THE EFFECT OF SLEEP HYGIENE ACTIVITY THERAPY ON SLEEP QUALITY IN THE ELDERLY

PENGARUH TERAPI AKTIVITAS SLEEP HYGIENE TERHADAP KUALITAS TIDUR LANSIA

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ABSTRACT

Hypertension is a health problem experienced by some people through the aging process, this results in an increased risk of cardio-cerebrovascular morbidity, such as myocardial infarction, heart failure, and stroke. The purpose of the study was to determine the effectiveness of the application of education on rest and sleep patterns on reducing blood pressure in the elderly. This research was Quantitative method with pre-experimental design. The sampling technique used probability sampling with simple random sampling method, the number of samples that matched the inclusion and exclusion criteria were 39 elderly people in Mondoteko Village, Rembang City, the analysis used a paired t-test. The results showed that the systolic blood pressure before being given the application of educational therapy for rest and sleep patterns (intervention) was 169.49 mmHg with a standard deviation of 12.34 and after being given the intervention was 94.36 mmHg with a standard deviation of 5.52. The p-value of systolic blood pressure was 0.001. Diastolic blood pressure before the intervention was 129.23 mmHg with a standard deviation of 7.39. The diastolic value after the intervention was 76.41 mmHg with a standard deviation of 6.277. The p-value of diastolic blood pressure is 0.001. There is an effectiveness of the application of educational therapy on rest and sleep patterns to decrease systolic and diastolic blood pressure in the elderly in Mondoteko Village, Rembang.

Keywords: educational therapy; rest and sleep; blood pressure; elderly

Lansia merupakan kondisi dimana seseorang akan mengalami kemunduran secara alamiah yaitu tubuh yang akan mengalami penuaan dan ditandai dengan terjadinya perubahan bentuk fisik serta fungsi tubuh yang mulai menurun. Perubahan pola tidur akibat proses penuaan lansia mempengaruhi kualitas tidur lansia antara lain kesulitan mempertahankan tidur, dan bangun terlalu pagi. Sleep hygiene penting dalam intervensi munculnya kasus insomnia yang terjadi pada orang lanjut usia dengan angka prevalensi diperkirakan sebesar 13-47% dengan proporsi sekitar 50-70% terjadi diusia diatas 65 tahun. Tujuan mengatasi tingkat pengaruh terapi sleep hygiene terhadap kualitas tidur lansia. Metode penelitian bersifat deskriptif kuantitatif dengan menggunakan desain quasi eksperimen pre-post test one group design. Teknik sampling adalah purposive sampling dengan jumlah sampel ≥ 16 responden. Instrument penelitian menggunakan kuesioner dengan uji analisa uji paired T Test. Hasil menunjukkan sebelum dilakukan terapi sleep hygiene nilai mean gangguan tidur berat adalah 15,69 pada 93,8% responden dan setelah dilakukan terapi sleep hygiene nilai mean adalah 10,00 (gangguan tidur ringan) pada 87,5% responden. Nilai p value 0,000 yang artinya ada pengaruh terapi aktivitas sleep hygiene terhadap kualitas tidur lansia.

Kata Kunci: lansia; sleep hygiene; kualitas tidur
INTRODUCTION

Elderly is the age at which a person will experience a natural decline, namely the body will experience aging and is characterized by changes in physical form and body functions that begin to decline (Binti, 2015). Over time, the aging process will be followed by various health problems to biological changes. Biological changes that usually occur in the elderly are changes in sleep patterns. Changes in sleep patterns due to the aging process in the elderly will affect the quality of sleep in the elderly.

Sleep disorders that often occur in the elderly are divided into 3, namely, difficulty starting sleep, difficulty maintaining sleep, and finally getting up too early (Doghramaji, 2008). Factors causing sleep disturbances in the elderly, namely, an unfavorable environment, pain, activity or lifestyle, diet, and dementia. Sleep stages are divided into 2, namely Non-Rapid Eye Movement (NREM) sleep which is divided into 3 stages (N1, N2, N3, and N4) (Mastin, 2014). Stage N1 is the lightest stage in the sleep process, occurring within 10 to 20 minutes. At this stage, a person can easily wake up and deny that he has slept and can be influenced by age and time. Stage N2 is characterized by stopping eye movements and brain waves (brain activity) becoming slow and lasting for 20 minutes. In this phase, a person will enter a deeper stage so that it is difficult to wake up. While stages N3 and N4 as the deepest sleep stages and are often referred to as slow-wave sleep. Rapid Eye Movement (REM) is characterized by rapid eye movements. REM sleep is a form of active sleep accompanied by dreams and is difficult to wake up (Nugroho, 2008).

Sleep problems that occur in the elderly, but what is often experienced is the occurrence of sleep disturbances which will have a negative influence on physical and mental health and decrease the quality of sleep in the elderly. Poor sleep quality will result in not fulfilling good sleep quality for the elderly it will cause the elderly to be susceptible to disease (Amir, 2019). Based on Official Statistics (BRS) data, it is stated that in 2020 the population in Central Java Province is 36,516,035 people with the percentage of the elderly population as much as 12.15%. The prevalence of the elderly who experience sleep disorders is quite high, namely as much as 67%. In Demak Regency itself, according to the Central Statistics Agency (BPS) in 2018 the prevalence of the elderly was 112.216.

Sleep quality is a condition in which the individual's sleep can affect fitness and freshness upon awakening. Factors that can affect sleep quality, such as sleep duration and comfort during sleep. Changes in sleep quality often make the elderly sleep time to be reduced which will eventually appear symptoms of insomnia (Prayitno, 2010).

Some of the elderly are not too familiar with sleep disorders, especially insomnia. The elderly with insomnia complain of excessive sleepiness during the day so that the body feels weak, especially in the extremities, fatigue, discomfort, loss of appetite, headaches, and activity disturbances. For this reason, it is necessary to take a step to overcome sleep disorders, namely through non-pharmacological therapy. Non-pharmacological therapy is therapy by living a healthy lifestyle (Tsou, 2014). The most effective non-pharmacological therapy to treat sleep disorders or insomnia is behavioral therapy, namely Sleep Hygiene (Hanifa, 2016).

Sleep hygiene is the identification and modification of behaviors and environments that affect and improve sleep quality. Sleep Hygiene is one of the important factors in the emergence of cases of insomnia. The Sleep Hygiene component consists of the sleep environment and habits or behaviors that are carried out before bed (Doghramaji, 2018). In terms of the environment, sleep hygiene can make a person sleep comfortably such as lighting that is not too bright or dark, room temperature that is not too hot or cold, there is no noise or noise, as well as maintaining room cleanliness and terms of behavior such as diet behavior carried out. during the day such as eating and drinking (Lavie, 2015).

Sleep hygiene therapy towards a better direction can improve the quality and quantity of sleep. Lack of sleep quality experienced by the elderly is the impact of poor Sleep Hygiene
activity behavior. Therefore, the elderly need to gain an understanding of the practice of good and appropriate Sleep Hygiene activities to improve the quality of sleep for the elderly (Pandi, 2019).

The results of a survey of 20 elderly people, there are 10 elderly who experience sleep disorders, namely insomnia and 5 elderly who experience mild sleep disorders such as restlessness at night so that sleep time becomes shorter and wakes up often, and 5 other elderly do not experience sleep disturbances because they can fall asleep properly, time and do not feel the bad effects of waking up such as restlessness. The impact that occurs in the elderly when they cannot sleep such as excessive sleepiness during the day, memory disorders, bad mood, to a decrease in quality of life.

The lack of comfortable beds for the elderly such as lighting, temperature, and cleanliness are also factors that support sleep disorders experienced by the elderly. An irregular nap schedule is also a supporting factor because the elderly say it is difficult to sleep at night on time if they elderly sleep for 4-5 hours during the day. The elderly said that they slept after the midday prayer until before the Asr prayer as a result of being tired after doing activities. The elderly said that there was no counseling about bedtime habits or sleep hygiene to improve the quality and quantity of sleep in the elderly, resulting in a lack of knowledge of the elderly about the impact that would occur if the sleep disorders experienced were not treated.

**METHOD**

The type of research used is quantitative, namely research that describes systematically, and accurately, facts, and characteristics about the population or a particular field. This study uses a Quasi Experiment Pre-Post Test One Group Design without control (Swarja, 2012).

The sample of this study amounted to 16 elderly according to the inclusion criteria. The sampling technique used in this research is purposive sampling, which is a sampling technique in which the researcher relies on his judgment by determining certain criteria when selecting members of the population to participate in the study (Sugiyono, 2006).

The instrument used to collect data in this study was a questionnaire, which is a way of collecting data by using a question to obtain information, responses, and answers. This study uses a questionnaire instrument adopted from the Pittsburgh Sleep Quality Index (PSQI) where respondents only provide answers or give certain signs with aspects of questions among sleep quality questionnaires to obtain the information needed by researchers (Lavie, 2015). Data analysis was carried out using the paired sample t-test statistical test (Nursalam 2008). The results of the normality test using Shapiro Wilk in table 1

<table>
<thead>
<tr>
<th>Sleep Quality Activity Therapy</th>
<th>Statistic</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest sleep hygiene activity therapy</td>
<td>0.945</td>
<td>16</td>
<td>0.420</td>
</tr>
<tr>
<td>Posttest sleep hygiene activity therapy</td>
<td>0.914</td>
<td>16</td>
<td>0.133</td>
</tr>
</tbody>
</table>

**RESULT**

The Level of Sleep Quality of the Elderly Before Being Given Sleep Hygiene Activity Therapy.

Table 2 Pre-Test Sleep Quality Level for the Elderly.

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep Hygiene Activity Therapy Pretest</td>
<td>16</td>
<td>15.69</td>
<td>13</td>
<td>18</td>
<td>1,302</td>
</tr>
</tbody>
</table>

Based on table 2, the pre-test of the level of sleep quality for the elderly shows data on the level of sleep quality for the elderly in 16 respondents, and the statistical results of the measurement of the majority of respondents with severe sleep disorders amounting to 16 respondents with a percentage of 93.8%.
The Level of Sleep Quality of the Elderly After Being Given Sleep Hygiene Activity Therapy.

Table 3 Post-Test Sleep Quality Level for the Elderly.

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep Hygiene Activity Therapy</td>
<td>16</td>
<td>10.00</td>
<td>7</td>
<td>14</td>
<td>1.592</td>
</tr>
<tr>
<td>Posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on table 3, the post-test of the level of sleep quality in the elderly shows data on the level of sleep quality in the elderly for 16 respondents, the statistical results of the measurement of the majority of respondents with mild sleep disorders are 14 respondents with a percentage of 87.5%.

Effect of Sleep Hygiene Activity Therapy on Sleep Quality in the Elderly Table.

Table 4. Paired Sample T-Test.

<table>
<thead>
<tr>
<th>Sample T-Test</th>
<th>n</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>16</td>
<td>15.69</td>
<td>13</td>
<td>18</td>
<td>1.302</td>
<td></td>
</tr>
<tr>
<td>Post test</td>
<td>10</td>
<td>7</td>
<td>14</td>
<td>1.592</td>
<td></td>
<td>0.000</td>
</tr>
</tbody>
</table>

Based on table 4 shows the data that the statistical results of the paired sample t-test measurement on the therapy of sleep hygiene activities on the sleep quality of the elderly obtained a sig value. (2-tailed) 0.00. This means that the p-value <0.05 means that Ha is accepted and H0 is rejected. This shows that there is a significant influence between sleep hygiene activity therapy on the quality of sleep for the elderly in Posbindu, Pamongan Village, Guntur District, Demak Regency.

DISCUSSION
The Level of Sleep Quality of the Elderly Before Being Given Sleep Hygiene Activity Therapy.

Sleep quality is a person's satisfaction with his sleep so that a person does not show feelings of tiredness, easily restless, lethargic, or apathetic, there is a black color around the eyes, has eye bags, headaches, and often yawns or is sleepy (Hidayat, 2006). The sleep cycle can be seen in terms of time spent in bed, sleep depth, and quality. Age-related changes do not affect the amount of sleep in the elderly, but significantly affect the quality of sleep and the amount of rest in the elderly. Poor sleep quality is influenced by several factors, namely: Internal and external factors. Internal factors include physiological and psychological factors such as pain or discomfort, stress, and dementia, while external factors include the environment such as too cold or hot temperatures and environments with too-bright lighting, lifestyle changes, diet, and drugs (Mubarak, 2006).

The results of the pre-test on the level of sleep quality in the elderly showed that data on the level of sleep quality in the elderly for 16 respondents obtained statistical measurements of the majority of respondents with severe sleep disorders, amounting to 16 respondents with a percentage of 93.8%. Elderly with heavy sleep quality is caused by several factors such as age, illness, and physical and psychological changes in the elderly. In addition, it is also influenced by environmental factors such as lack of cleanliness in the bed, lighting that is too bright, or environmental conditions that are too cold or too hot (Maryam, 2015).

This study is by Nilam (2015) that sleep quality is influenced by factors such as age, illness, and depression in the elderly. Increasing age in the elderly will be followed by changes in normal elderly sleep and rest patterns. Changes in the brain resulting from the aging process produce both excitation and inhibition in the nervous system. The cortex of the brain can act as an inhibitor in the wakefulness system and this inhibitory function decreases with age.

The Level of Sleep Quality of the Elderly After Being Given Sleep Hygiene Activity Therapy.

Sleep is a change in the level of consciousness that has changed physiological conditions such as blood pressure, pulse, and respiratory rate decrease when the response to external stimuli decreases (Randal, 2015). Sleep is a state of relaxation or temporary suspension of ongoing activities or work. Sleep
is a regular, repetitive, and easily awakened state of the organism characterized by relative mobility and an increase in the response threshold. Sleep can also be interpreted as a condition in which the body experiences a normal decrease in consciousness and can be awakened by sensory and other stimuli (Rafknowledge, 2014).

Sleep quality is a measure of how easily a person can start falling asleep and stay asleep (Symusiak, 2014). The quality of a person’s sleep can be explained by the length of time he sleeps and the discomfort he feels while sleeping or when he wakes up. The need for adequate sleep depends not only on the number of hours of sleep but also on the quality of sleep. The results of the post-test on the level of sleep quality in the elderly showed that data on the level of sleep quality in the elderly for 16 respondents obtained statistical measurements of the majority of respondents with mild sleep disorders, amounting to 14 respondents with a percentage of 87.5%. There is an increase in the quality of sleep in the elderly from before the sleep hygiene activity therapy and after being given sleep hygiene activity therapy. Sleep quality is influenced by several factors, including physiological factors (diseases suffered), psychological factors (depression, anxiety, etc.) environment (rooms that are too cold, hot, noisy, and too bright lighting), and lifestyles such as smoking, drinking alcohol, and so forth.

These results are in accordance with (Angelia, 2018) that the quality of sleep in the elderly is influenced by illness, anxiety, and comfortable environmental conditions. The main causes of client sleep disturbances at a high level of disturbance are pain and cough. In addition, environmental conditions that interfere with the client’s sleep such as noise, hot or cold room temperature, uncomfortable bed, and too bright lights.

**Effect of Sleep Hygiene Activity Therapy on Sleep Quality in the Elderly.**

Increasing age in the elderly also causes various health problems, one of which is the problem of sleep quality in the elderly. As a result, it has a bad effect on physical, and cognitive abilities and quality of life in the elderly. Handling sleep disorders can be done in two ways, namely pharmacologically and non-pharmacologically, in reviewing existing research journals, respondents are asked not to take sleeping pills or drugs that can make drowsiness (Stanley, 2006). In addition to using pharmacology in overcoming sleep problems, there are also non-pharmacological methods, one of which is sleep hygiene activity therapy. Sleep hygiene activity therapy is a non-pharmacological therapy with clean sleep patterns. This means that practices that can be used to build healthy sleep habits can improve sleep quality and proper bedtime. Sleep hygiene or sleep hygiene can also be interpreted as a technique to train behavior and the environment designed to improve sleep quality (Notoadmojo, 2015).

The statistical results of the paired sample t-test measurement on the therapy of sleep hygiene activities on the sleep quality of the elderly obtained a sig value. (2-tailed) 0.000. This means that there is a significant effect between sleep hygiene activity therapy on sleep quality. Sleep hygiene is the identification and modification of behavior that can affect sleep quality. Sleep hygiene involves attitude and environmental factors. Sleep hygiene can be seen in terms of behavior, environment, diet, and things that can induce sleep. The application of good sleep hygiene will help get quality sleep. Some good sleep hygiene behaviors include having regular sleep and waking schedule, allowing the mind to calm down and relax before going to bed, going to bed only when sleepy, and not napping for more than 30 minutes (Leeuwen, 2013). Sleep hygiene in terms of the environment can make a person sleep comfortably such as lighting that is not too bright or dark, room temperature that is not too hot or cold, there is no noise or noise, and keeping the room clean. Furthermore, in terms of diet sleep hygiene, various dietary patterns can affect a person’s sleep such as caffeine consumption 4 hours
before bedtime, drinking alcohol, and smoking. In terms of things that can induce sleep, sleep hygiene, various things can be used as habits to induce sleep such as getting up and sleeping on a regular schedule, limiting yourself to being in bed except for sleeping, and doing relaxation before bed to maintain comfortable sleeping conditions. (Potter, 2005).

CONCLUSION

The results showed that before sleep hygiene therapy the mean value of severe sleep disturbance was 15.69 in 93.8% of respondents and after sleep hygiene therapy the mean value was 10.00 (mild sleep disturbance) in 87.5% of respondents. The p-value is 0.000, which means that there is an influence of sleep hygiene activity therapy on the sleep quality of the elderly.

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