

A Study on the Relationship between Suicidal Ideation and Psychiatric Comorbidity in Alcohol Dependent Subjects

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Abstract

Background: Alcohol dependence is frequently associated with significant psychiatric co-morbidities which may increase the risk of suicidal ideation. Suicide is currently the fourth most common cause of death worldwide.

Aim: To find out the relationship between suicidal ideation and explore the risk factors for suicide among alcohol dependent subjects.

Materials and Methods: A total of 100 male patients diagnosed with alcohol dependence syndrome as per DSM V were included for the study. M.I.N.I version 6.00 used for assessing psychiatric comorbidity and Beck's suicidal ideation scale was used to measure the suicidal ideation.

Results: Among the study subjects mean score on Beck's suicidal ideation was found to be 7.55 with a SD of ± 7 , psychotic disorders were found to be 40 % followed by generalized anxiety disorders - 18% followed by major depressive disorder-2%.

Conclusion: suicidal ideation is highly prevalent among alcohol dependent individuals particularly those with co-existing psychiatric disorders.

Keywords: alcohol dependence, suicidal ideation, M.I.N.I, Beck's suicidal ideation scale.

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Introduction

Alcohol dependence is frequently associated with significant Psychiatric co-morbidities which may increase the risk of suicidal ideation. Suicide is currently the fourth most common cause of death worldwide.

In recent years, a whole series of studies has provided evidence for the association between alcohol consumption and an increased risk of suicidality. The meta-analysis by Amiri and Behnezhad [1] shows that alcohol consumption increases the probability of suicidal thoughts, suicide attempts and mortality from suicide by 65%. However, according to the WHO report [2], about 80% of the group with SI do not progress to a suicide attempt, as they often only have a temporary suicidal impulse [3]. Nevertheless, SI is considered a crucial primary indicator of the potential for a suicide attempt, as it is an essential stage in the process of suicide [4]. It has been reported that alcohol problems are a major cause of SI [5]. Due to

the characteristic loss of control over compulsive drinking and alcohol consumption, AUD not only causes physical problems, such as alcoholic liver disease [6], but also leads to long-term economic difficulties, such as employment changes, as well as mental disorders, such as sleep disorders, depression, anxiety disorders, and even suicidal ideation (SI) [7,8]. In addition, AUD has been reported to increase the risk of suicide as an independent risk factor by causing disorders in the endocrine system and other factors, not just as a complex mediator with other mental disorders [9].

In their review article, Fazel et al [10]. Discuss predisposing and triggering factors for suicidal behavior. Both classes of factors interact with the resilience of the individual. Predisposing and triggering factors can, in combination, lead to psychological distress that ultimately results in suicidal behavior. Drug and alcohol use disorders are considered to be strong triggers. Other triggering

factors have a moderate or weak effect. Strong predisposing factors include neuropsychiatric disorder and a family history of suicidal behavior risk factors for suicide [10].

Understanding the relationship between these factors is crucial for effective assessment and intervention.

Aims and Objectives:

Aim: To find out the relationship between Suicidal ideation and Psychiatric co morbidity in Alcohol dependent subjects

Objectives:

1. To measure the suicidal ideation and explore the risk factors for suicide among Alcohol dependent subjects.
2. To know any psychiatric co-morbidity among study population.
3. To study the relationship between Suicidal ideation and Psychiatric co morbidity in the study population.

Materials and Methodology:

Study Design: It is an observational study.

Study Setting: Study was conducted in Psychiatry Department, at a tertiary care hospital.

Study Duration: The study was conducted from April 2026 to June 2026 for a period of 3 months.

Study Population: Alcohol dependent participants who were admitted in the de-addiction ward were considered for the study.

Inclusion Criteria:

- The study includes 100 male patients diagnosed with Alcohol dependence syndrome as per DSM V criteria.
- Participants who are aged between 18 to 65 years are considered for the study.
- Participants who give informed consent are considered for the study.

Exclusion Criteria:

- The study excludes individuals with independent Axis -I disorders and with Comorbid medical illness.

Sample Size:

- A total of 100 male participants who meet the inclusion criteria are considered for the study.

Method of Data Collection: Participants who are diagnosed as Alcohol dependence syndrome and

those who meet the inclusion criteria and given informed consent were considered eligible for the study. Socio demographic details of the participants were collected using the socio demographic data sheet that was designed for the purpose of the study. They were administered Beck's suicidal ideation scale for measuring suicidal ideation and MINI scale was applied for assessing any underlying Psychiatric Co-morbidity. The following statistics are used in the study:

Statistical analysis was done using Mean, percentage, Standard deviation and

Chi square test (χ^2).

't'test – this is used for testing the difference between the means in two groups.

For statistical analysis the groups compared are as follows.

Group -1 – AD subjects with suicidal attempts.

Group -2 – AD subjects without suicidal attempts

Other classification involved

Group A- AD subjects with psychiatric diagnosis as per M.I.N.I.

Group B- AD subjects without any psychiatric diagnosis using M.I.N.I.

Pearson's correlation coefficient ('r') – this is used to test the association between two quantitative variables.

For all statistical analysis statistical package for social sciences version 21 (SPSS) was used. MS excel 2010 used for data entry. For all statistical analysis $P < 0.05$ was considered as significant.

Tools Used:

- Socio-demographic data sheet: Semi-structured socio-demographic profile which is self-designed was used to take details of age, gender, marital status and education.
- The Mini International Neuropsychiatric Interview, M.I.N.I. version 6.0.0 [11], it is a short structured diagnostic interview to assess major psychiatric disorders.
- The Beck's suicidal ideation scale: This scale is a 19-items instrument that evaluates the presence and intensity of suicidal thoughts in a week. [12]

Observations and Results:

The study sample consisted of 100 subjects.

Table 1: Socio – demographic characteristics of the sample.

Mean Age		Mean	S.D
	Mean Age	43.49 Yrs	8.026 yrs
Age Range		N	%
	18-24 yrs	2	2.00
	25-34 yrs	13	13.00
	35-44 yrs	38	38.00
	45-54 yrs	44	44.00
	>55 yrs	3	3.00
Gender		N	%
	Male	100	100.00
Marital status			
	Married	73	73.00
	Unmarried	24	24.00
	Divorced	03	03.00
Family type			
	Joint	70	70.00
	Nuclear	30	30.00
Domicile			
	Rural	45	45.00
	Urban	55	55.00
Socioeconomic status			
	Low	58	58.00
	Med	40	40.00
	Higher	02	02.00
Education			
	Illiterate	10	10.00
	Primary	20	20.00
	Secondary	27	27.00
	High School	35	35.00
	Graduate	08	08.00
Employment status			
	Employed	59	59.00
	Un Employed	41	41.00
Occupation			
	Un Skilled	45	45.00
	Skilled	14	14.00
	Un Employed	41	41.00

Table 1 shows that all the subjects in the sample were males, their mean age was 43.49 years with a standard deviation of ± 8.026 years, most of them belonged to age range of 45-54 years and 35-44 years. Majority of them were married, belonged to joint families, were from urban background and belonged to low socio economic status. Most of them had high school education, were employed and belonged to unskilled occupational groups.

Table 2:

	Groups	N	%
1.	Alcohol dependent subjects with suicide attempt	24	24
2.	Alcohol dependent subjects without suicide attempt	76	76
	Total	100	100

Participants were divided into two groups. Group 1 consisting of participants with suicidal attempts and group 2 consisting of participants without suicidal attempts. The above table showed the prevalence of suicidal attempts in alcohol dependent subjects to be about 24%.

Table 3:

AD subjects with suicide attempts(n=24)	AD subjects without suicide attempts (n=76)
mean $\pm$ SD : 44.16 $\pm$ 9.03 years	Mean $\pm$ SD : 43.27 $\pm$ 7.73 years

The mean age of the sample who have attempted suicide was found to be 44.16 with SD of ± 9.03 years.

Table 4:

	Beck's suicidal ideation score (Mean $\pm$ SD)	T
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Total sample	7.55 ± 7.00	32.658
AD subjects with suicide attempts	19.54 ± 2.16	
AD subjects without suicide attempts	3.76 ± 1.69	P=0.00

All the participants were applied on BECK'S suicidal ideation scale and were divided into groups those with suicide attempts and without suicide attempt.

The mean score on BECK'S suicidal ideation for the total sample was found to be 7.55 with a SD of ±7. In participants with suicidal attempt the mean

Beck's suicidal ideational score was 19.54 with a standard deviation of +/- 2.16.

In participants without suicidal attempt the mean Beck's suicidal ideational score was found to be 3.76 with a SD of +/- 1.69. The difference the mean values of suicidal ideation scores between the two groups was statistically significant.

Table 5: Psychiatric diagnosis as assessed by M.I.N.I across the two groups

Psychiatric diagnosis by M.I.N.I	Total sample 100(n%)	AD subjects with suicide attempts n=24	AD subjects without suicide attempts n=76
Psychotic disorder	40(40%)	10 (41.6%)	30(39.47%)
Generalized anxiety disorder	18(18%)	6(25%)	12(15.78%)
major depressive disorder	2(2%)	2(8.3%)	0(0%)

The most common psychiatric diagnosis observed in alcohol dependent subjects was psychotic disorder -40% , followed by GAD -18% followed by MDD -2%. The rate of occurrence of all these psychiatric disorders are greater among alcohol dependent subjects with suicide attempts when compared to those without suicide attempts when compared to those without suicidal attempts.

Table 6: Psychiatric diagnosis using M.I.N.I. across the two groups

	AD subjects with suicide attempts N(%)	AD subjects without suicide attempts N(%)	χ^2
AD subjects with psychiatric symptoms	18(75%)	42(55.26%)	3
AD subjects without any psychiatric symptoms	6(25.00%)	34(44.74%)	p<0.05

Correlation analysis: As tested by chi square test there were statistically significant differences in the occurrence of psychiatric co-morbidities between the two groups with alcoholic suicide attempters having greater prevalence of psychiatric co-morbidity when compared to alcoholic subjects without suicidal attempts.

Discussion

The mean age of the sample was 43.49 years with a SD of ± 8.026 years and majority of alcohol dependent subjects were found to be in age groups of 45 -54 years. The prevalence of attempted suicides in alcohol dependent subjects was found to be 24% in the current study. Harris R et al (1979) have studied 166 male alcoholic abusers and have reported suicide attempts in 26% in the study sample [13]. Chignon J.M et al (1998) have examined the life time prevalence of suicide attempts in alcohol dependent patients and have reported that 25.4% of them had attempts during their life time [14]. Schukit M A(2003) have reported that the mean age of alcoholic suicide attempts (33.3 years +/- 7.9 years) was significantly lower than that of alcoholics who have not made suicidal attempts(37.2 years+/- 11.6 years). [15]

In the present study, 70.84% of alcohol dependent subjects with suicide attempts and 73.68% of alcohol dependent subjects without suicide attempts

were found to be married and 4.16% of alcohol dependent subjects with suicide attempts and 2.64% of AD subjects without suicide attempts were found to be divorced. Pirkola S et al (2000) and Schukit M et al (2003) reported that marital status of being single widowed, divorced or separated has been observed to be a risk factor for increased suicidal attempts in alcohol dependent persons. [15,16]

Similarly a poor social support system and living alone were found to be predictive of suicide in Alcoholics by Murphy GE and Wetzel R.D(1992) [17]. The current study showed significant number of alcoholic subjects with suicidal attempts belonged to middle socioeconomic status followed by low socioeconomic status. Roy A (1990), Murphy GE (1992), Pirkola S (2000) and Conner KR (2003) reported that financial difficulties and belonging to low socio economic status were found to be more common among alcoholics who attempted suicide. [16-19] More than half of the Alcohol dependent subjects who had made suicidal attempts were found to be unemployed and unemployment in this group is found to be significantly greater than that in alcohol dependent subjects without suicidal attempts.

Hawton K. et al (1989) in their study of attempted suicide patients have found that a high rate of

unemployment in association with alcoholism is found in suicide attempters of both sexes [20].

Other studies subsequently have also confirmed unemployment as a risk factor that is specifically predictive of suicide in alcoholic patients. [15,17]

In the current study the psychiatric co morbidity was observed to be >50% in alcoholic subjects. The Epidemiological Catchment area study (ECA) the prevalence rate was reported to be 38%. The current study showed majority of the subjects suffered from Psychotic disorders (40%), followed by Generalized anxiety disorders and Major depressive disorders were found to be 2% in the study population.

The occurrence of Major depressive disorder was found to be a significant risk factor for suicide attempt in alcoholics in several studies. [17,21-23] Schukit M (1997) has reported that Alcoholics with independent major depression were more likely to attempt suicide than those with substance induced depression [24]. Beck et al (1989) have reported that the risk of alcoholics eventually committing suicide was over 5 times greater than that of non-alcoholics. They have found a positive relationship between levels of depression and suicidal intent in Alcohol dependent patients. [25]

These findings were replicated by Demirbas H et al (2001) and using linear regression analysis they reported that the depression scores predicted suicidal probability by 53%. [26] Concomitant features of depression like loss of self-esteem and negative self-image, hopelessness state and trait anxiety were also reported to speed up the suicidal process in Alcoholic patients. [20,27-29] Demirbas H (2001) observed that the occurrence of high level of anxiety in Alcohol dependent patients increases the risk of suicide. [26]

Hessel brock M et al (1988) in their study of attempted suicides have found that occurrence of multiple psychiatric diagnosis in the same individual with more severe psychiatric symptoms are characteristic of Alcoholic suicide attempters as compared to no attempters. [30] Benjaminsen et al (1998), have found that significantly more number of Alcoholics who attempted suicide suffered from depressive disorder, anxiety attacks, agoraphobia, substance abuse and other cluster B personality disorders. [28]

The study findings show that the occurrence of psychiatric morbidity is associated with an increased rate of suicide attempts in Alcohol dependent subjects.

Conclusion

The study showed the relation between psychiatry morbidity and suicidal attempts in alcohol dependent subjects. The current evidence suggests there is a significant increase in the risk of suicidal ideation in alcohol dependent individuals with psychiatry morbidity and suggest the need to address the underlying psychiatric comorbidity in substance use disorders in decreasing the risk of suicide in the substance use population.

Limitations: Sample size is less and hence the obtained results cannot be generalized to the population.

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