

## **A Study of Sleep Patterns among Alcohol Dependent patients, Following Detoxification at GHMC, Visakhapatnam**

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### **I. Introduction**

Insomnia is a complaint of difficulties falling asleep, frequent and/or prolonged awakenings and/ or consistently unrefreshing sleep that occurs despite adequate sleep opportunity. Persistent insomnia is associated with wide ranging adverse consequences including decreasing quality of life, increased risk for psychiatric disturbances, increased work absenteeism and poor interpersonal functioning.

The substance dependence is a major problem worldwide. In India, the prevalence of current use of alcohol ranged from a low of 7% in the western states of Gujarat to 75% in north-eastern states of Arunachal Pradesh. In ICD-10, the characteristic feature of dependence is a cluster of behavioural, cognitive and physiological phenomenon that develop after repeated substance use and typically include a strong desire to take the drug, difficulty in controlling its use, persisting its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance and sometimes a physical withdrawal state.

Sleep disturbances are extremely common among patients in recovery from alcohol dependence. A study examining the results from a national survey found rates of insomnia in alcohol withdrawal as high as 50%. Even higher rates have been found in clinical samples.

Insomnia in early alcohol recovery is especially important given its association with relapse within the first several months of recovery. On subjective measures, both increase in sleep onset latency and subjective perception of increased sleep fragmentation have been associated with relapse. In a study of 172 patients, about 61% of patients for the 6 months prior to admission to an alcohol treatment while insomnia at admission was a robust predictor of relapse at 5 months following treatment.

Bhanu prakash et al<sup>1</sup> conducted a study at Mayo clinic, Minnesota, which revealed that large proportion (69.3%) of patients in early alcohol recovery have sleep disturbances and even after their first month of abstinence, rates of sleep disturbances were 49.1%.

Studies using Polysomnographic (PSG) measures show that decreased sleep efficiency (SE), total sleep time (TST) and increased sleep onset latency (SOL) and wake time after sleep onset (WASO) in early recovery predict relapse. There are some indications that subjective measures of sleep may be better predictors of relapse compared to Polysomnographic measures. A single study examined the change in subjective sleep perception measured by PSQI (Pittsburg Sleep Quality Index) in early alcohol recovery. But this study had smaller sample and follow up rate of 40%.

The natural course of sleep problems in early alcohol recovery, especially following detoxification, has not been extensively studied. Understanding the course and clinical correlates of sleep problems in early alcohol recovery may identify patients at high risk of relapse and guide treatment interventions. Hence this study of sleep problems in early alcohol recovery has been taken up in residential treatment setting utilizing a validated sleep measure to characterize the course and clinical correlates of sleep problems.

### **Aims And Objectives**

1. To study the prevalence of insomnia in alcohol dependent patients following detoxification.
2. To assess their socio-demographic variables.

### **II. Materials And Methods**

This is a single stage cross-sectional study conducted at the Government Hospital for Mental Care, Visakhapatnam which is a tertiary care unit and a teaching institute. 30 patients diagnosed with alcohol dependent syndrome as per International Classification of Diseases, 10th revision (ICD-10) criteria were included in the study. Both inpatient and outpatient cases were taken into consideration. Their sleep patterns were studied after detoxification by using Pittsburg Insomnia Rating Scale (PIRS). Patients attending OPD were started on detoxification and their sleep patterns were studied during the follow up visit after 2 weeks (i.e.) after detoxification. As most of the patients attending were males, so only men were taken up for the study. The study period was 6 months i.e., from December 2013 to May 2014

My study tools were the demographic and clinical data obtained from patients, relatives or case sheets. Sleep patterns were rated using Pittsburg Insomnia Rating Scale, which is a 65- item self-administered questionnaire designed to assess the severity of insomnia in clinical practice , each item scored on a 4 point scale(0 to 3).Subjects rate items asking about subjective distress (Part 1- 1<sup>st</sup> 46 items), subjective sleep parameters (Part 2- next 10 items 47-56) and quality of life (Part 3- last 9 items) in the past 1 week.The total maximum score possible is 195 indicating sleep disturbance is severely bothering the subject and minimum score is 0 indicating no disturbance with sleep.

**Inclusion criteria:**

1. Patients of age 18 to 65 years
2. Those who have fulfilled ICD10 DCR criteria for alcohol dependence
3. Who have received detoxification treatment for their condition.

**Exclusion criteria:**

1. Patients with any other comorbid psychiatric disorder
2. Those with organic brain disorder or mental retardation
3. Patients with multiple substance abuse or dependence.
4. Those who are using sedatives or hypnotics.

**III. Results**

In the present study, a total of 30 patients were included. Socio-demographic data analysis suggested that all patients were males with majority coming from a rural background with mean age of presentation of 37.7years. Out of them, 76.6% were married with majority belonging to nuclear families. Most of them of them were employed.

Mean of total score was 69.65+/-39.75. Mean of distress score was 40.56+/-24.32 with most of them having reported difficulty getting to sleep at bedtime and one or more awakenings after getting to sleep. More than half of the patients reported anxiety or worries about getting to sleep and about lack of sleep. About 1/3<sup>rd</sup> of the patients reported poor alertness during daytime, lack of energy due to poor sleep, tiredness and bad moods because of poor sleep.

**Table 1. Demographic profile of study sample**

Variables	n=30	%
Age (yrs)*	37.7	
Marital status		
Married	23	76.7
Unmarried	7	23.3
Family type		
Nuclear	26	86.7
Joint	4	13.3
Residence		
Urban	6	20
Rural	24	80
Occupation		
Employed	22	73.3
Unemployed	8	26.7
Education		
Literate	20	66.7
Illiterate	10	33.3

\*Values are mean

Mean of sleep parameters score was 18.51+/-7.8 with majority of them taking time between 1/2hr to 1hr to fall asleep on most nights.1/3<sup>rd</sup> reported between 2-4 hours of actual sleep during most of the nights. Another 2/3<sup>rd</sup> reported between 4-7 hours of actual sleep during most nights. Most of them reported trouble coping due to poor sleep with majority feeling not refreshed the next day morning.

Mean of quality of life score was observed to be 10.58+/-7.63 with 1/3<sup>rd</sup> of patients rating good satisfaction with their sleep, with the rest rating poor satisfaction.

Score	Maximum score	Obtained score
Mean of distress score	138	40.56+/-24.32
Mean of sleep parameters score	30	18.51+/-7.8
Mean of quality of life score	27	10.58+/-7.63
Mean of total score	195	69.65+/-39.75

#### **IV. Discussion**

The study revealed that a large proportion of patients in early alcohol recovery have sleep disturbances even after 2 weeks of abstinence and detoxification and show higher scores on Pittsburgh Insomnia Rating scale indicating slight to moderate subjective distress, moderate disruptive sleep and moderate deterioration of quality of life.

This study focused on how alcohol dependent patients continue to have sleep disturbances even after quitting alcohol. The more prevalent, disruptive effects included more frequent waking, worse sleep quality, and reduction of deep sleep, earlier than usual waking times leading people to feel unrefreshed the next day morning.

A similar study conducted by Bhavya et al<sup>1</sup> at Dharwad, Karnataka with 55 patients resulted in mean of distress score as 30.02+/-20.76, mean of sleep parameters score as 9.54+/-7.8, mean of quality of life as 11.2+/-7.58 and mean of total score as 50.45+/-35.01. This study gave similar result.

Morioka et al<sup>3</sup> attempted to clarify the associations between various sleep disturbance symptoms and the frequency and amount of alcohol use among Japanese adolescents. A self-administered questionnaire survey was administered to students enrolled in randomly selected junior and senior high schools throughout Japan. With the number of days on which alcohol was consumed and the amount of alcohol consumed per drinking session. The prevalence of sleep disturbance is particularly high among adolescents drinking alcohol. The risk of having each symptom of sleep disturbance increases with the number of days on which alcohol was consumed and the amount of alcohol consumed per drinking session. These findings reconfirm the need to eliminate underage drinking to ensure good sleep among adolescents. This result goes in line with our present study. Insomnia at this stage of recovery could adversely impact the quality of life and possibly increase the risk of relapse. This high prevalence is concerning and should be addressed at the earliest by clinical detection and management. Limitations. Small sample size sample restricted to men

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