



Prenatal Gentle Yoga's Impact on the Length of the First Stage of Labor

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ABSTRACT

Every woman hopes for a natural and painless delivery. The mother must make cautious preparations to have a pain-free, trauma-free delivery. It is possible to get ready for childbirth by making the woman physically and mentally prepared. To assist a pain-free delivery process, good physical health, a healthy uterus, and strong muscles in the birth canal are required. Prenatal gentle yoga is one method that pregnant women can prepare physically well. Prenatal yoga, also known as yoga for pregnant women, is a variation of hatha yoga tailored to the needs of expectant mothers and will help the mother's body adjust to the many changes that occur throughout pregnancy and childbirth. This study looked at the impact of prenatal gentle yoga on the length of the first stage of labor. This study is quantitative with an actual experiment, with simply a post-test. The participants in this study were all postpartum mothers who were part of a group of expectant women from various parts of Indonesia. A total of 40 participants from the study separate into two groups, the intervention group (consisting of 20 participants who practiced prenatal gentle yoga) and the control group. Prenatal gentle yoga and the length of the first stage, according to the results of data analysis using the Spearman rho test ($p = 0.001$, $p < 0.05$). This study's findings suggest mild prenatal yoga during pregnancy affects moms' first-stage labor duration. First stage duration is shorter in moms who practice prenatal gentle yoga, with an average that varies from 2 to 5 hours, compared to mothers who do not practice prenatal gentle yoga, with an average first stage duration of 8 to 10 hours.

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1. INTRODUCTION

Natural and smooth delivery is the dream of every woman. The mother should carefully prepare a smooth delivery process and minimal trauma. Preparation for childbirth could be prepared by the mother's physical and psychic well. This natural and smooth delivery happens when the uterus contracts properly, rhythmically, and firmly with the muscles of the mother's lower uterus, cervix, and pelvis in a relaxed state, making it easier for the baby to pass through the birth canal. Mother will easily reach this state if she can calm and relax her body completely. Some physical exercises can be done before, during, and after pregnancy. The purpose of prenatal gentle yoga is to prepare the mother's body to face the process of changing the mother's body during pregnancy. The mother becomes healthy and fresher and prepares the mother's body to face the labor process than the mother. A

woman undergoing a normal pregnancy or without complications should be encouraged to do intense physical exercise to ease during pregnancy and its process (Raodah, 2021).

Prenatal gentle yoga is a yoga exercise done during pregnancy. This activity is one type of modification of hatha yoga adjusted to the conditions of pregnant women. The purpose of prenatal gentle yoga is to prepare pregnant women both physically and psychologically to face the labor process. Mothers will be more confident when done with careful preparation to gain confidence in undergoing labor smoothly and comfortably. Prenatal gentle yoga benefits the bio-motor component of the muscles trained and can also improve the mother's cardiorespiratory endurance as oxygen demand increases. Exercise during pregnancy has a positive effect on uterine activity, and cervical dilation will be coordinated during labor so that labor is faster and lasts shorter than those who do not continue prenatal yoga (Pratignyo, 2014).

Some studies show that prenatal gentle yoga benefits mothers, such as accelerating the mother's labor length and uterine contractions becoming strong (Kartikasari et al., 2020). Yoga exercises significantly affect the active phase's duration, whereas the group that does yoga exercises has a faster duration than the control group (Nopar, 2021). Therefore, researchers are interested in examining the effectiveness of prenatal gentle yoga on the duration of Kala I.

2. RESEARCH METHOD

This research design is quantitative research design using True experiment, which is post-test only. All postpartum mothers in a community of pregnant women from several regions in Indonesia became the population of this study. The sample of this study was 40 people consisting of 2 groups, namely the intervention group, where the mother did prenatal gentle yoga, and the control group never did prenatal gentle yoga; each group contained 20 people. Purposive sampling methods are prescribed for sampling that have met the inclusion criteria. The instrument in this study used a questionnaire distributed through a Google form. Data analysis of the effect of prenatal gentle yoga on the duration of first-stage labor in the intervention group and control group was analyzed using the Spearman rho test and SPSS application.

3. RESULTS AND DISCUSSIONS

Univariate analysis

Table 1. Characteristics of respondents

Characteristics of respondents	of	Duration of first stage	Intervention		Control		p-value*
			N	%	n	%	
Age (years)	20-25	2-5 hours	15	93,4	7	46,7	0,003
		8-10 hours	1	6,25	8	53,3	
	26-30	2-5 hours	1	25	4	80	
		8-10 hours	3	75	1	20	
Education	SD	2-5 hours	2	100	3	50	0,003
		8-10 hours	0	0	3	50	
	JUNIOR	2-5 hours	8	100	2	29	
		8-10 hours	0	0	5	71	
	SMA	2-5 hours	6	75	2	50	
		8-10 hours	2	25	2	50	
	Diploma	2-5 hours	1	100	2	66,7	
		8-10 hours	0	0	1	33,3	
Si	2-5 hours	1	100	0	0		
	8-10 hours	0	0	0	0		
Work	IRT	2-5 hours	10	77	4	24	0,003
		8-10 hours	3	33	13	76	
	Work	2-5 hours	6	86	1	33	
		8-10 hours	1	14	2	77	
Frequency of yoga exercises	Never	2-5 hours	0	0	8	40	0,003
		8-10 hours	0	0	12	60	
	5 times	2-5 hours	1	25	0	0	
		8-10 hours	3	75	0	0	

6 times		2-5 hours	2	67	0	0	
		8-10 hours	1	23	0	0	
7 times		2-5 hours	4	100	0	0	
		8-10 hours	0	0	0	0	
8 times		2-5 hours	9	100	0	0	
		2-5 hours	9	100	0	0	
		8-10 hours	3	15	12	60	
Maternity process	Usual	2-5 hours	17	85	8	40	0.003
		8-10 hours	3	15	12	60	

Table 1. The characteristics of respondents in this study had relatively diverse or different characteristics between the intervention group and the control group ($p = 0.003 < 0.05$). The intervention group was dominated by respondents aged 20-25 years with a short 2-5 hours duration. While in the same age range in the control group dominated by a long duration of time I which is 8-10 hours. Respondents who experienced a duration of 2-5 hours in the intervention group were dominated by junior and senior high school education, did not have a job or as a housewife, and the frequency of yoga was eight times.

Bivariate Analysis

Table 2. The effect of prenatal gentle yoga on the duration of the first stage

Variable	Intervention (mean ± SD)	Control (mean ± SD)	p-value*
Duration of the first stage	3.96 ± 0.999	9.83 ± 1,013	<0.001

Table 2. The analysis showed that prenatal gentle yoga affected the duration of the first stage ($p = 0.001 < 0.05$). The mean time in the intervention group was 3.96 hours, and the control group was 9.83 hours.

This study shows that prenatal gentle yoga affects the duration of time I. Labor is a series of expulsion processes that begin with contractions and end with the release of maternal fertilization results, characterized by changes in progress at the opening of the cervix and ending with the birth of the baby and placenta (Aji et al., 2022). Adequate contractions and optimal fetal position are the keys to a smooth delivery process. Adequate contractions can be created if the mother's body is in a state of physical and psychological readiness. Through gentle prenatal yoga, the mother's body will be prepared so that the uterine muscles become more flexible and contract properly. Optimal fetal position can also be realized through gentle prenatal yoga movements.

The birth process involves three factors related to and mutually influencing one another. The three influencing factors are the mother's physical, psychological, and mental strength (Noviyanti and Jasmi, 2022). Through prenatal gentle yoga, mothers are also trained to have psychological readiness because, in prenatal gentle yoga, mothers also have pranayama or breath exercises. She can overcome anxiety or fear during labor and calm her mind with good breathing exercises or meditation. A calm mind can make the mother more focused on overcoming pain during labor, and contractions will be more muscular because the mother feels relaxed (Suristyawati et al., 2019).

The age characteristics of respondents in the intervention group were predominantly aged 20-25 years and experienced period I quickly (2-5 hours). The age of 20-25 is optimal for healthy reproduction. Pregnancy will be risky if it occurs under the age of 20 and over the age of 35. The risk of complications that can occur includes miscarriage, anemia, preeclampsia, preterm labor, low birth weight, genetic disorders, and infections in pregnancy to cause death (Sukma and Sari, 2020). The age of 20-25 indicates a mature age for a mother to reach psychological maturity. In terms of physicality, the reproductive age is still very optimal for undergoing the process of pregnancy and childbirth. The body's metabolic system at this age of reproduction is still excellent; there has not been a decrease in organ functions in the body's metabolic process.

Intervention group education showed that junior and senior high school education passed the duration of labor faster (2-5 hours) than elementary school education. The level of education dramatically affects a person's ability to receive and understand information, circumstances, and the

surrounding environment. The level of education can support a person's ability to absorb information. In today's digital era, information is more accessible to the public. With high education, a mother is allowed to have an excellent ability to find information related to preparation for childbirth (Wijaya et al., 2020).

Duration of first stage is the discharge time that occurs between opening 0 to opening complete. The duration of the first stage for primigravida lasts 12 hours, while multigravida 8 hours (Sulfianti et al., 2020). The duration of the first stage is also related to the comfort of maternity mothers. Labor pain occurs due to cervical changes, namely dilation and thinning, ischemia in the uterus, and a decrease in the lowest part of the fetus. The long labor process will cause anxiety and fear, aggravating the pain. In addition, it will also cause fatigue and affect the improvement of pain perception.

Her contraction of the abdominal muscles, contraction of the diaphragm, and action of ligaments act as forces to push the fetus. This is a physiological contraction of the uterine muscles but, unlike other physiological contractions, causes pain. Uterine contractions are autonomic (not affected by will) but can be influenced from the outside, such as stimulation of the fingers of the hand (Ma'rifah et al., 2022). Factors that affect the duration of first-stage labor include the condition of the cervix, false contractions, and the use of analgesics or anesthetics (Kurniawati, 2017)

Uterine contractions can occur if the mother is relaxed or not depressed, also supported by the optimal fetal position. The hormone oxytocin can be appropriately produced if the mother feels a comfortable atmosphere full of warmth. One way to train a mother's calmness and physical readiness is through breathing exercises and gentle prenatal yoga (Aprilia, 2020).

Prenatal gentle yoga effectively prevents or reduces high maternal mortality and anxiety pain during pregnancy. Prenatal gentle yoga is one solution that pregnant women can do because mothers can feel relaxed and affect pregnancy, childbirth and even facilitate childcare activities later that can be obtained from pregnancy yoga classes. Practicing yoga while pregnant helps mothers focus more on regulating their breathing rhythm to bring comfort, security, and a sense of calm experienced by pregnant women when exercising (Aprilia, 2020). With mothers' good physical and psychological readiness and supported by an environment that supports normal childbirth, a comfortable and minimal trauma delivery is not just a dream. With good self-empowerment from mothers during pregnancy to prepare for childbirth, the goal of childbirth that is pleasant for mothers and families will also be easily realized.

4. CONCLUSION

The result of this study is that prenatal gentle yoga during pregnancy influences the duration of time I. The length of Kala I in mothers who do prenatal gentle yoga has a faster duration of 2-5 hours than those who do not, ranging from 8-10 hours. Pregnant women need gentle prenatal yoga to empower themselves and prepare for labor so that labor can run normally, smoothly, and with minimal trauma.

REFERENCES

- Aji, S.P., Prabasari, S.N., Kartikasari, M.N.D., Sakinah, I., Zulaikha, L.I., Susanti, Lestari, M., Darmiati, Khasanah, U., Sagita, W., Syamsuriyati, Petralina, B., Argaheni, N.B., Putri, N.R., 2022. *Obstetric Care in Childbirth*. PT Global Executive Technology, Padang.
- Aprilia, Y., 2020. *Prenatal Gentle Yoga: The Key to Giving Birth Smoothly, Safely, Comfortably, and Minimal Trauma*. PT Gramedia Pustaka Utama, Jakarta.
- Kartikasari, A., Hadisaputro, S., Sumarni, S., 2020. The Effect of Prenatal Yoga on the Duration of Labor Kala I Uterine Contractions and Changes in Endorphin Hormone Levels in Primigravida Mothers Case Study at Kadugede Health Center, Kuningan, West Java. *J. Health Science. Bhakti Husada Heal. Sci. J.* 11.
- Kurniawati, D., 2017. Management of Latent Phase to Active Phase Interventions on Labor Progress. *Nurscope J. Nursing and Thinkers. Ilm.* 3.
- Ma'rifah, U., Mardiyana, N.E., Sukarsih, R.I., Rozifa, A.W., Qodliyah, A.W., 2022. *Obstetric Care for Childbirth and Newborns*. Publisher Rena Cipta Mandiri, Malang.

- Nopar, R., 2021. The Effect of Pregnancy Yoga on the Duration of the Active Phase Based on the Partograph Curve. *J. Midwifery Sci. Women's Heal.* 2.
- Noviyanti, A., Jasmi, 2022. Physical and Psychological Factors of Maternity Mothers with the Intensity of Labor Pain Kala I in Primiparous Mothers. *J. Health.* 13.
- Pratigny, T., 2014. *Yoga Pregnant Women*. Pustaka Bunda, Depok.
- Raodah, 2021. Literature study: prenatal gentle yoga on anxiety levels in pregnant women. University of Muhammadiyah Mataram.
- Sukma, D.R., Sari, R.D.P., 2020. The Influence of Age Factors of Pregnant Women on the Type of Childbirth at Dr. H. Abdul Moeloek Hospital, Lampung Province. *Majority* 9.
- Sulfianti, Indryani, Purba, D.H., Sitorus, S., Yuliani, M., Haslan, H., Ismawati, Sari, M.H.N., Pulungan, P.W., Hutabarat, W.J., Anggraini, D.D., Purba, A.M.V., Aini, F.N., 2020. *Obstetric Care in Childbirth*. Our Foundation Writes, Medan.
- Suristyawati, P., Yuliari, S.A.M., Suta, I.B.P., 2019. Meditation to Overcome Anxiety in Pregnant Women. Health Study Program. Ayurveda, Fak. Wellness. Univ. Hindu Indones.
- Wijaya, J.F., Tanamal, C., Arif, J., Syahputri, F., 2020. The level of education of pregnant women and the regularity of ANC examinations. *J. Prima Med. Science* 4.