The road to good spirits: perceived stress, self esteem and coping skills in patients with alcohol dependence

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ABSTRACT

Background: Alcohol is the commonest psychoactive substance used by Indians. Stress and self-esteem issues may cause alcohol use as a coping mechanism. The purpose of this study was to analyze the severity of alcohol dependence, gauge levels of perceived stress and self-esteem and study coping skills in patients. It further examined the relations between sociodemographic variables of patients, their perceived stress, self esteem and coping skills as well as duration and severity of alcohol dependence.

Methods: Cross-sectional study of 200 patients with alcohol use disorder recruited by complete enumeration technique was undertaken. They were administered a semi-structured questionnaire along with Perceived Stress Scale (PSS-10), Rosenberg’s Self Esteem Scale (RSES), Coping Inventory for Stressful situations (CISS-21) and Severity of Alcohol Dependence Questionnaire (SADQ). Associations and correlations were examined.

Results: Almost half the patients had severe alcohol dependence. Less than one-fourth of the patients had low self esteem. There was a significant negative correlation between self esteem and severity of alcohol dependence as well as duration of alcohol use. Nearly half the patients had high perceived stress. There was a significant positive correlation between severity of alcohol dependence and perceived stress. Majority patients used task oriented coping skills. Patients of alcohol dependence having low self esteem used predominantly avoidant-oriented coping skills.

Conclusions: This study highlights the importance of thorough evaluation and screening in patients having alcohol dependence for self esteem issues and perceived stress levels. Teaching effective coping skills, supportive psychotherapy and counselling can be effective. Multimodal treatment protocols will effectively lighten the stress caused by alcohol dependence.

Keywords: Alcohol dependence, Coping skills, Perceived stress, Self-esteem

INTRODUCTION

Alcohol dependence is a national issue that needs to be tackled on a priority basis. Patients of alcohol dependence experience withdrawal symptoms, tolerance towards increasing quantities of alcohol, a strong desire to consume it and difficulty in controlling their consumption.1 Alcohol is the most common psychoactive substance used by Indians. Nationally, about 16 crore people, (14.6% of the population) aged between 10 and 75 years, consume alcohol with states of Chattisgarh, Tripura, Punjab, Arunachal Pradesh and Goa having the highest prevalence.2

Among alcohol users, country liquor and Indian made foreign liquor (about 30% each) are the predominantly consumed beverages.2 It is estimated that by 2050, in India alone, alcohol would cause the loss of 258 million
life years by deaths and 552 million QALY (Quality Adjusted Life Years) due to consumption. India is also estimated to suffer a net economic loss of INR 97.9 lakh crores.3

Self-esteem is the appraisal that people make about themselves and includes judgments about personal worth and approval.4,5 Adults with low self-esteem have been found to be more accepting towards alcohol use and misuse over time.6 Thus, self esteem issues can act as a stimulant for alcohol dependence.

Stress is a physiological response to demanding external stimuli that can result in feelings of danger and anxiety. It can be defined as a risk factor for individual harm.7 The response to stress is often accompanied by risky behaviors including alcohol consumption.8 As per Disease Theory of Alcoholism, initially, consumption of alcohol is a means to relieve stress.8 However, eventually, people often become dependent on alcohol. While effective coping skills help to mitigate the destructive effects of stress and moderate individual reactions, inappropriate stress management strategies can aggravate problems.10

Researchers have grouped coping skills into three categories, task oriented, emotion oriented and avoidance oriented.11

Task oriented coping is considered the efficacious approach.12 While studies exist analysing the effect of each individual component on alcohol dependence,10,13,14 there is a lacuna in world literature about the complex interplay of self-esteem, perceived stress and coping skills and the way they together ultimately affect alcohol dependence, a gap which the current study undertakes to address.

The purpose of this study was to analyze the severity of alcohol dependence and gauge levels of perceived stress and self-esteem in patients. Various coping skills in patients of alcohol dependence were studied. The study further examined the association of sociodemographic variables of patients having alcohol dependence with the magnitude of their perceived stress, self esteem and coping skills as well as duration and severity of alcohol use. Correlations of perceived stress and self -esteem with the duration and severity of alcohol dependence were also assessed to learn how variations in these affected alcohol consumption.

**METHODS**

Ethical clearance from the institutional ethics committee was sought for before the start of the study. Written informed consent was obtained from all participants for consent to participate in the study and for publication of the results obtained after completion of the study. The consent was obtained in the language they best understood.

The study was conducted over a period of 18 months in the Department of Psychiatry and Deaddiction at a tertiary care center. Patients aged 18-60 years diagnosed with alcohol use disorder as per the DSM V criteria were recruited in the study. Patients with substance use other than alcohol use disorder except tobacco, patients having other comorbidities and psychiatric disorders and those who refused to give consent were excluded from the study. 200 patients were taken by complete enumeration technique. Sociodemographic data were collected as per the case record form (CRF).

**Case record form**

Well-structured CRFs in the language best understood by the patients was used which included details such as age, gender, level of education, employment, marital status and the socioeconomic class. Duration of alcohol use by the patient and its severity were also noted. Duration of and attempts at abstinence were also noted.

**Perceived stress Scale-10 (PSS-10)**

It is one of the more popular tools for measuring psychological stress. It is a self-reported questionnaire that was designed to measure “the degree to which individuals appraise situations in their lives as stressful.” For this study, the Perceived Stress Scale 10 version was used. Total scores range from 20 to 40. Scores of 20 or higher were taken as high perceived stress. Cronbach's alpha for the scale is 0.78.15

**Rosenberg self esteem Scale (RSES)**

It is one of the most widely used self-report methods for assessing global self-esteem. The tool consists of 10 items, five of which are positively and five negatively worded. Total scores range from 20 to 40. Scores of 20 or higher were taken as high self-esteem. Cronbach's alpha for the scale is between 0.77 and 0.88.16

**Coping inventory for stressful situations-21 (CISS-21)**

The CISS-21 has been developed to assess three coping strategies: task oriented, emotion-oriented and avoidance coping. The Likert scale responses range from 1 (almost never) to 5 (almost always). The responses on all the 7 items of each subscale in the CISS-21 are summed together to obtain aggregate scores for the three coping strategies.17 Internal consistency scores for CISS-21 (Cronbach’s alphas) ranges from .75 to .88.18

**Severity of alcohol dependence questionnaire (SADQ)**

SADQ is a short, 20 item questionnaire designed to measure severity of dependence on alcohol as formulated by Edwards and Gross (1976) and Edwards (1978). There are five subscales: Physical withdrawal, Affective withdrawal, Withdrawal relief drinking, Alcohol consumption and Rapidity of reinstatement with four
items in each. Each item is scored on a four point scale, ranging from Almost never to Nearly always, resulting in corresponding scores of 0 to 3. Scores greater than 30 correlate with clinicians’ ratings of severe alcohol dependence. The test-retest reliability is 0.85.19

The frequency distribution of collected demographic data was made. The obtained scores on PSS 10, RSES, CISS-21 and SADQ were then associated with the tabulated demographic data using contingency tables to assess for any significant results using Chi-square test. Pearson’s coefficient was also applied to correlate perceived stress and self-esteem with duration and severity of alcohol dependence.

Linear regression models were obtained. The entire statistical analysis was carried out using GraphPad Prism software. (San Diego, CA).

RESULTS

There were 200 eligible patients of alcohol use disorder were recruited into the study after taking their written informed consent. Questionnaires were completed in all 200 cases. The response rate was 100%.

All participants were males. 54.5% patients were under 40 years of age. The mean age of the sample was 40.05 years with a standard deviation of 10.11 years. 83.5% patients were married, 14.5% were unmarried, while 1% were divorced and 1% were widowers. 9.5% patients were illiterate, 67% patients had completed secondary education (upto 10th grade) while 23.5% patients had pursued higher education (Above 11th grade). 82.5% patients belonged to the upper socioeconomic class. 84.5% patients were employed at the time of interview, while 15.5% were unemployed.

| Parameter | Variable | Findings | Mean | Standard deviation | 95% Confidence intervals |
|-----------|----------|----------|------|--------------------|-------------------------|
| Age of patient | Below 40 | 54.5% (n=109) | 40.05 | 10.11 | 38.66 to 41.44 |
| | Above 40 | 45.5% (n=91) | | | |
| Severity of Alcohol Consumption (as per SADQ score) | Below 30 (Low to Moderate) | 53% (n=106) | 29.10 | 15.01 | 27.02 to 31.18 |
| | Above 30 (Severe) | 47% (n=94) | | | |
| Duration of Alcohol Consumption (in years) | Less than 10 | 34% (n=68) | 15.43 | 8.51 | 14.25 to 16.61 |
| | More than 10 | 66% (n=132) | | | |
| Rosenberg Self-Esteem Scale Score | Below 20 (Low) | 21.5% (n=43) | 25.70 | 8.24 | 24.56 to 26.84 |
| | Above 20 (High) | 78.5% (n=157) | | | |
| Perceived Stress Scale Score | Below 20 (Low) | 54.5% (n=109) | 19.10 | 9.98 | 17.72 to 20.48 |
| | Above 20 (High) | 45.5% (n=91) | | | |
| Per capita monthly income(in rupees) (as per BG Prasad Modified 2017 classification) | Till 6254 (upto upper) | 17.5% (n=35) | 6962.74 | 2581.99 | 6604.84 to 7320.64 |
| | More than 6254 (Upper class) | 82.5% (n=165) | | | |

There were 53% patients having low to moderate alcohol dependence whereas 47% had severe alcohol dependence. (Table 1). The mean duration of alcohol use was 15.43 years. 84.5% patients of alcohol dependence had history of abstinence while 15.5% patients had never practiced abstinence from alcohol. The mean duration of abstinence from alcohol use was 9.43 months. The severity and duration of alcohol dependence were not found to be significantly associated with factors like education, occupation and marital status.

There were 21.5% patients having had low self esteem. There was no significant association between self-esteem and sociodemographic variables like education and marital status of the patients (Table 2). There was a significant (p<0.0001) negative correlation (Figure 1)
between severity of alcohol dependence and self esteem. (r = - 0.3229) A statistically significant (p= 0.0004) negative correlation (r = - 0.2479) between duration of alcohol use and self esteem was also observed (Figure 2). (Table 4). The correlation between duration of alcohol use and perceived stress was not found to be statistically significant.

There were 54.5% patients had low perceived stress. Associations between perceived stress and sociodemographic variables like education, employment and marital status of the patients having no statistical significance (Table 3). There was a significant (p <0.0001) positive correlation (Figure 3) between severity of alcohol dependence and perceived stress. (r = 0.2652) Majority patients (61.5%) used task oriented coping techniques to solve problems in day to day life. 38.5% used unhealthy ways of coping which included (16.5%) emotion based coping techniques and (22%) avoidant was of coping. Patients of alcohol dependence having low self-esteem used predominantly (p<0.0001) avoidant-oriented coping strategy (Table 5).

Figure 2: Linear regression graph showing correlation between self-esteem and duration of alcohol use.

Figure 3: Linear regression graph showing correlation between perceived stress and severity of alcohol dependence.

Table 2: Self-Esteem and socio-demographic variables.

| Parameter    | Variable                          | Low self-esteem (n=43) (21.5%*) | High self-esteem (n=157) (78.5%) | Total     |
|--------------|-----------------------------------|---------------------------------|---------------------------------|-----------|
| Employment   | Unemployed                        | 6 (3%)                          | 25 (12.5%)                      | 31 (15.5%)|
|              | Employed                          | 37 (18.5%)                      | 132 (66%)                       | 169 (84.5%)|
| Marital Status | Unmarried/ separated/ divorced   | 4 (2%)                          | 29 (14.5%)                      | 33 (16.5%)|
| Education    | School-level (Upto Grade 10)      | 36 (18%)                        | 117 (58.5%)                     | 153 (76.5%)|
|              | College level and above (above grade 12) | 7 (3.5%)                         | 40 (20%)                        | 47 (23.5%)|

*Figures in parentheses indicate percentage of patients

Table 3: Perceived stress and socio-demographic variables.

| Parameter    | Variable                          | High perceived stress (n=91) (45.5%) | Low perceived stress (n=109) (54.5%) | Total     |
|--------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------|
| Employment   | Unemployed                        | 18 (9%)                            | 13 (6.5%)                          | 31 (15.5%)|
|              | Employed                          | 73 (36.5%)                         | 96 (48%)                           | 169 (84.5%)|
| Marital Status | Unmarried/ Separated/ Divorced | 81 (40.5%)                         | 86 (43%)                           | 167 (83.5%)|
| Education    | School-level (Upto Grade 10)      | 16 (8%)                            | 17 (8.5%)                          | 33 (16.5%)|
|              | Above college-level (higher than grade 12) | 22 (11%)                         | 25 (12.5%)                         | 47 (23.5%)|

*Figures in parentheses indicate percentage of patients
DISCUSSION

All the patients of alcohol use disorder were males. This male preponderance is in keeping with the findings of National Survey on Extent and Pattern of Substance Use in India (2019) which concluded that for every one woman who consumes alcohol, there are 17 alcohol using men.2 There was an almost equal representation of young adults below 40 years (n=109) as well as middle aged and elderly population (n=91). The mean age of the sample was 40.05 years. Five in every six patients were married. Only every sixth patient was unemployed. These findings were all comparable to a study done by Nadkarni et al, in which the mean age was found to be 42.8 years with 93.1% patients being married and 82.8% patients being employed.20 When the socioeconomic classification was done as per B. G. Prasad's modified scale, though there were patients from all classes, more than three-quarters of the patients belonged to the upper socioeconomic class.21 This finding refutes previous literature which identified majority patients as belonging to the lower socioeconomic classes.22,23 This difference can be explained by the metropolitan setting where the study was conducted as people need higher incomes to keep up with the higher cost of living. The severity of alcohol dependence and duration of alcohol use were not found to be significantly associated with factors like education, occupation and marital status. The sociodemographic profile obtained in this study highlights the fact that patients of alcohol dependence come from all types of families with various socioeconomic standings and educational qualifications. Thus, alcohol dependence is not a disease restricted to a select few.

Self esteem

Less than one-fourth of the patients had low self esteem. This finding was in contrast with previous research which stated that most patients of alcohol dependence had low self-esteem.24,25 The greater prevalence of high self-esteem in our study can be attributed to the fact that alcohol dependent individuals commonly have coexisting personality disorders with a recent study placing people having personality disorders at five times higher risk for alcohol use disorder.26,27 Cluster B personality disorders have been found to have the highest risk for substance abuse and these patients often have a fragile high self esteem which is particularly common in narcissistic and borderline personality disorders.28,29

The association between levels of self-esteem and sociodemographic variables like education and marital status was found to be statistically insignificant. There was a significant weak negative correlation between severity of alcohol dependence and self esteem. (r = -0.3229).30 A statistically significant weak negative correlation (r = -0.2479) between duration of alcohol use and self esteem was also observed. While in the early days of dependence, patients may have higher levels of self esteem, they eventually begin to suffer from multiple medical comorbidities along with rising economic and social costs.31,32

These coupled with sustained unemployment secondary to their alcohol dependence leads patients to eventually possess lower self-esteem levels.33 Thus, patients having lower self-esteem were found to have greater duration of alcohol use as well as higher severity of alcohol dependence.

A higher self-esteem also serves to reduce the perceived need for alcohol and thus, this brings to light that psychiatric evaluation and management to improve the patients' self-esteem as well as to diagnose and treat underlying personality disorders can effectively set off a chain reaction that can reduces the magnitude and severity of alcohol dependence.

Table 4: Significant correlations of alcohol related variables.

| Correlation between                                      | p-value | r Value | Goodness of Fit (r squared) | Nature   |
|---------------------------------------------------------|---------|---------|----------------------------|----------|
| Severity of alcohol dependence and perceived stress    | <0.0001*| 0.2652  | 0.0703                     | Weak positive |
| Severity of alcohol dependence and self-esteem         | <0.0001*| -0.3229 | 0.1041                     | Weak negative |
| Duration of alcohol consumption and self-esteem        | 0.0004* | -0.2479 | 0.0614                     | Weak negative |

*p-value<0.05 is indicative of statistical significance of result

Table 5: Association of self-esteem in patients of alcohol dependence with coping styles.

| Self-Esteem | Task-oriented | Emotion-based | Avoidant | Total |
|-------------|---------------|---------------|----------|-------|
| Low self-esteem | 11 | 3 | 29 | 43 |
| High self-esteem | 112 | 30 | 15 | 157 |
| Total        | 123 | 33 | 44 | 200 |

χ², degree of freedom, P 65.92, 2, <0.00001*

*p-value<0.05 is indicative of statistical significance of result
Perceived stress

Almost half the patients had high perceived stress. Within the past month, they often reported experiencing feelings of stress, nervousness, irritation and an inability to control important things in their life. Associations between levels of perceived stress and education, employment and marital status were statistically insignificant.

There was a significant weak positive correlation between severity of alcohol dependence and perceived stress. \( r = 0.2652 \). These results were consistent with earlier studies which found that subjects with higher levels of stress had more level of alcohol consumption. The correlation between duration of alcohol use and perceived stress was not found to be statistically significant. Though, though heightened perceived stress may cause an increase in severity of alcohol dependence, it does not result in prolonged duration of alcohol use.

Coping skills

Majority patients (61.5%) used task oriented coping skills to solve problems in day to day life. This is effective because it involves focussed thinking to analyse, solve and learn from problems and take corrective action targeted towards change. These findings concurred with a study done by Sudraba et al, which showed that patients of alcohol dependence were increasingly using problem solving as a coping skill. Strong association was seen between patients of alcohol dependence having low self-esteem and avoidant-oriented coping strategy. Avoidant coping is a maladaptive coping mechanism characterized by change in behaviour while dealing with a stressor to avoid thinking or feeling things that are uncomfortable and includes social withdrawal. These steps also increased their likelihood of alcohol consumption. Thus, identifying patients of alcohol dependence having low self-esteem will help in effectively psychoeducating them about correct and effective coping strategies.

The strengths of our study included the consideration and study of multiple factors like self-esteem, perceived stress, coping strategies and severity and duration of alcohol use in patients of alcohol dependence. Our study had some limitations. This study was done in a single tertiary care centre in a metropolitan city and thus, the result obtained cannot be generalized nationally. Individual factors such as social support and the patient’s own personality would result in a variation between perceived stress scores even in otherwise similar situations. The study emphasizes the need for interventional longitudinal national level studies in this field involving stress management and psychotherapy to foster coping skills, along with behaviour assessment and prognosis assessed through multiple follow-ups, which would allow for the wider generalizability of conclusions through adoption of qualitative and quantitative methods.

CONCLUSION

Alcohol is the most common psychoactive substance used by Indians. The severity of alcohol dependence and duration of alcohol use were not found to be significantly associated with factors like education, occupation and marital status. Less than one-fourth of the patients had low self esteem. The association between levels of self-esteem and sociodemographic variables like education and marital status was found to be statistically insignificant. There was a significant negative correlation between self esteem and severity of alcohol dependence as well as between self esteem and duration of alcohol use. Almost half the patients had high perceived stress. Associations between levels of perceived stress and education, employment and marital status were statistically insignificant. There was a significant positive correlation between severity of alcohol dependence and perceived stress. The correlation between duration of alcohol use and perceived stress was not found to be statistically significant. Majority patients used task oriented coping skills. Patients of alcohol dependence having low self-esteem used predominantly avoidant-oriented coping strategy.

This one of it's kind study clearly identifies that reducing perceived stress and bolstering self esteem will reduce the severity of alcohol dependence. Pharmacotherapeutic and psychosocial interventions must be incorporated to help patients deal with stress. Individualized treatment approaches emphasizing stress management techniques like mindfulness, relaxation techniques, biofeedback and positive imagery must be developed. Improvement of self-esteem by healthy means in the form of positive self talk, personality development, social and vocational skills training should also be encouraged. Psychosocial education regarding use of healthy coping strategies to avoid psychological distress must be emphasized. Utilizing such multimodal treatment protocols will help in effectively lightening the stress caused by alcohol dependence.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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