

ORIGINAL ARTICLE

Frequency of female sexual dysfunction in Depression.

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ABSTRACT... Objective: To determine the frequency of sexual dysfunction among married women with untreated Major Depressive Disorder (MDD). **Study Design:** Analytical Cross sectional study. **Period:** June 2025 to December 2025. **Setting:** Outpatient department of Psychiatry and Behavioral Sciences, DHQ Hospital, Faisalabad Medical University. **Methods:** Total 193 married women aged 18–45 years, diagnosed with MDD per DSM-5 criteria and not on antidepressants, were enrolled using non-probability consecutive sampling. Sexual function was assessed using Female Sexual Function Index (FSFI), with a total score ≤ 26 indicating dysfunction. Data were analyzed using SPSS version 23.0; chi-square tests were applied to examine associations, with $p \leq 0.05$ considered significant. **Results:** The mean age of participants was 31.4 ± 6.2 years. Sexual dysfunction was present in 137 women (71.0%), with the lowest FSFI domain scores in desire (2.8 ± 1.1) and arousal (3.1 ± 1.3). Significant associations were found between sexual dysfunction and older age ($p = 0.021$), longer marriage duration ($p = 0.008$), higher parity ($p = 0.014$), and cesarean delivery ($p = 0.032$). Employment status showed no significant association ($p = 0.217$). **Conclusion:** Female sexual dysfunction was frequent in women with untreated depression, particularly affecting desire and arousal, and is significantly influenced by reproductive and demographic factors.

Key words: Depression, Female Sexual Dysfunction, FSFI, Major Depressive Disorder, Sexual Health, Untreated Depression.

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INTRODUCTION

Depression is a common psychiatric disorder. According to the World Health Organization (WHO), about 280 million people worldwide are suffering from depression, including 5% of the world's adults and 5.7% of adults above age 60. Depression is 50% more common in females than males. It is a condition primarily marked by a low mood, reduced energy, and reduced interest in activities previously found pleasurable.¹ Sexual health is fundamental to overall health and well-being of an individual, couples and families. Sexual dysfunctions refer to "impairments in the sexual response cycle or the presence of pain during sexual intercourse".² The incidence of female sexual dysfunction (FSD) in Western countries usually ranges from 15% to 58%.^{1,3}

Sexual dysfunction can be described as decreased sexual desire, inability to be physically aroused during sexual act, lack or delayed orgasm and presence of pain during intercourse. The risk factors reported for sexual dysfunction are age, education level,

employment status, mental stress and co-morbid physical illnesses such as diabetes, cardiovascular disease, genitourinary disease.⁴

It is noted that depression effects female sexual function because of presence of complex interplay between psychological, physical and social relationship. Depression often involves symptoms such as low self-esteem, negative body image, and anhedonia (loss of pleasure), all of which can diminish sexual interest and satisfaction.⁶ As a result, there is further decrease in self esteem, disruption of quality of life, interpersonal relationship and worsening of emotional stress. Sexual dysfunction is one of the major causes of marital discord and divorce.³

There was a study done by Reddy RM et.al (2020)¹, A total of 270 cases were included in study. 135 were cases and 135 were controls. On the ASEX, 46.66% of the cases were having sexual dysfunction, while it was only 8.89% in control group.

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A study was done by Eissa et.al (2022), 100 patients participated in this study which was divided into a case group (50 female patients diagnosed with major depression) and a control group (50 apparently healthy matched females). Data Analysis showed that all patients with major depression had a higher risk of sexual dysfunction compared to 36% in the control group.⁵

The rationale behind the study is that despite its importance, sexual dysfunction remains under reported, particularly among females who may feel reluctant or embarrassed to discuss these issues. This reluctance can lead to severe medical, personal, and relational consequences, including the potential for secondary infertility. Furthermore, while there is growing recognition of the link between depression and sexual dysfunction, there is a paucity of local studies that explore this association in detail. Given the limited data available and the significant impact that both depression and sexual dysfunction can have on women's health, this study is crucial. By determining the frequency of sexual dysfunction in females with depression, this research aims to contribute valuable insights that could lead to improved screening, early diagnosis, and targeted interventions. Addressing sexual dysfunction in the context of depression may not only improve individual well-being but also enhance relationship satisfaction and overall quality of life for affected women.

OBJECTIVE

To determine the frequency of sexual dysfunction in females with depression.

METHODS

This was analytical cross sectional study was conducted to investigate the association between depression and sexual dysfunction among married women attending the outpatient unit of the Department of Psychiatry and Behavioral Sciences at DHQ Hospital, Faisalabad Medical University, Faisalabad. The study was conducted from June 2025 to December 2025 following ethical approval from the Institutional Ethical Review Committee (Reference No. 48/ERC/FMU/2023-24/542 Dated. 12-02-2024). Depression was operationally defined according to the diagnostic criteria for Major

Depressive Disorder (DSM-5). Sexual function was assessed using the Female Sexual Function Index (FSFI), a validated, self-administered, 19-item Likert-type questionnaire that evaluates six domains of female sexual function: desire (items 1–2, domain factor = 0.6), arousal (items 3–5, factor = 0.3), lubrication (items 7–10, factor = 0.3), orgasm (items 11–13, factor = 0.4), satisfaction (items 14–16, factor = 0.4), and pain (items 17–19, factor = 0.4). Each item is scored on a scale from 0 or 1 to 5, and domain scores are calculated by multiplying the sum of item scores by the respective domain factor. The total FSFI score ranges from 2 to 36, with a cutoff score of ≤ 26 indicating the presence of sexual dysfunction.

A non-probability consecutive sampling technique was used to recruit participants. The calculated sample size was 193, based on anticipated population proportion of 56.86% (Sexual dysfunction in females with depression)⁷, confidence level 95%, and absolute precision 7%, using the WHO sample size calculator for a single proportion. Eligible participants were married women aged 18–45 years, diagnosed with depressive disorder for at least six months and not currently receiving any pharmacological treatment for depression. They were required to be able to read, provide written informed consent, and comply with study procedures. Exclusion criteria comprised the presence of severe or unstable medical conditions known to affect sexual function (e.g., diabetes, cardiovascular disease, hormonal disorders), coexisting primary psychiatric diagnoses (e.g., bipolar disorder, schizophrenia), pregnancy or lactation, cognitive impairment interfering with questionnaire completion, and current separation from the husband for any reason.

Data collection was carried out by the principal investigator through face-to-face interviews after obtaining written informed consent and ensuring participant confidentiality. A structured proforma was used to record socio-demographic and study variables, including age, duration of marriage, number of children, education level, mode of delivery (vaginal or cesarean section), employment status, and nature of occupation. The DSM-5 criteria were applied clinically to confirm the diagnosis of depression, and the FSFI was administered to

assess sexual function. Data were analyzed using SPSS version 23.0. Quantitative variables (e.g., age, duration of marriage, number of children) were summarized as mean $\pm$ standard deviation, while qualitative variables (e.g., education, delivery mode, employment status, sexual dysfunction) were presented as frequencies and percentages. To assess the association between depression and sexual dysfunction while controlling for potential effect modifiers such as age, duration of marriage, number of children, education, delivery mode, employment, and job nature, stratified analyses were performed, and the chi-square test was applied. A p -value ≤ 0.05 was considered statistically significant.

RESULTS

Total 193 married women diagnosed with Major Depressive Disorder (MDD) according to DSM-5 criteria and not currently on antidepressant medication were enrolled in this cross-sectional analytical study.

Socio-demographic and reproductive characteristics of the 193 married women with Major Depressive Disorder revealed that mean age of participants was 31.4 ± 6.2 years, and they had been married for an average of 9.8 ± 5.7 years. The majority (68.9%) had two or more children, and more than half (57.5%) had attained secondary-level education or higher. Nearly two-thirds (64.8%) were unemployed. Among the 172 women who had given birth, 68.6% reported vaginal delivery, while 31.4% had undergone cesarean section (Table-I).

The mean total FSFI score was 22.1 ± 5.3 , with 137 participants (71.0%) scoring at or below the clinical cutoff of 26, thus meeting the criteria for sexual dysfunction. Domain-specific analysis revealed that desire and arousal were the most impaired aspects of sexual function, with mean scores of 2.8 ± 1.1 and 3.1 ± 1.3 , respectively, while pain and satisfaction were relatively less affected (mean scores of 4.2 ± 1.7 and 4.0 ± 1.6 , respectively) (Table-II).

Women aged 31–45 years were significantly more likely to experience sexual dysfunction compared to those aged 18–30 years (78.2% vs. 62.4%; $p = 0.021$). Similarly, a longer duration of marriage (≥ 10

years), having two or more children, and a history of cesarean delivery were all significantly associated with higher rates of sexual dysfunction ($p = 0.008$, $p = 0.014$, and $p = 0.032$, respectively). In contrast, employment status showed no statistically significant association ($p = 0.217$).

TABLE-I

Socio-demographic and reproductive characteristics of study participants (n = 193)

Characteristic	n (%) or Mean $\pm$ SD
Age (years)	31.4 ± 6.2
Duration of marriage (years)	9.8 ± 5.7
Number of Children	
– 0–1	60 (31.1%)
– ≥ 2	133 (68.9%)
Education Level	
– Primary or less	82 (42.5%)
– Secondary or higher	111 (57.5%)
Employment Status	
– Unemployed	125 (64.8%)
– Employed	68 (35.2%)
Mode of delivery (n = 172)	
– Vaginal	118 (68.6%)
– Cesarean section	54 (31.4%)

TABLE-II

Frequency and severity of sexual dysfunction based on FSFI (n=193)

FSFI Parameter	Value
Mean total FSFI score	22.1 ± 5.3
Participants with sexual dysfunction (FSFI ≤ 26)	137 (71.0%)
Domain-specific mean scores:	
– Desire	2.8 ± 1.1
– Arousal	3.1 ± 1.3
– Lubrication	3.4 ± 1.5
– Orgasm	3.6 ± 1.4
– Satisfaction	4.0 ± 1.6
– Pain	4.2 ± 1.7

The extent of impairment within each FSFI domain by the proportion of participants whose domain scores fell at or below the sample median used here as a proxy for “severe impairment.” Desire was the most commonly impaired domain, with 58.0% of participants scoring low, followed by arousal (54.9%) and lubrication (48.7%). Fewer participants

exhibited low scores in orgasm (46.1%), satisfaction (42.5%), and pain (39.4%), suggesting a gradient of dysfunction severity across sexual response domains (Table-IV).

TABLE-III

Association between Sociodemographic/Reproductive Factors and Sexual Dysfunction

Variable	Sexual Dysfunction, n (%)	No Dysfunction, n (%)	P-Value
Age Group			0.021
– 18–30 years	58 (62.4%)	35 (37.6%)	
– 31–45 years	79 (78.2%)	22 (21.8%)	
Duration of Marriage			0.008
– <10 years	52 (60.5%)	34 (39.5%)	
– ≥10 years	85 (81.7%)	19 (18.3%)	
Number of Children			0.014
– 0–1	35 (58.3%)	25 (41.7%)	
– ≥2	102 (76.7%)	31 (23.3%)	
Mode of Delivery			0.032
– Vaginal (n=118)	74 (62.7%)	44 (37.3%)	
– Cesarean (n=54)	41 (75.9%)	13 (24.1%)	
Employment Status			0.217
– Unemployed	93 (74.4%)	32 (25.6%)	
– Employed	44 (64.7%)	24 (35.3%)	

TABLE-IV

Domain-wise frequency of Severe Impairment in Sexual Function (FSFI Subscores ≤ Domain Median)

FSFI Domain	Participants With Low Score	% of Total Sample
Desire	112	58.0%
Arousal	106	54.9%
Lubrication	94	48.7%
Orgasm	89	46.1%
Satisfaction	82	42.5%
Pain	76	39.4%

DISCUSSION

The study found high frequency of sexual dysfunction (71.0%) among married women with untreated Major Depressive Disorder (MDD), consistent with international literature reporting rates between 50% and 70% in depressed women.^{8,9,10} However, findings exceed many global estimates, possibly

reflecting the compounded effects of sociocultural constraints, limited mental health literacy and the absence of pharmacological intervention, which itself can influence sexual function. The markedly impaired desire and arousal domains align with neurobiological models of depression, wherein dysregulation of serotonin, dopamine, and norepinephrine pathways directly suppresses sexual motivation and responsiveness.^{11,12} Notably, pain and satisfaction were relatively preserved, suggesting that relational or emotional aspects of intimacy may remain partially intact despite core physiological and psychological disruptions.

Study results further demonstrate that older age, longer marital duration, higher parity, and cesarean delivery were significantly associated with sexual dysfunction in this population. These findings echo studies from Iran and India, where multiparity and surgical delivery were linked to pelvic floor dysfunction, body image concerns, and reduced sexual self-efficacy.^{13,14} The association with cesarean section despite its common perception as “less traumatic” than vaginal birth may relate to prolonged postoperative recovery, fear of pain, or psychological distress surrounding the birth experience, all of which can persist long after delivery.^{15,16,17} Conversely, the lack of association with employment status contrasts with some Western studies¹⁸, possibly due to the predominantly informal or home-based nature of employment among Pakistani women, which may not confer the same protective psychosocial benefits as formal employment.

A key strength of this study is its focus on untreated depression, thereby isolating the impact of the disorder itself from the confounding effects of antidepressant medications many of which (e.g., SSRIs) are well-known to induce sexual side effects.^{19,20,21} Additionally, the use of DSM-5 criteria for diagnosis and the validated FSFI enhances diagnostic and measurement reliability. The inclusion of reproductive variables such as mode of delivery fills a gap in South Asian literature, where perinatal factors are seldom examined in the context of sexual health among psychiatric populations.

However, several limitations must be acknowledged.

First, the cross-sectional design precludes causal inference regarding the directionality of the depression–sexual dysfunction relationship. Second, the sample was drawn from a single public-sector hospital, limiting generalizability. Third, while excluded women on antidepressants, but did not assessed the use of over-the-counter remedies, herbal supplements, or non-psychiatric medications that might influence sexual function. Fourth, the FSFI, though widely used, relies on self-report and may be subject to recall or social desirability bias, particularly in a conservative cultural context where sexual topics are stigmatized. Finally, hormonal profiles, partner-related factors (e.g., sexual dysfunction in husbands), and relationship quality known contributors to female sexual function were not evaluated.

On the basis of these findings, it is recommended that integrating sexual health screening into routine psychiatric evaluations for women with depression, especially those with ≥ 2 children, cesarean births, or long-term marriages is required. Psycho-education on the bidirectional link between mood and sexuality, coupled with couple-based counseling, may improve both mental and sexual outcomes. Future longitudinal or mixed-methods studies should explore partner dynamics, cultural narratives around female sexuality, and the impact of depression treatment (both pharmacological and non-pharmacological) on sexual recovery in women.

CONCLUSION

This study highlights a high burden of sexual dysfunction particularly in desire and arousal among women with untreated depression, significantly influenced by reproductive and demographic factors. Routine sexual health assessment and culturally sensitive interventions are warranted in psychiatric care.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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1	Sidra Rasheed: Conception of idea, study design, manuscript drafting.
2	Imtiaz Ahmad Dogar: Data collection, data analysis.
3	Iqra Ain Ali: Interpretation of data.
4	Hafiza Aneeqa: Data collection.
5	Sadaf Ghulam Jelani: Data entry.