

Psychosocial Factors Associated with Relapse in Patients with Alcohol Dependence

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ABSTRACT

Introduction: Despite the recent developments in the biology of addiction, a significant part of relapse and its management is still influenced by psychosocial factors and the interplay between them. This study aims at finding the extent of association of various psychosocial factors with relapse in patients of alcohol dependence. **Materials and Methods:** It is a cross-sectional study of two groups of alcohol dependence patients: abstinence ($n = 31$) and relapse ($n = 35$). Demographic, clinical, and psychosocial variables were compared between the two groups. Statistical analyses were aimed at finding the extent of association between various factors and relapse. **Results:** Demographic variables such as family history of substance dependence (odds ratio [OR] = 2.09; confidence interval [CI] = 0.74–5.90) and past history of ≥ 2 relapses (OR = 2.71; CI = 0.83–8.87) were associated with relapse in alcohol dependence. Clinical variables such as younger age of onset of dependence (Mean difference = -3.93; 95% CI = -7.66 - -0.21; $P = 0.038$) and shorter time to develop dependence (Mean difference = -3.08; 95% CI = -5.53 --0.63; $P = 0.014$) were significantly associated with relapse. Of the psychosocial variables, coping behavior (OR = 6.54; CI = 1.17–36.74) had the highest association with relapse followed by relapse precipitants (OR = 1.42; CI = 1.16–1.74). **Conclusion:** Coping behaviors to adverse situations have greater association with relapse among psychosocial variables than the number of high-risk situations a patient experiences. Interventions targeted at improving coping skills can help patients stay abstinent.

Key words: Addiction, alcohol, coping, dependence, life events, psychosocial, relapse

INTRODUCTION

According to the National Household Survey 2000–2001, alcohol is the most common substance of dependence in India, with an average prevalence of 4%. It contributes to 43.9% of inpatients in deaddiction treatment centers according to the Drug

Abuse Monitoring System.^[1] Alcohol use disorders are associated with long-term adverse health outcomes.^[2] The management of alcohol dependence is complicated by relapse. Cumulative relapse rates of patients treated for alcohol dependence are as high as 40%–60%. A majority of patients relapse within a year of

Access this article online	
Website: www.ijpm.info	Quick Response Code 
DOI: 10.4103/0253-7176.207337	

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How to cite this article: Sureshkumar K, Kailash S, Dalal PK, Reddy MM, Sinha PK. Psychosocial factors associated with relapse in patients with alcohol dependence. Indian J Psychol Med 2017;39:312-5.

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starting treatment with the first 3 months being the most vulnerable period.^[3] Relapse is a complex and dynamic phenomenon that appears to be determined by biological, psychological, and social factors and an interaction among these. The model of relapse as described by Marlatt and George^[4] clearly explains the significance of psychosocial factors in relapse. Hence, a study of association of various psychosocial factors with relapse will help in understanding the probability of relapse in a patient with alcohol dependence and identifying specific areas to be addressed in relapse prevention and management. There are only a few studies^[5] in India, which have comprehensively studied psychosocial factors and their extent of association with relapse in patients of alcohol dependence. The aim of this study is to identify the extent of association of various psychosocial factors with relapse in patients of alcohol dependence when compared to abstinent patients.

MATERIALS AND METHODS

The design of the study was cross-sectional and nonblind. For the purpose of the study, patients of alcohol abstinence and alcohol relapse were operationally defined. Abstinence was defined as adults between the age of 18 and 65 years who had met the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM IV-TR) criteria for substance dependence and is now abstinent for a minimum period of 3 months. Relapse is defined as adults between the age of 18 and 65 years who had met the DSM IV-TR criteria for substance dependence and were abstinent for at least 1 month (according to early full remission criteria of DSM IV-TR) after which they relapsed and are now fulfilling the DSM IV-TR criteria for substance dependence for at least 1 month. Approval for the study was obtained from the Institutional Ethics Committee. Patients who gave written informed consent were included in the study.

The sample of the study included patients of age group 18–65 years attending Psychiatry outpatient department in a tertiary care hospital on 3 alternate days of a week satisfying the DSM IV-TR criteria of alcohol dependence. Patients in the sample who fulfilled the previously mentioned definition of abstinence or relapse for alcohol dependence and who gave written informed consent were included in the study. Patients who had comorbid Axis-I psychiatric disorder (assessed using Structured Clinical Interview for DSM-IV Axis I),^[6] dependence for more than one substance except nicotine, major physical illness, organic brain syndrome, or mental retardation, who were in a state of intoxication or in a state where he/she was unable

to give consent or participate in the assessment were excluded from the study.

Demographic and clinical variables were collected from patients who were included in the study. Hindi version of relapse precipitant inventory (RPI)^[7] was applied to assess the high-risk situations for relapse. Coping behavior inventory (CBI)^[8] was applied to assess their coping strategies. Hindi translation of self-efficacy scale (SES)^[9] was applied to study their self-efficacy. Presumptive stressful life events scale (PSLES)^[10] was applied to assess life events in the past year. Social support questionnaire^[11] was administered to assess their social support. All the assessments were done as mentioned and the results compared between the alcohol abstinent and relapse groups.

RESULTS

A total of 66 participants were included in the final analysis, out of which 31 participants belonged to the abstinence group and the remaining 35 were in the relapse group. Occurrence of relapse as per the specified definition was considered as the primary outcome variable. Occurrence of high-risk situations, coping behavior, self-efficacy, stressful life events, and social support was considered as primary explanatory variables. Sociodemographic factors such as age, marital status, and education, and clinical factors such as the age at onset of dependence, duration of dependence, time to develop dependence, history of previous relapses, and family history of dependence were considered as other explanatory variables. The two study groups were compared in terms of various baseline sociodemographic and clinical variables to identify any baseline difference between the two groups. Both the groups comprised predominantly married, employed men from urban background. Both the groups did not differ significantly on marital status, employment, domicile, education, or socioeconomic status.

The mean age of onset of dependence was 3.93 years lesser in relapse patients when compared to abstinence patients (95% confidence interval [CI] 7.6–0.21, $P = 0.038$). Time to develop dependence was 3.08 years lesser in the relapse group (95% CI 5.53–0.63, $P = 0.014$) compared to the abstinent group [Table 1]. Of the patients with family history of dependence, 59.1% had relapse, whereas this proportion was 40.9% in patients without family history of dependence. The proportion of patients with relapse was 70.6% and 46.9%, respectively, in those with ≥ 2 relapses and < 2 relapses in the past. Family history of dependence and history of ≥ 2 relapses were associated with relapse in patients of alcohol dependence++ [Table 2].

Table 1: Comparison of various alcohol use related parameters between the two study groups

Parameters (years)	Groups	Mean	Mean difference (95% CI)	P
Age of onset of use	Relapse	22.71	-1.028 (-4.36-2.31)	0.541
	Abstinence	23.74		
Duration of use	Relapse	11.63	-2.56 (-5.83-0.70)	0.122
	Abstinence	14.19		
Age of onset of dependence	Relapse	29.53	-3.93 (-7.66--0.21)	0.038
	Abstinence	33.47		
Duration of dependence	Relapse	4.70	0.55 (-0.94-2.05)	0.462
	Abstinence	4.15		
Time to develop dependence	Relapse	6.90	-3.08 (-5.53--0.63)	0.014
	Abstinence	9.98		

CI – Confidence interval; $P < 0.05$ is considered statistically significant

Table 2: Association between family history of dependence and history of relapses in the study population

Parameter	Alcohol relapse (%)	Alcohol abstinence (%)	OR (95% CI)	P
Family history of dependence				
Yes ($n=44$)	26 (59.1)	18 (40.9)	2.09 (0.74–5.90)	0.197
No ($n=22$)	9 (40.9)	13 (59.1)		
History of relapses				
≥ 2 past relapses ($n=17$)	12 (70.6)	5 (29.4)	2.71 (0.83–8.87)	0.092
< 2 past relapses ($n=49$)	23 (46.9)	26 (53.1)		

CI – Confidence interval; OR – Odds ratio; $P < 0.05$ is considered statistically significant

Greater number of high-risk situations (odds ratio [OR] = 1.42; CI = 1.16–1.74) and more stressful life events in the past year (OR = 1.25; CI = 0.99–1.56) were significantly associated with relapse in patients of alcohol dependence. Lesser coping behavior was significantly associated (OR = 6.54; CI = 1.17–36.74) with relapse in patients of alcohol dependence. High-risk situations in all the three domains of RPI were significantly associated with relapse. Lesser positive thinking (OR = 3.6; CI = 1.5–8.49) and avoidance (OR = 2.97; CI = 1.21–7.24) coping strategies were the individual domains of CBI, which were significantly associated with relapse. General self-efficacy (OR = 0.93; CI = 0.88–0.97) domain of SES was significantly associated with relapse. Undesirable life events in the past year (OR = 1.70; CI = 1.071–2.7) were significantly associated with relapse [Table 3].

The total scores of primary exposure parameters that have shown positive association in univariate analysis were included in the multivariate logistic regression analysis. After controlling for RPI total score and stressful life events in the past year, lesser total number of coping behaviors was positively associated with relapse with an OR of 6.95 (CI = 0.93–52.42). The odds of relapse increased 1.41 (1.14–1.73) and 1.25 times (0.97–1.60) with each unit increase in

Table 3: Association between various psychosocial parameters and relapse in the study population (univariate binary logistic regression)

Psychosocial variables	Unadjusted OR	95% CI for OR		P
		Lower	Upper	
Relapse precipitant inventory	1.42	1.16	1.74	0.001
Negative mood state	1.42	1.10	1.83	0.006
Euphoric mood state	2.08	1.33	3.28	0.001
Lessened cognitive vigilance	1.97	1.12	3.44	0.018
Coping behavior inventory	6.55	1.17	36.74	0.03
Positive thinking	3.62	1.55	8.49	0.003
Negative thinking	1.46	0.71	3.01	0.300
Avoidance	2.97	1.21	7.24	0.017
Seeking social support	2.31	0.92	5.81	0.073
Self-efficacy scale	0.936	0.90	0.98	0.002
General	0.93	0.88	0.98	0.003
Social	0.91	0.82	1.00	0.060
Presumptive stressful life events scale	1.25	0.99	1.56	0.053
Desirable events	1.11	0.73	1.67	0.634
Ambiguous	1.17	0.78	1.18	0.437
Undesirable events	1.70	1.07	2.70	0.025
Social support	0.99	0.95	1.03	0.59

OR – Odds ratio; CI – Confidence interval; $P < 0.05$ is considered statistically significant

Table 4: Multivariate logistic regression with the primary exposure variables

Psychosocial factors	OR	95% CI for OR		P
		Lower	Upper	
Relapse precipitants	1.411	1.145	1.737	0.001
Coping behavior	6.959	0.923	52.452	0.050
Stressful life events – past year	1.252	0.976	1.606	0.077

OR – Odds ratio; CI – Confidence interval; $P < 0.05$ is considered statistically significant

RPI total score and PSLES total score, respectively, after controlling for the other two variables in the equation [Table 4].

DISCUSSION

This study shows that clinical factors such as family history of dependence and the number of previous relapses are consistently associated with alcohol relapse, like in a number of previous studies.^[5] This study is one of the few studies, which explores the extent of association of various psychosocial factors with relapse in patients of alcohol dependence. Among the psychosocial variables, coping behavior of the patient to adverse situations had the highest association with relapse, followed by high-risk situations. This finding was similar to the results of previous studies in this area.^[12] Lesser positive thinking and avoidance coping strategies had higher association in the individual domain analysis of coping behaviors. Undesirable life events in the past year and general self-efficacy had significant association

with relapse. Studies^[13] have shown that relapse rates are higher among those who are not capable to use coping skills effectively in stressful events (family conflict, peer pressure, financial difficulties, or temptations). Social support did not have an association with relapse similar to few other studies in this area.^[14] This study leads to the inference that even if it is difficult to control high-risk situations, training patients to cope with those high-risk situations, and stressors can help them stay abstinent from alcohol.^[15,16] Therapies focused on improving coping strategies are important, especially in young adults as peer influence^[17] plays a vital role in them. Emergence of various evidence-based psychological therapies for alcohol dependence such as cognitive-behavioral therapy including relapse prevention, motivational enhancement therapies, contingency management, and brief interventions would help us in addressing these risk factors for relapse effectively.^[18]

The study has many methodological limitations such as being a cross-sectional, nonblind study in a hospital setting, with a small sample size. Many biological factors were not studied as the study focused more on psychosocial factors, limiting the generalizability of the findings. No objective tests such as urine or blood analysis for alcohol was used to confirm abstinence or relapse. Future studies addressing these limitations would help in confirmation of the above findings.

CONCLUSION

Coping behaviors to high-risk situation have a greater association with relapse in patients of alcohol dependence compared to other psychosocial variables. Coping skills training in patients of alcohol dependence can hence help them stay abstinent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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