Sexual Dysfunctions Among Female Major Depressive Disorder Patients of Reproductive Age


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Abstract

Background: Depression, a pervasive public health issue, is associated with substantial morbidity and mortality. Existing literature suggests a connection between depression and female sexual dysfunction, impacting the overall quality of life. Recognizing the prevalence of sexual dysfunction in Major Depressive Disorder (MDD) patients becomes crucial for holistic patient care. Objective: This cross-sectional observational study, conducted at Sylhet MAG Osmani Medical College Hospital from September 2018 to August 2020, aimed to assess the patterns and frequencies of sexual dysfunction in female MDD patients of reproductive age. The primary objectives included evaluating the correlation between the severity of depression and sexual dysfunction, as well as exploring the association between sexual dysfunction and socio-demographic variables. Method: Sixty-eight married, reproductive-age females diagnosed with MDD were included. Diagnosis followed DSM-5 criteria, with severity assessed using the Bangla version of the Depression Anxiety and Stress Scale (DASS-21) and sexual dysfunction evaluated via the Female Sexual Function Index (FSFI) scale. Statistical analyses employed Chi-square tests and Pearson’s correlation coefficient tests. Results: Of the participants, 77.9% experienced sexual dysfunction, with 41.2% exhibiting extremely severe depression. Dysfunction in desire (72.1%), arousal (67%), and satisfaction (54.4%) were prevalent, while 51.5% reported lubrication difficulties. Dysfunction in orgasm (44.1%) and pain (45.6%) were less frequent. A significant correlation was observed between female sexual dysfunction and depression severity (p<0.001), while no statistically significant correlation was found between the duration of MDD and sexual dysfunction (p=0.122). Conclusion: This study underscores a high prevalence of sexual dysfunction in female MDD patients, emphasizing the necessity of routine inquiry into sexual health in the clinical management of Major Depressive Disorder. It highlights the need for increased awareness, early detection, and comprehensive interventions to address this often-overlooked aspect of mental health.

Keywords: Sexual Dysfunction, Major Depressive Disorder, Depression Severity, Socio-demographic Variables, Female Sexual Function.

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INTRODUCTION

Depression is a global epidemic that has garnered significant attention within the realm of public health. This debilitating mental health condition is characterized by symptoms such as persistent low mood, loss of interest in previously enjoyable activities, decreased energy levels, and diminished self-esteem [1]. According to the World Health Organization (WHO), an estimated 322 million individuals worldwide suffer from depressive disorders, making it the fourth leading cause of disability globally [2]. Moreover, WHO projections suggest that by the year 2020, depression will ascend to the position of the second leading cause of disease burden worldwide, underscoring the urgent need for understanding and addressing this pervasive condition [3]. Depression’s impact extends far beyond mood and emotional well-being; it can permeate various aspects of an individual’s life, including their sexual health. Sexual dysfunction is a multifaceted problem that can manifest in individuals with depression, further exacerbating their suffering [4]. Notably, depression can lead to sexual problems such as erectile dysfunction (ED) and...
lubrication difficulties, affecting both men and women. Moreover, age has been identified as a significant factor associated with declining sexual function, with older individuals experiencing a higher incidence of sexual issues [5].

In the context of Major Depressive Disorder (MDD), a severe form of depression, the interplay between depression and sexual dysfunction becomes particularly noteworthy. MDD encompasses a range of debilitating symptoms that significantly affect an individual's daily life and overall functioning. Managing MDD typically involves a multifaceted approach, including psychological treatments, pharmacological interventions, and efforts to raise awareness about the condition [6]. Antidepressant medications are commonly prescribed to alleviate depressive symptoms. While they often lead to an improvement in mood and overall well-being, they can also introduce sexual dysfunction as a potential side effect. This underscores the critical importance of assessing sexual function when diagnosing MDD and initiating treatment to prevent or address any ensuing sexual issues.

While clinical observations suggest that sexual dysfunction is relatively common among individuals with MDD, comprehensive data on this issue within specific populations remains scarce. This study aims to fill this gap by exploring the prevalence and severity of sexual dysfunction in a particular group: female MDD patients of reproductive age in Bangladesh. As the cultural, social, and economic context can significantly influence the experience of both depression and sexual dysfunction, understanding these dynamics within the context of Bangladesh is of paramount importance. The significance of this study lies in its potential to shed light on the intricate relationship between MDD and sexual dysfunction in a specific population. By examining the prevalence and severity of sexual dysfunction in female MDD patients, we can gain valuable insights into the scope of this issue within this demographic. Additionally, exploring the connection between depression severity and sexual dysfunction will provide a more nuanced understanding of how these two conditions intersect.

Furthermore, socio-demographic factors, such as education, occupation, and income, influence mental health and sexual function. These variables can shape the experience of MDD and sexual dysfunction and may contribute to disparities in prevalence and severity. Consequently, examining the impact of socio-demographic factors on these conditions is essential for tailoring effective interventions and support systems. In the study, depression is a global public health concern with a profound impact on individuals and societies. This study focuses on the specific issue of sexual dysfunction within the context of female MDD patients of reproductive age in Bangladesh. By investigating the prevalence, severity, and socio-demographic correlates of sexual dysfunction in this population, we aim to contribute to a more comprehensive understanding of the complex interplay between MDD and sexual health, ultimately informing targeted interventions and support strategies to improve the lives of those affected by these conditions.

**OBJECTIVES**

**General Objective:**
- To assess the prevalence and severity of sexual dysfunction among females of reproductive age suffering from Major Depressive Disorder.

**Specific Objectives:**
- To determine the frequency of sexual dysfunctions in female Major Depressive Disorder patients.
- To examine the relationship between the severity of depression and the presence of sexual dysfunctions in these patients.
- To explore potential connections between socio-demographic variables and the occurrence of sexual dysfunction among individuals with Major Depressive Disorder.

**METHODOLOGY**

**Study Design**

The study was cross-sectional, observational study was carried out in the Department of Psychiatry, Sylhet MAG Osmani Medical College Hospital, Sylhet. SOMCH is one of Bangladesh's oldest and most renowned tertiary-level hospitals. According to the outdoor register, around 100 patients take psychiatric services daily. On average, per day, 3-4 married female patients were diagnosed with Major Depressive Disorder. As patients come from the whole division and from the nearby district, patients can be said to be representative. This study was carried out from 1 September 2018 to 31 August 2020.

**Inclusion Criteria**
- Married female MDD patient of reproductive age group.

**Exclusion Criteria**
- Patients with co-morbid medical conditions such as endocrine disorders, neurological conditions, or pelvic disorders.
- Patients with a history of sexual dysfunction prior to the onset of substance use disorders.
- Pregnant and menopausal women.
- Simultaneous presence of other major psychiatric disorder.
- Patients who had taken any psychotropic medications in the last month.
- Patients with a history of previous surgery (e.g., colostomy, ileostomy, pelvic, or urethral surgery).
• Patients taking medications or contraceptives are known to cause sexual dysfunction.
• Patients with a history of substance and medication intake are known to cause sexual dysfunction.

Data Collection
The researcher has approached sixty-eight patients who attended the Psychiatry Outpatient Department of SOMCH. All were willingly consented to take part in the study. Previous treatment records were reviewed for preliminary selection. Major Depressive Disorder was assigned according to DSM-5 diagnostic criteria by a consultant psychiatrist. Socio-demographic information of the patient was obtained by using a semi-structured questionnaire. DASS subscale for depression was applied to assess the severity of depression. Then, the researcher interviewed the patient using the FSFI scale. It took about 30-35 minutes. One to Two patients were interviewed each day. Informed written consent was taken before data collection from patients. Confidentiality was maintained. Unintentional disclosure was avoided by consulting where they cannot be overheard and avoiding discussion between professional staff. The researcher periodically informed the guide and other consultants about the research findings. No compensation was provided where there were risks of loss of working time or privacy involved in any particular procedure. The subject was free to withhold the information during the study. The study did not involve any physical risk or social risk. Psychological risk and discomfort were minimized by an empathetic approach and by maintaining privacy. No drug or placebo was used for the study.

Data Analysis
Statistical analysis was performed using SPSS (Statistical package for social science) for Windows 25. All data were recorded systematically in a preformed checklist and were checked and verified thoroughly to reduce inconsistency and for omission and improbabilities. The data was edited, coded, and entered into the computer. Quantitative data were summarized as mean and standard deviation, and the relationship between Major Depressive Disorder, its duration, and Sexual Dysfunction was assessed by Pearson’s correlation coefficient test and scattered plot. Qualitative data were summarized as frequency and percentages. The chi-square ($\chi^2$) test was used to see any relationship between Sexual Dysfunction and the socio-demographic variable of patients suffering from Major Depressive Disorder. A probability ($p$) value of <0.05 was considered statistically significant.

Ethical Considerations
Ethical approval was of utmost importance in this study. The research protocol received approval from the Ethical Review Committee of Sylhet MAG Osmani Medical College, ensuring adherence to ethical standards. Informed written consent was obtained from all participants, emphasizing their voluntary participation and understanding of the study’s objectives, procedures, and potential risks and benefits. Participants were assured that their information would only be used for research purposes and would remain confidential, with no physical, psychological, or social risks imposed on them.

RESULTS
The study included a sample of 68 Major Depressive Disorder (MDD) patients. Socio-demographic data was collected using paper and pencil, and data were analyzed using SPSS version 25—the age distribution among depressed patients. The mean age was 32.34 years, with a standard deviation of 5.44. Most patients were in the 31-35 age group (38.2%), while the <26 age group had the lowest representation (13.2%).

Table 1: Association between Sexual Dysfunction and Demographic Characteristics of Major Depressive Disorder Patients

<table>
<thead>
<tr>
<th>Demography</th>
<th>Sexual Dysfunction</th>
<th>$P$-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;26</td>
<td>9 (100)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>26-30</td>
<td>12 (70.6)</td>
<td>5 (29.4)</td>
</tr>
<tr>
<td>31-35</td>
<td>21 (80.8)</td>
<td>5 (19.2)</td>
</tr>
<tr>
<td>&gt;35</td>
<td>11 (68.8)</td>
<td>5 (31.3)</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muslim</td>
<td>50 (80.6)</td>
<td>12 (19.4)</td>
</tr>
<tr>
<td>Hindu</td>
<td>3 (50.0)</td>
<td>3 (50.0)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>11 (78.6)</td>
<td>3 (21.4)</td>
</tr>
<tr>
<td>Primary</td>
<td>23 (82.1)</td>
<td>5 (17.9)</td>
</tr>
<tr>
<td>Secondary</td>
<td>14 (73.7)</td>
<td>5 (26.3)</td>
</tr>
<tr>
<td>Higher Secondary</td>
<td>3 (60)</td>
<td>2 (40)</td>
</tr>
<tr>
<td>Graduate</td>
<td>2 (100)</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>
Table 2 demonstrates the association of Sexual Dysfunction with demographic characteristics of participants. Chi-square was used to assess the significance of the association. The age of the depressed patient was not significantly associated with sexual dysfunction (p=0.263). The p-value of the Chi-square study for the association of religion with Sexual Dysfunction was not very significant (0.084). Similarly, education (p=0.737), occupation (p=0.059), and habitat (p=0.255) were not significantly associated with sexual dysfunction. Neither monthly income (p=0.977), family history of psychiatric illness (p=0.922), or parity (p=0.375) was associated significantly with Sexual Dysfunction.

Figure 1: Distribution of education among the study population

Figure 1 demonstrates the education of depressed patients. Most patients (41.2%) completed up to the primary level. A good number of parents had completed up to the secondary level (27.9%). Fewer of them were graduates (2.9%) or completed higher secondary education (7.4%). A good number of them were illiterate (20.6%).
Figure 2: Distribution of study population according to family history of psychiatric illness

Figure 2 depicts the history of psychiatric illness. Among the depressed patients, 80.9% patient had no family history of psychiatric illness, while 19.1% had a family history of psychiatric illness.

Figure 3: Distribution of Sexual dysfunction among subjects (n=68)

Figure 3 depicts the various and overall sexual dysfunction among the depressed patient. The patient had highest dysfunction in desire (72%) and arousal (67.6%). Many had dysfunction in lubrication (51.5%) and satisfaction (54.4%). Fewer of them had dysfunction in orgasm (44.1%) and pain (45.6%). Overall, sexual dysfunction was very high among the respondents (77.9%).

Table 2: Pearson's Correlation between DASS Scale and FSFI Scores

<table>
<thead>
<tr>
<th></th>
<th>Correlation</th>
<th>DASS Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total FSFI Score</td>
<td>r</td>
<td>-0.454</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Desire</td>
<td>r</td>
<td>-0.395</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Arousal</td>
<td>r</td>
<td>-0.367</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0.002</td>
</tr>
<tr>
<td>Lubrication</td>
<td>r</td>
<td>-0.395</td>
</tr>
<tr>
<td></td>
<td>p value</td>
<td>0.001</td>
</tr>
<tr>
<td>Orgasm</td>
<td>r</td>
<td>-0.487</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>r</td>
<td>-0.241</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0.048</td>
</tr>
<tr>
<td>Pain</td>
<td>r</td>
<td>-0.315</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0.009</td>
</tr>
<tr>
<td>Duration of Depression</td>
<td>r</td>
<td>0.247</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0.043</td>
</tr>
</tbody>
</table>
Figure 4: Relationship between DASS score and total FSFI scores

Figure 4 reveals the scattered plot illustrating the association of the DASS score and total FSFI score. It reveals the negative association. As the DASS score increases, the FSFI score decreases. It was due to a higher score of DASS revealing more severe depression and a lower score of FSFI revealing more severe sexual dysfunction.

**DISCUSSION**

Sexual dysfunction remains a globally sensitive issue, and this study addresses the scarcity of information on this topic, particularly in a country like Bangladesh. This cross-sectional observational study conducted in the Department of Psychiatry at Sylhet MAG Osmani Medical College Hospital aimed to assess the patterns and frequencies of sexual dysfunction among married females of reproductive age newly diagnosed with Major Depressive Disorder (MDD). The study involved interviews with 68 MDD patients to explore sexual dysfunction. The findings of the present study indicate a high prevalence of sexual dysfunction in women with Major Depressive Disorder, with 77.9% of participants reporting sexual dysfunction. This rate is consistent with similar studies conducted in Egypt [7] and India [8] and previous research in Bangladesh [9]. Additionally, an even higher rate of sexual dysfunction (90%) was reported in a study conducted by [10]. These results underscore the substantial impact of MDD on sexual health in women.

The severity of depression among the study participants varied, with 41.2% experiencing extremely severe depression, 35.5% moderate depression, 20.6% severe depression, and 2.9% mild depression. These findings align with previous research, showing that depression severity often ranges from mild to extremely severe [11,12]. The prevalence of sexual dysfunction increased as the severity of depression increased, with none of the mildly depressed patients reporting sexual dysfunction. In contrast, 58.3% of moderately depressed patients and 92.9% of severely or extremely severely depressed patients reported sexual dysfunction. This observation is consistent with the findings of [13], further highlighting the connection between depression severity and sexual dysfunction. The Female Sexual Function Index (FSFI) scores indicated that all parameters of sexual dysfunction had lower scores among depressed patients, indicating a higher severity of sexual dysfunction. This aligns with the overall trend observed in the study, where increased depression severity was associated with a higher prevalence of sexual dysfunction. Sexual desire problems were the most frequently reported sexual dysfunction among the study participants, with 72.1% reporting low desire. This is consistent with studies conducted by Mahmoud et al., [14,15]. The prevalence of desire disorders appeared to increase with the severity of depression, suggesting a potential link between depression severity and sexual desire disorder.

Sexual arousal problems were reported by 67% of the participants, which is consistent with the findings of [16] and Kennedy [17]. Lubrication difficulties were also prevalent among the study participants, with 51.5% reporting this issue. This finding is in line with the results of Mahmoud et al., [18], who reported high rates of lubrication difficulties among moderately and severely depressed individuals. The study did not find a significant correlation between the duration of
depression and sexual dysfunction, contrasting with the findings of Thakurta et al., [19]. The prevalence of difficulty in reaching orgasm was reported by 44.1% of the participants, consistent with the results of Maru et al. [20] and Hobb et al., [21]. Satisfaction problems were experienced by 54.4% of the participants, in line with the findings of Maru et al., (2019) and Mahmoud et al., (2018). Sexual pain disorders were reported by 45.6% of the participants, consistent with the results of Maru et al., [22] and Mahmoud et al., [23]. One of the most significant findings of this study was the strong negative correlation between depression severity, as measured by the Depression, Anxiety, and Stress Scale-21 (DASS-21), and female sexual dysfunction (FSFI). All parameters of sexual dysfunction were significantly correlated with depression severity, indicating that as depression severity increased, sexual dysfunction became more pronounced. This finding reinforces the notion that sexual dysfunction is closely intertwined with the severity of Major Depressive Disorder.

Socio-demographic data revealed that the mean age of onset of female sexual dysfunction was 32.34 years, which is consistent with the findings of the Egyptian study by Mahmoud et al., [24]. The study also found that the majority of patients were Muslim (91.2%), with 8.8% being Hindu, reflecting the religious composition of the region. Education levels varied, with 20.6% of participants being illiterate and the rest having completed primary or secondary studies. Occupation data indicated that most participants were housewives and lived in urban areas. Income levels varied, with 54.4% belonging to the lower-income group and 33.8% to the middle-income group. The study did not find any statistically significant relationships between socio-demographic variables and sexual dysfunction. In terms of family history, 80.9% of the participants had no family history of psychiatric illness. Parity did not show a significant correlation with sexual dysfunction in this study. These results contrast with the findings of other studies and suggest that different influencing factors may be at play in this population.

**CONCLUSION**

This study found a high prevalence of sexual dysfunction among Major Depressive Disorder (MDD) patients, with 77.9% affected. The severity of depression was significantly correlated with sexual dysfunction. Addressing sexual issues in MDD treatment is essential for improving patients' quality of life and overall outcomes.

**Recommendations**

- Include sexual dysfunction assessment in routine care for Major Depressive Disorder patients.
- Conduct additional multicenter studies in Bangladesh for a more comprehensive understanding of sexual dysfunction in Major Depressive Disorder.

**Acknowledgments**

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**Abbreviations**

- MDD - Major Depressive Disorder
- DASS-21 - Depression, Anxiety, and Stress Scale-21
- ED - Erectile Dysfunction
- FSFI - Female Sexual Function Index
- HAM-D - Hamilton Rating Scale for Depression
- ASEX - Arizona Sexual Experiences Scale
- DSM-5 Diagnostic and Statistical Manual for Mental Disorders

**Study Purpose**

To assess sexual dysfunction among female Major Depressive Disorder (MDD) patients of reproductive age in Bangladesh.

**Key Findings**

- Sexual dysfunction is highly prevalent (77.9%) among female MDD patients.
- The severity of depression correlates significantly with the severity of sexual dysfunction.
- Lower education levels, housewives, and lower income are associated with higher rates of sexual dysfunction.

**New Findings Added to What Is Known**

This study sheds light on the high prevalence of sexual dysfunction in a specific demographic of MDD patients in Bangladesh, emphasizing the need for further research and integrated assessment and management of sexual health in MDD patients.

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**Conflict of Interest:** None declared

**REFERENCES**


