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Original Article

Pattern of sexual dysfunction in male major depressive disorder patients

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Background: Major depressive disorder (MDD) is one of the most common psychiatric disorders. Sexual dysfunction is common in MDD, which is an important cause of poor quality of life as satisfying sexual experience is an essential part of healthy life.

Objectives: The study was undertaken to assess the pattern and frequency of sexual dysfunction in male MDD patients, to find out whether there is any correlation between severity of depression and sexual dysfunction and to see the relationship between sexual dysfunction with sociodemographic variables of patients suffering from MDD.

Methods: It was a cross-sectional, observational study conducted in the Department of Psychiatry, Sylhet MAG Osmani Medical College Hospital, Sylhet during the period of September 2017 to August 2019 where 68 male MDD patients were enrolled for the study. MDD was diagnosed according to the Diagnostic and Statistical Manual for Mental Disorders, 5th Edition (DSM-5) criteria. The sociodemographic information of the patients were obtained using a semi-structured questionnaire. Severity of depression was assessed by Bangla version of Depression Anxiety and Stress Scale (DASS-21). Arizona Sexual Experience Scale (ASEX) scale was used to assess sexual dysfunction.

Results: Majority of the patients (70.5%) with MDD had sexual dysfunction. Low sexual drive and orgasmic difficulty were the commonly reported sexual problems (35.3%). Problem with orgasmic satisfaction was present in 33.8% patients, 23.5% had difficulty in erection and 16.2% had low arousal. In this study we found statistically significant correlation between sexual dysfunction and severity of depression and no statistically significant correlation between duration of MDD and sexual dysfunction. On the other hand, neither severity of depression nor sexual dysfunction was correlated with duration of MDD.

Conclusions: This study revealed significantly high frequency of sexual dysfunction in patients with MDD. All the domains of sexual functioning were affected. Hence, this study emphasizes the need for awareness and importance of enquiring about sexual dysfunction in MDD patients.

Declaration of interest: None

Keywords: Sexual dysfunction; major depressive disorder; cross-sectional study

Introduction

Major Depressive Disorder (MDD) is a leading cause of ill health and disability worldwide. MDD is characterized by discrete episodes of changes of at least two weeks duration, involving changes in affect, cognition, neuro-vegetative functions and inter-episodic remissions.[1] Different studies show that the prevalence of MDD in Canada is 3.9%, in India 6% and in Bangladesh 4.6%.[2-4].

MDD affects behavioral, psychological and vegetative functions. Vegetative function includes sleep disturbance, diurnal variation of mood, loss of appetite, loss of weight, constipation and sexual dysfunction.[5] Sexual dysfunctions are a heterogeneous group of disorders that are typically characterized by a clinically significant disturbance in a person's ability to respond sexually or to experience sexual pleasure.[1] In the general population, prevalence of sexual dysfunction in men is 31%[6] and in women 43%.[7]

A number of psychological and socio-cultural factors such as depression, anxiety, stress, partner factors, interpersonal relationships, individual vulnerability, religion, marital status and adverse situation can cause sexual dysfunction.[8,9] Depressive disorder plays a major role in sexual dysfunction. Domains of sexual function like sexual interest, arousal, orgasm and resolution can be altered by depressive disorders.[10] There is high rate of sexual dysfunction (55%) in male MDD patients.[11,12] Medical conditions (e.g., diabetes mellitus, thyroid disease, spinal cord lesion, Peyronie's disease), adverse effects of some commonly used drugs (e.g., psychotropics, β-blockers, calcium channel blockers), surgical procedures (colostomy, ileostomy, pelvic and urethral surgery) and physiological factors such as ageing can cause sexual dysfunction.[13,14]

MDD is classified on the basis of severity as mild, moderate and severe.[1] The severity of sexual dysfunction is mostly correlated with the severity of depression.[15] Management of MDD includes psychological treatment, pharmacological treatment and development of social awareness. Antidepressants improve depression and often lead to restoration of sexual functioning but sometimes it also causes sexual dysfunction by affecting different phase of sexual response cycle. Hence, it is important to assess sexual function of a patient during diagnosis of MDD prior to starting any medication. Although clinical observations indicate that sexual dysfunction in patients with MDD is relatively common but there are no published data regarding this problem in respect to Bangladeshi population. This study tried to ascertain this problem by assessing the prevalence and type of sexual dysfunction in MDD and to evaluate the relationship between severity of MDD and sexual dysfunction.

Methods

This cross-sectional, observational study was conducted in Department of Psychiatry, Sylhet MAG Osmani Medical College Hospital, Sylhet, Bangladesh, during the period from September 2017 to August 2019. Sixty-eight male patients who were suffering from MDD were included in this study. Diagnosis of MDD was made as per DSM-5 diagnostic criteria.[1] After taking approval from the Institutional Ethics Committee, the study was conducted. Detailed history and physical examination were carried out to exclude other psychiatric disorders and organic disorders that can lead to sexual dysfunction. The exclusion criteria included presence of other major psychiatric disorders, history of sexual dysfunction prior to the present episode of illness, endocrine disorders (e.g., thyroid disorders, diabetes, hypogonadism, hyperprolactinemia), neurological disorders (spinal cord lesions, pelvic autonomic neuropathy), history of previous surgery (colostomy, ileostomy, pelvic and urethral surgery) and intake of any psychotropic medications in the last one month.

Sociodemographic information of the patient was obtained by using a semi-structured questionnaire. Bangla version of DASS-21 sub-scale for depression was applied to assess the severity of depression.[16] Arizona Sexual Experience Scale (ASEX) was applied to assess sexual dysfunction.[17] The ASEX rates sexual experience in the areas of desire, excitement, penile erection/ vaginal lubrication, orgasm and satisfaction from orgasm on a scale of 1 to 6. Sexual dysfunction is defined as having either a score of 5 or more on any item or a total score of 19 or more.

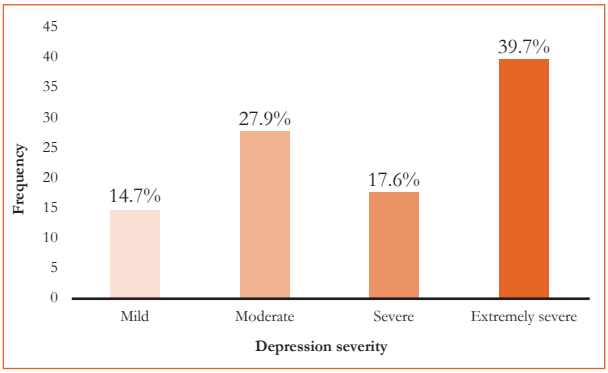
Statistical analysis was performed by using SPSS version 25. All data were recorded systematically in a preformed check list and was checked and verified thoroughly to reduce inconsistency and for omission and improbabilities. Then data were edited, coded and entered into computer. Quantitative data were summarized as mean and standard deviation and relationship between MDD, their duration and sexual dysfunction were assessed by Pearson's correlation coefficient test and scatter plot diagram. Qualitative data were summarized as frequency and percentages. Chi-square ($\chi 2$) test was used to see relationships between sexual dysfunction with socio-demographic variables of patients suffering from

MDD. A probability (p) value of <0.05 was considered statistically significant.

Results

A total of 68 male MDD patients participated in the study and the mean age was 32 (±7.9). Majority of them were Muslims (92.6%) and completed primary level of education (42.6%). A good number of patients completed secondary level education (29.4%) and graduation (20.6%). Service (33.8%), business (33.8%) and farming (20.6%) were the most common occupations of the patients. Most of the patients lived in urban areas (67.6%) and 44.1% had a monthly income in between 10000-30000 BDT. 33.8% of the patients earned <10000 BDT and 22.1% earned >30000 BDT. Regarding family history of psychiatric illness of the patients, we found 76.5% MDD patients had no family history of psychiatric illness while rest of the 23.5% had family history of psychiatric illnesses. It was also found that 75% patients had a duration of depression of less than 10 months, 22.1% had duration in between 10-50 months and 2.9% had a duration of more than 50 months. Figure 1 illustrates the severity of depression among the patients as measured by DASS-21 scale.

Figure 1: Severity of depression in MDD patients as measured by DASS-21 (N=68)



A total of 48 patients (70.5%) had sexual dysfunction with mean ASEX score of 18.1 (±4). Patterns of sexual dysfunction as per ASEX are shown in Table 1.

Table 2 reveals the differences in sexual dysfunction across sociodemographic characteristics of the patients and we found that sexual dysfunction did not vary across different age group (p=0.793), religion (0.956), educational status (p=0.585), occupation (p=0.713), residence (p=0.975), monthly income (p=0.815) and family history of psychiatric illness (p=0.509).

Table 1: Types of sexual dysfunction in MDD patients as per ASEX score (N=68)

Sexual dysfunction	Frequency (n)	Percentage (%)
Low desire	24	35.3
Arousal problem	11	16.2
Difficulty in erection	16	23.5
Difficulty to reach orgasm	24	35.3
Problem in orgasmic satisfaction	23	33.8
Total ASEX score ≥19	26	38.2
>4 score in three items	2	2.9
Total dysfunction	48	70.5

Discussion

The present study aimed to assess the pattern and frequency of sexual dysfunction in married male MDD patients between 18 to 50 years of age. In this study, 68 MDD patients were interviewed to explore sexual dysfunction. This study found high rates of sexual dysfucntion in MDD (70.5%), which is comparable to the results of Thakurta et al.[11] who studied 60 patients with MDD and rate of sexual dysfunction was found to be 71.6%. Findings of the present study are compatible to Kendurkar and Kaur, who found 76% baseline rates of sexual dysfunction in depressed patients from India.[18] The prospective Zurich cohort study showed that the prevalence of sexual problems in depressed subjects is approximately twice than that in control, i.e. 50% versus 24%.[19] Findings of the present study are also comparable to Maru et al where 77.7% of the male patients with MDD had sexual dysfunction.[20]

Table 2: Association between sexual dysfunction and demographic characteristics of the patients with MDD (N=68)

Characteristic	Sexual dysfunction		p value
Age	**Present**	**Absent**	
18-27	10 (62.5)	6 (37.5)	0.793
28-37	18 (52.9)	16 (47.1)	
38-47	8 (66.7)	4 (33.3)	
≥48	4 (66.7)	2 (33.3)	
Religion			
Islam	37 (58.7)	26 (41.3)	0.956
Hinduism	3 (60)	2 (40)	
Education			
Illiterate	2 (40)	3 (60)	0.585
Primary	16 (55.2)	13 (44.8)	
Secondary	14 (70)	6 (30)	
Graduation	8 (57.1)	6 (42.9)	
Occupation			
Farmer	10 (71.4)	4 (28.6)	0.908
Service	17 (73.9)	6 (26.1)	
Business	17 (73.9)	6 (26.1)	
Unemployed	5 (83.3)	1 (16.7)	
Others	2 (100)	-	
Residence			
Urban	27 (58.7)	19 (41.3)	0.975
Rural	13 (59.1)	9 (40.9)	
Monthly income			
<10000	12 (54.5)	10 (45.5)	0.815
10000-30000	19 (63.3)	11 (36.7)	
>30000	9 (60)	6 (40)	
Family history of psychiatric illness			
Present	13 (81.3)	3 (18.8)	0.509
Absent	38 (73.1)	14 (26.9)	

**values in parenthesis indicate percentage and Chi-square test was done to calculate significance*

Table 3: Pearson's correlation matrix among DASS-21 score, total ASEX score and duration of MDD

Characteristic	DASS-21 score	Total ASEX score	Duration of MDD
DASS-21 score	1	0.600	0.169
P value		0.000	0.169
Total ASEX score	0.640	1	0.069
P value	0.000		0.575
Duration of MDD	0.169	0.069	1
P value	0.169	0.575	

Low sexual desire had frequently been reported with MDD (35.3%) which is comparable with the findings of Thakurta et al.[13] (33.3%) and Kennedy et al.[21] (42%). Low arousal was present in 16.2% patients which was different from the study of Kendurkar and Kaur, and Thakurta et al. where it was 32.2% and 8.33%, respectively.[18,11] This difference might be due to difference in the sociodemographic variables like variation in age group, marital status and culture.

Difficulty in erection was found in 23.5% of MDD patients which is comparable with the result of Thakurta et al.[11] (29.1%) and Kendurkar and Kaur[1] (32%) who found difficulty in the domains of erection using the same rating instrument (ASEX scale) in Indian population. A study by Kennedy et al. showed similar rates of dysfunction with erection difficulties in 34% of subjects.[21] Sakhare et al.[22] reported 76% had erectile dysfunction which did not match with the present study. This variation may be due to use of different rating scales. Difficulty to reach orgasm was another most common dysfunction which was 35.3% in this study. This finding was comparable with the findings of Kennedy et al. (34%) and Mathew and Weinman (38%).[19,24] Findings of this study differ from Kendurkar and Kaur[18] where 22.5%, and Thakurta et al.[11] where 16.6% patients had difficulty in reaching orgasm. This difference might be due to difference in marital status and social factors.

The present study found problems in orgasmic satisfaction in 33.8% patients which is comparable with the result of Maru et al.[20] (35.5%) and Kendurkar and Kaur[18] (29%). This finding is inconsistent with Thakurta et al.[11] where reported rate was 16.6% and Thakurdesai & Sawant[23] where it was 7%. The inconsistency might be due to difference in the inclusion criteria and techniques of assessment.

The present study found that 14.7%, 27.9%, 17.6% and 39.7% of MDD patients had mild, moderate, severe and extremely severe depression, respectively, where severity was assessed by DASS-21 scale. Thakurta et al. found 12.5%, 29.5%, 37.5% and 20.8% of MDD patients had mild, moderate, severe and very severe depression, respectively.[11] Maru et al. reported that 15.5%, 37.7%, 37.7% and 8.8% of MDD patients had mild, moderate, severe and very severe depression, respectively.[20]

The study findings indicate that the rate of MDD is more in younger age groups. This study also found that sexual dysfunction among MDD patients were 62.5% in the age group of 18-27 years, 52.9% in age group of 28-37 years, 66.7% in the age group of 38-47 years and ≥48 years; the differences were not statisticslly significant (p=0.793) and indicated that age of MDD patients had no impact on sexual dysfunction. Result of this study was compatible with Kennedy et al. who found no significant differences across age groups of MDD patients with sexual dysfunction.[21]

Research suggests that family history is significant in MDD. However, in this study majority (76.5%) had no

family history of psychiatric illness. This result is almost similar with Maru et al.[20] which reported that 73.3% patients had no family history. In the present study, there is no statistically significant difference between MDD patients with family history of psychiatric illness and sexual dysfunction (P=0.509). Similarly, like several previous studies, this study found no statistically significant differences in sexual dysfunction across religion, education, occupation, monthly income and habitat status. One finding of this cross-sectional study was a strong positive correlation between severity of depression and sexual functioning (p=0.000), which has also been reported by Thakurta et al.,[11] Febre et al.[12] and Thakurdesai & Sawant[23] However Kennedy et al.[21], Kendurkar and Kaur[18] and Sakhare et al.[22] did not find any association between these two. This difference can be explained on the basis of sample size, sociocultural difference and difference in demographic characteristics. In this study there was no statistically significant correlation between duration of MDD and sexual dysfunction (p=0.575). However, Thakurta et al.[11] & Kennedy et al.[21] reported that duration of illness is correlated with sexual dysfunction.

Conclusions

This cross-sectional study revealed that sexual dysfunction is significantly high in MDD. Sexual desire, arousal, penile erection, ability to reach orgasm and satisfaction from orgasm were affected by MDD. Professionals can help the patients to enhance their quality of life by successfully identifying and treating sexual dysfunction in MDD. As all the domains of sexual functioning were affected, the emphasis is on systemic assessment of sexual functioning in patients with MDD before selecting a particular management plan. Sexual aspects of MDD patients should be addressed intuitively to reduce global health burden. As patients with MDD experienced significantly higher rate of sexual dysfunction, its assessment is needed in every patient suffering from MDD. Further multicentered studies are required to evaluate the actual scenario in Bangladesh.

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