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Sexual dysfunction levels in iranian women suffering from multiple sclerosis

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ABSTRACT

Objective: Sexual dysfunction (SD) is a common complaint in women who suffer from Multiple Sclerosis (MS), which has been categorized in three levels (primary, secondary, and tertiary) in previous studies. This study was conducted to assess the prevalence of sexual dysfunction (SD) at each level, and to identify associated factors and their impacts on SD in married women who suffer from Multiple Sclerosis. This study was conducted in Iran where the cultural barriers are recognized as important challenges in sexual function.

Methods: This is a single center study that was carried out in Iran MS Society. A total of 182 married women with MS (aged between 18 and 49 years) were participated in this study. We used the structured and self-report questionnaires including Multiple Sclerosis Intimacy and Sexuality Questionnaire19 (MSISQ19), together with socio-demographic and clinical questions, such as Expanded Disability Status Scale (EDSS), Fatigue Severity Scale (FSS) and Beck Depression Inventory (BDI) to collect the data. Pearson's correlation coefficients and analysis of variance (ANOVA) were performed for data analysis.

Results: Sexual dysfunction was reported in 149 patients (81.9%), including 136 (74.7%) women with primary SD, 70 (38.5%) women with secondary SD and 81 (44.5%) with tertiary SD. The most prevalent symptoms at each level of SD were orgasmic problems, spasticity and worries about sexual satisfaction of partners, respectively. The total score of MSISQ-19 was associated with education ($P < 0.001$), income status ($P < 0.001$), age ($P < 0.001$), number of children ($P < 0.05$), marriage duration ($P < 0.05$), EDSS score ($P < 0.01$), fatigue ($P < 0.01$), depression ($P < 0.001$), length of disease ($P < 0.01$) and length of drug medication therapies ($P < 0.01$).

Conclusion: According to this study, sexual dysfunction, especially primary SD was one of the most prevalent problems among women with MS. In addition, this study showed a complex and multifactorial nature for SD among these women. In order to provide an appropriate treatment and management of SD, associated factors and their impacts should be considered.

1. Introduction

Multiple sclerosis (MS) is accompanied with a variety of symptoms, which can be added side effects of medication (Khan et al., 2011). It seems that, all of the symptoms affect sexual function directly or indirectly (Cordeau and Courtois, 2014). Numerous studies have shown that, sexual dysfunction (SD) is one of the most common problems in MS patients (Kessler et al., 2009; Khan et al., 2011).

This disease affects women more than men and it is usually observed in reproductive-age women (20–40 years old) (Izadi et al., 2014). Therefore these young women will be faced with challenges in having a normal sexual life (Khakbazan et al., 2016). The previous studies showed that, around the world, 40–80% of women with MS have dysfunctions in their sexual life (Bronner et al., 2010; Qaderi and Khoei, 2014). These women have also a near-normal lifespan, therefore are involved with sexual dysfunction of MS for many years (Khan et al., 2011).

Although, SD in these women is common but often ignored, particularly in some countries like Iran (Qaderi and Khoei, 2014). In Iran, due to its cultural context (conservative culture), speaking about sexual feelings and experiences for women is an undesirable practice, specifically for disable persons, such as patients with MS (Safa-Isfahani, 1980). For this reason, while Iran has a partially high prevalence of MS, especially among women (female-to-male ratio is 3.11 in Iran), less attention is paid to sexuality issues of women with MS (Etemadifar et al., 2013; Qaderi and Khoei, 2014).

The main etiology of SD in patients with MS is still unknown. However, SD related to MS has been classified as primary, secondary,

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and tertiary (Bronner et al., 2010). Primary type is a result of neurological damages that directly affect sexual function. Secondary type is caused by physical changes which have indirect effects on sexual function, such as muscle weakness. Tertiary type is due to psychological and social damages of MS, that can impair sexual function, such as negative attitude toward self-image, decreased self-assurance and depression (Ashtari et al., 2014; Bronner et al., 2010).

For young and active sexual women with MS (Kessler et al., 2009), assessment of the SD seems to be essential. Thus, this study aimed to investigate the prevalence of SD at each of its three levels (primary, secondary, and tertiary), and to identify associated factors and their impacts on SD in Iranian women with MS. The results of this study can facilitate the management of sexual dysfunction, and promote quality of life in women who suffer from MS.

2. Methods

2.1. Study design and participants

This cross-sectional study was carried out to assess the prevalence of three levels of sexual dysfunction and associated factors in Iranian female patients with MS. This study was approved by the Ethics Committee of Tehran University of Medical Sciences and was conducted in Iran MS Society over a three-month period between January to March 2016.

Because of cultural barriers in sexual activity among Iranian single (unmarried) and widowed women, married 18–49 years old women who were registered in Iran MS Society (therefore had a definite MS diagnosis by a neurologist) were enrolled in the study. A total of 207 women who met the inclusion criteria, 87.9% (n=182) agreed to participate in the study.

Women who had another chronic illness except MS, psychological disorder, were pregnant or menopause, or if had not sexual function during the last six months, were excluded from the study.

Prior to participation, the women were reassured by researcher (FG) that their conversations will be kept confidential. Also they could quit the interview at any time which felt discomfort by questions. The participants also read and signed a consent form. Then, they were directed to a private room and were asked to complete two questionnaires: socio-demographic and disease questionnaire and MSISQ-19 via face-to-face interview.

2.2. Outcomes measurement

Status of women's sexual dysfunction was assessed using standard questionnaire, Multiple Sclerosis Intimacy and Sexuality Questionnaire-19. MSISQ-19 is a questionnaire with nineteen sections that measures the effect of MS symptoms on individual's sexual activity and satisfaction during the last 6 months. Each section in MSISQ-19 is placed in one of three levels: primary (direct physical 5Q), secondary (indirect physical 9Q) and tertiary (psychosocial 5Q). Scoring of each section is ranged between 1="never" (never disturb my sexual function or satisfaction), 2="almost never", 3="occasionally", 4="almost always", to 5="always" (always disturb my sexual function or satisfaction). Higher scores indicated more sexual dysfunction (Sanders et al., 2000).

Severity of fatigue and depression among participants also were assessed by Fatigue Severity Scale (FSS) and Beck Depression Inventory (BDI), respectively. FSS consists nine questions that are scored from 1 to 7, and has a total score between 9 and 63 (Khakbazan et al., 2016). BDI has twenty-one questions with a score from 0 to 3 in each question. Total score of depression is categorized as 0–9=minimal, 10–18=mild, 19–29=moderate and 30–63=severe depression (Beck et al., 1988). Therefore, higher scores indicate greater severity of fatigue and depression among patients.

Another questionnaire included questions about disease and socio-demographic status such as; age, education, occupation, economic status, contraception method, number of children, the age of MS onset, length of disease and drug medication therapies (DMTs) for MS. Also physical disability was rated by Expanded Disability Status Scale (EDSS) that assess pyramidal, cerebellar, brainstem, sensory, bowel and bladder, visual and mental functions. EDSS was examined by neurologist with scoring between 0 and 10.

2.3. Statistical analysis

Data were analyzed by SPSS software, version 16.0 (SPSS for Windows, SPSS Inc., Chicago, IL). Regarding to the normal distribution of data, Pearson's correlation and analysis of variance (ANOVA) were performed for investigation the relationship between three levels of SD and socio-demographic and disease variables. In fact, ANOVA was used to analyze the association between a quantitative variable (total SD score) and a qualitative multimode variable (such as education level). This statistical model focuses on the differences of means and variances. Pearson Correlation was also used to analyze the linear association between two quantitative variables (such as total SD score and age). *P*-values < 0.05 were considered as statistically significant.

3. Results

3.1. Socio-demographic and disease information

One hundred and twenty-eight patients were diagnosed with relapsing-remitting MS (RRMS) in our sample, 41 patients with secondary-progressive MS (SPMS), and thirteen patients with primary-progressive MS (PPMS). The average of participant's age was 36.9 ± 8.1 years old. They mainly had education level of diploma or higher (47.8%) and were housewives (63.7%). Duration of MS was calculated 6.8 ± 5.3 years, and they had been taking drug medications for 4.6 ± 4.4 years. The most common current/prior disease modifying therapy (DMT) use among participants was beta interferon (62.6%), fingolimod (47.8%) and glatiramer acetate (37.9%). Almost 43% of patients had an EDSS score of 4 or lower, 35.7% had a score of 4.5–5.5, and 21.4% had a score of 6 or greater (Table 1).

3.2. Sexual dysfunction information

According to MSISQ19 scores, sexual dysfunction was diagnosed in 149 (81.9%) of 182 study participants. Highest and lowest SD score was found in the primary level (delayed orgasm), and tertiary level (feeling less feminine), respectively.

The prevalence of problems in primary SD level showed that, delayed orgasm (48.9%) was the most prevalent symptom of primary SD. Almost eighty six of participants (47.3%) had decreased sexual desire, 39% had less pleasurable orgasm, 32.4% suffered from inadequate lubrication in vagina, and almost 18.7% had experienced a loss of genital sensation (Table 2).

Also in our study, problems of secondary SD level included; spasticity (38.5%), difficulty in moving (29.1%), body pain or burning (23.1%), tremor (22%), urinary symptoms (21.4%), feeling of their MS is getting worse (20.3%), dependency feeling because of MS (19.7%), bowel symptoms (18.1%), and cognitive deterioration (13.7%) (Table 2).

In tertiary SD level (frequency of score≥4 in each item of tertiary SD), worry about partner's sexual satisfaction (43.4%), feeling less attractive (29.1%), lack of confidence (18.2%), fear of rejection (17%), and feeling less feminine (12.6%) were reported by women with MS, respectively (Table 2).

3.3. Associated factors with sexual dysfunction

An association analysis was performed between the scores of each SD level and socio-demographic and disease characteristics. In this