The Effect of Dance Pregnancy on Abdominal Recti Diastasis in Pregnant Women at BPM Sleman Regency

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ABSTRACT

Background: The condition of rectus abdominis muscle separation can occur in 30% to 70% of pregnant women and the possibility of abdominal recti diastasis condition persists after a period of pregnancy in 35% to 60% of women. Abdominal recti diastasis can be a problem in the abdominal muscles after childbirth such as psychological problems, cosmetic disorders and physical problems such as back pain, protrusion in the abdominal wall, weakness in the abdominal wall and decreased abdominal muscle strength. There are various kinds of mild physical exercise that can be done by pregnant women such as a combination of upright movements, pelvic movements, back massage, and partner support called dance pregnancy.

Objectives: The purpose of this study was to determine the effect of dance pregnancy on diastasis recti in pregnant women

Methods: This research used quasi-experimental design with a non-randomized pretest-posttest group design. The number of samples in the study were 30 respondents with a division of 15 respondents in the experimental group and 15 in the non-experimental group. The sampling technique was accidental sampling. Analysis of the data used the t test.

Results: The T test results > t table (2,239 > 2,048) and p values was less than 0.05 (p = 0.033 <0.05), so it can be stated that there were significant differences in rectal diastasis change in the experimental and control groups.

Conclusions: From this study we concluded that the dance pregnancy method has an effect on diastasis recti in pregnant women, where the pregnant women who do dance pregnancy diastasis do not increase as much as in pregnant women who do not do dance pregnancy. Pregnant mothers are expected to be able to do light physical exercises. such as dance pregnancy so that rectal diastasis does not increase in size. So that muscle strength does not decrease during labor later.

Keywords: *Abdominal Recti Diastasis, Dance Pregnancy*

INTRODUCTION

Pregnancy can lead to complications endangering the mother and fetus. Complications of pregnancy can occur in the first, second and third trimester in the form of mild or severe complications. There are about 10-20% of pregnancies with complications (1). During pregnancy, the developing uterus stretches the muscles in the stomach. This can cause two large parallel bands of muscles that meet in the middle of the abdomen (rectus muscles) to be separated by an abnormal distance. A condition called diastasis recti or diastasis recti abdominis. Diastasis recti can weaken the abdominal muscles, causing low back pain and making it difficult to lift objects or perform other daily routine activities (2).

National guidelines recommend that healthy pregnant women should do light physical exercise every day. Most women reduce physical activity during pregnancy and only a few studies found pregnant women doing physical activity during pregnancy (3). There are various kinds of mild physical exercise for pregnant women such as a combination of upright movements, pelvic movements, back massage, and partner support called dance pregnancy. Dance pregnancy with soft music creates a very relaxed environment that will provide comfort to the mother's back area so that the mother will feel a massage (4).

Other research studies have also shown that belly dancing is also an excellent form of exercise to help pregnant women strengthen the muscles used during labor (5). More and more research show that regular exercise has benefits for both mother and baby. Like yoga and tai chi, belly dance is a form of exercise that harmonizes the mind and body which is an important element for pregnant women in facing pregnancy (6).

MATERIALS AND METHODS

This research is a quasi-experimental (quasi experimental) and measures the effect of dance pregnancy on diastasis recti in pregnant women. This study compares between groups given treatment (the intervention group) and those not treated (the non-intervention group). The design used is non-randomized pretest-posttest group. The number of samples in the study were 30 respondents, divided into 15 respondents in the experimental group (with dance pregnancy treatment which was done once a day for 2 weeks) and 15 in the non-experimental group. The sampling technique used accidental sampling. The instrument of data collection used respondents' form to determine characteristics, observation sheets, mattresses. The tools to check diastasis recti were calipers, dance pregnancy checklist. The data analysis used t test.

RESULTS AND DISCUSSION

Results

This study was conducted at one of the BPM in Sleman Regency in May-July 2019. Data obtained in this study were primary data, data obtained using recti diastasis measurements in 15 pregnant women treated with dance pregnancy (experimental) and 15 pregnant women who were not given any treatment (control). The following are the characteristics of the respondents in this study:

Table 1. Characteristics of respondents respondent

Respondent characteristics	The number n	Percentage %
Umur		
≤ 20 years	6	20
21-34 years	19	63,33
≥ 35 years	5	16,67
Total	30	100
Age of Pregnancy		
28 - 36 weeks	27	90
> 36 - 40 weeks	3	10
Total	30	100
Paritas		
1 time	16	53,33
2 times	6	20
3 times	8	26,67
Total	30	100

Based on table 1 known that the highest frequency of age distribution of respondents is respondents aged 21-34 years as many as 19 people (63.33%), while the most frequent distribution of gestational age respondents is 27 respondents (90%) gestational age 28-36 weeks and the most frequency distribution of parity of respondents is mothers who are pregnant for the first time by 16 people (53.33%).

Table 2. Results of bivariate data analysis with t test

Group	Means	t arithmetic	t table	P
Experiments	3,6667	2,239	2,048	0,033
Control	4,0067			

In the bivariate analysis the t test was used to determine whether there were differences in differential diastasis in the experimental group (who were treated with dance pregnancy) and the control group. The conclusion of the study is significant if t arithmetic > T table at a significance level of 5% and a value of p <0.05. The following is a summary of the results of the t-test in the experimental group (treated with dance pregnancy) and the control group.

Based on the calculation t test known to the average increase in the control group at 4.0067, while the average rise in the experimental group amounted to 3.6667, so it is known that the increase in the control group is greater than the experimental group. It is also known from the t value of 2.239 and sig value of 0.033. The value of t table with db 28 is 2.048. So, it can be concluded that t arithmetic> t table (2,239> 2,048) and sig values less than 0.05 (p = 0.033 <0.05), so it can be stated that there are significant differences in rectal diastasis changes in the experimental and control groups.

Discussion

One of the factors that can affect diastasis recti is the age factor. Maternal age factor is less than 20 years, reproductive function has not developed perfectly so that the birth canal is more easily torn, the contraction of the muscles is still bad, especially the uterine muscle so it will be prone to bleeding otherwise the age is more than 20-35 years, the condition at this age is at prime vitality so that the contraction of the muscles and the return of uterine devices are also faster because the regeneration process of the uterine cells are very good and the age of the mother is more than 35 years, the elasticity of the muscles at this age has begun to decrease so it will affect muscle recovery, especially the muscles of the uterus that require a longer time (7).

Changes in the musculoskeletal system occur because of the increase in gestational age. These musculoskeletal adaptations include: weight gain, center displacement due to enlargement of the uterus, relaxation and mobility. The center of gravity of the body shifts forward and when combined with stretch of weak abdominal muscles will result in indentations in the shoulders and chin that hang. There is a tendency for the muscles to shorten if the abdominal muscles stretch that can lead to muscle imbalances around the pelvis, and additional stress can be felt above the ligament. As a result is back pain that usually comes from sacroiliac or lumbar, and can be a long-term back disorder if muscle balance and pelvic stability are not restored after childbirth (8).

Diastasis recti often occurs in multi-parity, large babies, poly hydramnios, abdominal muscle weakness and incorrect posture (9). From table 2 the results of t-test calculations show that the average increase in the control group is 4.0067 while the average increase in the experimental group is 3.6667, so it is known that the increase in the control group is greater than the experimental group. In addition, it is known that t arithmetic> t table (2,239> 2,048) and sig values less than 0.05 (p = 0.033 <0.05), so it can be stated that there are significant differences in changes in rectal diastasis in the experimental and control groups.

Dancing is a safe and fun way to exercise during pregnancy. Dance is one of the complementary cares with low risk that can reduce the intensity of labor pain and increase maternal satisfaction (10). Maternal and fetal well-being during pregnancy and childbirth have been pursued in a variety of ways, some of which are physical exercises that can be carried out before, during and after pregnancy. In the third trimester you should avoid the supine position, exercise is focused on strengthening and balancing the muscles around the joints that make it possible to maintain muscle endurance and abdominal support because gravity shifts forward. These exercises basically aim to nourish the mother and the fetus and have a positive impact on both mother and fetus psychophysiology if carried out appropriately. A pregnant woman with a normal pregnancy or without contraindications should be supported to do physical exercise with moderate-intensity to benefit during pregnancy and childbirth.

The results of the study (11) showed that abdominal exercise was very effective in reducing diastasis recti in the early postpartum of women. It helps increase abdominal muscle strength and restore postpartum stomach efficiency. This exercise can be effective in narrowing the distance between recti, supporting an exercise program for the prevention or reduction of diastasis recti in postnatal women and is beneficial in reducing complications of diastasis recti.

Corrective exercise of abdominal rectal diastasis performed by primiparous women with rectal abdominis diastasis in the immediate postpartum period for 6 weeks has proven to be effective in reducing the abdominal rectal diastasis. Postnatal mothers need to be aware of the importance of corrective diastasis exercise in preventing further complications such as altered body posture, navel hernias and low back pain (12).

Chiarello et al (13) conducted a study with the results of the study showing that significant rectal diastasis was present in 90% of the non-exercising group and only 12.5% of the exercise group. The researchers concluded that the incidence and degree of rectal diastasis was significantly reduced in women who exercised compared to women who had never exercised (9).

Posture changes in pregnant women can affect the angle of placement of the pelvic and abdominal muscles. If it continues, diastasis recti abdominis will cause a loss in the muscle strength vector, and this will cause a decrease in muscle strength at the time of contraction so that it will cause labor to be prolonged (14).

CONCLUSION AND RECOMMENDATION

From the results of t-test calculations it is known that the average increase in the control group was 4.0067 while the average increase in the experimental group was 3.6667, so that it was known that the increase in the control group was greater than in the experimental group. For t arithmetic> t table (2,239> 2,048) and the value of sig less than 0.05 (p = 0.033 <0.05), so it can be stated that there are significant differences in changes in rectal diastasis in the experimental and control groups.

Dance pregnancy is one of the exercises that can be applied by midwives in helping pregnant women who have rectal diastasis. Pregnant women are expected to be able to do light physical exercises such as dance pregnancy so that rectal diastasis does not increase in size. So that muscle strength does not decrease during labor later.

ACKNOWLEDGEMENTS

Thank to Ministry of Research, Technology, and Higher Education of the Republic of Indonesia for providing research funding in 2019.

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