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# A cross sectional study of sexual dysfunction in alcohol dependence syndrome

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#### **Abstract**

**Introduction:** Alcohol use is the major health problem worldwide and India ranks second in alcohol consumption with around 33% of Indian population consuming alcohol. Alcohol is a potent substance that causes both acute and chronic changes in almost all neurochemical systems, with the result that heavy drinking can produce serious psychological symptoms including depression, anxiety, and psychosis. Alcohol also affects sexual health adversely and causes sexual dysfunction.

**Aims and Objectives:** The aim of the study is to assess relationship between duration of alcohol dependence and sexual dysfunction.

**Materials and Methods:** This study consists of 100 participants. The samples were drawn using ICD 10 for diagnosis of ADS, socio demographic profile, SADQ (Severity of Alcohol Dependence), ASEX (Arizona sexual experience scale).

**Results:** The current study found that the participants experienced one or more types of sexual dysfunction.

**Conclusion:** The likelihood of sexual dysfunction is greatly increased by the duration of consumption of alcohol. Sexual dysfunction is far more likely to occur in cases of severe alcohol dependence. Patients with ADS may stop drinking or cut back if they are informed and motivated about the relationship between their alcohol use and the sexual dysfunctions it causes.

Keywords: Alcohol, alcohol dependence, sexual dysfunction

#### Introduction

Alcohol consumption is the world's major health issue, and approximately 33% of Indians drink alcohol, ranking India second in the world [1]. Age, religion, education, type of drink, and other sociodemographic factors all influence the pattern of alcohol consumption [2]. A greater number of individuals in developing nations are drinking alcohol [3]. All the psychoactive drugs used have an effect on sexual functioning [4]. Because alcohol is a potent substance that alters nearly every neurochemical system both acute and over time, excessive alcohol consumption can lead to severe psychological symptoms like anxiety, depression, and psychosis [5]. Although prolonged and chronic alcohol consumption is known to cause sexual dysfunction, it may encourage the initiation of sexual activity by reducing anxiety and inhibitions [6]. Alcohol also adversely affects sexual health and leads to sexual dysfunction [7]. Dissatisfaction with one's sexual life is frequently related to anger, an increase in mental aggression, a lack of warmth and unity in relationships, breakups, and all of these things may get worsen with alcohol consumption [8]. Chronic alcohol consumption exacerbates alcohol dependence by causing sexual dysfunction, interpersonal problems, and further alcoholism [9]. This vicious cycle continues. It has been established through various studies over the years that the prevalence of sexual dysfunction in patients with alcohol dependence is higher than that in the general population. Hepatic dysfunction, altered testosterone metabolism, changes in the hypothalamic-pituitary-gonadal axis function, the direct depressant effect of alcohol, and interpersonal factors resulting from alcohol consumption are some of the possible mechanisms responsible for sexual dysfunction among patients with ADS [10, 11]. A recent review on alcohol-related harms highlighted the fact that alcohol dependency adversely affects male sexual functioning [12]. The duration of alcohol dependence was significantly correlated with sexual dysfunction [13].

#### **Subjects and Methods**

Across- sectional study was carried out to assess the sexual dysfunction among married male with alcohol dependence syndrome. A self- administered questionnaire was given to alcohol dependence males which contained the socio demographic details and also the items in the questionnaire included the questions from the scales of Severity of Alcohol Dependence (SADQ), Arizona sexual experience scale (ASEX). The participants who are willing to answer the items in the questionnaire were informed about the study and consent was obtained from them. The participants with prior sexual dysfunction, those suffering from major psychiatric disorders, the participants with other physical illness known to cause/contribute to sexual dysfunction, local injuries to genitalia, any genital anomalies, major medical as well as surgical disorders, participants who are not willing to give consent for the study was excluded. Study was conducted for a period of one year at Mamata medical college and general hospital, Khammam and Mamata Academy of Medical Sciences, Bachupally, Hyderabad.

## Severity of alcohol dependence questionnaire

Severity of alcohol dependence questionnaire (SADQ) is a 20-item questionnaire designed to measure the severity of ADS <sup>[14]</sup>. It is relatively quick to complete (approximately 5 min) and is easy to score. Each item is rated upon a fourpoint frequency scale (almost never, sometimes, often, and nearly always) and the responses are scored 0, 1, 2, or 3 accordingly. Thus, the range of total score is from 0 to 60. Score below 16 indicates mild alcohol dependence, 16–30 indicates moderate alcohol dependence, and 31 or higher indicates severe alcohol dependence. Internal consistency of SADQ is high <sup>[15]</sup>. In construct validity, single factor accounts for 53% of the variance. Concurrent validity suggests that clinical rating correlates with SADQ to 0.63 <sup>[16]</sup>.

#### Arizona sexual experiences scale

Arizona sexual experiences scale (ASEX) is a clinician-administered questionnaire. It is a user-friendly, 5-item rating scale based on a 6-point Likert scale [17]. It was developed for the assessment of sexual dysfunctions in patients. It particularly determines the modifications and alterations of sexual functions in relation to intake of medicines or psychotropic substances, including alcohol. Each item explores particular domains of sexuality such as "sexual drive, sexual arousal, penile erection, ability to reach orgasm, and satisfaction from orgasm" [18]. The possible total scores range from 5 to 30, with higher scores indicating more sexual dysfunction. Sexual dysfunction is defined as a total score of 19 or more, or a score of 5 or more on any domain, or a score of 4 or more on any three domains.

# Results

**Table 1:** Sexual dysfunction and its age correlates in patients with alcohol dependence syndrome (ADS)

| Age         | Ads with sexual dysfunction | Ads without sexual dysfunction |
|-------------|-----------------------------|--------------------------------|
| 21-30 years | 12(23%)                     | 20(41.6%)                      |
| 31-40 years | 40(77%)                     | 28(58.3%)                      |

**Table 2:** Sexual dysfunction and its educational correlates in patients with alcohol dependence syndrome (ADS)

| Education               | Ads with sexual dysfunction | Ads without sexual dysfunction |
|-------------------------|-----------------------------|--------------------------------|
| Illetrate               | 05(9.6%)                    | 02(4.1%)                       |
| Primary school          | 15(28.8%)                   | 19(39.5%)                      |
| Secondary<br>school     | 16(30.7%)                   | 08(16.6%)                      |
| Intermediate or diploma | 11(21.1%)                   | 06(12.5%)                      |
| Graduate                | 05(9.6%)                    | 13(27%)                        |

**Table 3:** Sexual dysfunction and its occupation correlates in patients with alcohol dependence syndrome (ADS)

| Occupation | Ads with sexual dysfunction | Ads without sexual dysfunction |
|------------|-----------------------------|--------------------------------|
| Employed   | 43(82.6%)                   | 36(75%)                        |
| Unemployed | 09(17.4%)                   | 12(25%)                        |

**Table 4:** Sexual dysfunction and its locality correlates in patients with alcohol dependence syndrome (ADS)

| Locality | Ads with sexual dysfunction | Ads without sexual dysfunction |
|----------|-----------------------------|--------------------------------|
| Rural    | 23(44.2%)                   | 32(66.6%)                      |
| Urban    | 29(55.8%)                   | 16(33.3%)                      |

**Table 5:** Duration of alcohol dependence correlates in patients with ADS with or without sexual dysfunction

| Duration of<br>alcohol<br>dependence | Ads with sexual dysfunction | Ads without sexual dysfunction |
|--------------------------------------|-----------------------------|--------------------------------|
| Above 10 years                       | 40(76.9%)                   | 20(41.6%)                      |
| Upto 10 years                        | 12(23.1%)                   | 28(58.4%)                      |

Table 6: Severity of alcohol dependence among study participants

| Severity of alcohol dependence<br>questionnaire (sad-q) score | Number of participants (n=100) |
|---|--------------------------------|
| Moderate (16-30 sad-q score)                                  | 28                             |
| Severe (≥31 sad-q score)                                      | 72                             |

**Table 7:** Distribution of cut off scores of Arizona sexual experiences scale in patients with ADS with sexual dysfunction (52%)

| Arizona sexual experiences scale | Number of participants (n=100) |  |
|----------------------------------|--------------------------------|--|
| Asex score >19                   | 11                             |  |
| Asex score of 4 on 3 domains but | 35                             |  |
| total score <19                  | 33                             |  |
| Asex score of 5 on 1 domains but | 06                             |  |
| total score <19                  | 06                             |  |

**Table 8:** Types of sexual dysfunction according to Arizona sexual experiences scale scores in patients with ADS (n=52)

| Types of sexual dysfunction according to Asex Score | Patients With ADS (n=52) |
|---|--------------------------|
| Low sexual desire                                   | 40                       |
| Difficulty in sexual arousal                        | 38                       |
| Dissatisfaction with orgasm                         | 22                       |
| Erectile dysfunction                                | 28                       |
| Difficulty in reaching orgasm                       | 32                       |

# Correlation of SADQ and ASEX scores in patients with alcohol dependence syndrome

The SADQ and ASEX scores showed a strong positive association. A statistically significant (P=0.01) association

was found. This conclusion implies that the current study's hypothesis, which states that there is a positive association between the existence of sexual dysfunction as indicated by the ASEX scale and the severity of ADS as measured by the SADQ, is valid.

Correlation between years of alcohol dependence and Arizona sexual experiences scale scores in patients with alcohol dependence syndrome Sexual dysfunction on ASEX scores was positively correlated with the number of years of alcohol dependence. ASEX scores increased in line with the duration of alcohol dependence.

#### Discussion

In the present study, a total of 100 married male patients with diagnosis of ADS were evaluated for the prevalence and types of sexual dysfunction, and also explored association between sexual dysfunction and ADS-related parameters such as severity as well as duration of ADS. In the present study, majority of the study participants (68%) were in the age group of 31–40 years. With mean age of the study participants being 34.52+3.55 years.

Ravi Singh Bhainsora *et al.* found that majority of study population were in the age group of 31- 40 years, mean age group of the study participants  $35.62 \pm 4.55$  years (range: 21-40 years), had similar results [19].

The prevalence of sexual dysfunction among patients with ADS was 52% of which majority had more than one sexual dysfunction. It indicates patients suffering from ADS are at increased levels developing of multiple sexual dysfunctions than non-alcoholics.

Prabhakaran *et al.* found that majority of the study participants (40 [47.6%]) were in the age group of 41–50 years. Similar finding was observed by Prabhakaran *et al.* had significant association of sexual dysfunction with the duration of alcohol dependence [20].

Aswal *et al.* had observed the prevalence of sexual dysfunction among patients of ADS to be 76% and impotence (28%) was the most common diagnosis in them, followed by loss of libido (26%), delayed ejaculation (10%), excessive libido (8%), and premature ejaculation (4%) [21].

Schiavi *et al.* found that sexual dysfunction caused due to alcohol was reversible with abstinence [22].

# **Conclusions**

A significant number of the study participants experienced one or more types of sexual dysfunction.

The likelihood of sexual dysfunction is greatly increased by the duration of consumption of alcohol.

Sexual dysfunction is far more likely to occur in cases of severe alcohol dependence.

Patients with ADS may stop drinking or cut back if they are informed and motivated about the relationship between their alcohol use and the sexual dysfunctions it causes.

# **Conflict of Interest**

Not available

# **Financial Support**

Not available

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