



# A Study To Assess The Effectiveness Of Psycho-Education Module On Sleep Deprivation Among Senior Citizens Residing At Selected Old Age Homes In Rajasthan.

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## Abstract

Sleep deprivation is a common health problem among senior citizens, especially those residing in old age homes. Age-related physiological changes, chronic illnesses, psychological stress, loneliness, and environmental factors contribute significantly to poor sleep quality among the elderly. Sleep deprivation adversely affects physical health, emotional well-being, cognitive functioning, and quality of life. Psycho-education is a structured, non-pharmacological intervention that enhances knowledge, coping abilities, and healthy sleep behaviors.

The present study aimed to assess the effectiveness of a psycho-education module on sleep deprivation among senior citizens residing in selected old age homes in Rajasthan. A quantitative approach with a quasi-experimental one-group pre-test post-test research design was adopted. The study was conducted among **300 senior citizens**, selected using purposive sampling technique. Data were collected using a socio-demographic proforma and a standardized sleep deprivation assessment scale. The psycho-education module included information on sleep physiology, sleep hygiene practices, relaxation techniques, stress management, and lifestyle modification.

The findings revealed a significant reduction in post-test sleep deprivation scores compared to pre-test scores ( $p < 0.001$ ), indicating the effectiveness of the psycho-education module. Significant associations were found between post-test sleep deprivation scores and selected demographic variables such as age, presence of chronic illness, and duration of stay in old age homes. The study concludes that psycho-education is an effective, economical, and feasible intervention for improving sleep among senior citizens.

### **Index Terms — Psycho-education, sleep deprivation, senior citizens, old age homes, geriatric nursing**

Sleep is a fundamental biological necessity that plays a vital role in physical restoration, emotional regulation, and cognitive functioning. Adequate and quality sleep is essential for maintaining overall health and well-being across the lifespan. However, with advancing age, significant changes occur in sleep architecture, including reduced total sleep duration, prolonged sleep latency, frequent nocturnal awakenings, and decreased sleep efficiency. These age-related alterations make senior citizens particularly vulnerable to sleep disturbances and sleep deprivation.

Sleep deprivation among elderly individuals is often multifactorial in origin. Chronic medical conditions, polypharmacy, psychological stress, anxiety, depression, loneliness, and diminished social support contribute significantly to disturbed sleep patterns. Senior citizens residing in old age homes face additional challenges such as institutional living environments, separation from family members, lack of emotional attachment, reduced autonomy, and disrupted daily routines, all of which further aggravate sleep problems.

Persistent sleep deprivation in the elderly is associated with numerous adverse health consequences, including fatigue, impaired memory, reduced attention and concentration, mood disturbances, anxiety, depression, increased risk of falls, and reduced quality of life. Although pharmacological agents are commonly prescribed to manage sleep problems, their use in older adults is often associated with undesirable side effects such as dizziness, confusion, daytime drowsiness, dependency, and increased risk of falls. Hence, reliance solely on medication is not considered an ideal or safe long-term approach for managing sleep disturbances among senior citizens.

In this context, non-pharmacological interventions have gained increasing importance in geriatric care. Psycho-education is a structured and evidence-based approach that focuses on enhancing knowledge, developing coping skills, promoting healthy sleep hygiene practices, and improving stress management abilities. Psycho-education empowers individuals to actively participate in their own health care, making it a cost-effective, safe, and nurse-led intervention suitable for institutional settings such as old age homes. Therefore, the present study was undertaken to evaluate the effectiveness of a psycho-education module on sleep deprivation among senior citizens residing in selected old age homes in Rajasthan.

## II. OBJECTIVES OF THE STUDY

1. To assess the level of sleep deprivation among senior citizens before the psycho-education module.
2. To assess the level of sleep deprivation among senior citizens after the psycho-education module.
3. To evaluate the effectiveness of the psycho-education module on sleep deprivation.
4. To find the association between post-test sleep deprivation scores and selected socio-demographic variables.

## III. RESEARCH METHODOLOGY

The research methodology outlines the systematic plan adopted to conduct the present study. It includes the research approach, research design, setting, population, sample, sampling technique, tools for data collection, intervention, and plan for data analysis.

### 3.1 Research Approach

A **quantitative research approach** was adopted for the present study, as it aimed to measure the effectiveness of a psycho-education module on sleep deprivation among senior citizens using numerical data and statistical analysis.

### 3.2 Research Design

A **quasi-experimental one-group pre-test post-test research design** was used to assess the effectiveness of the psycho-education module. In this design, the level of sleep deprivation was assessed before and after the administration of the intervention.

### 3.3 Research Setting

The study was conducted in **selected old age homes of Rajasthan**. The setting was chosen based on the availability of senior citizens, feasibility of data collection, and administrative permission.

### 3.4 Population

The population of the study comprised **senior citizens aged 60 years and above** residing in selected old age homes of Rajasthan.

### 3.5 Sample and Sample Size

The sample consisted of **300 senior citizens** who fulfilled the inclusion criteria and were residing in the selected old age homes during the period of data collection.

### 3.6 Sampling Technique

A **purposive sampling technique** was adopted to select the participants, as it enabled the researcher to include subjects who met the specific criteria required for the study.

### 3.2 Data and Sources of Data

Primary data were collected from senior citizens using a structured socio-demographic questionnaire and a standardized sleep deprivation assessment scale. Pre-test data were collected before the intervention, followed by administration of the psycho-education module. Post-test assessment was conducted on the 7th day after the intervention.

### 3.3 Theoretical Framework

The study was based on a modified health education model. The independent variable was the psycho-education module consisting of knowledge on sleep and aging, sleep hygiene practices, relaxation techniques, stress management, and lifestyle modification. The dependent variable was the level of sleep deprivation. Extraneous variables included age, gender, chronic illness, medication use, and duration of stay in old age homes.

### 3.4 Statistical Tools

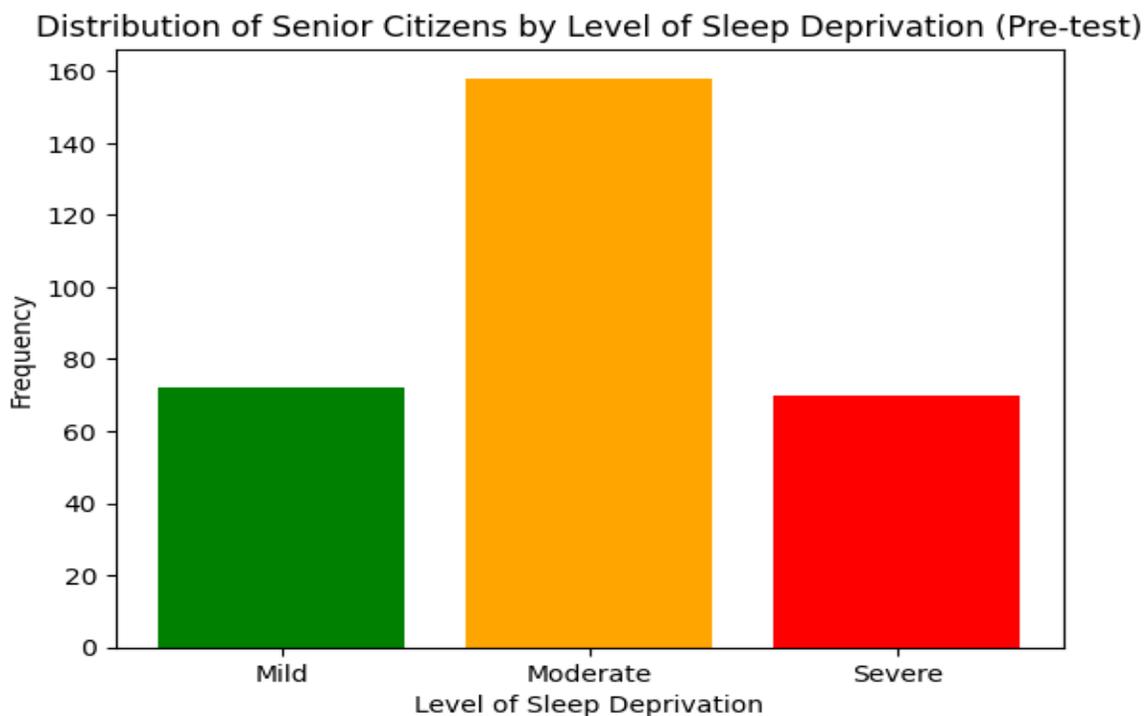
Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to describe demographic variables and sleep deprivation scores. Inferential statistics such as paired *t*-test and chi-square test were used to evaluate effectiveness and association.

## IV. RESULTS AND DISCUSSION

**Table 4.1: Distribution of Senior Citizens According to Level of Sleep Deprivation (Pre-test) (n = 300)**

Level of Sleep Deprivation	Frequency	Percentage
Mild	72	24.0
Moderate	158	52.7
Severe	70	23.3

Table 4.1 shows the distribution of senior citizens according to the level of sleep deprivation during the pre-test. The findings reveal that more than half of the participants (52.7%) were experiencing **moderate sleep deprivation**, while 23.3% had **severe sleep deprivation**. Only 24.0% of the senior citizens reported mild sleep deprivation. These findings indicate that sleep deprivation was a prevalent and significant health problem among elderly residents of old age homes prior to the intervention.



**Table 4.2: Comparison of Pre-test and Post-test Mean Sleep Deprivation Scores (n = 300)**

Test	Mean	SD	t value	p value
Pre-test	62.4	8.6	28.45	<0.001*
Post-test	41.2	7.9		

\*Significant at  $p < 0.05$

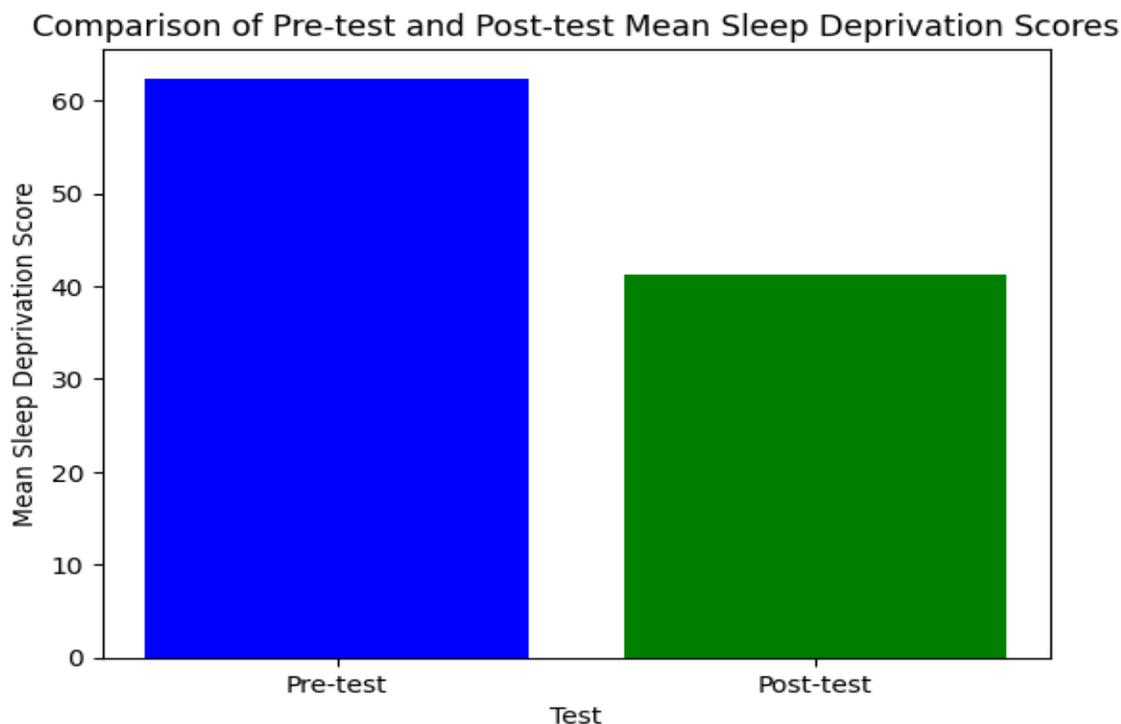


Table 4.2 depicts the comparison of pre-test and post-test mean sleep deprivation scores among senior citizens. The mean pre-test score was 62.4 with a standard deviation of 8.6, whereas the mean post-test score decreased to 41.2 with a standard deviation of 7.9. The calculated  $t$  value of 28.45 was statistically significant at  $p < 0.001$ , indicating a highly significant reduction in sleep deprivation scores following the administration of the psycho-education module.

The results clearly demonstrate that the psycho-education module was effective in improving sleep quality and reducing sleep deprivation among senior citizens. The improvement may be attributed to enhanced awareness regarding sleep hygiene, adoption of relaxation techniques, better stress management, and positive lifestyle modifications introduced during the psycho-education sessions. These findings support the use of psycho-educational interventions as a safe, economical, and non-pharmacological approach for managing sleep problems in elderly populations residing in institutional settings.

## V. CONCLUSION

The present study concluded that the psycho-education module was effective in significantly reducing sleep deprivation among senior citizens residing in old age homes. The structured psycho-educational intervention improved participants' awareness of healthy sleep practices, encouraged the adoption of relaxation techniques, and enhanced coping strategies for managing stress and age-related sleep problems. As a non-pharmacological approach, the psycho-education module proved to be safe, economical, and easy to implement without the risk of adverse effects associated with sedative medications.

The findings highlight the important role of nurses in promoting sleep health among the elderly through educational and supportive interventions. Incorporating psycho-education modules into routine geriatric nursing care can contribute to improved sleep quality, better psychological well-being, and enhanced overall quality of life for senior citizens residing in institutional settings.

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