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PREVALENCE AND PATTERNS OF PSYCHOSEXUAL DYSFUNCTION AMONG PATIENTS WITH ALCOHOL USE DISORDERS IN A DEADDICTION CENTRE IN CENTRAL INDIA: AN OBSERVATIONAL STUDY

Psychiatry

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ABSTRACT

Background: Psychosexual dysfunction is common among individuals with substance use disorders (SUDs), but it remains underexplored, especially in the Indian setting. Alcohol is the most frequently abused substances in India and may significantly impair sexual function through both physiological and psychological mechanisms. **Aim:** To determine the prevalence and types of psychosexual dysfunction among patients with alcohol use disorder admitted to a deaddiction centre. **Methods:** This prospective observational study was conducted over 18 months in the deaddiction ward of the Department of Psychiatry, Amaltas Institute of Medical Sciences, Dewas, Madhya Pradesh. A total of 190 patients diagnosed with alcohol use disorder were recruited using convenience sampling. Sociodemographic and clinical data were collected using a semi-structured proforma. Standardised tools including the Severity of Alcohol Dependence Questionnaire (SADQ), Arizona Sexual Experience Scale (ASEX), and Brief Psychiatric Rating Scale (BPRS) were administered. Data were analysed using Stata 17.0. **Results:** Out of 190 patients, all were male, with a mean ASEX total score of 19.8 ± 3.33 in alcohol users. Psychosexual dysfunction was positively associated with the severity of alcohol dependence (p=0.013) and with duration of alcohol use (p=0.0147). The most affected domains were ability to reach orgasm and penile erection. Severity of psychosexual dysfunction increased with longer duration and higher severity of alcohol dependence. **Conclusion:** Psychosexual dysfunction is highly prevalent among patients with alcohol use disorders. It is significantly associated with both the severity and duration of substance use. Routine screening and targeted interventions for sexual health should be integrated into deaddiction programmes to improve overall treatment outcomes.

KEYWORDS

Psychosexual dysfunction; Alcohol use disorder; Deaddiction; Substance abuse; ASEX; India; Sexual health; Addiction psychiatry; Central India.

INTRODUCTION

Psychosexual dysfunction refers to a range of disorders that affect an individual's ability to engage in sexual activity or to experience satisfaction from sexual interactions.[1] These dysfunctions can manifest as difficulties in desire, arousal, orgasm, or pain during intercourse. Common psychosexual dysfunctions include erectile dysfunction, premature ejaculation, decreased libido, and orgasmic disorders.[1] These conditions are multifactorial, often influenced by psychological, biological, and social factors, and can have significant repercussions on an individual's quality of life. Substance use disorders (SUDs) are a group of conditions in which the recurrent use of alcohol, drugs, or other substances leads to clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities.[2] SUDs are recognized as a major public health issue globally. They are characterized by the harmful consequences of repeated use, including tolerance, withdrawal symptoms, and an inability to control or reduce consumption.[2] Over time, substance use may affect various physiological systems, including the nervous, cardiovascular, and reproductive systems, which further complicates the individual's well-being.

The relationship between substance abuse and psychosexual dysfunction is well-documented.[3] Chronic consumption of substances, such as alcohol, opioids, stimulants, and sedatives, can negatively impact sexual function. These substances interfere with the body's hormonal balance, neurological pathways, and vascular systems that are crucial for normal sexual functioning.[3,4] In men, prolonged substance abuse can lead to erectile dysfunction, decreased libido, and ejaculation problems.[5]

In India, the problem of substance use has reached alarming levels. The Ministry of Social Justice and Empowerment conducted the "National Survey on Extent and Pattern of Substance Use in India (2019)", which provided critical data on the prevalence of SUDs across the country. According to the survey, approximately 14.6% of the population (aged 10–75 years) uses alcohol, and about 2.8% suffer from alcohol dependence.[6] Alarmingly, the survey also highlighted that around 16 crore people in India use alcohol, and nearly 5.7 crore people use opioids.[6]

While significant research has been conducted on substance use disorders (SUDs) and their psychological, social, and physical consequences, the intersection of SUDs and psychosexual dysfunction remains underexplored, particularly in the Indian context.[7,8] Most studies on psychosexual dysfunction focus on general populations or specific medical conditions, leaving a gap in understanding how substance abuse exacerbates or causes these issues. This study seeks to fill the gap in local research by evaluating the prevalence, types, and impact of psychosexual dysfunction among individuals in deaddiction centers.

Aim: To determine the prevalence of various psychosexual dysfunction among patients diagnosed with Alcohol Use Disorder patients admitted to De-addiction center.

MATERIAL AND METHODS

- **Study Design:** A single centre, hospital-based, cross-sectional observational study.
- **Study Settings:** The study was conducted in the deaddiction ward of the Department of Psychiatry at Amaltas Institute of Medical Sciences, Dewas, Madhya Pradesh.
- **Ethical Clearance:** Ethical clearance for the study was obtained after a thorough review of the research protocol, data collection forms, and informed consent documents. The Institutional Ethics Committee (IEC) of Amaltas Institute of Medical Sciences granted approval.
- **Study Duration:** 18 months.
- **Primary Outcomes**: Occurrence of Psychosexual Dysfunction in patients with alcohol use disorder and cannabis use disorder. Measured using the Arizona Sexual Experience Scale (ASEX) at the time of participant recruitment.

- **Independent Variables**:
- Type of substance used (alcohol or cannabis).
- Severity of substance use (SADQ and CUDIT-R scores).
- Socio-demographic factors (age, education, occupation, marital status, etc.).

- **Confounding Variables**:
- Comorbid medical conditions (e.g., diabetes, hypertension).

- Psychiatric comorbidities (e.g., depression, anxiety).
- Use of medications that may affect sexual function (e.g., antidepressants, antipsychotics, antihypertensives).

- **Study Participants:** The participants for the present study were adult patients admitted to the deaddiction ward with a diagnosis of alcohol use disorder use disorder.

- **Inclusion Criteria**

1. Patients admitted to the deaddiction center.
2. Age above 18 years.
3. Minimum stay of 15 days in the deaddiction center.
4. Patients diagnosed with alcohol use disorder.
5. Patients with a regular sexual partner.
6. Patients and/or their guardians who provided written informed consent.

- **Exclusion Criteria**

1. Patients with a history of primary sexual dysfunction prior to the initiation of alcohol or cannabis use.
2. Patients with medical conditions affecting sexual function (e.g., diabetes mellitus, hypertension, alcoholic cirrhosis, endocrine disorders, neurological or spinal cord lesions).
3. Patients with co-morbid psychiatric disorders (e.g., schizophrenia, delusional disorder, anxiety disorders, mood disorders).
4. Patients on medications affecting sexual function (e.g., antipsychotics, antidepressants, antihypertensives, steroids, disulfiram).
5. Patients who took discharge within 15 days of admission.
6. Patients under the age of 18 years.

- **Sample Size:** a total of **190 participants** were enrolled in the present study.
- **Sampling Methodology:** A **non-probability convenience sampling** method was used for this study. Participants were recruited based on their availability and willingness to participate during the data collection period.
- **Participant's Recruitment:** Participants were recruited by the Principal Investigator (PI) in the deaddiction ward of the Department of Psychiatry. Upon admission, patients were screened for eligibility based on the inclusion and exclusion criteria. A detailed history, including substance use patterns and medical and psychiatric history, was obtained to ensure eligibility. Patients who met the inclusion criteria were invited to participate in the study and provided with information about the study's objectives, procedures, and potential outcomes.
- **Data Collection Procedure:** The data collection process for this study followed a systematic and stepwise approach to ensure accuracy, consistency, and ethical compliance. The process involved the following stages, carried out in temporal sequence:

1. **Obtaining Informed Consent:** At the time of admission to the deaddiction ward, each potential participant was identified and approached by the Principal Investigator (PI). The PI explained the purpose, procedures, risks, and benefits of the study in a clear and comprehensible manner using a **bilingual (Hindi and English) consent form**. Participants were given sufficient time to ask questions and address any concerns. After ensuring that participants understood the study, written informed consent was obtained by signing the consent form or providing a thumb impression if they were unable to sign. For participants requiring additional support, consent was also obtained from guardians or family members.
2. **Initial Screening For Eligibility:** Participants who provided informed consent were screened to ensure they met the **inclusion and exclusion criteria**. Those meeting the criteria were enrolled in the study and assigned a **unique identification code** to ensure anonymity.
3. **Collection of Socio-Demographic and Clinical Data**

- Data were collected using a **semi-structured proforma** to gather:
- **Socio-Demographic Information**: Age, sex, education, occupation, marital status, and socioeconomic status.
- **Substance Use History**: Duration, type, frequency, and quantity of alcohol or cannabis use.
- **Medical and Psychiatric History**: Previous diagnoses, medications, and any history of comorbid conditions.
- This information was obtained through **face-to-face interviews** conducted by the PI in a private and confidential setting.

4. **Administration of Standardized Questionnaires:** After recording socio-demographic and clinical information, participants were assessed using the following standardized tools:

A. **Severity of Alcohol Dependence Questionnaire (SADQ)**: Administered to participants with alcohol use disorder to measure the severity of alcohol dependence. The 20-item questionnaire covered physical withdrawal symptoms, affective withdrawal, craving, typical consumption, and relapse behavior.

B. **Arizona Sexual Experience Scale (ASEX)**: Used to evaluate psychosexual dysfunction across five domains: sexual drive, arousal, erection/lubrication, ability to reach orgasm, and satisfaction from orgasm. Each item was rated on a 6-point Likert scale, with higher scores indicating greater dysfunction.

5. **Recording And Data Entry:** All collected data were recorded on the semi-structured proforma and standardized questionnaire forms. Each form was carefully checked for completeness and accuracy by the PI. The data were then entered into a password-protected electronic database by the PI and verified by the study supervisor to ensure data integrity.

- **Statistical Analysis:** All the statistical and graphical analyses for this study were undertaken using Stata software version 17.0. Descriptive statistics, including mean, standard deviation, frequencies, and percentages, were used to summarize the socio-demographic characteristics, substance use patterns, and types of psychosexual dysfunctions. Continuous variables, such as the age of participants and duration of substance use, were summarized using mean and standard deviation. Categorical variables, including the type of substance used and types of psychosexual dysfunction, were summarized using frequencies and percentages. Inferential statistics were employed to identify associations between independent and dependent variables. P-values less than 0.05 were considered statistically significant. All statistical tests were two-tailed and interpreted within a 95% confidence interval.
- **Funding:** There was no external funding for this study.
- **Conflict Of Interest:** The Principal Investigator, co-investigators, and study supervisors declare **no conflict of interest** in the design, implementation, and interpretation of the findings of this study.

RESULTS

A total of 190 male participants diagnosed with alcohol use disorder were included in the study. The majority of participants (37.4%) were in the 31–40 years age group, followed by 33.7% in the 21–30 years age group. Only 10% were aged 18–20 years, while 18.9% were in the 41–50 years group. Most participants (62.6%) were from rural areas, and 37.4% resided in urban locations. Regarding marital status, 81.6% were married, 15.3% were single, and 3.16% were either separated or divorced. In terms of educational status, 25.8% were illiterate, 15.8% had completed primary education, and 18.4% had studied up to high school. Senior secondary education was reported by 23.2%, while 16.8% had completed college-level education.

Table 1: Characteristics of Participants

	n	%
18-20	19	10
21-30	64	33.7
31-40	71	37.4
41-50	36	18.9
Gender		
Male	190	100
Female	0	0
Residence		
Rural	119	62.6
Urban	71	37.4
Marital Status		
Single	29	15.3
Married	155	81.6
Separated/Divorced	6	3.16
Educational Status		
Illiterate	49	25.8
Primary	30	15.8
High School	35	18.4
Senior Secondary	44	23.2
College	32	16.8

Among the 190 participants with alcohol use disorder, the duration of alcohol use varied widely. About 22.6% of participants had a history of

alcohol use for less than 1 year, while 18.9% had used alcohol for 1–3 years. A similar proportion (17.9%) reported use for 4–6 years. The remaining participants had longer durations: 15.3% for 7–9 years, 12.6% for 10–12 years, and 12.6% for more than 12 years. Based on SADQ scores, 22.63% of the participants had moderate alcohol dependence, 52.11% had high dependence, and 25.26% were categorised under very high alcohol dependence (Table 2).

Table 2: Duration and Severity of Alcohol Dependence

Duration of Substance Dependence (in years)	n	%
< 1 Year	43	22.6
1-3 Year	36	18.9
4-6 Years	34	17.9
7-9 Years	29	15.3
10-12 Years	24	12.6
>12 Years	24	12.6
Alcohol Dependence Severity Category		
Moderate	43	22.63
High	99	52.11
Very High	48	25.26

Table 3: Association between Alcohol dependence Severity and Sexual Dysfunction

Alcohol Dependence Severity Category		ASEX Total Score - Sexual Dysfunction Severity
Moderate	Mean	16.4
	±SD	3.3
High	Mean	19.9
	±SD	2.99
Very High	Mean	23.2
	±SD	3.18
	P-value	0.013

There was a clear association between the severity of alcohol dependence and sexual dysfunction as measured by the ASEX total scores. Participants with moderate alcohol dependence had a mean ASEX score of 16.4 ± 3.3, those with high dependence had a mean score of 19.9 ± 2.99, and participants with very high dependence showed the highest dysfunction with a mean score of 23.2 ± 3.18. This association was statistically significant (p = 0.013), indicating that higher alcohol dependence is linked to greater severity of psychosexual dysfunction.

Table 4: Comparison of Sexual Dysfunction among Alcohol and Cannabis

	Alcohol Dependence (n=190)	
	Mean	**SD**
Sexual Drive Score	2.38	1.69
Sexual Arousal Score	3.43	1.71
Penile Erection	3.64	1.7
Ability to Reach Orgasm	4.55	1.8
Satisfaction from Orgasm	3.53	1.74
ASEX Total Score - Sexual Dysfunction Severity	19.8	3.33

Among the 190 participants with alcohol dependence, the Arizona Sexual Experience Scale (ASEX) scores showed varying degrees of dysfunction across different sexual domains. The mean score for sexual drive was 2.38 ± 1.69, and for sexual arousal, it was 3.43 ± 1.71. The mean score for penile erection was 3.64 ± 1.70. The most affected domain was the ability to reach orgasm, with a mean score of 4.55 ± 1.80, followed by satisfaction from orgasm at 3.53 ± 1.74. The overall mean ASEX total score was 19.8 ± 3.33, indicating moderate to severe psychosexual dysfunction in this group (Table 4).

Table 5: Duration of Alcohol Abuse and Sexual Dysfunction among Users

	Alcohol Dependence (n=190)	
	Mean	**SD**
Duration of Substance Dependence (in years)		
< 1 Year	22.5	3.23
1-3 Year	22.4	2.87
4-6 Years	22.3	3.33
7-9 Years	23.2	2.94
10-12 Years	23.8	4.23
>12 Years	23.9	3.56
ANOVA P-value	0.0147	

An increasing trend in sexual dysfunction severity was observed with longer duration of alcohol abuse. Participants with alcohol use duration of less than 1 year had a mean ASEX score of 22.5 ± 3.23. Those with 1–3 years and 4–6 years of use had similar mean scores of 22.4 ± 2.87 and 22.3 ± 3.33, respectively. Participants with longer durations (7–9 years, 10–12 years, and more than 12 years) reported progressively higher mean ASEX scores of 23.2 ± 2.94, 23.8 ± 4.23, and 23.9 ± 3.56, respectively. This association was statistically significant (ANOVA p = 0.0147), suggesting that prolonged alcohol abuse is linked to increased severity of psychosexual dysfunction (Table 5).

DISCUSSION

In the present study, more than half of the alcohol-dependent patients (52.11%) had high severity of dependence, followed by very high severity in 25.26% and moderate severity in 22.63% of the patients. This indicates that most patients seeking treatment have progressed to a serious stage of alcohol use. These findings highlight the need for early screening and intervention. A study by Soni et al. (2024) also found that a majority of alcohol-dependent males had substantial or severe dependence. In their sample of 170 patients, 37.06% had substantial dependence and 12.94% had severe dependence as per ADS scores[9]. Similarly, Singh et al. (2023) reported that most of their alcohol-dependent patients had a long duration of use with early onset, which contributed to higher severity and complications including sexual dysfunction[8]. Pendharkar et al. (2016) studied 101 alcohol-dependent men and found that most participants had a long duration of alcohol use (mean 12.35 years) and moderate to severe dependence, measured by SADQ. They also noted that more than one-third of participants consumed over 360 ml/day of alcohol. [10]

Chabra et al. also found similar results in their cross-sectional study. In their sample, 68.3% of alcohol users were in the substantial to severe category. The authors observed a clear correlation between higher dependence and adverse outcomes in physical and sexual health. These data are consistent with the current study, where severe alcohol dependence was seen in nearly 77% of participants[11].

In the present study, the mean ASEX score increased with the severity of alcohol dependence. Patients with moderate dependence had a mean ASEX score of 16.4, those with high dependence had a mean score of 19.9, and those with very high dependence had a mean score of 23.2. This association was statistically significant (p = 0.013). These findings suggest that greater severity of alcohol dependence is linked to more severe sexual dysfunction. Soni et al. (2024) also found a positive correlation between the severity of alcohol dependence and ASEX scores. In their study, patients with higher ADS scores had worse sexual function, and this association was statistically significant.[9] They reported that 67.06% of patients with alcohol dependence had sexual dysfunction, and lack of sexual desire was the most common complaint. Singh et al. (2023) observed that 75.7% of alcohol-dependent men had sexual dysfunction. Among them, erectile dysfunction was the most common issue (73.5%), followed by low sexual desire (50.9%) and premature ejaculation (37.7%). They also noted that longer duration and higher severity of alcohol dependence were strong predictors of sexual dysfunction[8].

Pendharkar et al. (2016) reported that 58.4% of alcohol-dependent men had sexual dysfunction. They found that dysfunction in arousal (57.4%) and desire (54.4%) were the most frequent issues. Their study also showed a significant difference in sexual functioning between patients and healthy controls, with ASEX scores increasing with dependence severity. [10]

Saha A (2015) reported similar findings where patients with severe alcohol dependence had the highest rates of sexual dysfunction.[12] They found that most patients in the severe group had multiple sexual problems, and there was a clear link between dependence levels and ASEX scores. This supports the current study's result that severity of alcohol dependence is directly related to severity of sexual dysfunction.

The present study also looked at how the severity and duration of substance use affected sexual function. This research topic is important because sexual dysfunction is a common but often ignored problem in substance users. Many patients do not report these problems due to stigma or lack of awareness[13,14]. Understanding this issue can help improve the overall care of these patients. This study highlights the

need to screen for sexual dysfunction in men with substance use disorders. It also shows that the severity and duration of substance use may affect sexual health. These findings can help doctors plan better care and improve patient outcomes[15,16]. The study also creates a base for future research to explore the link between substance use and sexual dysfunction in more detail. Future studies can also include female patients and other substances.

This study has certain limitations. First, it included only male patients, so the findings cannot be applied to female patients with substance use disorders. Second, the study was conducted in a single hospital setting, which may limit the generalizability of the results to other regions or populations. Third, the cross-sectional design of the study does not allow for causal interpretations.

There is also a possibility of reporting bias, as the data on sexual dysfunction were collected through self-reported questionnaires. Patients may have underreported or overreported their symptoms due to embarrassment or poor recall. To reduce this bias, participants were assured of confidentiality and privacy during data collection.

CONCLUSION

This study found a high prevalence of psychosexual dysfunction among patients with alcohol and cannabis use disorders admitted to a deaddiction centre in Central India. The severity of psychosexual dysfunction was significantly associated with both the severity and duration of alcohol dependence. The most affected domains included orgasmic function and erectile ability. These findings highlight the need to routinely assess sexual health in individuals with substance use disorders, as unaddressed sexual dysfunction may negatively impact treatment adherence, psychological recovery, and overall quality of life. Integrating sexual health evaluation and management into deaddiction programmes is essential for providing comprehensive and effective care.

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