IMPACT OF ALCOHOL DEPENDENCE ON QUALITY OF LIFE: A COMPARATIVE STUDY

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ABSTRACT

Background: Alcohol dependence significantly impacts an individual's physical, psychological, and social well-being. Understanding the quality of life (QoL) of individuals with alcohol dependence and its relationship with socio-demographic and clinical variables is crucial for effective interventions. **Aim:** The aim of this study is to evaluate the quality of life (QoL) in individuals with alcohol dependence, compare it with normal controls, and examine its relationship with selected socio-demographic variables**. Methods and Materials:** A total of 200 participants were selected using a purposive sampling technique, comprising 100 individuals diagnosed with alcohol dependence (as per ICD-10 DCR criteria) and 100 normal controls matched on socio-demographic characteristics. The normal control group was screened using the General Health Questionnaire (GHQ-12), and those scoring e"3 were excluded. Participants were assessed using a socio-demographic datasheet and the WHO Quality of Life-BREF (WHOQOL-BREF). **Results:** No significant differences were observed between the two groups in socio-demographic variables, ensuring methodological rigor. However, individuals with alcohol dependence reported significantly lower QoL scores across all domains—Physical Health, Psychological Health, Social Relationships, and Environment—compared to normal controls ($p < .001$). Additionally, a significant negative correlation was found between age, duration of alcohol use, and all QoL domains, indicating that prolonged alcohol consumption and aging are associated with a decline in quality of life. **Conclusion:** The findings highlight the detrimental impact of alcohol dependence on various aspects of quality of life. Prolonged alcohol use exacerbates these effects, emphasizing the need for early intervention and psychosocial support.

Keywords: Alcohol dependence, quality of life, WHOQOL-BREF, socio-demographic variables, duration of alcohol use.

INTRODUCTION

Alcohol dependence is a persistent and recurrent condition marked by an inability to control alcohol consumption despite its negative consequences on health,

relationships, and daily functioning. In India, alcohol is the most commonly used psychoactive substance, with the National Drug Use Survey (2019) estimating that 5.2% of the population engages in harmful alcohol use, and 2.7% meets the criteria for alcohol dependence (Ambekar et al., 2019). Globally, alcohol consumption is responsible for nearly 3 million deaths annually and contributes to 5.1% of the total disease burden (WHO, 2018).

Quality of Life (QoL) is a multidimensional concept that encompasses an individual's physical health, psychological well-being, social relationships, and environmental factors (WHO, 1998). Research indicates that alcohol dependence significantly impairs all these domains, leading to deteriorated health, cognitive deficits (including memory and executive function impairments), emotional distress, social isolation, relationship difficulties, and unstable living conditions (Patkar et al., 2019; Dash & Swain, 2020; Olickal et al., 2021; Lahbairi et al., 2022; Colaco et al., 2023).

Recent studies highlight a bidirectional relationship between alcohol dependence and QoL. Factors such as the severity of alcohol use, co-occurring mental health conditions, and lack of social support are strongly associated with diminished QoL (Giri, Srivastava, & Shankar, 2016). While structured interventions and abstinence have been shown to improve QoL, prolonged alcohol use and relapse exacerbate these impairments (Davoren et al., 2020). Understanding these interactions is essential for developing targeted interventions aimed at enhancing well-being and promoting long-term recovery.

OBJECTIVE

The objective of this study is to evaluate the quality of life (QoL) in individuals with alcohol dependence, compare it with normal controls, and examine its relationship with selected socio-demographic variables

METHODOLOGY

This cross-sectional study was conducted at the Ranchi Institute of Neuro-Psychiatry & Allied Sciences (RINPAS), Kanke, Ranchi, using a purposive sampling method. A total of 200 male participants were selected, including 100 individuals diagnosed with alcohol dependence as per ICD-10 DCR criteria and 100 normal controls matched on socio-demographic characteristics. The WHOQOL-BREF, a 26-item scale assessing four domains—physical health, psychological well-being, social relationships, and environmental factors—was used to measure QoL. The inclusion criteria for the alcohol dependence group were: married males aged 25–45 years, a minimum education level of 5th standard, a diagnosis of alcohol dependence based on ICD-10 DCR criteria, and willingness to provide written informed consent. The normal control group included married males aged 25–45 years with a minimum education level of 5th standard, no history of substance use except nicotine, a GHQ-12 score below 3, and willingness to provide written informed consent.

PROCEDURE

Individuals diagnosed with alcohol dependence according to ICD-10 DCR criteria were recruited as the experimental group for the study. Those who did not consume alcohol and matched the socio-demographic characteristics of the experimental group, residing in Kanke and nearby areas, were selected as normal control participants. A total of 200 participants were selected using a purposive sampling technique, comprising 100 individuals with alcohol dependence and 100 normal controls. Informed consent was obtained from all study participants. Socio-demographic details were collected using a

self-prepared socio-demographic datasheet. The normal control group was screened using GHQ-12, and individuals scoring 3 or above were excluded from the study. All participants were then assessed using the WHOQOL-BREF scale to evaluate their quality of life. The collected data were analyzed using SPSS 20.

RESULTS

Table-1: Comparison of Sociodemographic Variables of Individuals with Alcohol Dependence and Normal Controls.

Continuous Variable		Sample (N=200)		df	t	
		Alcohol Dependence (N=100) (Mean ± SD)	Normal Control (N=100) (Mean ± SD)			
Age		32.160±6.87	32.990±5.98	198	-.910	
Year of education		15.51±3.71	16.27±4.22	198	-1.35	
Categorical variable		**(N=100) N**	**(N=100) N**		**X^2**	**P**
Family Type	Nuclear	51	52	1	.020	.887
	Joint	49	48			
Occupation	Daily wages Labor	20	18	4	3.357	.500
	Govt. Job	7	13			
	Private Job	16	21			
	Self employed	36	30			
	Unemployed	21	18			
Religion	Hindu	61	58	3	.572	.903
	Muslim	13	14			
	Christen	17	16			
	Other	9	12			
Domicile	Rural	47	45	2	.921	.631
	Urban	39	36			
	Semi-Urban	14	19			

Table-1: presents a comparison of sociodemographic variables between individuals with alcohol dependence and normal controls. The continuous variables, including age and years of education, were analyzed using an independent samples t-test. The mean age of individuals with alcohol dependence (32.16 ± 6.87 years) was slightly lower than that of the normal control group (32.99 ± 5.98 years), but the difference was not statistically significant. Similarly, the mean years of education were 15.51 ± 3.71 years in the alcohol dependence group and 16.27 ± 4.22 years in the normal control group, with no significant difference observed. For categorical variables, chi-square (÷²) tests were performed. The distribution of family type was nearly equal in both groups, with 51% of individuals with alcohol dependence belonging to nuclear families compared to 52% in the normal control group, showing no significant difference. Similarly, the occupation distribution showed no statistically significant variation between groups, with most participants being self-employed or working as daily wage laborers. Regarding religion, the majority of participants in both groups were Hindu (61% in the alcohol dependence group and 58% in the control group). Lastly, for domicile, most participants were from rural areas, followed by urban and semi-urban areas. Overall, no statistically significant differences were found between both groups across sociodemographic variables, indicating that both groups were comparable in these aspects.

Table-1.2: Duration of Alcohol Use of Individuals with Alcohol Dependence.

Variables	Alcohol Dependence
	Mean±S.D.
Duration of Alcohol Use (In Year)	7.86±3.21

Table-1.2 indicates that the participants had been consuming alcohol for an average of 7.86 years (±3.21 SD). This duration reflects the chronic nature of alcohol use in the sample.

Table-2: Comparison of Quality-of-Life domains between Individuals with Alcohol Dependence and Normal Controls.

WHO Quality-of-Life BREF	Sample (200)		df	t
	Alcohol Dependence (N=100) (Mean ± SD)	Normal Control (N=100) (Mean ± SD)		
Physical Health	18.62±2.89	26.99±3.71	198	-17.77***
Psychological Health	16.20±3.12	22.85±3.59	198	-13.95***
Social Relationship	7.55±1.68	11.66±2.27	198	-14.84***
Environment	18.91±3.85	28.39±4.76	198	-15.47***
Total QoL Score	61.21±9.91	89.89±10.90	198	-19.413***

*** Significance level p<.001

Table-2: Presents a comparative analysis of the Quality of Life (QoL) domains between individuals with alcohol dependence and normal controls using the WHOQOL-BREF scale. The results indicate that individuals with alcohol dependence reported significantly lower scores across all four QoL domains—physical health, psychological health, social relationships, and environment—compared to normal controls. These findings highlight the substantial negative impact of alcohol dependence on overall quality of life.

Table-3: The Relationship between Age, Education, Duration of Alcohol Use and Quality of Life in Individuals with Alcohol Dependence.

Quality of Life	Socio Demographic Variables		Clinical Variables
	Age	Education	Duration of Alcohol Use
Physical Health	-.388**	-.091	-443**
Psychological Health	-.365**	-.021	-.407**
Social Relationship	-.254*	-.064	-.271**
Environment	-404**	-.150	-.514**

*Significance level p<.05, **Significance level p<.01

Table-3 presents the correlation between socio-demographic variables (age and education), clinical variables (duration of alcohol use), and different domains of quality of life in individuals with alcohol dependence. The results indicate that age is significantly negatively correlated with all domains of QoL, including physical health, psychological health, social relationships, and environment. This suggests that as age increases, the quality of life decreases among individuals with alcohol dependence. Education did not show a significant correlation with any QoL domain, implying that the level of education may not have a direct impact on perceived quality of life in this population. The duration of alcohol use was significantly negatively correlated with all QoL domains, including physical health, psychological health, social relationships, and environment. These findings suggest that a longer duration of alcohol use is associated with a greater decline in overall quality of life, particularly in environmental well-being.

DISCUSSION

The results revealed no significant differences between the alcohol dependence group and the normal control group across socio-demographic variables such as age, education, family type, occupation, religion, and domicile. This methodological rigor ensures that potential confounding variables do not influence the study's findings, thereby enhancing its validity. The comparability between groups reduces potential biases, aligning with previous research that emphasizes the importance of matching socio-demographic factors in case-control studies (Prakash et al., 2015; Rajesh et al., 2021). The study also found that the average duration of alcohol use among individuals with alcohol dependence was 7.86 years (±3.21 SD), indicating the chronic nature of alcohol consumption in the sample. This prolonged duration is concerning, as long-term alcohol use is associated with severe physical, psychological, and social consequences. Furthermore, significant differences in QoL were observed between individuals with alcohol dependence and normal controls across all domains—Physical Health, Psychological Health, Social Relationships, and Environment. These findings align with prior research, which highlights the detrimental effects of alcohol dependence on various aspects of quality of life (Srivastava & Bhatia, 2013; Chikkerahally, 2019; Olickal et al., 2021; Arya, Singh, & Gupta, 2017). A significant negative correlation was found between age, duration of alcohol use, and all QoL domains, indicating that prolonged alcohol use and aging are associated with a marked decline in overall well-being. Alcohol exacerbates these challenges, particularly in older adults,

who are more vulnerable to its intoxicating effects and related health complications (Barry & Blow, 2016). Studies consistently show that long-term alcohol use deteriorates both physical and psychological health (Shivani et al., 2002; Varghese & Dakhode, 2022; Puddephatt et al., 2022). Beyond health-related consequences, harmful alcohol consumption often leads to family conflicts, work-related problems, financial instability, and unemployment (WHO, 2018). Alcohol dependence disrupts marital and familial dynamics, as reported by Ramanan & Singh (2016). Moreover, prolonged alcohol dependence diminishes satisfaction with living conditions, safety, and access to essential resources (Benegal, Velayudhan & Jain, 2000). Ma et al. (2022) further emphasized the role of a supportive family environment in improving the QoL of individuals with substance use disorders. Overall, these findings underscore the need for early interventions, targeted rehabilitation programs, and psychosocial support to mitigate the long-term consequences of alcohol dependence and improve the QoL of affected individuals.

CONCLUSION

The present study highlights the significant impairment in the quality of life (QoL) among individuals with alcohol dependence compared to normal controls. The findings reveal that alcohol dependence negatively impacts all domains of QoL, including physical health, psychological well-being, social relationships, and the environment. Additionally, a significant negative correlation was observed between age, duration of alcohol use, and QoL, indicating that prolonged alcohol consumption exacerbates these impairments over time. The absence of significant differences in socio-demographic variables between the two groups strengthens the validity of the findings by minimizing potential confounding factors. These results underscore the chronic and debilitating nature of alcohol dependence, emphasizing the need for early intervention, comprehensive rehabilitation programs, and social support systems to improve the overall well-being of affected individuals.

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