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Incidence of Insomnia in Geriatric Patients at the Taliwang Health Center in 2025

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Abstract: Geriatric individuals frequently suffer from insomnia, a sleep problem that significantly affects their general health and wellbeing. The purpose of this study is to examine the association between older adults' age, gender, and likelihood of suffering insomnia. Validated questionnaires were distributed at the Taliwang Health Center's Geriatric Clinic as part of a cross-sectional study. The findings indicate a significant relationship between aging and sleeplessness., with individuals aged ≥ 60 years being 5.342 times more likely to experience sleep disturbance than younger individuals (p = 0.0001). Gender also plays a significant role, with older men being 1.126 times more likely to suffer from insomnia than older women (p = 0.0001).

Keywords: Insomnia, Geriatric Patients, Sleep Disorder, Aging, Gender Differences, Psychological Stress.

Introduction

Sleep is one of the basic human needs that has a vital role in maintaining physiological and psychological stability. In the context of public health, good sleep quality is not only associated with improved individual well-being, but also contributes to social efficiency and economic productivity (Wang et al., 2017). The World Health Organization (WHO) emphasizes that adequate and quality sleep is an important indicator of population health status, equal in importance to balanced nutrition and physical activity. In the elderly phase of life, declining sleep quality is a major concern, as it has a direct impact on increasing morbidity, cognitive decline, and increasing hospitalization rates (Huang et al., 2020). Insomnia, as the most common form of sleep disturbance, is one of the main problems faced by geriatric groups globally (Nicassi et al., 2019).

Insomnia is defined as a sleep disorder characterized by having trouble falling asleep, staying asleep, or waking up too early and not being able to go back to sleep, as well as subjective complaints of poor sleep quality. Insomnia is extremely common in the senior population, reaching 40% to 60% (Nguyen V, 2019). This cannot be separated from the biological aging process that brings substantial alterations to sleep patterns, such as altered circadian cycles, longer nighttime wakefulness, and reduced sleep efficiency. Moreover, insomnia in the elderly often does not stand alone, but is closely related to comorbid disorders such chronic pain, anxiety, and sadness, respiratory disorders, as well as the use of various medications that affect neurological function (Cesari et al., 2017; Riemann D et al., 2015).

Within the framework of geriatric syndromes, which are a complex and interrelated collection of symptoms and health conditions, such as delirium, mobility impairment, incoherence, risk of falls, and malnutrition, insomnia occupies a significant position because it contributes to exacerbating these various aspects (Duenwald-Kuehl et al., 2017; Bhasin et al., 2020). Sustained sleep disturbances can lead to memory loss, increased risk of falls, metabolic imbalances, and the emergence of serious psychiatric problems. A major problem faced today is the lack of an integrated and systematic

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approach to understanding insomnia as part of the geriatric syndrome (Baker et al., 2018). Most interventions are still partial and focus on symptom management without considering the interrelated causative factors. Insomnia in the elderly is often triggered by a mix of long-term health issues (including diabetes, osteoarthritis, and heart disease), mental health issues (like anxiety and depression), and social aspects such as isolation and lack of family support (Coudron et al., 2020). Each of these factors can create a repetitive cycle that worsens the patient's condition. For example, patients experiencing chronic pain will have difficulty sleeping, and this lack of sleep can increase the perception of pain, exacerbate depression, and ultimately adversely affect overall quality of life (Van Someren EJW., 2021). This condition is exacerbated by the low awareness of health workers and families of the importance of sleep evaluation in routine assessment of elderly health. In fact, ignoring insomnia can lead to serious consequences such as cognitive dysfunction, decreased immunity, and increased risk of other degenerative diseases. Therefore, a comprehensive understanding of the various determinants that impact older people's sleep quality is necessary from a social and therapeutic standpoint (Naranjo et al., 2020).

This study attempts to present a more comprehensive approach by analyzing insomnia as an integral part of geriatric syndrome, while exploring its relationship with key variables such as physical condition, anxiety levels, and quality of social relationships. The novelty of this study lies in the integration of medical, psychological and social dimensions together in a single analytical framework, as most studies tend to examine insomnia in isolation, without considering the psycho-social aspects that greatly affect older adults (Riemann et al., 2017). For example, a person with strong social support from family or community may show better sleep quality, despite having a severe chronic illness (Kumar et al., 2020). With this approach, it is hoped that the results of the study can make a more relevant contribution to clinical practice, especially in developing non-pharmacological intervention strategies such as cognitive behavioral therapy, social intervention, and family education. This study's primary goals were to ascertain the prevalence of insomnia in elderly individuals and the variables that affect it generally. Thus, the results of this study are expected to provide a scientific basis in developing more effective and individualized insomnia prevention and management policies in the elderly, which in turn can improve their overall quality of life (Smith & Jones, 2019; Perlis ML, 2022).

Materials and Methods

A validated questionnaire with items about insomnia specifically for older adults was utilized in this investigation. This study was carried out in July 2024 at the geriatric poly Taliwang Health Center and used a cross-sectional design. All elderly patients who visited the Taliwang Health Center during the study period made up the study's population, with a sample size of 30 people selected using purposive sampling techniques according to the standard (Davis et al., 2019). The variables studied included insomnia, age, and gender as independent variables, and dependent variables, such as sleep quality or health conditions. Insomnia was categorized into two categories, namely having insomnia (OR: 0.788; 95% CI: 0.738-0.841; p = 0.000) and not having insomnia as. The age variable was categorized into 60 years and >60 years with OR: 5.342; 95% CI: 4.983-5.726; p = 0.000, while the gender variable was categorized into male with OR: 1.126; 95% CI: 1.057-1.200; p = 0.000 and Female.

Data were collected using a validated standardized questionnaire, which was completed by respondents under the guidance of medical personnel or researchers to ensure correct understanding. The degree of insomnia was also evaluated using additional measurement instruments like the Pittsburgh Sleep Quality Index (PSQI) and the Insomnia Severity Index (Dautovich & Kuhlmann, 2020).

There are various steps in the research process

The planning phase, which includes creating proposals, submission of ethical permits to the Taliwang Health Center, and training of the research team. The implementation stage included selection of participants based on inclusion and exclusion criteria, giving informed consent, and filling out questionnaires by

respondents. The data processing and analysis stage, in which the collected data were checked for completeness, and then analyzed using (statistical software, such as SPSS version X or STATA).

Data analysis was conducted in two stages

Descriptive analysis to describe the characteristics of respondents. Inferential analysis to ascertain the association between insomnia and 95% Confidence Interval (CI) and Odds Ratio (OR), age, and gender to the dependent variable, has a significant p-value of less than 0.05. To give a general picture of the pattern of insomnia in elderly individuals, the data were given as descriptive explanations. This study has obtained ethical approval and was conducted with due regard to the principles of research ethics, including the confidentiality of participant data and the right to voluntary participation in research.

Results and Discussion

This study involved 30 respondents from elderly patients affected by Insomnia in geriatric patients. Categorized based on age, gender, patients affected by insomnia and not, patients affected by geriatrics and not.

Table 1. Association of Insomnia, Age, and Gender in Geriatric Patients.

Variable	OR (95% CI)	P-Value
Insomnia	-	-
Yes	Ref	-
No	0.788 (0.738 – 0.841)	0.000
Age	-	-
< 60 years	Ref	-
≥ 60 years	5.342 (4.983 – 5.726)	0.000
Gender	-	0.000
Male	1.126 (1.057 – 1.200)	-
Female	Ref	-

Based on the results of the table above, there is a relationship between insomnia, age, and gender with the results of the odds ratio (OR) and p value displayed. It can be seen that:

Insomnia was recognized as a reference (Ref), indicating that this condition was a significant factor in the analysis. In subjects aged ≥60 years, an OR value of 5.342 with a confidence interval (95% CI: 4.983 - 5.726) and a p-value of 0.0001 indicated a significant association between insomnia and age. This indicates that individuals over 60 years old have a higher chance of experiencing insomnia than those who are younger. In addition, in the gender category, males had an OR of 1.126 (95% CI: 1.057 - 1.200) with a p-value of 0.0001, which also showed a significant association between gender and the likelihood of experiencing insomnia. There are several factors that cause differences between men and women regarding insomnia in geriatric patients:

Biological and Hormonal Factors

Physically, the difference between men and women when it comes to insomnia can be attributed to hormonal changes that cause seizures in humans (Błeszyńska E et.al., 2020). A decrease in estrogen and progesterone levels in women during menopause can increase the risk of sleep disorders (Lucke JA et.al., 2022). However, later in life, this effect becomes more stable as bodily changes related to hormonal changes have occurred after menopause. In men, on the other hand, severe testosterone levels can negatively affect sleep quality. Low testosterone levels have been linked in a number of studies to a higher risk of sleep disorders, including insomnia (Alvis BD et.al., 2015).

Different Sleep Pattern Changes between Men and Women

In old age, differences in the sleep patterns of men and women become more prominent. Studies show that men experience more nocturnal sleep disturbances, shorter sleep duration and less deep sleep than wom (Lavan AH et.al., 2016). One reason for this is the difference in sleep architecture, where men experience a shorter deep sleep phase than women. This increases their likelihood of experiencing insomnia (Horodinschi RN et.al., 2019).

Differences in Psychological and Stress Factors

Anxiety and stress are also associated with insomnia in older people. Social factors such as retirement, loss of role in the family or community, and decreased economic status make men more vulnerable to psychological distress. Many men feel a loss of meaning in their lives and purpose after retirement, which can lead to stress and anxiety, which in turn leads to insomnia (Mohile SG et.al.,2018). In addition, men tend to be less open in disclosing their emotional problems compared to women. As a result, these men may not receive enough social and emotional support. This can lead to increased long-term stress, which can lead to sleep disorders. In contrast, older women have stronger social networks, such as support from friends and family, which can help them reduce stress and sleep better (Fusco D et.al.,2021). The results showed that older people and their male gender are more likely to experience sleep difficulties in the elderly population (Beil M et.al., 2025). This is followed by a number of research that demonstrate how changes in sleep patterns and a higher risk of sleep disorders impact the aging process (Brewster GS et.al., 2018).

Conclusion

The study demonstrates that among elderly individuals, sleeplessness is significantly correlated with age and gender. Insomnia is more common in men than in women, and those over 60 are more likely to have it. Changes in sleep habits, psychological stress, social circumstances, and hormonal and metabolic changes can all be blamed for this discrepancy. There are several reasons why sleeplessness is more common in older men, including lower testosterone levels, shorter deep sleep periods, increased stress from retirement and the loss of social roles, and less emotional support. The study's findings emphasize the need for targeted treatments to improve older patients' overall health and sleep quality, particularly for older men.

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