of the study consists of men who applied to the Family Medicine Polyclinic of a medical faculty in Konya/Turkey. In addition, in the second stage of the study, only men who could use smart phones were included in the study. Due to the

structure of Turkish culture, it is not easy for individuals to talk about sexuality or express their feelings. Therefore, the answers given by the men to the questions may have been affected. In addition, concurrent validity could not be performed due to the lack of a similar scale in Turkey.

### Implication for practice

The scale assesses the genital self-image level of men. Expressing sexuality in Turkish culture is taboo for individuals and causes embarrassment, and there is no definite information about the prevalence of sexual problems in men.<sup>36</sup> The items of the scale determine both the satisfaction with the genital area and the level of comfort during the examination of health professionals. Health professionals can easily use this short scale to assess male genital self-image in the clinic. MGSIS may be useful tool for a large variety of urological andrological pathologies and for the post-surgical outcomes of many urological interventions for researchers as well as clinicians. In addition, the scale will enable different studies affecting the genital self-esteem level of men.

### Conclusion

The results of the study revealed that MGSIS is a valid and reliable tool to evaluate genital self-image in Turkish men. The scale provided good psychometric properties.

Considering that a significant part of sexual problems occur with problems related to genital self-image, it is recommended that genital self-image be evaluated and further investigated in both men and women. It is suggested to expand this study to a larger population and to involve more centers.

### Acknowledgements

We thank all Turkish men who participated in our study.

### Author contributions

VK: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Supervision; Validation; Visualization; Writing - original draft; Writing - review & editing.

YEA: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Supervision; Validation; Writing - original draft; Writing - review & editing.

SD: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Roles/Writing - original draft.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

### ORCID iD

Yasemin Erkal Aksoy  <https://orcid.org/0000-0002-7453-1205>

### Supplemental Material

Supplemental material for this article is available online.

### References

- Schilder P. *The image and appearance of the Human Body*. 1st ed. London: Routledge, 2013.
- McClintock EA. Handsome wants as handsome does: physical attractiveness and gender differences in revealed sexual preferences. *Biodemography Soc Biol* 2011; 57: 221–257.
- Woertman L and van den Brink F. Body Image and female sexual functioning and behavior: a Review. *J Sex Res* 2012; 49: 184–211.
- Knafo R, Haythornthwaite JA, Heinberg L, et al. The association of body image dissatisfaction and pain with reduced sexual function in women with systemic sclerosis. *Rheumatology* 2011; 50: 1125–1130.
- Saffari M, Pakpour AH and Burri A. Cross-cultural adaptation of the male genital self-image scale in Iranian men. *Sex Med* 2016; 4: e34–e42.
- Satinsky S, Reece M, Dennis B, et al. An assessment of body appreciation and its relationship to sexual function in women. *Body Image* 2012; 9: 137–144.
- Schick VR, Calabrese SK, Rima BN, et al. Genital appearance dissatisfaction: Implications for women's genital image self-consciousness, sexual esteem, sexual satisfaction, and sexual risk. *Psychol Women Q* 2010; 34: 394–404.
- Yulevitch A, Czamanski-Cohen J, Segal D, et al. The vagina dialogues: genital self-image and communication with physicians about sexual dysfunction and dissatisfaction among Jewish patients in a women's health clinic in Southern Israel. *J Sex Med* 2013; 10: 3059–3068.
- Waltner R. Genital identity: a core component of sexual and self-identity. *J Sex Res* 1986; 22: 399–402.
- Berman L, Berman J, Miles M, et al. Genital self-image as a component of sexual health: relationship between genital self-image, female sexual function, and quality of life measures. *J Sex Marital Ther* 2003; 29 Suppl 1: 11–21.
- DeMaria AL, Hollub AV and Herbenick D. The female genital self-image scale (FGSIS): validation among a sample of female college students. *J Sex Med* 2012; 9: 708–718.
- Herbenick D and Reece M. Development and validation of the female genital self-image scale. *J Sex Med* 2010; 7: 1822–1830.
- Çokluk Şekercioğlu G and Büyüköztürk. *Sosyal Bilimler için çok değişkenli istatistik: SPSS ve LISREL Uygulamaları*. Ankara, Turkey: Pegem Akademi Yayıncılık, 2012.
- Şencan H. *Sosyal ve Davranışsal ölçümlerde Güvenirlilik ve Geçerlik*. Ankara, Turkey: Seçkin Yayıncılık, 2005.
- Erdoğan S, Nahcivan N and Esin N. *Hemşirelikte Araştırma Süreç, Uygulama ve Kritik*. İstanbul: Nobel Tıp Kitapevleri, 2014.
- Alpar CR. *Uygulamalı İstatistik ve Geçerlik-Güvenirlilik*. 3rd ed. Ankara, Turkey: Detay Yayıncılık, 2014.
- İslamoğlu AH and Almiaçık. *Sosyal bilimlerde araştırma yöntemleri*. İstanbul: Beta, 2016.
- Herbenick D, Schick V, Reece M, et al. The development and validation of the male genital self-image scale: results from a nationally representative probability sample of men in the United States. *J Sex Med* 2013; 10: 1516–1525.
- Beaton DE, Bombardier C, Guillemin F, et al. Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine* 2000; 25: 3186–3191.
- Lawshe CH. A quantitative approach to content validity. *Pers Psychol* 1975; 28: 563–575.
- Ayre C and Scally AJ. Critical Values for Lawshe's content validity ratio. *Meas Eval Couns Dev* 2014; 47: 79–86.
- Sönmez V and Alacapınar FG. *Örneklendirilmiş Bilimsel Araştırma Yöntemleri*. Ankara, Turkey: Anı Yayıncılık, 2013.
- Çapık C. Geçerlik ve güvenilirlik çalışmalarında doğrulayıcı faktör analizinin kullanımı. *Anadolu Hemşirelik ve Sağlık Bilim Derg* 2014; 17: 196–205.
- Seçer. *Psikolojik test geliştirme ve uyarlama süreci SPSS ve LISREL uygulamaları*. Ankara, Turkey: Anı Yayıncılık, 2015.
- Seçer. *SPSS ve LISREL ile pratik veri analizi analiz ve raporlaştırma*. Ankara, Turkey: Anı Yayıncılık, 2017.
- Sümer N. Yapısal eşitlik modelleri: Temel kavramlar ve örnek uygulama. *Türk Psikol Yazıları* 2000; 3: 49–73.
- Tang S, Eisma MC, Li J, et al. Psychometric evaluation of the Chinese version of the Utrecht grief rumination scale. *Clin Psychol Psychother* 2019; 26: 262–272.
- Eisma MC, Stroebe MS, Schut HA, et al. Avoidance processes mediate the relationship between rumination and

- symptoms of complicated grief and depression following loss. *J Abnorm Psychol* 2013; 122: 961–970.
29. Doering BK, Barke A, Friehs T, et al. Assessment of grief-related rumination: validation of the German version of the Utrecht Grief Rumination Scale (UGRS). *BMC Psychiatry* 2018; 18: 43.
  30. Klein RB. *Principles and practice of structural equation modeling*. 4th ed. New York, NY: The Guilford Press, 2016.
  31. Wilcox SL, Redmond S and Davis TL. Genital image, sexual anxiety, and erectile dysfunction among young male military personnel. *J Sex Med* 2015; 12: 1389–1397.
  32. Mokkink LB, de Vet HCW, Prinsen CAC, et al. COSMIN risk of bias checklist for systematic reviews of patient-reported outcome measures. *Qual Life Res* 2018; 27: 1171–1179.
  33. Terwee CB, Prinsen CAC, Chiarotto A, et al. COSMIN methodology for evaluating the content validity of patient-reported outcome measures: a Delphi study. *Qual Life Res* 2018; 27: 1159–1170.
  34. Prinsen CAC, Mokkink LB, Bouter LM, et al. COSMIN guideline for systematic reviews of patient-reported outcome measures. *Qual Life Res* 2018; 27: 1147–1157.
  35. de Arruda GT, da Silva EV and Braz MM. Male genital self-image scale (MGSIS): cutoff point, cultural adaptation and validation of measurement properties in Brazilian men. *J Sex Med* 2021; 18: 1759–1767.
  36. Başkaya Y, Yılmaz B and Özerdoğan N. Erkek öğretmenlerde cinsel sağlık problemleri ve ilişkili faktörlerin belirlenmesi: web tabanlı araştırma. *Androloji Bülteni* 2019; 21: 50–55.