

THE RELATIONSHIP BETWEEN STRESS AND SLEEP QUALITY IN ELDERLY IN RAYA BAYU VILLAGE, RAYA DISTRICT, SIMALUNGUN DISTRICT

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Abstract

This study aims to identify the relationship between stress and sleep quality in the elderly using a correlative descriptive design. Determining the size of the sample using the power analysis table with a level of significance (α) of 5%, power ($1-\beta$) of 80% and an effect size of 40%, so that the sample size in this study is 50 elderly people who live in Raya Bayu Village, Raya District, Simalungun Regency. Sampling used simple randomized sampling according to the research criteria. Data collection was carried out from 2 to 30 June 2018 using a questionnaire consisting of 3 parts, namely the Demographic Data Questionnaire (KDD), Stress Questionnaire (KS), and Elderly Sleep Quality Questionnaire (KKTL). From the data analysis it is known that all respondents (100%) fall into the category of mild stress levels and almost all respondents (84.9%) have poor sleep quality. Respondents reported sleep duration at night < 5 hours (48%), length of time needed to start sleeping > 60 minutes (56%), frequency of waking up at night 3-4 times (52%), most respondents (60 %) woke up intermittently, when they woke up the respondents still felt a little sleepy (46%) and the majority of respondents were dissatisfied with their sleep (50%). And from the research it was found that stress has a moderate negative relationship to sleep quality in the elderly ($r = -0.454$) with an acceptable significance value ($p < 0.05$), Respondents reported sleep duration at night < 5 hours (48%), length of time needed to start sleeping > 60 minutes (56%), frequency of waking up at night 3-4 times (52%), most respondents (60 %) woke up intermittently, when they woke up the respondents still felt a little sleepy (46%) and the majority of respondents were dissatisfied with their sleep (50%). And from the research it was found that stress has a moderate negative relationship to sleep quality in the elderly ($r = -0.454$) with an acceptable significance value ($p < 0.05$), Respondents reported sleep duration at night < 5 hours (48%), length of time needed to start sleeping > 60 minutes (56%), frequency of waking up at night 3-4 times (52%), most respondents (60 %) woke up intermittently, when they woke up the respondents still felt a little sleepy (46%) and the majority of respondents were dissatisfied with their sleep (50%). And from the research it was found that stress has a moderate negative relationship to sleep quality in the elderly ($r = -0.454$) with an acceptable significance value ($p < 0.05$), when they wake up the respondents still feel a little sleepy (46%) and the majority of respondents are dissatisfied with their sleep (50%). And from the research it was found that stress has a moderate negative relationship to sleep quality in the elderly ($r = -0.454$) with an acceptable significance value ($p < 0.05$), when they wake up the respondents still feel a little sleepy (46%) and the majority of respondents are dissatisfied with their sleep (50%). And from the research it was found that stress has a moderate negative relationship to sleep quality in the elderly ($r = -0.454$) with an acceptable significance value ($p < 0.05$), when they wake up the respondents still feel a little sleepy (46%) and the majority of respondents are dissatisfied with their sleep (50%). And from the research it was found that stress has a moderate negative relationship to sleep quality in the elderly ($r = -0.454$) with an acceptable significance value ($p < 0.05$).

Keywords: *Stress, Sleep Quality, Elderly*

1. INTRODUCTION

Every individual will experience an aging process that begins when they enter old age, which is a natural process accompanied by a decrease in physiological function, changes in psychological and social conditions that interact with each other (Brunner, et al., 2010). This

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situation has the potential to cause health problems in general and mental health in particular (Kuntjoro, 2012). Changes in physiological function in the elderly are seen in several diseases that often occur, namely diabetes mellitus, hypertension, stroke, arthritis, osteoporosis, malignancy, kidney failure, digestive tract disorders, and chronic obstructive pulmonary disease (Lueckenotte, 2005). While the psychosocial changes that commonly occur in the elderly are changes that occur in the family such as death of a spouse, social isolation, loneliness, children study out of town or are married. substantial permanent income, retire, have to move to a smaller residence and also lose social interaction with peers who have died a lot (Potter & Perry, 2005)

Changes in physiological function that have an impact on changes in physical and psychosocial conduct cause stress in the elderly (Brunner, et al, 2010). According to Potter & Perry (2005) behavioral and emotional indicators of stress include anxiety and depression. Anxiety and depression are the most common stressors found in the elderly (Beck-Little & Weinrich, 1998). In a national survey it was reported that 5.8% and 3.7% of the elderly experienced stress as a result of anxiety and depression, and 9.5 % is the combined result of anxiety and depression (Burrows et al, 1998). This state of stress is reported to be associated with sleep quality in the elderly and is also the most common factor associated with sleep (Beck-Little & Weinrich, 1998).

It was also reported that poor sleep quality occurs in the elderly who experience anxiety and depression compared to the elderly who do not experience it (Evan & Rogers, 2004). Poor sleep quality in the elderly will result in decreased age, ineffective coping, decreased daily activities, frequent drowsiness, difficulty concentrating, irritability and offense, and paranoid psychological disorders (Lueckenotte, 2005). In Indonesia, especially in Medan, there has never been a study that reported the relationship between stress, namely anxiety and depression, and the quality of sleep in the elderly, so it is not yet known how stress and the quality of sleep in the elderly are and the relationship between the two.

1.1. Formulation of the problem

Based on the description of the background, the formulation of the problem in this study is "Is there a relationship between stress and sleep quality in the elderly in Raya Bayu Village, Raya District, Simalungun Regency?".

2. RESEARCH METHODS

2.1. Research design

This research uses a correlational descriptive design which aims to determine the relationship between stress and sleep quality in the elderly in Raya Bayu Village, Raya District, Simalungun Regency.

2.2. Time and Location of Research

This research will be conducted in Raya Bayu Village, Raya District, Simalungun Regency. Data collection was carried out on 2-30 June 2018.

2.3. Population

The population in this study were elderly people aged 60 years or more and residing in Raya Bayu Village, Raya District, Simalungun Regency.

2.4. Research sample

Determining the size of the sample using the power analysis table with a level of significance (α) of 5%, power ($1-\beta$) of 80% and an effect size of 40%, so that the sample size in this study is 50 people (Polit & Hungler, 2013).

2.5. Data analysis

According to Notoatmodjo (2006), the collected data will be analyzed descriptively in the form of correlation:

- a. Univariate analysis

Univariate analysis was performed to describe demographic data, stress variables and sleep quality variables. In general, this analysis only produces frequency distributions and percentages of each variable.

b. **Bivariate analysis**

This analysis was conducted to see the relationship between stress and sleep quality in the elderly in Raya Bayu Village, Raya District, Simalungun Regency. The bivariate analysis test used the Spearman correlation statistical test.

3.RESULTS AND DISCUSSION

Based on the results that have been obtained, a discussion is carried out to answer research questions about the relationship between stress and sleep quality in the elderly.

3.1. Characteristics of respondents

The results showed that out of 50 respondents (68%) the data were in the elderly (elderly) age group, namely between 60-74 years old with an average age of 67.2 years. This data is in accordance with Nugroho's report (2002) regarding the estimated life expectancy of the elderly in Indonesia in 2020 which is expected to increase, namely reaching the age of 70-75 years with an elderly population of 11.09% of the total population of Indonesia. The results also show that the majority of respondents are Batak (64%) and Javanese (36%).

3.2. Stress levels in the elderly

From the results of the study, all elderly people (100%) were at a mild stress level, while moderate and severe levels were not found in the elderly in Raya Bayu Village, Raya District, Simalungun Regency. The results of this study are not in line with the opinion of Kurlowicz (2004) that there are 13% of the elderly in the community who experience moderate and severe depression. Kay, DWK. (1998) in his research conducted in the United States also reported that there were 2-5% of elderly people in the community with severe anxiety and depression and 10% of mild cases. The difference in the results of this study is possible due to differences in the characteristics of the elderly population studied where there are differences in lifestyle, culture, social status, and others among the people.

3.3. Sleep quality in the elderly

From the results of the study it was found that almost all (84.9%) of the elderly had poor sleep quality and only 15.1% of the elderly had good sleep quality. In line with the opinion of Foley et al. (2005) and Taylor et al. (2001) that the elderly generally experience changes in the quantity and quality of their sleep and these changes are the impact of changes related to increasing age and the aging process. Meanwhile, there are some elderly whose sleep quality is good because they do not experience a source of stress and have a good self-concept towards various changes in the aging process that occur (Fitchen et al. 2005).

3.4. The relationship between stress and sleep quality in the elderly

The results of statistical analysis in this study were that stress was negatively related to a moderate level of association with sleep quality in the elderly ($r=-0.454$). The results of the relationship analysis have an acceptable significance value, namely $p=0.001$, where $p<0.05$. So it can be concluded that the research hypothesis is accepted, meaning that the statement that there is a relationship between stress and sleep quality in the elderly in Raya Bayu Village, Raya District, Simalungun Regency is acceptable.

A negative relationship means that there is an opposite relationship between the two research variables, namely the higher the stress level, the worse the quality of sleep in the elderly or vice versa. While the resulting relationship at a moderate level is possible because the stress components correlated in the results of this study are all (100%) at a mild stress level.

From the results of the study it was found that stress causes poor sleep quality in the elderly. The results of this study are in line with the opinion of Craven and Hirnle (2008) that poor sleep is directly related to stress and anxiety variables. Also in accordance with the research of

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Burrows et al. (1998) in their research on the relationship between stress and sleep quality in the elderly, that anxiety and depression have a negative impact on the quality of sleep in the elderly, namely decreased total hours of sleep, increased time needed to fall asleep, frequent awakenings at night and poor sleep.

However, judging from the factors that affect the quality of sleep in the elderly, both physical conditions/diseases experienced, changes in lifestyle, living environment, diet, drugs consumed, as well as age/aging process, it is possible for the elderly to experience depression. poor sleep quality (Potter & Perry, 2005).

4.CONCLUSION

Based on the results of the analysis and discussion, conclusions and suggestions can be drawn regarding the relationship between stress and sleep quality in the elderly in Raya Bayu Village, Raya District, Simalungun Regency. In the frequency distribution of the characteristics of the respondents, most of them were young elderly (elderly) aged 60-74 years (68%) , male and female (42% 58%), Batak and Javanese (64% 36%), have an income of less than 700,000 (58%). All respondents belong to the mild stress level category (100%). 84.9% of respondents had poor sleep quality and only 15.1% of respondents had good sleep quality. Stress in the elderly was negatively associated with a moderate level of association with sleep quality ($r = -0.454$) with a significance value that could be T accepted ($p < 0$),

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