

THE EFFECT OF YOGA EXERCISES ON IMPROVING THE QUALITY OF SLEEP IN PREGNANT WOMEN IN THE II AND III TRIMESTER AT PMB FITRI FATMA GONDANGREJO

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ABSTRACT

In the second and third trimesters of pregnancy, complex complaints begin to occur. The complaint that usually arises is difficulty sleeping. Yoga exercise is a solution to overcome this discomfort. Based on a preliminary study conducted at PMB Fitri Fatma Gondangrejo Karanganyar on October 16 2022, the results obtained from 10 pregnant women showed that 70% of pregnant women experienced sleep disturbances at night because they did a lot of activities during the day and 30% of pregnant women did not experience sleep disturbances. The aim of this study was to analyze the effect of yoga exercise on improving sleep quality in second and third trimester pregnant women at PMB Fitri Fatma Gondangrejo. This type of research uses the Pre Experimental Design method with one group pretest-posttest. The population in this study were all pregnant women in the second and second trimesters of pregnancy and a sample of 30 pregnant women using the accidental sampling technique. The dependent variable is the quality of sleep improvement for pregnant women, while the independent variable is the influence of yoga exercises. The instruments of this research are PSQI and yoga exercise TOOLS. Data analysis used the Willcoxon statistical test ($\alpha=0.050$) and the normality test with *shapiro-wilk*. The results of this study show that before being given intervention in the form of yoga exercise therapy, the majority had poor sleep quality, namely 28 respondents (96.0%) and after being given intervention in the form of yoga exercise therapy, the majority of respondents had good sleep quality, namely 26 respondents (90.6%).), the Willcoxon Signed Ranks statistical test obtained a significant value of $0.000 < 0.05$. The conclusion from the results of this study shows that there is an influence of yoga exercise on improving the sleep quality of pregnant women at PMB Fitri Fatma Gondangrejo.

Keywords:

Improving the Sleep Quality of Pregnant Women, Yoga Exercises

1. INTRODUCTION

Pregnancy is fertilization or union of spermatozoa and ovum and is followed by nidation or implantation (Sarwono, 2017). During the growth and development of pregnancy from month to month, a pregnant woman's ability is needed to adapt to the changes that occur physically and mentally. This change occurs due to an imbalance of the hormone progesterone and the hormone estrogen, namely the female hormones that have been in the mother's body since the pregnancy process (Mandriwati, 2018).

During pregnancy, pregnant women experience physical and psychological changes that can cause discomfort, especially in the second and third trimesters, such as dyspnea, insomnia, gingivitis and epulsion, frequent urination, pressure and discomfort in the perineum, back pain, constipation, varicose veins, fatigue, contractions. Braxton hicks, leg cramps, ankle edema (non-pitting) and mood changes and increased anxiety (Perry, 2017).

Pregnant women will also experience sleep disorders which will affect the poor quality of pregnant women's sleep due to increasing complaints and anxiety. In general, pregnant women experience difficulty sleeping, the causes are hormonal changes, stress, excessive fetal movement, uncomfortable sleeping positions, frequent urination and pain in the waist due to stretching of the bones, especially in the waist area, which corresponds to the increasing size of the pregnancy. (Siagallan, 2010). The level of anxiety affects the quality of sleep of pregnant women. The lower the level of anxiety experienced by pregnant women, the better the quality of their sleep.

The prevalence of sleep disorders in Indonesia among pregnant women is quite high, namely around 64%. 65% of pregnant women who experience sleep apnea are forced to undergo caesarean section and around 42% experience preeclampsia (Resi, 2015). According to Robin (2015), a decrease in sleep quality is caused by several things, including irregular sleep patterns, lack of exercise and so on. Yoga exercises work to calm the sympathetic nerves at the same time as yoga stimulates the parasympathetic nervous system which makes it easier for the body to rest and sleep, so that the Nucleus Supra Chiasmatic (NSC) which previously did not work normally because the sympathetic and parasympathetic nerves did not work can work again normally.

Pregnant women are advised to do light exercise during pregnancy so that their womb is healthy and reduces problems that usually arise during pregnancy such as edema, hypertension, low back pain, shortness of breath, varicose veins, spasms, insomnia and other problems. Yoga exercise is one of the light sports choices that can be taken by pregnant women. As a form of relaxation before giving birth and reducing anxiety, yoga can also help pregnant women improve sleep quality because pregnant women often find it difficult to sleep at night or during the day due to changes in body shape experienced by pregnant women (Ministry of Health, 2017).

2. METHOD

This type of research uses quantitative research using the Pre Experimental Design method. This method is a research method used to look for the influence of something being treated.

The research design used in this study is a one group pre test post test design which is an experimental study where a comparison group (control) is not used, but previously the group had been subjected to pre test observations so that the researcher could compare changes after the experiment was carried out.

The population in this study were all pregnant women in the second and first trimesters of pregnancy who were willing to be respondents for sleep disorders not because they suffered from certain diseases and sleep disorders not because they consumed certain drugs that could affect their sleep at PMB Fitri Fatma Gondangrejo, with a total of 30 pregnant women in May-June.

The sampling technique in this research is the accidental sampling technique, namely sampling based on spontaneity factors. The sample in this study was 30 pregnant women in the second and third trimesters. The method used in collecting data for this research was an observation sheet.

After all the data has been collected, the next step is data processing. Data processing according to (Nototmodjo, 2012) is data checking (editing), coding, data entry, tabulating.

After the data is collected, the next step is data analysis. In this research, data analysis uses a computerized system which consists of two types: univariate analysis and bivariate analysis.

3. RESEARCH RESULT

3.1 Univariate Analysis

3.1.1 Respondent Characteristics

Table 1. Respondent Characteristics

Respondent Characteristics		Frequency (n)	Percentage (%)
Age	19-30 Years	25	75.0
	31-38 Years	5	25.0
Religion	Islam	27	76.0
	Christian	3	24.0
	Catholic	0	0
	Hindu	0	0
Education	Buddha	0	0
	elementary school	0	0
	JUNIOR HIGH SCHOOL	16	53.1
Work	SENIOR HIGH SCHOOL	9	34.4
	College	5	12.5
	Housewife	25	90.1
	Entrepreneur	2	3.1
	Private	3	6.3
Total		30	100%

The results of table 1 above show that the age of most of the respondents was between 19-30 years as many as 25 respondents (75.0%) and 31-38 years as many as 5 respondents (25.0%), the religion adhered to by the majority of respondents was Islam. 27 respondents (76.0%), the majority were Christians, 3 respondents (24.0%) and 16 respondents (53.1%) had graduated from junior high school, 9 respondents (53.1%), high school, 9 respondents (34.4%), 5 tertiary institutions. respondents (12.5%). And the majority of respondents work as housewives, 25 respondents (90.1%), private sector, 3 respondents (6.3%), self-employed, 2 respondents (3.1%).

3.1.2 Data on Sleep Quality Distribution before Yoga Exercise

Table2. Data on distribution of sleep quality before yoga exercise

Sleep quality	Frequency (n)	Percentage (%)
Good	2	4.0
Bad	28	96.0
Total	30	100.0

Based on table 2 above, it shows that the sleep quality of respondents before being given intervention in the form of yoga exercise therapy, the majority had poor sleep quality, namely 28 respondents (96.0%) and 2 respondents (4.0%) had good sleep quality.

3.1.3 Data on Sleep Quality Distribution after Yoga Exercise

Table3. Distribution data on sleep quality after yoga exercise

Sleep quality	Frequency (n)	Percentage (%)
Good	26	90.6
Bad	4	9.4
Total	30	100.0

Based on the table above, it shows that the sleep quality of respondents after being given intervention in the form of yoga exercise therapy, the majority of respondents had good sleep quality, namely 26 respondents (90.6%) and had poor sleep quality, namely 4 respondents (9.4%).

3.2 Bivariate Analysis

3.2.1 Normality test

Table4. Normality Test Results

Variable		P-Value	Information
Sleep quality	Pre	0.010	Abnormal
	Post	0.001	Abnormal

Based on the table of normality test results on sleep quality data before and after the intervention in the form of yoga exercises above, it shows that the p-value is <0.05 , so the data is not normally distributed so the statistical test used is the Wilcoxon test.

3.2.2 Analysis of the Effect of Yoga Exercise on Sleep Quality in Pregnant Women in the Second and Third Trimesters

Table 5. Results of analysis of the influence of yoga exercise on sleep quality in pregnant women in the second and third trimesters

Variable	P-Value
Sleep quality before and after yoga exercises	0,000

The results of the analysis using the Wilcoxon statistical test above show a p-value of 0.000 so that the p-value is < 0.05 which indicates that H_0 is rejected and H_a is accepted. This explains that there is an influence of yoga exercise on improving the quality of sleep in pregnant women in the second and third trimesters at PMB. Fitri Fatma Gondangrejo.

4. DISCUSSION

4.1 Respondent Characteristics

The results of table 1 show that the majority of respondents were between 19-30 years old, 25 (75.0%) of the respondents, this result is in accordance with research by Safriani, I., Nufus, H., & Nurmayanti, I. (2017) that of the 32 respondents, the majority of respondents were aged 18-30 years, 24 were pregnant women (75%).

The results of table 1 show that the majority of respondents' religion is Islam, with 27 respondents (76.0%). This is in accordance with research by Safriani, I., Nufus, H., & Nurmayanti, I. (2017) showing that of the 32 respondents, all respondents were Muslim, 32 were pregnant women (100%).

The results of table 1 show that 16 respondents (53.1%) had junior high school graduates. These results are in line with research by Safriani, I., Nufus, H., & Nurmayanti, I. (2017) that of the 32 respondents, the majority of respondents had junior high school education, 17 of them were pregnant women (53.1%).

The results of table 1 show that the majority of respondents work as housewives, 25 (90.1%) respondents. These results are in accordance with research by Safriani, I., Nufus, H., & Nurmayanti, I. (2017) that out of 32 respondents Almost all respondents work as housewives, 29 pregnant women (90.6%).

4.2 Effect of Improving Sleep Quality before Yoga Exercise

Based on table 2, it shows that the sleep quality of respondents before being given intervention in the form of yoga exercise therapy, the majority had poor sleep quality, namely 28 respondents (96.0%). These results are in line with research by Safriani, I., Nufus, H., & Nurmayanti, I. (2017) showing that out of 32 respondents, almost all respondents had poor sleep quality, namely 31 pregnant women (96.9%).

This is in accordance with the opinion of Uliyah (2006) in general, feeling sleepy during the day (daytime dysfunctions) occurs due to fatigue during the day either due to activities or a person's physical condition. Pregnancy causes changes in a woman's body, especially hormonal changes that cause fatigue throughout the

day. Pregnant women will experience disturbed sleep patterns due to the body's response to pregnancy, such as not getting enough sleep, not sleeping soundly, and discomfort during sleep which causes pregnant women to feel sleepy in the afternoon/evening.

4.3 Effect of Improving Sleep Quality after Yoga Exercise

Based on the table above, it shows that the sleep quality of respondents after being given intervention in the form of yoga exercise therapy, the majority of respondents had good sleep quality, namely 26 respondents (90.6%). These results are in accordance with research by Safriani, I., Nufus, H., & Nurmayanti, I. (2017) which shows that of the 32 respondents, almost all respondents had good sleep quality, namely 29 pregnant women (90.6%), while respondents who had not experienced changes or had poor sleep quality in 3 pregnant women (9.4%). The increase in sleep quality that is obtained after implementing yoga exercises, this is proven by the 7 parameters of sleep quality, the smaller the value for each parameter.

According to researchers, the increase in sleep quality for pregnant women in the second and third trimesters is caused by an increase in feelings of comfort, calm and peace after doing yoga exercises, because when the body carries out guided movements and meditation, the erythrocytes that carry oxygen from the blood to the brain become more fluid so that the body feels fresh, calm, easy to concentrate and comfortable when resting.

4.4 The Effect of Yoga Exercise on Sleep Quality in Pregnant Women in the Second and Third Trimesters

The results of the analysis using the Wilcoxon statistical test above show a p-value of 0.000 so that the p-value is < 0.05 which indicates that H_0 is rejected and H_a is accepted. This explains that there is an influence of yoga exercise on improving the sleep quality of pregnant women in the second and third trimesters at PMB Fitri. Fatma Gondangrejo. The results of this research are in line with research by Safriani, I., Nufus, H., & Nurmayanti, I. (2017) that there is an influence of yoga exercise on the sleep quality of pregnant women in the third trimester in the Plandaan Jombang Health Center Work Area with a p-value of 0.000.

Entering the third trimester of pregnancy, pregnant women begin to experience many complaints. Apart from the stress of thinking about what it will be like when delivery arrives, physical and psychological complaints begin to be felt in real terms. Most common complaints include difficulty getting out of bed, stomach getting heavier, back pain, swollen legs, limited movement and so on. This is normal in the third trimester of pregnancy. In preparation for childbirth, several things need to be done, including regular check-ups with the doctor to monitor the development of the baby in the womb. Pregnant women are also encouraged to move more and do pregnancy yoga exercises. According to Eni (2001), physiological and psychological changes are needed to protect the normal function of pregnant women in providing for the growth and development of the fetus. These changes cause specific symptoms according to the stages of

pregnancy, which consist of trimesters. The period that requires special attention is during the third trimester because this is a time of increasing fetal growth and development. The drastic increase in body weight causes pregnant women to feel tired quickly, have difficulty sleeping, have shortness of breath, legs and arms.

According to researchers, the sleep quality of pregnant women increases have bad sleep quality, good sleep quality due to yoga exercises which bring positive energy to unite every movement, so that the body feels more relaxed, fresh and feels calm in the soul. Eliminates tension and positive affirmations are formed in the soul of the pregnant mother so that the pregnant mother does not feel anxiety, difficulty sleeping and tension in the mother's mind. Pregnant who does yoga.

5. CONCLUSION

Based on the results of research on the effect of yoga exercise on improving the sleep quality of pregnant women in the second and third trimesters at PMB Fitri Fatma Gondangrejo, the following conclusions were obtained:

- 5.1 Characteristics of respondents based on the gestational age of the respondents, most of the respondents were aged between 19-30 weeks, 25 respondents, the majority of respondents' religion was Islam, 27 respondents (76.0%) and 16 respondents (53.1%) had graduated from junior high school. . And most of the respondents work as housewives, 25 respondents
- 5.2 The majority of respondents' sleep quality before being given intervention in the form of yoga exercise therapy had poor sleep quality, namely 28 respondents (96.0%).
- 5.3 Respondents' sleep quality after being given intervention in the form of yoga exercise therapy, the majority of respondents had good sleep quality, namely 26 respondents (90.6%).
- 5.4 There was an effect of providing yoga exercises on improving the sleep quality of pregnant women in the second and third trimesters at PMB Fitri Fatma Gondangrejo as many as 26 respondents (90.6%) P-Value 0.000.

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