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Association between Self-esteem and Body Image with Marital Satisfaction in Iranian Women with Vaginismus: A Cross-Sectional Study

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Abstract

Introduction: Vaginismus is a common sexual dysfunction in women that, by negatively affecting mental health, can impact the quality of marital relationships or marital satisfaction. This study aimed to determine the relationship between self-esteem, body image, and marital satisfaction in women with vaginismus.

Methods: This cross-sectional study was conducted on 236 women with vaginismus who were selected with convenience sampling method in sexual health clinics in Tehran, Iran, in 2018. Data were collected through questionnaires including socio-demographic characteristics, ENRICH marital satisfaction, Rosenberg self-esteem, and body image. Pearson correlation analysis was used to determine the relationship between self-esteem, body image, and marital satisfaction as bivariate analysis, and a general linear model with adjustment for socio-demographic characteristics was used for multivariate analysis using SPSS software, Version 24.

Results: The average age of women was 31.48(5.48) and more than 80% had a university education. And 75% of women had a history of vaginismus for more than one year. The mean (SD) scores for marital satisfaction, self-esteem, and body image were 31.55(7.12), 17.42(5.46), and 41.45(13.13), respectively. According to Pearson correlation results, there was a significant positive correlation between self-esteem and marital satisfaction (r= 0.43, p-value <0.001), and a significant negative correlation between body image and marital satisfaction (r=-0.31, p-value < 0.001). The results of the linear model with adjustment for socio-demographic variables indicated that an increase in self-esteem scores (B=0.42; 95% CI: 0.25 to 0.59; P<0.001) led to an increase in marital satisfaction while worsening body image (B= -0.08; 95%CI: -0.15 to -0.20) was associated with a decrease in marital satisfaction.

Conclusions: Increased self-esteem and reduced body image concerns are associated with higher marital satisfaction among women with vaginismus. Therefore, Identifying these people, factors affecting the disease, management and control of the factors involved, and counseling interventions to enhance self-esteem and improve body image are recommended for this group of women.

INTRODUCTION

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Vaginismus is the involuntary contraction of the outer third of the vaginal muscles, which prevents penetration. It falls under the category of "Genito-pelvic pain/penetration disorder," where patients experience distressing pain upon attempted penetration with a penis, finger, or any other foreign object [1, 2]. While the prevalence of vaginismus is 1%–7% worldwide, the ratio has been documented to increase up to 5%–17% in clinical settings [3]. However, the prevalence of vaginismus varies between developed and developing countries due to cultural differences and ranges from 1 to 60%3 [4]. At a family planning clinic in Iran, the prevalence of vaginismus among Iranian women was 8% [5, 6]. The study conducted in Iran shows that even within a single country, the etiological

causes of vaginismus could vary significantly according to socioeconomic factors; therefore, treatment should be individualized to each woman's circumstances. This study also confirmed the consensus of other studies that a major contributing factor to vaginismus was fear of pain [7, 8]. Strong religious beliefs and feelings of guilt about intercourse can contribute to this disorder [9]. Women who have vaginismus have many psychological and marital problems [10, 11]. Vaginismus has significant effects on sexual [١٢]and marital adjustment [13]. A previous study has found that marital problems and divorce are more frequent for those affected by vaginismus[14]. It is also been proven that vaginismus has a direct effect on sexual satisfaction and well-being [15], leading to an overall loss of self-confidence [16]. Women with vaginismus feel guilty, angry, inefficient, and shameful, and body image dissatisfaction [17], with reduced self-confidence [18, 19]. Self-confidence is described as self-esteem and self-respect, which is the result of a person's trust in his or her own strengths and abilities [20]. Many patients with vaginismus typically identify themselves in a pessimistic way. This poor perception influences the level of self-esteem of women, which induces psychological morbidity[21]. High self-esteem enables individuals to possess strong problem-solving abilities and empowers them to manage situations in stressful conditions better. Furthermore, it enhances interpersonal skills, allowing individuals to engage more effectively in social interactions[22].

Another critical psychosocial issue for individuals living with benign gynecological conditions is that of body image, reflecting the interplay between thoughts, feelings, and perceptions about the whole body, and its functioning [23]. In other words, body image involves an individual's perception of the aesthetics of their body [24]. As is apparent from the literature, women with vaginismus have more concerns about losing control, negative body image, catastrophic pain, and beliefs about their genital incompatibility during vaginal penetration [25] and consider themselves defective and thus blame themselves continuously [26]. Sexual attitude is also related to a person's body image so that people with a good body image can easily accept their gender roles [27]. A suitable physical appearance, weight, and body image can play a significant role in marital relationships [28] and a relatively stable construct that reflects a person's evaluation of self-concept, that is, the set of beliefs and cognitions about one's qualities, character, roles, and attributes [29]. On the other hand, a negative body image, through fear of intimacy, can lead to anxiety and other psychological issues, potentially having adverse effects on women's emotional connections with their spouses [30]. However, Iranian researchers in a case-control study which was conducted among 50 women who had an unconsummated marriage (case group) and 100 women who had a consummated marriage (control group) reported the total score of body image and all its components had no significant difference between both the groups of the case and the control. According to these researchers, it is necessary to examine the incomplete marriage in the cultural context [31]. The results of recent studies have shown that problems related to body image may interfere with sexual function and cause painful experiences [32, 33].

Witting et al. (2008) examined the effects of women's sexual distress on their marital satisfaction and reported that women with sexual distress or sexual dysfunction experienced more incompatibility with their spouses [34]. In a study conducted with 60 married couples, it was found that sexual desire affected marital satisfaction and there was a significant positive relationship between sexual desire and relationship satisfaction [35, 36].

Meanwhile, marital satisfaction stands as a crucial factor in family stability and overall life quality. Its absence can lead to tension, anxiety, relationship discord, and even separation between couples[37]. Considering the connection between self-esteem and body image [38] and the potential roles of these two variables in marital satisfaction, along with the absence of studies in Iran on this subject and the relatively high prevalence of vaginismus disorder in Iranian women[39], the current study aimed to investigate the relationship between self-esteem, body image, and marital satisfaction in women with vaginismus.

METHODS

Study Design and Participants

In this cross-sectional study, the authors enrolled 236 women with vaginismus admitted to sexual

Health clinics in Tehran, Iran in 2018. The participants included Iranian, literate, and married women between the age of 18 and 49 years (who lived with a male husband/partner) who have had vaginismus for at least 6 months, with no history of acute or chronic physical illness, no history of psychiatric treatment, no use of anti-depression drugs or hormonal contraceptives which could interfere with sexual function in the past three months. Women who were unwilling to participate in the study and those who did not complete the questionnaires were excluded.

Sampling Methods

The participants with sexual disorders (difficulties with vaginal penetration during intercourse due to pain, fear, anxiety, and tightening of the pelvic floor muscles during attempted vaginal) were selected from four private sexual health clinics using convenience sampling. Those interested in participating in the study were assessed for inclusion and exclusion criteria. Then they were referred for a final diagnosis. The diagnosis of vaginismus was confirmed based on the individual's sexual history and examination by a gynecological specialist (first author)

who had trained in sex therapy. Written informed consent was obtained, and participants self-completed questionnaires after including in the study. 240 out of 256 identified eligible women agreed to participate in the study. Four questionnaires had incomplete information which were excluded from the study.

The diagnosis of vaginismus was initially identified through Pelvic examination, which included an assessment of the external appearance of the vulva, and vulvar sensitivity (QT test: using a cotton swab). Also, external genital examination included the evaluation of scratches, erosion, wound, erythema, edema, and unusual vaginal discharge. Any cases of itchiness, odor, and pain were noticed through an external examination. Moreover, self-report of cases such as distinctive color of vaginal discharge, burning during urinating, or vaginal bleeding and spotting were also taken into account during the examination. Sometimes women were also referred to urologists to make sure they did not have any urinary infections/or diseases. In the absence of any physical and structural abnormalities, disease, or any active vaginal infection, women then were referred to psychologists. Phycologists by using DSM5 indicators and going through the sexual history of women confirmed diagnosis.

Measurements

To collect the data, we used 4 questioners including:

Socio-demographic characteristics questionnaire: This questionnaire included questions about age, educational level, employment status, and duration of their sexual disorder. The validity of this questionnaire was confirmed through the face and content validity.

MSS- shortened version: The ENRICH Marital Satisfaction Scale (EMS Scale) is a 10-item self-report instrument designed to measure marital satisfaction. Each item is scored on a 5-point Likert scale as follows: 1 (strongly disagree), 2 (moderately disagree), 3 (neither agree nor disagree), 4 (moderately agree), and 5 (strongly agree). Total scores range from 10 to 50; higher scores are indicative of greater marital satisfaction [40]. The reliability of the original version of the Scale was confirmed (Cronbach's alpha = 0.86) [40], and Cronbach's alpha for the Persian version of the Scale was reported as 0.74 [41].

RSES: Rosenberg Self-Esteem Scale, a 10-item scale, was concerned with measuring overall self-esteem. Items are rated from strongly disagree (0) to strongly agree (3). This questionnaire contains ten phrases, the first five of which are intended to be positive and the remaining five to be negative. The questionnaire is scored in reverse. A total score ranges between 0 and 30. Higher scores on this 10-item scale point to higher levels of Self-Esteem. The Persian version of this questionnaire was used in the current study, with Cronbach's alpha of 0.72 and reliability of 0.74 [42].

BICI: Body Image Concern Inventory (BICI): The test formulated by Littleton and colleagues has 19 items. The respondent should answer questions on a 5-point Likert scale. Scores range from 19 to 95; the higher a person's score, the greater the body image concern [43]. This tool has two factors, the first of which includes the person's dissatisfaction and shyness of appearance, and checking and hiding perceived defects. The second factor shows the interference of body image concern with social function of the individual. Littleton et al. (2005) reported Cronbach's alpha score of this inventory for all questions, the first factor and the second factor were 0.93, 0.92 and 0.76 respectively [43]. In Iran, Bassak Nejad and Ghaffari [44] and Hasheminejad et al. [45] tested the reliability of the BICI items and Cronbach's alpha respectively reported 0.95 and 0.86 for this test.

Data Analysis

After collecting data from participants, the data were analyzed using SPSS software, Version 24. Descriptive statistics, including frequencies (percentages) and means (standard deviations), were used to describe socio-demographic characteristics and the variables of self-esteem, body image, and marital satisfaction. Independent samples t-test was employed to determine the relationship between socio-demographic characteristics and marital satisfaction for dichotomous variables, while one-way analysis of variance (ANOVA) was used for categorical variables. To assess the relationship between self-esteem, body image variables, and marital satisfaction in the bivariate analysis, the Pearson correlation test was utilized, and for multivariate analysis, the general linear model with adjustment for socio-demographic characteristics was employed. All P-values are two-sided. P-value ≤0.05 was considered to be statistically significant.

RESULT

The average age of women and their spouses were 31.48(5.48) and 27.88 (5.71), respectively. More than half of the participants were employed women and homemakers (approximately 65%). In terms of education, among women and their spouses, the majority had a university education (more than 80 %). According to the two-variable tests (independent t-test and one-way analysis of variance), there was a significant relationship between the variables of occupation (p=0.012), women's education (p=0.021), and their spouses' education (p=0.001) with marital satisfaction (Table 1).

Table 1: Socio-demographic characteristics of participants and their relationships with marital satisfaction

Variable	N (%)	marital satisfaction	P-value
Woman's Age (year)			0.62
<20	17 (7.4)	30.47 ± 8.47	
20-29	137 (58.1)	31.59 ± 6.87	
30-39	73 (30.9)	31.55 ± 7.29	
≥ 40	9 (3.8)	32.89 ± 7.80	
Woman's Education			0.021
Under Diploma	12 (5.1)	30.83 ± 7.01	
Diploma	13 (5.5)	26.31 ± 7.31	
Academic Degree	211 (89.4)	31.91 ± 7.02	
Woman's Occupation			0.012
Employed	155 (65%)	30.70 ± 7.31	
Unemployed	81 (35%)	33.16 ± 6.49	
Housing situation			0.077
Occupant	154 (65.3%)	30.95 ± 6.93	
Tenant	82 (34.7%)	32.67 ± 7.38	
Husband's age (year)			0.831
20-29	97 (41.1)	31.40 ± 6.82	
30-39	121 (51.3)	31.44 ± 7.41	
40-49	14 (5.9)	33.14 ± 7.29	
≥ 50	4 (1.7)	32.75 ± 6.44	
Husband's Education			0.001
Under Diploma	28 (11.8)	27.43 ± 6.43	
Diploma	15 (6.4)	28.80 ± 8.76	
Academic Degree	193 (81.8)	32.36 ± 6.85	
Duration of disease (year)			0.093
Less than 1	59 (25.0)	30.53 ± 6.96	
1-2	65 (27.5)	31.75 ± 7.54	
2-5	69 (29.2)	32.99 ± 6.64	
5-10	33 (14.0)	29.36 ± 6.86	
≥ 10	10 (4.2)	33.50 ± 7.94	

Data in table are presented as Mean ± SD

Table 2: Status of marital satisfaction, self-esteem, and body image and the correlation of self-esteem and body image with marital satisfaction.

Questionnaire (N=236)	Mean (SD)	Obtainable score range	Obtained score range	Correlation with marital satisfaction*
Marital satisfaction scale	31.55 (7.12)	10 - 50	13-45	-
Rosenberg Self-Esteem Scale	17.42 (5.46)	0 - 30	2-29	0.435*
Body Image Concern Inventory	41.45(13.13)	19 -95	19-92	-0.310*

*P<0.001

Table 3. Relationship between self-esteem and body image with marital satisfaction based on the general linear model

	B(95% confidence interval)	P-value*
Rosenberg Self-Esteem Scale	0.42 (0.25 to 0.59)	<0. 001
Body Image Concern Inventory	-0.08 (-0.15 to -0.02)	0.012
Woman's Age (Reference: ≥40)		
<20	-2.04 (-8.99 to 4.91)	0.563
20-29	-1.42 (-7.47 to 4.62)	0.643
30-39	-1.78 (-7.74 to 4.18)	0.557
Education (Reference: academic degree)		
Under Diploma	1.47 (-2.94 to 5.89)	0.511
Diploma	-0.014(-4.52 to 4.49)	0.995
Husband's education (Reference: academic degree)		
Under Diploma	-3.26 (-6.373 to -0.16)	0.039*
Diploma	-2.36 (-6.37 to 1.65)	0.248
Job (Reference: Employed)		
Unemployed	-1.39 (-3.23 to 0.45)	0.138

* General linear model

The Mean (standard deviation) for self-esteem, body image, and marital satisfaction were, respectively, 17.4 (5.4) (score range: 0 to 30), 41.4 (13.1) (score range: 19 to 95), and 31.5 (7.1) (score range: 10 to 50).

There was a significant direct relationship between self-esteem and marital satisfaction (r= 0.43, p-value < 0.001), and a significant reverse relationship between body image and marital satisfaction (r=-0.31, p-value < 0.001).

In such a way that women with high self-esteem had high marital satisfaction, but women who had obtained high

scores on the body image concern questionnaire (poor body image) had low marital satisfaction (Table 2).

The results of the general linear model with adjusting the variables of job, education and husband education revealed that there was a significant positive relationship between self-esteem and marital satisfaction (B =0.425, 95% CI: 0.25 to 0.59; P< 0.001). Also, there was a significant negative relationship between body image and marital satisfaction (B=-0.08, 95% CI: -0.15 to -0.02; P=0.012). Furthermore, the results showed a significantly negative relationship between marital satisfaction and having a husband with a lower level of education (under diploma) (B= -3.2, 95% CI: -6.37 to -0.16; P =0.039), (Table 3).

DISCUSSION

Based on the results of this cross-sectional study, which examined 236 women with vaginismus, a significant relationship was found between self-esteem, body image, and marital satisfaction. Additionally, this study identified a meaningful association between marital satisfaction and a spouse's education level.

In our study, the average score of marital satisfaction was average. In a case control study in Türkiye, Çankaya et al [36] showed that women with vaginismus had lower marital satisfaction total scale and sub-dimensions (family [p = .016], sexuality [p = .001], and self [p = .001]) compared to women in the control group. In their opinion Social and cultural factors such as social pressure to have children, fear of subfertility with advancing age, and cultural restrictions that are more pronounced in conservative populations may be effective. According to Çankaya et al results, low marital satisfaction (was found to be a risk factor for vaginismus. Various results have been reported regarding the marital satisfaction of couples experiencing vaginismus. In the study by Yasan & Gürgen [46], has been reported that vaginismus was observed in women with low marital satisfaction. However, other studies have reported that most women with vaginismus consider their marriage satisfactory [3, 47]. Unsatisfactory marital relationships may result in unsatisfactory sexual intercourse, which may increase the risk of divorce [5]. Low marital satisfaction may cause vaginismus, but we cannot make a definite judgment since vaginismus can be seen in women with good marital satisfaction. Therefore, more systematic research studies are needed on this topic.

In the current study, self-esteem was significantly positively associated with marital satisfaction. Similar findings were reported by Taghizadeh and Kalehri [48] in a cross-sectional study (2015) involving employed women at a university. The advantage of the current study over their research was the larger sample size (236 participants compared to 94). Furthermore, approximately 56% of the participants in their study reported moderate marital satisfaction, while only 8% indicated low self-esteem, suggesting a more favorable state in the present study. This difference may be attributed to variations in the studied population, as only women with vaginismus were included in the current study. Given that vaginismus can influence self-esteem [49] and marital satisfaction [21], this factor likely contributed to the higher scores for these variables compared to the study by Taghizadeh and Kalehri. Yadalijamaloye and colleagues also reported a positive correlation between self-esteem and marital satisfaction in their study of 757 women, indicating that increased self-esteem leads to increased marital satisfaction [50]. Moreover, a study conducted in Egypt reported a strong positive relationship between self-esteem and sexual quality of life [51, 52]. Therefore, self-esteem can be considered a predictor of sexual quality of life, which in turn affects marital satisfaction. However, Sacco and Phares did not find that the marital satisfaction of low self-esteem was more adversely affected by partners who viewed them negatively, compared with high self-esteem. That is, self-esteem level did not interact with partner appraisal. Their results and findings by Leary et al. (1998) are similar. Both reported that compared to high self-esteem participants, those with low self-esteem did not react more negatively to negative interpersonal appraisals [53, 54].

The results from this study revealed that marital satisfaction is linked in important ways with body image. Mohammadi et al.[55] and Wallwiener et al. [56] showed the effect of negative body image on sexual function and marital satisfaction. Regarding body image and sexual avoidance, the results of Woertman and Van den Brink [32] as well as La Rocque and Cioe [57] showed that negative body image is associated with avoiding sexual activity. But Hossein et al [31] in a case-control study which was conducted among 50 women who had an unconsummated marriage (case group) and 100 women who had a consummated marriage (control group) in Isfahan, reported the total score of body image and all its components had no significant difference between the groups of the case and the control. This finding is at odds with the findings of our study. In a study by Milhausen et al., it was shown that a complex pattern of relationships exists between body image and sexual relationship variables and that these relationships are not the same for men and women [58]. Among the research related to women who had unconsummated marriage, some research can be observed in which biological and sociocultural factors are considered to be the most important reasons for unconsummated marriage [59]. Some studies also consider disabilities such as premature ejaculation, erectile dysfunction, and sexual dysfunction in women as effective factors in unconsummated marriage.

Hossein et al [31] in a case-control study which was conducted among 50 women who had an unconsummated marriage (case group) and 100 women

who had a consummated marriage (control group) in Isfahan, reported the total score of body image and all its components had no significant difference between the groups of the case and the control.

In the current study, a significant correlation was observed between marital satisfaction and the spouse's education level. This finding is consistent with Khodakarami et al. [60], who reported a significant relationship between women's education, employment status, and marital satisfaction. The present study differs in that it focused on women with vaginismus, whereas their study included prim-parous women.

One notable limitation is the lack of consideration of body mass index (BMI) and the influence of family and societal pressure on women's focus on physical appearance, which impact body image. Additionally, factors such as marital duration and marital type, which can affect marital satisfaction or self-esteem, were not investigated. The use of convenience sampling is another limitation of the study.

CONCLUSION

In general, a positive relationship between the independent variable of self-efficacy and marital satisfaction and an inverse relationship between body image and marital satisfaction were observed. The findings can aid medical professionals in developing practical methods for more accurately identifying psychological issues and giving vaginismus-affected females the proper treatments to improve their marital lives. Therefore, counseling interventions aimed at enhancing self-esteem and improving body image in this group of women are recommended. However, prioritizing the identification of the underlying causes of vaginismus and its treatment is essential. Future studies should focus on determining and classifying the factors affecting vaginismus (psychological, physical, social, etc.), to develop effective management solutions tailored to the underlying causes. Additionally, it is advisable to consider potential confounding variables such as marital duration, type of marriage, and BMI in these studies.

List of abbreviations

MSS: Marital Satisfaction Questionnaire-Shortened Version.

RSES: Rosenberg Self-Esteem Scale.

BICI: Body Image Concern Inventory.

ETHICAL CONSIDERATIONS

After observing ethical and research principles, including receiving a code of ethics from the Research Ethics Committee of Tarbiat Modarres University (IR.MODARES.REC.1396.645), submitting an introduction to sex clinics and explaining the nature and objectives of the study, the questionnaires were distributed and completed. Ethical considerations in this research included protection of information confidentiality, obtaining informed written consent from participants, and the right to withdraw from the research at any time without penalty.

Availability of data and materials

The data sets used and analyzed during the current study are available from the corresponding author upon reasonable request.

CONFLICT OF INTERESTS

The authors declare no conflict of interest.

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None.

AUTHORS' CONTRIBUTIONS

S.Z, A.V designed and developed the project including the concepts of investigation; A.V was involved in the acquisition of data; Sh.JS, A.Fn-K analyzed and interpreted the data; A.V, S.Z, and A.Fn-K was involved in the drafting of the manuscript; S.Z, A.V performed critical revision of the manuscript for important intellectual content; S.Z, A.V, Sh.JS performed administrative, technical, and material support. All authors read and approved the final manuscript.

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