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Female Sexual Dysfunction and Related Factors among Reproductive Age Women in Kaskan, Iran

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Abstract

Aim: Sexual function is influenced by different individual and environmental factors. Female sexual dysfunction (FSD) can lead to serious conditions for women and their family. The present study aimed to identify the prevalence and risk factors for FSD, in Kashan, Iran.

Methods: In this cross-sectional study, a convenience sample of 200 women refering to educational gynecology clinics and meeting the inclusion criteria was selected in Kashan, Iran, 2014. Three anonymous self-administered questionnaires were completed by the participants: Demographic, the Female Sexual Function Index (FSFI), and the Depression, Anxiety and Stress Scale-21 (DASS-21). Chi-square, T-test, Mann Whitney's and Pearson's correlation coefficients were performed for the determination of factors associated with FSD. A score less than 28 out of a possible score of 36 suggests the presence of FSD based on FSFI.

Findings: Of total participants, 119 (59.5%) had FSD. Thirty-nine percent reported desire disorders, 37% arousal disorders, 28.5% lubricant disorders, 24%5 orgasmic disorders, 19.5% pain disorders, and 22.5% satisfaction disorders. Sexual dysfunction was more common in depressed, anxious and stressed and low educated women with older age and longer duration of marriage.

Conclusion: Sexual dysfunction is common among women and some demographic and emotional problems likely contribute to the experience of sexual dysfunction. This finding may have implications on the clinical evaluation of sexual function and identifying the effect of demographic and psychological factors on FSD in women.

Keywords: Sexual Dysfunction, Depression, Anexity, Stress, Women, Iran

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Introduction

Sexual health is an important element of humanity and an essential component of physical and mental health [1]. According to the current definition, sexual health is "a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity". Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled [2]. Sexual health education, a basic need for all people, enriches their sexual knowledge and information, providing them to understand their responsibilities, commitments and rights in order to be able to achieve an enjoyable life [3]. The World Health Organization (WHO) emphasizes on integration of sexual health into health care services, training people and health care provider about sexuality, and promoting sexual health [4]. Regardless of emphasizing sexual health, this remains an ignored issue in the Middle East and North African countries including Iran [5]. These governments have attempted to develop strategies and policies for reproductive health without including sexual health [6]. Because of cultural difficulties, many young people do not feel comfortable in discussing sexual issues [7, 8]. Similarly, health care providers are also unwilling to provide sex related information to the clients [9]. Sexual problems are common. Female sexual dysfunction (FSD) defines as any disorder in the process of sexual contact [10]. Sexual function is influenced by different individual and environmental aspects, and the rate of FSD varies in studies due to different descriptions, study protocols, and cultural issues [11]. The prevalence of FSD differs in a range of 43-90% [12, 13]. In the United States, the incidence rate of FSD has been described to be 43%, while it has been assessed at 5.8% in the United Kingdom, and approximately 15% of the overall population in the United Kingdom suffers from life-long sexual dysfunction [14]. In studies performed in Iran, nearly 30% of the community population were reported to have FSD [15, 16]. FSD includes four main phases of orgasmic disorders, sexual arousal disorders, sexual desire disorders and sexual pain disorders [17]. It could lead to serious conditions for persons and their family associates. Inappropriate sexual health in some areas, especially those with specific cultural predispositions, may result in emotional denial or divorce [18-21]. Some personal and emotional factors are associated with FSD [16, 18, 20]. In a study, the score of FSFI in older age was lower than in young people. Also a

significant correlation was observed between the duration of marriage and total scores of FSFI [22]. However, few studies have assessed the prevalence and related factors of FSD in women in Iran [16, 23, 24]. In this regard, a study showed that the presence of previous pelvic surgery, type of contraception methods, a history of psychological problems, marriage status, low physical activity, chronic diseases, multi-parity, and menopause status are significantly associated with FSD [23]. Results of another study in Iran showed that positive history of psychiatric disorders, using psychotropic medication and history of sexual abuse had significant correlation with sexual dysfunction [16]. Findings of a study in the north of Iran demonstrated that FSD was associated with depression, anxiety, and stress [24]. Given the considerable effect of FSD on family and community health, this study aimed to determine the rate of FSD and related factors in women referring to the educational Obstetrics and Gynecology clinics in Kashan, Iran, 2014.

Materials and Methods

This cross-sectional study was performed between August and December 2014. The study was performed on women referring to three outpatient Obstetrics and Gynecology clinics affiliated with Kashan University of Medical Sciences in Kashan city, Iran. The participants were a convenience sample of 200 women 18–49 years. The aim of the study was explained to the participants by the researchers. Those who agreed to participate signed a consent form. Inclusion criteria were as follows: being literate, and married, having a sexually active spouse, not having chronic or sever medical diseases, not being pregnant or having childbirth within the last 6 weeks, and not being under treatment for psychiatric disorders. Women who met the inclusion criteria were recruited. All participants completed three anonymous self-administered questionnaires individually including Female Sexual Function Index (FSFI), the Depression, Anxiety and Stress Scale-21 (DASS-21), and demographic data.

The FSFI developed by Rosen et al. [25] consists of 19 questions that assess six sub-scales of female sexual function over the past four weeks, including sexual desire (two items), arousal (four items), lubrication (four items), orgasm, satisfaction, and pain during sexual intercourse (three items). Ranges of scores for questions 3–14 and 17–19 are 0–5, and for questions 1, 2, 15 and 16 are 1–5. The score of each domain is obtained by adding the scores of each question related to that domain and multiplying the sum by the domain factor. Domain factor for desire was 0.6, for sexual arousal and sexual lubrication was 0.3, and for orgasm, satisfaction and pain was 0.4. Total score was calculated by summing the scores of six subscales. The range of the total scale score

is from 2.0 to 36.0, with lower scores related with a higher degree of sexual dysfunction. Iranian version of this scale was approved by Mohammadi et al. [26]. The results of this study demonstrated satisfactory findings for total scale and all domains with Cronbach's alpha≥ 0.7. Cut- off point was found to be 28 for total scale for women with and without sexual dysfunction. Cut- off point for subscales was: 3.3 for desire, 3.4 for arousal and orgasm, 3.7 for lubrication, and 3.8 for satisfaction and pain during sexual activity.

The DASS-21 was developed to measure the essential symptoms of depression, anxiety and stress, and has demonstrated good psychometric properties. It is a self-report scale, and has seven items taken from each of the three subscales of the DASS-42, consisting of 42 items with 3 subscales; each subscale has 14 items. Items of DASS refer to the past seven days [27]. Each item is rated on a 4-point Likert scale from 0, which means "did not related to me at all" to 3 "related to me most of the time. For each subscale of the DASS-21, the score has range from 0 to 21. The higher score means severe depression, anxiety and stress. The DASS-21 scores are multiplied by two so that we can compare the DASS-21 scores with those of the DASS-42. However, women with scores of less than 10, 8 and 15 are normal regardless of depression, anxiety and stress, respectively. Cut-off scores for defining mild/moderate/severe/extremely severe depression are 10-13, 14-20, 21-27 and above 27, respectively, cut-off scores for defining mild/moderate/severe/extremely severe anxiety are 8-9, 10-14, 15-19 and above 19, respectively, and cut-off scores for defining mild/moderate/severe/extremely severe stress are 15-18, 19-25, 26-33 and above 33, respectively.

The psychometric properties of this scale were evaluated in Iran by Asghari et al. The results of the Persian version of DASS-21 demonstrated that this scale is valid and reliable, and can be used for Iranian population. Cronbach's alpha was ≥0.77 for three sub-scales [28]. However, we reassessed the reliability of the FSFI and DASS-21 through the test re-test method. For instance, 20 participants completed the questionnaire twice with two-week intervals. Cronbach's alpha coefficients obtained for total scores of FSFI and DASS-21 were 0.78 and 0.91, respectively, and ≥0.7 for the sub-scales of two scales.

The study was approved in Kashan University of Medical Sciences. All subjects signed a written informed consent before the study enrollment. The study objectives and designs were explained to the patients and they were free to withdraw from the study.

Data analysis

Data analysis was conducted using SPSS

(ver.16). Chi-square test was used to assess the relationship between qualitative variables; T-test and Mann Whitney's test were employed to assess the relationship between the mean scores of quantitative variables. The Pearson's correlation coefficient was used to assess the relationship between the scores of FSFI and DASS-21 and their subscales. P values less than 0.05 were considered significant in all the tests.

Results

In this study, 200 participants completed the questionnaires. A score less than 28 was used to discriminate healthy women from those with FSD. Of the total participants, 119 (59.5%) had FSD, 39% reported desire disorders (DD), 37% arousal disorders (AD), 28.5% lubricant disorders (LD), 24%5 orgasmic disorders, 19.5% pain disorders and 22.5% satisfaction disorders. The mean scores of FSFI and its subscales are presented in Table 1. The mean score of FSFI in women with FSD was 22.25±3.75, and in women without FSD was 30.99±2.61. The mean age of the participants was 30.47 ± 7.51 years, mean age at marriage was 19.75 ± 3.85 years, and duration of marriage was 10.62 ± 7.45 years. Level of education in the majority of participants (44%) was high school or diploma, the majority of participants (75.6%) were urban residents, and the majority of them had withdrawal contraception. The associations between the demographic characteristics and FSD are summarized in Table 2. Independent t-test showed that FSD was associated with older age and longer duration of marriage. Mann Whitney's U test showed that age at marriage was not associated with FSD. Chi-square test showed that the rate of FSD increased in women with low level of education. Other demographic factors were not associated with FSD. Pearson's correlation coefficient revealed the significance correlations between FSD and total score of DASS-21 ($r=-.425$, $p<0.001$), depression ($r=-.437$, $p<0.001$), anxiety ($r=-.342$, $p<0.001$) and stress ($r=-.387$, $p<0.001$). The association between presence of depression (score>9), anxiety (score>7), and stress (score>14) with FSD was evaluated by Chi-square test. The results showed that occurrence of FSD increased in women with depression, anxiety and stress (Table 3).

Table 1: Sexual function scores in women with and without female sexual dysfunction (FSD)

Variables	Women with FSD (n=119)	Women without FSD (n=81)
Desire	3.19 (0.82)	4.69 (.97)
Arousal	3 (0.79)	4.98 (0.88)
Lubrication	3.75 (1.04)	5.12 (74)
Orgasm	4.06 (1.34)	5.37 (0.91)
Satisfaction	4.04 (0.92)	5.35 (0.79)
Pain	4.20 (1.04)	5.45(0.66)
Total score of FSFI	22.25 (3.75)	30.99 (2.61)

Table 2: The associations between demographic characteristics and female sexual dysfunction (FSD)

Characteristics	Women with FSD (n=119)	Women without FSD (n=81)	P value[b]
Age	30.52 ± 7.95	28.47 ± 6.16	0.006
Age at marriage	19.70 ± 3.85	19.85± 3.88	0.78
Duration of marriage	11.69 ± 7.85	8.55± 6.11	0.005
Education			0.027
Primary school	32(26.9)	8 (9.9)	
High school/diploma	50 (42)	38(46.9)	
University education	37 (31.1)	35 (43.2)	
Job			0.73
Employed	102(85.7)	68 (84)	
Unemployed	17(14.3)	13 (16)	
Contraception			0.30
Withdrawal	56 (47.1)	31 (38.3)	
Condom	30 (25.2)	34 (42)	
Other methods	23 (19.3)	10 (12.3)	
Unused contraception	10 (8.4)	6 (7.4)	
Place of residence			0.67
Urban	88 (73.9)	62 (76.5)	
Rural	31 (26.1)	19 (23.5)	

Table 3: The association of depression, anxiety and stress severity with FSD

Characteristics	Women with FSD (n=119)	Women without FSD (n=81)	P value
Depression			<0.001
Normal	31 (26.1)	44 (54.3)	
Mild	12 (10.1)	14 (17.3)	
Moderate	35(29.4)	16(19.8)	
Severe	29(24.4)	3(3.7)	
Extermely severe	12 (10.1)	4(4.9)	
Anexity			0.002
Normal	21(17.6)	33(40.7)	
Mild	10(8.4)	10 (12.3)	
Moderate	30 (25.2)	17 (21)	
Severe	20 (16.8)	6(7.4)	
Extermely severe	38 (31.9)	15 (18.5)	
Stress			<0.001
Normal	26 (21.8)	44 (54.3)	
Mild	23 (19.3)	9 (11.1)	
Moderate	30 (25.2)	14 (17.3)	
Severe	29 (24.4)	12 (14.8)	
Extermely severe	11 (9.2)	2 (2.5)	

Discussion

The results of this study showed that FSD has a high prevalence among the participants (59.5%) considering FSFI score <28. This result is consistent with that of a previous study by Jafarzadeh et al. in Iran [22]. These researchers reported the prevalence of FSD as 62.5%. In another study in Turkey, prevalence of FSD was 43.4% and 62% based on total FSFI score (<26 and <28, respectively) [29].

Our results are inconsistent with those of another study in Iran that reported 31.5% of the general population had FSD considering cut-off point <23 [23]. Variations in the reported prevalence of FSD might be due to the differences in cut-off points for the scores of FSFI as well as socio-demographic, health-related, and gynecological characteristics [29]. In the present study, sexual desire disorder was the most frequent problem (39%), sexual arousal was the second most frequent problem among women with FSD (37%), and lubricant disorder was the most prevalent orgasmic disorder (28.5% versus 24.5%). Our results are consistent with the findings of another study in Iran, which reported that desire disorder was the most frequent problem among the women with FSD [22]. Inconsistent with our findings, Safarinejad et al. reported orgasmic disorder was the most prevalent subscale of sexual dysfunction in Iran [23]. However, cut-off point for FSD domains in our study was different for each subscale, but in Safarinejad's study, the cut-off point was considered 3.9 for all subscales. This difference can also partly be explained by medical, social, cultural, and psychological factors. For example, it may be related to the expression style of different languages regarding the terms of desire or arousal by the participants. Since our participants were in reproductive age and most of them were sexually active, these characteristics can increase achieving to orgasm. However, in the current study, the participants referred to the Gynecology clinics so be they might suffer from gynecologic disorders, hormonal problems or received hormonal therapy; these factors may lead to decreased lubrication.

Similar to the findings of other studies, our results showed that the prevalence of FSD was increased with older age. More prevalent sexual dysfunctions in older age could be due to low sex drive, reduced sexual activity, and vaginal dryness caused by estrogen deficiency [22, 23, 30, 31]. Our results demonstrated that scores of FSFI were correlated with the participants' level of education. Pérez-López et al. evaluated FSD and related factors in mid-aged Spanish women with the six-item FSFI. The results showed the total FSFI-6 scores were positively correlated with female and partner educational level [32]. Another study in Iran showed that satisfaction from sexual function was influenced by education [33]. Our results revealed that the women's mean duration of marriage in the FSD group was more than in the normal group. This phenomenon might be explained by the burden of high number of children or financial problems. However, the findings of a study on Turkish women showed that duration of marriage was not associated with prevalence of FSD in fertile group. But prevalence of FSD

was found to be associated with age, partner's age, and duration of marriage among the infertile group [34]. In this regard, duration of infertility and duration of treatment might increase emotional problems and decrease sexual function. In another study in Korean infertile women, duration of marriage, duration of infertility or presence of delivery history did not influence on FSFI score [35]. Inconsistence with our results, in Tehrani et al.'s study, there was a statistically significant negative relationship between sexual dysfunction and duration of marriage [36]. They suggested that as women become more experienced about their sexual function and satisfaction, they promote emotional communications with their husbands. In Tehrani's study, the participants were selected from among normal population; while in our study, the participant were selected from among the women who that referred to Gynecology clinics, so maybe they have gynecology problems affecting on their sexual quality of life and sexual satisfaction [33].

Our findings demonstrated that FSD is related to depression, anxiety and stress. Consistent with our results, Sepehrian et al. in Iran found that female sexual dysfunction was associated with depression, anxiety and stress [24]. A study was performed by Pakpour et al. in order to determine the prevalence and risk factors of FSD in a sample of infertile Iranian women. The results of multi-level analysis demonstrated that risk factors for FSD were older age and self-reported depression [37]. Nobre et al.'s study showed that some specific cognitive and emotional factors are associated with different clinical presentations of FSD [38]. However, the female sexual response cycle is multi-factorial. Mechanisms of sexual response such as sexual interest depend on biological factors, and are diminished by situations such as anxiety and depression [39, 40].

The limitation of the current study is that only women who referred to Gynecology clinics were assessed. Therefore, these findings may not be generalized to the normal population.

In conclusion, sexual dysfunction is common among the women in the current study, and some factors such as older age, low education level, increasing duration of marriage, depression, anxiety and stress are associated with FSD. We suggest that the evaluation of sexual function should be a part of the comprehensive care of women who refer to Obstetrics and Gynecology clinics. Moreover, high rate of sexual dysfunction among the participants should be alarming for health care providers in Kashan, Iran. In addition, screening and treatment of depression, anxiety and stress, which are potential risk factors for FSD, should be considered. Finally, doing community-based studies to identify the frequency and risk factors of FSD can improve the methods of intervention for decreasing the FSD.

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Conflicts of interest

There are no conflicts of interest

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