



## The Effectiveness of Pregnancy Exercises on the Smoothness of Labor for Mothers Giving Birth at the Serasi Clinic

Srininta Srininta<sup>1\*</sup>, Mesrida Simarmata<sup>2</sup>, Indra Septiady Manurung<sup>3</sup>, Yarni Kristiani Zai<sup>4</sup>, Yudha Anggriani Putri Nasution<sup>5</sup>  
<sup>1-5</sup> STIKes Mitra Husada Medan, Indonesia

Adress: Jl. Pintu Air IV Jl. Ps. VIII No.Kel, Kwala Bekala, Kec. Medan Johor, Kota Medan, Sumatera Utara 20142

Author's correspondence: [mesridasimarmata@gmail.com](mailto:mesridasimarmata@gmail.com)

**Abstract** : Childbirth is a series of processes of expelling the fetus, placenta from the uterus to the outside world. Many complications can occur during childbirth due to various factors. HIS. Mal presentation, large fetus, KPD, narrow pelvis, and others. The efforts made are pregnancy exercises, pregnancy exercises so that the mother's body and reproductive organs become more flexible . Objective: To analyze the effectiveness of implementing pregnancy exercises on the smooth delivery process for mothers giving birth at the Serasi Clinic in 2024. Method: This research uses a survey method and a case control research design with a cross sectional design. Population: all mothers giving birth at the Serasi Clinic. Number: i as many as 35 people and with total sampling technique: 35 people. The instrument uses a questionnaire and the data analysis technique uses chi square analysis. Results: The majority of births were smooth, 27 people (77%). as many as 26 people (74%) took part in pregnancy exercise and 1 person (3%) did not take part in pregnancy exercise. Meanwhile, of the 8 people whose labor process was not smooth, 8 people (23%) did not participate in pregnancy exercises. The results of the Chi Square test by looking at the continuity correction obtained a P value of 0.000 (<0.05), so it can be concluded that there is a significant relationship between the implementation of pregnancy exercises and the smoothness of the delivery process at the Serasi Clinic in 2024.

**Keywords:** Pregnancy, Exercise, Smooth, Childbirth.

### 1. BACKGROUND

The maternal mortality rate (MMR) according to the expected health profile in 2024 is 183/100,000 live births, this figure is still far from the SDGs target of 70/100,000 live births (Ministry of Health of the Republic of Indonesia, 2023) . Conditions during pregnancy change in each trimester, intervention is needed during pregnancy so that the delivery will run smoothly (Ariendha, 2023) . Childbirth is a series of processes of removing the fetus, placenta from the uterus to the outside world , there are 4 stages of labor, namely stage 1 opening stage, stage II fetal expulsion, stage III placenta expulsion and stage IV supervision stage (Irfana Tri Wijayanti, 2022) . Many complications can occur during labor with various factors, namely the age of the pregnant mother who is too young or too old, the pregnancy gap is too close, the mother's lack of knowledge and attitude about pregnancy and childbirth, comorbidities during pregnancy, poor obstetric history. Complications that can occur are prolonged stage I labor, obstruction, shoulder dystocia, placenta rest, bleeding in stage IV. This can be screened if the mother routinely makes regular antenatal care visits (Putri et al., 2020) .

Prolonged labor is labor that occurs longer than the normal time, namely for the first stage of primiparous children 12 hours and multiparous children for 8 hours, if this has passed then it will pass the partograph line and will require immediate action because it can be dangerous for the mother and baby. Many factors can cause this prolonged labor, namely HIS. Malpresentation, large fetus, KPD, narrow pelvis, and others (Susilowati et al., 2021) . Many things can be done to facilitate this labor, such as previous research using the Peanut Ball technique (Susilowati et al., 2021) , while according to other studies, namely pregnancy exercises so that the mother's body and reproductive organs are more flexible . Pregnancy exercises are a series of activities carried out by pregnant women that can make the pregnant woman's physical condition more flexible and the mother's psyche more stable so that preparation for childbirth is better. The results of previous research by Fitriani et al. in 2023 showed that there was a relationship between pregnancy exercises and facilitating labor (Fitriani et al., 2023) .

From the results of a survey conducted at the Serasi clinic, out of 10 people who gave birth, 5 of them experienced complications in childbirth and 3 of them experienced prolonged labor. Based on this, the researcher is interested in researching the Effectiveness of Implementing Pregnancy Exercises on the Smoothness of the Labor Process in Mothers Giving Birth at the Serasi Clinic in 2024.

## **2. THEORETICAL STUDY**

Normal delivery is labor that begins spontaneously, has low risk at the start of labor and remains so throughout the labor process, the baby is born spontaneously in a posterior head presentation at 37-42 complete weeks of gestation and after delivery the mother and baby are in healthy condition. There are stages I, II, III, IV of labor.

There are many reasons why labor is difficult, both maternal and fetal factors. However, there are efforts that can be made to flex the reproductive organs so that delivery is smoother, such as pregnancy exercises

## **3. RESEARCH METHODS**

Research methods implemented with approach quantitative with *survey* method and design study *case control* with design study Which used is *cross sectional* . The population of this study was all mothers giving birth at the Serasi Clinic . The population was 35 people and the technique was *total sampling* . The instrument used a questionnaire and the data analysis technique used *chi square analysis*.

#### 4. RESULTS AND DISCUSSION

##### Analysis Univariate

Based on the data results in the documents obtained by the researcher, then can made distribution frequency characteristics Respondent covering age, education, work And parity Respondent as well as variable study as following:

**Table 1.**

**Distribution Characteristics Respondents in Clinic Harmonious**

Characteristics		Frequency	Percentage (%)
	< 20 years	3	9
Age	20-35 year	30	85
	> 35 years	2	6
	SD	2	6
Education	JUNIOR HIGH SCHOOL	11	32
	SENIOR HIGH SCHOOL	18	51
	College	4	11
	Housewife	28	80
Work	Private sector employee	2	6
	Self-employed	3	9
	civil servant	2	5
	Primigravida	11	31
Parity	Multigravida	24	69
	<b>Amount</b>	<b>35</b>	<b>100</b>

Based on table 1, the characteristics of the respondents are the majority of respondents aged 20-35 years as many as 30 people (85%) and the minority of respondents aged >35 years as many as 2 people (6%). The majority of high school education as many as 18 people (51%) and the minority of elementary school as many as 2 people (6%), the majority parity is multigravida as many as 24 people (69%) and the minority primigravida as many as 11 people (31%).

**Table 2.**

**Distribution Respondents of Pregnancy Gymnastics Implementation in Clinic Harmonious Year 2024**

Implementation Exercise Pregnant	Frequency	Percentage (%)
Exercise Pregnant	26	74
No Exercise Pregnant	9	26
Amount	35	100

*Source : Data Secondary, 2024*

Based on table 2 that the majority of respondents did prenatal exercises, as many as 26 people (74%) and the minority did not do prenatal exercises, as many as 9 people (26%).

Based on the data results in the documents obtained by the researcher, then can explained smoothness process labor on table following This:

**Table 3.**  
**Distribution Based on the Smoothness of the Delivery Process in Clinic Harmonious Year 2024**

Smoothness Process Labor	Frequency	Percentage (%)
Fluent	27	77
No Fluent	8	23
Amount	35	100

Source : Data Secondary, 2024

Based on table 3. It was found that the majority of deliveries went smoothly, as many as 27 people (77%) and the minority of deliveries did not go smoothly, as many as 8 people (23%).

#### Analysis Bivariate

Results analysis bivariate For see connection exercise pregnant with smoothness process labor. Connection between variable free with variable bound in study This use analysis *ChiSquare* with a significance level of 95% or p value = 0.05. The results are analysis bivariate can seen on the following table This:

**Table 4.**  
**The Relationship between Pregnancy Exercise Implementation and Smoothness Process Childbirth in Clinic Year of Harmony 2024**

Implementation of Pregnancy Gymnastics	Smooth Delivery Process						P. Value
	Fluent		Not smooth		Total		
	n	%	n	%	n	%	
Pregnancy exercise	26	74	0	0	26	74	0,000
No Prenatal Exercise	1	3	8	23	9	26	
Total	27	77	8	23	35	100	

Based on table 4, the results of the analysis of the relationship between prenatal exercise and smoothness process labor, obtained that 35 person Mother Which process her delivery fluent, as much as 26 person (74%) follow exercise pregnant And 1 person (3%) No follow

exercise pregnant. Temporary from 8 person with process labor No fluent as many as 8 people (23%) with all of them not participating in pregnancy exercises

Based on the table of results of the analysis of the relationship between prenatal gymnastics and smoothness process labor, obtained that 35 person Mother Which process her delivery fluent, as much as 26 person (74%) follow exercise pregnant And 1 person (3%) No follow exercise pregnant . Temporary from 8 person with process labor No fluent as many as 8 people (23%) with all of them not participating in pregnancy exercises

Results test Chi Square with see *continuity correction* obtained mark P *value* 0.000 (<0.05) so can concluded there is significant relationship between the implementation of pregnancy exercises with smooth delivery process at Serasi Clinic in 2024 .

## **Discussion**

### **Implementation Exercise Pregnant**

Based on table 4.2 that the majority of respondents did prenatal exercises, as many as 26 people (74%) and the minority did not do prenatal exercises, as many as 9 people (26%).

Prenatal exercise is a movement of pregnant women that can make the body of pregnant women more relaxed. According to previous research, prenatal exercise can help pregnant women in making their bodies more flexible and reducing anxiety in pregnant women. The results of this study are in line with previous research that age characteristics greatly affect the smoothness of labor (Susilowati et al., 2021) ,

In the results of this study, the majority of prenatal exercise because the majority of respondents aged 20-35 years with high school education and multigravida parity with the majority of jobs as housewives. So the respondents are still young with sufficient education in understanding information and experience that already exists in previous pregnancies.

### **Smoothness Process Labor**

Based on table 4.6. It was found that the majority of deliveries went smoothly, as many as 27 people (77%) and the minority of deliveries did not go smoothly, as many as 8 people (23%).

Labor is the process of the product of conception coming out of the uterus. Consists of 4 stages, namely stages I, II, III, IV. Stage I is the opening stage and stage II is the stage of fetal expulsion. In stages I and II, labor lasts a long time due to various causes (Irfana Tri Wijayanti, 2022) . Many factors can affect the smoothness of labor such as malpresentation, large fetuses and abnormal contractions (Susilowati et al., 2021) . Many efforts are made to

facilitate labor such as peanut butter (Trihartiningsih, 2023) . However, there are also ways to train physically so that the reproductive muscles are more elastic and relaxed, such as pregnancy exercises.

The results of this study are also in accordance with the study by S. Putri in 2020 that there is a relationship between age and labor complications (Putri et al., 2020) . The results of this study are in line with previous research by Fitriani in 2023 that pregnancy exercises can smooth the labor process in pregnant women (Fitriani et al., 2023)

In this study, the majority of respondents' deliveries went smoothly because the majority of respondents did pregnancy exercises.

### **Connection Exercise Pregnant with Smoothness Process Labor**

Based on table 4.4, the results of the analysis of the relationship between prenatal exercise and smoothness process labor, obtained that 35 person Mother Which process her delivery fluent, as much as 26 person (74%) follow exercise pregnant And 1 person (3%) No follow exercise pregnant. Temporary from 8 person with process labor No fluent as many as 8 people (23%) with all of them not participating in pregnancy exercises

Based on the table of results of the analysis of the relationship between prenatal gymnastics and smoothness process labor, obtained that 35 person Mother Which process her delivery fluent, as much as 26 person (74%) follow exercise pregnant And 1 person (3%) No follow exercise pregnant. Temporary from 8 person with process labor No fluent as many as 8 people (23%) with all of them not participating in pregnancy exercises

Results test Chi Square with see *continuity correction* obtained mark *P value* 0.000 (<0.05) so can concluded there is significant relationship between the implementation of pregnancy exercises with smooth delivery process at Serasi Clinic in 2024 which means that prenatal exercise is effective in facilitating the delivery process.

The results of this study are in accordance with previous studies that prenatal exercise in multiparity is very effective in facilitating labor, while in primigravida it is not (Rasumawati, 2019) . This study is also in accordance with previous studies that doing prenatal exercise regularly can facilitate reproductive muscles during labor (et al., 2023) . The results of this study are also in accordance with the results of Fitriani's 2023 study that doing prenatal exercise can facilitate labor (Fitriani et al., 2023) .

According to the researcher's assumption that the majority of respondents from 27 respondents who did prenatal exercise, only 1 person did not have a smooth delivery because the respondent was still a primigravida, while 8 people who did not do prenatal exercise had an

overall delivery that did not go smoothly. From this, it was found that respondents who did prenatal exercise had reproductive organs that were more elastic and strong during labor, thus facilitating delivery.

#### **4. CONCLUSION**

There is connection implementation of pregnancy exercises for smooth delivery in mothers giving birth at the Serasi Clinic. It is hoped that education will be given to pregnant women to do pregnancy exercises so that their delivery will be smooth

#### **Thank-you note**

We would like to thank the Head of STIKes Mitra Husada Medan who has facilitated the implementation of this research. Thanks also to Klinik Serasi who have agreed to be the place of this research and thank you to the Pregnant Women at the Serasi Clinic who have agreed to be respondents in this research. The limitation of this research is that it only conducted 1 observation, it is expected that further research will conduct the same research with repeated observations.

#### **BIBLIOGRAPHY**

- And, P., With, U., & Mother, P. (2022). Education, occupation and age with knowledge of mothers of toddlers about stunting. 4(1), 9–18.
- Chori Elsera, S., Soniya, S., Marwanti, M., Permatasari, D., & Hamranani, S. S. T. (2024). Pregnant women's knowledge of pregnancy nutrition as an effort to prevent stunting. *TRIAGE Journal of Nursing Science*, 10(2), 80–86. <https://doi.org/10.61902/triage.v10i2.912>
- Dayuningsih, P. E. A. T., & Tria, S. N. (2020). The influence of parenting patterns on feeding on the incidence of stunting in toddlers aged 0-59 months. *Andalas Public Health Journal*, 14(2), 3–11. <http://jurnal.fkm.unand.ac.id/index.php/jkma/>
- Dianna, D., Damayanti, D. F., & Purnamasari, M. (2023). Differences in knowledge and attitudes of pregnant women before and after being given a pocket book on stunting in the Sandai Health Center area, Ketapang Regency. *National Health Research Journal*, 7(1), 45–50. <https://doi.org/10.37294/jrkn.v7i1.470>
- Hidayah, N., Kurniawati, D. A., Umaryani, D. S. N., & Ariyani, N. (2024). The relationship between mother's knowledge about the first 1000 days of life and the incidence of stunting. *Muhammadiyah Nursing Journal*, 3(1), 51.
- Hidayati, D. U., Yulastini, F., & Fajriani, E. (2022). The influence of education in the first 1000 days of life (HPK) on the knowledge and attitudes of women of childbearing age (WUS) in Indonesian health development. 5(2), 169–177.

- Indah Lestari, N., Majid, R., & Harleli. (2024). An overview of the knowledge, attitudes, and actions of pregnant women about the. *Jurnal Wins*, 4(4), 222–226.
- Maryati, I., Annisa, N., & Amira, I. (2023). Dominant factors in the incidence of toddler stunting. *Journal of Obsession: Journal of Early Childhood Education*, 7(3), 2695–2707. <https://doi.org/10.31004/obsesi.v7i3.4419>
- Rahman, H., Rahmah, M., & Saribulan, N. (2023). Efforts to handle stunting in Indonesia: Bibliometric analysis and content analysis. *Journal of Government Science, Voice of the Equator (JIPSK)*, VIII(01), 44–59.
- Robinson, B., & Rahman, S. (2022). Preventing stunting in the first 1000 days of life in the Pasar Merah Barat village community. *Jurnal Implementa Husada*, 3(2).
- Wati, E., Sari, S. A., & Fitri, N. L. (2023). Implementation of health education on pregnancy danger signs to improve the knowledge of primigravida pregnant women in the work area of the Purwosari Health Center UPTD, Metro Utara District. *Jurnal Cendikia Muda*, 3(2), 226–234.