Forum for Linguistic Studies 2025, 7(2)

ISSN:2705-0610 E-ISSN:2705-0602

"ASSESSMENT OF SLEEP QUALITY AMONG ELDERLY RESIDENTS OF OLD AGE HOMES: A CROSS-SECTIONAL STUDY"

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ABSTRACT

Introduction: Sleep is a vital physiological process essential for physical, mental, and emotional well-being. In the elderly, sleep quality is often compromised due to age-related changes, comorbidities, and environmental factors. Poor sleep is particularly common among those residing in institutional settings such as old age homes, where routines, reduced social interaction, and physical ailments may further affect rest. This study aimed to assess the quality of sleep among elderly residents of old age homes in Pune city.

Methods: A descriptive cross-sectional design was adopted. The study was conducted among 13 elderly participants aged 60 years and above residing in selected old age homes. A purposive sampling technique was used. Data were collected using the self-structured questionnaire. Descriptive and inferential statistics, including chi-square tests, were used for analysis.

Results: Findings revealed that 69.23% of the elderly had poor sleep quality, 23.08% had average sleep quality, and only 7.69% reported good sleep. The mean PSQI score for the poor-quality group was 47.61 ± 10.38. No statistically significant associations were found between sleep quality and demographic variables such as age, gender, education, income source, family type, or health-related conditions.

Conclusion: The study highlights a high prevalence of poor sleep quality among elderly residents in old age homes. Although no demographic associations were observed, the findings emphasize the need for regular sleep assessment and the implementation of interventions such as sleep hygiene education, environmental adjustments, and supportive therapies to improve sleep health and overall quality of life in institutionalized elderly populations.

Keywords: Sleep quality, Elderly, Old age homes, Pittsburgh Sleep Quality Index, Institutionalized care

INTRODUCTION

Sleep is important due to the impact it has on your overall health. Appropriate sleep is needed for mental focus and memory, managing stress, maintaining proper body weight, boosting the immune system, and a host of other wellness needs. Adults aged 18 to 60 years should get at least seven hours of sleep each night in order to achieve the benefits of sleep. If not, you run the risk of becoming sleep-deprived. Sleep is a powerful stress reliever. It improves concentration, regulates mood, and sharpens judgment and decision-making. A lack of sleep not only reduces mental clarity but the ability to cope with stressful situations. The link between sleep and memory processing is well established. Sleep serves as an opportunity for the mind

to process all the stimuli taken in while awake. It triggers changes in the brain that strengthen neural connections helping us to form memories. (1)

Among different age groups, the number of older adults has had the fastest growth rate in the world. Along with the increase in the aged population, their health problems become more important because physical and mental health in old age is at greater risk than in other stages of life. Among the problems of old age, sleep disorders have affected more than 50% of the elderly. Sleep disorders are associated with an increased risk of heart diseases, metabolic diseases, obesity, depression, and anxiety, while adequate sleep improves emotional health, productivity, brain function, and overall physical and metabolic health. Identifying and treating sleep problems can lead to reduced complications of diseases and health costs, increased quality of life, improved daily performance, and improved safety of patients and their families. (2)

The elderly is a period in which a person will slowly experience physical, mental, and social decline, little by little experiencing difficulties in carrying out daily functions. These changes call degenerative changes. Degenerative changes also occur in the skin, bones, heart, blood vessels, lungs, nerves, and other body tissues. With limited regenerative abilities, the elderly are more susceptible to various diseases, syndromes, and illnesses than adults. In addition, in the elderly, there is also a change in sleep patterns. (3)

NEED FOR THE STUDY

Sleep is a vital physiological process that significantly influences physical health, cognitive functioning, and emotional well-being across the lifespan. In elderly populations, sleep disturbances are common due to age-related physiological changes, comorbidities, medication use, and psychosocial stressors. Poor sleep among the elderly is strongly associated with increased risks of depression, cognitive decline, cardiovascular morbidity, impaired immune response, and reduced quality of life (4). For older adults residing in old age homes, these challenges may be compounded by institutional routines, lack of social support, and environmental factors such as noise, lighting, or shared living spaces. Consequently, assessing sleep quality in this group is crucial for designing targeted interventions that can improve both health outcomes and overall well-being.

Research demonstrates that sleep quality is often overlooked in geriatric health care, particularly within institutional settings. While attention is generally focused on chronic illness management, inadequate sleep is seldom prioritized, despite its profound implications for functional independence and mental health (5). Identifying the prevalence and nature of sleep disturbances among elderly in old age homes will provide critical evidence for health professionals and caregivers to plan supportive interventions, ranging from environmental modifications to counseling and behavioral therapies.

Gulia and Kumar emphasize that sleep health in the elderly is a growing public health concern in India, highlighting the urgent need for systematic assessments and tailored strategies to address sleep problems (6). As people age, they tend to have a harder time falling asleep and more trouble staying asleep. Older individuals spend more time in lighter stages of sleep than in deep sleep, and circadian rhythm efficiency declines, leading to earlier sleep and waking times. Even when they obtain 7–8 hours of sleep, they often wake up prematurely. The prevalence of sleep disorders is markedly higher in older adults; conditions such as obstructive sleep apnoea, restless legs syndrome, and periodic limb movement disorder are more frequent

and contribute to fragmented sleep. Moreover, common age-related health conditions including hypertension, diabetes mellitus, renal failure, respiratory diseases, immune disorders, gastroesophageal reflux disease, dementia, chronic pain, depression, and anxiety are closely linked with sleep disturbances (7,8). This underscores the importance of research focusing on institutionalized elderly populations, who may be more vulnerable to unrecognized sleep disturbances. By undertaking such studies, policymakers and healthcare providers can prioritize sleep assessment in geriatric care, ensuring comprehensive strategies that enhance quality of life in late adulthood.

AIM OF THE STUDY

The present study aims to assess the quality of sleep among elderly residents living in old age homes and to identify the factors associated with sleep disturbances in this population.

Objective

1. To determine the level of sleep quality among elderly residents.
2. To find the association between sleep-quality scores and selected demographic variables of elderly residents.

METHODOLOGY

Research Design:

A descriptive cross-sectional research design was employed to assess the quality of sleep among elderly residents of old age homes.

Research Setting:

The study was conducted in selected old age homes of Pune city. Permission was obtained from the institutional ethical committee of the college and from the administrative authorities of the old age homes.

Population:

The population comprised elderly individuals aged 60 years and above residing in old age homes.

Sample and Sample Size:

A total of 13 elderly residents were selected for the study. The sample size was based on feasibility and availability of participants during the study period.

Sampling Technique:

A purposive sampling technique was used to select participants who met the eligibility criteria.

Inclusion Criteria:

- Elderly aged 60 years and above.
- Elderly who were able to understand and obey commands from the researcher.
- Those willing to participate and provide informed consent.

Exclusion Criteria:

- Elderly with severe psychiatric illness or cognitive impairment.
- Bedridden elderly unable to respond.

Data Collection Tool:

The self - structured Questionnaire was used.

Data Collection Procedure:

Participants were approached individually. After explaining the purpose of the study and obtaining written informed consent, data were collected using face-to-face interviews with the self- structured Questionnaire tool.

Data Analysis:

Data were coded, entered, and analyzed using descriptive and inferential statistics. Frequency, percentage, mean, and standard deviation were used to summarize demographic variables and sleep quality levels. Chi-square test was applied to determine associations between sleep-quality scores and selected demographic variables.

RESULT

Table 1 Demographic Profile.

(N = 13)

Demographic Variables	F	%
1. Age in years		
a. 60-63 years	3	23.08
b. 64-67 years	8	61.54
c. 68-70 years	2	15.38
2. Gender		
a. Male	8	61.54
b. Female	5	38.46
c. Transgender	0	0.00
3. Education		
a. Primary	2	15.38
b. Secondary	5	38.46
c.Higher secondary	4	30.77
d. Graduate	2	15.38
e. Post graduation	0	0.00
4. Souce of Income		
a. Pension	4	30.77
b. Son	4	30.77
c. Daughter	4	30.77
d. Any Other	1	7.69
5. Type of Family		
a. Joint Family	7	53.85
b. Nuclear family	4	30.77
c. Broken Family	2	15.38
6. Duration of Sleep		
a. 3 hrs - 4 hrs	2	15.38
b. 4 hrs - 5 hrs	5	38.46
c. 6 hrs - 7 hrs	3	23.08
d. 8 hrs - 9 hrs	2	15.38
e. 9 hrs - 10 hrs	1	7.69
7. Present of Neck Pain		

a. Yes	6	46.15
b. No	7	53.85
8. Present of Back Pain		
a. Yes	9	69.23
b. No	4	30.77
9. Any information regarding Guided imagery Therapy		
a. Yes	3	23.08
b. No	10	76.92

Table 1 presents the demographic characteristics of the elderly participants residing in old age homes. Out of the 13 participants, the majority (61.54%) were in the age group of 64–67 years, followed by 23.08% in the age group of 60–63 years, and 15.38% between 68–70 years. With respect to gender, males constituted 61.54% of the sample, while females accounted for 38.46%; no participants identified as transgender.

Regarding educational status, 38.46% of the participants had completed secondary education, 30.77% had studied up to higher secondary, while 15.38% each were graduates or had completed only primary education. None of the participants were postgraduates. With respect to the source of income, 30.77% each reported financial support from pension, son, or daughter, while 7.69% had other sources of income.

In terms of family background, more than half of the participants (53.85%) belonged to joint families, while 30.77% were from nuclear families and 15.38% reported belonging to broken families. Concerning sleep duration, the largest proportion of participants (38.46%) reported sleeping for 4–5 hours per night, while 23.08% slept for 6–7 hours, 15.38% each for 3–4 hours and 8–9 hours, and only 7.69% reported sleeping for 9–10 hours.

With respect to health-related factors, 46.15% of participants reported the presence of neck pain, while 53.85% did not. A majority (69.23%) reported experiencing back pain, whereas 30.77% did not. Furthermore, 76.92% of the participants had no prior information regarding guided imagery therapy, while only 23.08% reported awareness of it.

Overall, the findings indicate that most participants were within the 64–67 year age group, male, educated up to secondary level, with joint family backgrounds, limited sleep duration (4–5 hours), and a high prevalence of musculoskeletal complaints such as back pain.

Finding related to quality of sleep among elderly residing in old age homes.

Table 2: Level of Sleep Quality

(N = 13)

LEVEL OF SLEEP QUALITY	f	%	Mean	SD
POOR (25–50)	9	69.23	47.61	10.38
AVERAGE (51–75)	3	23.08		
GOOD (76–100)	1	7.69		

Table 2 illustrates the distribution of sleep quality among the elderly residing in old age homes. Out of 13 participants, the majority, 69.23% (n=9), were found to have poor sleep quality with scores ranging from 25–50. Only 23.08% (n=3) reported an average quality of sleep (scores 51–75), while a very small proportion, 7.69% (n=1), exhibited good sleep quality (scores 76–100). The mean score for the poor sleep-quality group was 47.61 ± 10.38, which further indicates a significant prevalence of poor sleep quality in this population.

These results clearly highlight that most elderly residents of old age homes experience inadequate or disturbed sleep. The findings emphasize the need for targeted interventions and health strategies—such as sleep-hygiene education, management of pain and comorbidities, and relaxation therapies—to improve the quality of sleep and enhance the overall well-being of the elderly population in institutional care.

Findings related to association between sleep-quality levels and selected demographic variables

Demographic Variables	AVERAGE	GOOD	POOR	DF	CHi Table value	Chi calculated	P value	Remark
1. Age in years								
a. 60-63 years	1	0	2	4	9.488	0.719	0.949	NOT SIGNIFICANT
b. 64-67 years	2	1	5					
c. 68-70 years	0	0	2					
2. Gender								
a. Male	2	1	5	4	9.488	0.410	0.982	NOT SIGNIFICANT
b. Female	1	0	4					
c. Transgender	0	0	0					
3. Education								
a. Primary	1	0	1	8	15.507	2.564	0.959	NOT SIGNIFICANT
b. Secondary	0	1	4					
c.Higher secondary	1	0	3					
d. Graduate	1	0	1					
e. Post graduation	0	0	0					
4. Souce of Income								
a. Pension	2	0	2	6	12.592	6.158	0.406	NOT SIGNIFICANT
b. Son	0	1	3					
c. Daughter	0	0	4					
d. Any Other	1	0	0					
5. Type of Family								
a. Joint Family	1	0	6	4	9.488	4.727	0.316	NOT SIGNIFICANT
b. Nuclear family	2	1	1					
c. Broken Family	0	0	2					

6. Duration of Sleep								
a. 3 hrs - 4 hrs	1	0	1	8	15.507	5.242	0.731	NOT SIGNIFICANT
b. 4 hrs - 5 hrs	0	1	4					
c. 6 hrs - 7 hrs	2	0	1					
d. 8 hrs - 9 hrs	0	0	2					
e. 9 hrs - 10 hrs	0	0	1					
7. Present of Neck Pain								
a. Yes	1	0	5	2	5.991	0.914	0.633	NOT SIGNIFICANT
b. No	2	1	4					
8. Present of Back Pain								
a. Yes	2	0	7	2	5.991	1.876	0.391	NOT SIGNIFICANT
b. No	1	1	2					
9. Any information regarding Guided imagery Therapy								
a. Yes	0	0	3	2	5.991	0.81	0.667	NOT SIGNIFICANT
b. No	3	1	6					

In this sample (N = 13), sleep quality did not show a significant association with any measured demographic or clinical variable. Descriptive trends suggest poorer sleep is widespread across subgroups, with hints of worse sleep among those reporting back pain and those in joint families, but these trends did not reach statistical significance.

DISCUSSION

The present study aimed to assess the quality of sleep among elderly residents of old age homes in Pune city. Findings revealed that a majority (69.23%) of participants experienced poor sleep quality, while only 7.69% reported good sleep. These results suggest that sleep disturbances are a common concern among institutionalized older adults.

The prevalence of poor sleep in this study is consistent with previous research. A study conducted among institutionalized elderly in China reported that 67.3% had poor sleep quality (9), while Jesudoss et al. observed that 66% of older adults in Indian old age homes experienced very poor sleep (10). Similarly, Itani et al. found that nearly 75% of institutionalized elders had poor sleep, further highlighting the vulnerability of this population (11). These findings underscore that institutional settings often contribute to poor sleep due to environmental disruptions, limited exposure to daylight, and regimented routines.

In contrast to larger studies, no significant associations were found in the present study between demographic variables (such as age, gender, or education) and sleep quality. This differs from the findings of Kulkarni et al., who reported significant gender differences in sleep disturbances, with women more frequently affected (12). Zhu et al. also identified comorbidities and functional limitations as strong predictors of poor sleep among

institutionalized elders (13). The discrepancy may be attributed to the small sample size (N = 13), which limits the power to detect significant associations.

Despite these limitations, the present findings align with the broader evidence base, suggesting that poor sleep is widespread among institutionalized elderly. Addressing sleep health in such populations is important, as studies have demonstrated its relationship with frailty, depression, and reduced quality of life. Larger studies incorporating functional and psychosocial factors are recommended to strengthen the evidence base.

CONCLUSION

The present study assessed the quality of sleep among elderly residents of selected old age homes in Pune city. The findings revealed that a significant proportion (69.23%) of the participants experienced poor sleep quality, while only a small minority reported average or good sleep. This high prevalence underscores that sleep disturbances are a major concern among institutionalized elderly populations.

No significant associations were observed between demographic variables such as age, gender, education, family type, or health conditions (neck pain and back pain) and levels of sleep quality. This outcome differs from larger-scale studies that have identified such associations, suggesting that the limited sample size in the present study may have constrained the detection of significant relationships. Nevertheless, the results remain consistent with international and national evidence showing that institutionalized settings tend to exacerbate sleep problems due to environmental and psychosocial factors.

Poor sleep quality in the elderly is not only a matter of comfort but has broader implications for health, including increased risk of frailty, depression, cognitive decline, and reduced overall well-being. The present study highlights the urgent need to integrate sleep assessment into geriatric care within old age homes. Interventions such as sleep hygiene education, environmental modifications, and non-pharmacological therapies should be prioritized to improve the quality of life of institutionalized older adults.

Conflict of Interest: The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

Funding Source: There is no funding Source for this study

Acknowledgement: I most sincerely convey my deep sense of gratitude to my guide Prof. Dr. Heera Jayasheela (Vice Principal & Professor) Pravara Institute of Medical Sciences, Shrimati Sindhutai Eknath Rao Vikhe Patil College of Nursing Loni, Maharashtra, India, for her remarkable guidance and academic support during this study.

REFERENCES

1. Charles S, MPH. The Importance of Sleep. Very well Health. https://www.verywellhealth.com/why-you-should-never-regret-a-good-night-s-sleep-5088198
2. Heidarian M, Mohammadi Shahbalaghi F, Mohammadi S, Sadeghi Mahalli N, Noroozi M, Vosoghi N. Effect of guided imagery on sleep quality and general health of the elderly. Salmand [Internet]. 2023;18(3):410–23. Available from: http://salmandj.uswr.ac.ir/article-1-2482-en.html
3. Abidin Z, Mashuri M. The effectiveness of guided imagery on sleep quality in the elderly in mojo community health center Padang, lumajang. J Aisyah J Ilmu Kesehat.

2023;8(1):61–8. https://www.researchgate.net/publication/370956388_The_Effectiveness_of_Guided_Imagery_on_Sleep_Quality_in_the_Elderly_in_Mojo_Community_Health_Center_Padang_Lumajang

4. Ancoli-Israel S, Cooke JR. Prevalence and comorbidity of insomnia and effect on functioning in elderly populations. J Am Geriatr Soc. 2005;53(7 Suppl):S264–S271.
5. Foley DJ, Monjan AA, Brown SL, Simonsick EM, Wallace RB, Blazer DG. Sleep complaints among elderly persons: An epidemiologic study of three communities. Sleep. 1995;18(6):425–32.
6. Gulia KK, Kumar VM. Sleep disorders in the elderly: A growing challenge. Psychogeriatrics. 2018;18(3):155–65. https://doi.org/10.1111/psyg.12319
7. Neikrug AB, Ancoli-Israel S. Sleep disorders in the older adult – a mini-review. Gerontology. 2010;56(2):181–9.
8. Crowley K. Sleep and sleep disorders in older adults. Neuropsychol Rev. 2011;21(1):41–53.
9. Zhu S, et al. Sleep quality and its impact on the health of elderly nursing home residents in China. Front Public Health. 2020;8:352.
10. Jesudoss A, et al. Insomnia and sleep quality among older people residing in old age homes in India. Sultan Qaboos Univ Med J. 2019;19(3):e181–e187.
11. Itani O, et al. Prevalence and predictors of poor sleep quality among institutionalized elders. J Nurs Home Res. 2017;3:54–60.
12. Kulkarni V, et al. Prevalence of poor quality of sleep among the elderly: A community-based study in India. J Indian Acad Geriatr. 2024;20(3):120–6.
13. Zhu S, et al. Risk factors for poor sleep quality among institutionalized elderly. BMC Geriatr. 2020;20:498.