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Research Paper

A Cross Sectional Study of Sexual Dysfunction among Male Alcohol Dependent Patients in a Tertiary Care Centre

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ABSTRACT

Background: The relationship between Alcohol consumption and sexual dysfunction is complex. Most persons prefer alcohol before sexual activity due to its disinhibiting property and alcohol is believed to be a powerful sexual facilitator and aphrodisiac. By identifying and reporting this sexual dysfunction in Alcohol dependence awareness can be created among clinicians to focus on these problems to reduce the morbidity and enhance the quality of life. ***Methodology:*** A Cross-sectional case control study, for 12 months in SIMS&RC Bengaluru, Cases were 30 married males admitted for deaddiction and 30 where relatives of the patient were chosen for controls. ***Results:*** The prevalence of at least one sexual dysfunction among cases is higher (71.6%) than controls (28.4%). The prevalence of more than one sexual dysfunction in cases (62.3%) is also higher than controls (23.3%). ***Conclusion:*** Prevalence of sexual dysfunction is significantly high among persons with alcohol dependence comparing with non-alcoholics. Erectile dysfunction is not significantly higher for persons with alcohol dependence than controls Persons with alcohol dependence and controls did not differ regarding premature ejaculation. Duration of alcohol consumption did not significantly increase the risk of sexual dysfunction in multiple domains. Orgasmic dysfunction was the least common sexual dysfunction among alcohol dependents, but significantly higher when compared to non-alcoholic persons.In patients with alcohol use, over the previous 12 months significantly increase the probability of Premature ejaculation, intercourse dissatisfaction, decreased sexual desire and orgasmic dysfunction but no other domain.

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Sexual dysfunction is common among alcoholism patients. The danger rises proportionately with heavy drinking. Clinicians should routinely evaluate alcoholic patients' sexual functioning to rule out potential sources of sexual dysfunction. Because alcohol has a disinhibiting effect, most people prefer it before engaging in sexual activity. Alcohol is also thought to be a potent sexual facilitator and stimulant. By identifying and reporting this sexual dysfunction in alcoholism, clinicians may become more aware of these issues, which will assist in lowering morbidity and enhance quality of life.

LITERATURE REVIEW

Alcohol is known to cause sexual dysfunction over time, which causes severe distress and relationship issues. Alcohol abuse is instead known to get worse as a result of this. Alcoholism-related diseases, the depressive effects of alcohol itself, or any number of psychological factors associated with alcohol use can all contribute to sexual dysfunction among alcoholics.

There are various types of sexual dysfunction, including:

1. Decreased sexual desire—persistent or recurrent deficiency or absence of desire for sexual activity giving rise to marked distress and interpersonal difficulty;
2. Sexual aversion disorder—persistent or recurrent aversion and avoidance of all genital sexual contact leading to marked distress and interpersonal difficulty;
3. Difficulty in erection—recurrent or persistent, partial, or complete failure to attain or maintain an erection until the completion of the sex act;
4. Difficulty in achieving orgasm—persistent or recurrent delay in or absence of orgasm, following a normal sexual excitement phase;
5. Premature ejaculation—persistent or recurrent ejaculation with minimal sexual stimulation, before, on or shortly after penetration and before the person wishes it, which causes marked distress.[1,2,3]

Inhibition of hypothalamic gonadotropin-releasing hormone and/or pituitary luteinizing hormone, which changes the hypothalamic-pituitary-adrenal and hypothalamic-pituitary-gonadal axis, reduction in plasma testosterone levels, increased inhibitory activity of gamma-amino butyric acid receptor, and decreased excitatory activity of glutamate receptor in central nervous system are some of the mechanisms proposed to explain alcohol-induced sexual dysfunction. Men who drink regularly have been found to have sexual difficulties in the range of 8.2% to 95.2%.[4]

Relevance of the Study

Advancement in age, low educational attainment, unemployment, early beginning of alcohol use, longer duration of alcohol dependency, concomitant use of tobacco, increased quantity and frequency of drinking, and the presence of liver disease were some of the predictors of sexual dysfunction found. Since multiple studies have demonstrated no or a paradoxical relationship between alcohol consumption and sexual dysfunction, the issue has been up for debate.

It is apparent that people who were dependent on alcohol had their physical and mental health extensively examined at de-addiction clinics and outpatient centres. However, sexual dysfunction is the one that receives the least attention and diagnosis.

The different physical and psychological effects of alcohol intake have been the subject of several research to date. However, very few research have compared alcohol's direct impact on sexual function.

The primary focus of these investigations was erectile dysfunction, and other sexual dysfunctions were not considered. Therefore, in this study, we attempted to highlight numerous sexual dysfunctional domains in alcohol-dependent individuals and compare them to non-alcoholics.

Aims and objectives

- To understand the Proportion of sexual dysfunction pertaining to socio-demographic profile among alcoholics and non-alcoholics.
- To assess the Proportion and pattern of sexual dysfunction among patients with alcohol dependence syndrome, in comparison with non-alcoholics.

METHODOLOGY

- **Study place:** Sapthagiri Institute of Medical Sciences and Research Centre, Bengaluru.
- **Study subjects:** Patients satisfying the inclusion criteria enrolled in this study after obtaining written informed consent.
- **Study Period:** 12 months (April 2021-March 2022)
- **Study design:** A Cross-sectional case control study
- **Sample size:** 30 male patients, admitted in the hospital for alcohol deaddiction were chosen as cases, 30 controls from relatives of the patient.

Inclusion Criteria

1. Patients who have given written informed consent for the case control study
2. Male Patients in the age group of 18-50 years who are married/had a regular sexual partner
3. For choosing Cases - Patient meet the criteria for alcohol dependence syndrome as per ICD-10 research diagnostic criteria
4. For choosing Controls - Persons who have not been consuming alcohol for the past one year and no evidence of alcohol dependence before.

Exclusion Criteria

1. For cases - Clinically assessed history of primary sexual dysfunction (Prior to initiation of alcohol use)
2. Co-morbid medical /Psychiatric disorders which can contribute to sexual dysfunction
3. Substance use other than alcohol and tobacco
4. Patients with history of chronic drug intake which are known to cause sexual dysfunction for the past one year like -antipsychotics, antidepressants, anti-hypertensives, steroids, etc.

Tools Used for The Assessment

- Proforma for socio-demographic data,
- Kuppusamy ‘s socio-economic scale,
- International index for erectile function questionnaire (IIEF),
- Premature ejaculation diagnostic tool (PEDT).

Statistical Analysis

- Patients fulfil criteria for alcohol dependence syndrome according to ICD-10 Research Diagnostic Criteria (WHO) After obtaining written informed consent.
- The study and control groups were matched.
- The matching was performed according to the type of variable using chi- square test and student -t test.
- The prevalence of sexual dysfunction was identified by comparing the two groups by respective tests of significance.
- The above statistical procedure was performed by using SPSS software.
- The P value of less than 0.05 was considered as significant.

RESULTS

Table: 1 Showing Socio-Demographic Profile of Cases and Controls

S.No	Variables	Cases (N=30)		Control (N=30)		Statistical Results
		N	%	N	%	
1.	Age Below 35 35 – 45 45 And Above	 7 17 6	 23.3 56.7 20	 6 18 6	 20 60 20	X^2 = 0.105 P Value=0.94
2.	Education Below Primary High School & Above	 18 12	 60 40	 17 13	 56.7 43.3	X^2 = 0.0686 P Value=0.793
3.	Locality Urban Rural	 15 15	 50 50	 22 8	 73.3 26.7	X^2 = 3.455 P Value =0.06
4.	Occupation Semiskilled Skilled Business	 10 9 11	 33.3 30 36.7	 8 14 8	 26.7 46.7 26.7	X^2 = 1.7829 P Value=0.410
5.	Income Below 5000 5000 - 10000 Above 10000	 5 17 8	 16.7 56.7 26.7	 5 18 7	 16.7 60 23.3	X^2 = 0.095 P Value=0.95
6.	Religion Hindu Non-Hindu	 27 3	 90 10	 26 4	 86.7 13.3	X^2 = 0.1617 P Value=0.68

***P < 0.05**

As per the above table it is found that majority of them belongs to the age group of 35- 45 years of age There is no statistically significant difference between case and control regarding Age. Majority of them belongs to the educational group of below primary. There is no significant difference between case and control regarding Education. It is found that majority of them belongs to Urban locality. There is no significant difference between case and control regarding Locality. Majority of them belongs to the skilled occupation. There is no significant difference between case and control regarding occupation. It is found that majority of them falls in the income range of 5000-10000 rupees per month. There is no statistically significant difference between case and control regarding Income. It is found that majority of them belongs to Hindu. There is no significant difference between case and control regarding Religion

Table 2 Showing Comparison of Family History of Alcoholism, Duration of Marital Life, Socio Economic Status Between Cases And Control

S.No	Variables	Cases (N=30)		Control (N=30)		Statistics Results
		N	%	N	%	
1.	Family History					$X^2 = 0.0705$
	Present	11	36.7	11	36.7	P Value 0.790
	Absent	19	63.3	19	63.3	
2.	Marital Life Duration					
	Below 8 Years	6	20	9	30	$X^2 = 0.890$
	9 – 17 Years	17	56.7	14	46.7	P Value=0.64
	18 & Above	7	23.3	7	23.3	
3.	Socio-Economic State					
	Upper Middle	4	13.3	3	10	$X^2 = 0.165$
	Middle	22	73.3	23	76.7	P Value=0.92
	Lower Middle	4	13.3	4	13.3	

***P < 0.05**

From the above table it is found that around 36.7 % of the respondents having family history of alcoholism. and around 63.3% of the respondents are not having family history of alcoholism. It was found that majority of them must negative family history of alcoholism. There is no significant difference between case and control regarding to family history of Alcoholism.

It was found that around 20 % of the respondents belong to below 8 years of marital life. Similar number 23.3% of respondents do belong to 18 and above years of marital life. It is found that majority of them belongs to 9-17 years of marital life. There is no significant difference between case and control regarding the duration of marital life. Around 13.3 % of the respondent belongs to upper middle socio-economic status. Similar number of respondents do belong to lower middle. It was found that majority of them belongs to middle socio-economic status. There was no significant difference between case and control regarding Socio economic status.

Table-3 Showing Sexual Dysfunction Among Cases and Control

S.No	Prevalence	Case (%)	Control (%)
1.	At Least One Sexual Dysfunction	71.6	28.4
2.	More Than One Sexual Dysfunction	62.3	23.3

From the above table it has been found that the prevalence of at least one sexual dysfunction among cases is higher (71.6%) than controls (28.4%).

The prevalence of more than one sexual dysfunction in cases (62.3%) is also higher than controls (23.3%).

FIGURE-1

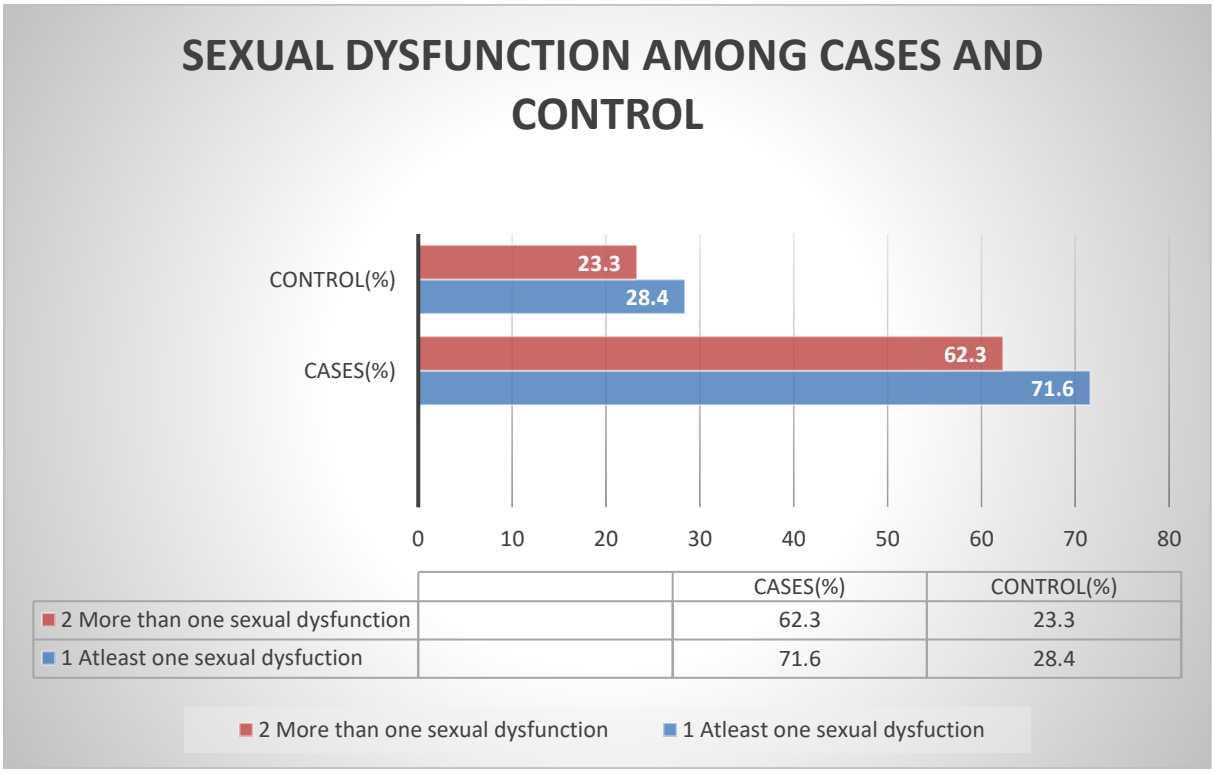


Table-4 Showing Sexual Dysfunctions in Various Domains Among Case and Control

Sl no	Variables	Cases N=30	Cases %	Control N=30	Control %	Statistical analysis
1	Erectile function with dysfunction Erectile function with no dysfunction	13 17	43.3 56.6	7 23	23.3 76.6	X^2=2.7 P-value 0.100348
2	Dysfunction in intercourse satisfaction No dysfunction in intercourse satisfaction	19 11	63.3 36.7	05 25	16.7 83.3	X^2=13.611 p-value 0.000225
3	Dysfunction in Orgasmic function No Dysfunction in Orgasmic function	10 20	33.3 66.6	03 27	10 90	X^2=4.8118 p-value0.0282
4	Dysfunction in Sexual desire No Dysfunction in Sexual desire	13 17	43.3 56.7	02 28	6.7 93.3	X^2=10.756 p-value0.00104
5	Dysfunction in overall satisfaction No Dysfunction in overall satisfaction	16 14	53.3 46.6	05 25	16.7 83.3	X^2=8.5645 p-value0.002908
6	Premature Ejaculation-Present Premature Ejaculation-Absent	12 18	40 60	02 28	26.7 73.3	X^2=9.3168 p-value 0.002271

***P < 0.05**

From the above-mentioned table 4

There is statistically significant difference between case and control regarding Intercourse satisfaction, Orgasmic function, Sexual desire, Overall satisfaction, Premature ejaculation domain of IIEF.

There was no statistical significance in Erectile function domain of IIEF.

Table-5 Showing Sexual Dysfunctions in Various Domains Among Case and Control

Serial No	Erectile function	Intercourse satisfaction	Orgasmic function	Sexual desire	Overall satisfaction	Premature Ejaculation
Cases	43.3%	63.3%	33.3%	43.3%	53.3%	40%
Control	23.3%	10%	6.7%	6.7%	16.7%	26.7%

Among cases Erectile dysfunction was 43.3%, intercourse satisfaction was 63.3%, Orgasmic function was 33.3%, sexual desire was 43.3%, Overall satisfaction was 53.3%, followed by Premature ejaculation was 40% in patients with Alcohol dependence subjects.

Figure-2 Showing Sexual Dysfunctions in Various Domains Among Case and Control

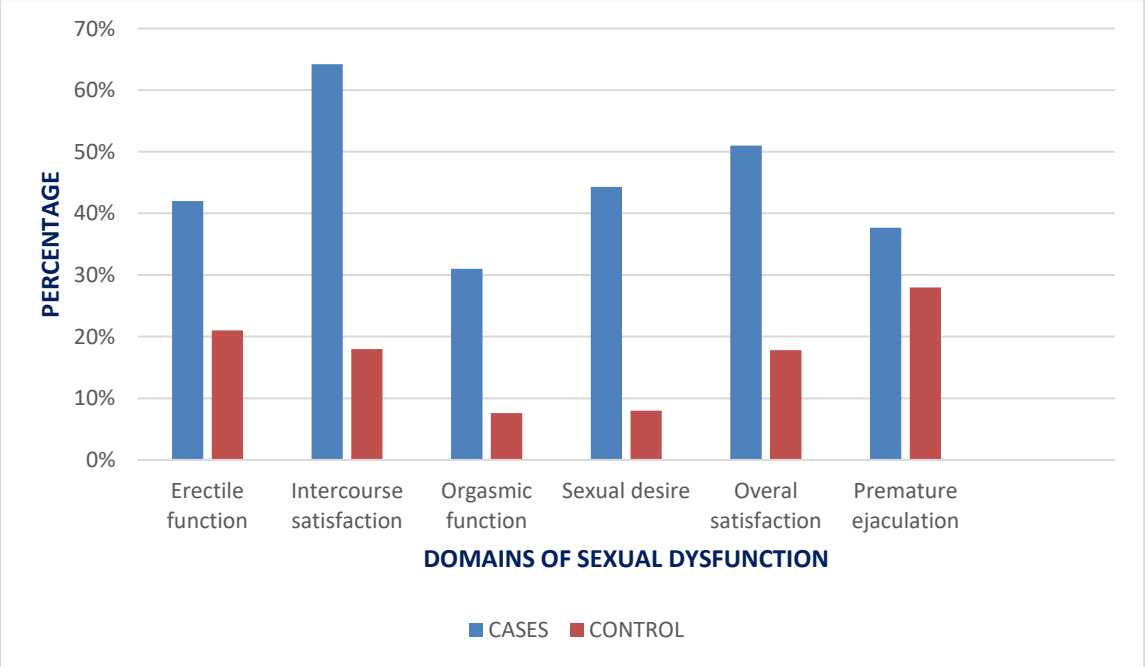
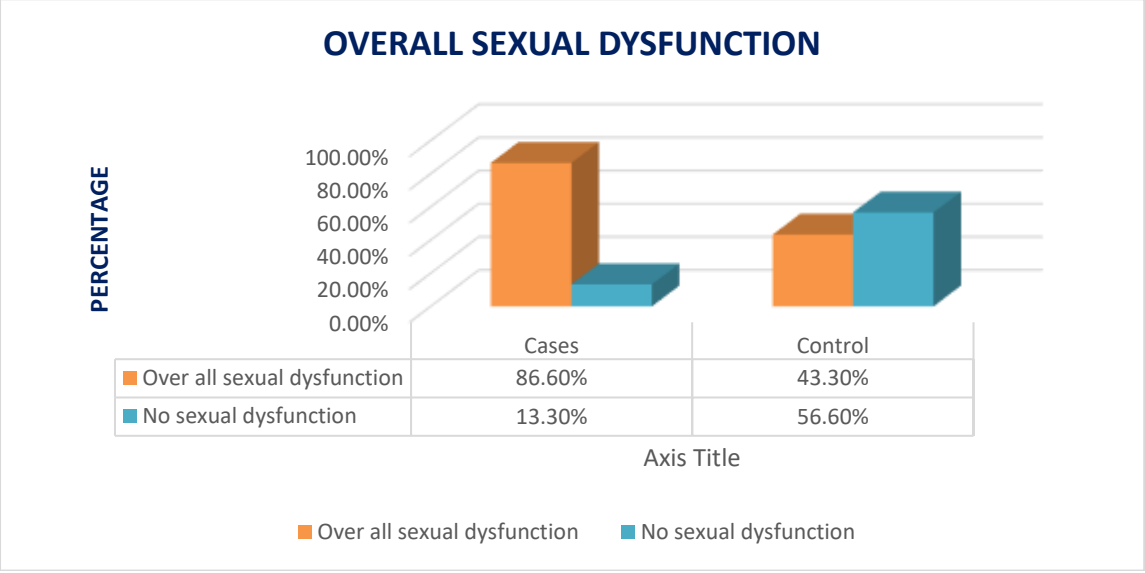


Figure-3



Overall sexual dysfunction

Out of 30 cases ,26 cases had overall sexual dysfunction which was found to be 86.6% and no dysfunction was 13.3%. Out of 30 controls, 13 control had overall sexual dysfunction which was found to be 43.3% and no dysfunction was 56.6%

DISCUSSION

In this study Proportion of at least one sexual dysfunction was (71.6%) than control (28.4%). The prevalence of more than one sexual dysfunction in case (62.3%) is also higher than control (23.3%). Among cases Erectile dysfunction was 43.3%, intercourse satisfaction was 63.3%, Orgasmic function was 33.3%, sexual desire was 43.3%, Overall satisfaction was 53.3%, followed by Premature ejaculation was 40% in patients with Alcohol dependence subjects.

Shreyas Pendharkar et al overall, 58.4 per cent of patients in the ADS group had sexual dysfunction The highest frequency was seen for dysfunction for arousal (57.4%), followed by problems in desire (54.4%), erection (36.6%), satisfaction with orgasm (34.6%) and ability to reach orgasm was least affected (12.87%) [6]

A Cross sectional study by **Rohilla et al** showed men (58.6%) with alcohol dependence were found to have sexual dysfunction compared to only one-fifth in the control group (18.5%). The most affected sexual functions were the ability to get and keep erection (70%) and arousal (62.8%).[5]

Bhainsora RS et al 100 patients of ADS assessed, 48% had sexual dysfunction 87.5% - reduced sexual drive,79.1% -dysfunction in sexual arousal,58%-erectile dysfunction54% - difficulty in reaching orgasm,31.2%-orgasmic satisfaction.[7]

Prabhakaran DK, et al out of 84 patients 34% had sexual dysfunction The most common type being erectile dysfunction (25%), dysfunction in satisfying orgasm (20%) and premature ejaculation (15.5%).[4]

Sucharita mandal et al Out 50 cases 40 % Reported of sexual dysfunction Erectile dysfunction (26%). inability to reach and satisfaction with orgasm 38% and 28% respectively.[8]

This study warranted a greater percentage of at least one sexual dysfunction in comparison to the five above mentioned Indian studies. It is observed that intercourse satisfaction, orgasmic function, sexual desire, overall satisfaction has been significantly lower in patients with alcohol dependence syndrome compared with non-alcoholics in this study. In these above-mentioned studies showed significant Erectile dysfunction which was less in this study.

CONCLUSION

Prevalence of sexual dysfunction is significantly high among persons with alcohol dependence comparing with non-alcoholics.

Erectile dysfunction is not significantly higher for persons with alcohol dependence than controls.

Persons with alcohol dependence and controls did not differ regarding premature ejaculation.

Duration of alcohol consumption did not significantly increase the risk of sexual dysfunction in multiple domains.

Orgasmic dysfunction was the least common sexual dysfunction among alcohol dependents, but significantly higher when compared to non-alcoholic persons.

Limitations

- Study population was derived from general hospital setting and the number of samples was low. So, the findings could not be comparable to general population.
- Measurement of Blood level of alcohol and endocrinological factors related to sexual dysfunctions could provide more relevant data regarding this study which was not possible in our setting.
- Severity of alcohol consumption was not assessed and compared in our study.

Future directions

Future studies can be directed to conduct follow up studies with a greater number of samples. The studies should include biochemical, hormonal assays for sexual dysfunctions.

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Conflict of Interest
The author(s) declared no conflict of interest.

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