

THE EFFECT OF PREGNANCY EXERCISE ON ANXIETY LEVEL AND SLEEP QUALITY OF PREGNANT WOMEN AT CLINIC PERA

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ABSTRACT

Pregnancy exercise is exercise that recommended for pregnant women because it aims to do to prepare mentally and physically for pregnant women. Disorder during pregnancy which is poor sleep quality, high levels of anxiety, back pain, increased urinary frequency and leg cramps.

This research aimed to determine the effect of pregnancy exercise on anxiety level and sleep quality of pregnant women and to determine the correlation between anxiety level and sleep quality of pregnant women.

This research is an experimental research with one group pretest-posttest design with sample 22 respondents drawn using purposive sampling techniques based on inclusion and exclusion criteria. The data is primary data by answered the questionnaire Zung Self-Rating Anxiety Scale (ZSAS) and the questionnaire The Pittsburgh Sleep Quality Index (PSQI). The data is processed using the Wilcoxon test to determine the difference anxiety level and sleep quality before and after pregnancy exercise of pregnant women and using the Spearman test to determine the correlation between anxiety level and sleep quality of pregnant women.

The results showed difference of anxiety level before and after pregnancy exercise ($p=0.000$) and showed difference of sleep quality before and after pregnancy exercise ($p=0.001$). The results also showed there is not relationship between anxiety level and sleep quality of pregnant women ($p=0.051$).

Keywords: Pregnancy Exercise, Anxiety Level, Sleep Quality, Pregnant Women

Introduction

The gestation period starts from conception until the birth of the fetus. The normal duration of pregnancy is 280 days from the first day of the last menstrual period. Pregnancy is divided into 3 quarters, namely the first quarter starting from conception to 3 months, the second quarter from the fourth month to 6 months, the third quarter from the seventh month to 9 months. Pregnancy involves physical and emotional changes from the mother as well as social changes in the family (Saifuddin, 2009)

Discomfort during pregnancy and anxiety about childbirth cause sleep disturbances in pregnant women and one of the conditions that causes sleep disturbances in pregnant women is physical and emotional changes during pregnancy (Bobak, et al., 2005).

Pregnant women are encouraged to do moderate exercise during pregnancy so that the mother and fetus are healthier and reduce the problems that arise during pregnancy. One of the mild sports that pregnant women can do is pregnancy exercise. When examined further, in fact the pregnancy exercise movement contains a relaxing effect which is useful to stabilize anxiety and reduce fear by means of physical and mental relaxation, as well as getting information that prepares them to experience what will happen during labor and birth (Wibowo & Larasati, 2012).

Pregnancy exercise is a body movement in the form of exercises with rules, systematics, and the principles of special movements adapted to the condition of pregnant women, aiming to make pregnant women mentally and physically ready to face the labor process. (Widianti,

2009). Although not many, several maternal and child hospitals and health centers in Makassar City and Gowa Regency already have pregnant women class programs and pregnancy exercise classes. The benefits of pregnancy exercise itself are not really considered.

Research by Gede Robin in 2015 showed a relationship between the level of anxiety and the quality of sleep in third trimester primigravida pregnant women. The results showed that as much 35 primigravida pregnant women trimester III, 65.7% showed moderate to severe anxiety levels and 68.6% showed poor sleep quality (Robin, 2015). Based on the above background, the researcher is interested in conducting research on the effect of pregnancy exercise on anxiety levels and sleep quality in pregnant women in Pera clinics.

Method

This research is a type of experimental research with a pre-experimental form with the aim to determine the effect of doing pregnancy exercise on anxiety levels and sleep quality in pregnant women, ≥ 5 months at Pera Clinic.

The design of this research is the One-Group Pretest Posttest Design. The first thing to do in this study is to give a pretest (O1) to the subject to determine the level of anxiety and sleep quality of pregnant women before treatment. Furthermore, given treatment (X) in the form of pregnant exercise to the subject. Then performed a posttest (O2) on the subject to determine the level of anxiety and sleep quality after treatment. The results of O1 and O2 were then compared to see the pretest comparison and posttest on the subject.

Result

Table 4.1 Characteristics Responden

No	Characteristics	Frekuensi	Presentasi
1.	Mother's Age		
	<20 Years	1	4.5%

	20-35 Years	18	81.8%
	>35 Years	3	13.6%
2.	Gestational age	2	9.1%
	5 month		
	6 month	6	27.3%
	7 month	8	36.4%
	8 month	6	27.3%
3.	Education	6	27.3%
	SD/ equal		
	SMP/ equal	5	22.7%
	SMA/ equal	11	50.0%
4.	Paritas	19	86.4%
	Multigravida		
	Primigravida	3	13.6%

The table above shows the sample frequency with a mother's age under 20 years of 1 person (4.5%), 18 people aged 20-35 years (81.8%) and 3 people over 35 years of age (13.6%). The table above also shows a sample with a gestational age of 5 months as many as 2 people (9.1%), 6 months of gestation as many as 6 people (27.3%), 8 people at 7 months (36.4%) and 6 months of gestation. (27.3%).

Then the table above shows the sample frequency with the latest elementary school education (SD) or the equivalent as many as 6 people (27.3%), the last education was junior high school (SMP) or the equivalent as many as 5 people (22.7%) and with the last education was high school (SMA) or equivalent as many as 11 people (50%). The table above also shows the sample frequency based on parity of respondents with a multigravida sample of 19 people (86.4%) and a sample of 3 primigravidas (13.6%).

Tabel 4.2 Distribusi Tingkat Kecemasan dan Kualitas Tidur

		Pretest	Posttest
Anxiety Level	Normal	19 (86.4%)	22 (100%)
	Mild anxiety	2 (9.1%)	0 (0%)
	Anxious	1 (4.5%)	0 (0%)
Total		22	22
Sleep quality	Good	4(14.8%)	16 (59.3%)
	Bad	18 (66.7%)	6 (22.2%)
Total		22	22

Based on data table 4.2. It can be seen that the distribution of respondents based on the level of anxiety during the pretest, where normal respondents were 19 people (86.4%), respondents with mild anxiety levels were 2 people (9.1%) and respondents with severe anxiety levels were 1 person (4.5%). Meanwhile, at the level of anxiety during the posttest, there were 22 normal respondents (100%).

Based on the normality test on the anxiety level data distribution, the significance value for the pretest level of anxiety was 0.017. Because the significance value is less than 0.05, the data is considered to be not normally distributed. While the normality test for the posttest level of anxiety obtained a significance value of 0.018. because the significance value is less than 0.05, the data is considered to be not normally distributed.

Because it is obtained that the distribution of anxiety level data is not normally distributed, to test the difference in anxiety level values the Wilcoxon test is used. Wilcoxon test results for the pretest and posttest data on anxiety levels are shown in the following table.

Tabel 4.3 Tabel 4 Tingkat Kecemasan Ibu Hamil Sebelum dan Setelah Senam Ha

Median	Minimum-Maximum	p*
Pretest	33.0	23 – 62
Posttest	26.0	22 – 35

* Hasil Uji Wilcoxon

From table 4.3 shows the value of the pretest and posttest the level of anxiety of pregnant women has a significance value of $p < 0.05$, that is, $p = 0.000$, it can be concluded that there is a significant difference in the level of anxiety before and after giving pregnancy exercise.

Discussion

WHO provides recommendations for the age that is considered the safest for pregnancy and childbirth is 20-35 years. In this age range, the physical condition of

women is in prime condition. The uterus is able to provide protection, mentally ready to care for and care for her pregnancy carefully (Tobing, 2007). In this study, respondents with an age range of 20-35 years were as many 18 people or as much as 81.8% percentage.

Pregnancy at the age of less than 20 years can cause problems because the physical condition is not 100% ready (Tobing, 2007). This is in line with research conducted by Eka Roisa Shodiqoh and Fahriani Syahrul (2014) which states that third trimester pregnant women with an age range < 20 years experience moderate anxiety levels of 3 people (50%) and experience severe anxiety levels of 3 people (50%).). In this study, there were 1 pregnant women who were in the age range < 20 years. Meanwhile, after the age of 35 years, some women are classified as having a high risk of congenital abnormalities and complications at the time of delivery. During this period, maternal and infant mortality rates have increased (Tobing, 2007). In this study there were 3 people or 13.6% who were in the age range > 35 years.

The higher the education level of a person, the greater the opportunity to seek treatment at health services. Conversely, low education will cause a person to experience stress, where the stress and anxiety that occur are due to the lack of information that the person gets (Purwatmoko, 2001).

In this study, there were as many multigravida respondents 19 people or 86.4% and primigravida as many as 3 people or 13.6%. Primigravida mothers will tend to feel anxious about their pregnancy, feel anxious, and are afraid to face childbirth, considering that ignorance is a contributing factor to anxiety. Meanwhile, mothers who have been pregnant before (multigravida), perhaps anxiety is related to past experiences that have been experienced (Astria, 2009).

This is in line with research conducted by Eka Roisa Shodiqoh and Fahriani Syahrul (2014) which showed a

statistically significant difference in the level of anxiety among primigravida and multigravida mothers in dealing with childbirth, where it is known that the primigravida respondent group experienced mild anxiety levels of 6 people (27.3%), 6 people (27.3%) had severe anxiety levels, 10 people (45.4%) moderate anxiety levels, while multigravida respondents experienced severe anxiety levels as much as 2 people (9.5%), 4 people (19.0%) moderate anxiety level, and 15 people (71.4%) mild anxiety level.

In this study, 2 people with 5 months of gestation were found, or 9.1%, with 6 months of gestation as many as 6 people or 27.3%, 8 people with 7 months of gestation or 36.4% and 6 months of pregnancy with 6 people or 27.3%. Often in early pregnancy, mothers often feel ambivalent, confused, about 80% of mothers go through disappointment, sadness, anxiety. The second trimester is often said to be a period of profound health. This is because during this trimester women generally feel good and are free from pregnancy discomforts. In the third trimester, the mother usually feels worried, afraid her life, her baby, abnormalities in babies, childbirth, labor pains and the mother will never know when she will give birth (Indrayani, 2011).

The results of testing the difference in the value of anxiety levels before and after giving pregnancy exercise using the Wilcoxon test obtained a significance value of $p = 0.000$. Because the p value < 0.05 , it can be concluded that there is a significant difference in the value of anxiety levels before giving pregnancy exercise with the anxiety level values after giving pregnancy exercise at the Samata Health Center, Gowa Regency, where before giving pregnancy exercise there were 1 pregnant women with severe anxiety levels. The level of mild anxiety as many as 2 people and 19 other people were normal, meanwhile after giving pregnancy exercise, all 22 pregnant women were normal. Based on this, it can be said that there is an effect

of giving pregnant exercise on the anxiety level of pregnant women. This is also confirmed by the difference in the median value of anxiety levels before and after giving pregnancy exercise, namely the median value at pretest 33.0 and the median value at posttest 26.0. It is clear that there is a very significant decrease in the median value of anxiety. The decrease in anxiety levels was also evident At the minimum and maximum values where at the pretest the minimum score was 23, while at the posttest the lower score was 22. Likewise with the maximum value where the pretest score was 62 then at the posttest the score was much lower, namely 35.

This study is relevant to research by Murbiah (2014) entitled The Effect of Pregnant Exercise on Anxiety Levels in the Third Trimester Primigravida in Palembang City which resulted in a significant significance value between the pretest and posttest values of pregnancy exercise. The results of his study also provide qualitative analysis of pregnant women after pregnancy exercise which shows that they feel more comfortable and less anxious about childbirth. Doing pregnancy exercise can reduce the level of anxiety in pregnant women where this exercise is itself one of the competencies of Physiotherapy. One of the reasons for this is the relaxation movement in pregnancy exercise. In addition to relaxation movements, there are also movements for breathing regulation which in addition to helping mothers during childbirth, can also provide a feeling of calm and relaxation for pregnant women. Maternal relaxation can also be assisted by the presence of therapeutic communication during pregnancy exercise. Physiologically, relaxation will affect the parasympathetic work of the central nervous system. The parasympathetic nervous system slows down or weakens the work of the body's internal organs. As a result, there is a decrease in heart rate, breathing rhythm, blood pressure, muscle tension, metabolic rate and the production of stress-causing hormones. Along with the decrease in

stress-causing hormones, the mother will feel calmer. Thus, pregnant women will feel relaxed as symptoms of anxiety decrease.

In this study, it was found that 86.4% of respondents were not anxious or normal at the pretest, which means that there were quite a lot of respondents who did not experience anxiety during pregnancy before giving pregnancy exercise. This can be caused because most of the respondents are multigravida mothers, namely as many 86.4% of respondents. Multigravida mothers are more likely not to experience anxiety during pregnancy because of previous experiences with pregnancy and childbirth. Pregnancy and childbirth experiences can help mothers in dealing with things that occur that can increase their anxiety, such as fear of pain during childbirth or physical changes during pregnancy. In this study, it was also found that respondents with maternal ages ranging from 20 years to 35 years where if the woman is pregnant in this age range, the mother is considered to be more physically and mentally ready to face her pregnancy.

Conclusion

Based on the objectives and results of research regarding the Effect of Pregnancy Exercise on Anxiety Levels and Sleep Quality for Pregnant Women at the clinic pera, the following conclusions are drawn:

1. The distribution of anxiety levels before giving pregnancy exercise, namely 19 respondents (86.4%) normal, 2 respondents (9.1%) mild anxiety and 1 respondent (4.5%) severe anxiety, and the distribution of sleep quality before giving pregnancy exercise, namely 4 respondents (14.8%) with good sleep quality and 18 respondents (66.7%) with poor sleep quality.
2. The distribution of anxiety levels after giving pregnancy exercise shows that as many as 22 respondents (100%) are normal and the distribution of sleep quality after giving pregnancy exercise is as much as 16 respondents (59.3%) indicated good sleep quality and 6

respondents (22.2%) indicated poor sleep quality.

3. There is an effect of giving pregnant exercise on changes in the level of anxiety of pregnant women where there is a decrease in the value of anxiety levels after giving pregnancy exercise as indicated by significance value $p = 0.000$.
4. There is an effect of giving pregnant exercise on changes in the quality of sleep for pregnant women where there is a decrease in the value of sleep quality after giving pregnancy exercise which is indicated by the significance value of $p = 0.001$.
5. There is no significant relationship between anxiety level and sleep quality where the significance value shows $p = 0.051$.

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