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Frequency of Sexual Dysfunction in Female Students at Mazandaran Medical Sciences University

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Abstract: Sexual dysfunction is a common, curable problem in women. Proper sexual function plays an important role in mental health, family stability and prevention of divorce and it is one of the predictive indices of the onset of marital problems. Few studies of sexual dysfunction have been done in Iran. The aim of this study was to determine the frequency distribution of sexual dysfunction in female students at the Mazandaran Medical Sciences University. This was a cross-sectional, descriptive study. Of the 135 married female students initially identified, 87 met the study criteria. Data were collected using a demography questionnaire and the checklist of the Female Sexual Function Index (FSFI) 2000. The collected data were analyzed using descriptive statistics. Of the 87 subjects, 79.31% had an intention disorder, 56.32% had a desire disorder, 32.18% had a lubrication disorder, 41.3% had an orgasm disorder, 19.5% had dissatisfaction and 47.1% experience dyspareunia. Overall, 9.1% had no dysfunction and 91% had at least one sexual disorder: 26.45% had one disorder; 17.25% two, 13.7% three, 11.4% four, 12.6% five and 9.1% had all six disorders. A high rate of sexual dysfunction was present in these young married women. Since sexual dysfunction is a predictive factor for marital discord, a comprehensive program to deal with sexual dysfunction is required.

Key words: Sexual dysfunction, sexual disorder, sexual desire

INTRODUCTION

Sexual dysfunction associated with paraphilia is classified as a sexual disorder and is defined as the presence of a deficiency in the four-phase sexual response including intention, desire, orgasm and resolution. Psychophysiological changes can lead to abnormalities in normal sexual function. Female sexual dysfunction is a common, curable problem (Saks, 1999). Researchers have studied the treatment of sexual disorders because of the significance of proper sexual function for individual mental health and a couple's marriage, (Nettebladf and Uddenberg, 1979; Mehrab and Ehsanmanesh, 2003). Sexual function and the quality of a couple's interrelationship complement each other to such an extent that a defect in one of these can lead to a negative impact on the other. Impotence is an important predictive factor of difficulties in a marriage (Chandler and Brown, 1994). Different factors, such as age, educational level, sexually transmitted diseases and mental state can affect sexual disorders (Sadock, 2005; Mahyar and Nohi, 2003). Reports indicate that there is a relationship between drug use and sexual disorders (Monterio *et al*., 1984; Mathew *et al*., 1980; Kivela and Pahkala, 1988; Casper *et al*., 1998; Sadock and Sadock, 2003). In addition, race, religion and sociocultural conditions can affect an individual's sexual needs and expectations (Vermilion and Melise, 1997). Studies have shown that sexual dysfunction is very common and that those who have sexual dysfunction need treatment (Mehrab and Ehsanmanesh, 2003; Spence, 1991; Braun *et al*., 2000). Goldstein *et al*. (2000) showed that the prevalence of sexual dysfunction among the normal female population ranged from 24-43% and that age, educational level, sexual abuse in childhood and individuals' psychological states play a role in such disorders (Goldstein, 2000). Lauman *et al*. (1999) studied 1749 females and 1410 males, aged 18-59 years, living in the USA; the prevalence of sexual dysfunction was 33% among females and 31% among males and the prevalence was related to age and educational level (Laumann *et al*., 1999). Diemont (2000) reported that the prevalence of

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sexual dysfunction in the Netherlands was 14.9% in females and 8.7% in males (Diemont *et al*., 2000). Frank *et al*. (1978) studied 100 normal couples and found that 63% of females and 40% of males had sexual dysfunction (Frank *et al*., 1978). Rosen *et al*. (1993) studied 329 patients referred to the outpatient department of an obstetric clinic in the UK; 48.5% had sexual dysfunction (Rosen *et al*., 1993). Kinzel's study of 203 female students revealed that 21.8% had a history of sexual dysfunction and 36.6% had marital problems with disorders of orgasm and sexual arousal (Kinzl *et al*., 1994). Despite the large number of studies worldwide on the epidemiology of sexual dysfunction, there is little information on the prevalence of sexual dysfunction in Iran. Azar *et al*. (2003) in their study of sexual dysfunction and psychological state in females showed that 91.5% of patients referred to an outpatient psychiatric clinic in Tehran had sexual dysfunction, while in the control group, consisting of individuals from the general population, the rate was 66.7% (Mahyar *et al*., 2003). Mehrabi's (2003) study of 300 male patients referred to the outpatient psychiatry clinic reported that 72.2% had a disorder of erection, while 36% had an ejaculation disorder (Mehrab and Ehsanmanesh, 2003). Thus, the present study was designed to determine the prevalence of all types of sexual dysfunction in female students at Mazandaran Medical Sciences University.

MATERIALS AND METHODS

In this descriptive, cross-sectional study, 135 married females students at Mazandaran Medical Sciences University were initially identified; of these, 87 met the study criteria on the basis of a consensus method and were included. The exclusion criteria were: those not willing to cooperate in the study; those who had no sexual contact due to religious beliefs; and those who were taking medications, such as antipsychotics, antihypertensives and monoamine oxidase inhibitors, that could affect sexual desire. Also excluded were females who could not have sexual activity due to: thyroid disorders, diabetes, primary hyperprolactinemia, depression, vaginitis, uterine cervical inflammation, endometriosis, other pelvic problems, sexually transmitted diseases, pregnancy and childbirth in the previous month. The aim of this study was explained to all participants and they were assured about the confidentiality of their data. Two anonymous questionnaires with only a code number were provided to the subjects. The first questionnaire collected demographic and personal data, as well as a medical history, to determine the presence of exclusion criteria. The second questionnaire included the female sexual function index 2000, which is a primary screening tool for studying sexual function disorders based on six factors (intention, desire, lubrication, orgasm, satisfaction and sexual pain) using 19 items. Each question was based on a score of 0 or 1 to 5. Overall, the lowest score for the six factors was 2 and the highest 36. For scoring, the self-questionnaire scoring system (FSFI scoring appendix) was used. Since this was the first time that the translated copy of this questionnaire was used, its validity was confirmed by seeking expert psychiatric advice and doing a preliminary study involving 10% of the subjects (alpha = 0.73). The reliability of the questionnaire was confirmed using testing-retesting in a 4week period; the reliability index was r = 0.98, with p = 0.001. The data were analyzed using descriptive statistics and the results are displayed in the tables.

RESULTS

The total number of female students studying at the five colleges affiliated with the Mazandaran Medical Sciences University was 135; 120 had lived with their husbands during the four weeks prior to the study; 25 were excluded based on the exclusion criteria; and 8 did not wish to cooperate. Thus, the data for 87 subjects were obtained.

Table 1 shows the subjects' general and demographic characteristics. Most subjects (51, 58.6%) were between 22 to 25 years of age; the age of first sexual intercourse was also between 22 to 25 years for 54 (62%) subjects. The largest number of participants came from the College of Nursing-Midwifery (29, 33.3%) and the Medical College (26, 29.8%). Coitus interrupts was the most common method of contraception (40, 45.9%). Only 19 (21.8%) subjects had one child; the others had no children.

Table 1: Subjects' general and demographic characteristics

	Variables	Frequency	(%)
Age group (years)	18-21	7	7.9
	22-25	51	58.6
	26-29	29	33.3
Academic stream	Medical	26	29.8
	Nursing-midwifery	29 5 5 22	33.3 5.7
	Pharmacy Hygiene Paramedical		5.7 25.2
Age at first sexual intercourse (years)	18-21	27	31
	22-25	54	62
	26-29	6	6.8
Method of contraception	OCP	12	13.7
	Condom coitus interrupts IUD	27 40 2 used	31 45.9 2.2
	Other methods or combinations of different methods	6	6.8
No. of children	No children	68	78.1
	One child	19	21.9

Table 2: The distribution of sexual disorders

Type of disorder	Frequency	(%)
Intention	69	79.3
Desire	46	56.3
Lubrication	28	32.1
Orgasm	36	41.3
Satisfaction	17	19.5
Pain	41	47.1

Table 3: Distribution of the number of types of sexual dysfunction per subject.

No. of dysfunctions	Frequency	(%)
No dysfunction	8	9.1
One dysfunction	23	26.4
Two dysfunctions	15	17.2
Three dysfunctions	12	13.7
Four dysfunctions	10	11.4
Five dysfunctions	11	12.6
Six dysfunctions	8	9.1
Total	87	100

Table 2 shows the distribution of sexual disorders among the subjects. The most prevalent sexual dysfunction involved intention (69, 79.3%) and the least prevalent involved satisfaction (17, 19.5%).

As shown in Table 3, many of the cases had several types of sexual dysfunction; thus, the total frequency is greater than the number of subjects.

There was no significant difference in the number of different types of sexual dysfunctions by age, academic stream, or method of contraception.

DISCUSSION

Our results indicate that there was a high prevalence of sexual dysfunction; at least 90% of the subjects suffered from at least one sexual dysfunction. This figure is similar to the prevalence of 91.5% reported by Azar *et al.* (2003), but is significantly different from the prevalence reported by Dicemont (2000), Laumann (1999), Goldstein (2000), Frank (1978), Ende (1984), Rosen (1993) of 14.9, 43, 21-43, 63, 50 and 38%, respectively. The different prevalence rates are likely due to differences in age, educational level, evaluation tools and sociocultural factors.

Age: Several studies have shown that sexual dysfunction declines with age in women (Sadock , 2005; Azar *et al.*, 2003; Goldstein, 2000; Laumann, 1999). Researchers have identified several factors that may impact on sexual dysfunction, including fear of sexual contact in younger women, lack of sexual experience, differences between the partners in sexual activity, the presence of more mental disorders that can affect sexual function and fear of pregnancy (Goldstein, 2000; Azar *et al.*, 2003). The present study included subjects ranging in age from 18-29 years, while the majority of the previous studies involved members of the general public ranging in age from 18-60 years. This likely explains the different findings. Furthermore, younger age has been shown to be associated with disorders of intention, orgasm and sexual pain (Sadock, 2005; Saks, 1999; Mehrab and Ehsanmanesh, 2003); thus, the higher prevalence of these dysfunctions in our study reflects their younger age.

Educational level: Different studies have emphasized that sexual dysfunction in both sexes has a direct relationship with educational level. It has been found that there is a higher prevalence of sexual dysfunction related to orgasm with higher educational levels (Sadock, 2005; Azar *et al.*, 2003; Goldstein, 2000; Laumann *et al.*, 1999; Wetheimer and Lopater, 2002). One of the main reasons for this is that individuals with higher education have an extremely high intention and desire to show their sexual satisfaction to their life partner (Sadock, 2005). Therefore, this can be a main reason for the different findings between our study, which involved university students and the other studies, which included the general public.

The tools used in this study: Different authorities classify sexual response into four stages: Intention, desire, orgasm and decline. Thus, many sexual dysfunction questionnaires are based on these four stages. In this study, the FSFI questionnaire was used, which also includes lubrication, satisfaction and pain; these additional items can improve the validity and the evaluation of female sexual dysfunction.

Sociocultural factors: Social and religious beliefs, as well as fundamental education about sexual behavior, can help reduce sexual dysfunction (Sadock, 2005; Mahrab and Ehsanmanesh, 2003; Vermilion, 1997; Wertheimer and Lopater, 2002). Generally, from the perspective of sexual activity, societies can be into three groups: bounded, partially limited and free (Sadock, 2005). Iranian society is considered to be bounded due to several factors including: certain restrictions on premarital sexual contact; a lack of public sexual instruction; and abortion facilities are inaccessible. These restrictions appear to have created a feeling of public security and a lower prevalence (29.5%) of sexual dissatisfaction in this study compared with other similar studies (64%) (Rosen *et al.*, 1993). However, such restrictions may increase the overall rate of different types of sexual dysfunctions, particularly hidden and non-reported types (Sadock, 2005; Wertheimer and Lopater, 2002), as was seen in our results. No significant relationship was found between the frequency of sexual dysfunction and age, educational level and other demographic characteristics, which differs

from previously reported studies (Sadock, 2005; Goldstein, 2000;Laumann *et al*., 1999; Wertheimer and Lopater, 2002). The difference is mainly due to the fact that our subjects were of a similar young age and a similar educational level. This is the first study of this type in the region; thus, the data should be considered preliminary. The limitations of this study include the small number of subjects from a particular class of society who are not representative of the general population. Also, the subjects' sexual activity over a short period of time (4 weeks) was studied. Therefore, larger studies involving the general population over a longer period of time are needed.

The high frequency of sexual dysfunction among the subjects studied suggests that the couples had difficulties in their relationships. Thus, comprehensive studies are needed to help guide the planning and delivery of effective sexual dysfunction management programs by administrators and health executives.

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