



## Research Article

# Sexual Dysfunction in Female Patients with Migraine

Gokhan Ozer

Department of Neurology, Sanko University Faculty of Medicine, Gaziantep, Turkey

### Abstract

**Objectives:** To investigate sexual dysfunction in married, literate females diagnosed with migraine.

**Methods:** Twenty-two literate, married female patients with migraine presenting to our outpatient clinic (Ankara) were asked to complete the Female Sexual Function Index (FSFI) questionnaire. Age, body mass index (BMI), employment status, and responses to FSFI questionnaire were analyzed using the Chi-square test to check whether they were correlated with total FSFI scores.

**Results:** The mean age of females was  $30.9 \pm 5.7$  years, and their mean FSFI score was  $27.5 \pm 7.5$ . FSFI scores were significantly associated with employment status and BMI ( $p < 0.05$ ).

**Conclusion:** Based on FSFI, there was no significant difference in the severity of sexual dysfunction among female patients with migraine compared with healthy subjects in previous population-based studies.

**Keywords:** Migraine, sexual dysfunction, women

**Cite This Article:** Ozer G. Sexual Dysfunction in Female Patients with Migraine. EJMO. 2018; 2(1): 13-15

Migraine is a highly prevalent primary episodic headache that is associated with various combinations of chronic multifocal gastrointestinal and autonomous changes. Among neurological disorders, the lifetime prevalence of migraine is estimated to be 13% in males and 33% in females.<sup>[1]</sup> Female sexual dysfunction is a multifactorial condition that affects 30%–50% of all females.<sup>[2]</sup> Female sexual dysfunction is similar to erectile dysfunction in males. It is very common in the general population, but mostly remains unrecognized and untreated.

One of the studies with the largest patient series for female sexual dysfunction reviewed the data from National Health and Social Life Survey. In this study, data were collected from 1749 females and 1410 males aged 18–59 years at the time of survey, and sexual dysfunction was identified in 31% of males and 43% of females.<sup>[3]</sup>

In one study, sexual desire was found in 22% of females, orgasm problems in 14%, and pain during sexual intercourse in 7%.<sup>[4]</sup> There are no definite data on the incidence of female sexual dysfunction in Turkey, and population-based studies are limited. Demirezen et al. found sexual dysfunction at a prevalence of 67.5% in 123 young females under the age of 40 years presenting to a primary care facility, and reported an association between sexual dysfunction and age, education level, and economic status.<sup>[5]</sup>

Migraine attacks can be provoked by several causes, and pain frequency and severity may increase particularly in the presence of psychological factors. In the present study, our aim was to determine the frequency and severity of sexual dysfunction which is also closely related to psychological factors in female migraine patients compared with normal females.

**Address for correspondence:** Gokhan Ozer, MD. Sanko Universitesi Tip Fakultesi Noroloji Anabilim Dalı, Gaziantep, Turkey

**Phone:** +90 342 211 53 12 **E-mail:** primernordr@gmail.com

**Submitted Date:** September 23, 2017 **Accepted Date:** November 07, 2017 **Available Online Date:** December 07, 2017

©Copyright 2018 by Eurasian Journal of Medicine and Oncology - Available online at [www.ejmo.org](http://www.ejmo.org)



## Methods

The study enrolled 29 literate, married female patients diagnosed with migraine according to the International Classification of Headache Disorders II, 2004 (ICHD-II)<sup>[6]</sup> criteria who did not have any concomitant neurological, systemic, or psychiatric conditions. The patients were questioned about age, employment status, and headache, and their body weight and height were measured for calculating the body mass index (BMI). All volunteers were asked to complete the 19-item Female Sexual Function Index (FSFI) questionnaire by checking the box that corresponds to the response that fits them best for each question. This form is presented in the Appendix-1. FSFI scores range between 0 and 45, and lower scores indicate greater sexual dysfunction.

The Chi-square test and analysis of variance were used to check whether age, BMI, and employment status of the patients were correlated with FSFI scores. Additionally, correlation of sexual function of patients with FSFI scores was calculated using the Chi-square test based on patients' responses to each question.

## Results

The study subjects had a mean age of 30.9±5.7 years, mean FSFI score of 27.5±7.5, and mean BMI of 23.0±2.9 kg/m<sup>2</sup>; 65% were unemployed and 34% were employed (Table 1, 2). FSFI scores of the subjects ranged between 11 and 44 points.

**Table 1.** Patients' age, BMI and IFSF index scores

	Number of patients	Minimum	Maximum	Mean
Age	29	22.00	39.00	30.9655
BMI	29	18.42	30.41	23.0227
Score	29	11.00	44.00	27.5862

IFSF: Index of female sexual function. BMI: body mass index.

**Table 2.** Patient's working status

Work status	Frequency	Percent
No working	19	65.5
Working	10	34.5

**Table 3.** The percentage of responses to each question on the IFSF questionnaire of the patients participating in the study

Score	Sexual discomfort	Vaginal dryness	Sexual intervention	Sexual desire	Sexual desire level	Sexual satiety with partner	General sexual satisfaction	Orgasm frequency	Clitoris sensitivity
1	0	3.4	3.4	20.7	27.6	10.3	13.8	17.2	13.8
2	6.9	3.4	24.1	37.9*	20.7	10.3	10.3	37.9*	17.2
3	17.2	10.3	31.0*	10.3	34.5*	31.0*	24.1	13.8	55.2*
4	17.2	20.7	20.7	24.1	13.8	31.0*	34.5*	13.8	10.3
5	58.6*	62.1*	6.9	6.9	3.4	17.2	17.2	17.2	3.4

\*The highest number of responses for each question; IFSF: Female Sexual Function Index.

There was a statistically significant association between FSFI score and employment status (unemployment) and BMI ( $p < 0.005$ ). Sexual desire, sexual arousal, orgasm, pain during sex, sexual satisfaction, vaginal dryness, and sexual intercourse were significantly correlated with FSFI scores ( $p < 0.05$ ). Each question on the FSFI form was assigned a score between 1 and 5, and percentage of patients according to FSFI scores for each question are presented in Table 3; 10.7% of patients had FSFI scores of  $\leq 15$ .

## Discussion

Sexual dysfunction is a major problem associated with diminished quality of life. Sexual dysfunction in females with a neurological disease remains unclear. Sexual dysfunction frequently occurs in females and males with epilepsy. Sexual apathy is the most common form of sexual dysfunction, particularly in individuals with temporal lobe epilepsy, and it is specifically related to temporal lobe involvement.

Patients with spinal cord diseases, such as multiple sclerosis (MS) and spinal cord injury, experience difficulties in sexual intercourse due to lower limb spasticity and neurogenic bladder dysfunction.<sup>[7]</sup> Sexual dysfunction in patients with multiple sclerosis has been evaluated relatively more often, and studies found greater sexual dysfunction in patients with MS than in the normal population.

In the current study, literate migraine patients without any concomitant systemic or psychiatric disorders and whose husbands did not have sexual dysfunction were assessed using the FSFI questionnaire, and associations between data from the questionnaire and certain other parameters were examined. The average FSFI score was 29.1 for employed females and 26.7 for housewives. FSFI scores were  $\leq 15$  in 10.7% of patients.

In a Turkish study entitled "Factors associated with sexual function in married women",<sup>[8]</sup> FSFI score of 15 was used as a cut-off for sexual dysfunction. In the current study, the mean FSFI score was 27.5±7.5, which is consistent with the Turkish study.<sup>[8]</sup> There is a direct association between BMI and sexual dysfunction, which was also confirmed in the present study. In studies investigating the effects of chronic diseases, such

as chronic renal failure, and certain specific conditions, including pregnancy, on female sexual function, diabetes, chronic renal failure, and pregnancy were reported to be associated with decreased sexual function.

Additionally, many factors, including urinary tract symptoms, sexual abuse, harassment, masturbation, problems with a sexual partner, work life, socioeconomic status, and daily living issues can affect an individual's sex life. Sexual dysfunction is considered to be increased with advancing age, but because migraine is more common in the younger population, the average age of our patients was less.

In the current study, we aimed to investigate the prevalence of sexual dysfunction in female migraine patients compared with historical healthy female subjects. In conclusion, female migraine patients did not significantly differ from historical female subjects with respect to the severity of sexual dysfunction as shown by FSFI scores. The study subjects were randomly selected, which can explain the uneven distribution of employed and unemployed females and small sample size. To the best of our knowledge, this is the first study to investigate sexual dysfunction in females with migraine. Further comprehensive studies with a larger sample size are needed.

#### Disclosures

**Ethics Committee Approval:** The study was approved by the Local Ethics Committee.

**Peer-review:** Externally peer-reviewed.

**Conflict of Interest:** None declared.

#### References

1. Zarifoglu M, Siva A, Hayran O, THES G. An epidemiological study of headache in Turkey: a nationwide survey. *Neurology* 1998;50:A225.
2. Spector IP, Carey MP. Incidence and prevalence of the sexual dysfunctions: a critical review of the empirical literature. *Arch Sex Behav* 1990;19:389–408. [\[CrossRef\]](#)
3. Laumann EO, Paik A, Rosen RC. Sexual dysfunction in the United States: prevalence and predictors. *JAMA* 1999;281:537–44.
4. Önem K, Ahmedov I, Kadioğlu A. Kadın Cinsel Fonksiyonun Patofizyolojisi. In: Kadioğlu A, Başar M, Semerci B, Orhan İ, Aşçı R, Yaman MÖ, editors. *Erkek ve Kadın Cinsel Sağlığı*. İstanbul: Türk Androloji Derneği Yayını; 2004. p. 620–9.
5. Demirezen E, Erdoğan S, Önem K. 6. Ulusal Androloji Kongresi, 8-11 Haziran 2005 İzmir; Kongre Özet Kitabı. s. 27.
6. Headache Classification Committee of the International Headache Society. *International Classification of Headache Disorders*. *Cephalalgia* 2004;24:Suppl 1.
7. Bradlet WG. *Neurology in clinical practice*. 4th ed. Philadelphia: Butterworth-Heinemann; 2004. p. 760–1.
8. Güvel S, Yayıoğlu Ö, Bağış T, Savaş N, Bulgan E, Özkırdeş H, et al. Factors associated with sexual function in married women. *Türk Üroloji Dergisi* 2003;29:43–8.