

Validity and Reliability of the Persian Sexual Self-Efficacy Scale Functioning in Female

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ABSTRACT

Objective: This study is an attempt to investigate validity and reliability of the Persian version of Sexual Self-Efficacy Scale-Female functioning in volunteer married women in married dormitories and non-dormitories of Shahid Beheshti University of Tehran, Iran.

Methods: The current study is descriptive of type survey. The sample consisted of 160 volunteer married women in married dormitories and non-dormitories of Shahid Beheshti University of Tehran, who were selected by a convenience sampling method and a structured clinical interview based on DSM-IV-TR after voluntary obtaining informed consent. They completed 37-item Sexual Self-Efficacy Scale-Female Functioning (SSES-F). The data were analyzed using exploratory factor analysis by SPSS-PC (v.16).

Results: The results of exploratory factor analysis on SSES-F identified 4 factors. Cronbach's α coefficients was $\alpha=0.93$ for the entire measure (28 items), with alphas ranging from 0.80 to 0.92 for the individual factors.

Conclusion: Given the validity and reliability of the SSES-F Scale, with regard to the validity and reliability of the SSES-F, this scale can be used in clinical settings and research studies, particularly in prevention and increasing the competence of legal marital relations.

1. Introduction

Sexuality is one of the important elements of mental well-being and health of women. Sexual dysfunction includes problems affecting on individual's sexual desire, ability to arousal and reach to orgasm, and it also leads to feel pain during sexual intercourse (Vermillion & Holmes, 1997). A useful model for investigating the impairments of women's sexual responses included simultaneously attention to traditional and innovative medical, psychological and physiological views. Dissatisfying of many women is because of that their husbands are not taught or

are inattentive and not aware of sexual arousal in women and its anatomical basics (Phillips, 2000).

Later and Basson proposed an intimacy-based female sexual response cycle (Basson, 2001). According to her, the female sexual response is a circular, more complex model than the linear sequence of desire, arousal, orgasm, and resolution and the key to female sexual response is emotional intimacy and sexual stimuli.

Today, efficient steps have been taken by different researchers to create and develop multidimensional standardized clinical instruments to measure sexual function-

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ing and quantitative evaluating of therapeutic effects such as General Sexual Functioning Questionnaire (Creti et al., 1989; Creti, Fichten, Libman, Kalogeriopoulos, & Brender, 1987); the Brief Inventory of Sexual Function for Women (BISF-W) (Taylor, Rosen, & Leiblum, 1994); the Female Sexual Function Inventory (Rosen et al., 2000); and the Sexual Function Questionnaire (SFQ) (Quirk, Heiman, Rosen, Laan, Smith, & Boolell, 2002).

However, Sexual Self-Efficacy Scale-Female Functioning, are developed by different researchers in the context of sexual functioning that can be useful in identifying and diagnosing women with sexual dysfunctions in Iranian society by family therapists and counselors. This instrument is an indicator of perceived competence of behavioral, cognitive and emotional aspects of women's sexual response. Fichten, Libman and Rothenberg (1988) reported that the SSES-F was developed as a multidimensional instrument for screening, assessment and research instrument in our sex therapy practice at the Jewish General Hospital. This scale developed versus Sexual Self-Efficacy Functioning-Male Erection and is used to clinical screening and evaluating, as well as for research (Fichten et al., 2010; Libman, Rothenberg, Fichten, & Amsel, 1985). Researchers argue that sexual self-efficacy is individuals' perceived ability and trying to attempt and successfully initiating a sort of sexual activity including ability to avoid from some certain behaviors, initiating or assertiveness in obtaining sexual satisfaction and use of prevention tools during sexual activity (Rosenthal, Moore, & Flynn, 1991). While most of existing measures of sexual functioning evaluate aspects of sexual behavior, this instrument is developed for evaluating cognitive dimension and extends of sexual trust and confidence.

Cronbach's a reliability coefficient for Sexual Self-Efficacy Scale-Female Functioning on 131 women age ranging from 25 to 68 years was 0.93; and in another study, from 0.70 to 0.87 and test-retest reliability coefficient with 4-week interval obtained 0.83, and from 0.50 to 0.93 ($P < 0.001$) for eight subscales. Validity coefficient of the SSES-F and the scores of their partner was .46 (Bailes et al., 2010). This scale is associated with another sexual functioning instrument including Sexual History (Nowinski & LoPiccolo, 1979), Inventory of Sexual Satisfaction (Rust & Golombok, 1985), the Sexual Interaction Inventory (Lopiccolo & Steger, 1974) and Lack Wallace Marital Adjustment Scale (Kimmel & Van der Veen, 1974). Creti et al., (1989) observed that 50-year old women in this scale obtained significantly lower scores in compared to younger women.

This study expands upon this previous research and aims to answer the following questions: 1- What is the optimal factor structure for the Persian Sexual self-efficacy scale-

Female functioning, as determined by exploratory factor analysis? And, 2- Does the Persian Sexual self-efficacy scale-Female functioning has a proper reliability?

2. Methods

This study is descriptive of type survey. The sample for this study consists of a voluntary sample of 160 married women residing in married dormitories and non-dormitories of Shahid Beheshti University of Tehran. The participants were chosen voluntarily among all of married students of all fields in faculties (education and psychology, social science, technical-engineering, economy-management, and basic sciences) of Shahid Beheshti University of Tehran. The selection of the women was in accordance to the include criteria: being married, having at least one child, 2 years of experience of living together, having no marital conflicts or problems, anxiety, depression and mood disorders, and not using pregnancy inhibition drugs. And women not having these criteria and those who were not tended to participate were omitted from the research. In doing so, the goals of the research were conveyed to married women who had these criteria and who were volunteer, then they were undergone a short semi structural interviewed individually. Also, a number of students were chosen from each faculty and their related fields in accordance to above criteria.

Sexual Self-Efficacy Scale-Female Functioning (SSES-F). This scale is an indicator of perceived competence in terms of behavioral, cognitive and emotional aspects of women's sexual response (Fichten et al., 2010; Libman et al., 1985) and includes 37 items in 5-point likert type (sorted from 5=very high to 1=very low). The tool measures four cycles of women's sexual response: interest, desire, arousal and orgasm. In addition, SSES-F measures samples of different aspects of women's sexual and interpersonal expressions including communication, physical attempt and acceptance and joy from different physical activities and it includes following subscales: interpersonal orgasm, interpersonal desire and interest, sensuality, personal arousal, affection, communication, physical acceptance and refusal.

After getting the relevant certifications from university, the sample was collected in accordance to the criteria. Then, the whole procedure and goals of research were conveyed to the women, and after getting the oral informed consent in the early phases of the research and making them sure about confidentiality and anonymity of the data, the research began to be conducted. Furthermore, the participants were given the right to quit the study at any time point and, in the case they demanded, the results of the study would be accessible for them. After receiving, the items of this

scale translated into the Persian, and after scientific revising and editing the translated text, it compared again with the original text. Then, the translated items were translated into the English once again by a faculty member of information department who was mastered in English, and finally, by comparing the original text and the translated text, we made least changes in the items. Implementation of the scale on women was done by two female master of arts students of clinical psychology who were under a short time instruction for clinical interview.

In this study, using SPSS-16, the following data analyses and methods were applied to study the psychometric characteristics of Sexual Self-Efficacy Scale-Female Functioning: (1) A Kolmogorov-Smirnov test was run to ensure a normal distribution of the data. (2) Exploratory factor analysis with Varimax rotation was performed to identify underlying factors and preliminarily establish factorial validity. And (3) Finally, Cronbach's alphas were calculated to test the internal consistency of the measure.

3. Results

The mean age of participants was 25.37 (SD=6.27), with the range of 18 to 35 years; the median, mode and

range of scores for duration of marriage 3, 1 and 30 years, and for number of children 1, 1 and 4, respectively.

To ensure the collected data has a normal distribution, a Kolmogorov-Smirnov test was used. The results ($z=1.03$, $p=0.234$) showed that the distribution of the collected data is not significantly different from normal. The KMO Index (0.80) and Bartlett test of Sphericity ($=1796.57$, $p<0.001$), showed that the assumed normal distribution have been observed, and the sample size is sufficient for factor analysis.

As shown in table 1, the correlation of each item was initially calculated with the total score of the scale (37 items), and items 9, 10, 14, 24, 25, 28 and 31 from the original form were not correlated with total score and thus, were omitted, and factor analysis was conducted on 30 remained items of the scale. It should be noted that 2 items (items 7 and 8 in form 30 item) of the 30 items did not have a significant loading on the four extracted factors (in term of factor loadings higher than 0.40), and thus were omitted (see Table 2). Overall, 37-item scale reduced to 28-item scale (each of 28 items are significant with total score in statistical level of $p<0.01$). In addition, the mean the total score was 3.47 (SD=0.61).

Table 1. Statistical measures of items of SSES-F (n=160)

| Item | \bar{X} | SD | rtt | Item | \bar{X} | SD | rtt |
|------|-----------|------|------|------------|-----------|------|------|
| 1 | 3.60 | 1.32 | 0.36 | 17 | 3.81 | 1.20 | 0.65 |
| 2 | 3.59 | 1.28 | 0.59 | 18 | 3.20 | 1.32 | 0.63 |
| 3 | 3.68 | 1.25 | 0.41 | 19 | 3.08 | 1.17 | 0.41 |
| 4 | 3.99 | 1.14 | 0.55 | 20 | 3.71 | 1.23 | 0.63 |
| 5 | 3.98 | 1.17 | 0.52 | 21 | 3.63 | 1.03 | 0.59 |
| 6 | 3.96 | 1.07 | 0.60 | 22 | 3.91 | 1.20 | 0.56 |
| 7 | 3.93 | 1.12 | 0.57 | 23 | 2.24 | 1.28 | 0.26 |
| 8 | 3.39 | 1.41 | 0.30 | 24 | 3.16 | 1.32 | 0.41 |
| 9 | 4.01 | 1.25 | 0.48 | 25 | 2.82 | 1.17 | 0.32 |
| 10 | 2.88 | 1.26 | 0.42 | 26 | 2.56 | 1.33 | 0.31 |
| 11 | 3.36 | 1.27 | 0.56 | 27 | 3 | 1.33 | 0.46 |
| 12 | 3.65 | 1.26 | 0.37 | 28 | 3.62 | 1.23 | 0.57 |
| 13 | 3.38 | 1.17 | 0.52 | Total mean | 3.47 | 0.61 | |
| 14 | 3.75 | 1.16 | 0.52 | | | | |
| 15 | 3.63 | 1.29 | 0.66 | | | | |
| 16 | 3.79 | 1.25 | 0.63 | | | | |

Note: All of the 28 items were significantly correlated to total score of scale at the level of 0.01.

As shown in table 2, exploratory factor analysis using Varimax rotation on 28 items (with omitting 9 items after correlation of each item with the total score of the scale, and exploratory factor analysis), initially identified 8 factors with eigenvalues of more than 1, but 4 factors are distinguishable based on Scree test (see Figure 1), four extracted factors explain 45.58% of the variance of SSES-F items.

The first factor explained 25.57% of the variance, and based on item content, it was labeled readiness for sex (the items of this factor include: 1, 2, 3, 4, 5, 6, 7, 16, 17, 18, 20, 22 and 28), Items of the second factor accounted for 8.26% variance, and this factor was termed communication development and self-stimulatory (the items of this factor include: 10, 11, 15, 19, 21 and 24), the third factor accounted for 6.33% of the variance and was labeled relationship without intercourse (the items of this factor include: 8, 9, 12, 13 and 14) and the fourth factor accounted for 5.40% of the variance and was labeled orgasm by tool (the items of this factor include: 23, 25, 26 and 27).

Thus, the SSES-F was found to be a multi-dimensional scale. It should be noted that 2 items (items 7 and 8) of the 30 items did not have a significant loading on the four extracted factors (in term of factor loadings higher than 0.40), and thus were omitted (see Table 2). Also, it is to say that 2 items of 19 and 27 have common factor loads on both of first and second factors, but based on content and meaning, these two items could be attribute to the first factor and then removed from the second factor. The total scale α coefficients, after omitting the two items, were 0.88 (28 items), for the first factor, 0.87 (13 items), for the second factor, 0.74 (6 items), for the third factor 0.70, (5 items) and for the fourth factor 0.67 (4 items), indicate acceptability of the tool's internal consistency.

4. Discussion

The purpose of this research was to investigate the validity and reliability the Persian version of the Sexual Self-Efficacy Scale-Female Functioning and the determination of its psychometric properties. Internal consistency

Table 2. Factor loads of Sexual Self-Efficacy Scale-Female Functioning by Varimax rotation: Eigenvalues, percent of variance accounted, and alpha coefficients.

| Item | Factor | | | | Item | Factor | | | |
|------|--------|------|------|---|------------------------|--------|------|------|------|
| | 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 |
| 1 | 0.55 | - | - | - | 18 | 0.42 | - | - | - |
| 2 | 0.73 | - | - | - | 19 | - | 0.44 | - | - |
| 3 | 0.65 | - | - | - | 20 | 0.43 | - | - | - |
| 4 | 0.75 | - | - | - | 21 | - | 0.50 | - | - |
| 5 | 0.58 | - | - | - | 22 | 0.59 | - | - | - |
| 6 | 0.61 | - | - | - | 23 | - | - | - | 0.73 |
| 7 | 0.62 | - | - | - | 24 | - | 0.51 | - | - |
| 8 | - | - | 0.60 | - | 25 | - | - | - | 0.67 |
| 9 | - | - | 0.49 | - | 26 | - | - | - | 0.73 |
| 10 | - | 0.74 | - | - | 27 | - | - | - | 0.48 |
| 11 | - | 0.70 | - | - | 28 | 0.53 | - | - | - |
| 12 | - | - | 0.73 | - | Eigenvalues | 7.67 | 2.48 | 1.90 | 1.62 |
| 13 | - | - | 0.71 | - | percent of variance | 25.57 | 8.26 | 6.33 | 5.40 |
| 14 | - | - | 0.61 | - | Cronbach's alpha | 0.87 | 0.74 | 0.70 | 0.67 |
| 15 | - | 0.53 | - | - | total Cronbach's alpha | 0.88 | | | |
| 16 | 0.42 | - | - | - | | | | | |
| 17 | 0.55 | - | - | - | | | | | |

1. Readiness for sex; 2. Communication development and self-stimulatory; 3. Relationship without intercourse; 4. Orgasm by tool.

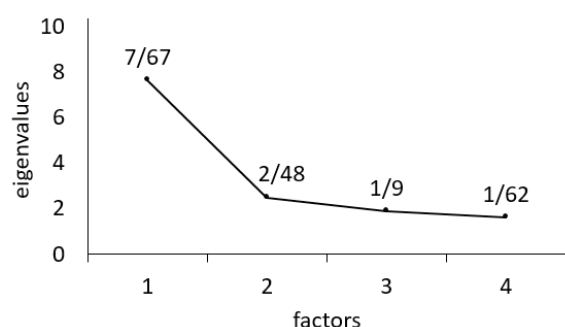


Figure 1. Scree test of SSES-F.

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tency coefficients of Sexual Self-Efficacy Scale-Female Functioning using Cronbach's α in whole of the scale and four extracted factors obtained have acceptable reliability. This finding is consistent with Bailes et al., (1998) research that indicated that this scale has an appropriate reliability with a non-clinical sample of women (married or cohabitated or single women). In other words, it can be concluded that the scale has an internal consistency in Persian population, specifically college students (see Table 2), in terms of its items and context.

On the basis of the exploratory factorial analysis of the Iranian form of Sexual Self-Efficacy Scale-Female Functioning, it can be inferred that the resulting structure, compared to the one obtained by Bailes et al., (1998) in the original English form, presents some similarities and differences that, in part, are the reflection of the different connotations and meaning that sexual self-efficacy in the two cultures, namely readiness for sex, communication development and self-stimulatory, a relationship without intercourse and orgasm by tool. It also confirms with the three factors, from the eight factors identified by Bailes et al., (1989), namely individual arousal, communication and interpersonal orgasm in United States culture.

This finding shows that the content and meaning of sexual self-efficacy in other culture and the Iranian culture are similar to a great extent. However, items 9 (initiate sexual activities), 10 (refuse a sexual advance by the partner), 14 (deal with discrepancies in sexual preference between you and your partner), 24 (feel sexually aroused in response to erotica (picture, books, films, etc), 25 (become sexuality aroused by masturbating when alone), 28 (maintain sexual arousal throughout a sexual encounter), 31 (have an orgasm while the masturbating when alone), 22 (enjoy intercourse) and 23 (enjoy lovemaking encounter in which you do not reach orgasm), of the Iranian form, are not considerable in the Iranian culture.

Based on the extracted components, it can be concluded that this group of married women have the merit, competency and mental preparation for a sexual relationship with their legal husbands that it can contribute to the durability and stability of family. Furthermore, they came to believe that can enter in a legal relationship with this mental preparation and they have the ability of "communication development and self-stimulatory", which can have a positive and strong effect on maintaining mutual relationships between couples in different cycles of sexual response and common life. Also, the women of this study have come to realize that their "orgasm" will be done by their legal husbands who lead to secure attachment and strengthening the bond between couples in marital life. The main point is that women more enjoy from a relationship with their husbands that is without intercourse. Because women more emphasize on emotional aspect rather than physical aspect in a marital relationship and until this issue is unmet, this is impossible for them to go to next stages of sexual response.

The obtained factors including readiness for sex, communication development and self-stimulatory, a relationship without intercourse and orgasm by tool, were similar to clinical definition of women's cycle of sexual response, in which it triggers by psychological and physiological stimulators. Now, family counselors inform couples that parties' satisfaction in life, specifically sexual satisfaction are the factors that keep marital life stable and consistent. Also, the women providing a secure and safe and without mental tension and full of love and mercy environment for their husbands can form competences and positive beliefs in their own marital life. Otherwise, if women don't trust to their cycle of sexual responses during stages of common life, after a short time they would feel depressed, inefficacy and insufficient and finally marital relationships will interrupt.

This study cannot be generalized to all married women and all the population because it is focused mainly on a convenience sample and is only related to married female students. But these kinds of issues are still taboo in this society and thus, it may create problems for researchers. Furthermore, we were limited to a single sample, and confirmation of the factor structure with a second sample is needed. It is recommended to assess the concurrent validity of this scale using a general self-efficacy scale or a similar instrument to this scale. Another recommendation to the researchers is to use this scale in order to assess the diagnostic validity in a clinical sample with sexual problems and a group of healthy people. Foremost among these is the lack of test-retest reliability coefficients.

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