

# Study of prevalence of Sexual dysfunction in Alcohol Dependent individuals: A cross sectional study

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## ABSTRACT

**Background:** The chances of developing sexual dysfunctions appear to increase with increasing years of alcohol consumed. Various explanations have been offered for sexual dysfunction in alcoholic patients. The prevalence of sexual dysfunction causes significant distress and affects the relationship of a couple.

**Aims:** Our study was an attempt to find out the presence of sexual dysfunction in alcohol dependent individuals and correlate with severity of Alcohol Dependence

**Materials & Methods:** Sixty male in-patients who were diagnosed as alcohol dependence syndrome according to ICD-10 were assessed for severity of dependence using Severity Of Alcohol Dependence Questionnaire (SADQ) and Assessment of sexual disorders was done using Arizona Sexual Experiences Scale (ASEX). Relationship between the severity of alcohol dependence and presence of sexual disorder is analyzed using chi square test and spearman's correlation coefficient test using SPSS software.

**Results:** Sixty percent of our patients with alcohol dependence had sexual dysfunction. The level of alcohol dependence has significant association with the sexual dysfunction.

**Conclusion:** Sexual dysfunction and alcohol dependence are proportionately related. Clinicians need to assess sexual dysfunction in all patients presenting with Alcohol Dependence.

**Keywords:** Dysfunction, Alcohol Dependence, SADQ, ASEX

## INTRODUCTION

Man survives earthquakes, epidemics, the horrors of disease and all the agonies of the soul, but for all time his most tormenting tragedy has been, is and will be the tragedy of bedroom.

*-Leo Tolstoy. <sup>1</sup>*

A good sexual functioning is the most important component of quality of life and is essential for maintaining a satisfying intimate relationship as it provides a sense of physical, psychological & social wellbeing<sup>2</sup>. A sexual dysfunction can arise as a result of biological problems, relationship problems, and intra-psychic conflicts, lack of a proper sexual knowledge, other psychiatric and/or medical disorders, personality, types, disorders, and use of medicines (anti-hypertensive, anti-depressants) or a combination of any or all of these. Sexual dysfunctions are as common as any other in the world. Sexual dysfunction in the alcoholic may be due to the depressant effect of alcohol itself, alcohol-related disease or due to a multitude of psychological forces related to the alcohol use<sup>3</sup>. Many studies in United States of America and United Kingdom<sup>4</sup> have reported the same. The most common sexual dysfunction in men was premature ejaculation and the most common sexual dysfunction in women was low sexual desire<sup>5</sup>. Chronic and persistent use of alcohol can cause sexual dysfunction, resulting in marked distress and interpersonal difficulty which in turn, can worsen the alcohol abuse.

Sexual dysfunction in alcohol dependents was found to be 51% , each reporting hypoactive sexual desire and impotence in a study done by Stanshke et al<sup>6</sup>. Lemere and Smith reported that 8% of 17,000 patients treated for alcoholism had impotence<sup>7</sup>. The reported prevalence of lack of sexual desire ranges from 51% to 58%, 16-59% for erectile impotence, 4-15.9% for premature ejaculation, and 17.8-25.4% for retarded ejaculation in subjects using alcohol long-term<sup>8,9</sup>. Whalley reported that 54% of hospitalized alcoholic men and 24% of healthy controls had erectile impotence. In another study by Jensen, 63% of married alcoholic men and 10% of controls had sexual dysfunctions.

Van Thiel and Lester reported that 61% of alcohol dependent patients had sexual dysfunction, the most common being erectile dysfunction followed by reduced sexual desire. Erectile dysfunction and reduced sexual desire were frequently seen to be coexisting.

**Studies in Indian Context:**

In one study by Vijayasenan<sup>10</sup>, examined 97 male inpatients admitted with alcohol dependence for sexual dysfunction and found that two third of the patients had sexual dysfunction for a period of one year prior to admission. The disturbances noted were diminished sexual desire (58%), retarded ejaculation (22%), erectile dysfunction (16%) and premature ejaculation (4%).

In another study by Bijil Simon and Benegal Vivek<sup>11</sup>, where they examined 100 male alcohol dependent males, reported that 72 suffered from sexual dysfunction. Amongst which, 37.5% were having problem of premature ejaculation and an equal number was suffering from low desire. Problems with erection were the concern in around 33% individuals. They report anorgasmia and delayed ejaculations in 14.5% and 10% respectively.

Men with alcohol dependence have reported to have problems with desire. Objective behavioural studies done to evaluate the effect of alcohol sexual arousal in response to an erotic film have observed that alcohol attenuates the capacity of sexual response<sup>12, 13</sup>.

**Effects of alcohol on sexual function by amount of alcohol<sup>14</sup>:**

Small doses of alcohol can cause release of inhibition increased aggression, increased desire, increased arousal, control of premature ejaculation, decreased penile tumescence.

Moderate doses of alcohol can cause: longer foreplay, increased time to erection, difficulty in maintaining erection, uncertain orgasm, and decreased penile tumescence.

Large doses of alcohol can cause impotence both erectile and ejaculatory, desire problems, unpleasant ejaculation.

Chronic alcoholism may lead to loss of libido, loss of sexual satisfaction, erectile impotence, decreased testosterone, infertility, breast development, decreased body hair, shrivelled testicles<sup>15</sup>.

Studies on endocrine and other biological effects of alcohol report that long-term use of alcohol leads to inhibition of hypothalamic-pituitary-adrenal axis and reduces the release of gonadotropins from the pituitary. Chronic alcohol abuse has been recorded to cause testicular atrophy, inhibition of testosterone production, and inhibition of spermatogenesis, apart from its direct oxidative toxicity<sup>16, 17</sup>.

Association between long-term and high amount of alcohol consumption and Sexual dysfunction has been widely reported<sup>18, 19</sup> and men with Sexual dysfunction are frequently noted to be chronic alcohol dependent.<sup>20</sup>

A review of clinical and experimental studies concluded that in male alcoholics, the greater quantity, frequency, and duration of drinking are associated with Erectile Dysfunction (ED), inhibited libido, and retarded ejaculation<sup>21</sup>. A major limitation of these data has been the lack of standard instruments to assess Sexual dysfunction.

However, there has been a conflicting study in recent time which does not link Sexual Dysfunction and alcohol, which evaluated the effect of alcohol abuse, panic disorder, and depression on ED did not report any increase in the risk of ED with alcohol abuse<sup>22</sup>.

Studies on patients presenting with Sexual dysfunction have reported a variable percentage of alcohol use. Fagan et al.<sup>23</sup> reported 29% of 145 consecutive patients with sexual problems to score on the probable alcoholism range on the Michigan Alcohol Screening Test, of which only six were diagnosed with alcoholism.

Masters and Johnson<sup>24</sup> reported that in 35 out of 213 men with secondary impotence, the ED occurred as a direct result of acute alcohol intake; they did not detail out the chronicity of alcohol intake.

**MATERIAL AND METHODS**

This study was conducted in General Hospital Psychiatry Unit of a multispecialty teaching hospital. It is a cross sectional, point prevalence non-interventional study. Sixty consecutive patients who met ICD-10 criteria for Alcohol Dependence syndrome were taken into the study from June, 2015 to December 2015. Institutional ethical committee approval was taken for the study and informed consent was taken from the patients. Patients were then assessed by Severity of Alcohol Dependence Questionnaire (SAD-Q).

Then they were assessed for the presence of Sexual Dysfunction by using Arizona Sexual Experiences Scale (ASEX).

Relationship between the severity of alcohol dependence and presence of sexual disorder is analyzed using chi square test, spearman's correlation using SPSS software

**SAD-Q**

The **Severity of Alcohol Dependence Questionnaire** (SADQ or SAD-Q) is a 20 item clinical screening tool designed to measure the presence and level of alcohol dependence.<sup>25</sup>

It is divided into five sections:

- Physical withdrawal symptoms
- Affective withdrawal symptoms
- Craving and relief drinking
- Typical daily consumption
- Reinstatement of dependence after a period of abstinence.<sup>26</sup>

Each item is scored on a 4-point scale, giving a possible range of 0 to 60. A score of over 30 indicates severe alcohol dependence.

#### Arizona Sexual Experiences Scale<sup>27</sup>:

This test is intended for the assessment of sexual dysfunctions in psychiatric patients and people with health problems (men and women). It particularly evaluates modifications and alterations of sexual functions in relation to the intake of medicines or psychotropic substances.

This self-report questionnaire can be both administered by a clinician or self-administered. It is made up of 5 items rated on a 6-point Likert scale. Each item explores a particular aspect of sexuality: 1. Sexual drive, 2. Arousal, 3a. Penile erection; 3b. Vaginal lubrication, 4. Ability to reach orgasm, 5. Satisfaction from orgasm.

All male subjects between 20-50 years and diagnosed as alcohol dependence syndrome, married or having a regular sexual partner and patients who gave consent were included in our study.

Patients with history suggestive of a primary sexual disorder were excluded.

Patients with co-morbid disorders like Diabetes Mellitus, Bronchial asthma, Hypertension, H/o Urogenital surgeries and other psychiatric illness were excluded from the study.

Patients with any other substance use other than alcohol, tobacco and patients already on drugs affecting sexual functioning like antidepressants, antipsychotics, anti-hypertensive or steroids were excluded from the study.

## RESULTS

Our study comprised a sample of 60 patients. All the patients fulfilled the criteria for Alcohol Dependence Syndrome according to ICD-10. The demographic distribution of the sample is shown in Table 1. Our sample comprised 8 (13.33%) were aged between 20-40 years, 38 subjects were between the age group of 30-40 (63.33%) years, and 14 (23.33%) were aged between 40-50 years. In our study, 54 (90%) individuals were Hindu by religion while 2 (3.33%) were Muslims and 4 (6.66%) were Christians as shown in Table 2.

**Table 1: Age distribution of the alcohol dependent individuals**

Age	Frequency
20-30	8
30-40	38
40-50	14

**Table 2: Distribution of Alcohol Dependence by Religion**

Religion	Frequency
Hindu	54
Muslim	2
Christian	4

With respect to duration of alcohol consumption, 8 (13.33%) individuals were consuming alcohol in the last 5 years, 40 (66.66%) individuals were consuming alcohol between 5-10 years. Around 12 (20%) persons were consuming alcohol for more than 10 years as shown in Table 3.

In our study, when measured on SAD-Q, (Table 4) 23% were having Mild Alcohol Dependence while 70% of the patients were diagnosed to be having Moderate Alcohol Dependence Syndrome and around 7% of the patients had Severe Alcohol Dependence. None of our study subjects were fitting into Very Severe Alcohol Dependence.

**Table 3: Distribution of frequency of duration of Alcohol consumption.**

Duration of Dependence	Frequency
1-5yrs	8
5-10yrs	40
>10yrs	12
Total	60

**Table 4: Distribution with respect to severity of dependence on SAD-Q**

Severity of Dependence by SADQ	Frequency	%
Mild	14	23
Moderate	42	70
Severe	4	7
Very severe	0	0

**Table 5: Prevalence of sexual dysfunction measured by ASEX.**

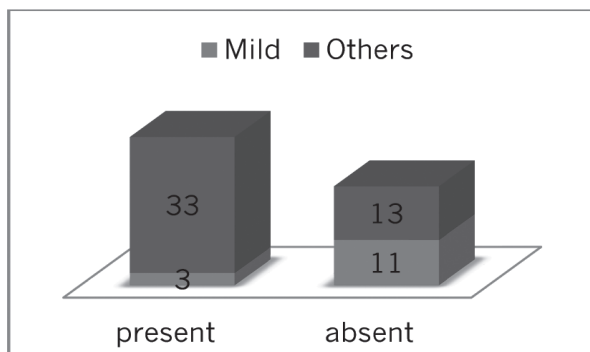
Sexual dysfunction by ASEX	Frequency	%
Presence	36	60
Absence	24	40

In sixty alcohol dependent individuals, on ASEX, 36 (60%) reported that they were having sexual dysfunction (Table 5)

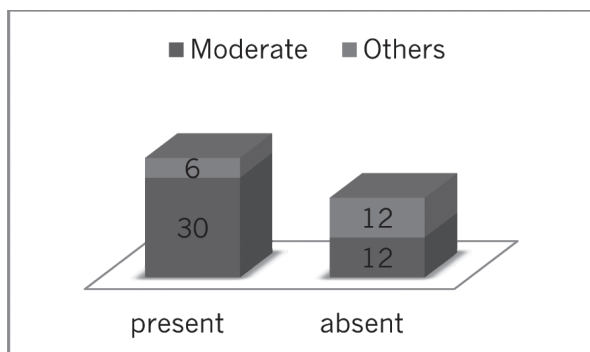
When measured within the group, in relation to the severity of alcohol dependence, Mild alcohol dependence, out of 14 patients, three had sexual dysfunction (Graph 1). The presence of sexual dysfunction had significant association with the level of alcohol dependence. 21% of patients with Mild alcohol dependence had sexual dysfunction. We found that a statistically significant number of mildly dependent patients had sexual dysfunction ( $p=0.0013$ ).

In patients who were diagnosed with Moderate alcohol dependence, 30 out of 42 (Graph 2) patients had sexual dysfunction. 71% of patients with Moderate alcohol dependence had sexual problems ( $p=0.0093$ ).

**Graph 1: Correlation of mild alcohol dependence to sexual dysfunction**



**Graph2: Correlation of moderate alcohol dependence to sexual dysfunction**



In patients diagnosed with severe alcohol dependence, three out of 4 patients had sexual dysfunction. In patients with severe alcohol dependence when measured on SAD-Q and ASEX, 75% had sexual dysfunction ( $p<0.05$ ).

#### DISCUSSION

Sexual dysfunction appears to be fairly common problem in males with Alcohol Dependence. The sexual

dysfunction appears to be in direct relation to the amount of alcohol intake. The chances of developing sexual dysfunction increases with the increase in severity of alcohol intake. It has been reported that high level of intake of alcohol causes toxic effects which may cause vagal neuropathy and may cause sexual dysfunction which may be reversed with abstinence<sup>28</sup>. However, chronic alcohol use is associated with alteration of levels of Gonadal hormones and is responsible for sexual dysfunction<sup>29</sup>.

Our study yielded a 60% prevalence of sexual dysfunction in alcohol dependent males which is consistent with the study done by Vijaysenana<sup>10</sup> et al and Jenson et al<sup>30</sup>. Similar results were found in another study conducted by Van Theil et al<sup>31</sup>.

In our study, in individuals with Mild, Moderate and Severe Alcohol Dependence, sexual dysfunction was found in 21%, 70% and 75% respectively. The more chronic the alcohol use, the more prevalence of sexual dysfunction. This is consistent with previous studies<sup>18, 19, 20</sup>. Our study has focussed particularly on alcohol dependent males because of the high prevalence of alcohol use in males and low prevalence of alcohol dependence in females.

#### Limitations

Small sample size prevents the results to be generalised community wise.

During the period of the study, we did not have any female patients admitted with Alcohol Dependence Syndrome. So our study could not elicit Sexual Disorders in women with Alcohol Dependence Syndrome.

Our study sample had co-morbid tobacco use in about 85% of individuals which could not be excluded.

#### CONCLUSION

A significant percentage of alcohol dependent individuals have co-morbid sexual dysfunction. The sexual dysfunction is in direct relation to the amount of alcohol consumed and duration of alcohol use. Our study highlights the importance of addressing sexual problems in clinical population with alcohol dependence. There is an evidence to suggest that the sexual dysfunction can be reversed by abstinence and this can be used in clinical setting as a tool to counsel patients with alcohol dependence.

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**Please cite this article as:** Pavan K, Chada Apurva, Anaveni R , Roy S. Study of prevalence of Sexual dysfunction in Alcohol Dependant individuals: A cross sectional study. *Perspectives in medical research* 2017;5(1):25-29.

**Sources of Support:** Nil, Conflict of interest: None declared.