

EFFECTIVENESS OF POSTPARTUM EXERCISE FOR POSTPARTUM WOMEN ON UTERINE INVOLUTION

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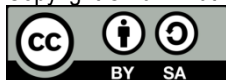
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ABSTRACT

The involution process will run well if uterine contractions are strong so that action must be taken to improve uterine contractions. Efforts to control the occurrence of bleeding from the placenta site by improving contractions with puerperal gymnastics. The purpose of the study was to determine the effectiveness of puerperal gymnastics on postpartum mothers on uterine involution at Puskesmas Pujud, Rokan Hilir Regency. Research Design Quasy Experiment. The population of postpartum mothers, which was taken by purposive sampling technique. Of the 17 postpartum women in the Pujud Puskesmas Working Area of Rokan Hilir Regency, before the puerperal exercise there was a decrease in TFU Fast 0 (0%), there was a decrease in TFU Normal 8 (47.1), there was a decrease in TFU Slow 9 (52.9) and after the puerperal exercise there was a decrease in TFU Fast 11 people (64.7%), there was a decrease in TFU Normal 6 (35.3), there was a decrease in TFU Slow 0 (0). There is a significant influence between postpartum exercises with uterine involution seen from the measurement of Uterine fundus height with the results of the One-Sample Test test P value of 0.000 < 0.05. It can be concluded that puerperal gymnastics is effective in reducing the height of the Uterine fundus of postpartum women at Puskesmas Pujud, Rokan Hilir Regency. It is hoped that all postpartum women can understand the benefits of postpartum exercises for the uterine involution process.

Keywords : Postpartum Exercises, Post Partum, Uterine involution

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INTRODUCTION

The postpartum period, also known as the puerperium, is a healing phase that lasts six to eight weeks after labor ends and ends when the uterine organs revert to their pre-pregnancy state. The process of restoring reproductive organs to women after giving birth is something that must be considered. Since this serves as the foundation for tracking the contraction's intensity and the uterine fundus's height (TFU). A well-contracting uterus will eventually become smaller and become imperceptible to the touch (Mindarsih and Pattypeilohy, 2020)

One of the disorders during the postpartum period is the process of recovering the physical condition of the postpartum mother, specifically the uterine involution process. Subinvolution is one disorder of the imperfect involution process that can cause bleeding and maternal mortality. Because they fear that their movements will actually have negative effects like pain and

bleeding, many postpartum moms are reluctant to move and instead choose to spend the majority of their time sleeping (Ardiyanti Hidayah, 2023)

Exercise after giving birth is crucial to the process of uterine involution. Strong uterine contractions are necessary for the involution process to progress, hence measures to enhance uterine contractions must be implemented. attempts to reduce placental bleeding by strengthening myometrial contractions and using postpartum workouts to retract myometrial fibers. As a result, a key component of postpartum care is maintaining uterine contractions with exercises designed to encourage the production of the hormone oxytocin. There are several ways to receive oxytocin, including oral, intranasal, intramuscular, and massage, which triggers the hormone's release. Postpartum exercise is a movement that will speed up the work of the

parasympathetic nerves to convey commands to the back of the brain so that oxytocin is released (Sari and Suhertusi, 2021).

When doing postpartum exercises, When the placenta emerges right after the involution process, the abdominal muscles tense, aiding in the involution process. The external and internal genitalia will progressively revert to their pre-pregnancy state during the postpartum phase. These changes in the genital organs as a whole are called involution (Prameswary and Kumaladewi, 2019).

Women who do not exercise after giving birth will see a slower rate of uterine involution. This could possibly be caused by several factors, namely age and activity or early mobilization. Postpartum mothers who are older will be affected by the advancing age mechanism. There will be metabolic changes associated with aging, including an increase in body fat, a decrease in muscle flexibility, and a reduction in the absorption of fat, protein, and carbs. Uterine involution will be inhibited if this process is linked to a decrease in protein as we age (Herlinda and Widyaningsih, 2022).

One of the changes in the reproductive system is uterine involution, This causes the uterus to shrink back to its pre-pregnancy weight of only 60 grams. The uterus undergoes the most modifications after the conclusion of the third stage of labor; at this point, it weighs 1000 grams and is roughly the same size as it was at 20 weeks gestation. However, it rapidly shrinks until the end of the first week(Wahyuningsih Endang, 2020).

The involution process can occur quickly or slowly, factors that influence uterine involution include: age, mother, number of children born (parity), occupation, education, exclusive breastfeeding, early mobilization and early breastfeeding. Early mobilization factors and postpartum exercises can help to speed up the uterus's return to its natural size because the movements carried out by the mother help to facilitate blood circulation and expulsion of lochea, thereby helping speed up the uterine involution process (Herlinda and Widyaningsih, 2022).

Postpartum activity, the early mobilization of new moms, the early start of nursing, diet,

psychology, age, and parity issues are some of the factors that affect uterine involution. A mother's body will go through a healing phase after giving birth and gradually revert to its pre-pregnancy state (Wahyuningsih Endang, 2020). Based on a preliminary survey on August 3 2023, in the Pujud Community Health Center Working Area, Rokan Hilir Regency, there were 15 women giving birth. The results of interviews with 10 postpartum mothers showed that 7 postpartum mothers who did postpartum exercises experienced normal uterine involution, uterine subinvolution was observed in three postpartum women who did not engage in postpartum workouts. The reason postpartum mothers do not do postpartum exercises is because they are afraid of pain and pain in the stitching wounds. Based on the description above, the researcher is interested in raising this problem in research entitled "Effectiveness of Postpartum Women's Postpartum Exercise on Uterine Involution at the Pujud Community Health Center, Rokan Hilir Regency"

METHOD

An experimental approach with a one group pretest-posttest design is used in this study. A One Sample T Test was employed for data analysis. The purpose of this study was to determine the effectiveness of Postpartum Gymnastics on Uterine Involution at Puskesmas Pujud, Rokan Hilir Regency. The subjects were watched both before and after the intervention. In the Rokan Hilir Regency's Pujud Community Health Center Working Area, this study was conducted from August to October of 2023. Normal postpartum moms in the Pujud Community Health Center Working Area, Rokan Hilir Regency, who satisfied the inclusion criteria and agreed to participate in the study as responders by completing a consent form after receiving informed consent, served as the subjects of this study. In this investigation, non-probability sampling was used. Purposive sampling, which included a total of 17 postpartum moms, was the sample technique employed in this study. The following were the inclusion criteria for this study: postpartum moms who meet physiological requirements, postpartum mothers that. Postpartum mothers

who experienced complications after giving delivery and mothers who declined to participate in the study were the exclusion criteria.

The uterine fundus's height is measured by the research apparatus using a meter. Bivariate analysis was performed by the researchers utilizing the One Sample T Test.

RESULT

Table 1 General Description of Respondent The characteristics (n=17)

Respondent Characteristics	n	%
Age		
20-35 Years	11	64.7
> 35 Years	6	35.3
Education		
Low	6	35.2
Intermediate	8	47
High	3	17.8
Parity		
Multiparous	12	70.5
Grande multiparous	5	29.5
Total	17	100

Table 1 above indicates that the bulk of the 17 respondents who were studied fall within the age range of 20 to 35 years, namely 11 respondents (64.7%), the majority have secondary education, 8 respondents (47%) and the majority of respondents are multiparous. as many as 12 respondents (70.5%)

Table 2 Frequency Distribution of the Effectiveness of Postpartum Women's Postpartum Exercises on Uterine Involution at the Pujud Community Health Center, Rokan Hilir Regency.

Variable	Before postpartum exercise		After doing postpartum exercises	
	N	%	n	%
Uterine Involuti on				
Fast	0	0	11	64.7
Normal	8	47.1	6	35.3
Slow	9	52.9	0	00
Total	17	100%	17	100%

Table 2 indicates that prior to the implementation of postpartum exercise, among the 17 postpartum moms in the Pujud

Community Health Center Working Area, Rokan Hilir Regency, normal uterine involution occurred in 8 respondents (47.1), slow uterine involution occurred in 9 respondents (52.9%) and After postpartum exercise, rapid uterine involution occurred in 11 respondents (64.7%), normal uterine involution occurred in 6 respondents (35.3%).

Table 3 Effectiveness of Postpartum Women's Postpartum Exercises on Uterine Involution at Pujud Community Health Center, Rokan Hilir Regency.

Variable	One-Sample Test					
	95% Difference Confidence Interva					
	t-test	df	Mean	Lower	Upper	Mark P-Value
Before Postpartum Exercise	20.27	16	2.5294	2.264	2.7939	0,000
After postpartum exercise	11,324	16	1.3529	1,099	1.6062	0,000

Table 3 indicates that the P value for the One-Sample Test is $0.000 < 0.05$. Therefore, postpartum workouts performed both before and after have an impact on lowering the fundal height of the uterus (TFU) of postpartum women at the Pujud Community Health Center, Rokan Hilir Regency, according to the grounds for decision making in statistical testing.

DISCUSSION

The majority of respondents (64.7%) in a study with 17 respondents were found to be between the ages of 20 and 35. This is consistent with the claim made by Bobak, Lowdemic, and Jensen (2015) (Bobak 2015) that women's reproductive and productive years are reflected in the high birth rates in the age ranges of 20 to 24 and 25 to 29. The Ministry's (Health 2016) data, which shows that the 25–29 age group is the largest among the productive age group, further supports this..

In total, respondents in this study had a high school educational background, namely 8 respondents (47%). This is also in accordance with research results (Wulandari 2021) that most study participants had completed both high school and college. Due of the numerous other

factors that also affect uterine involution, the educational variable has no direct impact on it. Socioeconomic position and education are frequently correlated. A person with less education typically comes from a low socioeconomic background. This will have an effect on nutritional status as well as income and purchasing power for necessities like food. A well-educated, independent woman will take care of herself and be able to select the healthiest foods and services for herself. It is said that women with greater levels of education tend to be more aware of their own health issues. (Wulandari 2021)

The majority of respondents were multipara, namely 12 people (70.5%). In multiparas, The rate of uterine involution tends to slow down in comparison to the primiparas, this is due to the physiology of the multipara uterine muscles reducing their elasticity, resulting in obstacles to uterine involution. In multiparas, the uterine muscles are often stretched, when the uterine involution process takes a long period due to overly stretched muscles (Retnowati and Indria 2023)

According to (Pramandari 2015) Additional elements that impact uterine involution comprise of premature postpartum mobilization, early breastfeeding, age factors and parity factors. Early post partum mobilization is a movement to change the mother's original position from lying, on her side, sitting to standing alone after a few hours of birth which can facilitate the expulsion of lochia (postpartum blood residue), speed up involution, facilitate the function of the gastrointestinal and urinary organs, and facilitate blood circulation. Early breastfeeding is one of the supporting factors for the uterine involution process because the baby's sucking stimulates the release of oxytocin and has a contraction effect on smooth muscles. During breastfeeding there will be contact between mother and child. Through physical contact between mother and baby, the peripheral concentration of oxytocin in the maternal circulation becomes higher in the first hour compared to just before pregnancy. So it will help speed up the process of uterine involution. According to the findings of the One-Sample Test, the P value is $0.000 < 0.05$. Therefore,

postpartum workouts performed both before and after have an impact on lowering the fundal height of the uterus (TFU) of postpartum women at the Pujud Community Health Center, Rokan Hilir Regency, based on the grounds for decision making in statistical testing..

Due to an increase in calcium ions in additional cells that bind to calmodulin and stimulate myosin kinase and phosphorylase, postpartum exercise can strengthen uterine muscle contractions. This results in constant uterine contractions and sporadic tugging of the muscles. (Ganong 2018) The uterus's constant contraction and retraction will clamp blood vessels, causing them to burst and disrupt blood circulation to the uterus. As a result, the muscle tissue will lack the necessary substances, causing both the uterus's size and uterine muscle tissue to decrease. In addition, the uterus will atrophy and return to its original shape due to the disruption of blood circulation to the uterus. (Masruroh 2020)

This research is also supported by research conducted by (Rullynil, Ermawati, and Evareny 2014) on how activity after giving birth affects postpartum moms' uterine fundal height. According to the study's findings, postpartum exercise decreased the height of the uterine fundus, with a p-value of $(0.00) < \alpha (0.05)$. The study's findings further clarify how practicing postpartum workouts consistently in accordance with recommended methods strengthens uterine contractions. Because of the compression of the blood vessels, there is less blood flow to the uterus, which leads to ischemia. The uterus gets smaller as a result of the tissue contracting.

The outcomes of studies (Sulistiyawati and Khasanah 2017) explained that more than 50% of respondents who often did postpartum exercise experienced rapid uterine involution, 9 (52.9%) respondents, while the rest often did postpartum exercise but experienced slow uterine involution. The significance level of 0.02 was derived from the tests of Fischer Exact Probability at $\alpha = 0.05$ because $P < 0.05$ indicates the rejection of H_0 , indicating a link between uterine involution and postpartum exercise. Uteri among postpartum moms in the Tawang Sari Health Center's operational region, Mojokerto Regency. analyzing the results of the

research and theory above, according to researchers, the influence of postpartum exercise on reducing the height of the uterine fundus in the work area of the Pujud Community Health Center, Rokan downstream region in 2023 is because carrying out postpartum exercise can stimulate the muscles to contract. The success of postpartum exercise is also supported by the mother's good condition, high awareness and encouragement from patients to do this exercise and also the responsibility of healthcare professionals in educating the public about health issues, including postpartum exercise.

In light of these findings, in order to hasten the involution process even more, it is recommended that postpartum mothers immediately carry out postpartum exercises in a structured, systematic and continuous manner, namely doing postpartum exercises regularly in the morning and evening twice a day, the number of movements that must be done and the exercise movements that exactly according to the instructions and pictures. Those who do not engage in postpartum exercise will see a slower decline in the height of their uterine fundus, this could occur due to a lack of activity or exercise carried out by the mother, causing uterine contractions to run less well which will result in the uterus returning more slowly to its pre-pregnancy shape. The implementation of postpartum exercises can also be influenced by health workers. The role of health workers, especially midwives, is expected to be able to carry out its role, in the form of health education aimed at postpartum mothers.

CONCLUSION

In response to the above One-Sample Test results, the P value is $0.000 < 0.05$. Therefore, postpartum exercises performed both before and after have an impact on lowering the fundal height of the uterus (TFU) of postpartum mothers at the Pujud Community Health Center, Rokan Hilir Regency. These findings are consistent with the criteria used for decision making in statistical tests. Postpartum mothers should carry out postpartum exercises in a structured, systematic and continuous manner according to the instructions given so that the

postpartum recovery process goes well. So that health workers at community health centers can implement and provide motivation to postpartum mothers to carry out postpartum exercises. So that the results of this research can become information and input for educational institutions and the midwifery profession, especially courses on postpartum midwifery care and breastfeeding, which can be used with postpartum exercises. the process of Involution of the uterus in postpartum women.. For further research on the involution process postpartum mother's uterus by looking at factors such as age, parity, education, early mobilization, employment and nutritional status.

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