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Original Research Article

Mechanism of coping in patients of alcohol dependence and its correlation with anxiety, depressive symptoms

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ABSTRACT

Background: Alcohol use disorder is a common and challenging problem in India. In various studies the prevalence of co-morbid psychopathologies ranges from 15-70% including depression & anxiety disorders. Coping mechanisms of individual play vital role in case of developing alcohol dependence and various psychopathologies. A complex interaction of psychopathologies, coping skills, and alcohol use can influence the outcome of alcohol dependence. This study was undertaken with the aim of studying coping mechanism along with anxiety, depressive symptoms and their correlation in patients of alcohol dependence.
Methods: This was a cross sectional study conducted in a tertiary government hospital. Institutional ethics committee approval obtained. 152 patients with the diagnosis of alcohol dependence (DSM IV TR) were screened for inclusion and exclusion criteria, out of which 60 patients were enrolled after taking written informed consent. Following scales were used for the study, mechanisms of coping scale (MOCS), Hamilton anxiety rating scale (HAM-A), Montgomery-Asberg depression rating scale (MADRS).
Results: 32 patients had HAM-A score >17 suggestive of anxiety, similarly 40 patients had MADRS score >7 indicating depression. Problem focussed coping mechanism such as problem solving is associated with better outcome in terms of lesser anxiety and later age of first drink as well as developing dependence. Passivity, which is an emotion focussed coping mechanism, is associated with earlier first drink and higher depression score in patient suggesting poor outcome.
Conclusions: Coping skills training should be incorporated in abstinence focused programs. Co-morbid psychopathologies like anxiety and depression are common in alcohol dependence individuals and thus, screening for these symptoms is essential for early interventions and better outcomes.

Keywords: Alcohol dependence, Anxiety, Coping mechanisms, Depression

INTRODUCTION

Alcohol use disorder is a common and challenging problem in India. Common co-morbid psychopathologies in alcohol dependence include negative affective disorders like severe depression and anxiety disorders.[1,2] Though alcohol dependence may both contribute to and result from negative affective disorders, abstinence often alleviates depressive and anxiety symptoms. The presence of depressive and anxiety symptoms complicates the course of alcohol dependence and poses challenges for treatment and prevention of relapses. Though anxiety is a common withdrawal symptom,

anxiety disorders are not rare even after prolonged abstinence from alcohol.

The prevalence of other psychiatric disorders in alcohol dependants is of concern to both clinicians and researchers; it is arguably one of the most important advancements in psychiatric nosology in the twentieth century.[3] Alcohol dependence is often associated with other psychiatric disorders in clinical and community samples of alcoholics.[4] Affective disorders (mainly depression), personality disorders (antisocial) and anxiety disorders (phobia) are widespread among persons who abuse alcohol and having an additional psychiatric diagnosis has implications for the prognosis and treatment of alcohol dependence and the associated psychopathology.[5] In various studies the prevalence of co-morbid psychopathologies ranges from 15-70% including depression & anxiety disorders like social phobia, generalized anxiety disorder.[1,2,6]

Coping skills are crucial in relapse prevention strategies of alcohol dependence. A complex interaction of psychopathologies, coping skills, and alcohol use can influence the outcome of alcohol dependence. Also there is complex interplay between anxiety, depression symptoms with alcohol consumption and coping mechanisms. It is very difficult to comment whether anxiety, depressive features are present before starting of alcohol consumption or various psychosocial effects of alcohol triggered the anxiety, depression.

In addition, coping mechanism of individual play vital role in case of developing alcohol dependence and various psychopathologies like anxiety and depression. If coping mechanisms used are poor or negative coping mechanisms are used, that may lead to persistence of anxiety, depression which in turn lead to relapse in cases of alcohol dependence. Thus by finding out the complex interplay between anxiety, depression and coping skills in alcohol dependent individuals we can act in order to prevent the relapse.

There are many western studies who found out the relation between anxiety, depression in alcohol dependent but very few Indian studies on this issue. Also there is scarcity of studies and dearth of literature focusing on coping mechanisms in alcohol dependence and its relationship with psychopathologies & alcohol dependence. Therefore this study was undertaken with the aim of studying coping mechanism along with anxiety, depressive symptoms and finding their relationship in patients of alcohol dependence.

METHODS

This was a cross sectional single interview study conducted in a tertiary care government hospital, Mumbai. After getting Institutional ethics committee approval, 152 alcohol use disorder patients attending for follow up in OPD of de-addiction unit were screened for inclusion and exclusion criteria, out of which 60 patients were enrolled in the study. The patients included were adult patients less than 60 years of age with the diagnosis of alcohol dependence (DSM IV TR) with at least 30 days of abstinence and those able to speak Hindi, English or Marathi. Patients with already diagnosed comorbid psychiatric or major medical illness were excluded. The patient using any other substance apart from alcohol and tobacco were also excluded from the study.

Written informed consent was obtained from each participant after they were provided information about the study and assured confidentiality. After taking the consent the participant were given an appointment for the interview as per their convenience. Especially designed case record was used to note the socio-demographic variables and responses of patients. Following scales were used for the study,

Mechanisms of coping scale (MOCS)

It is an was modified by Parikh et al from the 'Ways of Coping Scale' by Lazarus and Folkman.[7,8] It is a 30-item instrument divided into 5 factors that relate to individual ways of coping namely escape avoidance, fatalism, expressive action, problem solving, passivity. The patients were asked to choose ‘Alcohol Dependence’ as the event and then rate the 30 items on a scale of 0 to 3 response set of scale. Since the number of items on each of the five factors was different, the average score for each factor was calculated.[9]

Hamilton anxiety rating scale (HAM-A)

It’s a 14 items scale devised by Hamilton which measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety).[10] Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56, where <17 indicates mild severity, 18–24 mild to moderate severity and 25–30 moderate to severe.

Montgomery-Asberg depression rating scale (MADRS)

It is a 10 item scale used to assess the depressive symptoms in alcohol dependent individuals devised by Montgomery and Asberg.[11] Each item is scored on a scale of 0, 2, 4, 6 in which higher scores indicate increasing severity of depressive symptoms. Ratings can be added to form an overall score (range 0 to 60); no weights are used. Cut-off points include: 0 to 6 - symptoms absent, 7 to 29 - mild depression, 30 to 34 - moderate, 35 to 60 - severe depression.

Statistical analysis

Statistical Analysis was done by Software SPSS 15 for windows. Correlations were carried out by Pearson’s rank correlation coefficient and group differences were analyzed by chi-square test as applicable. Two tailed ‘p’

value was obtained for all statistical analysis and score of p≤0.05 was considered as statistically significant.

RESULTS

We interviewed 60 patients and all of them were males with mean age of 37.2±6.3 years. The sociodemographic distribution of our sample was as described in Table 1. The mean age of first drink was 20.9±5.4 years with earliest age of first drink being 14 years and 22 of 60 participants had their first drink before 18 years of age. We interviewed the patient to determine by what age they developed alcohol dependence and the mean age of developing alcohol dependence in our sample was 30.3±4.1 years. The correlation between age of first drink and age of developing dependence was positive and significant (Pearson correlation coefficient- 0.622, P<0.00). We also correlated the different coping mechanisms with age at first drink and age at dependence (Table 2) and found significant positive relationship of both with problem solving coping mechanism. Also the passivity had significant negative correlation with age of first drink.

Table 1: Sociodemographic distribution of the sample.

Socio-demographic variables		Percentage	n-60
Religion	Hindu	66.6%	40
	Muslim	33.3%	20
Marital status	Married	75%	48
	Unmarried	25%	12
Education	Intermediate	66.6%	40
	High school	23.3%	14
	Primary school	10%	6
Socioeconomic status	Upper lower	10%	6
	Lower middle	26.6%	16
	Upper middle	63.3%	38
Family history of alcohol dependence	Yes	66.6%	40
	No	33.3%	20

Table 2: Correlation of coping mechanism with age variable.

Parameters	Age at first drink		Age at dependence	
	Pearson's R	P value	Pearson's R	P value
MOCS escape avoidance	0.313	0.092	0.206	0.275
MOCS fatalism	-0.146	0.442	-0.286	0.125
MOCS expressive action	0.106	0.577	-0.203	0.283
MOCS problem solving	0.766	0.000*	0.392	0.032*
MOCS passivity	-0.669	0.000*	-0.104	0.583

MOCS- Mechanism of coping scale, *- P<0.05.

Table 3: Relationship between family history of alcohol dependence and anxiety, depression.

Parameters		Family history of alcohol dependence		Chi square	P value
		Yes (n-40)	No (n-20)		
Anxiety on HAM-A	Present (n-32)	30% (n-18)	23.3% (n-14)	1.674	0.196
	Absent (n-28)	20% (n-22)	10% (n-6)		
Depression on MADRS	Present (n-40)	43.3% (n-26)	23.3% (n-14)	0.075	0.784
	Absent (n-20)	23.3% (n-14)	10% (n-6)		

HAM-A - Hamilton anxiety rating scale, MADRS- Montgomery-Asberg depression rating scale.

Table 4: Correlation of anxiety and depression with coping mechanisms and other variables.

Parameters	Anxiety		Depression	
	Pearson's R	P value	Pearson's R	P value
Age	-0.164	0.388	0.473	0.008*
Age at first drink	-0.462	0.010*	-0.210	0.265
Age at dependence	-0.581	0.001*	0.161	0.395
MOCS Escape avoidance	0.164	0.388	-0.100	0.599
MOCS Fatalism	0.189	0.317	-0.235	0.210
MOCS Expressive action	0.324	0.081	0.016	0.933
MOCS Problem solving	-0.389	0.033*	-0.145	0.445
MOCS Passivity	0.286	0.125	0.486	0.006*

MOCS- Mechanism of coping scale, *- P<0.05.

DISCUSSION

The present study assesses anxiety and depressive features in alcohol dependent individuals and also the coping mechanisms in alcohol dependant patient in early remission. We also focused on assessing the interplay between anxiety, depression and coping mechanisms in patients of alcohol dependence as this complex interplay may be responsible for prolonged abstinence and relapse prevention.

On assessing the socio-demographic variables, it was observed that unlike other studies conducted in a general hospital setting or other alcoholism treatment centres, all the subjects were males in this study. The reason could be that alcohol consumption by women is socially unacceptable in Indian culture and women may not avail treatment openly in a general hospital setting. It was found that more men than women use alcohol, and the ratio of men to women for an alcohol-related diagnosis is about 2:1 or 3:1.[12,13] Though we enrolled the patients from age group 18-60 years the mean age of study sample was found to be 37.2±6.3 years, with majority (83.3%) in the age group of 26-45 years. This is in keeping with other studies.[2,13] The Muslims were relatively less in spite of the hospital being situated in a predominantly Muslim locality; this is most probably due to the fact that Islam considers alcohol consumption as sinful act whereas Hinduism does not explicitly discourage the alcohol use. Barry has suggested that in various nationalities and religions, the low alcohol dependence rates found were due to effective social and religious restraints.[14]

Majority of participants were married, but this is not enough to draw any conclusion. The Indian society encourages marriage and traditionally women are supposed to be supportive of their spouses and only few of them opt for the separation or divorce from their spouse alcohol related problems. The level of education may be related to Alcohol consumption patterns.[15] Since the data being from government hospital, our patients population belonged to Middle to Lower socio-economic class and hence the education level might have been less. Alcoholism is common amongst unskilled and semiskilled workers, employers and managers coming as second with professionals a close third.[16]

The mean age of first drink in our study was in 20s whereas mean age of developing dependence is in 30s. This finding is comparable with other studies.[12,13,17] These two age factors also have a strong positive correlation. Those who start drinking at an early age are also predisposed to the development of dependence at quite young age.[13] By acknowledging this fact we can say that by curbing early age of first drink we can avoid the development of early dependence to alcohol. Corollary to it is that this relationship also helps to identify the ones which are likely to be dependant early even before they develop dependence. This can be achieved by imposing legal drinking age for alcohol consumption, which is 18 years in most of the countries. However, in our sample one third of patients had started consuming alcohol before 18 years, which is the minimum legally permissible age for alcohol use in the state of current study. Hence, these laws should be enforced strictly by the government authorities.

Apart from it the problem-solving coping mechanism also had a significant positive impact on age of first drink as well as age of dependence suggesting that use of problem solving mechanism defers the age of first drink and dependence both. Therefor problem solving appears to be a protective coping mechanism unlike passivity which is an emotion oriented and unfavourable coping mechanism and has negative impact on age of first drink.

Two third of individuals from the study had positive family history of alcohol consumption which is in keeping with literature.[18] Family history of alcohol consumption is most often associated with development of anxiety and depression in the siblings and it was found correct by other authors although no such finding could be reflected in our study.[19,20]

More than half of our patients had anxiety symptoms and maximum of them with moderate anxiety. Various studies showed the prevalence of anxiety disorders in alcohol dependent individuals to be 8-56% at different stages of alcohol treatment.[12,21] The order of appearance of anxiety symptoms or actual disorder in alcohol dependent individuals is very complex to understand, many workers found it to be primary in origin long before the development of alcohol dependence whereas others assume that this occur just during first two weeks of abstinence because of acute withdrawal and likely to continue at a decreasing level of intensity over the subsequent months as part of protracted withdrawal.[22-25] Our patients had anxiety symptoms in spite of interviewing them after 30 days of abstinence, which might be due to protracted withdrawal or primary anxiety disorder, which has gone unnoticed due to presence of alcohol consumption as self-medication.[12,21] Other studies have found the prevalence of co-morbid social phobia, panic disorder, agoraphobia to be 2-39%, 3-60%, 2-41% respectively.[21,26]

The positive correlation between anxiety score and age of first drink and age of dependence suggests that those with primary anxiety disorder could be self-medicating themselves with alcohol in order to relieve the anxiety and thus starts drinking at an earlier age subsequently developing dependence at an earlier age.[21] Predictably the problem solving was inversely related to the anxiety in the sample i.e. those who are having higher anxiety are less likely to use problem solving type of coping which might be because that increased level of anxiety does not allows people to cope effectively for problem solving due to cognitive blocking caused by anxiety. Depression is a common comorbidity in alcohol use disorder.[1,17] In our study two third of patients reported depressive symptoms

and majority were mild depression. Though mild depressive symptoms are commonly reported but the diagnosis of major depressive disorder is missed hence many cases might go untreated. It is possible that those having mild symptoms were masking there depressive symptoms with alcohol making them more prone to relapse. Depression is often found co-morbid with alcohol use and the association is accounted more than chance alone.[12] The relationship of chronology of alcohol use and depression is complex and it is difficult to claim which appears first.[27,28] More research is needed to understand the impact of mild depressive symptoms on the course of alcohol use. Our study suggests those who are older are more prone for depressive symptoms.

Also, depression is positively correlated with Passivity which is emotion, focused coping mechanism and thus these individuals are more likely to get depressed and depression decreases overall initiative and activity level along with energy. Emotion focused coping is related to poor outcome and problem solving coping is related to abstinence and decrease alcohol use.[29,30] However, some researchers have suggested that the number of coping styles is more important in maintaining abstinence and lack of coping is related to poorer outcome.[31]

Thus, it is important to strengthen the coping skills to make them more capable of dealing with their stress and preventing further relapse. There is dearth of literature on studies in coping and alcohol use disorder thus further research is needed to study the relation of coping with outcome in alcohol use disorder. The effect of coping on anxiety and depression needs to be studied further as to the best of our knowledge, there are no studies which are explaining the relation between anxiety, depression and coping mechanisms in alcohol dependent individuals.

CONCLUSION

The first drink is taken in 20s and by 30 the dependant in developed in our exclusively male sample. The age of first drink and age of developing dependence has a positive relationship so that earlier the first drink, younger the patient to develop dependence. The depression and anxiety symptoms are present in most alcohol dependant patients, especially mild depression and moderate anxiety was present even after 30 days of abstinence from alcohol. Anxiety symptoms are associated with earlier first drink and dependence at younger age. Problem focussed coping mechanism such as problem solving is associated with better outcome in terms of lesser anxiety and later age of first drink as well as developing dependence. Passivity, which is an emotion focussed coping mechanism as associated with earlier first drink and higher depression score in patient suggesting poor outcome.

Coping is multi-factorial and complex phenomenon, coping skills should be improvised to enable individuals to cope with their alcohol related problems and also coping skills training should be incorporated in abstinence focused programs. Those who are more vulnerable like younger individuals, those who start drinking at an early age should receive special attention in order to avoid development of alcohol dependence and alcohol related problems. Imparting better problem solving type of coping mechanisms may improve the co-morbid psychopathology. Co-morbid psychopathologies like anxiety and depression are common in alcohol dependence individuals and thus, these symptoms should have to be screened in each of these individuals for early interventions and better outcomes.

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