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# FACTORS INFLUENCING MOTIVATION IN ALCOHOL DEPENDENCE SYNDROME IN A TERTIARY CARE HOSPITAL – A CROSS SECTIONAL STUDY

Psychiatry

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## ABSTRACT

**Context:** By encouraging the patient to seek and adhere to therapy as well as make effective long-term adjustments, motivation plays a crucial role in the treatment of alcohol dependence syndrome. **Aim:** Our goal was to examine the motivation for change in inpatients with alcohol dependence syndrome and to assess the relationship between motivation and specific socio- demographic and clinical variables. **Settings and Design:** Fifty consecutive patients admitted for the treatment of Alcohol Dependence Syndrome in the De-addiction centre were evaluated. **Methods and Material:** ADS was established using the necessary modules and the International Classification of Disease, 10th Revision. The University of Rhode Island Change Assessment measure was used to evaluate motivation at baseline and two weeks following admission. Both the Kuppuswamy socioeconomic status scale and the Severity of Alcohol Dependence Questionnaire were applied. **Statistical analysis used:** Data were analysed using paired and unpaired t-tests, Fisher's exact test, and Wilcoxon signed-rank test. **Results:** In baseline, the motivation assessment revealed that 68% of patients were in the precontemplation (PC) stage, compared to none at the PC stage, 71% at the contemplation stage, and 28% at the action stage after two weeks of inpatient stay. After two weeks of inpatient treatment, there was a highly significant change in the levels of motivation for the contemplation and action stages ($Z = 5.894$, $P < 0.001$). **Conclusions:** According to the study's findings, some ADS patients may not have been very motivated before treatment, but their motivation significantly increased during a brief inpatient stay.

## KEYWORDS

Motivation, alcohol dependence, URICA, SADQ

### INTRODUCTION:

By encouraging the patient to seek and adhere to therapy as well as make effective long-term adjustments, motivation plays a crucial role in the treatment of alcohol dependence syndrome. This study was done to find correlation between stages of change and daily alcohol consumption, severity, and problems due to alcohol.

### AIM:

The aim was to assess the motivation for change among In-patients with alcohol dependence syndrome.

### OBJECTIVES:

(1) To assess the motivation for change among In-patients with alcohol dependence syndrome.
(2) To identify factors influencing motivation among In-patients with alcohol dependence syndrome.
(3) To analyse the relation between socio-demographic data, clinical variables and motivation for change among In-patients with alcohol dependence.

### Subjects and Methods:

This study was carried out at the De-addiction and Treatment Centre. The Institutional Ethical Committee gave its approval to the study. Male patients between the ages of 18 and 60 who had been diagnosed with ADS according to the ICD-10 Diagnostic Criteria for Research comprised the study population. A sample of 50 consecutively consenting patients was chosen from this group. The study excluded patients with other substance use disorders (aside from nicotine addiction), other co morbid psychiatric disorders (aside from personality disorders), and patients who were unwilling to provide informed consent.

### Procedure:

The participants were explained about the nature of the study, and written informed consent was obtained. The socio-demographic and clinical information were recorded. All the patients were screened with the ICD-10 symptom checklist for mental disorders screener, applying the respective modules to establish ADS and rule out comorbid psychiatric disorders other than personality disorders. The severity of alcohol dependence was assessed using the Severity of Alcohol Dependence Questionnaire (SADQ). The socioeconomic status was assessed using the Kuppuswamy's Socioeconomic Status Scale. The assessment of motivation was done using the University of Rhode Island Change Assessment (URICA) scale on two occasions: first, at the end of 1st week of inpatient care when withdrawal symptoms had subsided, representing baseline assessment; and second, after 2 weeks of inpatient stay. The URICA was applied verbatim by the third author; however, it was translated into the local language by the third author for some of the patients not well versed in English.

### Statistical analysis:

Statistical analysis was done using Statistical Package for Social Sciences (SPSS) V.25.0.Descriptive statistics was used to analyze the stages of motivation, clinical, and socio-demographic variables. Comparison between groups was done using paired and unpaired t-test. Chi-square test and Fisher's exact test were used to analyze the significance of association. Wilcoxon signed-rank test was used to analyze the significance of change in motivation levels from baseline to 2nd week.

### RESULTS:

#### a) Socio-demographic data:

This study was conducted on 50 patients, all of whom were male. Forty two percent of the patients were aged between 31 and 40 years, 76% being married. Nighty-eight percent were Hindus, and 1% Christians; 32% had high school education, while only 16% were illiterate. 99% were employed before admission to the de-addiction facility. Most of the patients had a monthly income between 5000 and 10,000 Indian rupees (46%). The assessment of socioeconomic status showed that 38% of patients belonged to Class I, 46% to Class II and 16 % to Class III.Fourteen percentage of the sample had been referred for treatment by family, 82% had sought treatment on their own; others (4%) included referral by religious leaders and employers.

#### b) Clinical data:

Analysis of clinical data showed that 74% of the patients had initiated alcohol use below 25 years of age. A majority of patients had late onset of alcohol dependence, i.e., onset of dependence after the age of 25 years (n = 70, 70%)Thirty percent consumed<6 standard units,42% percent of the sample consumed 6–12 standard units, 28% consumed 13–18 standard units of alcohol daily.The duration of alcohol dependence was < 1 year in 12%, 1–5 years in 44%, 6–10 years in 28%, 11–15 years in 10%, 15–20 years is 6% of the sample. The severity of alcohol dependence was mild in 6%, moderate in 74%, and severe in

20% of the patients. Fifty-two percent had experienced some complication of alcohol use, gastritis and liver disease being the most common; 44% had a medical co-morbidity such as hypertension or diabetes.

**c) Assessment of motivation:**

Figure 1 shows the stages of motivation assessed using the URICA scale. At baseline, 68% of the patients (n = 68) were in PC stage, 32% in contemplation stage (n = 38). The second assessment showed that 71% in contemplation stage (n = 71), and 30% in action stage (n = 30). There was a highly significant change in the stage of motivation toward contemplation and action stage after 2 weeks of in-patient stay (Wilcoxon signed-ranks test Z = 5.894, P = 0.000).

**Factors associated with baseline motivation:**

The stages of motivation at the baseline showed significant association with complications of alcohol use (P = 0.043) and medical comorbidity (P = 0.002). Liver disease, peripheral neuropathy, and the presence of comorbidities such as hypertension and neurological disorders were associated with higher stages of motivation. There was no significant association of religion with the stages of motivation. Higher income and higher socioeconomic class were associated with higher stages of motivation(p=0.026). A significant association was seen between mode of referral and stages of motivation at baseline. The patients who referred themselves for treatment had better motivation to change compared to those referred by family and others at baseline (P =0.003).

**Factors associated with motivation at second assessment:**

At the second assessment, there was a highly significant correlation between the severity of alcohol dependence and the stages of motivation (P = 0.001). After two weeks of inpatient treatment, the patients who voluntarily sought treatment were more motivated to change than those who were admitted by family and others (P= 0.003).The difference in motivation levels between the baseline and second week was found to be significant (P =0.031, t = 2.221) when comparing the URICA score. At the second assessment, no significant association was found between the stages of motivation and complications of alcohol use, medical co morbidity.

No significant association was found between the stages of motivation and age of initiation of alcohol use, duration of alcohol dependence, quantity of daily drinking, number of previous abstinence, age, marital status and education at baseline or second assessment.

**DISCUSSION:**

The present investigation was an observational, descriptive clinical study, carried out on 50 consecutive male patients admitted for the treatment of ADS in a de-addiction unit for 2 weeks. Patients with alcohol or substance dependence are admitted and treated for 2 weeks routinely. The patients receive pharmacotherapy along with group discussions, education about effects of alcohol, family meetings, and individual therapy whenever required. Motivation was assessed on two occasions to observe changes in the motivation levels. A highly significant change was observed in the stage of motivation toward contemplation and action after 2 weeks of admission in the de-addiction centre.

Pre treatment motivation levels were low in the present inpatient sample. However, after a short duration of hospital stay, their motivation levels improved significantly. The patients received treatment as usual including pharmacotherapy and psycho-education, had no access to alcohol and no exposure to cues during their stay. This could account for the improvement in motivation levels during the hospital stay. This could account for the improvement in motivation levels during the hospital stay.

A positive therapeutic relationship has been found to be important for patients with low motivation, improving their outcome.[1] A study by Rumpf et al reported that readiness to change was significantly higher in alcohol-dependent persons in the general hospital compared to the general population.[2] The findings of our study indicate that even a short duration of inpatient stay leads to significant improvement in the level of motivation to change in patients with alcohol dependence.

The presence of complications of alcohol use and medical comorbidity showed significant association with the stages of motivation at baseline as found in the Forsberg et al and Lau K et al studies.[3] A majority of patients with liver disease, peripheral neuropathy, hypertension, and neurological disorders had higher motivation. Most of the patients with diabetes and absence of comorbidity were in PC stage. Motivation to change has been found to be higher among inpatients with alcohol-attributable diseases than among inpatients without them. Alcohol has been reported to have a protective effect against diabetes and cardiovascular disorders, which may influence the promotion of alcohol use in these disorders, and in such cases, alcohol use may not be recognized as a problem behaviour.

Majority of patients in the lower class were in PC stage, and higher income and upper socioeconomic class were associated with better stages of motivation, similar to the findings of the de Oliveria et al study during 2003 [4]. Promoting involvement in religious activities where applicable and addressing socioeconomic condition of the patients could have a beneficial influence on motivation and treatment seeking.

Self-referral for the treatment was associated with higher stages of motivation at baseline and after 2 weeks of admission. The present study indicates that patients who sought treatment willingly had higher levels of motivation compared to those admitted by family or others, and their high level of motivation was sustained till the end of treatment. This implies that motivating patients to seek treatment willingly before admission may promote better outcomes than forcible admission. There were 5 drop outs in our study.

The sample of the present study may not be representative of the general population as the population of this study is a selected group of inpatients. The patients have been recruited by consecutive sampling which eliminates sampling bias, with specific inclusion and exclusion criteria, thus ensuring a homogenous group. A larger sample size would be required to enhance the reliability and validity of the results. The tools have established reliability and are less time-consuming. Rater bias is possible as the assessment was not blind

The assessment of motivation was carried out on two occasions during inpatient stay though over a short period which is a conspicuous merit of this study. In our study, baseline assessment representing motivation level at admission was done 1 week after admission since most patients experienced withdrawal symptoms in the 1st week. Hence, it may not represent an accurate assessment of motivation level at admission. The Relation of motivation levels to treatment and outcome was not assessed in this study.

Further research could address issues such as selection of larger sample representative of general population, longer follow-up period with multiple blind assessments, and explore association of motivation levels with treatment outcome.

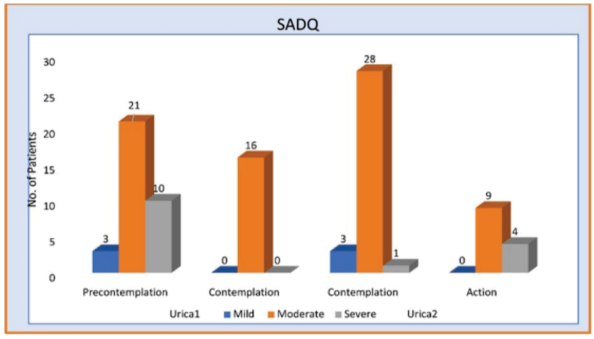


**Figure1:** Distribution of sample across pre-contemplation, contemplation and action stages of motivation at week 1 and week 2, reflecting a significant improvement in the motivation to change after 2 weeks, Wilcoxon signed-ranks test Z=5.894,p<0.001.

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