Section: Psychiatry

Original Research Article

SUICIDAL IDEATION AND ITS ASSOCIATION WITH SEVERITY OF ALCOHOL DEPENDENCE AMONG PATIENTS WITH ALCOHOL DEPENDENCE SYNDROME: A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Alcohol dependence syndrome is associated with substantial psychiatric, medical, and psychosocial morbidity. Suicidal ideation represents an important clinical concern among individuals with alcohol dependence because alcohol use may coexist with impulsivity, emotional dysregulation, and adverse social circumstances. The present study assessed suicidal ideation and its association with severity of alcohol dependence.

Aim: To assess suicidal ideation and its correlation with the severity of alcohol dependence among patients with alcohol dependence syndrome.

Materials and Methods: The present study is a cross-sectional observational study, conducted for six months from October 2025 to March 2026 in the Psychiatry Department of a tertiary care hospital. A total of 220 male patients aged 18 years and above diagnosed with alcohol dependence syndrome were recruited by convenience sampling. Patients with dependence on psychoactive substances other than alcohol, those hospitalized because of a suicide attempt, and those unwilling to provide informed consent were excluded. Alcohol dependence severity was assessed using the Severity of Alcohol Dependence Questionnaire (SADQ), while suicidal ideation and behaviour were assessed using the Columbia-Suicide Severity Rating Scale (C-SSRS). Descriptive statistics, Spearman correlation, chi-square test, and binary logistic regression were used. Statistical significance was considered at $p<0.05$.

Results: The mean age of participants was 40.61±10.67 years. Suicidal ideation, defined in the study based on the C-SSRS "wish to be dead" component, was present in 32.3% of participants. Suicidal thoughts were reported by 25.9%, thoughts about methods by 25.5%, and suicidal intent with a specific plan by 20.0%. Severe suicide risk was identified in 21.8%. A statistically significant weak positive correlation was observed between SADQ score and C-SSRS total intensity score ($r=0.279$, $p<0.001$). Binary logistic regression identified SADQ score as the strongest predictor (OR=1.056, 95% CI 1.030–1.083, $p<0.001$), while duration of alcohol use was also significant (OR=0.964, 95% CI 0.930–0.999, $p=0.041$).

Conclusion: Suicidal ideation was common among patients with alcohol dependence syndrome and was significantly associated with greater severity of alcohol dependence. Routine assessment using standardized suicide-risk instruments, particularly among patients with severe alcohol dependence, may facilitate early identification and appropriate psychiatric intervention.

Keywords: Alcohol Dependence, Suicidal ideation, SADQ score, C-SSRS Score.

INTRODUCTION

Suicide is a major public health problem and represents an important cause of premature mortality worldwide. Suicidal behaviour encompasses a continuum ranging from thoughts about death and suicidal ideation to planning, suicidal attempts and completed suicide. Suicidal ideation is therefore an important warning sign that warrants clinical assessment, particularly when it occurs in individuals with psychiatric or substance-use disorders.[1,2] The World Health Organization recognizes suicide as a major global health concern, with substantial consequences not only for individuals but also for families, communities and healthcare systems.[3]

Alcohol dependence is a chronic condition characterized by impaired control over alcohol use, continued use despite harmful consequences and physiological features of dependence. Alcohol use disorders are associated with considerable medical, psychological and social morbidity and contribute substantially to global disease burden.[4]

Acute alcohol intoxication may impair judgement, increase impulsivity and reduce behavioural inhibition, potentially facilitating suicidal behaviour. Chronic alcohol dependence may contribute to social isolation, financial difficulties, relationship problems, occupational impairment and psychiatric comorbidity, all of which may increase vulnerability to suicidal thoughts and behaviour.[5]

Various previous studies consistently demonstrated an association between alcohol-related disorders and suicidality. Hufford highlighted the role of alcohol intoxication and dependence in increasing impulsivity, aggression, and emotional instability, thereby contributing to suicidal behaviour.[2] McCloud et al. reported a strong association between alcohol-use disorders and suicidality in a psychiatric inpatient population.[5]

Suicidal ideation may be passive, such as wishing to be dead, or active, involving thoughts about deliberately ending one's life and potentially progressing towards a specific plan.[6] Assessment of the nature, intensity, duration, controllability, intent and planning of suicidal thoughts is therefore clinically important. The clinical presentation of suicidal ideation can be variable. Individuals may express hopelessness, helplessness or worthlessness, withdraw socially, demonstrate changes in mood or behaviour, increase alcohol or substance use, or engage in impulsive and risky behaviour.[7,8]

The Columbia-Suicide Severity Rating Scale (C-SSRS) is a standardized instrument designed to assess suicidal ideation and suicidal behaviour. It evaluates different dimensions of suicidal thinking and behaviour and can assist clinicians in identifying individuals who require further evaluation.[9,10] The C-SSRS has been studied in different populations, supporting its use as a structured approach to suicide-risk assessment.[10]

Assessment of alcohol dependence severity is also important because the intensity of dependence may influence the risk of suicidal ideation. The Severity of Alcohol Dependence Questionnaire (SADQ) assesses several features of alcohol dependence, including withdrawal symptoms, relief drinking, frequency of alcohol consumption and the speed with which withdrawal symptoms develop. It provides a standardized measure of the severity of alcohol dependence and was used in the present study to quantify dependence severity.

The present study was therefore undertaken among patients with alcohol dependence syndrome, which specifically assessed suicidal ideation using the C-SSRS, quantified alcohol dependence severity using the SADQ, examined the association between sociodemographic characteristics and suicidal ideation, and identified alcohol-related predictors using logistic regression.

Aim: To assess suicidal ideation and its correlation with the severity of alcohol dependence among patients with alcohol dependence syndrome.

MATERIALS AND METHODS

Study Design

The study was a cross-sectional observational study conducted among patients diagnosed with alcohol dependence syndrome. The study was conducted in the Psychiatry Department of a tertiary care hospital over a period of six months, from October 2025 to March 2026. A total of 220 male patients aged 18 years and above diagnosed with alcohol dependence syndrome were included using convenience sampling.

Inclusion Criteria

Male patients aged 18 years and above; diagnosed with alcohol dependence syndrome; willing to provide informed consent; and able to understand and respond to the study instruments.

Exclusion Criteria

Dependence on psychoactive substances other than alcohol; current hospitalization because of a suicide attempt; or unwillingness to provide informed consent.

Assessment of Alcohol Dependence

The Severity of Alcohol Dependence Questionnaire (SADQ) was used to assess alcohol-dependence severity. The study categorized participants into low, moderate, severe, and very severe dependence categories.

Assessment of Suicidal Ideation and Behaviour

The Columbia-Suicide Severity Rating Scale (C-SSRS) was used to assess suicidal ideation and suicidal behaviour. Components included wish to be dead, suicidal thoughts, thoughts about methods, suicidal intent without a specific plan, and suicidal intent with a specific plan. Suicidal behaviour included interrupted attempts, aborted attempts and preparatory behaviour.

Statistical Analysis

Data were entered into Microsoft Excel and analysed using IBM SPSS Statistics version 27.0. Descriptive statistics were used for categorical and continuous variables. Spearman correlation assessed the relationship between SADQ score and C-SSRS total intensity score. Chi-square testing assessed associations between sociodemographic variables and suicidal ideation. Binary logistic regression identified alcohol-related predictors. A p-value of <0.05 was considered statistically significant.

Ethical Considerations

Institutional Ethics Committee approval was obtained. Written informed consent was obtained from all participants. Confidentiality was maintained; personal identity details were not disclosed, and information was used exclusively for research purposes.

RESULTS

Table 1: Descriptive Statistics of Alcohol Use Characteristics Among Study Participants (n = 220)

VARIABLES	FREQUENCY	PERCENTAGE (%)
Duration of alcohol use(years) 2-10 11-20 21-30 31-40 41-45	 71 79 49 20 1	 32.27 35.90 22.27 9.09 0.45
Amount of alcohol intake (ml) 75 90 180 375 750 1125	 2 2 52 105 58 1	 0.9 0.9 23.6 47.7 26.4 0.5

- Out of 220 patients, it was observed that 71 (32.27%) participants have 2-10 years, 79 (35.90%) participants have 11-20 years, 49 (22.27%) participants have 21-30 years, 20 (9.09%) participants have 31-40 years and only 1 (0.45%) participant has 41-45 years of history of alcohol use.
- Out of 220 patients, majority of patients 105 (47.7%) consuming 375ml of alcohol, followed by750ml intake in 58 (26.4%) participants and 180ml intake in 52 (23.6%) participants. A smaller proportion of participants reported consuming 75ml and 90ml, each in 2 (0.9%) participants. Only 1 (0.5%) participant reported consuming 1125ml of alcohol.

Table 2: Distribution of Study Participants According to Suicidal Ideation Components (C-SSRS) (n = 220)

VARIABLE	CATEGORY	FREQUENCY	PERCENT (%)
Wish to be dead	No	149	67.7
	Yes	71	32.3
	Total	**220**	**100**
Suicidal thoughts	No	163	74.1
	Yes	57	25.9
	Total	**220**	**100**
Thoughts of how to kill yourself	No	164	74.5
	Yes	56	25.5
	Total	**220**	**100**
Intent without specific plan	No	216	98.2
	Yes	4	1.8
	Total	**220**	**100**
Intent with specific plan	No	176	80
	Yes	44	20
	Total	**220**	**100**

Table 3: Distribution of Study Participants According to Grouped Intensity of Suicidal Ideation Parameters (C-SSRS) (n = 220)

VARIABLE	SCORE 0–1 N (%)	SCORE 2–3 N (%)	SCORE 4–5 N (%)
Frequency	176 (80.0)	34 (15.5)	10 (4.5)
Duration	173 (78.6)	38 (17.3)	9 (4.1)
Controllability	176 (80.0)	28 (12.7)	16 (7.3)
Deterrents	179 (81.4)	28 (12.7)	13 (5.9)
Reasons	176 (80.0)	18 (8.2)	26 (11.8)

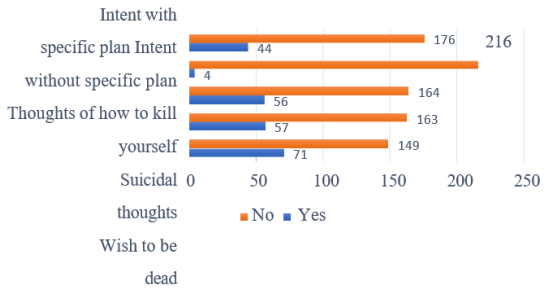

Figure 1: Distribution of Suicidal Ideation Components (C-SSRS) (n = 220)

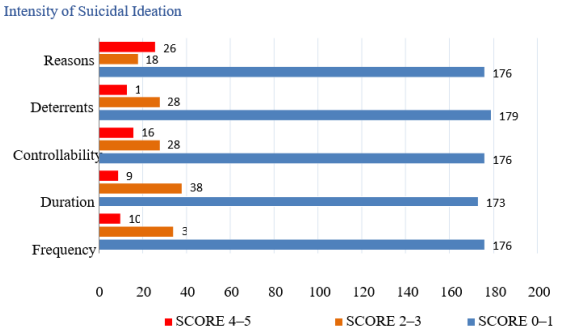

Figure 2: Intensity of Suicidal Ideation Parameters (C-SSRS) (n = 220)

Suicidal Ideation Components

- Of the total sample, 71(32.3%) of participants had suicidal ideations.
- Using C-SSRS, 71(32.3%) of participants reported a wish to be dead and 57(25.9%) had suicidal thoughts. Thoughts about methods were present in 56(25.5%). Intent without a plan was rare 4(1.8%), while intent with a specific plan was seen in 44 (20%).

Frequency of suicidal ideation was low in 176 (80.0%) participants, moderate (score 2–3) in 34 (15.5%) participants, and high (score 4–5) in 10 (4.5%) participants. Similarly, duration was low in 173 (78.6%) participants, moderate in 38 (17.3%), and high in 9 (4.1%).

Controllability was low in 176 (80.0%), moderate in 28 (12.7%), and high in 16 (7.3%).

Deterrents were low in 179 (81.4%), moderate in 28 (12.7%), and high in 13 (5.9%). Reasons for suicidal ideation were low in 176 (80.0%), moderate in 18 (8.2%), and high in 26 (11.8%).

Table 4: Distribution of Study Participants According to Total Intensity Score of Suicidal Ideation (C-SSRS) (n = 220)

Total Intensity Score	Frequency	Percent (%)
0	163	74.1
1–10	20	9.1
11–20	30	13.6
21–25	7	3.2
Total	**220**	**100**
Mean	**Standard Deviation**	**Range**
3.34	6.61	0-24

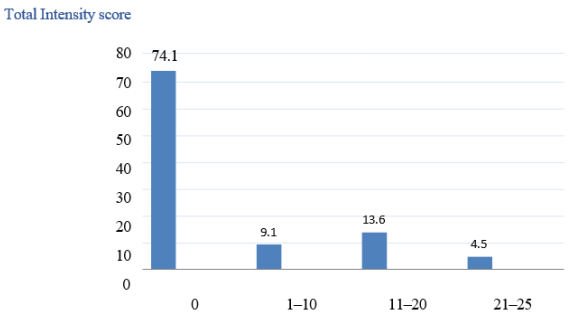

Figure 3: Total Intensity Score Distribution of Suicidal Ideation (n = 220)

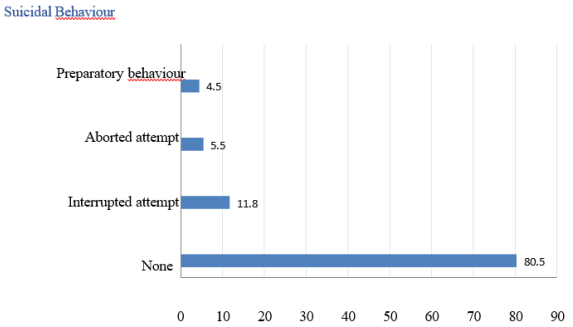

Figure 4: Distribution of Suicidal Behaviour Among Study Participants (n = 220)

It was observed that 163 (74.1%) participants had a total intensity score of 0, indicating absence of suicidal ideation intensity. A score between 1–10 was noted in 20 (9.1%) participants, while 30 (13.6%) participants had scores between 11–20. A high intensity score of 21–25 was observed in 7 (3.2%) participants. The mean total intensity score was 3.34 ± 6.61, with a range of 0 to 24.

- Suicidal behavior was assessed using the Columbia Suicide Severity Rating Scale (C-SSRS) among 220 participants.
- It was observed that majority of participants 177 (80.5%) reported no suicidal behavior. 26 (11.8%) participants was noted with interrupted attempt, 12 (5.5%) participants reported aborted attempt and preparatory behavior was observed in 5 (2.3%) participant

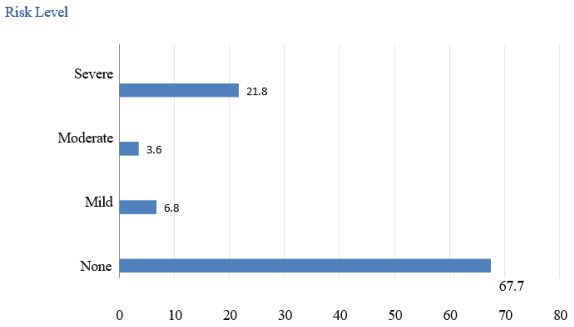

Figure 5: Suicide Risk Level Distribution Based on C-SSRS (n = 220)

Figure 6: Scatter Plot Showing Correlation Between SADQ Score and Total Intensity Score (n = 220)

The majority of participants, 149 (67.7%), were categorized under no suicide risk. Mild risk was identified in 15 (6.8%) participants, while moderate risk was observed in 8 (3.6%) participants. Severe suicide risk was reported in 48 (21.8%) participants.

The scatter plot demonstrates a weak positive linear relationship between SADQ score and total intensity score. The upward trend line indicates that suicidal ideation increases with severity of alcohol dependence, which is consistent with the correlation analysis (r = 0.279, p < 0.001)

Table 5: Distribution of Study Participants According to C-SSRS Suicidal Behavior (n = 220)

SUICIDAL BEHAVIOUR	FREQUENCY	PERCENT (%)
None	177	80.5
Interrupted attempt	26	11.8
Aborted attempt	12	5.5
Preparatory behaviour	5	2.3
Total	**220**	**100**

Table 6: Distribution of Study Participants According to Suicide Risk Assessment (C-SSRS) (n= 220)

RISK LEVEL	FREQUENCY	PERCENT (%)
None	149	67.7
Mild	15	6.8
Moderate	8	3.6
Severe	48	21.8
Total	220	100

Table 7: Correlation Between Severity of Alcohol Dependence (SADQ Score) and Suicidal Ideation (Total Intensity Score) (n = 220)

VARIABLES COMPARED	CORRELATION COEFFICIENT (R)	P-VALUE	INTERPRETATION
SADQ score vs Total intensity score	0.279	<0.001	Weak positive correlation

DISCUSSION

A total of 220 male patients with alcohol dependence syndrome were included. The mean age was 40.61±10.67 years. Most participants were married and employed. The majority had 11–20 years or 2–10 years of alcohol use, and 60% reported a family history of alcohol use. The mean SADQ score was 31.21±14.05. Severe dependence was observed in 35.0%, moderate dependence in 32.3%, very severe dependence in 17.3%, and low dependence in 15.5%. Thus, the study population predominantly demonstrated moderate-to-severe alcohol dependence.

Using the C-SSRS, 71 participants (32.3%) reported a wish to be dead, which was used in the thesis to represent the prevalence of suicidal ideation. Suicidal thoughts were present in 57 (25.9%), thoughts about methods in 56 (25.5%), intent without a specific plan in 4 (1.8%), and intent with a specific plan in 44 (20.0%). The mean C-SSRS total intensity score was 3.34±6.61. A statistically significant weak positive correlation was observed between SADQ score and C-SSRS total intensity score (r=0.279, p<0.001), indicating that greater alcohol-dependence severity was associated with greater suicidal-ideation intensity.

Binary logistic regression identified SADQ score as the strongest predictor (OR=1.056, 95% CI 1.030–1.083, p<0.001). Duration of alcohol use was also significant (OR=0.964, 95% CI 0.930–0.999, p=0.041).

These findings are consistent with previous literature demonstrating an association between alcohol-use disorders and suicidality. Alcohol may contribute to suicide risk through impaired judgement, behavioural disinhibition and increased impulsivity during intoxication, while chronic dependence may contribute through social, occupational, financial and interpersonal difficulties.[2,5]

Previous studies have reported an association between severity of alcohol dependence and suicidal ideation. Driessen et al. found that psychiatric comorbidity, particularly depressive and anxiety disorders, was associated with suicidal ideation

among alcohol-dependent patients.[1] Conner et al., using Project MATCH data, demonstrated an important relationship between drinking behaviour and suicidal ideation.[11] Kumar et al. reported a significant positive association between suicidal ideation and severity of alcohol dependence among patients with alcohol dependence syndrome.[12] Ziółkowski et al. identified alcohol dependence severity, alcohol craving and psychiatric comorbidity as relevant factors associated with suicidal thoughts.[13] Rahoof et al. reported a high prevalence of suicidal ideation among persons with alcohol-use disorder and emphasized the need for systematic suicide-risk assessment.[14]

More recent work has continued to demonstrate the relationship between alcohol-use disorder and suicidal ideation. Studies have reported associations with younger age, psychiatric symptoms and severity of alcohol-related problems. The thesis literature review also describes findings from studies by Zakhour et al., Hsu et al., Crossin et al., and Mahadevappa et al., which collectively support the importance of alcohol-related severity and associated clinical factors in suicidal risk.

The significant relationship between SADQ score and suicidal ideation intensity is consistent with previous reports of a relationship between severity of alcohol dependence and suicidal ideation.[12,13] The weak correlation indicates that dependence severity is an important clinical marker but does not by itself explain suicidal behaviour, which is multifactorial.

Overall, the findings support routine assessment of suicidal ideation among patients with alcohol dependence, particularly those with greater dependence severity. Standardized tools such as the C-SSRS should complement detailed clinical assessment of psychiatric comorbidity, previous suicidal behaviour, psychosocial stressors and protective factors.

CONCLUSION

Suicidal ideation was common among patients with alcohol dependence syndrome and was significantly associated with greater severity of alcohol dependence. Routine assessment using standardized suicide-risk instruments, particularly among patients with severe alcohol dependence, may facilitate early identification and appropriate psychiatric intervention.

Limitations of the Study

This study has a few limitations. Since it was cross-sectional and conducted at a single hospital using convenience sampling, causal relationships cannot be established, and the findings may not be generalizable to other settings. Patients who were currently hospitalized following a suicidal attempt were excluded, which may have resulted in underestimation of acute suicidal risk.

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REFERENCES

1. Driessen M, Veltrup C, Weber J, John U, Wetterling T, Dilling H. Psychiatric comorbidity, suicidal behaviour and suicidal ideation in alcoholics seeking treatment. Addiction. 1998; 93: 889-894.
2. Hufford MR. Alcohol and suicidal behavior. Clin Psychol Rev. 2001;21(5):797-811.
3. World Health Organization. Suicide: key facts. Geneva: World Health Organization; 2021.
4. Li J, Bornheimer LA, Fernandez L, Dagher J. The relationships between risk-taking, depression, and alcohol use in the experience of suicidal ideation among adults in the general population. Crisis. 2022;43(3):228-235.
5. McCloud A, Barnaby B, Omu N, Drummond C, Aboud A. Relationship between alcohol use disorders and suicidality in a psychiatric population: in-patient prevalence study. Br J Psychiatry. 2004;184(5):439-445.
6. Cleveland Clinic. Suicidal ideation (suicidal thoughts). Cleveland, OH: Cleveland Clinic; 2024.
7. American Psychiatric Association. Suicide prevention. Washington, DC: American Psychiatric Association.
8. Rizvi A, Harmer B, Saadabadi A. Suicidal ideation. In: StatPearls. Treasure Island, FL: StatPearls Publishing; 2026.
9. Austria-Corrales F, Jiménez-Tapia A, Astudillo-García CI, Arenas-Landgrave P, Xochihua-Tlecuitl T, Cruz-Cruz C, et al. The Columbia-Suicide Severity Rating Scale: validity and psychometric properties of an online Spanish-language version in a Mexican population sample. Front Public Health. 2023; 11: 1157581.
10. Van Spijker BA, Batterham PJ, Calear AL, Farrer L, Christensen H, Reynolds J, et al. The Suicidal Ideation Attributes Scale (SIDAS): community-based validation study of a new scale for the measurement of suicidal ideation. Suicide Life Threat Behav. 2014;44(4):408-419.
11. Hawton K, Witt KG, Taylor Salisbury TL, Arensman E, Gunnell D, Hazell P, et al. Psychosocial interventions for self-harm in adults. Cochrane Database Syst Rev. 2016;(5): CD012189.
12. Bryan CJ, Mintz J, Clemans TA, Leeson B, Burch TS, Williams SR, et al. Effect of crisis response planning vs. contracts for safety on suicide risk in U.S. Army Soldiers: a randomized clinical trial. J Affect Disord. 2017; 212: 64-72.
13. Ziółkowski M, Czarnecki D, Chodkiewicz J, Gąsior K, Juczyński A, Biedrzycka A, et al. Suicidal thoughts in persons treated for alcohol dependence: the role of selected demographic and clinical factors. Psychiatry Research. 2017; 258: 501–505.
14. Rahoof FV, Cherian AV, Kandasamy A, Ezhumalai S, Dhanasekara RP. Suicidal Ideation among Persons with Alcohol Use Disorder: A Cross-Sectional Study. J Psychosoc Well Being. 2021 Jul-Dec; 2 (2): 30-41.