

Sexual dysfunction in patients with depression presenting in a tertiary care center: a cross-sectional study

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ABSTRACT

Introduction: Sexual dysfunction (SD) is common in depression, with prevalence ranging from 46.6% to 90%. In Nepal, there has been no research on sexual dysfunction in depression, especially among males. This study aimed to determine the prevalence of sexual dysfunction among Nepalese patients with a first episode of major depression.

Methods: A hospital-based cross-sectional study was conducted in the Department of Psychiatry, Devdaha Medical College, from 15th January 2025 to 15th July 2025. Patients diagnosed with depression were selected using purposive sampling. The Arizona Sexual Experience Scale (ASEX) was utilized to evaluate sexual dysfunction. Ethical approval was obtained from the Institutional Review Committee (Reference No: 18/2024), and informed consent was secured from all participants prior to data collection. Data entry and analysis were performed using the Statistical Package for the Social Sciences (SPSS) version 24.0. Point estimates with 95% confidence intervals were calculated. Binary variables were summarized using frequencies and percentages, while continuous variables were presented as mean and standard deviation.

Results: Among 280 participants, sexual dysfunction was present in 158 (56.4%). The median age was 36 years, and most of them had moderate depression 216 (77%). Sexual dysfunction was slightly more prevalent in males (57.0%) than in females (43.0%). The mean ASEX score was 17.39 ± 4.46 , higher in males. The most common issue was decreased sexual desire in both genders, followed by erection difficulties in males and lubrication problems in females.

Conclusion: Sexual dysfunction was common among patients with depression, with slightly higher rates in males. Routine and sensitive assessment of sexual functioning should be part of psychiatric evaluation, as early identification allows timely management and helps improve treatment outcomes and quality of life.

Keywords: Depression, erectile dysfunction, Nepal, sexual dysfunction.

INTRODUCTION

Sexual dysfunctions (SDs) involve disturbances in sexual desire and in the psycho physiological processes of the sexual response cycle in both men and women.¹ Depression has been shown to negatively influence sexual functioning across genders.² Studies indicate that the prevalence of SD among individuals with major depression ranges from 46.6% to 90%, considerably higher

than in the general population.³⁻⁵ The Zurich cohort study reported that depressed individuals experience nearly double the rate of sexual problems compared to controls, affecting all stages of sexual functioning.^{6,7}

Despite this well-established association, evidence from Nepal remains scarce.⁸ In Nepal, only one study has examined sexual dysfunction among females,⁸ and no study has systematically assessed sexual dysfunction in males or in patients with first-episode major depression. Cultural taboos, religious beliefs, socioeconomic challenges, low awareness, and reliance on traditional medicine

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often prevent individuals from recognizing or treating sexual dysfunction.^{9,10}

This lack of local data limits clinicians' ability to identify, counsel, and manage sexual dysfunction in patients with depression, potentially affecting treatment adherence, quality of life, and overall clinical outcomes. To address this important gap, the present study aimed to assess the prevalence of sexual dysfunction among Nepalese patients experiencing their first episode of major depression attending a tertiary care center.

METHODS

The study was a cross-sectional, descriptive, hospital-based study conducted at the Department of Psychiatry and Mental Health, Devdaha Medical College. Patients visiting the outpatient department who were diagnosed with depression according to the ICD-10 criteria by a consultant psychiatrist were assessed over a period of six months, from 15th January 2025 to 15th July 2025. Ethical approval for the study was obtained from the Institutional Review Committee of the same institute (Reference No: 18/2024). Participants included all married patients living with their partners, aged between 20 and 60 years, attending the psychiatry outpatient department (OPD), and willing to participate in the study. Individuals with debilitating physical illnesses, intellectual disabilities, severe cognitive impairments, severe depressive episodes with psychotic symptoms or active suicidal ideation, current psychoactive substance use (opioids, cannabis), or unwillingness to participate were excluded. The purpose and nature of the study were clearly explained to all participants, and informed consent was obtained.

Purposive sampling was used to select patients who received a diagnosis of first episode depression as per the International Classification of Diseases, Tenth Revision (ICD-10). The sample size was calculated using the formula:

$$n = \frac{Z^2(p \times q)}{e^2} = \frac{[(1.96)^2 \times 0.776 \times 0.224]}{0.0025} = 266$$

Where n= minimum required sample size

Z= 1.96 at 95 % Confidence Interval (CI)

p= prevalence of Sexual dysfunction was taken 77.6 %.¹¹

q= 1-p e= margin of error, 5%.

The calculated minimum required sample size was 266. We rounded to 280.

The semi-structured pro forma was filled with adequate information, including age, marital status, education, religion, and type of family. A standard instrument, the Arizona Sexual Experience Scale (ASEX), was used. ASEX is a brief five-item questionnaire that assesses sexual functioning in the domains of sexual drive, arousal, penile erection or vaginal lubrication, ability to achieve orgasm, and satisfaction with orgasm during the past week.¹² Items are rated on a 6-point scale ranging from 1 (hyperfunction) through to 6 (hypofunction), providing a total score range between 5 and 30. A total score >18, or a score ≥ 5 (very difficult) on any single item or any three items with individual scores ≥ 4 , is indicative of clinically significant SD. ASEX was translated into Nepali using the guidelines.¹³ Sexual dysfunction was assessed using the Arizona Sexual Experiences Scale (ASEX), a brief, standardized instrument with well-established validity and reliability, which has been widely used in patients with depressive disorders. The ASEX was administered by same-sex interviewers, the male authors conducted interviews with male patients, while the female author conducted interviews with female participants. In all cases, strict measures were taken to ensure privacy during the interviews and to maintain complete confidentiality of the information obtained.

Data entry and analysis were performed using the Statistical Package for the Social Sciences (SPSS) version 24.0. Point estimates with 95% confidence intervals were calculated. Binary variables were summarized using frequencies and percentages, whereas continuous variables were described using mean and standard deviation.

RESULTS

Among 280 participants, Sexual dysfunction was present in 158 (56.40%). There were 160 (57.10%) males and 120 (42.90%) females. The median age of participants was 36 years. As the age data were not normally distributed (Shapiro–Wilk test, $p < 0.05$), the median value was reported. All

Table 1. Sociodemographic characteristics of the patients with depression. N=280

Variable	Frequency N (%)		Sexual Dysfunction	
			Absent	Present
Age in years (Median)		36		
Age Group (In years)	20-39	201 (71.80)	81 (40.30%)	120 (59.70%)
	40-60	79 (28.20)	41 (51.90%)	38(48.10%)
Gender	Male	160 (57.10)	70 (57.40%)	90 (57.00%)
	Female	120 (42.90)	52(42.60%)	68 (43.00%)
Marital Status	Married	280 (100.00)	122 (43.60%)	158 (56.40%)
Occupation	Homemaker	101 (36.10)	44 (43.60%)	57 (56.40%)
	Service/Job	94 (33.60)	35 (37.20%)	59 (62.80%)
	Business	60 (21.40)	36 (60.00%)	24 (40.00%)
	Agriculture	25 (8.90)	7 (28.00%)	18 (72.00%)
Education	Primary	94 (33.60)	47 (50.00%)	47 (50.00%)
	Secondary	140 (50.00)	67 (47.90%)	73 (52.10%)
	Bachelors	29 (10.40)	3 (10.30%)	26 (89.70%)
	Masters	17 (6.10)	5 (29.40%)	12 (70.60%)
Type Of Family	Nuclear	83 (29.60)	26 (31.30%)	57 (68.70%)
	Joint	197 (70.40)	96 (48.70%)	101(51.30%)
Religion	Hindu	278 (99.30)	120 (43.20%)	158 (56.80%)
	Muslim	2 (00.70)	2 (100.0%)	0 (0.0%)

Table 2. Distribution of severity of Depressive disorder based on ICD 10. N=280

Severity of Depression	Male (n=160), n (%)	Female (n=120), n (%)	Total (%)
Mild	1 (100%)	0	1 (0.40)
Moderate	118 (54.60%)	98 (45.40%)	216 (77.10)
Severe	41 (65.10%)	22 (34.90%)	63 (22.50)

Table 3. Mean total ASEX scores by sex

Variable	Male (n=160), Mean± SD	Female (n=120), Mean±SD	Total (n=280) Mean±SD
Total ASEX score	17.92±4.557	16.68±4.239	17.39±4.458

ASEX = Arizona Sexual Experiences Scale; SD = standard deviation

Table 4. Domain-wise distribution of sexual dysfunction based on ASEX items among subjects (N = 280), N=280

Domains (sexual dysfunction)	Male	Female	Total (%)
Desire	39 (62.9%)	23 (37.1%)	62 (22.1%)
Arousal	44 (100%)	0	44 (15.7%)
Penile erection/ vaginal lubrication	22 (68.75%)	10 (31.25%)	32 (11.42%)
Orgasm	27 (100%)	0	27 (9.60%)
Orgasmic Satisfaction	25 (100%)	0	25 (8.90%)

Table 5. Sexual dysfunction with the level of depression. N=280

Sexual dysfunction	Moderate depression	Severe depression	Total
Present	105 (66.5%)	53 (33.5%)	158 (56.42%)
Absent	112 (91.8%)	10 (8.2%)	122 (43.57%)

the participants were married 280 (100%). Most participants were women engaged primarily in household work 101 (36.10%), and half of the respondents 140 (50.0%) had attained educational status up to bachelor's level. A total of 197 (70.40%) respondents were living in a joint family, and almost all the participants were Hindu by religion, 278 (99.30%). The prevalence of sexual dysfunction was higher among males, with 160 participants (57.0%) reporting it, compared to 120 females (43.0%) (Table 1). Moderate Depression was present in 216 (77.1%) of the participants, while 63 (22.50%) had severe depression and one (0.40%) had mild depression (Table 2). The mean ASEX total score was 17.39 ± 4.458 with a higher mean score for males (17.92 ± 4.557) than females (16.68 ± 4.239) (Table 3).

The most common problem was desire in both males and females, 39 (62.9%) and 23 (37.1%) respectively, followed by penile erection in males and vaginal lubrication in females (68.75% and 31.25%) respectively (Table 4).

DISCUSSION

The present study revealed that more than half (56.4%) of sexual dysfunction among patients with major depressive disorder had sexual dysfunction who had not received antidepressant treatment. The observed prevalence is lower than figures reported in Moroccan (77.6%) and Indian (71.66%) studies of patients with depression.^{14,15} The discrepancy with the Indian study may be partly explained by the limited sample size of only 60 participants. Variations in reported prevalence across studies can also be attributed to differences in inclusion criteria, assessment methods, and types of dysfunction evaluated. It has been shown that active inquiry by physicians identifies sexual problems in approximately twice as many patients as those detected through spontaneous self-reporting.¹⁶

Another possible explanation is that the median age in our study was 36 years (IQR: 29–40), which appears slightly lower than the mean age reported by Thakurta et al.¹⁵ However, because our data are non-normal, we report the median rather than the mean. Previous research has suggested that the

prevalence of sexual dysfunction tends to increase with advancing age.¹⁷ Our findings are, however, consistent with studies by Ghosh et al. and Liu et al., who reported sexual dysfunction rates of 50% and 61%, respectively.^{18,19}

In our study, male participants reported a slightly higher prevalence of sexual dysfunction than females, which contrasts with the findings of Ghosh et al. and Liu et al., who observed a higher prevalence among females.^{20,21} This difference in our results might be partly attributed to the larger proportion of male participants in our sample, which could have influenced the overall distribution and reporting patterns. Mean ASEX scores in our study were slightly higher in males compared to females, which is consistent with the finding from Ghosh et al.¹⁸

Our study found that the most prevalent sexual problem among both male and female patients with major depressive disorder was reduced sexual desire. Reduced sexual desire was reported by 43.30% of men and 33.82% of women. These findings align with the results of a systematic review by Goncalves et al. which reported decreased sexual drive in 53.27% of men.²⁰ The second most common dysfunction among males in our study was difficulty in erection, while among females it was reduced vaginal lubrication. These results are comparable to those reported by Thakurta et al., who observed 29.16% dysfunction in the domain of erection and 20% in vaginal lubrication among female participants, using the same assessment instrument.¹⁵

Limitations of the study: This study has several limitations. There is a possibility of selection bias, as participants were recruited from a tertiary care center using a convenience sampling method, limiting the generalizability of the findings to the broader population.

CONCLUSIONS

This study revealed a notable prevalence of sexual dysfunction among patients with depressive disorders, with slightly higher rates observed in males than in females. Therefore, mental health professionals should sensitively assess sexual

functioning, as patients rarely report such issues on their own. Including sexual history in a thorough evaluation can make patient management more comprehensive. Since sexual dysfunction is associated with greater impairment in quality of life, early detection and appropriate management of these issues can prevent progression from mild to severe dysfunction. Additionally, recognizing sexual dysfunction early can guide the selection of antidepressants with favorable side effect profiles and allow the use of pharmacologic interventions when needed, ultimately improving the overall quality of life in patients with major depressive disorder.

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