

# To Determine the Quality of Sleep among Elderly Population at Selected Community in Chennai

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**Abstract:- Background:** Our daily lives depend on sleep, and as we age, our sleep patterns tend to change as well. Most people discover that getting older makes it more difficult for them to fall asleep. Chronic sleep disorders are thought to affect 40–70% of older persons, and up to 50% of cases go misdiagnosed. The purpose of this study was to ascertain the causes of insomnia and the quality of sleep in order to develop strategies for promoting sleep among the senior population in a particular Chennai community .**Materials and procedure:** The study, which involved 100 senior citizens living in Mel Ayanambakkam, was carried out using a descriptive correlational research design. Pretested and validated instruments, such as the Insomnia Severity Scale, the Health variables proforma, and the Demographic Variables Proforma, were used to gather data. **Results:** The levels of insomnia, 39% of the elderly population did not have insomnia, 28% of the elderly population had sub threshold insomnia and moderate level of insomnia, only 5% of the elderly population had severe insomnia. There was no significant association between demographic variables such as age, gender, marital status, type of family, leisure time activities and monthly income and quality of sleep ( $p < 0.05$ ). **Conclusion:** The elderly who experience sleep disturbances will increase the amount of sleep during the daytime, attention and memory problems, depression. Health care professionals especially the nurses, play a vital role in educating the community on importance of sleep among elderly population.

**Keywords:-** Quality of Sleep , Elderly, Insomnia, , Population, Hospital Acquired Infection, ICU Nurses, Comprehensive Training Program.

## I. INTRODUCTION

Older adults wake up more frequently due to deep sleep, spending less time asleep, worry, and other factors including the need to urinate or discomfort from a chronic condition. They were awakening sooner in the morning and more frequently during the night .One of the main causes of sadness and accidents is insomnia [1]. Even if their overall sleep duration has not changed, older adults may experience depression from sleep because they wake up more frequently and sleep lighter. Medication side effects may also be connected to sleep problems. [2]

Multiple medication interactions may also have an impact on sleep; however, chronic daytime insomnia is not a typical aspect of aging. Individuals who experience persistently poor sleep are more vulnerable to depression, dementia, heart disease, obesity, and falls. [3] As a result, sleep hygiene is important for healthy aging. The world's aging population (2022) estimates that 771 million people, or about 10% of the worldwide population, are 65 years of age or older. This market has been expanding quickly, and by 2100, it is predicted to have grown from 16% in 2050 to 24%. Chronic sleep disorders are thought to affect 40–70% of older persons, and up to 50% of cases go misdiagnosed. [4]

Older adults are more likely to experience the negative effects of an unsuitable sleeping environment, such as a noisy, dim, or uncomfortable bedroom. Auditory pollution can have an impact on sleep quality since the brain analyzes auditory information both while an individual is awake and while they are asleep. [5] People typically strive to adjust their surroundings to maintain appropriate sleep quality when the noise level is between 40 and 55 Db, or roughly the volume of mild road traffic.[6] Sleep issues become common around noise levels of 55 dB, or roughly the volume of two persons conversing. This depends on whether or not hearing acuity is maintained.[7]

Numerous physical and mental health issues are linked to insomnia, such as a higher risk of mental health disorders, suicide, and chronic illnesses like obesity, cardiovascular disease, and chronic pain that necessitate higher medication usage.[8] Insomnia treatment is essential because it may lessen the cost on public health. The prevalence of self-reported sleep issues rises with age: 40% of people who see a general practitioner report having serious sleep issues; this percentage rises to 63% for people 60 years of age and older, and to 67% for those residing in long-term care facilities.[9] With most industrialized countries seeing increases in life expectancy, sleep issues will only become more of a worry.[10]

While age-related physiological changes that impact sleep quality are well accepted, senior people are more susceptible to negative effects from an unsuitable sleep environment, such as a noisy, dim, or uncomfortable bedroom.[11] One of the most crucial aspects of nursing care for the old population is evaluating the elderly's sleep quality. Thus, in order to create methods to enhance sleep in

older populations, this study evaluates the causes of insomnia and the quality of sleep.

➤ *Objectives of the Study*

- To estimate the prevalence of depression among elderly population.
- To identify the predictors of depression among elderly population.

➤ *Research Hypotheses*

H1: There will be a significant association between the selected demographic variables and quality of sleep among elderly population.

**II. MATERIAL AND METHODS**

The study, which involved 130 senior citizens living in Keel Ayanambakkam, was carried out using a descriptive correlational research design. After receiving approval from the principal, head of research and development in Chennai, and head of the department of community health and mental health nursing, data was gathered. Through door-to-door surveys and interactions, the researchers selected the elderly population based on eligibility requirements. Pretested instruments, including the Performa health and demographic factors and the Performa insomnia severity scale, were used to gather data through in-person interviews conducted in senior citizens' homes. Data were examined using both descriptive and inferential statistics in accordance with the goals and theories of the investigation.

**III. RESULTS AND DISCUSSION**

Majority of the Elders were married (63%), receiving government pension (57%), with equal proportion of male and females (50%). Regarding other variables around half of them of them were Hindus (48%), from Nuclear family (52%) with a monthly family income of Rs. 10,000 – 15,000 (42%). With regard to other variables 41% were non literate, 32% elders were aged 65-69 years, 34% were spending their leisure time listening to music, and had more than two children (43%). This finding was supported by the cross-sectional study conducted in a rural and an urban area

of Delhi among 115 participants from each area using systematic random sampling. A semi-structured questionnaire was used to collect the data. Out of 230 participants, 121 (52.6%) were females and 109 (47.4 %) were males. Insomnia was more prevalent in the elderly participants of rural area (95%) while just 5% were in the urban population. Out of the 230 participants, 113 (49.1%) had scores of 0-7 whereas 117 (50.9%) had scores between 8-28 which meant they had some degree of insomnia. Insomnia was significantly associated with the locality of the participants (  $p < 0.05$  ) [12].

Majority of them were not using any sleeping pills for sleep (78%), did not have the habit of taking alcohol and smoking (69%). More than half of the elderly population were not using any comfort devices for sleep (53%), had no bed time rituals for sleep(58%), their physical activities were moderate (53%) had diabetes mellitus(50%) and on medications(43%).

In terms of Insomnia Severity index, Less than half of the elderly population did not have difficulty in falling asleep (40%), no problem in waking up early (42%) no sleep interference (35%), had mild difficulty in staying asleep (34% ), had moderate noticeable insomnia (30%), moderate satisfaction with sleep pattern (28%) and moderately worried about insomnia (28%).

Regarding levels of insomnia 39% of the elderly population did not have insomnia, 28 % of the elderly population had sub threshold insomnia and moderate level of insomnia, only 5% of the elderly population had severe insomnia. We can infer from the above table that the mean and standard deviation of quality of sleep in Elderly population is 10.05/28 and  $\pm 3.3$  (35.8%)

There was no significant association between demographic variables such as age, gender, marital status, type of family, leisure time activities and monthly income and quality of sleep ( $P > 0.05$ ). Hence the hypotheses H1 “There will be a significant association between the selected demographic variables and quality of sleep in Elderly population is rejected.

**Table. 1 Frequency and Percentage Distribution of Background Variables of Elderly Population. N= 100**

Background variables	Category	f and %
<b>Age in years</b>	60-64	30
	65-69	32
	70-74	27
	>74	11
	<b>Gender</b>	
	Male	50
	Female	50

<b>Educational status</b>		
	Non-literate	41
	Primary education	28
	Secondary education	21
	Higher secondary education	3
	Graduation & above	7
<b>Religion</b>		
	Hindu	48
	Christian	28
	Muslim	3
	Others	2
<b>Marital status</b>		
	Unmarried	12
	Married	63
	Divorced	8
	Widow or widower	17
<b>Type of family</b>		
	Nuclear family	52
	Joint family	48
<b>Source of income</b>		
	Govt pension	57
	Sponsor	12
	Savings	16
	Properties	5
	Others	10
<b>Monthly family income in Rs</b>		
	<10,000	35
	10,001 – 15000	42
	15001 - 20,000	18
	>20,000	5
<b>Leisure time activities</b>		
	Listening music	5
	Watch television	34
	Gardening	17
	Reading books	17
	Walking	15
	Others	12
<b>No of children</b>		
	None	5
	One child	11
	Two children	41
	Above two children	43

**Table. 2 Frequency and Percentage Distribution of Health Variables in Elderly Population N=100**

<b>Health Variables</b>	<b>Category</b>	<b>f and %</b>
<b>History of any medical illness</b>	Diabetes mellitus	50
	Hypertension	27
	Arthritis	2
	Respiratory problems	4
	Others	17
<b>Bed time activities</b>	Hot water bath	10
	Drinking milk	11
	Walking	9
	Meditation	4
	Listening music	4
	Reading books	3
	NIL	58
	<b>History of using sleeping pills</b>	Frequently
Rarely		12
Not using any pills		4
Nil		78
<b>History of any others medications</b>	Seizures	3
	Diabetes mellitus	43
	Hypertension	19
	Other	6
	Nil	29
<b>History of habit</b>	Smoking	15
	Consumption of alcohol	13
	Others	3
	Nil	69
<b>Physical activity</b>	Sedentary	30
	Moderate	53
	Heavy	17
<b>Comfort device used for sleeping</b>	More pillows	30
	Special bed	9
	More bedsheets	8
	Nil	53

**Table.3 Frequency and Percentage Distribution of Severity of Insomnia among Elderly Population N=100**

Severity of insomnia	f & %
<b>Difficulty in falling asleep</b>	
None	40
Mild	22
Moderate	22
Severe	13
Very severe	3
<b>1.2 Difficulty staying asleep</b>	
None	30
Mild	34
Moderate	17
Severe	16
Very severe	3
<b>1.3 problem waking up too early</b>	
None	42
Mild	11
Moderate	21
Severe	18
Very severe	8
<b>2. Satisfied/ dissatisfied with sleep pattern</b>	
None	15
Mild	18
Moderate	28
Severe	31
Very severe	8
<b>3.Sleep pattern interference</b>	
None	35
Mild	27
Moderate	23
Severe	13
Very severe	2
<b>4. Insomnia noticeable to others</b>	
None	26
Mild	28
Moderate	30
Severe	14
Very severe	2
<b>5. Worried/ distressed about insomnia</b>	
None	26
Mild	18
Moderate	28
Severe	24
Very severe	4

**Table 4: Association between Demographic Variables and Quality of Sleep among Elderly Population N = 100**

Demographic Variables	Upto Mean (≤10)	Above Mean (> 10)	X2 Value and P Value
<b>Age in years</b> Upto 70 Above 70	37 17	26 20	1.53(df = 1) P = .215 NS
<b>Gender</b> Male Female	26 28	24 22	1.612 (df = 1) P = .688 NS
<b>Marital status</b> Married Single	38 17	25 20	1.9452 (df = 1) P = .235 P < 0.05 NS
<b>Leisure activities</b> Engaged Not engaged	32 23	21 24	1.3175 (df = 1) P = .344 NS
<b>Types of Family</b> Nuclear family Joint family	25 29	28 18	2.117 (df = 1) P = .145592 NS
<b>Monthly Family income (Rs)</b> 10,000 Above 10,000	43 12	34 11	0.096(df = 1) P = .756205 NS

**IV. LIMITATIONS**

- The settings was selected based on the convenience of researcher.
- The problem faced during the study was few patients refused to participate in the study and had problem in getting permission from community
- Random sampling could not be done due to practical constraints

**ACKNOWLEDGEMENT**

I would like to thank all the participants for supporting me to conduct this study. I would like to thank my research guide and clinical guide who helped me throughout the study. I would like to extend my heartfelt thanks for all who has directly or indirectly helped me during my study period.

- **Conflict of Interest:** The author declares no conflict of interest.

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