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Prevalence Survey of Sexual Dysfunction among Women in the Reproductive Age Group Referred to the Islamic Azad University Hospital During 2011-2012

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Abstract

Background: Sexual dysfunctions are common and are regarded as important health problems for women of all ages with related quality of life issues. The purpose of this cross-sectional study was to explore the frequency of sexual dysfunction among women in reproductive age group referred to the Islamic Azad University hospitals. **Materials and Methods:** This study was performed on married women selected by simple random sampling, aged 15-45 years who referred to Boo–Ali, Amir-Al-Momenin and Javaheri hospitals in Tehran, Iran from August 2011 to August 2012. Data were collected by face-to-face interview and completion of self-report questionnaires that assessed sexual functions among women in six separate dimensions. Analysis was done using Pearson correlation coefficient by SPSS 14.0; significant difference was set at 0.05. **Results:** A total of 384 women with mean age of 28.6±7.1 years were enrolled. The mean Body Mass Index (BMI) was 27.4±2.6 kg/m2. Ninety-seven subjects (25.2%) had never attained an orgasm, 31 (8%) had a low level satisfactory relationship with their husband, 55(14.3%) had painful intercourse, 42(10.9%) had arousal disorder, all of which increased significantly with age (P=0.003). Female Sexual dysfunctions had a significant negative correlation with BMI (P=0.004). The emotional relationship (P=0.003) and educational level (P=0.08) were significantly associated with the Female Sexual Function (FSF) score. No significant difference was detected in marriage duration (P=0.081) and used contraception methods (P=0.081).
Conclusion: The prevalence of female sexual dysfunction including desire, arousal, lubrication, orgasm, satisfaction and pain problems increased with age and BMI. In addition, lower educational level is an associated factor that may cause sexual dysfunction. Also, emotional relationship had positive association with FSF score, while it was not associated with the use of contraceptive methods. **[GMJ. 2014;3(1):14-19]**

Keywords: Sexual dysfunction; FSFI; Female; Reproductive age

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Introduction

Providing sufficient response to the sexual needs has significant affects on physical and mental health of human being. The family as the center and core of all human societies is based on the sexual instinct [1]. Sexual dysfunction is defined as a disturbance of the processes that characterize the sexual response cycle, or as pain associated with sexual intercourse [2]. Sexual dysfunctions are highly prevalent, affecting about 43% of women and 31% of men overall [3]. In addition to their widespread prevalence, sexual dysfunctions have been found to affect the inter-personal functioning and overall quality of life in both men and women. Although sexual arousal difficulties are less prevalent comparing with the sexual desire difficulties, they have also received special attention in the recent years [4]. Female Sexual Dysfunctions (FSD) are classified according to the four-phase model of Masters and Johnson and Kaplan, which is briefly as follows: sexual desire, the first phase, consists of the motivational or appetitive aspects of sexual response; Sexual urges, which fantasies, and wishes are included in this phase; Sexual excitement, refers to a subjective feeling of sexual pleasure and accompanying physiologic changes which includes vaginal lubrication in women and orgasm (or climax, defined as the peak of sexual pleasure, with rhythmic contractions of the genital musculature in both men and women, as well as ejaculation in men.); and the final phase, resolution, during which a general sense of relaxation and well-being is experienced [5]. In fact, the normal female sexual functions (FSF) contain desire, arousal, and orgasm. A variety of hormonal elements, neurotransmitters and nitric oxide take part in this cycle and cause vascular relaxation, increasing of blood flow, lubrication and engorgement of genitalia. The FSD can be considered as alterations in one or more phases of the sexual response cycle, and this four-stage model forms the basis for the diagnosis and classification of sexual dysfunctions [6,7].

The diagnosis and treatment of FSD was introduced in the early twentieth century [8]. The cornerstone of the diagnosis of FSD, is a carefully taken history and physical examination. History includes medications, organic and psychiatric diseases, menstrual condition, trauma, sexual disorder in partner, emotional relationship, etc. [9]. Previous studies have shown that the incidence of FSD is 25% to 50% [10]. Furthermore, reports indicate that sexual dysfunction is a factor that influences the overall quality of life [11]. In Iran, previous studies have reported that the prevalence of sexual dysfunction in people from different cultures or different conditions of life may range from 31.5% to 38% [12]. Considering the paucity of data about sexual dysfunction among Iranian women from the normal population, this cross-sectional study was conducted to explore the frequency of sexual dysfunction among women in the reproductive age group referred to the clinic of gynecology for routine check-up at Islamic Azad University affiliated hospitals.

Materials and Methods

This cross-sectional study was performed on 384 married women, aged 15-45 years that were selected through simple random sampling from about 2674 women that had referred to the gynecology clinics of Boo–Ali, Amir-Al-Momenin and Javaheri hospitals for routine check-ups in Tehran, Iran, from August 2011 to August 2012. The study was approved by the ethical committee of Azad University and written informed consent for participation was obtained. Exclusion criteria included pregnancy, psychosomatic disorders, hypothyroidism or hyperthyroidism, diabetes, sexual dysfunction in husband (as their sexual partner), smoking, alcoholism, documented kidney or liver failure.

Data were collected via two detailed questionnaires. Demographic characteristics consisted of age, educational level, marriage duration as well as emotional and marital relationships. In order to evaluate sexual dysfunction, we used the standard Female Sexual Function Index (FSFI) questionnaire that was previously translated to Farsi (The Cronbach's alpha coefficient for internal consistency was 0.85 and reliability was 0.973) [13]. The FSFI is a validated,

Table 1. Sexual Dysfunction and Women in the Reproductive Age, Score Ranges of Domains of FSF Questionnaire and Score Range and Mean of Studpopulation.

Variables	Questionnaire score rang		Population score rang		
	Min	Max	Min	Max	Mean ± SD
Desire	1.2	6	2.1	3.8	3.8±1.4
Arousal	0	6	2.3	3.9	3.3±3.4
Lubrication	0	6	2.2	4.8	3.2±1.3
Orgasm	0	6	1.7	4.3	3.9±1.8
Satisfaction	0.8	6	0.8	4.5	4.1±0.9
Pain	0	6	3.6	5.2	4.7±2.1
Total FSF score	2	36	12.7	26.5	25.81±16

FSF: Female sexual function

brief (19-item) self-report questionnaire that assesses sexual functioning in women in six separate dimensions (desire, arousal, lubrication, orgasm, satisfaction, pain) (table-1).

In order to calculate Body Mass Index (BMI), women's height and weight were measured and the value settings were considered as follows: a BMI lower than 20 kg/m2 as under-weight, a BMI of 21 to 25 kg/m2 as normal, a BMI of 25 to 30 kg/m2 as over-weight and a BMI over 30 kg/m2 was considered as obese. A gynecologist examined all the women and then they were educated face-to-face at the time of recruitment regarding the cycle of female sexual function and description of each domain. The questionnaires were completed by patients. Illiterate women participated in an interview (as ask-answer), with two of the experienced authors. Analysis was done using Pearson correlation coefficient in SPSS 14.0; significant difference was set at $p<0.05$.

Results

A total of 384 married women aged 15-45 years who met the inclusion criteria were evaluated. None of the women who were invited to participate refused to provide informed consents. The average age of patients was 28.6 ± 7.1 years. The mean percentile for the BMI was 27.4±2.6 kg/m2.

Mean Total Female Sexual Function (TFSF) score was 22.6 ± 3.1. FSD had a significant negative correlation with BMI (P=0.004). Since a score of 16 or lower indicated FSD, 68.4% of obese patients had sexual dysfunction. Desire and orgasm were the first and second most prevalent problems, respectively. The FSD and its frequency are shown in figure-1. The severity and prevalence of FSD increased significantly with age (Table-2). The illiterate women had unfavorable sexual functions compared to women with higher educational level (P=0.001). To investigate various factors that may cause female sexual dysfunction, no significant difference was detected in marriage duration (P=0.08) and used contraceptive methods (P=0.08). There was a significant association between FSD and emotional relationship (P=0.003).

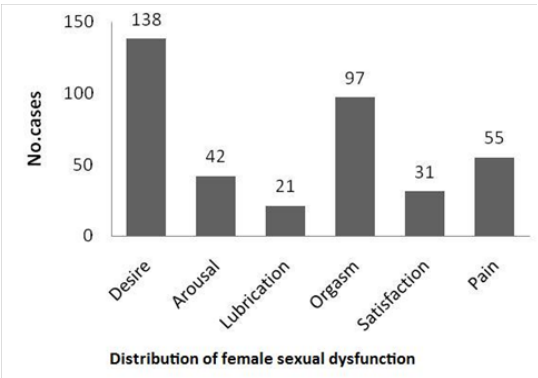

Figure 1. Sexual Dysfunction and Women in the Reproductive Age,distribution of Female Sexual Dysfunction

Table 2. Association Between FSF and Basal Characteristics of All Surveyed Women

Variables		Frequency (Percent)	Mean of TFSFS ±SD	P-value
Age(years)	15 to 20 years	8(2.08)	28.7±2.7	0.05
	21 to 25 years	51(13.2)	24.3±3.4	0.04*
	26 to 30 years	269(70.05)	22.1±4.1	0.02*
	31 to 35 years	37(9.6)	17.8±2.2	0.02*
	36 years and above	19(4.9)	13.2±3.6	0.003*
Education	Illiterate	74(19.2)	17.3±4.9	0.07
	High school diploma	109(28.3)	24.9±3.7	0.002*
	Academic	201(52.3)	27.1±2.4	0.001*
BMI(Kg/m²)	20 or less(underweight)	58(15.1)	16.3±1.6	0.08
	21 to 25(normal)	157(40.8)	31.2±5.4	0.01*
	26 to 30(overweight)	131(34.1)	17.4±3.3	0.03*
	31 or more(obese)	38(9.8)	12.6±3.8	0.04*
Marriage duration	Less than 1 year	72(18.7)	22.1±2.9	0.06
	1 years to 5 years	228(59.3)	24.7±3.5	0.08
	More than 5years	84(21.8)	18.9±1.8	0.06
Method of contraception	None	186(48.4)	24.6±3.4	0.05
	condom	84(21.8)	20.5±4.6	0.06
	OCP	93(24.2)	21.2±4.1	0.07
	natural	21(5.4)	22.7±3.9	0.08
Emotional relationship	Good	97(25.2)	27.2±2.1	0.003*
	Moderate	172(44.7)	20.9±3.5	0.2
	Poor	115(29.9)	16.5±3.7	0.1

TFSTS: Total Female Sexual Function Score
* P<0.05 in the group

Discussion

In this study 35.9% of the women had low sexual desire and 25.2% had muted orgasm. Oksuz *et al*. reported desire problem as the most common sexual dysfunction among Turkish women (48.3%) [2]. Elnashar reported hypoactive sexual desire disorder in 49.6% of women, while only 3.6% had increased desire [14]. This domain is highly related to social, economic, psychological and interpersonal status. Thus, with the improvement of such conditions, we may anticipate better sexual function in community and improvement of quality of life [15].

Orgasmic problem was the second most common sexual problem (25.2 %) and 10.5% of women had primary anorgasmia. Abdo *et al*. analyzed 1219 women by a 38-item questionnaire. FSD was present in 49% of women and lack of sexual desire, pain during intercourse and orgasmic dysfunction was reported by 26.7%, 23% and 21% of women, respectively [16]. Safarinejad *et al*. from Iran reported that 26% of women had never achieved orgasm and it was the most common FSD in their study. They stated that the possible explanation may include a restraining sexual educa-

tion, poor partner performance and technique, and negative beliefs with regard to sexual activity. Insufficient clitoral stimulation may account for most cases of absent orgasm and all women may be potentially orgasmic if adequately stimulated.

In general, Ministry of Health and Medical Education of Iran has announced that 45% of women have suffered from orgasmic disorder [17].

In the present study, the minimal FSD was lubrication problem; hence 5.4% of women indicated that they were not pleased during sexual activity. The satisfaction problem was related to displeasure in sexual activity, fear of pregnancy, some religious and cultural beliefs, some women's conditions (illness, dyspnea, dyspareunia, and menopause), financial problems, method of contraception (oral agents), and medications (anxiolytic or/ and antipsychotic drugs). However, orgasm attainment, active sexual activities, and unusual sexual practice by husband had resulted in increased satisfaction levels. Another study in North California showed that one-third of women who were sexually active were not satisfied with their sexual activity [18].

According to our findings, prevalence and severity of FSD increased with age in women. This may be due to old age illnesses and hormone alterations. An Italian study reported that menopausal women had significantly lower FSF scores; however, hormone therapy improved their sexual functions [10]. Lumen *et al* . reported that 43% of women with sexual dysfunction have higher age and educational level [3].

In the present study, women with high school diploma and academic education obtained 24.9 and 27.1 TFSF scores, respectively. Therefore, acquiring more information about female sexual performances, understanding of desire, arousal and orgasm in normal women, correction of martial intimacy and lovely relationships as well as foreplay are among the very effective factors that may improve female sexual activity.

This study faced many challenges such as difficulty in accessing the required resources. On the other hand, translation and validation of appropriate questionnaires addressing sexual disorders should be deemed as an essential requirement in this field. Besides, taking the cultural barriers and the existing sensitivity about questioning sexual issues into account, considering the non-respondent group would be of paramount importance.

Conclusion

The results of this study indicate that desire disorder and muted orgasm are the most common domains of FSD. Also, we indicated that FSD is common in the general population and is influenced by age, educational level, BMI and emotional relationship. Considering the paucity of data on the prevalence of FSD among Iranian women, we recommend further studies from other centers as well as systematic reviews to be conducted in order to further elucidate the epidemiology of sexual disorders among special groups.

Health Implications

Sexuality is an important and complex domain in quality of life studies. Female Sexual Dysfunction (FSD), a multidimensional medical subject with organic (biological), psychological and social (interpersonal) determinants, is estimated to be very common among women in Iran. The importance of sexual health for quality of life and overall life satisfaction has been increasingly recognized.

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