

THE EFFECT OF PREGNANCY GYMNASTICS ON THE REDUCTION OF LOW BACK PAIN IN PREGNANT WOMEN TM III INDEPENDENT PRACTICE OF MIDWIFE NOVIA BR KARO KEC. SUNGGAL REGENCY, DELI SERDANG 2024

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ABSTRACT

The incidence of spinal pain in pregnant women has been proven to be more than 50% in developed countries such as the United States, Canada, Iceland, Turkey, and Korea. Non-Scandinavian countries such as North America, Africa, the Middle East, Norway, Hong Kong, and Nigeria are also affected. Bone discomfort affects anywhere between 21% and 89.9% of people. According to research findings on pregnant women in various regions of Indonesia, back pain affects 60-80 percent of them. In East Java, around 65 percent of pregnant women experience low back pain This study uses an experimental research design. Experimental research is a type of research that involves changing independent variables to find causal relationships. A single-group pretest-posttest design was adopted in this investigation. This type of research is characterized by the discovery of a causal relationship involving a group of people The results of Evi Sulistyana's research in Turi Lamongan district in 2011 on the effect of pregnancy gymnastics on low back pain in pregnant women III. The findings revealed that some pregnant women in the third trimester experienced 45.8% moderate pain and 54.2% mild pain before pregnancy exercises, but 41.7 percent mild pain and 58.3 percent no pain were reduced after pregnancy activity. The Wilcoxon signed rank test with a 0.05 produced a p 0.000 which showed that the effect of pregnancy exercises on the reduction or intensity of back pain was significant Based on the results of the research conducted and the data obtained at the Independent Practice of Midwives Novia Br Karo Kec. Sunggal Regency Deli Serdang in 2023 can be concluded as follows: Before doing pregnancy exercises against pain in pregnant women at the Independent Practice of Midwife Novia Br Karo Kec. In 2023, the majority of respondents experienced moderate pain, after doing pregnancy exercises for pain in pregnant women at the Independent Practice of Midwife Novia Br Karo Kec. Sunggal Regency Deli Serdang In 2023, the majority of respondents experienced mild pain

Keywords: Pain, pregnant women

INTRODUCTION

The Maternal Mortality Rate (MMR) is a component of the development index and the quality of life index which is calculated by paying attention to and paying attention to the degree of women's health (AKI).

According to the ICD (International Classification of Diseases-10), maternal death is defined as the occurrence of maternal death during pregnancy or since the termination of pregnancy within 42 days of death, but not due to causes such as accidents or falls. , but caused by her pregnancy or the

handling of her pregnancy, or events after the end of her pregnancy (postpartum), with various causes of death. (Sumarmi, 2017)

The incidence of spinal pain in pregnant women has been proven to be more than 50% in developed countries such as the United States, Canada, Iceland, Turkey, and Korea. Non-Scandinavian countries such as North America, Africa, the Middle East, Norway, Hong Kong, and Nigeria are also affected. Bone discomfort According to the findings of a study by Princess Aulia on low back pain in pregnancy from 13 weeks to 30 weeks, the older the gestational age, the more intense the back pain experienced throughout pregnancy. Found that up to 51% of pregnant women experience an increase in back pain.

Another study conducted by Kartikasari et al in Polindes Tianak Village looked at the relationship between pregnancy exercises and back pain in pregnant women. The findings showed that pregnant women who did not participate in pregnancy exercises more than once experienced back pain (75 percent). According to a preliminary study based on data collected on pregnant women in Jombang Regency in 2018, 10 out of 10 pregnant women experience back pain. (Hakiki, 2015). Around 65 percent of pregnant women experience back pain. (Mafikasari et al., 2015).

Weight gain and hormonal changes are physiological changes

that are commonly experienced by mothers during pregnancy, one of which is a trigger for discomfort in the back. It was found that 68 percent of pregnant women who did not participate in pregnancy exercises experienced lower back discomfort, but those who participated in pregnancy exercises did not experience lower back pain. (Manyozo, 2019)

Joint mobility that causes postural changes in pregnant women is an uncomfortable position in the lower back area. Exercise during pregnancy is one of the techniques to relieve or reduce pain waist. Pregnancy exercises involve the work of all the muscles in the body, especially the large muscles in the legs, back, and arms, to cause the heart to beat faster and harder, the respiratory rate increases, and the body sweats

According to the results of an initial survey in the Independent Practice of Midwives Novia Br KaroKec. Sunggal Regency, Deli Serdang, eight out of ten TM III mothers experience low back pain during pregnancy, and some do not know of a very effective pregnant women class program.

METHOD

3.1. Types of Research

This study uses a type of quantitative research with the research methods used as follows: *Experiment* with a research design *one group before and after intervention design* or *Pre test-post test design* (Notoadmodjo, 2017) .

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3.3. Location and Time of Research

3.3.1. Research Location

This research will be carried out at the Independent Practice of Midwife Novia Br KaroKec. Sunggal Regency Deli Serdang

3.2.1. Research Time

This research was carried out from May to June 2023. Pregnancy exercises are carried out for 1 week, 1 time, namely Friday at 16.00 WIB with a duration of 30 minutes during the pregnant women class.

3.4. Population and Sample

3.4.1. Populasi

Subjects (e.g., humans; clients) who meet the established criteria are the research population (Nursalam, 2016). This study included all pregnant women in the third trimester in the Independent Practice of Midwife Novia Br KaroKec. Sunggal Regency Deli Serdang with a total of 25 pregnant women.

3.4.2. Sample

The sample is a part of the population that is used as the subject of research and must meet certain conditions (Nursalam, 2016). All pregnant women in the third trimester at the Independent Practice of Midwife Novia Br KaroKec. Sunggal of Deli Serdang Regency was included in this study.

RESULT AND DISCUSSION

4.1.1. Univariate Results

The general data of the respondents in this study included age, last education, parity and pregnancy history. The results of the descriptive review of general data are in the form of the following tables:

1. Characteristics of Respondents in Independent Practice of Midwives Novia Br KaroKec. Sunggal Deli Serdang Regency in 2023

Table 4.1 Characteristics of respondents in the Independent Practice of Midwives Novia Br KaroKec. Sunggal Deli Serdang Regency in 2023

No	Characteristic	Frequency (f)	Percentage (%)
1	Age of Respondents		
	<20 Years	3	9.4
	21-25 Years	17	53.1
	26-30 Years	9	28.1
	31-35 Years	2	6.3
	>35 Years	1	3.1
	Sum	32	100,0
2	SD	4	12.5
	SMP	12	37.5
	SMA	14	43.8
	College	2	6.2
	Sum	32	100,0
3	Housewives	25	78.1
	Wiraswasta	2	6.3
	PNS	4	12.5
	Guru	1	3.1
	Sum	32	100,0

Based on the table of characteristics above, it is known that most of the respondents are in the age group of > 20 years as many as 3 respondents (9.4%), aged 21-25 years 17 respondents (53.1%), aged 26-30 9 respondents (28.1%), aged 31-35 years 2 respondents (6.3%) and aged >35 years 1 respondent (3.1%). There were 4 respondents (12.5%) in elementary education, 12

respondents (37.5%) in junior high school education, 14 respondents (43.8%) in high school education, and 2 respondents (6.2%) in higher education.

2. Distribution of Back Pain Frequency Before Pregnancy Gymnastics at the Independent Practice of Midwife Novia Br KaroKec. Sunggal Deli Serdang Regency in 2023

No	Pain	Frequency	Percentage (%)
1	Mild Pain	6	18,8
2	Moderate Pain	17	53,1
3	Severe Pain	9	28,1
	Sum	32	100

Based on the table above, it can be observed that pregnant women before respondents (53.1%).

being given pregnancy exercises the majority of respondents experienced moderate pain as many as 17

3. Back Frequency Distribution After Pregnancy Exercises at Independent

Practice Midwife Novia Br KaroKec. Sunggal Deli Serdang Regency in 2023

No	Pain	Frequency	Percentage (%)
1	Mild Pain	19	59,4
2	Moderate Pain	10	31,2
3	Severe Pain	3	9,4
Sum		32	100

Based on table 4.3, it shows that the majority of respondents are not working, namely 11 respondents (73.3

Pregnancy Gymnastics at Independent Practice of Midwife Novia Br Karo Kec. Sunggal Deli Serdang Regency in 2023

Distribution of Wilcoxon Signed Ranks for Back Pain Before and After

Back Pain in Pregnant Women Before and After Treatment	N	Percentage (%)	Mean Rank	Sum of Ranks	With	P
Negative	22	70,0	14,91	328,0		
Positive	6	5,0	13,0	78,0	-3.122a	.002
Ties	4	25,0				
Total	32	100	-	-	-	-

Based on the table above, it can be observed that the *Negative Ranks* or the difference between back pain before and after pregnancy exercises is 22,

4. The Effect of Pregnancy Gymnastics on Back Pain in the Independent Practice of Midwife Novia Br KaroKec. Sunggal Deli Serdang Regency in 2023

Statistical analysis with Wilcoxon showed that the *nila* $p = 0.002 < 0.05$, it can be concluded that there is an effect of pregnancy exercises on back pain in pregnant women. Data from table 4.4 also shows that pregnancy gymnastics has an effect in reducing the scale of back pain in pregnant women in the Independent Practice of Midwife Novia Br KaroKec. Sunggal Regency Deli Serdang Year 2023

The data from table 4.4 shows that the results of *Negative Ranks* from this study are 22. It can be concluded that pregnancy exercises provide effectiveness on pain intensity in respondents before and after pregnancy exercises in 22 respondents, while the other 10 respondents were in *positive ranks* and *Ties*. The results of this study are also strengthened by research conducted by Purnama (2019). The results of the statistical test found that there was a significant decrease between the mean pain intensity before and after being given pregnancy exercises where the p-value of 0.000 was less than the alpha value ($p < \alpha$ (0.05), meaning that it can be concluded that pregnancy exercises are effective in reducing the intensity of back pain in pregnancy (Purimama, 2019)

5. Back Pain of Pregnant Women After Pregnancy Gymnastics at the Independent Practice of Midwife Novia Br KaroKec. Sunggal Deli Serdang Regency in 2023

The growth of the uterus that causes a change in Uterus posture will enlarge in the first months under the influence of estrogen and progesterone which increase levels. The normal weight of the uterus is approximately 30 grams. At the end of pregnancy (40 weeks), the weight of the uterus becomes 1,000 grams. The changes increase the pressure on the lumbar lordosis and the pressure on the paraspinal muscles. The enlarged uterus and increased weight cause the muscles to work harder so that it can put strain on the muscles and joints. Efforts to overcome this include exercise and relaxation exercises that are suitable for pregnant women, namely pregnancy gymnastics.

6. Back pain for pregnant women before gymnastics Pregnant in the

Back pain is often experienced by pregnant women, this is because the abdomen begins to enlarge, making pregnant women lose their balance. During pregnancy, the joints in the pelvis, which are initially stable, will experience laxity, this occurs starting from the fifth pregnancy. As a result, the pregnant woman pulls her back back and arches. From this position, it will result in a curved back, and the muscles in the back are pulled, causing pain (Firdayani, 2018).

Based on the results of the research from the observation sheet carried out on pregnant women before being given, pregnancy exercises were carried out at the Independent Practice of Midwife Novia Br KaroKec. Sunggal Regency Deli Serdang obtained data from observation sheets

That, of the 32 pregnant women, the majority of respondents experienced moderate back pain before pregnancy gymnastics was carried out as many as 17 people (53.0%). This is evidenced by the results of observations in pregnant women who experience back pain that makes the mother's work not go well, back pain that sometimes reaches the plate

The results of this study are in accordance with the results of the study Evi Sulistiana (2018) on the effect of pregnancy exercises on the reduction of low back pain in pregnant women in the second and third trimesters, the results showed that before doing pregnancy exercises, some pregnant

women in the second and third trimesters experienced moderate (45.6%) and mild (54.2%) pain. After doing pregnancy exercises reduced to (41.7%) and did not feel pain (58.3%), the results of the wilcoxon sigh rank test $P= 0.05$ showed $P=$

0.000 so that $P<0.05$ means that there is an effect of pregnancy exercises on reducing the intensity of back pain.

7. Limitations of Researchers

Researchers realize that in conducting this research, it cannot be separated from shortcomings. This is not caused by intentional factors. The limitations in the study are that some of the respondents' conditions cannot be controlled periodically, such as the regularity of doing gymnastics, the concentration of pregnant women is disturbed due to various things so that some pregnant women still do not get the effects of the pregnancy exercises carried out.

CONCLUSION

Based on the results of the research conducted and the data obtained at the Independent Practice of Midwives Novia Br KaroKec. Sunggal of Deli Serdang Regency in 2023 can be summarized as follows

Before doing pregnancy exercises against pain in pregnant women at the Independent Practice of Midwife Novia Br KaroKec. In 2023, the majority of respondents experienced moderate pain

After doing pregnancy exercises for pain in pregnant women at the Independent Practice of Midwife Novia Br KaroKec. In 2023, the majority of respondents experienced mild pain.

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