

## **THE RELATIONSHIP BETWEEN STRESS LEVEL AND SLEEP QUALITY IN THE ELDERLY AT POSYANDU KASIH IBU RW 006, MALAKA SARI VILLAGE, EAST JAKARTA**

Dhiya Fakhirah Widodo<sup>1</sup>, Agus Sumarno<sup>2\*</sup>, Seniwati<sup>3</sup>, Siti Fatimah<sup>4</sup>

1-4. Bachelor of Nursing Program, Faculty of Health Sciences, As-Syafi'iyah Islamic University – Jakarta, Indonesia

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### **Contact**

[dhiyafk12@gmail.com](mailto:dhiyafk12@gmail.com)

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### **ABSTRACT**

#### **Introduction**

The elderly are an age group that is prone to experiencing a decrease in sleep quality due to physiological and psychological changes, including stress. The elderly experience a decrease in sleep quality at night by around 70% to 80%. The need for adequate sleep for an individual is not only measured by the quantity of sleep, but also by the quality of his sleep. Poor sleep quality in the elderly is often associated with several factors such as age, medical conditions, psychiatric disorders, and the use of certain medications. This will have an impact on cognitive decline, fatigue during the day, decreased quality of life, sleep disorders such as insomnia and depression to anxiety.

#### **Method**

This study was quantitative with a cross sectional approach design. The population in this study was elderly aged 60-90 years using the Cluster Total Sampling technique. The sample size used in this study was 70 respondents and data analysis used the Chi-Square test.

#### **Result**

The results of statistical tests showed that most of the elderly experienced moderate stress levels of 24 respondents (34.3%) and had poor sleep quality of 29 respondents (41.4%), the Chi-Square statistical test was a pvalue = 0.001 or a pvalue < 0.05 so that H1 was accepted and H0 was rejected.

#### **Conclusion**

So it can be concluded that there is a relationship between stress levels and sleep quality in the elderly at Posyandu Kasih Ibu RW 006 Malaka Sari Village, East Jakarta.

## INTRODUCTION

According to the National Sleep Foundation (NSF) in the United States, approximately 67% of 1,508 people over the age of 65 reported problems initiating and maintaining sleep (Riset et al., 2023). According to research conducted by (Ning Li et al., 2020), the prevalence of poor sleep quality among older adults in China 14.39%. Poor sleep quality tends to be experienced by older women. The National Institute of Health in Bethesda, United States, also states that 50% of older adults aged 65 and over suffer from sleep disorders (Putri et al., 2023). According to data from the World Health Organization, the prevalence of sleep disorders in the elderly in Indonesia is quite high, at around 67% (WHO, 2020).

Poor sleep quality in elderly can be linked to several factors, including age, medical conditions, psychiatric conditions (depression, emotional stress, anxiety), and medication use (Hasibuan et al., 2021). Furthermore, environmental factors can help or hinder sleep in elderly. A comfortable and quiet environment can promote restful sleep, while a noisy environment can hinder sleep. Lifestyle factors can also influence sleep patterns in the elderly. Elderly individuals who frequently engage in activities such as light exercise tend to sleep more soundly than those who are less active (Putri et al., 2023). Globally 15% of the elderly population has mental health problems, and stress is one of the mental health problems that affects a large proportion of the elderly population (Putri et al., 2020).

According to the World Health Organization (WHO), the global prevalence of mental health disorders in the elderly is 61.6%. According to the Alliance of Mental Illness (NAMI), an estimated 52.9% of adults in the United States experience mental health disorders (Shalafina et al., 2023). According to the Central Bureau of Statistics, the prevalence of stress in the elderly in Indonesia reaches 8.34% (Putri et al., 2021). According to data from the Ministry of Research and Technology, 55% of the Indonesian population experiences stress, 0.8% of which is categorized as having very severe stress levels and 34.5% of which is categorized as having mild stress levels (Direja, 2020; Putri et al., 2024).

Based on the above phenomenon, the researcher was interested in conducting research with the topic "The Relationship Between Stress

Levels and Sleep Quality in the Elderly at Posyandu Kasih Ibu RW 006, Malaka Sari Village, East Jakarta".

## METHOD

The type of research is descriptive correlational, which describes the phenomena that occur and seeks the relationship between two research variables. The research design is cross-sectional, where the study was conducted to find the relationship between the dependent variable (sleep quality) and the independent variable (stress level).

This research was conducted on January 15, 2025, at Posyandu Kasih Ibu RW 006 Malaka Sari Village, East Jakarta. The sampling technique used was a non probability technique using the total sampling method with 70 respondents.

## RESULT

Table 1. Respondents Characteristics based on Age

| Usia         | Frekuensi | Peresentase% |
|--------------|-----------|--------------|
| Elderly      | 44        | 62.9         |
| Old          | 26        | 37.2         |
| <b>Total</b> | <b>70</b> | <b>100.0</b> |

From the 70 elderly respondents, 44 respondents (62.9%) are elderly, and 26 respondent (37.2%) are old.

Table 2. Respondents Characteristics based on Job

| Pekerjaan     | Frekuensi | Peresentase% |
|---------------|-----------|--------------|
| Bekerja       | 14        | 20.0         |
| Tidak Bekerja | 56        | 80.0         |
| <b>Total</b>  | <b>70</b> | <b>100.0</b> |

From the 70 elderly respondents, 14 respondents (20.0%) are working, and 56 respondent (80.0%) are unemployed.

Table 3. Characteristics based on Stress Levels

| Tingkat Stress | Frekuensi | Peresentase% |
|----------------|-----------|--------------|
| Ringan         | 23        | 33.0         |
| Sedang         | 24        | 34.0         |
| Berat          | 23        | 33.0         |
| <b>Total</b>   | <b>70</b> | <b>100.0</b> |

From 70 elderly respondents, 23 respondents (33.0%) experienced mild stress, 24 respondents (34.0%) experienced

moderate stress, and 23 respondents (33.0%) experienced severe stress.

Table 4. Characteristics based on Sleep Quality

| Kualitas Tidur | Frekuensi | Peresentase% |
|----------------|-----------|--------------|
| Baik           | 20        | 28.6         |
| Cukup          | 21        | 30.0         |
| Buruk          | 29        | 41.4         |
| <b>Total</b>   | <b>70</b> | <b>100.0</b> |

From the 70 elderly respondents, 20 respondent (28.6%) had good sleep quality, 21 respondents (30.0%) had sufficient sleep quality, and 29 respondents (41.4%) had poor sleep quality.

Table 5. Bivariate Analysis

| Tingkat Stress | Kualitas Tidur                            |             |             |              | P-Value | Contingency Coefficient |
|----------------|-------------------------------------------|-------------|-------------|--------------|---------|-------------------------|
|                | Baik                                      | Cukup       | Buruk       | Total        |         |                         |
| Ringan         | Count<br>% of<br>Total<br>12<br>12,1<br>% | 7<br>10,0%  | 4<br>5,7%   | 23<br>33,0%  | 0.001   | 0,458                   |
| Sedang         | 4<br>5,7%                                 | 11<br>15,7% | 9<br>12,9%  | 24<br>34,0%  |         |                         |
| Berat          | 4<br>5,7%                                 | 3<br>4,3%   | 16<br>22,9% | 23<br>33,0%  |         |                         |
| <b>Total</b>   | 20<br>28,6<br>%                           | 21<br>30,0% | 29<br>41,4% | 70<br>100,0% |         |                         |

From the 70 elderly respondents, it was found that the total bivariate analysis of stress levels and sleep quality was in the poor category, namely 29 respondents (41.4%).

## DISCUSSION

### Characteristics Based on Stress Levels

The results obtained from research at Posyandu Kasih Ibu RW 006 Malaka Sari Village, East Jakarta showed that 24 elderly people or (34.3%) of all respondents were in the moderate stress levels category.

The results of this study align with research conducted by (Putri et al., 2025), on stress levels in the elderly. The 101 respondents were categorized into five groups : normal, mild, moderate, severe, and very severe. Total of 15 respondents (14.9%) were categorized as having normal stress levels, 19 respondents (18.8%) were categorized as having mild stress levels, 58

respondents (57.4%) were categorized as having moderate stress levels, 7 respondents (6.9%) were categorized as having severe stress levels, and 2 respondents (2.0%) were categorized as having very severe levels. The result of this study prove that the majority of respondents experienced varying levels of stress, because stress has a subjective nature and is influenced by many aspects

Research conducted by (Kaunang et al., 2019) found that along with structural and physiological changes in older adults, their immune systems decline, making them more susceptible to various diseases. This decline in physical ability can lead to stress in older adults.

### Characteristics Based on Sleep Quality

The results obtained from research at Posyandu Kasih Ibu RW 006 Malaka Sari Village, East Jakarta showed that 29 elderly people or (41.4%) of all respondents were in the poor sleep quality category.

The result of this study align with research conducted by (Merry & Wikaningtyas, 2024), which found that 89 respondent (74.8%) had poor sleep quality, while 30 respondents (25.2%) had good sleep quality. This indicates that the majority of elderly people at the Kedawung Village Posbindu have poor sleep quality.

According to the theory proposed by Konzier (2010) in (Basarewan, 2022), a person's sleep time decreases as they enter old age. As older adults experience degeneration, effective sleep time decreases further. Consequently, ideal sleep quality is not achieved and various sleep disorders can arise. Apart from that, the elderly also have to adjust to the changes they experience, both physically, physiologically and psychologically, which tend to be bad

### The Relationship Between Stress Levels and Sleep Quality in the Elderly

Result of the SPSS data calculation test with the p-value, the chi-square statistics using (asyp.sig.) 0.001 were obtained, this value is smaller than  $\alpha = 5\%$  or ( $p < 0.05$ ). It can be concluded that there is a Relationship Between Stress Levels and Sleep Quality in the Elderly at Posyandu Kasih Ibu RW 006 Malaka Sari Village, East Jakarta.

This study aligns with research conducted by (Saroinsong et al., 2023), which used the fisher test to obtain a p-value of 0.003. There is a relationship between stress levels and sleep

quality.

In addition, this study is also in line with research conducted by (Makaba & Nurbaya, 2021), namely using the results of the chi-square test, the p-value obtained was 0.000, which indicates a significant relationship between stress levels and sleep quality.

The poorer the sleep quality experienced by older adults, the higher their stress levels. Sleep quality plays a crucial role in stress management, as good sleep helps the body and mind recover. Otherwise, poor sleep quality can also increase stress responses and create a negative cycle that worsens a person's psychological condition.

## CONCLUSION

Based on the result and discussion regarding the relationship between stress levels and sleep quality in the elderly at Posyandu Kasih Ibu RW 006 Malaka Sari Village, East Jakarta, it can be concluded that the majority of elderly characteristics are in 60-74 years age category, namely 44 respondents (62.9%), the majority of stress levels in the elderly are in the moderate category, namely 24 respondent (34.0%) of all respondents, the majority of sleep quality in the elderly is in the poor category, namely 29 respondents (41.4%) of all respondents.

Based on the research result, researchers concluded that maintaining good sleep quality and regular sleep patterns can reduce stress levels, because adequate and sound sleep supports emotional balance and cognitive function.

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