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THE IMPLEMENTATION OF PUERPERAL GYMNASTICS WITH THE PROCESS OF UTERINE INVOLUTION POST PARTUM MOTHER

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ABSTRACT

Gymnastics childbirth is one way to overcome the damage to mobility in the form of puerperal women movements useful to tighten the abdominal muscles that are loose, smooth lochea expenditure and accelerate involution. Interviews with the mother post partum revealed that they have never done physical exercises after childbirth and are rarely mobilized to do gymnastics childbed. The purpose of this study is to see related puerperal gymnastics suplementation of the process of uterine involution in postpartum mother. This research was conducted in September to October with quantitative methods. The instrument used was the observation sheet, and gauges with a population of all mothers who gave birth to normal post partum that meet the criteria with systematic sampling. Out of 20 respondents 10 were obtained who were given treatment gymnastics puerperal uterine involution process that is 80% full speed. While 3 respondents out of the rest 10 who were not given treatment of puerperal gymnastics experienced slow involution that as many as 3 people. The study showed statistically significant outcome at P value of 0.004 and so the alternative hypothesis (Ha) has been accepted. From the result of this study it can be conclude that there is a relationship between the implementation of puerperal gymnastic with the process of uterine involution post partum mother. It may be effective if healthcare institution implement puerperal gymnastic to post partum mother to aid the recovery of the mother after the process of labor and induce less complicatios such as hemorrhaging post partum.

Keywords: Puerperal gymnastics, uterine involution

INTRODUCTION

Maternal Mortality Rate (MMR) is one of the indicators to improve a health service, based on the 2007 Indonesia Demographic and Health Survey (IDHS) shows that maternal mortality in Indonesia reaches 248 deaths per 100,000 live births. One of the factors of maternal mortality is postpartum hemorrhage due to lack of services provided by health workers and government programs that are not working (Saifuddin, 2006).

At the time of pregnancy some muscles relax, especially the muscles of the uterus and stomach. After delivery, the uterus does not rapidly return to its original state, and the process of restoring it to its original state required a gymnast known as postpartum gymnastics. Gymnastics should be done within 24 hours after delivery, regularly every day (Kasdu, 2006).

Women who give birth often complain stomach still looks big, enlargement effect of uterine muscle due to enlargement cell or enlargement of its size during pregnancy. After giving birth to muscles it will loosen. One of the ways to help restore size the uterus on the condition before pregnancy is with puerperal gymnastics (Khasanah, 2008).

Puerperal Gymnastics is a way to overcome the mobility damage in the puerperium. This puerperal exercise are useful movements to tighten loose abdominal muscles after pregnancy, strengthen the abdominal and perineal muscles to produce a good body shape, launch lochea expenditure and accelerate involution, tighten the pelvic floor and improve blood circulation throughout body (Farrer, 2001).

Andriyani, Nurlaila & Pranajaya (2013) Conducted research in BPS Lia Maria Sukarame Bandar Lampung. This type of research is pre experimental design using posttest involving control and experiment group. Sampling with non probability sampling is convenient. The sample size was 30 normal postpartum mothers

and were divided into 15 controls and 15 experimental groups. Statistic results at the speed of uterine involution showed that $p = 0.03$ ($p < 0.05$). This research shows influence of puerperal gymnastics on speed of uterine involution in postpartum mother at BPS Lia Maria Sukarame Bandar Lampung.

The observations of researcher of midwifery room Ibnu Sina Hospital Bukittinggi City shows that in general postpartum mothers never do gymnastics and in this hospital also has never done research related to the exercise of gymnastics. From the results of interviews with post partum it was revealed they do not perform physical exercise postpartum and rarely deployed to do gymnastics. Based on the above, the researchers are interested to examine whether there is a relationship of postnatal gymnastics exercises on the process of involution of uteri post partum mother in Ibnu Sina Hospital Bukittinggi City.

METHODS

The research method used in this research is quantitative method. This research is to know the effect of postnatal gymnastics in relation to the process of post partum mother in Ibnu Sina Hospital Bukittinggi City. The research design used in this study is the type of research design of Pre-Exsperimental Design by using the design of The Static Group Comparison i.e sample A is given treatment and sample B is not given treatment, no Pre-test was done but Post-test was done and then observed and after that both the results were compared (Wasis, 2008). With the design form as follows :

Table 1: The Static Group Comparison

Group	*Pre-test*	Treatment	*Post-test*
Experiment	-	*P*	01
Control	-	-	02

The sample is part of the population to be studied or part of the number of characteristics possessed by the population (Hidayat, 2007). In this study samples taken by researchers as many as 20 people. Out of 20, 10 people were given postnatal gymnastic treatment and 10 people were not given postnatal gymnastic treatment.

This study uses Systematic Sampling method where the sampling method based on the sequence of population members who have been given the serial number, with the nature of the population heterogeneous (Hidayat, 2007). Respondents were taken by using the serial number according to the number of the childbirth, the revoked even number taken as respondents who received postnatal gymnastic treatment and who abstracted the odd number taken as respondents who did not get the treatment of puerperal gymnastics.

In this study data collection was done by using Implementation Gymnastics. For postnatal gymnastic exercises for respondents who received postnatal gymnastic treatment in the early stages of the researcher disseminates postpartum gymnastics techniques to the mothers as the respondents, then for the next stage the mothers are accompanied and supervised by researchers in doing gymnastics after that researchers make observations and measurements for obtaining data. While for the respondents who are not given exercises were just observed and measured. Researchers use the meter in making measurements in the process of data collection.

After conducting trials, the researchers then conducted data collection by distributing gymnastics guidelines and socializing postnatal exercises on the respondents who were treated and who had been selected according to the sample criteria and asked the respondent to sign the informed concent, then invited the respondent to read and understand the guide. After that the researcher disseminated the postnatal gymnastic movement on the respondents who were given treatment, and the respondents were asked to carry out the movements in accordance with the gymnastics guide sheets. Researchers accompany respondents in the implementation of gymnastics and researchers have made observations and measurements until fundus uteri was not palpable anymore. While for the respondents who are not given treatment, researchers only make observations and measurements in the same time with respondents who were given puerperal gymnastics treatment. To obtain the data, the researcher visited the respondent's house receiving treatment and the respondent who did not get treatment every day. It is necessary to obtain valid data when processing data with computer system. Then the researcher ended the meeting by thanking the respondents for their cooperation.

In doing the analysis, the data first processed with the aim of converting data into information. In statistics, the information obtained is used for the decision-making process, especially in hypothesis testing.

The data analysis used is *T* dependent or paired sample test to analyse mean difference between two dependent data groups (Hastono, 2006).

After getting permission or introduction from education, the researcher reported on the training of Ibnu Sina Hospital Bukittinggi City care about the research to be conducted. This research starts from September to October. After the researchers got permission from the training then the researchers asked for a cover letter of research for the midwifery room. Before the research conducted all respondents who became the subject of research, given information about the plan and the purpose of research. Each respondent has the right to refuse or approve as a research subject. For those who agree to be asked to sign a letter of approval that has been determined. After getting approval then the researcher doing research by emphasizing the problem of research ethics.

RESULT

After the data is collected, they were processed in computerized and presented in the form of diagram and table below.

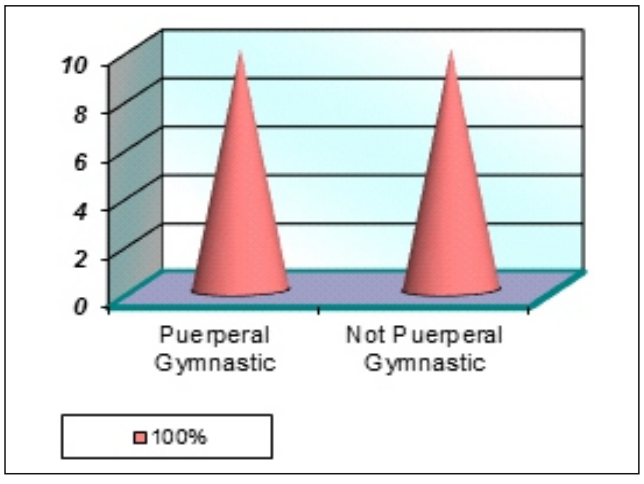

Figure 1 : Puerperal Gymnastics Exercise at post partum mother

From the diagram above shows that the number of respondents who do gymnastics that is as many as 10 people and respondents who do not exercise gymnastics as many as 10 people.

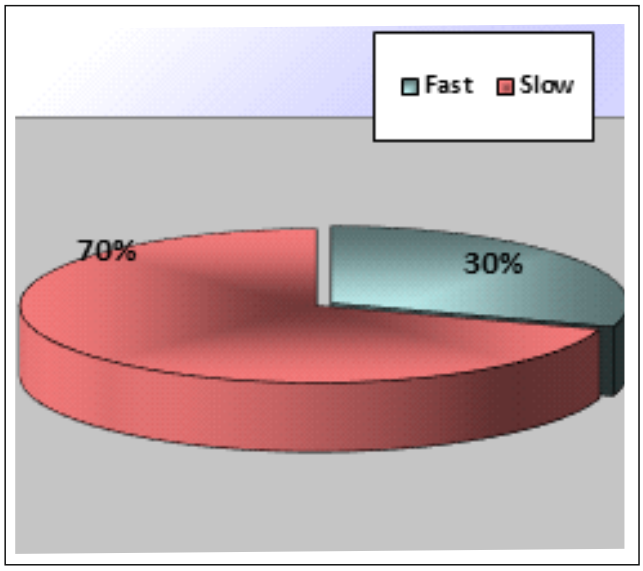

Figure 2: Distribution Frequency of Uterine Involution of Postpartum Mother of Control Group

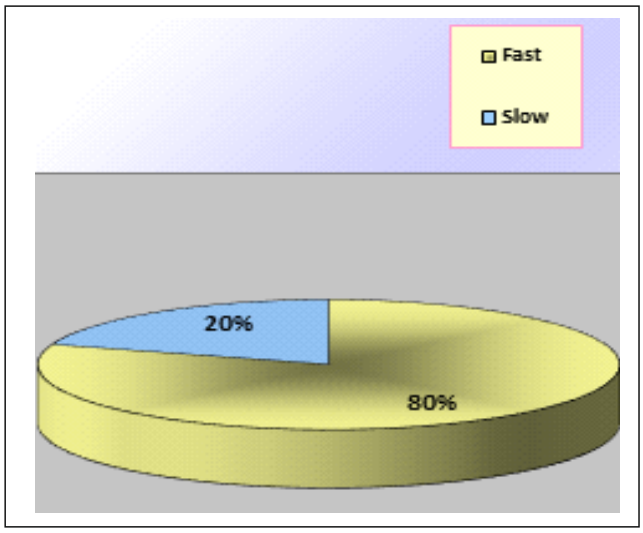

Figure 3: Distribution Frequency of Uterine Involution of Post Partum Mother of Experimental Group

From the diagram it can be seen that the uterine involution process in the treatment group is almost entirely faster at ≤10 days (80%) while the involution process in the control group is mostly slower (70%) than the treatment group. Most were slower (70%) in comparison with the treatment group.

To determine the relationship between postnatal exercises on postpartum involution process, statistic test is done by using *T* Dependent Test formula (Paired Sample) with degree of significance $\alpha = 0.05$.

Table 2: Average Invisibility Uter Post partum mother

Variable	Mean (cm)	SD	*P*-Value
Uterine involution :			
Respondents who were given gymnastic	9.7	1.4	0.004
Respondents who were not given gymnastics	11.5	1.35	

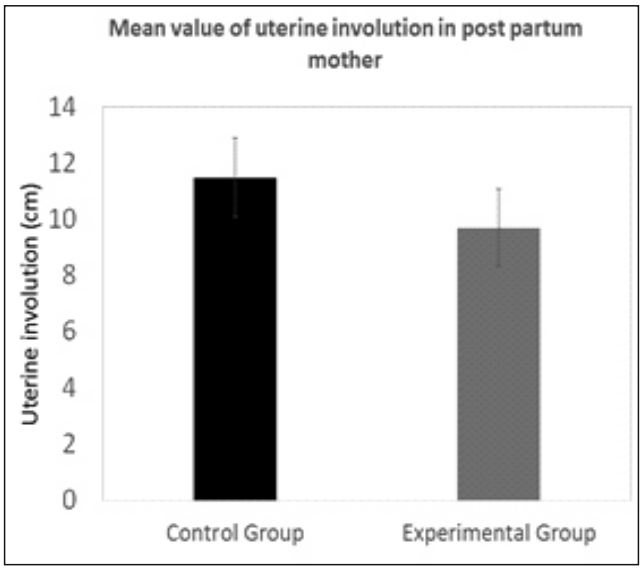

Figure 4: Mean Value of Uterine Involution Post Partum Mother

From the table and figure can be seen that the average involution of uteri on respondents who were given treatment of puerperal gymnastics is 9.7 with standard deviation 1.4. In the respondents who were not given gymnastics, the mean involution rate was 11.5 with a standard deviation of 1.35. The result of statistical test obtained p value = 0.004, where the value of $p \leq \alpha$ (0.05) hence can be concluded there is significant difference between uterine involution of respondent given gymnastics and which is not given gymnastics.

DISCUSSION

Respondents in this study amounted to 20 people divided into 10 people as an intervention group and 10 people control group.

The results showed that 10 post-partum mother who were given puerperal gymnastics were almost entirely under going a rapid involution process, while in 10 post-partum mothers who were not given puerperal gymnastics it was found that most were experiencing a slow involution process.

The mean of uterine involution on respondents who were given puerperal gymnastic treatment was 9.7 where as in the respondents who were not given gymnastics the mean involution rate was 11.5.

Result of statistical test get of *P* value = 0.004 so that can be drawn conclusion there is relation between execution of puerperal gymnastics with process uterine involution post partum mother. The results supported by (2004) research on 29 primiparous and 22 pluriparous in 2004 about postpartum uterine involution in primiparous and pluriparous polish longwool sheep Monitored by ultrasonography. The results show that uterine involution was completed in the majority of ewes till day 35 postpartum. Furthermore, the results indicate that parity affected uterine involution. It was completed earlier in primiparous than in pluriparous ewes.

The result also supported by Andriyani research at 30 respondents year 2013 about puerperal gymnastics on the uterine involution of post partum mothers in BPS Lia Maria Sukarame Bandar Lampung got *p* value = 0.03.

Lee et al.(2013) so has been a research about Effects of Sheng Hua Tang on Uterine Involution and Ovarian Activity in Postpartum Dairy Cows. The results showed that the areas and diameters of endometria were significantly (p<0.01) reduced in the group that received SHT compared to the control group on the seventh postpartum day. The group that received SHT had an intrauterine fluid volume mean of 1.2±0.6 cm3, which was significantly lower than that of the control group, 2.3±0.8 cm3 (p<0.01) on the 13th postpartum day. In addition, the uterine tension score was a mean of 1.0±0.0 in the group that received SHT, which was also significantly lower than that of the control group, 1.5±0.5 (p<0.01) on the 19th postpartum day.

Meanwhile according to Indriyani (2015) research confirmed that the perception of the postpartum mothers and their families about 'early and immediately period self care' with coeficient α = 0.05 from '*p* value' for each was 0.00.

Puerperal gymnastics can be done from one day after

birth until the tenth day, in the implement must be done gradually starting from the simplest stage to the repetition of the movement (Kasdu, 2006).

Whereas according to Bobak & Jensen (2005) puerperal gymnastics is one way to overcome the mobility damage in the postpartum. This Puerperal gymnastics is a useful movement to tighten loose abdominal muscles after chilbirth, strengthen the abdominal muscles and perineum so as to produce a good body shape, accelerate uterine involution, tighten the pelvic floor and improve blood circulation throughout the body.

The assumption of puerperal gymnastics researchers is better done immediately after delivery because puerperal gymnastics has many benefits for the recovery of maternal conditions after childbirth. The mother in the post partum period whether it is the birth of the first child or had given birth to a child before, will usually need information and instructions. Moms seem to gain new experiences and need new skills and information. In addition to the recovery of the condition the mother after childbirth gymnastics also can restore the ideal body shape because in general the attention of women after birth restore the body shape and abdominal wall as beautiful as possible.

After 12 days postnatal christmas is usually not palpable through the abdomen and after 6 weeks the size has returned to non-pregnant size (Farrer, 2001).

The assumptions of many post-partum mothers who undergo a rapid involution process or less than 12 days are not given postpartum exercises because even though only mobilization or doing homework will help the process of uterine involution depend on willingness and motivation.

When exercising gymnastics occurs contraction of the abdominal muscles that will help the involution process. Ambulation as soon as possible is indispensable in the process of involution. In addition, according to (Farrer, 2001). Puerperal gymnastics is one way to overcome the mobility damage in the puerperium. This puerperal exercise is a useful movement to tighten loose abdominal muscles after pregnancy, strengthens the abdominal and perineal muscles to produce a good body shape, launches lochea expenditure and accelerates involution, tightens the pelvic floor and improves blood circulation throughout body.

From several research and several theories above researchers to analyze that there is a relationship between puerperal gymnastics with the process of uterine involution this has been proven by some people who have done the research including the researchers themselves and research conducted by this researcher the same with research ever done by Some of the researchers above. By performing various movements of gymnastics provide significant benefits for mothers after childbirth. While postpartum exercises that are not done will experience physical changes, and recovery of the reproductive organs is slower.

CONCLUSION

Based on the result of the research, it can be concluded that the process of involution of uteri in the treatment group is almost entirely faster is ≤ 10 days while the involution process in the control group is mostly slower compared to the treatment group. From the statistical test, there is a relationship between postnatal gymnastics exercise and the process of uterine involution post partum mothers in midwifery room Ibnu Sina Hospital Bukittinggi City, where *p*-value = 0.004 and thereby H_A accepted.

There is need to do gymnastics by opening space for exercising postpartum exercises for postpartum mothers aiding restoration of their condition after the birth process and reduce the occurrence of complications such as bleeding.

Because of the limitations of the research it is hoped that the next researchers will be able to develop and continue this research by examining other factors affecting the process of uterine inversion and the difference of uterine involution in primiparous mother by multiparous using Quasy Experimental design.

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