

Identifying Factors That Influence Insomnia In The Elderly In Terms Of Age And Anxiety

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ABSTRACT

Insomnia is defined as a condition of difficulty falling asleep. Insomnia has been considered a huge health problem in the elderly. This research aims to see how age and anxiety factors influence insomnia in the elderly. Results: The results of the study show that from 51 elderly respondents, it was found that age was one of the factors that influenced the incidence of insomnia in the elderly. All data was analyzed using univariate and bivariate analysis with SPSS software. The analysis results show a significant relationship by comparing the value (p-value = 0.34) with ($\alpha = 0.05$). Meanwhile, the relationship between anxiety and the incidence of insomnia can be seen from the value (p-value = 0.81) with ($\alpha = 0.05$) which indicates that there is no relationship between these two factors. Conclusion: These findings provide the idea that it is necessary to pay attention to the elderly in dealing with insomnia problems that occur to consider age as the factor that most influences insomnia. The elderly are considered a more vulnerable group, so efforts to prevent and treat insomnia are needed.

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1. INTRODUCTION

Insomnia is a condition characterized by disturbances in the quantity, quality, or timing of a person's sleep (Baglioni et al., 2010). Sleep disorders can affect an adult's physical, emotional, cognitive, and social development. These facts suggest that academic, emotional, health, and behavioral problems in adults can be prevented or significantly improved through interventions that improve sleep quality and quantity. Disrupted sleep patterns are a condition where a person can experience discomfort due to changes in the quantity and quality of sleep patterns (Yanti et al, 2022). Insomnia itself is also very often associated with health problems which may be thought to play a role in causing mental conditions to persist or can cause depression (Johansson et al, 2021).

According to data from WHO in Indonesia, the prevalence of sleep disorders in the elderly is quite high in 2020, namely around 67% (Juwita et al., 2023). Every year it is estimated that around 25% -57% of elderly people experience serious sleep disorders. Meanwhile, insomnia often occurs in people over 60 years old. The elderly group complained more about having difficulty falling asleep and waking up earlier in the morning. Apart from that, there are 30% of the seventy-year-old group who wake up a lot at night. Based on the North Sumatra data center, the level of health problems for elderly people in 2020 was 24.16%, which means one in four elderly people experienced insomnia. Based on age group, the morbidity rate for the age group 60-69 to 80 years and above shows a higher percentage, namely 21.39%, 29.09% from 33.88% respectively. Thus, it can be said that as individuals age, the health problems they experience increase and have an impact on their health (Badan Pusat Statistik Provinsi Sumatera Utara. 2019).

According to Hindriyastuti (2019), age is one of the factors that can influence a person's health. This is related to the body's cells and organs experiencing a decline in function as age increases. Just like normal sleep patterns begin to change with age. Apart from the process of increasing age or over time, there are factors that cause disturbances or quality of sleep in the elderly, namely excessive anxiety due to not being able to sleep causes a person to try to sleep but he is

increasingly unable to sleep (Gregory & Sadeh (2016). which is then caused by an imbalance of brain neurochemistry in the formation of the brain stem or forebrain dysfunction, where elderly people who live alone or are afraid at night can cause difficulty sleeping and there are many other influencing factors such as age, gender, endocrine disorders, illness, and stress and tension (Iwa et al, 2022).

The results of an initial survey conducted by researchers in March in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency in 2023 showed that the prevalence of elderly people was 104 people. Researchers conducted an interview with the Head of the Bonan Dolok I Community Health Center and found that the problem most often experienced by the elderly was insomnia. Researchers also conducted direct interviews with 15 respondents to support the information obtained, that there were 10 out of 15 people experienced insomnia. This research aims to determine how age and anxiety can influence insomnia in the elderly in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency in 2023. It is hoped that this research will be able to contribute to the community to find out the factors that can influence insomnia in the elderly.

Apart from that, this research will highlight the importance of society, especially the elderly, in understanding and having sufficient knowledge regarding the factors that influence insomnia in the elderly. This will contribute to the ability of the community or the elderly to know and provide the best recommendations in preparing the best treatment to overcome insomnia in the elderly. This research will also explain in more detail the factors that influence insomnia in the elderly, so that readers can understand the importance of identifying these factors.

2. METHOD

The research design used in this study was chosen to identify factors that influence insomnia in the elderly. Questionnaires in this research were used and distributed to respondents to collect quantitative data using primary data from respondents. Each variable in this research was operationalized using a quantitative approach with statistical data to describe the results of respondents' answers. The population in this study was all elderly people aged 60 years and over residing in the village of Bonan Dolok 1 Village, Sijamapolang District, Humbang Hasundutan Regency, namely 104 people. Meanwhile, the sample determined in this study was determined using the sampling method using the Slovin formula, where the sample in this study was 51 people. This research was conducted from March to May 2023.

Research measurement parameters are adjusted to the research context. Where age is measured with 2 assessments (i.e. 1 = when at the time of the study the respondent was 56-65 years old (Late Elderly) and 2 = when at the time of the study the respondent was >65 years old (elderly). Next, anxiety is measured using 5 measurement aspects (starting from 0 = no symptoms (no symptoms at all); 1 = mild symptoms (one or less than half of the existing selected symptoms); 2 = moderate symptoms (half of the existing symptoms) ; 3 = severe symptoms (more than half of the existing symptoms, 4 = very severe symptoms (all existing symptoms). Measurement of the anxiety variable uses HARS with 14 questions which have 4 categories, namely: (1) No anxiety, if the respondent answers questions with a score of less than 14; (2) Mild level of anxiety, if the respondent answers the question with a score of 14-20. (3) Moderate level of anxiety, if the respondent answers the question with a score of 21-27. (4) Severe level of anxiety when the respondent answers the question with a score of more than 27. Meanwhile, the variable relationship between age and anxiety on insomnia in the elderly was measured using a questionnaire for each question item, there were 4 answer choices. with a rating of 1 = Never; 2 = Sometimes; 3 = Often, 4 = Always. Where, measuring the insomnia variable score uses the KSPBJ-Insomnia Rating Scale with 11 questions which have 4 categories, namely: (1) No complaints of insomnia, if the respondent answers the question with a score of 11-19; (2) Mild insomnia, if the respondent answers the question with a score of 20-27; (3) Moderate insomnia, if the respondent answers the question with a score of 28-36; (4) Severe insomnia, if the respondent answers the question with a score of 37-44.

Data obtained from research is processed and presented in the form of percentages and frequency distributions. Data analysis used was univariate and bivariate, namely, data analysis

using frequency distribution tables and combining several variables (Notoatmodjo, 2010). The results of the analysis were carried out through data analysis tools using SPSS 23 software. SPSS is considered the standard for analyzing cause-and-effect relationships to test relationships between variables. To determine the influence between independent variables and variables dependent then a chi-square test is carried out.

3. RESULT AND DISCUSSION

From data collection carried out through interviews and questionnaires distributed, 51 elderly respondents were obtained. The results of the univariate analysis were carried out to describe the presentation of data and several variables in the form of a frequency distribution, including the frequency distribution of respondent characteristics, namely gender, and occupation, and the frequency distribution of respondents based on age and anxiety in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency. The results show that the frequency distribution of respondents' characteristics based on gender and occupation is shown in Table 1

Table 1. Characteristics of Respondents

Characteristics	Total	Percentage (%)
Gender		
Man	17	33
Woman	34	67
Total	51	100
Work		
Civil servants	5	9,8
Self-employed	6	11,7
Farmer	40	78,5
Total	51	100

Source: results of data collection

Based on Table 1, it is known that the characteristics of respondents based on gender are 17 people (33%) male and 34 people (67%) female. Gender is one of the basic conditioning factors that can cause problems with the sleep quality of the elderly. This is because elderly women are experiencing the menopause phase and in this phase physiologically the body will experience a decrease in the hormone estrogen which can affect psychological conditions, namely becoming more emotional, restless, and easily anxious, this is what makes elderly women have difficulty sleeping compared to elderly men. Fitri et al, 2022). The distribution of respondents based on occupation was civil servants as many as 5 people (9.8%), entrepreneurs as many as 6 people (11.7%), and farmers as many as 40 people (78.5%). Job status can influence the incidence of insomnia in the elderly, that is, the more often the elderly do physical activity during the day or work as farmers, the less anxiety they will feel because they have been diverted to work, and this will cause a fatigue effect which makes the incidence of insomnia lower compared to civil servant employment status.

Table 2 Frequency of Respondents Based on Age and Anxiety of the Elderly in Bona Village Dolok 1, Sijamapolang District, Humbang Hasundutan Regency in 2023.

Karakteristik Responden	Jumlah	Persentase (%)
Usia		
56-65 tahun	23	45,1
>65 tahun	28	54,9
Total	51	100
Kecemasan		
Tidak Ada	10	19,6
Ringan	23	45,1
Sedang	10	19,6

Karakteristik Responden	Jumlah	Persentase (%)
Berat	8	15,7
Total	51	100
Insomnia pada Lansia		
Tidak Ada	5	9,8
Ringan	12	23,5
Sedang	29	56,8
Berat	5	9,8
Total	51	100

Source: results of data collection

Based on Table 2, it is known that the distribution of respondents based on age is 23 people aged 56-65 years (45.1%), and 28 people aged > 65 years (54.9%). The distribution of respondents based on anxiety was 10 people who did not experience anxiety (19.6%), 23 people who experienced mild anxiety (45.1%), 10 people who experienced moderate anxiety (19.6%), and those who experienced anxiety. weight as many as 8 people (15.7%). The distribution of respondents based on Elderly Insomnia was 51 respondents, 5 people did not experience insomnia (9.8%), 12 people experienced mild insomnia (23.5%), 29 people experienced moderate insomnia (56.8%) and Those who experienced severe insomnia were 5 people (9.8%).

After carrying out the Univariate analysis, further analysis is carried out in the form of Bivariate analysis. The bivariate analysis obtained from the two variables is categorical data, tested using a statistical test, namely chi-square, which aims to find out whether the variables have a relationship or not by comparing the p-value and α .

Table 3 Distribution of the Relationship to Insomnia in the Elderly by Age

Variables	Insomnia in the Elderly										
	None		Light		Medium		Heavy		Total	α	p-value
Age	n	%	n	%	n	%	n	%	n	%	
56-65	5	9,8	3	5,9	12	23,5	3	5,9	23	45,1	
Years											0,05 0,034
>65	0	0	9	17,6	17	33,5	2	3,9	28	54,9	
Years											

source: Results of data analysis, 2023

Based on the results of data collection collected through questionnaires distributed to respondents through research using primary data, it can be seen that the relationship between the age factor and the occurrence of insomnia is shown in Table 3. It is known that of the 23 respondents aged 56-65 years who did not experience insomnia, 5 people (9.8%), 3 people experienced mild insomnia(5.9%), 12 people experienced moderate insomnia (23.5%), 3 people experienced severe insomnia (5.9%). Of the 28 respondents aged > 65 years, 0(0%) did not experience insomnia, 9 people experienced mild insomnia (17.6%), and 17 people (33.5%) experienced moderate insomnia. weight of 2 people (3.9%). The results of bivariate analysis using the chi-square test obtained a p-value (0.034) < α (0.05), so H_0 was rejected and H_a was accepted. H_a was accepted, meaning there was a relationship between age and insomnia in the elderly in Bonan Dolok 1 Village, Sijamapolang District, Humbang Regency. Hasundutan.

This is in line with research conducted by (Tiku et al, 2022) which states that age can influence insomnia. The older you are, the more mature a person's level of maturity and strength will be in thinking and working (Lasut, 2017). These results are also supported by the latest research conducted by Hasan et al., 2023, that the highest percentage of insomnia in the elderly is in the age group 66-70 years with mild insomnia, while the lowest percentage of insomnia is in the elderly aged 71-75 years with severe insomnia and 81 -85 years old with severe insomnia. This explains that insomnia affects many older people and becomes more common with age. It is important to identify and treat underlying medical conditions that may cause insomnia.

Table 4 Relationship between insomnia in the elderly based on anxiety

Variables	Insomnia in the Elderly										α	p- value
	None		Light		Medium		Heavy		Total			
Anxiety	n	%	n	%	n	%	n	%	n	%		
None	2	3,9	4	7,9	4	7,9	0	0	10	19,6	0,05	0,081
Light	3	5,9	6	11,7	14	27,5	0	0	23	45,1		
Medium	0	0	1	1,9	6	11,7	3	5,9	10	19,6		
Heavy	0	0	1	1,9	5	9,9	2	3,9	8	15,7		

source: Results of data analysis, 2023

Based on Table 4, it is known that of the 10 respondents who did not experience anxiety and who did not experience insomnia, 2 people (3.9%), 4 people (7.9%) experienced mild insomnia, and 4 people (7.9%) experienced moderate insomnia. .9%) and those experiencing severe insomnia were 0(0%). Of the 23 respondents who experienced mild anxiety and who did not experience insomnia, 3 people (5.9%), 6 people experienced mild insomnia (26.1%), 14 people experienced moderate insomnia (27.5%), and 0(0%) experienced severe insomnia. Of the 10 respondents who experienced moderate anxiety and those who did not experience insomnia were 0(0%), those who experienced mild insomnia were 1 person (1.9%), those who experienced moderate insomnia were 6 people (11.7%), and those who experienced 3 people (5.9%) had severe insomnia. Of the 8 respondents who experienced severe anxiety and those who did not experience insomnia were 0(0%), 1 person experienced mild insomnia (1.9%), 5 people experienced moderate insomnia(9.9%), who experienced insomnia weight of 2 people (3.9%). The results of bivariate analysis using the chi-square test results obtained a p-value (0.081) > α (0.05), so H_0 is accepted, H_a is rejected, and H_0 is accepted, meaning there is no relationship between anxiety and insomnia in the elderly in Bonan Dolok I Village, Sijamapolang District, Regency. Humbang Hasundutan. This is in line with research conducted by (Sormin et al., 2022; Tyas et al, 2023) which states that anxiety does not affect insomnia in the elderly.

According to researchers, anxiety does not always affect sleep disorders or insomnia in the elderly. So it is hoped that the elderly can avoid the causes of insomnia and improve the quality of sleep well (Ningsih et al., 2022). Elderly people can share with other people or close family when they experience problems to reduce feelings of anxiety. Apart from that, other research that is not in line with the results of this research is shown in research conducted by Sohat et al., 2014; Hapsari et al, 2023. The results of their research identified that anxiety is a natural disturbance of feelings, characterized by feelings of fear or deep and ongoing concerns. Anxiety levels are influenced by coping someone in the face of an incident. Insomnia is caused by emotional problems and mental health disorders, including anxiety. Anxiety disorders are the most common conditions common in the elderly. In the elderly face thoughts of death with a sense of despair and anxiety is a psychological problem important in the elderly, especially the elderly who experiencing chronic illness. Anxious behavior in the elderly it can be caused by disease physiological medicine that is difficult to overcome, loss of spouse, job, family, social support, response exaggeration of life events, thoughts of impending death.

4. CONCLUSION

Based on the research hypothesis, we highlight the differences between factors that influence insomnia in the elderly. From the research results, it was revealed that the level of insomnia in the elderly can be influenced by age factors, while anxiety does not affect insomnia in the elderly. This indicates that the higher the age level, the stronger the influence on insomnia in the elderly. Apart from that, although anxiety is one of the factors that can influence mental health problems which are often related to insomnia, this research shows different results. Therefore, in dealing with the problem of insomnia that occurs in the elderly, it is important to consider age as the factor that most influences insomnia. The elderly are considered a more vulnerable group, so efforts to prevent and treat insomnia symptoms are needed (Sumirta et al., 2015). However, this research also has limitations in several ways. It can be seen that this

research only identifies general factors that influence insomnia without considering all other factors that can influence this occurrence. For this reason, future researchers need to pay attention to re-identifying other factors that can cause insomnia, such as sleep patterns, habits, certain health problems, and other factors. Apart from that, this research also shows that anxiety does not affect the incidence of insomnia. So it is necessary for further research to carry out identification again using a larger sample to verify the research results again.

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