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# Assess the Effectiveness of Chair Based Exercises on Level of Sleep among Senior Citizens

**Sheela[1], David. F. J.[2]**

[1]Assistant Professor, Saveetha College of Nursing, SIMATS, Chennai, Tamil Nadu, India
[2]B.Sc. (N) IV Year, Saveetha College of Nursing, SIMATS, Chennai, Tamil Nadu, India

## ABSTRACT

Sleep problems are highly prevalent in elderly population and insomnia being the most common sleep disorder among the geriatrics. According to International Classification of sleep disorders, third edition, Insomnia is defined a acute or chronic sleep disorder characterized by difficulty in initiating or maintaining sleep, early morning awakening that occur at a minimum of three nights per week, for three months and are associated with significant daytime consequences. The aim of the study to assess the effectiveness of chair based exercise on level of sleep among senior citizens. Quantitative research approach and experimental research design was adopted for the present study.30 samples were selected by using non-probability purposive sampling technique. A structured questionaries' was used to collect demographic variable. IN clinical variable Pittsburgh sleep quality index was used to assess sleep quality among senior citizen.

***KEYWORDS:*** *Chair based excerise, sleep quality, senior citizen*

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## INTRODUCTION

Sleep problems are highly prevalent in elderly population and insomnia being the most common sleep disorder among the geriatrics. According to International Classification of sleep disorders, third edition, Insomnia is defined a acute or chronic sleep disorder characterized by difficulty in initiating or maintaining sleep, early morning awakening that occur at a minimum of three nights per week, for three months and are associated with significant daytime consequences. Prevalence of Insomnia increases with age and prevalence of insomnia found to be higher among older adults which is thought to be consequence of physical and mental co morbidity rather than consequences of ageing itself. Decreased quality of life, risks for falls, psychological and physical difficulties, economic and social costs, risks for nursing home placement and mortality were found to be negative consequences of Insomnia in late life. Prevalence of Insomnia increases with age and unfortunately less than fifteen percent of patients with Insomnia receive treatment or consult health care provider. When untreated Insomnia leads psychological such as fatigue, depression, cognitive impairments, depression and increased risk of falls. Studies have shown that there is twenty three percent increased risk of depression in patients with untreated insomnia. The prevalence of sleep problems increases from the age of 65 years and approximately 50% of geriatrics suffer from sleep difficulties in which approximately 30% suffer from insomnia and 20% suffer from sleep apnea. Sleep problems in older adults can cause fatigue, daytime sleepiness and napping. Sleep problems also affect The general functioning such as activities of daily living were affected by sleep problems and are associated with poorer quality of life.

## MATHODS AND METHODOLOGY

A Quasi- experimental design with purposive sampling technique. The total sample size was 60 patients, out of which 30 patients were in control group and 30 in experimental group. A quasi experimental pre-test and post-test design with control group was chosen for analysis. To assess the

effectiveness of chair based exercise on level of sleep among senior citizens at SMCH. Those who wish to participate and can use it while collecting data. Individuals who did not wish to participate in the study were excluded. Information on research and informed consent was obtained. Data were collected by structured questionnaires. Confidentiality was maintained throughout the study. The pre-test was conducted and exercise was given by using chair and the post-test was conducted. Collected data were analyzed by using descriptive and inferential statistics. The project has been approved by the Ethics Committee of the Institution.

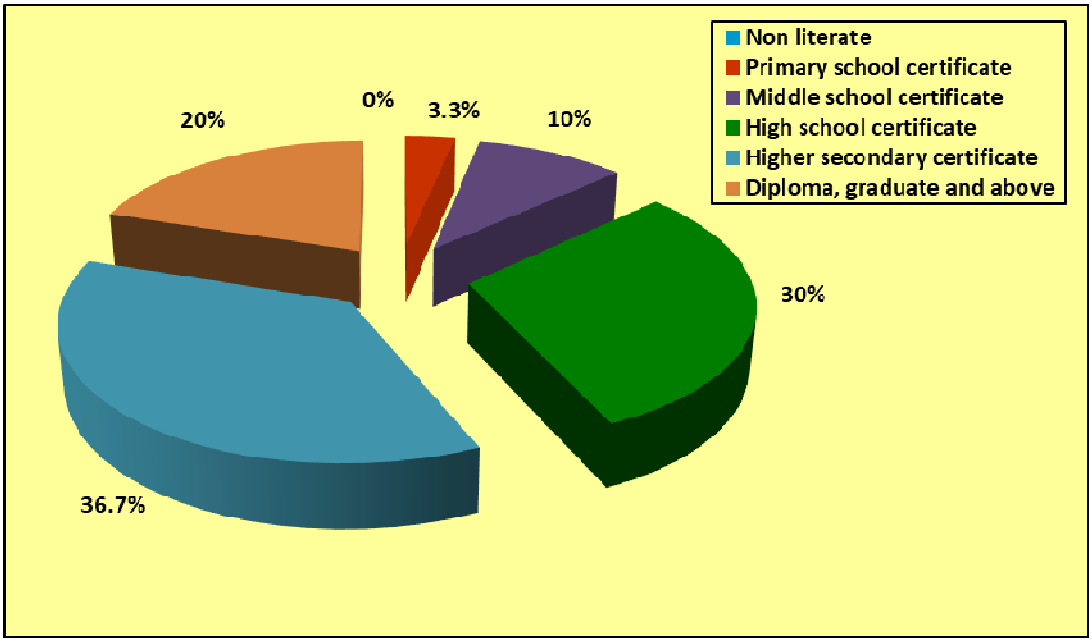
**SECTION A: DESCRIPTION OF THE DEMOGRAPHIC OF SENIOR CITIZEN.**

**Table 1: Frequency and percentage distribution of demographic variables of senior citizen.**

**N = 30**

| Demographic Variables | Frequency | Percentage |
|---|---|---|
| **Age in years** | | |
| 61 – 65 | 12 | 40.0 |
| 66 – 70 | 11 | 36.7 |
| 71 – 75 | 7 | 23.3 |
| **Gender** | | |
| Male | 16 | 53.3 |
| Female | 14 | 46.7 |
| Transgender | - | - |
| **Educational status** | | |
| Non literate | - | - |
| Primary school certificate | 1 | 3.3 |
| Middle school certificate | 3 | 10.0 |
| High school certificate | 9 | 30.0 |
| Higher secondary certificate | 11 | 36.7 |
| Diploma, graduate and above | 6 | 20.0 |
| **Residence** | | |
| Urban | 12 | 40.0 |
| Semi urban | 13 | 43.3 |
| Rural | 5 | 16.7 |
| **Family history** | | |
| Yes | 6 | 20.0 |
| No | 24 | 80.0 |
| **Previous medical history** | | |
| Yes | 13 | 43.3 |
| No | 17 | 56.7 |

The Table 1 shows that most of the senior citizen, 12(40%) were aged 61 – 65 years, 16(53.3%) were male, 11(36.7%) had higher secondary education, 13(43.3%) were residing in semi-urban area, 24(80%) had not family history and 17(56.7%) had no previous medical history.




**Percentage distribution of educational status of Education status of the senior citizen**

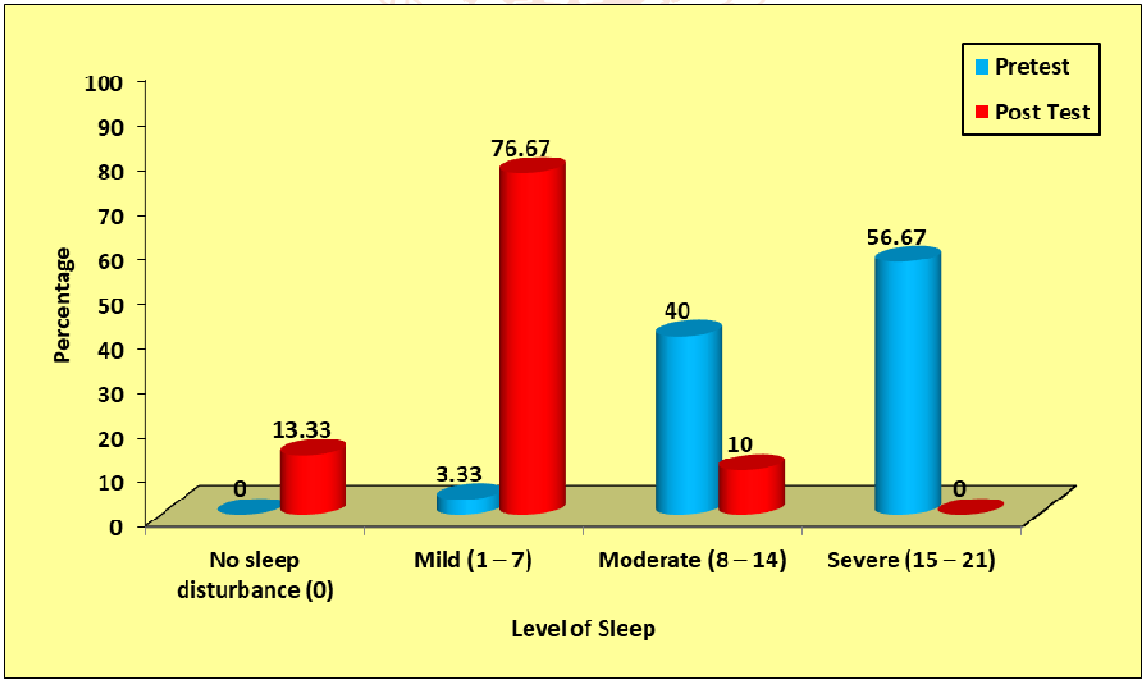
**SECTION B: ASSESSMENT OF LEVEL OF SLEEP AMONG SENIOR CITIZEN.**

**Table 2: Frequency and percentage distribution of pretest and post test level of sleep quality among senior citizen.**

**n = 30**

| Level of Sleep Quality | Pretest | | Post Test | |
|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage |
| No sleep disturbance (0) | 0 | 0 | 4 | 13.33 |
| Mild (1 – 7) | 1 | 3.33 | 23 | 76.67 |
| Moderate (8 – 14) | 12 | 40.0 | 3 | 10.0 |
| Severe (15 – 21) | 17 | 56.67 | 0 | 0 |

The table 2 shows that in the pretest, 17(56.67%) had severe sleep disturbance, 12(40%) had moderate sleep disturbance and 1(3.33%) had mild sleep disturbance whereas in the post test, 23(76.67%) had mild sleep disturbance, 4(13.33%) had no sleep disturbance and 3(10%) had moderate sleep disturbance.



**SECTION C: EFFECTIVENESS OF CHAIR BASED EXERCISE ON SLEEP AMONG SENIOR CITIZEN.**

**Table 3: Effectiveness of chair based exercise on sleep among senior citizen.**

**n = 30**

| Test | Mean | S.D | Mean Difference Score | Paired 't' test value |
|---|---|---|---|---|
| Pretest | 13.63 | 2.92 | 9.16 | **t=14.247** |
| Post Test | 4.47 | 2.46 | | **p=0.0001, S*****|

***p<0.001, S – Significant

The table 3 depicts that the pretest mean score of sleep among senior citizen was 13.63±2.92 and the post test mean score was 4.47±2.46. The calculated mean difference score was 9.16. The calculated paired 't' test value of t = 14.247 was found to be statistically significant at p<0.001 level which clearly infers that administration of chair based exercise on sleep among senior citizen was found to be effective in improving the level of sleep in the post test.

## CONCLUSION

The findings of the study conclude that chair based exercise administered to senior citizen improves their sleep quality. The exercises can be used to reduce sleep disturbances in senior citizen who suffer from sleep and not willing to use sleep medication. One way to the monitoring, development, and improvement of quality takes place within the organization is internal evaluation

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## AUTHORS CONTRIBUTION

All the authors actively participate in the work of study. All the authors read and approved the final manuscript.

## CONFLICT OF INTEREST

The authors declare no conflict of interest

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