

The Effect of Pregnancy Gymnastics on Reducing Pain on The Backs of Pregnant Women in the Practice of Independent Midwives Sri Ratu Alam Batam City in 2022

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ABSTRACT

Pregnancy brings great changes in the female body, including the back. Since entering the second trimester period, some pregnant women began to experience back pain due to the increasingly large baby. 50-80% of women have experienced back and hip pain during pregnancy, chiropractic doctor Ronald J. Tyszkowski said. Back pain is a side effect of a normal pregnancy. The prevalence of spinal pain in pregnant women occurs more than 50% in the United States, Canada, Iceland, Turkey, Korea, and Israel. Meanwhile, in northern America, Africa, the Middle East, Norway, Hong Kong, the prevalence is higher which ranges from 21% to 89.9%. The results of research on pregnant women in various regions in Indonesia reached 60-80% of pregnant women experiencing back pain in their pregnancies. In East Java, around 65% of all pregnant women experience back pain. The method used with the Crosssectiona design was a study sample of pregnant women in the II and III trimesters with a total of 35 people. Based on the results of research conducted at BPM Sri Ratu Alam Batam City on, using the Statistics Product Solution (SPSS) program and from the analysis using the Chi-Square test, a P Value value = $0.001 < 0.05$ was obtained, this shows that there is an influence of pregnant gymnastics on reducing pain in the back of pregnant women at BPM Sri Ratu Alam Batam City

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INTRODUCTION

Pregnancy brings major changes to a woman's body, including the back. Since entering the second trimester, some pregnant women begin to experience back pain due to their growing baby. About 50-80 percent of women experience back and hip pain during pregnancy, says chiropractor Ronald J. Tyszkowski. Back pain is a normal side effect of pregnancy. With increasing gestational age, the body will make physical adjustments to the increase in the size of the fetus. The most obvious change in the body is that the spine increases in lordosis because the body's support shifts back more than

the posture when not pregnant. Anatomically, the rotating joint ligament can increase the widening / enlargement of the uterus in the abdominal space. Pain in this ligament occurs due to dilation and pressure on the ligament due to an enlarged uterus. Pain in this ligament is an inconvenience for pregnant women. One way to reduce low back pain during pregnancy is by doing pregnancy exercises. Pregnancy exercise is part of antenatal care at certain health service centers, such as hospitals, health centers, clinics, or other health service centers (Safi'i, 2010). The role of the mother in participating in pregnancy exercise is very important for pregnant women after the pregnancy reaches the age of 28 weeks (Saminem, 2012). Following pregnancy exercise regularly can maintain a healthy body and can relieve lower back pain felt by pregnant women

RESEARCH METHOD

The design of this study is analytical, namely research that aims to find the influence of independent variables and dependent variables. With Crosssectional design, which is a study that studies the occurrence of effects, the dynamics of correlations between risk factors and the effects observed at the same time (Isgiyanto, 2009). To find out the effect between pregnant gymnastics and reducing the back pain of pregnant women in the Sri Ratu Alam Independent Midwife Practice, Batam City 2022. The sample is partial or representative of the population under study. The sampling technique in this study was *total sampling*, where the entire population was used as a research sample, namely 35 respondents.

RESULTS AND DISCUSSIONS

Univariate Analysis

Based on data obtained from 26 respondents, namely 13 control groups and 13 intervention groups, after statistical processing, the distribution and sample frequency results are as follows :

Table 1. Frequency Distribution of the Effect of Pregnant Gymnastics Is Limited to Reducing Pain on the Back of Pregnant Women in BPM Sri Ratu Alam Batam

No	Pregnant Gymnastics	Frekuensi	Persentase (%)
1	Do	20	57
2	Not Doing	15	43
	Jumlah	35	100

Table 1 shows that out of 35 respondents, 20 respondents (57%) did pregnant gymnastics were found, and 15 respondents did not do so (43%).

Bivariate Analysis

Table 2. Frequency Distribution of the Effect of Pregnant Gymnastics on Reduction of Pain in the Back of Pregnant Women at BPM Sri Ratu Alam Batam City

Pregnant gymnastics	Pain Reduction						P- value
	NO		Ya		Total		
	F	%	F	%	F	%	
Yes	10	66,7	5	33,3	15	100	0,001
No	2	10	18	90	20	100	

Table 2 showed from 35 respondents who did not do pregnancy gymnastics as many as 15 respondents where there was no reduction in back pain 10 respondents (66.7%) and who felt pain reduction 5 respondents (33.3%). Then the respondents who did pregnant gymnastics as many as 20 respondents where there was no reduction in back pain 2 respondents (10%) and who felt a reduction in pain 18 respondents

Discussion

The results of statistical tests using the Chi-Square test obtained a P Value value = $0.001 < 0.05$. This shows that there is an influence of pregnant gymnastics on reducing pain in the back of pregnant women. Based on the results of this study, the effect of pregnant gymnastics on reducing back pain in pregnant women if done regularly can reduce pain if pregnant gymnastics is done, and increase the ability of mothers to do daily activities better.

Low back pain in pregnant women as one of the discomforts felt by pregnant women at a certain gestational age can start from the end of the first trimester and continue until after delivery can be reduced by pregnant gymnastics. Pregnancy gymnastics itself is one way to improve health during pregnancy, besides the benefits of pregnant gymnastics are strengthening and maintaining the elasticity of the abdominal wall muscles, ligaments, and pelvic floor muscles that are also related to childbirth (Pomegranate, 2015). This is in line with research conducted by Yosefa (2013) with the wilcoxon test, that there is a significant influence between the intensity of pain before and after doing pregnant exercises in pregnant women in the Pekanbaru Women's Health Center Working Area, with the wilcoxon test obtained p value = 0.000 ($p < 0.05$).

Doing pregnancy gymnastics can reduce the intensity of pain by reducing biomechanical changes that occur during pregnancy, increasing joint stability that will affect the vertebrae in supporting the body's increasing load. In addition, pregnant gymnastics also adheres to the muscles of the body and increases the pain threshold .

Pregnant gymnastics that is done regularly can reduce the lower back pain of pregnant women because the movements contained in pregnant gymnastics are able to strengthen the abdominal muscles so as to prevent excessive tension in the pelvic ligaments so that the intensity of pain is reduced. Pregnant gymnastics is able to secrete endorphin hormones in the body. Endorphins stimulate opioid receptors in the peripheral, posterior cornu, and brainstem. Each class of endogenous opioids has a different tendency towards opioid receptors. Neurotransmitters such as norepinephrine, serotonin, acetylcholine and γ -aminobutyric acid are all involved in pain inhibition through various mechanisms. Norepinephrine and serotonin reduce pain by modulating descending impulses from the brain. So that when doing pregnant gymnastics, the mother becomes more relaxed and gymnastics is able to reduce pain.

Based on the results of research and related theories, pregnant gymnastics against low back pain, when doing pregnant gymnastics the muscles of the abdominal wall, ligaments and pelvic floor muscles can be trained to be more elastic and pregnant gymnastics movements provide a relaxing effect for mothers, with more and more often mothers doing pregnant gymnastics that make the elasticity of the otos is getting better so that it can reduce pain in the mother's lower back. In addition, the influence of pregnant gymnastics on reducing low back pain felt by pregnant women at 13 to 30 weeks of pregnancy is caused by the adherence of pregnant women to do pregnant exercises (Firdayani, 2018).

Research by Lichayati (2013) shows that doing pregnancy gymnastics regularly can reduce back pain, one of which is with transverse muscle exercises, basic pelvic exercises and stretching generally. According to Firdayani (2018) participating in pregnancy gymnastics regularly can maintain a healthy body and can alleviate low back pain felt by pregnant women. Gymnastics movements must be correct so that they can feel the benefits to the maximum and the mother can be comfortable living her pregnancy. Pregnancy gymnastics is one of the non-pharmacological alternatives to treat low back pain, especially in the II and III trimesters.

CONCLUSION

Based on the results of research conducted at BPM Sri Ratu Alam Batam City, using the Statistics Product Service Solution (SPSS) program and from the analysis using the Chi-Square test obtained a P Value value = $0.001 < 0.05$ this shows that there is an effect of pregnant gymnastics on reducing pain in the backs of pregnant women in BPM Sri Ratu Alam Batam City

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