

The Relationship Between Pregnancy Exercise And Quality Of Sleep For Pregnant Women In Trimester III At The Juliana Dalimunthe Clinic, Percut Sei Tuan Sub-District, Deli Serdang District, 2022

¹Eka Sylviana Siregar, ²Maulina Mawaddah
^{1,2} STIKes Sehat Medan, North Sumatra, Indonesia

ARTICLE INFO

Keywords:

Pregnancy exercise,
Sleep quality,
Pregnant women

Email :
ekasylviana@gmail.com

ABSTRACT

Dealing with the problem of sleep disturbances in pregnant women, we can provide several methods to stabilize the quality of good sleep, such as determining a good and comfortable position during sleep, basic relaxation exercises, one of which is pregnancy exercise. This study aims to determine the relationship between Pregnancy Exercise and Sleep Quality for Pregnant Women in the Third Trimester. This type of research is a descriptive correlation research that aims to reveal the correlative relationship between variables using a cross-sectional approach. The population of this study were all third trimester pregnant women totaling 25 respondents. The sampling technique uses total sampling. The results of the research on pregnancy gymnastics conducted by third trimester pregnant women at the Juliana Dalimunthe Clinic were mostly performed poorly by 14 respondents (56.0%). The majority of sleep quality in third trimester pregnant women at the Juliana Dalimunthe Clinic is still poor as many as 15 respondents (60.0%). There is a significant relationship between pregnancy exercise and the sleep quality of third trimester pregnant women at the Juliana Dalimunthe Clinic, with a p value = 0.000 (p < 0.05). The conclusion of this study is that the better the exercise during pregnancy, the better the sleep quality of third trimester pregnant women.

Copyright © 2022 Jurnal Eduhealth.

All rights reserved.

is Licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License \(CC BY-NC 4.0\)](https://creativecommons.org/licenses/by-nc/4.0/)

1. INTRODUCTION

Pregnancy is an event that begins with conception (fertilization) and ends with the onset of labour. Pregnancy is a change in the context of continuing the naturally occurring offspring, producing a fetus that grows in the mother's womb, and then the growth rate and size of the fetus for gestational age can be explained, at each pregnancy examination (Muhimah 2021).

Pregnancy exercise is part of antenatal care at certain health service centers, such as hospitals, health centers, clinics, or other health service centers. Pregnancy exercise is useful for maintaining and optimizing physical balance, maintaining pregnancy health, eliminating complaints that occur due to changes due to the pregnancy process, and facilitating the delivery process.

According to Indivara, in Marwiyah and Sufi (2018) it is stated that sufficient sleep will make pregnant women fitter and healthier so that they can carry out their activities properly, and the fetus they contain will grow healthily. Therefore, pregnant women must try to fulfill their sleep adequacy, which is around 7-8 hours per day.

According to Sinta in Herdian (2019) the quality of sleep is a measure of how easy it is for a person to start sleeping and to maintain sleep. The quality of a person's sleep can be described by the length of time they sleep, and the complaints they feel while sleeping or after waking up.

According to Brayshaw in Marwiyah and Sufi (2018) states that to deal with the problem of sleep disturbance in pregnant women, we can provide several methods to stabilize good sleep quality, such as determining a good and comfortable position during sleep, basic relaxation exercises, one of which is exercise. pregnant.

Pregnancy exercise can have a positive impact on overcoming sleep disorders, but the application of pregnancy exercise is still rarely used, due to the lack of awareness of pregnant women about the importance of pregnancy exercise.

According to the National Sleep Foundation (2017), about 70 million people in America experience sleep problems, where women experience sleep deprivation more often than men and the frequency increases with age. As many as 78% of women in America report sleep disturbances during pregnancy than when not pregnant. Many women also report feeling very tired during pregnancy, especially in the third trimester. Sleep disturbances are experienced by many women in the third trimester of pregnancy, such as lower back pain. At this time pregnant women experience anxiety which causes difficulty sleeping and depression. Difficulty sleeping in pregnant women can be in the form of decreased sleep duration (Vitria, 2020). Based on the Ministry of Health of the Republic of Indonesia in 2018, the number of pregnant women in Indonesia who experience sleep disturbances reaches 64% (Ministry of Health RI, 2018). In line with research conducted by Andari (2018), in Medan it was also shown that 63% of 41 pregnant women had poor sleep quality due to the physiological and psychological changes experienced by mothers during pregnancy.

Based on a survey of third trimester pregnant women that the authors conducted by giving questionnaires to 25 third trimester pregnant women who had poor sleep quality as many as 15 respondents (60.0%) and a minority had good sleep quality as many as 10 respondents (40.0%) .

2. METHOD

This type of research is a descriptive correlation research which is to reveal the correlative relationship between variables using a cross-sectional approach. The population in this study were all pregnant women who did pregnancy exercise from April to July at the Juliana Dalimunthe Clinic, a total of 25 people. The sample of this study used the total sample technique.

3. RESULTS AND DISCUSSION

Research Result

A. Univariate analysis

Data on the distribution of respondents' characteristics were taken from 25 pregnant women who became patients at the Juliana Dalimunthe Clinic in 2022 including age, education, occupation and parity. The full results can be seen in table 4.1 below:

Table 1 Frequency Distribution of Respondent Characteristic Data at the Juliana Dalimunthe Tembung Clinic, Deli Serdang district, in 2022

No	Characteristics of Respondents	Amount	
		Frequency	Percentage (%)
1	Age (years)		
	- <25 years	7	28.0
	- 26-35 years	16	64.0
	- >35 years	2	8.0
	Amount	25	100.0
2	Education		
	- SD	0	0.0
	- Junior High School	9	36.0
	- Senior High School	12	48.0
	- College	4	16.0
	Amount	25	100.0
3	Profession		
	IRT	13	52.0
	Self-employed	10	40.0
	civil servant	2	8.0

	Amount	25	100.0
4	Parity		
	Primipara	10	40.0
	Multipara	15	60.0
	Amount	25	100.0

Based on table 1 above, it is known that the characteristics of respondents based on the age of the majority of respondents aged between 26-35 years were 16 respondents (64.0%), with the education level of the majority of respondents graduating from high school (SMA), namely 12 respondents (40.0 %), based on the occupation of the majority of mothers as housewives (IRT) as many as 13 respondents (52.0%) and judging from the parity, most of them have □2 children (multipara), namely as many as 15 respondents (60.0%).

Table 2 Frequency Distribution of the Benefits of Pregnancy Exercise for Trimester III Mothers at the Juliana Dalimunthe Clinic

No	Pregnancy exercise	Amount	Percentage (%)
1	Well	11	44.0
2	Not enough	14	56.0
	Total	25	100.0

Based on table 2 above, it is known that the majority of pregnancy exercise for third trimester pregnant women at the Juliana Dalimunthe Tembung clinic is not well done by 14 respondents (56.0%) and the minority is well done by 11 respondents (44.0%).

Table 3 Frequency Distribution of Sleep Quality in Trimester III Pregnant Women at the Juliana Dalimunthe Clinic

No	Sleep Quality in Third Trimester Pregnant Women	Amount	Percentage (%)
1	Well	10	40.0
2	Bad	15	60.0
	Total	25	100.0

Based on table 3 above, it is known that the majority of sleep quality in third trimester pregnant women at the Juliana Dalimunthe clinic has poor sleep quality as many as 15 respondents (60.0%) and a minority has good sleep quality as many as 10 respondents (40.0%).

B. Bivariate Analysis

Relationship between Pregnancy Exercise and Sleep Quality for Trimester III Pregnant Women at the Juliana Dalimunthe Clinic. The results of the cross-tabulation analysis of the relationship between pregnancy exercise and the sleep quality of third-trimester pregnant women at the Juliana Dalimunthe Clinic can be seen in table 4.4 below:

Table 4 Cross Tabulation Relationship between Pregnancy Exercise and Sleep Quality for Trimester III Pregnant Women at the Juliana Dalimunthe Clinic Year 2022

No	Pregnancy exercise	Sleep Quality of Pregnant Women				Total	<i>p-values</i>	
		Well		Bad				
		F	%	F	%			f
1	Well	9	36.0	2	8.0	11	44.0	0.000
2	Not enough	1	4.0	13	52.0	14	56.0	
	Total	10	40.0	15	60.0	25	100.0	

Based on table 4, it can be seen that of the 11 pregnant women who had done pregnancy exercise

well the majority had good sleep quality as many as 9 respondents (36.0%) and a minority had poor sleep quality as many as 2 respondents (8.0%). Meanwhile, of the 14 pregnant women who did not do well during pregnancy exercise, the majority had poor sleep quality as many as 13 respondents (52.0%) and a minority had good sleep quality as much as 1 respondent (4.0%).

Statistical test results *chi square* obtained a p value = 0.000 ($p < 0.05$) so that the Alternative Hypothesis (H_a) is accepted, which means that there is a significant relationship between pregnancy exercise and sleep quality of third trimester pregnant women at the Juliana Dalimunthe Clinic.

Discussion

Benefits of Pregnancy Exercise for Trimester III Mothers at the Juliana Dalimunthe Clinic

The research results show that pregnancy exercise for third trimester pregnant women at the Juliana Dalimunthe Tembung clinic was not well performed by the majority of 14 respondents (56.0%) and the minority had been well performed by 11 respondents (44.0%). These results indicate that some third trimester pregnant women are still not good at doing pregnancy exercise.

Given the importance of the benefits of pregnancy exercise as an alternative to reduce pregnant women's complaints which result in decreased sleep quality. The benefits of pregnancy exercise are to improve blood circulation, reduce swelling, improve muscle balance, reduce the risk of gastrointestinal disorders, including constipation, reduce leg spasms or cramps, strengthen abdominal muscles, speed up the healing process after giving birth and improve sleep quality and master breathing techniques and can self-regulate to serenity (Rukiyah, 2014).

The results of Utami's research (2015) which said that pregnant women who have good sleep quality have a regular frequency of pregnancy exercise. This is because pregnancy exercise will have a relaxing effect on pregnant women which can affect the improvement of sleep quality for pregnant women, thus causing pregnant women to have good sleep quality. Pregnancy exercise has benefits, namely increasing circulation and cardiovascular fitness, increasing awareness and control of breathing, increasing awareness of body posture, strengthening specific muscle groups, increasing stamina, reducing fatigue and improving sleep quality, improving psychological well-being, reducing stress and anxiety and increasing social interaction. .

According to Herdiani's research (2019) that pregnant women who do pregnancy exercise well in accordance with the maximum movements and exercises according to what is taught from poor sleep quality experience good sleep quality where at every class meeting pregnant women are given the opportunity to share the complaints they feel during pregnancy so that pregnant women are more open and able to deal with their complaints through suggestions and solutions provided by midwives to these pregnant women.

After doing pregnancy exercise, the mother's complaints can be reduced because pregnancy exercise can maintain and strengthen the flexibility of the abdominal and pelvic floor muscles. Reduced complaints in pregnant women can extend the sleep time of pregnant women. In pregnancy exercise there are also movements that teach pregnant women to be able to sleep in a comfortable position. If a pregnant woman wakes up to go to the bathroom, when she wants to go back to sleep, she already knows how to sleep or a comfortable sleeping position so that it's easier for her to fall asleep right away. When pregnancy exercise is done regularly, there is an increase in the duration of sleep for pregnant women. Doing pregnancy exercise can make pregnant women relax so that their sleep time becomes longer. (Herdiani, 2019)

According to researchers, the benefits of pregnancy exercise are very good in improving the sleep quality of third trimester pregnant women. Pregnancy exercise also has movements that teach pregnant women to be able to sleep in a comfortable position. Various studies state that when regular pregnancy exercise is carried out, there is an increase in the duration of pregnant women's sleep. Doing pregnancy exercise can make pregnant women relax so that their sleep time becomes longer. Therefore pregnancy exercise is an alternative to reduce complaints that result in decreased sleep duration for pregnant women.

B. Sleep Quality in Third Trimester Pregnant Women at the Juliana Dalimunthe Clinic

The results showed that the majority of sleep quality in third trimester pregnant women at the Juliana Dalimunthe clinic had poor sleep quality as many as 15 respondents (60.0%) and a minority had good sleep quality as many as 10 respondents (40.0%). From these results it is known that the majority of sleep quality in third trimester pregnant women at the Juliana Dalimunthe clinic has poor sleep quality.

Based on the results of DS Sihombing's research (2020), pregnant women respondents said they had difficulty sleeping due to disturbances of comfort felt during the third trimester. The majority of discomfort is caused by frequent abdominal contractions/baby movements (35.3%) of which there are 77.7% who have poor sleep quality. This is supported by Sukorini's research (2017) which states that the factors that affect poor sleep quality include physical comfort disturbances which are body sensations during pregnancy along with increasing gestational age and the results of his research found 3 pregnant women with severe comfort disorders and all of them (100%) had poor sleep quality.

In addition, the results of the study showed that respondents with primigravida status who experienced anxiety and worry disorders also contributed to poor sleep quality. In line with Wardani's research (2018) found that 46.6% of primigravida respondents with moderate anxiety, 78.5% experienced poor sleep quality. The theory from Ardilah et al (2019) says one of the factors that causes poor sleep quality is anxiety. This anxiety arises due to excessive worry when approaching labor related to how the birth will be imagined because there is no experience, causing difficulty getting to sleep and frequent awakenings at night.

The results of Sukorini's research (2017) in Surabaya show that poor sleep quality that occurs in pregnant women is influenced by other factors such as physical comfort disturbances and fears of pregnant women before delivery. The risk of experiencing poor sleep quality increases in pregnant women who have severe physical discomfort. In addition, pregnant women who have an illness increase the risk of experiencing poor sleep quality. Pregnant women who have a disease are at greater risk of having poor sleep quality than pregnant women who do not have the disease.

According to research by Wu et al (2014) suggests that the impact of poor sleep quality, inadequate sleep duration (sleep duration), and increased sleep disturbance/discomfort in the third trimester can pose a risk of depression in pregnant women. The results of her research explored the correlation between third trimester sleep quality and postpartum depressive symptoms, and the results indicated that postpartum depressive symptom scores increased with increasing third trimester sleep quality scores.

Based on Alita's research (2020) shows an effective way to improve the sleep quality of third trimester pregnant women, namely pregnancy exercise. Pregnancy exercise can increase the feeling of comfort sleeping, where the results obtained by respondents who do exercise reach 70% and the feeling of comfort sleeping is classified as good 60%. The more pregnancy exercise is done regularly, the more comfortable the feeling of sleeping will be. By fulfilling good quality sleep, it will reduce the risk of complications in pregnant women and the fetus.

C. Relationship between Pregnancy Exercise and Sleep Quality for Trimester III Pregnant Women at the Juliana Dalimunthe Clinic

Based on the results of the cross tabulation analysis, it can be seen that of the 11 pregnant women who had done pregnancy exercise well, the majority had good sleep quality as many as 9 respondents (36.0%) and a minority had poor sleep quality as many as 2 respondents (8.0%). Meanwhile, of the 14 pregnant women who did not do well during pregnancy exercise, the majority had poor sleep quality as many as 13 respondents (52.0%) and a minority had good sleep quality as much as 1 respondent (4.0%).

The results of the chi square statistical test obtained a p value = 0.000 ($p < 0.05$) so that the Alternative Hypothesis (H_a) was accepted, which means that there is a significant relationship between pregnancy exercise and the sleep quality of third-trimester pregnant women at the Juliana Dalimunthe Clinic.

The results of this study are in line with research by Marwiyah & Sufi (2018) which states that

The Relationship Between Pregnancy Exercise And Quality Of Sleep For Pregnant Women In Trimester Iii At The Juliana Dalimunthe Clinic, Percut Sei Tuan Sub-District, Deli Serdang District, 2022. Eka Sylviana Siregar, et.al

there is an effect of pregnancy exercise on the sleep quality of pregnant women. The results of the research analysis show that giving pregnancy exercise can have a positive effect, especially on the quality of mother's sleep during pregnancy. This is because pregnancy exercise is an exercise for pregnant women that aims to help the muscles of the abdominal wall become elastic during uterine enlargement, improve the physical balance of pregnant women, help improve the correct position of the mother during pregnancy and also improve the mother's blood circulation thereby increasing the comfort of the mother. during pregnancy (Ministry of Health, RI, 2010).

Pregnancy exercise can be useful for increasing oxygen circulation to the muscles and tissues of the body, as well as improving blood circulation. The purpose of pregnancy exercise is to form posture, stretch and strengthen muscles, especially the muscles that play a role in childbirth and improve the work of the heart, blood vessels and lungs in circulating. nutrients and oxygen throughout the body. So that it can reduce physical discomfort and reduce complaints of pregnant women.

According to the assumptions of researchers, the benefits of pregnancy exercise are closely related to the sleep quality of third trimester pregnant women. Various studies state that pregnancy exercise will have a relaxing effect on pregnant women which can affect the improvement of sleep quality for pregnant women, thus causing pregnant women to have good sleep quality. Doing pregnancy exercise can make pregnant women relax so that their sleep time becomes longer. Pregnancy exercise can also be used as an alternative to reduce complaints that result in decreased sleep duration for pregnant women

4. CONCLUSION

Based on the results of data analysis and discussion that has been attached, the following conclusions can be drawn: The majority of pregnancy exercise carried out by Trimester III pregnant women at the Juliana Dalimunthe Clinic is still poorly performed by 14 respondents (56.0%).

The majority of sleep quality in third trimester pregnant women at the Juliana Dalimunthe Clinic is still poor as many as 15 respondents (60.0%). There is a significant relationship between pregnancy exercise and the sleep quality of third trimester pregnant women at the Juliana Dalimunthe Clinic, with a p value = 0.000 ($p < 0.05$). These results indicate that the better the exercise during pregnancy, the better the sleep quality of third trimester pregnant women.

REFERENCE

- [1] Ai Yeyeh, Rukiyah. 2014. *Asuhan Kebidanan I (Kehamilan)*. Cetakan Pertama. Jakarta: Trans Info Media.
- [2] Brawyshaw, E.2008. *Senam-Hamil & Nifas*. Penerjemah : P. Kapoh, R. Jakarta: EGC
- [3] Heardman and Ebner. 1992. *Senam Hamil: Relaxation and Exercise for Childbirth*. Cetakan ke-2. Jakarta: Arjan.
- [4] Herdiani, N,T. 2019. Pengaruh Senam Hamil Terhadap Kualitas Tidur Ibu Hamil Trimester III di Wilayah Kerja Puskesmas Ratu Agung Kota Bengkulu.
- [5] Marwiyah, N., & Sufi, F. 2018. Pengaruh Senam Hamil Terhadap Kualitas Tidur Ibu Hamil Trimester II dan III di Kelurahan Margaluyu Wilayah Kerja Puskesmas Kasemen. *Faletahan Health Journal*, 5(3), 123-128.
- [6] Utami AP. 2014. Hubungan Frekwensi Senam Hamil dengan Kualitas Tidur Ibu Hamildi Wilyah Kerja Puskesmas Tuban . 2015;1-11.
- [7] Utami AP. 2014. Hubungan Frekwensi Senam Hamil dengan Kualitas Tidur Ibu Hamil di Wilyah Kerja Puskesmas Tuban . 2015;1-11.
- [8] Wardani, ND. 2018. Korelasi Kualitas Tidur Dengan Kapasitas Memori Kerja Pada Mahasiswa Tingkat Akhir. 8 (1); 482-491
- [9] <https://repositori.usu.ac.id/handle/123456789/28967>
- [10] https://www.academia.edu/39282056/Hubungan_Gangguan_Kenyamanan_Fisik_Dan_Penyakit_Dengan_Kualitas_Tidur_Ibu_Hamil_Trimester_III