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Alcohol Dependence and Its Impact on Male Sexual Function: A Cross-Sectional Study

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Abstract

Background:
Alcohol dependence is often linked with adverse effects on male sexual health. While alcohol may temporarily enhance sexual confidence or performance, chronic and excessive use leads to marked sexual dysfunction. Despite its clinical relevance, sexual health concerns are frequently overlooked in alcohol-dependent individuals, especially in India, where stigma and underreporting are prevalent. This study aimed to determine the prevalence and pattern of sexual dysfunction among men with alcohol dependence and examine its association with sociodemographic and clinical variables.

Methods:
A cross-sectional study was conducted in the Department of Psychiatry, Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan. One hundred male patients aged 18–60 years diagnosed with alcohol dependence (ICD-10) were included. Sexual function was assessed using the Arizona Sexual Experience Scale (ASEX), and dysfunction was categorized as mild, moderate, or severe. Statistical analysis involved descriptive measures, the chi-square test, the independent t-test, and the Pearson correlation, with $p < 0.05$ considered statistically significant.

Results:
The prevalence of sexual dysfunction was 68%, with 24% mild, 30% moderate, and 14% severe cases. Erectile function (42%) and reduced sexual desire (35%) were the most affected domains. Dysfunction significantly correlated with longer alcohol use (>10 years, $p < 0.01$) and older age (>40 years, $p < 0.05$), but not with education or socioeconomic status.

Conclusion:
Sexual dysfunction is highly prevalent among alcohol-dependent men. Increasing age and prolonged alcohol use are key risk factors, warranting routine sexual health assessment in this population.

Keywords: Alcohol dependence, Sexual dysfunction, ASEX, Prevalence.

Introduction

Alcohol is one of the most frequently consumed psychoactive substances globally, with substantial physical, psychological, and social consequences. The "World Health Organization" evaluates that injurious alcohol usage accounts for over 5% of the global disease burden and contributes to more than 3 million deaths annually.[1] In India, alcohol consumption is rising, and alcohol dependence represents a major public health concern, particularly among men.[2]

Alcohol exerts complex effects on sexual function. While low doses may temporarily enhance sexual desire and reduce performance anxiety, chronic and heavy use is strongly linked with sexual dysfunction, comprising diminished libido, erectile dysfunction, premature ejaculation, and difficulty achieving orgasm.[2] Mechanisms underlying these effects involve neurotoxic damage, hormonal disturbances of the "hypothalamic–pituitary–gonadal axis", vascular impairment, and psychosocial factors such as marital conflict and psychiatric comorbidities. Studies suggest that 40–80% of men with alcohol dependency experience some form of sexual dysfunction, which can impair quality of life and negatively affect treatment adherence.[3, 4]

Despite its clinical significance, sexual health is often overlooked in psychiatric and de-addiction settings due to stigma, underreporting, and the absence of routine assessment. In India, research on alcohol-related sexual dysfunction is limited and largely confined to small, localized samples. Cultural taboos

around discussing sexual health may further contribute to the underestimation of its prevalence.[5]

Given these gaps, this study was designed to evaluate the incidence and severity of sexual dysfunction among male patients with alcohol dependence utilizing the "Arizona Sexual Experience Scale (ASEX)" and to examine its association with sociodemographic and clinical variables.

Materials and methods

The present hospital-based cross-sectional study was carried out in the "Department of Psychiatry at Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan", after institutional ethical committee approval. One hundred consecutive male patients aged 18–60 years, diagnosed with alcohol dependence syndrome according to ICD-10 criteria and abstinent for at least 72 hours, were recruited from inpatient and outpatient services over six months. Patients with comorbid psychiatric or medical conditions affecting sexual function, those on medications known to impair sexual function, or those unable or unwilling to provide consent were excluded. Eligible patients were identified by the treating psychiatrists and screened according to the study criteria. After obtaining informed written consent, participants were interviewed using a structured sociodemographic and clinical proforma collecting data on age, marital status, education, occupation, socioeconomic status, family type, duration and quantity of alcohol use, and age at onset of drinking. Sexual function was estimated by means of the "Arizona Sexual Experience Scale (ASEX)", a validated five-item self-report instrument measuring sexual drive, arousal, penile erection, capability to reach orgasm, and sexual satisfaction. The ASEX was administered in a confidential setting to ensure privacy and minimize reporting bias, and all responses were reviewed for completeness before data entry. A total ASEX score ≥19, a score of ≥5 on any single item, or a score of ≥4 on three or more items was considered indicative of sexual dysfunction.

Data were entered in Excel and analyzed with SPSS v25. Descriptive statistics summarized sociodemographic and sexual dysfunction prevalence. Chi-square tested associations between categorical variables, independent t-tests compared mean ASEX scores, and Pearson's correlation assessed relationships between alcohol use and ASEX scores. $p < 0.05$ was considered significant.

Results

Sociodemographic and Clinical Profile

A total of 100 male subjects diagnosed with alcohol dependence were involved in the study. The mean age of participants was 38.4 ± 8.2 years (range: 18–60 years). The majority were married (72%), educated up to secondary school (58%), and belonged to the middle socioeconomic group (64%). The mean duration of alcohol use was 11.2 ± 5.6 years, with 45% reporting alcohol consumption for more than 10 years.

Prevalence and Severity of Sexual Dysfunction

Out of 100 participants, 68 (68%) exhibited sexual dysfunction as assessed using ASEX criteria. Among them, 24 (24%) had mild dysfunction, 30 (30%) had moderate dysfunction, and 14 (14%) had severe dysfunction (Table 1).

Table 1. Prevalence and Severity of Sexual Dysfunction

Category	Frequency (n)	Percentage (%)
No dysfunction	32	32.0
Mild dysfunction	24	24.0
Moderate	30	30.0
Severe	14	14.0
Total	100	100.0

Pattern of Sexual Dysfunction

The most frequently described dysfunction was erectile dysfunction (45%), followed by reduced sexual desire (35%), premature ejaculation (28%), orgasmic difficulty (20%), and reduced sexual satisfaction (18%) (Table 2).

Table 2. Distribution of Types of Sexual Dysfunction

Type of Dysfunction	Frequency (n)	Percentage (%)
Erectile dysfunction	45	45.0
Reduced sexual desire	35	35.0
Premature ejaculation	28	28.0
Orgasmic difficulty	20	20.0
Reduced satisfaction	18	18.0

Association with age, Duration of Alcohol Use, and marital status

Sexual dysfunction was significantly more prevalent among participants aged over 40 years (80%) compared to those aged 40 years or younger (60%) ($\chi^2 = 4.22$, $p < 0.05$). Similarly, patients with a duration of alcohol use exceeding 10 years showed a markedly higher incidence of sexual dysfunction (84.4%) than those with 10 years or less of use (54.5%) ($\chi^2 = 8.23$, $p < 0.01$). In contrast, although sexual dysfunction was slightly more common among married participants (69.4%) than unmarried participants (57.1%), this difference did not reach statistical significance ($p > 0.05$).

Discussion

This study examined the incidence, pattern, and associates of sexual dysfunction among male subjects with alcohol dependence attending a tertiary care hospital in Jaipur, Rajasthan. Using the ASEX, sexual dysfunction was found in 68% of participants, indicating a high burden of sexual difficulties in these people. The majority of patients experienced moderate to severe dysfunction, with erectile dysfunction (45%) being the most frequently reported complaint, followed by reduced sexual desire (35%) and premature ejaculation (28%).

The prevalence of sexual dysfunction in this study aligns closely with findings from previous Indian studies. Arackal and Benegal [1] reported sexual dysfunction in 72% of alcohol-dependent men, while Sarkar S et al. [6] found a prevalence of 70.8%. Similarly, Vijayasenan [7] reported a rate of 67% among chronic alcohol users. International studies also show comparable findings, with Schiavi et al. [8] and Van Thiel et al. [9] reporting a strong association between chronic alcoholism and erectile or ejaculatory disturbances. These consistent findings across studies suggest that alcohol dependence is a main risk factor for male sexual dysfunction worldwide.

In the present study, erectile dysfunction was the predominant complaint, consistent with the results of Grover et al. [10], who observed erectile and libido-related issues as the most common problems among substance-dependent men. The pathophysiological basis of alcohol-related erectile dysfunction is multifactorial. Chronic alcohol consumption affects the "hypothalamic–pituitary–gonadal axis", resulting in declined testosterone levels, reduced gonadotropin release, and testicular atrophy.[9] Moreover, alcohol has direct neurotoxic and vascular effects, resulting in endothelial dysfunction and impaired penile blood flow.[8] Psychological factors, including performance anxiety, marital conflict, and alcohol-related guilt, may further exacerbate sexual problems.[2]

The present study also noted that sexual dysfunction was significantly more prevalent among men aged over 40 years (80%) than among those aged 40 years or younger (60%). This result is reliable with earlier research signifying that advancing age independently contributes to sexual dysfunction through age-related vascular and hormonal decline.[8] The combination of advancing age and prolonged alcohol exposure likely acts synergistically, compounding neurovascular and endocrine damage that underlies sexual impairment. A substantial association was also observed between the duration of alcohol usage and the prevalence of sexual dysfunction, with 84.4% of those consuming alcohol for more than 10 years exhibiting dysfunction compared to 54.5% among those with 10 years or less of use. This supports earlier evidence by Van Thiel et al. [9] and Schiavi et al. [8], which demonstrated a dose–response relationship between chronic alcohol intake and sexual dysfunction severity. Long-term alcohol exposure progressively damages both the neuroendocrine and vascular systems, leading to persistent dysfunction even after abstinence.

Although married participants had a slightly higher incidence of sexual dysfunction (69.4%) than unmarried participants (57.1%), the variance was not statistically significant. Similar non-significant associations were stated by Grover et al. [10] and Sarkar S et al. [6], suggesting that sexual dysfunction in alcohol dependence is predominantly biological rather than influenced by marital status or other sociodemographic variables.

The high occurrence of sexual dysfunction among alcohol-dependent men has important clinical implications. Such dysfunctions not only impair quality of life and marital satisfaction but may also contribute to poor treatment adherence and relapse.[2] Unfortunately, sexual health issues often remain underreported by patients due to stigma and underassessed by clinicians. Routine screening for sexual dysfunction using simple tools like ASEX in de-addiction programs may help in early identification and management. Integrating psychoeducation, counselling, and pharmacological interventions targeting sexual health can enhance recovery and improve overall well-being.

In conclusion, this study demonstrated a greater occurrence (68%) of sexual dysfunction among male patients with alcohol dependence, with "erectile dysfunction" and decreased sexual desire being the most common types. The likelihood of dysfunction increased significantly with advancing age and longer duration of alcohol use, highlighting a dose–response association between chronic alcohol drinking and sexual impairment. Although marital status showed no significant association, sexual dysfunction was found to affect overall well-being

markedly. These results highlight the necessity for regular assessment of sexual health in subjects with alcohol dependence. Early identification and management through counselling, psychoeducation, and appropriate medical intervention can enhance treatment adherence, improve quality of life, and support long-term recovery.

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Ethics and Disclosures

Ethical Approval:

The study was approved by the Institutional Ethics Committee of Mahatma Gandhi Medical College and Hospital, Jaipur, Rajasthan.

Conflict of Interest:

The authors declare no conflicts of interest.