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## Sexual dysfunction in selective serotonin reuptake inhibitors receiving patients attending psychiatric outpatient department at tertiary level hospital in Pokhara: a cross sectional study

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### Abstract

**Introduction:** Sexual dysfunction is common following treatment with selective serotonin reuptake inhibitors (SSRI) and can have a negative impact on treatment adherence. However, few patients spontaneously report these dysfunctions in clinical settings. The aim of this study was to find out the proportion and pattern of sexual dysfunction following treatment with SSRI.

**Method:** A descriptive cross-sectional study was done in a tertiary level hospital among psychiatric patients visiting the outpatient department from 9 Nov 2022 to 8 Nov 2023, after receiving ethical approval from the institutional review committee. Demographic details, psychiatric diagnosis, medication used, and duration of medication used were recorded. The Depression, Anxiety, and Stress-21 Scale was used to assess depression, anxiety and stress and the psychotropic related sexual dysfunction questionnaire was used to assess sexual dysfunction and its pattern.

**Result:** A total of 87 patients receiving SSRI were included in the study. The proportion of sexual dysfunction among SSRI recipients was found to be 27(31.03%). The proportion of sexual dysfunction was higher in males 19(70.37%). Among those 27 patients, the most common pattern was decreased libido 17(62.96%), and vaginal lubrication 3(11.11%) was the least common pattern of sexual dysfunction. Out of 27 patients with sexual dysfunction 9(33%) spontaneously reported sexual dysfunction.

**Conclusion:** Nearly one-third of recipients of SSRIs have sexual dysfunction, majority of patients may not report sexual dysfunction spontaneously and sexual dysfunction is seen more in paroxetine recipients.

**Keywords:** Proportion; Sexual Dysfunction; SSRIs



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## Introduction

Sexual dysfunction is common after treatment with selective serotonin reuptake inhibitors (SSRIs).<sup>1-4</sup> The prevalence and pattern of SSRI-induced sexual dysfunctions have been variable across the globe depending upon the study design, selection of assessment tools, and sociocultural background of patients. SSRI-induced sexual dysfunction is known to have a negative impact on adherence to ongoing SSRI treatment and also affect marital satisfaction.<sup>5,6</sup>

In Nepal, the topic of sexual dysfunction is less frequently discussed among patients and doctors, and data on the prevalence and pattern of SSRI-induced sexual dysfunction are lacking. Thus, awareness of various aspects of sexual dysfunction among SSRI recipients could aid in early recognition of non-adherence to SSRI and the need for treatment to tackle the side effects.

The aim of this study was to determine the proportion and pattern of sexual dysfunction among SSRI-receiving patients attending the Outpatient Department of Psychiatry in a tertiary-level hospital.

## Method

A descriptive cross-sectional study was conducted among psychiatric patients visiting the outpatient department of psychiatry at Pokhara Academy of Health Sciences (PoAHS), Pokhara, Nepal, from November nine, 2022 to November eight, 2023. Ethical approval was taken from the institutional review committee (ref. no: 128/079). Patients providing written consent, aged 20 to 55 years, under any one SSRI for at least three months and with no active symptoms of anxiety and depression for at least one month, sexually active, and not receiving medications that can alter sexual functioning (eg.: beta blockers, antipsychotics, antihypertensives etc.), were included. Patients not providing consent, age more than 55 years, not sexually active, have illnesses such as diabetes mellitus, hypertension, hypothyroidism, history of surgery such as hysterectomy, are receiving antihypertensives, and hormonal supplements, are under multiple medications and who have active signs and symptoms of anxiety and, depression, physically unstable patients, and patients with sexual dysfunction before starting SSRI were excluded from the study. A convenience sampling method was used.

Sample size was calculated on Cochran formula  $n = Z^2pq/e^2$  at 95% level of significance and

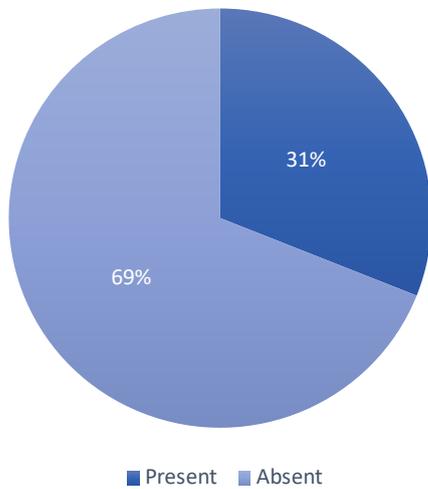
allowable error (e) at 5%. The tabulated value of Z at 95% level of significance is 1.96,  $Z^2 = (1.96)^2 = 3.84$ ; prevalence(p)=81.9, q=100-p=18.1;  $e^2 = 25$ . The calculated sample size was 85.

The sociodemographic profile, psychiatric diagnosis, SSRI used, and duration of SSRI used were noted. Patients were screened for signs of anxiety, depression, and stress using the Depression, Anxiety, and Stress (DASS)-21 scale and the Psychotropic related sexual dysfunction questionnaire-SALSEX (PRSDQ) was used to assess the presence or absence of sexual dysfunction.

DASS-21 is an abbreviated version of DASS-42. It is a 21-item self-reporting questionnaire that measures symptoms of depression, anxiety, and stress subscale and each subscale has seven items, and each item has a four-point severity scale "Zero" for "did not apply to me at all," "one" for "applied to me to some degree, or some of the time-sometimes," "two" for "applied to me to a considerable degree, or a good part of the time-often," "three" for "applied to me very much, or most of the time- almost always." The final score of each item in the subscale is multiplied by two.<sup>7</sup> The scale has been translated and validated into Nepali language with good psychometric properties.<sup>8</sup> The PRSDQ-SALSEX is a seven-item clinician-rated scale that assesses the presence or absence of sexual dysfunction following antidepressant and antipsychotic therapy.<sup>9,10</sup> It can be applied to both genders. First item of the PRSDQ-SALSEX is a screening item for presence or absence of sexual dysfunction and second item assesses whether the patient has spontaneously reported any sexual dysfunction to the interviewer and next five items (item three to item seven) assesses libido, orgasm, ejaculation, erection, lubrication in females, and the patient's tolerance to sexual dysfunction as per severity. Each item (item three to item seven) of PRSDQ-SALSEX is scored in a four-point severity scales "zero" for less intensity to "three" for more intensity. The final score can be obtained by adding the scores of items three to seven.<sup>10</sup> The PRSDQ-SALSEX has good internal consistency (Cronbach's alpha= 0.93) and construct validity.<sup>9</sup> The PRSDQ-SALSEX was translated into Nepali and back translated to English by members of research team for our research purposes. When patients visited our OPD, they were informed about the study, and consent was obtained if the patient met our inclusion criteria, then demographic profile, psychiatric diagnosis, duration of SSRI used and SSRI used were collected using the semi structured proforma designed by the Department of Psychiatry of PoAHS. The data collected were entered in Microsoft Excel 2016 and analysed using IBM SPSS.

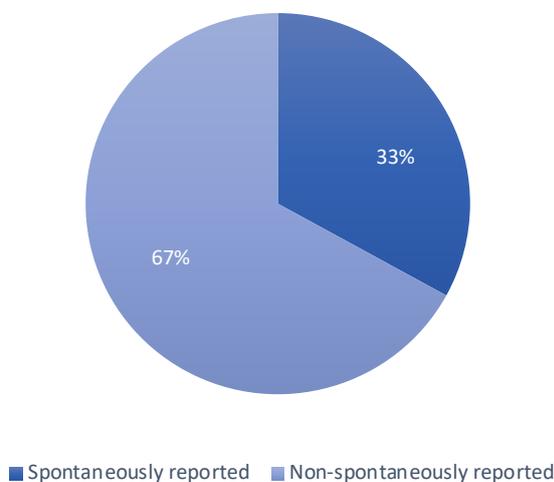
**Result**

A total of 87 patients receiving at least one SSRI participated in our study. In our study, the proportion of sexual dysfunction among patients receiving SSRI was 27(31.03%), Figure 1.



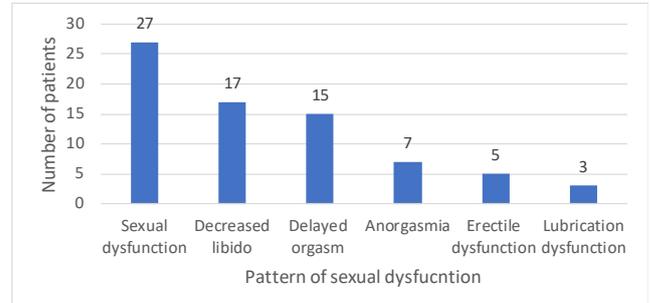
**Figure 1. Proportion of sexual dysfunction among SSRI receiving patients (N=87)**

Among them, 9(33%) spontaneously reported their sexual dysfunction to the interviewers, Figure 2.



**Figure 2. Reporting of sexual dysfunction among SSRI receiving patients (N=27)**

Out of 27 patients with sexual dysfunction, the most common pattern observed was decreased libido 17(62.96%) and lubrication dysfunction three (11.11%) was the least common pattern observed, Figure 3. The proportion of sexual dysfunction was higher in patients age group 20-40 years 18(66.67%), male 19(70.37%), married 26(96.29%), occupation other than homemaker 21(unskilled worker/ labourer, skilled worker, businessman, etc.) (77.77%), and from the nuclear family 20(74.07%), Table 1.



**Figure 3. Pattern of Sexual dysfunction among SSRI receiving patients (N=27)**

**Table 1. Sociodemographic profile of patients with sexual dysfunction among patients receiving SSRI (N=27)**

Characteristics	N(%)
<b>Age (in years)</b>	
20-40	18(66.67%)
41-55	9(33.33%)
<b>Sex</b>	
Male	19(70.37%)
Female	8(29.63%)
<b>Educational status</b>	
Secondary and below	15(55.55%)
Higher secondary and above	12(44.45%)
<b>Marital status</b>	
Married	26(96.29%)
Divorced & Unmarried	1(3.71%)
<b>Occupation</b>	
Homemaker	6(22.23%)
Other	21(77.77%)
<b>Religion</b>	
Hindu	20(74.07%)
Other than Hindu	7(25.93%)
<b>Family type</b>	
Nuclear	20(74.07%)
Joint	7(25.93%)

Sexual dysfunction was more common among patients with an anxiety disorder 16(59.25%), patients under paroxetine treatment seven (53.84%), and among 27 patients with sexual dysfunction, the majority of patients 18(66.67%) reported they tolerated their sexual dysfunction well; dysfunction did not interfere with the couple’s relationships and were willing to continue SSRI; 8(29.63%) reported fair tolerance; reported interference with the couple’s relationship but were willing to continue SSRI; and 1(3.70%) reported poor tolerance; reported serious interference with the couple’s relationship and considered discontinuing SSRI due to sexual dysfunction, Table 2.

**Table 2. Clinical profile of patients with sexual dysfunction among SSRI recipients (N=27)**

Characteristics	Number (%)	Characteristics	Number (%)
<b>Psychiatric diagnosis</b>		<b>Duration of treatment</b>	
Anxiety disorder	16(59.25%)	3-11 months	14(35.00%)
Depressive disorder	5(18.51%)	1-2 years	7(23.34%)
Depressive disorder with anxiety disorder	5(18.51%)	>2 years	6(35.29%)
Obsessive compulsive disorder (OCD)	1(3.70%)	<b>Tolerance of sexual dysfunction by patients</b>	
<b>SSRI used by patients</b>		Well	18(66.67%)
Paroxetine	7(53.84%)	Fair	8(29.63%)
Sertraline	4(30.76%)	Poor	1(3.70%)
Escitalopram	13(29.54%)		
Fluoxetine	3(17.64%)		

## Discussion

We conducted a hospital-based cross-sectional study to determine the proportion, pattern, and other aspects of sexual dysfunction in outpatients receiving SSRI.

In our study, the proportion of sexual dysfunction among patients under SSRI was found to be 27(31.03%), which was more than the previous study conducted in Nepal, where sexual dysfunction among SSRI-receiving patients was found to be 17%.<sup>11</sup> However, using the same tool, European studies showed sexual dysfunction as high as 56-80% among patients under SSRI.<sup>1-3</sup> This suggests that sexual dysfunction can be less reported by Nepalese. This might be due to a lack of knowledge, embarrassment to discuss with doctors, and stigma regarding the topic.

In our study, among patients with sexual dysfunction, 9(33%) spontaneously reported about their sexual dysfunction to the interviewers. Studies showed that spontaneous reporting ranged between 4.22-41%.<sup>1-3,12,13</sup> Such a variation in the reporting of sexual dysfunction could be due to the tools used for the assessment of sexual dysfunction and the study design.

In our study, sexual dysfunction was more common in patients aged 20-40 years 18(66.67%). This could be because the majority of the Nepalese population, aged 20- 40 years seeks psychiatric care.<sup>14-17</sup> In our study, males reported more dysfunction than females. This finding is similar to previous studies.<sup>2,3,18,19</sup>

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our study, males reported more dysfunction than females. This finding is similar to previous studies.<sup>2,3,18,19</sup>

In our study, among patients with sexual dysfunction the most common pattern observed was decreased libido 17(62.96%), followed by delayed orgasm 15(55.55%), anorgasmia 7(25.90%), erectile dysfunction 5(18.50%) and vaginal lubrication dysfunction 3(11.11%) which is similar to previous studies.<sup>1-3,12,20,21</sup>

In our study, sexual dysfunction was more common in patients with anxiety disorders 16(59.25%). Anxiety and related disorders are the most common cause for seeking psychiatric services in Nepal.<sup>14,22</sup> Thus, contributing to a higher number of cases of sexual dysfunction in our study.

Our study showed that the proportion of sexual dysfunction was higher in patients receiving paroxetine 7(53.84%) and less in fluoxetine 3(17.64%) which is similar to previous studies.<sup>1-3,23</sup> High binding to cholinergic receptors compared to other SSRIs and blockade of nitric oxide synthase (NOS) by paroxetine can be the cause of high sexual dysfunction.<sup>3,24,25</sup> Similarly, low sexual dysfunction in fluoxetine can be attributed to the 5HT<sub>2c</sub> antagonism of fluoxetine, which can preserve sexual functioning.<sup>26</sup> In our study, despite having sexual dysfunction, the majority of patients 18(66.67%) tolerated it well and were willing to continue with ongoing SSRI treatment, while 1(3.70%) patient tolerated it poorly and was considering discontinuing SSRI owing to the sexual dysfunction.

There are certain limitations to our study. Our study had a small sample size, so the findings cannot be generalised in a community setting. Further, some patterns of sexual dysfunction, such as pain during

sex, are not covered in our study as they are not covered in the original rating scale, PRSDQ.

In the future, multi-centric studies using more than one locally validated tool in a large population need to be considered. Beyond estimation of the prevalence of sexual dysfunction assessing risk factors, help-seeking behaviours, barriers, and treatment of sexual dysfunction and its outcomes need to be considered.

### Conclusion

Sexual dysfunction among SSRI recipients is a less explored topic in Nepal. This study shows that nearly one-third of recipients of SSRIs have sexual dysfunction. The majority of patients may not report sexual dysfunction spontaneously, so they must be specifically questioned using a valid tool to assess for the presence of sexual dysfunction. PRSDQ-SALSEX is a good tool for assessing sexual dysfunction in an outpatient setting, consuming less time and covering several aspects of sexual dysfunction after starting SSRI, thus enabling clinicians to take the necessary decisions. Paroxetine causes more sexual dysfunction, so an inquiry about baseline sexual functioning before starting paroxetine is necessary.

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### Conflict of Interest

None

### Funding

None

### Author Contribution

Concept, design, planning: BKC, LV, RG, RS, MK; Literature review: BKC, LV; Data collection/analysis: BKC, LV, RG; Draft manuscript: BKC, LV, RG, RS, MK; Revision of draft: BKC; Final manuscript: BKC, LV, RG, RS, MK; Accountability of the work: BKC, LV, RG, RS, MK.

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