



Effect of Sleep Hygiene Therapy on Sleep Quality in Premenopausal Women At Sememi Center

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ABSTRACT

During premenopause, decreasing estrogen levels cause various physical and psychological changes, including insomnia which affects sleep quality. This research examines the effect of sleep hygiene therapy on sleep quality in premenopausal women at the Sememi Surabaya Community Health Center. The method used is quasi-experimental research with a One Group Pretest-Posttest design. The research population consisted of 90 premenopausal mothers, and samples were taken using purposive sampling of 48 respondents. The independent variable is sleep hygiene therapy, while the dependent variable is sleep quality. Data was collected using a questionnaire and analyzed using the Wilcoxon Signed Rank Test. The results showed an increase in sleep quality after sleep hygiene therapy, with a p value of 0.004, which is smaller than α 0.05. In conclusion, sleep hygiene therapy has a positive influence on sleep quality in premenopausal women. It is recommended that premenopausal mothers utilize this therapy to improve the quality of their sleep.

Keywords: Premenopausal Mothers, Sleep Quality, Sleep Hygiene Therapy

INTRODUCTION

Throughout their lives, humans will experience various changes until aging, as well as women. Women will experience physiological changes starting from the reproductive period to the climacteric period or also called premenopause. The word menopause comes from the Greek, namely from the word "men" which means month, and the word "peuseis" which means temporary cessation. Linguistically, a more appropriate word is menocease which means the cessation of menstruation. From a medical perspective, this menopause is not usually known immediately, but usually it will be known from the productive period to the non-productive period which causes a lack of estrogen and progesterone hormones (Sebtalesty & Mathar, 2019).

Premenopause is a natural event that every woman must face, premenopause, occurs in the fertile period before menopause, namely the period from menarche to menopause but is often accompanied by various physical and psychological symptoms that can affect their quality of life. (Ompusunggu et al., 2019)

According to WHO data in 2025, the number of menopausal women in Asia will increase from 107 million to 373 million. The Indonesian Ministry of Health estimates that the population of Indonesia in 2020 will reach 262.6 million with the number of women living in menopause age around

30.3 million with an average age of 49 years who experience menopause.

The Population and Civil Registry Service of the Republic of Indonesia noted that around 7.4% of the total population in 2025 experienced menopause. From this data, the age range is around 48 years (Lubis & Amalia, 2020). From the statistical data center in East Java, the population aged >45 years has entered menopause, this happened in 2020 and occurred in 4,073,370 people. Meanwhile, in Surabaya itself, it occurred in the range of 279,613 people in 2020 (Isi, 2018)

Based on a preliminary study conducted in the area around the Sememi Health Center, 24 out of 32 premenopausal women said they had difficulty sleeping at night. So it is known that therapy is needed to improve sleep quality in premenopausal women in the Sememi Health Center area. Based on this, researchers are interested in studying the effect of sleep hygiene therapy on sleep quality in premenopausal women in the Sememi Surabaya Health Center area.

During premenopause, certain changes occur due to decreased estrogen levels which can cause mild to severe disorders. In premenopausal women, there are physical and psychological changes. These changes that often occur during premenopause cause complaints such as decreased libido, joint pain, depression, fatigue, lack of enthusiasm, insomnia or difficulty sleeping. Insomnia is a sleep disorder in which the individual has

difficulty starting or maintaining sleep accompanied by symptoms such as irritability or fatigue. Some things related to insomnia apart from hormonal changes are depression and metabolic syndrome. Older adults/elderly sleep needs around 4-6 hours/day, around 20-25% REM (Rapid Eye Movement) sleep. The incidence of poor sleep quality in women is 57.8%. Stress is one of the causes that can make a person's sleep poor quality. Another cause is addiction to using cellphones. According to the theory put forward by Potter & Perry (2009) in Wibowo (2020), the factors that affect sleep quality are 1) emotional stress, 2) gender, 3) physical illness, 4) medication, 5) lifestyle, 6) age, 7) environment, 8) activity and 9) fatigue, and 10) food intake. Emotional stress is the most dominant factor affecting sleep quality. Poor sleep quality can increase the risk of diseases such as endocrine disorders, obesity, stroke, coronary heart disease, and the risk of fractures due to decreased bone mineral density. Lack of sleep in the elderly can affect physical, cognitive abilities and quality of life. Elderly people who experience sleep disorders will increase the amount of sleep during the day, attention and memory disorders, depression tends to decrease at night, and low quality of life (Wahyu & Purwitasari, 2023). The psychological impact caused by not fulfilling the quality of sleep is an increase

in the stress hormone cortisol which causes decreased immunological function and emotional feelings. (Hidayat, 2021)

Overcoming sleep disorders requires a management method with a pharmacological and non-pharmacological approach. Pharmacological therapy such as the use of sedatives, hypnotics, antihistamines, and antidepressants can cause side effects that are not good for the health of the elderly. In addition, there are non-pharmacological actions that do not have adverse effects on the health of the elderly. (Wahyu & Purwitasari, 2023)

The right non-pharmacological therapy to overcome sleep disorders is sleep hygiene behavioral therapy. Sleep hygiene is a modification of behavior and environment that can affect and improve sleep quality. Sleep Hygiene Behavior is a practice or habit that can optimize good sleep so that you can do maximum activities during the day. The purpose of maintaining sleep hygiene is to increase the REM period and maintain sufficient REM duration. Improving sleep hygiene in the elderly is a simple but effective way to improve sleep quality.

Improving sleep hygiene in the elderly is a simple way to improve sleep quality. Good sleep hygiene behavior can prevent the development of sleep disorders and problems and help someone have good sleep quality. This study aims to determine the effect of sleep hygiene therapy on sleep quality in

premenopausal women in the Sememi Surabaya Health Center area.

METHOD

This study used a quasi-experimental design with a one group pretest-posttest design. This study has been conducted since August - May 2024 located at the Sememi Health Center, Surabaya. The population of this study were premenopausal women in the Sememi Health Center area, Surabaya, totaling 90 and the number of samples was 48 premenopausal women selected using Purposive Sampling according to the inclusion and exclusion criteria using the Slovin formula.

The independent variable in the study was sleep hygiene therapy and the dependent variable was the sleep quality of premenopausal women. Data collection using a questionnaire. Calculations were

carried out using SPSS For Windows software using data analysis, namely the normality test, Wilcoxon Signed Rank Test and Mann Whitney U Test.

Sleep hygiene therapy method provided through health education. And sleep quality itself is a measure of how easy it is for someone to start sleeping and feel refreshed after waking up. Sleep hygiene therapy methods include: 1. Sleep and wake schedule, 2. Bedtime habits, 3. Avoid sleeping during the day, 4. Exercise at least once a day for 15-30 minutes, 5. Room evaluation, 6. Evaluate a comfortable bed, 7. Avoid using alcohol, cigarettes, caffeine, 8. Do activities such as reading books/newspapers, 9. Sunbathe in the morning for at least 15-30 minutes. And sleep quality is measured by the Pittsburgh Sleep Quality Index (PSQI) questionnaire which is carried out at the beginning of the meeting and two weeks later.

RESULTS AND DISCUSSION

RESULTS

Characteristics of Respondents

Respondents in this study were premenopausal women in the Sememi Surabaya Health Center work area, the research data that has been obtained are as follows:

Tabel 1 Requency Distribution of Respondent Characteristics

Characteristics	Category	Frequency (n)	Percentage (%)
Age	40-43	17	35%
	44-47	22	46%
	48-50	9	19%
	Total	48	100%
Education	Primary	0	0%
	Middle	48	0%
	High	0	0%
	Total	48	100%
Occupation	Working	48	100%
	Not Working	0	0%
	Working		
	Total	48	100%

Based on table 1 it can be seen that most respondents are aged 44-47 years as much as 46%. All respondents have a high school education and have jobs (100%).

Sleep Quality Before Intervention

Table 2 Frequency Distribution of Sleep Quality Before Intervention

Sleep quality	Pretest	
	N	%
Very good	5	10.4
Less	21	43.8
Poor	22	45.8
Total	48	100

Based on these results, it can be seen that the quality of sleep before the intervention was given, almost half of the respondents experienced poor sleep quality, namely 22 people (45.8%).

Sleep Quality After Intervention

Table 3 Frequency Distribution of Sleep Quality After Intervention

Sleep quality	Posttest	
	N	%
Very good	19	39.6
Less	14	29.2
Poor	15	31.3
Total	48	100

Based on these results, it can be seen that the quality of sleep after the intervention was given, almost half of the respondents experienced very good sleep quality, namely 19 people (39.6%).

The Effect of Sleep Hygiene Therapy on Sleep Quality in Premenopausal Women

Table 4.4 The Effect of Sleep Hygiene on Sleep Quality

Sleep quality	Pretest		Posttest	
	N	%	N	%
Very good	5	10.4	19	39.6
Less	21	43.8	14	29.2
Poor	22	45.8	15	31.3
p-value	0.004			

Based on the test results above, it is known that the analysis results using the Wilcoxon Test obtained a p-value of $0.004 < \alpha 0.05$. It can be concluded that H1 is accepted and H0 is rejected, so there is an effect between sleep hygiene therapy on sleep quality in respondents.

DISCUSSION

Based on the results of the research and data analysis that has been done, it was found that there was an increase in the value of good maternal sleep quality from 10.4% to 39.6%, while poor sleep quality in premenopausal mothers decreased from 45.8% to 31.3%. The results of statistical tests using Wilcoxon showed that there was an effect between sleep hygiene therapy and sleep quality with a p-value <0.05. In line with research by Wibowo (5(Damanik et al., 2022), that after being given sleep hygiene, the quality of sleep changes. Most of which means there is an influence between sleep hygiene therapy and sleep quality.

This is in accordance with research by Rahmawati ((Damanik et al., 2022), that one way to improve sleep quality is to maintain sleep hygiene. Sleep hygiene is a list of activities that can be done to facilitate the initiation and maintenance of sleep. Components included in the list include creating a comfortable environment for sleeping, relaxing, eating healthy food at night, exercising, and establishing a routine before going to bed ((Damanik et al., 2022). Employee workload causes low levels of sleep hygiene which leads to decreased sleep quality and affects work productivity. According to Harahap (2022), practicing sleep hygiene can improve sleep quality because sleep hygiene is one way to improve

sleep quality and reduce things that interfere with sleep.

One method to improve sleep quality is sleep hygiene. Sleep hygiene is a collection of activities that can be carried out to facilitate the onset of sleep and maintain it. The components in the list consist of creating a comfortable environment for sleep, relaxation, eating healthy food at night, exercising, and setting a bedtime routine. The components in this list, bring about the natural tendency to sleep to increase and the things that disturb sleep to decrease (Patrisia et al, 2020).

Sleep hygiene affects the process of melatonin formation and serotonin-acetylcholine levels in the blood. Melatonin is a hormone produced by glands in the brain. Hormone production will be more active at night because its function is to help the body fall asleep. While during the day, the body only produces this hormone in smaller amounts so that the body remains awake and can be active. Factors that trigger disruption of melatonin hormone performance, including body condition, electromagnetic radiation, to light emitted from night lights (Harahap et al., 2022).

The process of melatonin formation and good serotonin-acetylcholine levels will affect sleep quality. Sleep and wakefulness are regulated by the brainstem, thalamus and

various hormones produced by the hypothalamus. Serotonin is a neurotransmitter responsible for the transfer of nerve impulses to the brain that plays a role in inducing drowsiness, as well as a modulator of brain work capacity. In the body, serotonin is converted into melatonin. If this melatonin hormone decreases, it will disrupt the performance of melatonin in the body which can make it difficult for someone to sleep (Harahap et al., 2022).

Sleep hygiene therapy is a list of activities that can be done to facilitate the onset and maintenance of sleep. The components of the list consist of creating a comfortable environment for sleeping, relaxing, eating healthy foods at night, exercising, and establishing a bedtime routine (Harahap et al., 2022). So how to regulate sleep habits (sleep hygiene) is defined as behaviors that promote sleep quality, including a proper sleep schedule, healthy sleep habits, a sleep-supportive environment, and physiological practices that help you fall asleep. The blue light emitted by gadget screens can reduce the hormone melatonin in the body, so that the body stays awake. A comfortable sleeping environment will improve sleep quality, such as dim light, temperatures that are not too hot or cold, and minimizing noise. Going to bed and waking up at the same time and getting enough sleep will train the brain to form a consistent sleep

rhythm. Limiting time in bed can improve the quality of REM sleep so that a person will be fresher and healthier when they wake up in the morning. Routine activities in the morning can strengthen the circadian rhythm and cause regular sleep onset (Harahap et al., 2022). Based on the description above, researchers argue that sleep hygiene therapy can improve sleep quality in menopausal women, so that when premenopausal women maintain their sleep patterns properly, there is a change or improvement from the previous sleep quality which had poor sleep quality results.

CONCLUSION

Based on the results of the research that has been conducted and the discussion that has been described regarding "The Effect of Sleep Hygiene Therapy on Sleep Quality in Premenopausal Women in the Sememi Surabaya Health Center Area", it was concluded that almost half of the respondents before being given sleep hygiene intervention had poor sleep quality, almost half of the respondents after the sleep hygiene intervention had good sleep quality, and there was an influence between sleep hygiene therapy on sleep quality in premenopausal women in the Sememi Surabaya Health Center Area. Suggestions for further research are that this is expected to be able to conduct further research to

determine other variables that affect sleep quality in premenopausal women. Innovation can also be carried out on the health education media used.

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