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"IMPACT OF SOCIO-DEMOGRAPHIC FACTORS IN PATIENTS WITH ALCOHOL DEPENDENCE AT A TERTIARY CARE HOSPITAL IN HYDERABAD"

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Abstract:

Background: Alcohol consumption in India has increased significantly in recent decades, with changing social norms and increased availability contributing to rising rates of alcohol dependence. This study aimed to assess the impact of socio-demographic factors on alcohol dependence among patients at a tertiary care hospital in Hyderabad, India.

Materials and Methods: This cross-sectional study included 30 consecutive male patients with alcohol-related disorders at a tertiary care hospital in Hyderabad. Participants were screened using the CAGE questionnaire and diagnosed using DSM-IV-TR criteria. Detailed socio-demographic data was collected, including age, education, employment, income, family type, and reasons for alcohol initiation and consultation. Data was analyzed using descriptive statistics, chi-square tests, and Pearson's correlation.

Results: The majority of patients (76.67%) were aged 30-49 years. Alcohol initiation predominantly occurred before age 20, but daily drinking and dependence peaked in the 21-40 age group. Illiteracy was high (46.67%) among patients. Most patients (86.67%) were employed, primarily in unskilled or semi-skilled jobs. Peer pressure was the dominant reason for alcohol initiation (86.67% of cases). Over half (53.3%) of patients presented following a suicide attempt. All patients were from rural backgrounds, with 90% living in nuclear families.

Conclusion: This study highlights the complex interplay of socio-demographic factors in alcohol dependence among male patients in Hyderabad. Findings suggest the need for targeted interventions, including early prevention programs, workplace initiatives, peer-based approaches, integrated mental health care, and strategies tailored for rural communities. Future research should include larger, multi-center studies and explore gender differences to develop more comprehensive prevention and treatment strategies.

Keywords: Alcohol dependence, socio-demographic factors, rural India, peer pressure, suicide risk

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Introduction:

Alcohol consumption has existed in human societies since ancient times as a common source of relaxation and intoxication. However, excessive alcohol use can lead to significant public health problems [1]. According to World Health Organization statistics, around 2 billion people worldwide consume alcoholic beverages, with over 76 million people having alcohol use disorders. This amounts to 4.4% of the global burden of disease [2,3].

In India, there has been a concerning increase in alcohol consumption in recent decades, with the initiation age alarmingly decreasing. Despite having a large proportion of lifetime abstainers (89.6%), per-capita consumption of alcohol in India increased by 106.7% between 1970-1996 . Changing social norms, urbanization, increased availability, high-intensity marketing, and relaxation of trade rules have contributed to increased alcohol use [4,5].

Epidemiological studies in India have shown prevalence rates of 16-50% for alcohol dependence . The National Household Survey 2000-2001 found a prevalence rate of 21% for alcoholism in males . A meta-analysis revealed an overall substance use prevalence of 6.9/1000 for India, with rates of 11.9% among men and 1.7% among women .

Among individuals with alcohol abuse and dependence, prevalence rates for psychiatric comorbidity have been reported to be as high as 57-84% [9-11]. Untreated psychiatric morbidity can increase risk of relapse in alcohol-dependent subjects even after detoxification . Various studies have also reported that alcohol dependence with comorbid psychiatric disorders is associated with poor prognosis [13,14].

This study aims to assess the frequency, pattern and distribution of psychiatric morbidity and personality profiles in alcohol-dependent patients presenting to a tertiary care center in Hyderabad, India. It will examine the impact of various sociodemographic factors on alcohol use and associated psychiatric comorbidities in this population.

Materials and Methods:

Study Design: Cross-sectional hospital-based study

Setting: Tertiary care hospital (MediCiti Institute of Medical Sciences and Hospital) in Hyderabad

Sample: 30 consecutive male patients presenting with alcohol-related disorders who met inclusion criteria

Inclusion Criteria:
- Male patients aged 18-70 years
- Presenting with alcohol-related disorders
- Willing and able to give informed consent

Exclusion Criteria:
- Critically ill patients
- Delirious patients

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- Patients with dementia or gross cognitive impairment
- Patients with head injury or other medical conditions precluding completion of questionnaires

Tools Used:
1. Sociodemographic data questionnaire
2. CAGE questionnaire for alcohol screening
3. DSM-IV-TR criteria for diagnosing alcohol use disorders

Procedure:
- Patients screened using CAGE questionnaire
- Those screening positive diagnosed using DSM-IV-TR criteria
- Detailed sociodemographic data collected including:
  - Age
  - Educational status
  - Employment status
  - Income level (using BG Prasad Classification 2013)
  - Family type
  - Reasons for alcohol initiation and consultation
- Age of onset of alcohol use, daily drinking, and dependence recorded

Analysis:
- Results analyzed statistically using SPSS version 22
- Descriptive statistics used for sociodemographic variables
- Chi-square test used to assess significance of sociodemographic factors
- Pearson's correlation used to examine relationships between variables

Ethical Considerations:
- Ethical approval obtained from institutional ethics committee
- Informed consent taken from all participants

Results:
Socio-Demographic profile of participants of the study:

VARIABLES	COUNT
GENDER	
MALES	30 (100%)
FEMALES	0
BACKGROUND	
RURAL	30 (100%)
URBAN	0
TYPE OF FAMILY	
NUCLEAR	27 (90%)

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JOINT	3 (10%)
MARITAL STATUS	
MARRIED	30 (100%)
NOT MARRIED	0

THIS STUDY HAD ALL MALES WHO ARE MARRIED AND ARE FROM RURAL BACKGROUND OUT OF WHOM 27(90%) ARE FROM NUCLEAR FAMILIES

Age and Alcohol Drinking Patterns

S.No	AGE	COUNT
1	<20	0
2	20-29	4 (13.34%)
3	30-39	12 (40%)
4	40-49	11 (36.67%)
5	60-70	3 (10%)

YATES CHI^2 =14.875; DF = 4; P= 0.001 SIGNIFICANT

It is significant on statistical analysis that the majority of patients (76.67%) lie in the age group of 30-49 years. This is similar to previous studies in which the mean age at presentation was between 35 and 46 years.

AGE IN RELATION TO ALCOHOL DRINKING PATTERNS

S.No	Age	NO. OF PEOPLE STARTING ALCOHOL	NO. OF PEOPLE DAILY DRINKING	NO. OF PEOPLE WITH DEPENDENCE
1	0-20	22 (73.4%)	12 (40%)	6 (20%)
2	21-40	7 (23.3%)	16 (53.3%)	22 (73.4%)
3	41-60	1 (3.33%)	2 (6.67%)	2 (6.67%)

There is statistically significant difference (p=0.00002) in the age od starting alcohol, with a predominance of onset in the age group below 20 years. However, the age group 21-40 years rather than below 20 years has statistical significance in both daily drinking as well as dependence

EDUCATION STATUS OF PATIENTS

S.No	EDUCATIONAL STATUS	COUNT

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1	ILLETERATE	14 (46.67%)
2	PRIMARY SCHOOL 0-6TH/LITERATE	1 (3.33%)
3	MIDDLE SCHOOL 6-8	3 (10%)
4	HIGH SCHOOL 8-10	7 (23.33%)
5	INTER/GRADUATION	5 (16.67%)

YATES CHI2 =13.875; DF =4; P= 0.007 SIGNIFICANT

Illiteracy in this group is 14 (46.67%), followed by high school education 7 (23.33%) and inter/ graduate education 5 (16.67%), and a few patients in middle school – 3(10%), and 1 (3.33%) with primary school education. Illiteracy, which may also be a contributing causative factor, is also statistically significant (p=0.007).

EMPLOYMENT STATUS OF PATIENTS

S.No	STATUS	COUNT
1	EMPLOYED	26 (86.67%)
2	UN EMPLOYED	4 (13.33%)
	GRAND TOTAL	30

YATES CHI2 =14.7; DF =1; P= 0.0001 SIGNIFICANT

The employment status in the sample group was 26 (86.67%) as employed in which most of them are in unskilled and semi-skilled employment and 4 (13.33%) were currently not employed. Contrarily, the number of employed patients was statistically significantly more than the unemployed. (p=0.0001)

(BG PRASAD CLASSIFICATION 2013) INCOME SCALE OF PATIENTS

S.No	PERCAPITA INCOME	COUNT
1	I -> RS 5156	2 (6.66%)
2	II - RS 2578- RS 5155	11 (36.67%)
3	III - RS 1547- RS 2577	10 (33.33%)
4	IV - RS 773- RS 1546	6 (20%)
5	V - < RS 773	1 (3.33%)

YATES CHI2 =10.875; DF =4; P= 0.02 SIGNIFICANT

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The income group of the patients is group II and III culminating to 21(70%) of the total sample group, followed by group IV and then by Group I. A statistically significant number of patients have an income in the range of 1547-5155 (p=0.02)

REASON TO START ALCOHOL

S.No	REASONS	COUNT
1	PEER PRESSURE	26 (86.67%)
2	STRESSOR	4 (13.33%)
	TOTAL	30

YATES CHI2 =14.7; DF =1; P= 0.0001 SIGNIFICANT
The most common reason for starting alcohol was seen to be peer pressure 26 (86.67%).Peer pressure is a strongly significant statistical factor as a reason to start alcohol.

REASON FOR CONSULTATION AT PSYCHIATRIC OPD

S.No	REASON	COUNT
1	MEDICAL/PHYSICAL HEALTH	6 (20%)
2	SUICIDE ATTEMPT	16 (53.3%)
3	WITHDRAWAL SYMPTOMS	8 (26.6%)
	GRAND TOTAL	30

YATES CHI2 =4.475; DF =2; P= 0.1 NOT SIGNIFICANT

The most common reason for consultation to psychiatric OPD for the patients in the study was seen as Suicide attempt 16(53.3%) followed by Withdrawal symptoms 8 (26.6%), then medical/physical health 6 (20%). Even though over half the patients presented with a suicide attempt, this does not reach statistical significance (p=0.1)

Discussion:

Age Distribution and Drinking Patterns

The majority of alcohol-dependent patients (76.67%) were between 30-49 years old, consistent with previous studies reporting mean presentation ages of 35-46 years[14]. This aligns with findings from Nadkarni et al. (2020), who noted higher alcohol use rates among older adolescents and adults in India[15].

Notably, while alcohol initiation predominantly occurred before age 20 (73.4% of cases), daily drinking and dependence were most prevalent in the 21-40 age group. This progression pattern

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supports observations by Benegal (2005) regarding decreasing initiation age and increasing consumption in India over recent decades[4].

Socioeconomic Factors

Education: Illiteracy was notably high among patients (46.67%), suggesting a potential link between lower educational attainment and vulnerability to alcohol dependence. This association may be due to reduced awareness of alcohol-related risks or limited access to health information. Singh et al. (2020) similarly found lower education levels to be associated with higher alcohol use among adolescents in Delhi[5].

Employment and Income: Contrary to some expectations, 86.67% of patients were employed, primarily in unskilled or semi-skilled jobs. The majority (70%) fell into middle-income brackets (₹1547-5155 per capita). This challenges simplistic notions that unemployment drives alcohol dependence and suggests that workplace-based interventions could be effective. Pillai et al. (2021) also reported associations between alcohol use and employment status in Goa[6].

Social Influences

Peer pressure emerged as the dominant reason for alcohol initiation (86.67% of cases), far outweighing other factors. This underscores the powerful role of social norms and group dynamics in shaping drinking behaviors, particularly among young people. Dhawan et al. (2022) similarly identified peer influence as a key factor for substance use initiation among youth in urban slums[7].

Clinical Presentation

Alarmingly, over half (53.3%) of patients presented following a suicide attempt. While not statistically significant in our sample, this high rate demands attention and suggests a critical need for mental health screening and suicide prevention efforts in alcohol-dependent populations. This aligns with findings from Jaisoorya et al. (2019), who reported high rates of psychiatric comorbidity among college students with alcohol use in Kerala[8].

Rural-Urban Divide

All patients in this study came from rural backgrounds, with 90% living in nuclear families. This rural predominance may reflect differences in healthcare access, cultural attitudes toward alcohol, or economic stressors unique to rural areas. The National Family Health Survey-5 (2019-21) similarly found higher alcohol consumption rates in rural India compared to urban areas.

Implications for Intervention:

1. Early Prevention: Given the early age of alcohol initiation, school-based education programs targeting adolescents are crucial, as supported by Hawkins et al. (2008).

2. Workplace Interventions: With high employment rates among patients, workplace screening and support programs could be effective, as suggested by McLeroy et al. (2003).

3. Peer-Based Approaches: Interventions that leverage positive peer influence may be particularly impactful, given the role of peer pressure in initiation.

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4. Mental Health Integration: The high rate of suicide attempts underscores the need for integrated mental health and substance use treatment, as recommended by Hallgren and Andréasson (2013).

5. Rural Focus: Tailored interventions for rural communities are essential, addressing their unique risk factors and barriers to care, as highlighted by Gururaj et al. (2021).

Limitations and Future Directions

This study's small sample size and single-center design limit generalizability. Future research should include larger, multi-center studies and explore gender differences, as this sample included only male patients. Additionally, longitudinal studies could better elucidate the progression from initiation to dependence, as suggested by Wakefield et al. (2010).

Conclusion:

This study highlights the complex interplay of sociodemographic factors in alcohol dependence. By identifying key risk factors and patterns, it provides valuable guidance for developing targeted prevention and treatment strategies in the Indian context.

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