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# A Study of Stressful Life Events Contributing To Relapse in Alcohol Dependence Syndrome Patients at A Tertiary Care Centre

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## Abstract

**Background:** Alcohol relapse is the process of going back to prior heavy drinking after a time of sobriety or reduced use. Relapses are common despite the availability of numerous therapeutic alternatives. Relapse is more likely to occur in those who experience psychological stress after treatment than in those who do not. Hence this study aims to examine demographic variables, clinical parameters of alcohol use, stressful life events and its association with alcohol relapse.

**Methodology:** A cross-sectional study was done at a tertiary care centre in Kalaburagi on 60 subjects presenting in relapse after minimum of 1 month abstinence. Patients were assessed by sociodemographic and clinical profile along with Severity Alcohol Dependence Questionnaire (SADQ) to measure alcohol dependence severity level and Presumptive Stressful Life Events Scale (PSLES) to identify life events one year prior to the relapse. Statistical analysis was done using IBM SPSS 20.0 software.

**Results:** About 45% (n=27) patients were severely dependent. The mean stress scores for life events among patients in past one year was 161.88 (SD-107.54). The mean number of life events among patients in past one year was 3.46 (SD-2.1). The mean number of undesirable life events were 2.45 (SD-1.70) which was higher than desirable events 0.18 (SD-0.39) with $p<0.05$ which is statistically significant. Common stressful life events were financial conflicts (61.7%), followed by marital/family conflict (43.3%) and Job/work/loan related conflicts (41.6%).

**Conclusion:** The study supports the link between stressful life events and relapse, suggesting that interventions in identifying such events can help patients in maintaining abstinence and potentially prevent further relapses.

**Keywords:** Alcohol Relapse, Occur, PSLES, Stimulus

## Introduction

The alcohol dependence syndrome includes a variety of behavioural, cognitive, and physiological issues where a person's use of alcohol takes precedence over other once highly valued practices.[1]

According to a survey in 2019, In India, about 16 crore (14.6%) people consume alcohol. Among which 27.3% are men and 1.6% were women. The state of Karnataka has a prevalence is 6.4% and use is higher among men (12.1%).[2]

Relapse means 'to go back into a previous condition or into a worse state after making an improvement'.[3] Although several treatment options are available, including pharmacological and non-pharmacological agents, relapse rates are high.[4] About 70-90% of patients relapse within 3 months of treatment.[5]

The term "stress" is used to describe the subjective feeling of tension or pressure. People believe alcohol helps them cope with the stress. Stressful events can be a stimulus, that elicit negative affective states and lead to alcohol use to relieve the emotional distress. Hence, Stressful life events are considered a major contributor to the continuation of alcohol use and relapse.[3]

In a study conducted at Bengaluru in 2019, Undesirable stressful life events were significantly higher than desirable. Desirable life events had significant impact on abstinence.[6]

Another study at Kerala in 2014 revealed Undesirable Stressful life events contributing to relapse were family conflicts, financial crisis and occupational problems.[7]

Hence, It is critical to analyse and address the stressful factors which are pushing abstinent patients to undesirable relapses. This study of interactions between stressful life events and alcohol relapse has widespread implications for assessment and prevention of further relapses.

## Methodology

### Aim

1. To assess the sociodemographic profile of alcohol dependence syndrome patients in relapse.
2. To study clinical profile of alcohol use of patients in relapse
3. To investigate the role of stressful life events in alcohol dependence syndrome patients presenting in relapse.

**Operational Definition:** Relapsed patient is a person who was diagnosed with alcohol dependence syndrome according to the ICD 10 criteria and stopped using alcohol for at least a month but subsequently restarted using alcohol.[5]

**Source of Data:** This cross-sectional study was done at Department of psychiatry, Basaveshwara Teaching and General Hospital attached to H.K.E. Society's Mahadevappa Rampure Medical College, Kalaburagi. By consecutive sampling, a written informed consent was taken from a total of 60 subjects.

### Inclusion criteria

1. Age more than 18 years
2. Patients who fulfil ICD 10 criteria for Alcohol Dependence syndrome

3. Patients who remained abstinent for minimum duration of 1 month after been diagnosed with alcohol dependence syndrome in the past.

**Exclusion criteria**

1. Patient with history of co-morbid major psychiatric illness except nicotine use disorder.
2. Patients with history of head injury, neurological diseases and major medical conditions causing significant cognitive impairment.

**Instruments and Scales Used**

1. **Semi Structured Performa for socio-demographic profile and alcohol consumption details** which included age, gender, marital status, occupation, religion, education, type of family, family history of alcohol use, age at onset and reason for drinking, Current duration of dependence, last abstinence period and duration, reason for relapse.
2. **Severity of addiction assessed by Severity of alcohol dependence Questionnaire (SADQ):** a self-administered questionnaire with 20 items, was used to measure alcohol dependence severity. This scale is divided into five thematic sections of excessive alcohol consumption: physical withdrawal symptoms, psychological withdrawal symptoms, craving, alcohol consumption, and relief withdrawal symptoms after abstinence period. Each item is assessed on a 4-point scale that goes from "Almost Never" to "Nearly Always," with a corresponding score of 0 to 3. The highest possible score is 60, and the least is 0. Based on the scores the severity ranges from mild/low dependence to severe dependence. It shows good evidence of internal, criterion and external validity.[8]
3. **Presumptive Stressful life event scale (PSLES) for assessing stressful events:** It covers 51 defined life events and is scored 0 and 1 for the absence and presence of particular life events. It has shown good standards on the Indian population. PSLES was developed from Social Readjustment Rating Questionnaire (SRRQ) of Holmes and Rahe (1967) that is a standard rating instrument for assessment of life events and used worldwide. The modification was meant to serve two purposes: first, to remove those items that were symptoms of illness and thereby increasing the content validity, and second, to modify certain items to suit our unique cultural values. The items in this scale are classified into desirable, undesirable and ambiguous events. PSLES gives assigned weights for mean stress experienced to each event ranging from 0 to 100, and the same were given to the reported events. Further, individual stress score was calculated.[9]

**Statistical Data Analysis**

The data collected were entered in a licensed version of Microsoft excel spreadsheet and analysed statistically by using IBM SPSS software 20.0. Result was analysed by descriptive analysis in the form of frequency and proportion, chi square test and ANOVA test.

**Results**

Table 1: Sociodemographic data

| Variables | Frequency (N=60) | Percent |
|---|---|---|
| Age (years) | | |
| 18-30 | 10 | 16.66 |
| 31-40 | 23 | 38.33 |

| | | |
|---|---|---|
| 41-50 | 19 | 31.66 |
| 51-60 | 5 | 8.33 |
| >60 | 3 | 5 |
| Mean Age: 40.2 (SD=10.33) | | |
| Gender | | |
| Male | 60 | 100 |
| Occupation | | |
| Skilled | 8 | 13.33 |
| Semi-Skilled | 25 | 41.66 |
| Unskilled | 11 | 18.33 |
| Unemployed | 16 | 26.66 |
| Marital status | | |
| Single | 7 | 11.66 |
| Married | 47 | 78.33 |
| Separated | 5 | 8.33 |
| Divorced | 1 | 1.66 |
| Education | | |
| Illiterate | 10 | 16.66 |
| Primary School | 14 | 23.33 |
| Higher School | 20 | 33.33 |
| Higher Secondary | 6 | 10 |
| Graduate | 10 | 16.66 |
| Type of family | | |
| Nuclear | 32 | 53.33 |
| Joint | 28 | 46.67 |
| Religion | | |
| Hindu | 55 | 91.67 |
| Muslim | 5 | 8.33 |

Table 2: Alcohol consumption Details

| Variables | Frequency (N=60) | Percent % |
|---|---|---|
| First drink: Age (years) | | |
| <18 | 15 | 25 |
| 18-24 | 18 | 30 |
| 25-30 | 13 | 21.67 |

| | | |
|---|---|---|
| 31-35 | 10 | 16.67 |
| >35 | 4 | 6.67 |
| Total duration of consumption (Years) | | |
| <5 | 6 | 10 |
| 5-10 | 18 | 30 |
| 11-20 | 22 | 36.67 |
| 21-30 | 11 | 18.33 |
| >30 | 3 | 5 |
| First drink: reason to start | | |
| Peer Pressure | 35 | 58.33 |
| Curiosity | 13 | 21.67 |
| Stress | 9 | 15 |
| Other | 3 | 5 |
| duration of alcohol dependence (Months) | | |
| <1 | 3 | 5 |
| 1 to 2 | 11 | 18.33 |
| 3 to 6 | 15 | 25 |
| 6 to 12 | 7 | 11.67 |
| >12 | 24 | 40 |
| Last Abstinence period (in months) | | |
| <6 | 16 | 26.67 |
| 7-12 | 25 | 41.67 |
| 13-24 | 11 | 18.33 |
| 25-48 | 5 | 8.33 |
| >48 | 3 | 5 |
| Last abstinence duration | | |
| 1 - 2 Months | 36 | 60 |
| 3 -6 months | 14 | 23.33 |
| 6 -12 Months | 5 | 8.33 |
| > 1 year | 5 | 8.33 |
| Reason for relapse | | |
| Peer Pressure | 9 | 15 |
| Family/relationship conflict | 14 | 23.33 |
| Financial conflict | 5 | 8.33 |

| | | |
|---|---|---|
| Craving | 28 | 46.67 |
| Others | 4 | 6.67 |
| Family h/o alcoholism | | |
| Yes | 41 | 68.33 |
| No | 19 | 31.67 |
| SADQ scoring | | |
| Low or Mild (0 - 15) | 16 | 26.67 |
| Moderate (16-30) | 17 | 28.33 |
| Severe (31-60) | 27 | 45 |
| Mean | 28.18 ± 15.83 | |
| Total | 60 | 100 |

Table 3: Presumptive stressful life event scale (PSLES) scoring

| Variable | Mean | SD | Median | ANOVA | |
|---|---|---|---|---|---|
| | | | | F | P value |
| PSLES: Desirable events in past 1 year | 0.18 | 0.390 | 0.00 | 0.04 | P = 0.996 |
| PSLES: Undesirable events in past 1 year | 2.45 | 1.702 | 2.00 | 7.01 | P = <0.01 |
| PSLES: Ambiguous events in past 1 year | 0.83 | 0.960 | 0.00 | 10.10 | P = <0.01 |
| Stressful life events in past 1 year mean score | 161.8 | 107.5 | 133.0 | | |
| PSLES: Total number of events | 3.46 | 3.052 | 2.00 | | |

Figure 1:

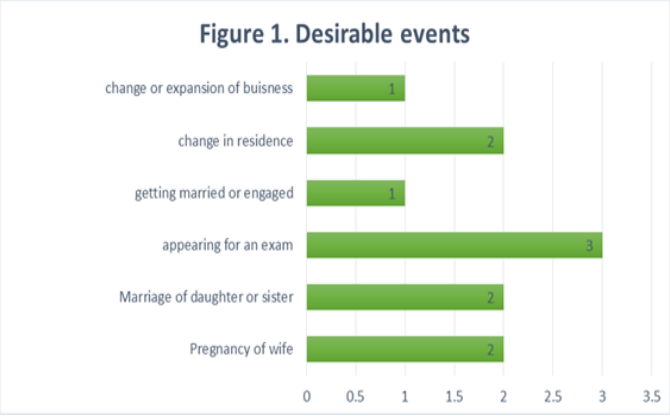
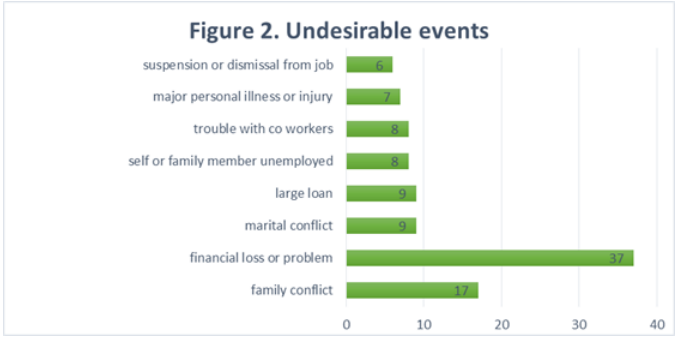



Figure 2:




The sociodemographic details of the study sample are presented in Table No. 1. Mean age of the participants was 40.42±10.33 and 100% of patients were male. About 25 (41.6%) patients who relapsed were semi-skilled. A majority of 47 (78.33%) patients were married and 55 (91%) belonged to Hindu religion. About 20

(33.33%) had completed education till high school and about 32 (53.33%) belonged to Nuclear family.

Table No. 2 shows the clinical profile of alcohol use in the study participants. 33 (55%) patients had their first drink before the age of 24 years with peer pressure (58.33%) being the most common reason. About 36 (60%) patients relapsed within 2 months of treatment with craving (46.67%) being most common reason for relapse. 41 (68.33%) patients had a history of alcohol consumption by a family member. A majority 24 (40%) patients were dependent on alcohol for more than a year and 27 (45%) were severely dependent on alcohol on SADQ scoring.

Table No. 3 shows scoring of presumptive stressful life events scale. The mean stress scores for life events in past one year was 161.88 (SD-107.54). The mean number of stressful life events in past one year was 3.46 (SD-2.1). The mean number of undesirable life events were 2.45 (SD-1.70), desirable events were 0.18 (SD-0.39) and ambiguous events were 0.83 (SD-0.960). The ANOVA F values indicate significant differences in the means of undesirable (7.010) and ambiguous events (10.100), with P values less than 0.01, suggesting these results are highly statistically significant. In contrast, the desirable events have an ANOVA F value of 0.04 and a P value of 0.996, indicating no significant difference and a high probability that the results could be due to chance. Common undesirable stressful life events observed among our participants were financial conflicts (61.7%), followed by marital/family conflict (43.3%) and Job/work/loan related conflicts (41.6%).

**Discussion**

In the current study, we evaluate the role of stressful life events in contributing to relapse in alcohol dependence syndrome patients. Here we evaluate and find the potential risk factors from sociodemographic profile and clinical profile of alcohol use. We also evaluate using scales that assess severity of dependence and stressful life events. The study sample was 60 alcohol dependence syndrome patients presenting in relapse.

In our study the mean age of participants is 40.62 ± 10.33 years. Kadam et al. similarly reported a mean of 41.066 ± 7.98 years. This is because alcohol dependence is slow to develop with late development of social and occupational dysfunction.[10] Majority of our study sample was middle aged, often facing high career pressures, family responsibilities, and financial burdens. Most of them get married by this age and due to their family pressure, they come to seek treatment for alcohol relapse.[11]

In the present study, 100% participants are male. In our region, like most parts of India, societal norms often discourage women from consuming alcohol, leading to lower reported rates of alcohol use in women. They may face greater stigma which can result in underreporting or reluctance to seek treatment.[12] A study in the Republic of Korea by J. Yang et al reported 7.9% female in their study which is higher than our study and the plausible explanation is the lifetime prevalence of alcohol use disorder (AUD) in Korea is 6.4% in females.[13]

In the present study, a majority of 41.66% were semi-skilled workers followed by 26% were unemployed which is similar to Vihram et al.[14] Majority semi-skilled participants who relapsed, often facing job instability, low wages, and high work-related stress.[15] Whereas, Amit K Sharma et al in 2012 reported 50% unemployed patients. This can be attributed to 62.5% patients having lower education in their study sample.[16]

We had about 78% married population which similar to kadam et al reporting 76.6% married population. The

later development of dependence pattern in alcohol use probably allows time for the subjects to get married.[10] Common reasons for relapse in marriage was marital conflicts, conflict with in-laws, responsibilities, and financial stressors.[12]

In our study, about 73.2% participants were educated only till high school. This is similar to Bakyaraj et al.[5] We had 53% participants from nuclear families. This is similar to Kadam et al reporting 60% nuclear family.[10] The common themes involved for relapse in nuclear family show lack of support as in an extended family, isolation and stress associated with modern urban living.[12]

In the present study, 91.67% were Hindu population. Our demographic region has a higher population of Hindus compared to other religions, which is reflected in our study sample. These findings are similar to Prashant Kumar et al, who reported 92% Hindu and 6% Muslim population. Drug abuse in the Muslim religion is considered as a taboo. Probably as Muslims strongly discourage consumption of alcohol. The Quran explicitly forbids the consumption of alcohol.[12]

In our study, 68% participants have family history of alcoholism. These findings are similar to Samir Kumar et al reporting 63.3%.[4] The family member's substance abuse is often influenced by substance-using behaviours of others in the family. Substance abuse in parents had significant influence on substance abuse in children, especially from father to son.[16]

About 55% patients had their first drink before the age of 24 years with peer pressure being the most common reason in our study. These findings are similar to Rampure et al. who reported 54.7% patients started drinking before 20 years of age.[6] Whereas, in a study conducted in Nairobi by Kuria et al. reported a higher 92.9% of participants having begun alcohol drinking before the age of 25 years. This may be due to the free culture and social factors in western countries to alcohol.[17] V.N Wainaina et al. showed most patients drunk in the company of friends (81.3%). Peer pressure can be a strong motivator, especially among younger individuals who want to fit in with their peers.[18]

In our study a majority of 40% patients were dependent on alcohol for more than 12 months. Korlakunta et al. similarly reported a longer duration of dependence with 78% being dependent on alcohol for less than 5 years. The possible explanation for this can be younger age of onset of drinking leading to a significantly longer duration of dependence and frequent relapses.[11]

In the present study, about 60% patients relapsed within 2 months of treatment with craving being most common reason for relapse. Korlakunta et al., similarly found that 56% remained abstinent only for 2-6 months and 38% for 7-12 months. This could be due to the late age at dependence (after 30 year) in their sample.[11] The initial months of abstinence are often the most challenging due to withdrawal symptoms and strong cravings. This might lead to majority of relapse in initial few months. Chauhan et al also showed similar findings with Craving as the main reason for relapse in 48%.[19] Prashant et al. proposed that, Craving is a non-automatic process and based on the cognitive processing model, alcohol consumption evolves into a habit only after a minimal conscious effort or attention.[12]

On severity of alcohol dependence questionnaire (SADQ), a majority of 45% belonged to severe category. The findings are also similar to Ramkumar et al reporting 55% patients belonging to severe dependence category.[14] Prashant Kumar et al. also reported 42% severely dependent patients.[12] The plausible explanation

being patients with severe dependence likely have a long history of heavy alcohol use. Majority individuals have presented late and might have developed a high tolerance to alcohol, requiring larger amounts to achieve the same effects, leading to higher dependence scores. The mean score in our study was 28.18 ± 15.83. which is similar to Samir Kumar Praharaj et al. reporting a mean score of 24.13±15.38.[4]

In current study, the mean stress scores in past 1 year is 161.8 ± 107.5. Mean number of desirable stressful life events in past 1 year is 0.18 ± 0.39 events was significantly lower than mean number of undesirable stressful life events in past 1 year is 2.45 ± 1.702 with p-value <0.01. Samir Kumar et al, similarly reported the mean number of undesirable life events was 2.76 (SD 1.75) which significantly higher than desirable events 0.30 (SD 0.70).[4] Similar findings were also reported by Rampure et al and Chauhan et al, which showed higher undesirable events in past year compared to desirable events.[6,19]

In our study, some common desirable events included appearing for an exam, change in residence, marriage of a dependent daughter or sister and pregnancy of wife. Common undesirable stressful life events are financial conflicts like financial loss or loan (67.6%), followed by marital/family conflict (56.6%) and Job/work related conflicts (38.4%). This can be explained by the occupational role and higher number of married participants in our study sample. Similar to our study, Samir Kumar et al reported the most common life event as financial loss or problems (43%), followed by large loan and marital conflict (27%).[4] Rampure et al in 2019, similarly reported, a series of desirable events such as purchase of land or house, marriage of a daughter or sister in past 1 year had significant impact on abstinence.[6] Markose et al also similarly found common undesirable Stressful life events to be family conflicts 93%, financial crisis 63%, occupational problems 45.4% and loss of a significant one 43.1%.[7]

**Conclusion**

This study improves our understanding of this disorder and helps to analyse and address the causative factors which are pushing abstinent patients to relapses. The study of interactions between stressful life events and relapses in alcohol dependence syndrome has widespread implications for assessment and prevention of further relapses.

**Strengths**

- The study analyses severity of addiction, multiple stressful factors like undesirable and desirable life events giving an insight into possible triggers for relapse.

**Limitations**

- Small sample size of 60 patients.
- Retrospective recall of life events may contribute to recall bias.
- Hospital based study cannot be generalised to population.

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