

Different Quality of Elderly Sleeping which Does Agents Regularly and not at the Welfare of Well Agung Kupang City

Fiadolof lahal¹, Jacob M. Ratu², Andreas Umbu Roga², Lukas M. boleng³

¹Master Program in Public Health Sciences, University of Nusa Cendana, NTT Indonesia, ²Faculty of Public Health, University of Nusa Cendana, NTT Indonesia, ³Faculty of Teacher Training and Education, University of Nusa Cendana, Sports Education Study Program

Abstract

Background: Elderly is not a disease, a process that gradually results in cumulative changes, decreased immune system in the face of stimuli from inside and outside the body. Decreased endurance is characterized by decreased physical ability, decreased cardiovascular system, decreased respiratory system, decreased reproductive system, decreased muscular system, changes in the skin system, hair loss and this can inhibit the activities of the elderly. The higher the life expectancy, the greater the number of elderly people. This was followed by high health problems that exist in the elderly, one of which is sleep disorders which is more than half of the elderly people, often complaining of sleep disorders at night. Elderly exercise is one example of physical activity that can be done to improve the quality of sleep.

Objective: To determine the difference of sleep quality decline between the elderly who do regular and non-regular exercise. This study uses an experimental research group using a sample of 40 elderly.

Results: The elderly who have high quality sleep categories 11 people (27.5%) and elderly who have low sleep quality 29 people (72.5%) with an average of 47.8 and after regular exercise activities the number of elderly people who regularly reducing high sleep quality to 2 people (5%) and elderly who have low sleep quality of 35 people (95%) with an average of 22.2. The results of statistical tests in groups that do gymnastics irregularly and regularly by using statistical tests obtained p value 0,000.

Conclusion: This shows that there is an influence of elderly exercises on sleep quality in the elderly who do regular gymnastics and cannot improve sleep quality in the elderly.

Keywords: *Elderly, Elderly Gymnastics, Sleep Quality.*

Preliminary

Aging or aging is a condition that occurs in human life in three stages, namely childhood, adulthood and old age which cannot be avoided by every person. Elderly psychology is basically the study of psychological problems, behaviors and habits that occur when a person reaches the stage of age that enters the elderly category.

In the elderly there will be various setbacks in the organs of the body, therefore the elderly are very easily stressed (1).

Sleep quality is someone's satisfaction with his sleep experience that includes aspects of sleep initiation, maintaining sleep and quantity. Sleep quality and freshness when I wake up include quantitative aspects of sleep, such as sleep duration, time needed to be able to fall asleep, and frequency of awakening, and subjective aspects such as depth of sleep and extinction (2).

Changes in elderly sleep patterns are caused by changes in the central nervous system that affect sleep regulation(3). Changes in sleep quality in the elderly

Corresponding author:

Fiadolof Lahal,

Master Program in Public Health Sciences, University of Nusa Cendana, NTT Indonesia
e-mail: fiadoloflahal@yahoo.com

are caused by the physical ability of the elderly which decreases. Physical ability decreases due to decreased ability of organs in the body, such as the heart, lungs, and kidneys. Decreased organ capacity causes immune system and body immunity to be affected ⁽⁴⁾.

Factors that affect the sleep quality in the elderly, divided into 2 categories, they are internal and external factors. Internal factors include age, psychological condition, response to disease, etc. The external factors such as the environmental and lifestyle. The age factor is the most important factor that affected the quality of sleep⁽⁵⁾

In overcoming problems due to the changes experienced by the elderly, the health care needs to do sports, but what needs to be considered is that sports for the elderly have a rest than for young people. Type of exercise must also be considered and adjusted to the situation of the elderly. One of the good sports for the elderly is gymnastics ⁽⁶⁾.

Elderly exercise is a mild exercise and is easy to do but not burdensome to the elderly. This exercise will help the body become fit and fresh because it trains the bones to stay strong, encourage the heart to work optimally and help eliminate free radicals that roam in the body⁽⁷⁾. In his research stated that elderly exercise gives a significant influence on fitness physical. ⁽⁸⁾

This research is useful for the government, universities and also for the community to give insight into the importance of the elderly gymnastics.

Research Purposes

To find out the difference in psychological response can be seen from the decrease in sleep quality between the elderly who do regular and not regular exercise

Research Methodology

The research method used in this research is analytic observational with cross sectional design that is experimental research in order to study the dynamics of the correlation or influence between the dependent variable and the independent variable observed at the same time.⁽⁹⁾ The sample used in this study was all the elderly who were in UPT Budi Agung Welfare, Kupang City. elderly who can participate in gymnastics activities.

The total population is 80 people, and all of them are used as samples called total sampling. The analysis used in this study is univariate analysis and bivariate analysis

Results and Discussion

Characteristics of Respondents

Characteristics of respondents based on age, sex, education, religion and ethnic origin are explained in the following table 1

Table 1. characteristics of research respondents

Characteristics of respondents	Kategori	Amount People
Age	60-65	11 (27,5%)
	66-70	8 (20%)
	71-75	9 (22,5%)
	76-80	12 (30%)
Gender	Male	15 (37,5%)
	Women	25 (62,5%)
Education	No school	11 (27,5%)
	SD	22 (55%)
	Middle School	5 (12,5%)
	High School	1 (2,5%)
Religion	Higher education	1 (2,5%)
	Islamic	4 (10%)
	Christians	19 (47,5%)
Ethnic origin	Catholic	17 (42,5%)
	Timor	21 (52,5%)
	Rote	6 (15%)
	Sabu	4 (10%)
	Alor	3 (7,5%)
	Sumba	6 (15%)

Based on table 1, in addition, the characteristics of respondents by age can be seen that the age category of 60-65 years amounted to 11 people (27.5%), 66-70 years 8 people (20%), 71-75 9 people (22.5%) and 76-80 years 12 people (30%) can also be known that the characteristics of respondents by sex are 15 men (37.5%) and the sex of women is 25 people (62.5%), the

characteristics of respondents by group the highest level of education is the elementary level of 22 people (55%), not attending school of 11 people (27.5%), the junior high school level of 5 people (12.5%), while for the high school and D3 / S1 levels respectively 1 person each (2.5%). Characteristics of respondents based on groups of belief levels (Religion) the most are Christians amounting to 19 people (47.5%), Catholic religion totaling 17 people (42.5%), and Islamic religion totaling 4 people (10%), characteristics of respondents based on the most common ethnic origin is the plains of Timor totaling 21 people (52.5%), then Rote and Sumba 6 people (15%), methamphetamine 4 people (10%) and Alor 3 people (7.5%)

1. Univariate analysis

Differences in elderly psycho-physiological responses that do gymnastics regularly and are not explained in the table

Table 2. elderly who do exercise regularly and not.

Variable	Elderly who does irregular gymnastics			Elderly who does regular gymnastics		
	High	Low	Average	High	Low	Average
Sleep Quality	11 (27,5%)	29 (72,5%)	47.8	2 (5%)	38 (95%)	22.2

In this study divided into 2 categories: high and low listed in table 2 above, it can be seen the effect of elderly exercise on sleep quality regularly and not. Regular exercise category results show that the elderly who have high sleep quality categories of 11 people (27.5%) and elderly who have low sleep quality categories of 29 people (72.5%) with an average of 47.8 and the elderly who do gymnastics activities irregular number of elderly people who have high sleep quality 2 people (5%) and elderly who have low sleep quality 35 people (95%) with an average of 22.2.

2. Bivariate Analysis

Differences in sleep quality in the elderly who do regular and non-regular exercise

Table 3 sleep quality

Variable	Elderly who does irregular gymnastics		Elderly who does regular gymnastics		Value	Different p
	Average	Sd	Average	Sd		
Sleep quality	47,8	4,1	22,2	1,2	25.6	.000

The test results show there are differences in the average sleep quality of the elderly for the elderly who do regular exercise (47.8) and irregular elderly exercise (22.2). Different test results showed that the effect of elderly which performed regular and irregular gymnastic activities was significant or there was a relationship (p =

.000). This means that after giving gymnastics elderly for elderly people who do regular and irregular gymnastics experience changes in sleep quality (25.6).

Discussion

The results of research conducted on 40 respondents

obtained the results of the majority of respondents were female as many as 25 people (62.5%) and as many as 15 people (37.5%). This result also shows that the average number of respondents who become respondents is aged 60-80 years. Increasing age affects the decline from sleep periods. Changes in the quality of sleep in the elderly is caused by the physical ability of the elderly which decreases. Decreased organ capacity causes immune system and body immunity also influence.⁽¹⁰⁾

This study uses a non-experimental research group in order to study the dynamics of the correlation or influence between the dependent variable and the independent variable observed at the same time.

In this study the measurements were made before and after the elderly do gymnastics activities of the elderly who do gymnastic activities, both regularly and irregularly, with the results obtained in the elderly who do regular and irregular gymnastic activities to obtain insignificant results ($p = .000$). This shows the elderly who do regular gymnastic activities, their level of fitness becomes better, which gymnastics elderly can affect the quality of sleep in the elderly, according to researchers' observations this occurs due to respondents actually doing a series of gymnastics activities that are carried out actively with good, then the benefits of gymnastics directly obtained by respondents. These results indicate that the provision of elderly exercises affects the quality of sleep in the elderly with insomnia and H_0 rejected.

Elderly exercise is a mild exercise and is easy to do, not burdensome to the elderly. this exercise will help the body to stay in shape and stay fresh because it trains the bones to stay strong, encourage the heart to work optimally and help eliminate free radicals that roam in the body.⁽¹¹⁾

Conclusion

After conducting research on the differences in the psychological response of the elderly who do elderly gymnastics regularly and not at the Upt of Welfare Budi Agung Kupang City, it was found that 40 respondents found that most respondents were female as many as 25 people (62.5%) and as many as 15 men people (37.5%). This result also shows that the average number of respondents who become respondents is aged 60-80 years.

The results of statistical tests on groups that do gymnastics irregularly and regularly by using statistical tests obtained p value 0,000 for. This shows that there is an influence of elderly exercises on sleep quality in the elderly and can improve sleep quality in the elderly.

Suggestion

1. For the Budi Agung Welfare social home in Kupang City

It is hoped that this research can be used as evaluation material and input to help the quality of elderly sleep so that it remains normal by doing elderly gymnastics conducted at the Budi Agung Welfare Unit

2. Share nurses

It is expected that nurses can coordinate with the elderly program holders to be able to increase counseling evenly and thoroughly about the prevention and control of sleep quality in the elderly

3. For Educational Institutions

Can improve learning and knowledge about gymnastics that affect the quality of sleep in the elderly.

4. For Other Researchers

For further research it is hoped that this research can be used as additional information to develop further research on other benefits of elderly exercise such as overcoming increasing lung capacity and illustrating knowledge about elderly exercise.

Ethical Clearance: This study using human as research subjects, therefore, before obtaining the permission, the author submitted ethical clearance to Health Research Ethics Committee, Faculty of Medicine Nusa Cendana University. This research had been permitted with ethical approval recommendation number 86/UN15.16/KEPK/2019 dated october 07, 2019.

Source of Funding – Self

Conflict of Interest – Nil

References

1. Arisdiani, T, & Widiastuti, Y. P. Relationship Between Emotional Stress and Sleep Quality. (2017) ; 5 (5), 68 –71.

2. Aslidar. Improvement of Physical Balance and Mental Health of the Elderly Through Older Gymnastics in Upt Elderly Social Services and Toddler Children in Binjai and Medan. *Journal of Flora Nursing*, (2014); VII (1), 71–82.
3. Eko Setiawan. Effect of elderly gymnastics with. (2015).
4. Judha, M. SENAM ELDERLY INCREASES INSPIRATION CAPACITY. (2016) ; 11 (April), 3–9.
5. Mardius, A., & Astuti, Y. The Effect of Elderly Gymnastics on Physical Fitness of the Residents of Pondok Pinang Housing, Lubuk Buaya Village, Koto Tengah District, Padang City. *Journal of Education Research and Evaluation*, [Internet] (2017); 1 (3), 147. [https : // doi .org/ 10. 23887/ jere. v1i3. 10381](https://doi.org/10.23887/jere.v1i3.10381)
6. Sumedi, T., & Kuswati, A. Effects of Elderly Gymnastics Against the Decreased Insomnia Scale of the Elderly in Cilacap Council of Nursing Homes. *Soedirman Journal of Nursing*, (2010); 5 (1), 13-20.
7. Tegawati, L. M., Karini, S. M., & Widya, R. Effects of Elderly Gymnastics Against Decreased Depression Rates in Older People. *Journal of Psychology*, (2009); 1 (2), 36–45
8. Puspitasari, I. Comparative Study of the Strs of Elderly Levels Participating and Not Following Fitness Exercise (SBL) in the MRISI Hamlet of Tirtonirmolo Village Kasihan Bantul. (2012). 1–10.
9. Zulailka, I. (2016). No Title The effect of corporate governance on the quality of auditor performance. *Computer Journal of Accounting and Auditing Sciences*, 23 (45), 5-24