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Short Communication

Sexual dysfunction in multiple sclerosis during the COVID-19 outbreak

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ABSTRACT

The World is witnessing a growing array of health challenges associated with COVID-19 based on research across different populations, including those with neurological diseases. This short report examines the possible link between COVID-19 and sexual dysfunction in multiple sclerosis. We do so through the comparison of self-reported sexual dysfunction data before and during the COVID-19 outbreak among persons with multiple sclerosis. We observed that sexual dysfunction remained stable among persons with multiple sclerosis during the COVID-19 outbreak.

KEYWORDS: sexual behavior, sexual dysfunction, multiple sclerosis, COVID-19 outbreak, pandemic.

ABBREVIATIONS

MS: multiple sclerosis; FSFI: Female Sexual Function Index; EDSS: expanded disability status scale.

INTRODUCTION

The COVID-19 pandemic and its management has seemingly resulted in a broad alteration of human behavior [1]. Indeed, the modification of interpersonal and social behaviors has been suggested as a primary means of controlling the transmissibility of the novel coronavirus. Sexual activity is a high-risk transmissible interpersonal behavior, and the COVID-19 pandemic has resulted in widespread stress, anxiety, and depression that could influence sexual activity, particularly its dysfunction. Of note, sexual dysfunction is burdensome and common in Society, but underestimated among females with the neurological disease multiple sclerosis (MS) [2]. There is some research on sexual behavior during the COVID-19 outbreak in the general population, but no research, to date, has investigated it among patients with MS. We investigated whether there was a shift in sexual dysfunction among females with MS during the COVID-19 outbreak.

MATERIALS AND METHODS

The ethical committee of the Kermanshah University of Medical Sciences (KUMS; Kermanshah, Iran; IR.KUMS.REC.1397.233) approved the study. The study was performed following the rules of the seventh edition (2013) of the declaration of Helsinki [3]. We contacted 78 married females with relapsing-remitting MS (RRMS) about participating in this brief follow-up study [2], and 37 (47%) were interested. Of those 37 participants, full data were available from 31 participants.

Participants were fully informed about the study purpose, anonymous and secure data handling, and provided written informed consent. We compared the sexual dysfunction scores of all participants obtained during the pandemic with data collected 12 months earlier. To do so, data were gathered remotely. Demographic information and the neurological status were available from medical records. To assess sexual dysfunction, we administered the Farsi version of the Female Sexual

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Function Index (FSFI) [4]. The FSFI contains 19 questions covering six domains of sexual function: Sexual desire (2 items), Sexual arousal (4 items), Lubrication, (4 items), Orgasm (3 items), Sexual satisfaction (3 items), Pain (3 items). An overall score can further be computed from the 19 items. Answers are given on 5-point Likert scales ranging between 0 (almost never or never/very low or none at all/or similar) and 4 (almost always/very high and similar; for the item 'pain', scoring was reversed), with lower mean scores reflecting greater sexual dysfunction (*Cronbach's alpha=.88*). We compared overall and subscale FSFI scores before and during COVID-19 using a paired samples t-test in SPSS® 25.0 (IBM Corporation, Armonk NY, USA) for Apple® Mac®, and the nominal level of significance was set at alpha ≤ .05.

RESULTS

The mean age of the patients and the median expanded disability status scale (EDSS) score were 40.8 years (SD = 6.2) and 3.50 (range 6.00), respectively. The overall and subscale FSFI scores did not differ significantly during the COVID-19 outbreak compared with the scores before the outbreak (Table 1). There was no association between EDSS or age with sexual dysfunction during the COVID-19 outbreak (overall score and all subscales).

DISCUSSION

We examined the possibility that sexual dysfunction changed based on the COVID-19 outbreak among females with MS, and we observed no change. The pattern of results is consistent with a recent observation of others [5] indicating that there were no statistically significant differences in sexual activity before and during the outbreak in three south-east Asian countries (Bangladesh, India & Nepal). This similarity may be an indicator of a similar dynamic of sexual dysfunction in MS as the general population during times of stressful life conditions. We further note a general lack of change in emotional status in persons with MS during the COVID-19 outbreak [6], and this is important as emotion impacts would be a likely source of sexual dysfunction in MS and overall.

Despite the novelty of our study, there are several limitations. We only recruited female patients as a sample of convenience, as the original study [2] only included women with MS. Our data were collected remotely as visiting patients in person was highly discouraged during the pandemic. We did not measure other mental and physical aspects of sexual behavior, such as anxiety, couple satisfaction, and health behaviors.

Table 1. Descriptive and inferential statistical indices of Female Sexual Dysfunction Index (FSFI) overall and per subscale, separately for the times before and during the COVID-19 outbreak.

Variable	Before the COVID-19 outbreak (n=31)	During the COVID-19 outbreak (n=31)	t-tests	Cohen's d
Sexual Dysfunction				
FSFI total	47.03 (11.89)	47.87 (11.53)	.46	0.07 (T)
Desire	4.87 (2.55)	5.52 (2.58)	.05	0.25 (S)
Arousal	8.35 (2.37)	8.29 (2.47)	.88	0.02 (T)
Lubrication	9.06 (3.47)	8.77 (3.77)	.26	0.08 (T)
Orgasm	7.29 (2.53)	7.19 (2.44)	.74	0.04 (T)
Satisfaction	9.23 (2.55)	9.58 (2.85)	.36	0.13 (T)
Pain	8.22 (4.19)	8.48 (3.94)	.48	0.06 (T)

Notes: FSFI = Female Sexual Function Index. Values are means (M) and standard deviations (SD), and higher values indicate lower sexual dysfunction overall and per subscale. T = trivial effect size; S = small effect size.

CONCLUSION

The present pattern of results expands upon the sparse literature regarding the stability of sexual dysfunction and other outcomes among females with MS during the COVID-19 outbreak. These results might be clinically important by noting that female sexual behavior does not change significantly with a single, highly stressful event.

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CONFLICT OF INTEREST STATEMENT

Dena Sadeghi Bahmani and Robert W. Motl declare no conflicts of interest.

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