Systematic Review

Factors Related to Sleep Disorders in the Elderly in Tresna Werdha Madago Tentena

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ABSTRACT

Background: Sleep disorders are common things often experienced by the elderly. This will affect their quality of life. There are many factors that influence sleep needs in the elderly. The aim of this study was to determine the factors related to sleep disorders in the elderly.

Method: This study used a cross-sectional design with accidental sampling. The population in this study was the elderly at Tresna Werdha Madago Tentena. The data retrieval for this research was conducted between June - July 2014. The analysis of the data was done using Chi-Square. The results from the 45 respondents showed that 61.3% had sleep disorders caused by their disease and that 65.6% had sleep disorders caused by an unconducive environment.

Result: This result showed that disease and an unconducive environment influenced sleep needs.

Conclusion: The recommendation for nurses and staff is to increase their attention span and the environmental comfort by dimming the lights when the patient is going to sleep and reducing noise. This means that the patient's sleep needs are fulfilled.

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INTRODUCTION

Increasing the economic life, increasing the variety of technology and improving on the health facilities has led to an number of improvements tied into human life expectancy(Mubarak, 2008). The increase in life expectancy has an impact on the increasing number of elderly people (Maryam, 2008).

At present, the number of elderly people around the world is estimated to be more than 629 million (one in 10 people are over 60 years old). By 2025, the elderly population will reach 1.2 billion (Menkokesra, 2008). In Indonesia, there are 15.3 million, which is 7.4% of the population. In 2005, this number was estimated to have increased to - / + 18.3 million (8.5%) (Nugroho, 2008).

As they age, the elderly will experience physical, psychosocial and spiritual changes(Saputra, 2013). One of changes is their sleep patterns(Saryono and Widianti, 2010). According to the National Sleep Foundation, about 67% out of 1,508 elderly people in the United States aged 65 years and over reported experiencing sleep disorders (Pirma Siburian Sp PD,

2009) and as many as 7.3% of the elderly complained of a disorder related to starting and maintaining sleep or insomnia (Anderson, 2009).

Sleep quality in the poor elderly cannot be separated from the factors that influence it(Stockslager, Jaime L and Schaeffer, 2008). A quiet environment, hot or cold temperature, car noise and other communication devices can disrupt sleep (Immanuel, 2008). Medical conditions and the physical changes related to old age also influence sleep(Widuri, 2010). The pain at night will be more influential, it will take longer to fall asleep and the sleep is disrupted. The aim of this study was to determine the factors related to sleeps disorder in elderly (Bandiyah, 2009).

MATERIALS AND METHODS

Research Design, Population and Sample and Variables
This study used a cross-sectional design and accidental sampling. The population in this study was all of the elderly people at the Tresna Werda

"Madago" Social Institution in Tentena, totaling about 85 people. From the results of the calculation above, the total sample was 45 people. This research was conducted in the Poso of Central Sulawesi from June - July 2014. The inclusion criteria of this research were as follows: 1) the elderly who live in the Tresna Social Home Werda "Madago" Tentena, 2) the elderly people who do not experience psychic disorders, 3) the elderly people who have no hearing loss and 4) the elderly who are willing to be used as a respondent. The independent variables in this study were accompanying diseases and the environment. The dependent variable was the need for sleep in the elderly.

Instruments

This instrument used three types of questionnaire in the form of a disease disorder questionnaire, environmental questionnaire and the questionnaire on the needs of the elderly sleepers.

Research Procedures and Analysis

The procedure for retrieving the data was the filling out of the questionnaires by the respondents with their approval. The study was conducted for 2 months in the Madago Tentena social institution. This research study received permission and passed the ethical review conducted by the Ethics Commission of the Tresna Werdha Madago Tentena on July 2_{nd} 2014, certificate number 016/TU/PSTW/VII/2014. The data was analyzed using IBM SPSS Statistic 24. The statistical analysis used was the Chi-square test. The confidence interval was 95% with an alpha value of (a)= 0.05.

RESULT

The results of the analysis of the relationship between the dependent variables, namely the elderly sleep needs and disease, showed a value of p=0.013. This value is said to be significant because the value is p<0.05, which means that the hypothesis is accepted. This explains that there is a significant relationship between elderly sleep needs and disease. We can see from the OR value of 5.806 (25.173-1.339) that the respondents with disease have a chance that is 5. 806 times more likely when it comes to not having fulfilled their sleep needs compared to the respondents without a disease [Table 1].

The results of the analysis of the relationship between the dependent variables indicates that elderly sleep needs and environmental disorders showed a value of p=0.000. This value is said to be significant because the value is p<0.05 which means that the hypothesis is accepted. This explains that there is a significant relationship between the elderly sleep needs and environmental disorders. The OR value is 22.909 (199.944-2.625), which shows that the respondents with an environmental disorder have 22.909 times more of a chance of unfulfilled sleep needs compared to the respondents without environmental disturbances [Table 2].

Table 1. The Results of the Analysis of the Relationship Between Elderly Sleep Needs and Disease in June-July 2014

| Variable | Needs Sleep | | | | n |
| | Fulfilled | | Not Fulfilled | | |
	n	%	n	%	
With disease	12	38.7	19	61.3	31
Without disease	11	78.6	3	21.4	14
Total	23	51.1	76	48.9	45
Chi-Square	p = 0.013 or = 5.806				

Table 2. The Results of the Analysis of the Relationship Between the Elderly Sleep Needs and Environment Disorders in June - July 2014

| Environmental | Needs Sleep | | | | n |
| | Fulfilled | | Not Fulfilled | | |
	n	%	n	%	
Unconducive	11	34.4	21	65.6	32
Conducive	12	92.3	1	7.7	13
Total	23	51.1	76	48.9	45
Chi-Square	p = 0.00 or = 22.909				

DISCUSSION

The results of the study on 45 respondents showed that the respondents who did not fulfill their sleep needs were 61.3% compared to the respondents without disruption to meeting their need for sleep, which amounted to 21.4%. For the respondents with environmental disorders, 65.6 did not meet their sleep needs compared to the respondents who did not have any disruption in their sleep by 7.7%.

The results of the analysis in this study are based on the significance values which indicate that there is a significant relationship in relation to meeting the needs of the elderly, their sleeping, the disruption of disease and environmental disorders. This means that if there are accompanying diseases and environmental disorders, then the sleep needs of the elderly are not met. This is in accordance with what the respondents indicated in the results of this study. The disease experienced by the respondents was rheumatism. This caused the respondents to experience pain complaints, especially during their daily activities or when the temperatures too cold. Pain is an unpleasant sensory and emotional experience due to actual or potential tissue damage(Immanuel, 2008). Pain stimuli are transmitted to the spinal cord, thalamus and midbrain(Asmadi, 2008). From the thalamus fibers, there is the transmission of pain messages to the various areas of the brain including the sensory cortex, association cortex and limbic system. which will affect sleep (Anderson, 2009).

The response / complaint commonly experienced by the rheumatic clients was mild to severe pain, which can interfere with sleep. Based on the results of a study by Dament et al., it was reported that young people reported a sleeping efficiency of 80 to 90% while the elderly reported 67 to 70%. Luce and Segal revealed that in the elderly group (forty years), only 7% of cases complained about sleep problems (only

able to sleep for no more than five hours a day). The same was found in 22% of cases in the age group who were 70 years old (woke up earlier than 5:00 a.m). In addition, 30% of the 70-year age group had awakened at night (Bandiyah, 2009).

Environmental factors are factors that greatly influence the fulfillment of rest and sleep needs in the elderly. These factors include noise, temperature, lighting, circulation or ventilation systems and the room situation. The limitations in this study were the limited number of independent variables. There is also the cause of insomnia in the elderly to consider.

CONCLUSION

The conclusion is that the respondents with disabilities and environmental disorders have not fulfilled their need for sleep.

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