Clinical and Experimental Health Sciences

Original Article / *Özgün Araştırma*

Evaluation of Sexual Dysfunction, Depression and Quality of Life Among Married Women Presented to a Gynecology Polyclinic of a Training and Research Hospital in Sakarya

Sakarya İli Bir Eğitim ve Araştırma Hastanesi Kadın-Doğum Polikliniği'ne Başvuran Evli Kadınlar Arasında Cinsel İşlev Bozukluğu, Depresyon ve Yaşam Kalitesinin Değerlendirilmesi

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Cite this article as: Sahin S., Ilcıoğlu K., Unsal A. Evaluation Of Sexual Dysfunction, Depression And Quality Of Life Among Married Women Presented To A Gynecology Polyclinic Of A Training And Research Hospital In Sakarya. Clin Exp Health Sci 2018; DOI: 10.5152/clinexphealthsci.2017.619

ABSTRACT

Objective: This study is intended to determine frequency of sexual dysfunction among married women, to review some variables that are believed to be associated with sexual dysfunction and to evaluate depression and quality of life.

Method: This is a descriptive study conducted on married women admitted to a Training and Research Hospital Gynecology Polyclinic in Sakarya between September 2012 and April 2013. The study group consisted of a total of 777 women admitted to the gynecology polyclinic of the hospital and agreed to take part in the study.

Results: The age of women in the study group ranged between 17 and 58 with a mean age of 32.25 ± 8.07 years. The scores obtained by women from the Female Sexual Function Index (FSFI) ranged between 4.40 and 34.70 with a mean score of 24.70 ± 6.80 whereas the scores obtained from the Beck Depression Inventory were between 0 and 48 with a mean score of 10.94 ± 8.22.

Conclusion: Sexual dysfunction in women has a negative impact on depression and quality of life.

Keywords: Women, depression, sexual dysfunction, quality of life, Turkey

ÖZ

Amaç: Bu çalışma ile evli kadınlar arasında cinsel işlev bozukluğu sıklığının saptanması, ilişkili olduğu düşünülen bazı değişkenlerin incelenmesi, depresyon ve yaşam kalitesinin değerlendirilmesi amaçlanmıştır.

Yöntemler: Çalışma, Eylül 2012 – Nisan 2013 tarihleri arasında Sakarya ili bir Eğitim ve Araştırma Hastanesi Kadın-Doğum Polikliniği'ne başvuran evli kadınlar üzerinde gerçekleştirilen tanımlayıcı tipte bir araştırmadır. Çalışma süresince hastanenin kadın hastalıkları polikliniğine başvuran ve çalışmaya katılmayı kabul eden toplam 777 kadın çalışma grubunu oluşturmuştur.

Bulgular: Çalışma grubunu oluşturanların yaşları 17-58 arasında değişmekte olup, ortalama 32.25±8.07 yıl idi. Kadınların Kadın Cinsel Fonksiyon İndeksinden (IFSF) aldıkları puanlar 4.40-34.70 arasında değişmekte olup, ortalama 24.70±6.80 puan, Beck Depresyon Ölçeğinden aldıkları puanlar ise 0-48 arasında değişmekte olup, ortalama 10.94±8.22 puan idi.

Sonuç: Kadınlarda cinsel işlev bozukluğu, depresyon ve yaşam kalitesini olumsuz yönde etkilemektedir.

Anahtar Kelimeler: Kadın, depresyon, cinsel disfonksiyon, yaşam kalitesi

INTRODUCTION

As a complicated process associated with neurological, vascular and endocrine systems, sex is a concept involving emotional, intellectual and sociocultural components in addition to being desirable, having childbearing potential and body image for women (1,2).

Based on the International Statistical Classification of Diseases and Health Related Problems (ICD-10) issued by the World Health Organization, sexual dysfunction covers the various ways in which an individual is unable to participate in a sexual relationship as he or she would wish (3). Female sexual dysfunction is a disturbance in one or several stages of physiological changes in sexual desire, arousal, lubrication and orgasm stages of the sexual response cycle (4). Biological, cognitive, emotional, social and hereditary factors are involved in its etiology (5,6). One of the most extensive and reliable studies conducted on sexual dysfunction is the U.S. National Health and Social Life Survey which evaluated

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 DOI: 10.5152/clinexphealthsci.2017.619

1749 women aged 18-59 years. In this study, the incidence of sexual dysfunction was determined as 43% and female sexual dysfunction was 1.5 times higher compared to male sexual dysfunction (7). The studies conducted on different populations reported that the prevalence of sexual dysfunction ranged between 22-68.8% (6,8).

Loss of interest, reduction in energy, lowered self-esteem, inability to experience pleasure, irritability and social withdrawal characterized with depression may impair the form and continuity of relationships. The presence of these symptoms may disrupt sex life and relationships and may cause sexual dysfunction (SD). Epidemiological and clinical studies show that depression affects sexual function and satisfaction adversely, even in untreated patients. Most antidepressant drugs are reported to cause the SD. In a study comparing treated and untreated patients with diagnosed depression and without depression, it was determined that the group treated for depression experienced the highest number of sexual problems (5,9).

As an activity which is not necessary for maintaining the personal life but is essential for continuation of species, sex is one of the most important indicators of the quality of life (10). Among the most common medical problems, sexual dysfunctions are mostly caused by unnecessary stress due to the lack of information, fear, concern, insecurity, and prejudgment. Sexual problems negatively affect not only the individuals but also the society due to the disruption of duties within the society. Thus, they result in unhappiness by decreasing the quality of life (11,12).

Female sexual dysfunction may be affected from bio-psychological and cultural factors and therefore requires a multidisciplinary approach involving teamwork. Nursing has an important role in promotion of female sexual health and treatment of SD (13). The nursing approach towards sexual problems of women includes assessment of sexual health, resolving of problem with appropriate nursing practices and maintenance of sexual health.

This study is intended to determine frequency of sexual dysfunction among married women, to review some variables that are believed to be associated with sexual dysfunction and to evaluate depression and quality of life.

METHODS

The study is a descriptive research conducted on married women presented to the gynecology polyclinic of a Training and Research Hospital from September 2012 to April 2013. Total number of women who presented to the gynecology polyclinic during the study was 3500, 777 of which (22.2%) constituted the study group. Married and non-pregnant women who presented to the Gynecology Clinic with a complaint, have no systemic disease, are sexually active in the last one month and agreed to take part in the study were included.

A questionnaire was prepared by using the literature in line with the study objective (5,6,14). The questionnaire forms included some socio-demographic characteristics of women, some variables that are believed to be associated with sexual dysfunction, questions related to the FSFI as well as questions of the Beck Depression Inventory and SF-36 Health-Related Quality of Life Survey. Written consent has been obtained for the study from the Ethics Board of Faculty of Medicine of University. After receiving information on the subject matter and objective of the study, the women who agreed to take part in the study completed the previously prepared questionnaires under supervision in the observation room. For those who are illiterate, the questionnaires were completed by the investigators. This procedure lasted for approximately 25-30 minutes. The rules stated in the Helsinki Declaration were followed in the course of data collection.

The FSFI was used to assess the sexual function of the women in this study. The FSFI was developed by Rosen et al. (4) and its reliability and validity study was conducted in Turkey by Aygin and Eti Aslan in 2005 (15). The index consisted of 19 items and was designed to assess the aspects of female sexual function (sexual desire, arousal, lubrication, orgasm function, general satisfaction and sexual pain). The index that can be applied to the women who had a sexual intercourse within last month is scored from 2 to 36. Total score was obtained by multiplying the scores obtained in the domains with their own coefficient. The scores obtained from this index ranged between 2 and 36 and those with a score of 26.55 or less were regarded to have sexual dysfunction.

Cronbach's Alpha value was determined to be 0.82 in the original index (4) and 0.98 in the validity and reliability study conducted by Aygin and Aslan (15) in Turkey. It was reported that the Female Sexual Function Index is a valid and reliable instrument to assess sexual function of Turkish women. Our study determined a Cronbach's Alpha value of 0.79.

Depression level was evaluated with the Beck Depression Inventory. The Beck Depression Inventory was developed by Beck et al. in 1961 (16), and modified later by Hisli in 1999 to reflect the Turkish culture and norms (17). It was a self-report inventory and consisted of 21 items on a 4-point Likert scale. The inventory scores ranged between 0 and 63 and those with a score of 17 and above were regarded to have "suspected depression". Cronbach's Alpha value was determined to be 0.80 by Hisli (17). Our study determined a Cronbach's Alpha value of 0.81.

In our study, SF-36 Health-Related Quality of Life Survey was used to assess quality of life. SF-36 questionnaire was developed by Ware and Sherbourne in 1992, whose reliability and validity study in Turkey was conducted by Kocyigit et al. (18,19). This questionnaire consists of 36 items and assesses quality of life in 8 domains (physical functioning, physical role functioning, social role functioning, emotional role functioning, mental health, vitality, bodily pain, and general health perceptions). Domain scores of the questionnaire range between 0 and 100 and higher scores denote to a better health-related quality of life. Cronbach's Alpha value was determined to be between 0.62 and 0.94 by Ware et al. (18) and 0.73-0.76 in the Turkish validity and reliability study. Our study calculated a Cronbach's Alpha value of 0.83.

Having menstruation in equal intervals (21-35 days) was defined as regular menstruation. The women who have pain in abdomen, thighs and lower back one day before and/or the first day of menstruation were deemed to "have dysmenorrhea" (20). The women who had pain during or after the sexual intercourse within last one year were regarded to have "dyspareunia". Forced intercourse or being exposed

to degrading or humiliating actions within last one year was defined as *sexual violence* (21). Women who smoke at least one cigarette per day were defined as smokers, whereas nonsmokers were defined as women who had never smoke or who had not smoked in the past 6 months (22). The women who are actively engaged with a revenue-generating business (e.g. worker, civil servant, farmer, self-employed etc.) were defined as "employed". Family income was assessed by the women as low, average and high based on their own perceptions. Those who defined themselves as uptight, enthusiastic, hasty in the study group were classified in "Type A personality" and those who defined themselves as quiet, calm, patient and organized were classified in "Type B personality" (23). The women whose Body Mass Index is 30 and above based on self-declaration were considered obese.

Data were assessed with IBM SPSS (version 20.0) Statistical Package Program (IBM Inc.; SPSS Statistics for Windows, Version 20.0. Armonk, NY, USA); Chi-squared test, Mann-Whitney U test and Spearman's Correlation Analysis were used for the analyses. Statistical significance value was accepted as $p \leq 0.05$.

RESULTS

The age of women in the study group ranged between 17 (by obtaining consent from the women) and 58 with a mean age of 32.25 ± 8.07 years. Of the women, 149 (19.23%) were aged 24 years and below, 336 (43.2%) were aged 25-34 years, 241 (31.0%) were aged 35-44 years, and 51 (6.6%) were aged 45 years and above. Sexual dysfunction was determined in 54.3% (n = 422) of the women in the study group. The distribution of the women with or without sexual dysfunction by some socio-demographic characteristics is given in **Table 1.**

Table 1. Some socio-demographic characteristics of the women with and without sexual dysfunction

Sociodemographics	Sexual dysfunction			Statistical analysis
	No n (%)*	Yes n (%)*	Total n (%)**	X^2; p value
Age group (years)				
≤24	89 (59.7)	60 (40.3)	149 (19.2)	**35.239; 0.000**
25-34	163 (48.5)	173 (51.5)	336 (43.2)	
35-44	95 (39.4)	146 (60.6)	241 (31.0)	
≥45	8 (15.7)	43 (84.3)	51 (6.6)	
Education level				
Primary school and below	94 (35.6)	170 (64.4)	264 (34.0)	**21.700; 0.000**
Secondary school	49 (59.8)	33 (40.2)	82 (10.6)	
High school	133 (37.5)	122 (47.8)	255 (32.8)	
University	79 (44.9)	97 (55.1)	176 (22.7)	
Employment status				
Unemployed	243 (50.8)	235 (49.2)	478 (61.5)	**13.268; 0.000**
Employed	112 (37.5)	187 (62.5)	299 (38.5)	
Family income				
Low-Middle	243 (49.6)	247 (50.4)	490 (63.1)	**33.157; 0.000**
Good	112 (39.0)	175 (61.0)	287 (36.9)	
Family type				
Nucleus	296 (47.4)	329 (52.6)	625 (80.4)	3.597; 0.058
Large	59 (38.8)	93 (61.2)	152 (19.6)	
Personality type				
A	217 (50.5)	213 (49.5)	430 (55.3)	**8.853; 0.003**
B	138 (39.8)	209 (60.2)	347 (44.7)	
Smoking				
No	224 (42.0)	309 (58.0)	533 (68.6)	**9.174; 0.002**
Yes	131 (53.7)	113 (46.3)	244 (31.4)	
History of a physician-diagnosed chronic disease				
No	301 (46.6)	345 (53.4)	646 (83.1)	1.267; 0.260
Yes	54 (41.2)	77 (58.8)	131 (16.9)	
History of any gynecologic surgery				
No	295 (45.5)	353 (54.5)	648 (83.4)	0.042; 0.837
Yes	60 (46.5)	69 (53.5)	129 (16.6)	
Obesity				
No	302 (46.2)	351 (53.8)	653 (84.0)	0.516; 0.472
Yes	53 (42.7)	71 (57.3)	124 (16.0)	
Menopause				
No	329 (46.4)	380 (53.6)	709 (91.2)	1.668; 0.196
Yes	26 (38.2)	42 (61.8)	68 (8.8)	
Total	355 (45.7)	422 (54.3)	777 (100.0)	

*Percent for the row, **Percent for the column

No assessment was made for 9 women (1.2%) with alcohol addiction in the study group. The first marriage age of women ranged between 13 and 39 with a mean age of 22.56 ± 5.57 years. The mean age at menarche in the study group was 13.47 ± 1.53 years (min: 11; max: 18). The frequency of dysmenorrhea was 43.0% (n = 334) and frequency of dyspareunia was 33.3% (n = 259). The number of women with a history of infertility and a history of sexual violence was 59 (7.6%) and 43 (5.5%), respectively. The distribution of the women with or without sexual dysfunction by marriage, obstetrical and gynecologic characteristics is given in **Table 2.**

Table 2. Some marriage, obstetrical and gynecologic characteristics of the women with and without sexual dysfunction

Some marriage/ obstetrical/ gynecologic characteristics	Sexual dysfunction			Statistical analysis X^2; p value
	No n (%)*	Yes n (%)*	Total n (%)**	
Marriage type				
Arranged	60 (34.1)	116 (65.9)	176 (22.7)	**12.725; 0.002**
Love	243 (49.7)	246 (50.3)	489 (62.9)	
Elopement/abduction	52 (46.4)	60 (53.6)	112 (14.4)	
First marriage age				
≤19	95 (39.3)	147 (60.7)	242 (31.1)	**15.429; 0.001**
20-24	166 (50.8)	161 (49.2)	327 (42.1)	
25-29	69 (52.7)	62 (47.3)	131 (16.9)	
≥30	25 (32.5)	52 (67.5)	77 (9.9)	
Marriage period (year)				
≤ 1	80 (69.6)	35 (30.4)	115 (14.8)	**33.334; 0.000**
2-4	76 (46.6)	87 (53.4)	163 (21.0)	
5-9	78 (40.6)	114 (59.4)	192 (24.7)	
≥ 10	121 (39.4)	186 (60.6)	307 (39.5)	
Age at menarche				
≤ 12	112 (50.2)	111 (49.8)	223 (28.7)	**56.639; 0.000**
13	76 (36.9)	130 (63.1)	206 (26.5)	
14	50 (29.2)	121 (70.8)	171 (22.0)	
≥ 15	117 (66.1)	60 (33.9)	177 (22.8)	
Menstrual regularity				
Irregular	70 (38.7)	111 (61.3)	181 (23.3)	**4.679; 0.031**
Regular	285 (47.8)	311 (52.2)	596 (76.7)	
Dysmenorrhea				
No	208 (47.0)	235 (53.0)	443 (57.0)	0.664; 0.415
Yes	147 (44.0)	187 (56.0)	334 (43.0)	
Dyspareunia				
No	267 (51.5)	251 (48.5)	518 (66.7)	**21.475; 0.000**
Yes	88 (34.0)	171 (66.0)	259 (33.3)	
Number of pregnancy				
0	113 (62.1)	69 (37.9)	182 (23.4)	**47.141; 0.000**
1	129 (51.6)	121 (48.4)	250 (32.2)	
2	61 (34.9)	114 (65.1)	175 (22.5)	
≥ 3	52 (30.6)	118 (69.4)	170 (21.9)	
Number of birth				
0	173 (64.1)	97 (35.9)	270 (34.7)	**59.459; 0.000**
1	96 (40.0)	144 (60.0)	240 (30.9)	
≥ 2	86 (32.2)	181 (67.8)	267 (34.4)	
History of infertility				
No	330 (46.0)	388 (54.0)	718 (92.4)	0.283; 0.595
Yes	25 (42.4)	34 (57.6)	59 (7.6)	
History of sexual violence				
No	346 (47.1)	388 (52.9)	734 (94.5)	**11.244; 0.001**
Yes	9 (20.9)	34 (79.1)	43 (5.5)	
Total	355 (45.7)	422 (54.3)	777 (100.0)	

*Percent for the row, **Percent for the column

Suspected depression was diagnosed in 138 women (17.8%) in this study. The distribution of women with and without suspected depression by the presence of sexual dysfunction is given in **Table 3.**

Table 3. Distribution of those with and without suspected depression by sexual dysfunction in the study group

Sexual dysfunction	Depression		
	No n (%)*	Yes n (%)*	Total n (%)**
No	338 (95.32)	17 (4.8)	355 (45.7)
Yes	301 (71.3)	121 (28.7)	422 (54.3)
Total	639 (82.2)	138 (17.8)	777 (100.0)

*Percent for the row **X^2=75.302; 0.000**
**Percent for the column

Mean scores in all domains of SF-36 survey were determined to be significantly lower in women with sexual dysfunction compared to those without sexual dysfunction ($p < 0.05$ for each domain). The mean scores of the women with or without sexual dysfunction obtained from the domains of the SF-36 Health-Related Quality of Life Survey are given in **Table 4.**

Table 4. Average scores subjects received from SF-36 domains by status of sexual dysfunction.

Domains	SF-36 score		Statistical analysis*
	Sexual dysfunction		
	No (n=355) Median (min-max)	Yes (n=422) Median (min-max)	z test; p-value
Physical functioning	75.0 (30.0-100.0)	65.0 (0.0-100.0)	10.277; 0.000
Role-physical	100.0 (0.0-100.0)	50.0 (0.0-100.0)	7.479; 0.000
Bodily pain	45.8 (0.0-100.0)	12.0 (0.0-66.7)	8.917; 0.000
General health perception	60.0 (0.0-100.0)	54.7 (15.8-100.0)	3.849; 0.000
Vitality	68.8 (18.8-100.0)	56.3 (0.0-93.8)	6.997; 0.000
Social functioning	75.0 (12.5-100.0)	62.5 (0.0-100.0)	4.896; 0.000
Role-emotional	100.0 (0.0-100.0)	33.3 (0.0-100.0)	9.001; 0.000
Mental health	57.9 (15.8-94.7)	36.8 (0.0-100.0)	10.621; 0.000

*Mann-Whitney U test

Based on the Logistic Regression Analysis results in **Table 5**, risk factors for sexual dysfunction included being in the age group of 45 years and over, having a university degree, good family income, Type B personality, marriage period of 2 to 9 years, history of dyspareunia, 1 or more childbirth and history of sexual violence.

The scores obtained by women from the FSFI Index ranged between 4.40 and 34.70 with a mean score of 24.70 ± 6.80 whereas the scores obtained from the Beck Depression Inventory were between 0 and 48 with a mean score of 10.94 ± 8.22. A negative relationship was determined between the scores obtained from the FSFI Index and Beck Depression Inventory (r_s = 0.196; p = 0.000). The distribution of the scores obtained from the FSFI Index and Beck Depression Inventory is shown in **Figure 1.**

Table 5. Significant independent variables for sexual dysfunction according to Logistic regression analysis *(final step)*

Variables	ß	SE[a]	p	OR[b]	%95 CI[c]
Constant	-3.134	0.422	0.000		
Age group (years) (reference: ≤24)					
25-34	0.010	0.316	0.974	0.990	0.533-1.838
35-44	0.071	0.344	0.837	1.037	0.547-2.105
≥45	2.254	0.549	**0.000**	**9.530**	**3.248-27.957**
Education level (reference: secondary school)					
High school	0.581	0.318	0.067	1.788	0.959-3.332
University	0.923	0.337	**0.006**	**2.517**	**1.299-4.876**
Primary school and below	0.406	0.329	0.217	1.501	0.788-2.859
Family income (reference: Low-Middle)					
Good	0.803	0.193	**0.000**	**2.232**	**1.529-3.259**
Personality type (reference: A)					
B	0.498	0.178	**0.005**	**1.646**	**1.161-2.333**
Marriage period (year) (reference: ≤1 year)					
2-4	0.983	0.303	**0.001**	**2.673**	**1.477-4.840**
5-9	0.853	0.360	**0.018**	**2.347**	**1.159-4.751**
≥10	-0.002	0.398	0.997	0.998	0.458-2.177
History of dyspareunia (reference: none)					
Yes	1.249	0.209	**0.000**	**3.487**	**2.314-5.256**
Number of birth (reference: 0)					
1	1.977	0.259	**0.000**	**7.222**	**4.350-11.990**
≥2	1.887	0.308	**0.000**	**6.599**	**3.609-12.064**
History of sexual violence (reference: none)					
Yes	1.076	0.498	**0.031**	**2.933**	**1.105-7.784**

SE[a]: Standard error, OR[b]: Odd's ratio, CI[c]: Confidence interval

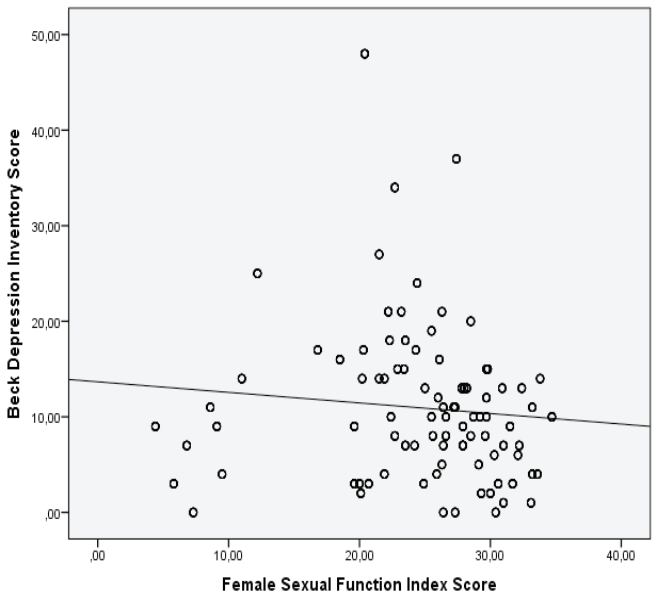

Figure 1. The distribution of the scores obtained from the FSFI Index and Beck Depression Inventory

DISCUSSION

As an activity which is not necessary for maintaining the personal life but is essential for continuation of species, sex is a concept involving emotional, intellectual and sociocultural components in addition to being desirable, having childbearing potential and body image for women (10,24,25). Sexual dysfunction was determined in 54.3% of the women in the study group. In a multidisciplinary study, sexual dysfunction was determined in 40-45% of the women and 20-30% of the men with increased age (26). Some of the studies conducted in our country reported an incidence of 27-67.5% for the SD (1,27,28). Use of various diagnosis methods may be the reason of inconsistent results.

In this study, sexual dysfunction was determined to increase along with the advancing age ($p < 0.05$). Similar results were reported in the studies conducted in Turkey and some other countries (8,9,29-31). The higher SD with the advancing age may be associated with adverse effect of the changes occurred in the anatomy and hormones of the women in time on their sexual functions and with the increase in some chronic diseases, social and psychological problems (31).

In the study group, sexual dysfunction was significantly higher in women whose level of education is primary school and below compared to others ($p < 0.05$). Some researchers also reported similar results (14,29). The lower risk of SD in women whose level of education is higher may be associated with the higher working rate, correspondingly better income level, more luxurious living standards and a more positive attitude towards sex in the women in this group.

In this study, sexual dysfunction was higher in those with low to middle family income ($p < 0.05$). Some studies conducted in Turkey also reported a lower incidence of SD in women who defined their income level as high (29-31). Singh et al. reported that income level is not an important risk factor for sexual dysfunction (32).

Having a large family is believed to cause limitations in sex life of the couples, which may adversely affect sexual function (6). However, based on the results of our study, there was no difference between having a large family and having a nucleus family in terms of sexual dysfunction ($p > 0.05$). Some studies reported no relationship between the family type and sexual dysfunction (6,32). The reason for varying incidences in different studies may include not only various diagnosis methods but also varying age groups and samples of different socio-economic levels.

In the study group, sexual dysfunction was more frequently reported in those with type B personality ($p<0.05$). This may be explained with calm and quiet characteristics of type B personality. The women with a calm and quiet personality are shy about communicating effectively, which may establish a ground for sexual dysfunction. Miscommunication and lack of trust are suggested to have impact on development and continuation of orgasm dysfunction. Communication problems were therefore claimed to be included in the reasons of sexual dysfunction (33-35).

It is believed that obese women have concerns about not being attractive during sexual intercourse and the incidence of sexual dysfunction is therefore higher in obese women (14,36). In our study, no difference was determined in obese and non-obese women in terms of sexual dysfunction ($p> 0.05$). Yaylali et al. reported similar results in their study (37).

In the study group, sexual dysfunction was more frequently reported in those who had an arranged marriage ($p < 0.05$). Some studies suggested that the incidence of SD was lower in women who had a love marriage (31,38). Imamoglu claimed that the couples who had a love marriage have more satisfaction in marriage. It may be associated with the fact that sharing, communication and satisfaction are better in the couples who had a love marriage (39). Considering the importance of emotional intimacy with their spouse regarding sex (40), it may be considered normal to have problems in sex life in involuntary marriages (38).

Given the increase in age of women along with the longer marriage period, it is normal that the changes associated with the advancing age adversely affect the sexual functions of the women and that the incidence of SD in the women who are married for long time is therefore higher. Sexual dysfunction was significantly lower in women who have been married for 1 year or less in our study ($p < 0.05$). Some researchers also reported similar results (6,30). However, Guvel et al. reported that there was no relationship between marriage period and frequency of the SD (41).

Levator ani muscle modulates motor response during orgasm and vaginal penetration. A hypertonic levator ani muscle can contribute to vaginismus, dyspareunia and other pain disorders. When levator ani is hypotonic, decreased vaginal sensation and decreased intensity of orgasm, and urinary incontinence during sexual intercourse or orgasm may develop. Incontinence during sexual intercourse is reported to develop particularly during orgasm and vaginal penetration. In this case, it is possible that the frequency of the SD is higher in women with dyspareunia (42,43). In our study, sexual dysfunction was more frequent in women with dyspareunia ($p<0.05$). Similar results were reported in some studies (44,45).

In our study, sexual dysfunction was more frequently reported in women with a history of sexual violence ($p<0.05$). Long-term psychological dysfunction, social adjustment disorder and sexual dysfunction were reported in the victims of sexual violence in the literature, which is consistent with the results of our study (46).

In this study, the frequency of untreated depression was higher in the women with sexual dysfunction ($p< 0.05$). However, the relationship between sexual dysfunction and level of depression is a weak positive relationship ($p<0.05$). In the study of Ozerdogan et al., the incidence of the SD was significantly higher in the women with symptoms of depression compared to those without symptoms of depression (6). These results are consistent with the results of studies conducted on the women in Turkey and other countries (24,47,48). In a study conducted on Australian women aged 45-55 years, the prevalence of sexual dysfunction was determined to be higher in women with high depression scores (5).

As with all other dysfunctions, sexual dysfunction is also expected to affect the health-related quality of life adversely. In our study, the quality of life was determined to be poorer in all subscales of SF-36 survey in the women with sexual dysfunction ($p < 0.05$ for each subscale). Hissasue et al. stated that the SD affects the quality of sex life adversely. Some studies reported that the problems in sex life of the women reduce their quality of life (7,8,25,44,49). Rosen et al. determined that the SD does not have an impact on a satisfying sexual intercourse (50).

Limitations

The limitations of this study may include the facts that it is a descriptive study and it was conducted at a single site on married women who presented to the Gynecology Polyclinic with a complaint.

CONCLUSION

A negative relationship was determined between the scores obtained from the FSFI Index and Beck Depression Inventory. Mean scores in all domains of SF-36 survey were determined to be significantly lower in women diagnosed with sexual dysfunction compared to those without sexual dysfunction. Sexual dysfunction is a health issue which is extremely personal, disturbing and devastating with

regard to physical and social aspects for women and it decreases their self-confidence and quality of life with a significant effect on their psychological state. It would be advantageous to organize health trainings in order to raise awareness in this regard and to receive professional help from doctors and nurses regarding the risk factors. As the study was hospital-based, it may not indicate the actual incidence of sexual dysfunction in general population (e.g. married women). More extensive studies are required to establish actual incidence of this problem in the society as well as the relationship between sexual dysfunction, depression and quality of life.

Acknowledgments

The authors would like to thank the married women who were willing to participate in the study.

Authors' Note

This study was presented as a poster in the 21st International Sexual Health Congress held on April 17-20, 2014 in Antalya.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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