

The Influence of Tata Gym on the Progress and Pain of Labor



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ABSTRACT: Gymnastics and Yoga reduce the influences of anxiety in pregnancy, both help the body to be ready for childbirth and help to strengthen the pregnant women. Gymnastics is a form of coping to avoid physical stress due to pregnancy, such as leg and back cramps. Yoga is body exercise and it helps to understand how the body works. Tata Gym is one of the pregnancy exercises for pregnant woman that is developed by combining the movements of pregnancy exercise and yoga. The purpose of this study is to determine the differences in Tata Gym and yoga on the progress of labor. Methods: This study applied a post-test only with control group design. The research sample was 60 pregnant women who were selected using a purposive sampling technique, which were further divided into two groups, each being the intervention group (30 people) and the control group (30 people). In both groups, the progress of labor and level of labor pain were measured. Furthermore, the differences in labor progress and labor pain levels were tested using Chi-square tests. Results: The results showed that there was no difference in the progress of labor in the first stage between the groups of mothers who practiced Tata Gym and Yoga. There were differences in the progress of labor in the second stage between groups of mothers who practice Tata Gym and Yoga. The group of mothers who practiced Tata Gym experienced less labor pain than the group of mothers who practiced Yoga. Conclusion: Tata Gym is more effective to increase the progress of labor in the second stage and reduce labor pain than Yoga.

KEYWORDS: Yoga, elderly, blood pressure

I. INTRODUCTION

Pregnancy is one of the stages in life that must be prepared by a woman from the beginning of her pregnancy. During the process of pregnancy, physiological and psychological changes occur due to the increase of oestrogen and progesterone hormones which cause discomfort in pregnancy. Feelings of anxiety often occur during pregnancy, especially in primigravida which ends during labor. Anxiety arises from fears of safe labor and labor pain. Well prepared preparation will have an important role in pregnancy [1, 2].

Exercise reduces the influences of anxiety in pregnancy and makes the body ready for labor. The recommended exercise is pregnancy exercise, which helps woman's body to be stronger [3]. Gymnastics is an exercise in reversing the influences of stress that involves the parasympathetic part of the central nervous system. Pregnancy exercise is a form of physical activity that is beneficial because it develops body muscles, increases elasticity of the pelvic muscles and ligaments and decreases the incidence of bleeding during and after childbirth, and can reduce the incidence of fetal distress. Gymnastics is a form of coping that can avoid physical stress due to pregnancy, such as leg and back cramps [3,4]. The results of the Sicilian study (2016) showed that pregnancy exercises were influenceive against the time of labor with a P value <0.005 [5].

Ambivalent attitude is often experienced by pregnant women, meaning that sometimes they feel joyful and happy because they will soon become mothers and parents. Progesterone and estrogen levels in pregnancy will increase which causes discomfort in pregnancy [6-8].

In addition to pregnancy exercise, one of the sports activities that can be carried out during the prenatal period is yoga [8, 9]. Yoga is the best body workout exercise because it trains the muscles of the body and helps the pregnant women to understand how the body works. Breathing exercises are the most important element in doing yoga and ability to breathe well is very beneficial for the mother [9, 10].

Yoga helps the mother to be relaxed, and relaxation will inhibit the increase in sympathetic nerves, so the hormones that cause the body's dysregulation can be reduced. Priharyanti's research (2018) states that prenatal yoga has a positive influence on reducing anxiety levels of primigravida mothers in trimester II and III with a p-value of 0.004 [11].

Antenatal visits to trimester III (K4) in Karawang District decreased in 2016 which was 98.49% and mothers who did not do antenatal checks by 5.48%. Labor assistance met the national target of 97.30% with a higher number of deliveries at 2390

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cases and 1960 cases of normal labor. This is due to complications during pregnancy or childbirth and the patient's request for SC on the grounds of worrying about pain during normal labor [12].

II. METHOD

This research was conducted at the Musyasyfah Clinic in Karawang Regency, West Java, Indonesia from June to September 2019. This study applied a post-test only with control group design. The intervention group carried out Tata Gym, while the control group did yoga. The research sample was 60 pregnant women who were selected using a purposive sampling technique, which were further divided into two groups, each being the intervention group (30 people) and the control group (30 people). In both groups, the progress of labor and level of labor pain were measured. Furthermore, the differences in labor progress and labor pain levels were tested using logistic regression tests. This research had passed the ethical evaluation by the Health Research Ethics Committee of Poltekkes Kemenkes Jakarta I

III. RESULTS

The results showed that there was no difference in the progress of labor in the first stage between the groups of mothers who practiced Tata Gym and Yoga (Table 1). Table 2 shows that there are differences in the progress of labor in the second stage between groups of mothers who practice Tata Gym and Yoga. In this case, the progress of labor was faster in the group of mothers who carried out Tata Gym.

Meanwhile, Table 3 shows that the group of mothers who practiced Tata Gym experienced less labor pain than the group of mothers who practiced Yoga.

Table 1: The influence of Tata Gym and Yoga on the progress of labor stage I

Stage I	Variable				p-value
	Tata Gym		Yoga		
	Frequency	Percentage	Frequency	Percentage	
Not crossing alert line	26	86.7	23	76.7	0.506
Crossing alert line	4	13.3	7	18.3	

Table 2: The influence of Tata Gym and Yoga on the progress of labor stage II

Stage II	Variable				p-value
	Tata Gym		Yoga		
	Frequency	Percentage	Frequency	Percentage	
30-60 Minutes	22	73.3	12	40	0.018
≥60 Minutes	8	26.7	18	60	

Table 3: The influence of Tata Gym and Yoga on the reducing of labor pain

Labor pain	Variable				p-value	OR	IK 95%	
	Tata Gym		Yoga				Min	Max
	f	%	f	%				
Mild (4-6)	13	43.3	5	16.7	0.090	3.714	1.078	12.797
Moderate (7-9)	14	46.7	20	66.7	0.038	4.333	0.742	25.29
Severe (10)	3	10	5	16.7	0.103	0.385		

IV. DISCUSSION

The results showed that there was no difference in the progress of the first stage of labor between mothers who practiced Tata Gym and Yoga. In addition to these two interventions, the progress of the first stage of labor is also influenced by the size of the fetal head, presentation, location, attitude and position of the fetus. In addition, it is also influenced by birth canal factors such as the mother's pelvis and reproductive organs [13]. Regarding the intervention of the Gym, according to Almasyhur (2010), pregnancy exercise and yoga have a relationship with the strength of the pelvic floor muscles. Primigravida experienced an increase of 1.75 mmHg in the non-contracted condition and 1.5 mmHg in the contraction condition [14]. The progress of labor

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can be faster and the pain will be reduced if the mother is able to relax during her period. Relaxation by regulating breathing is done with the aim of helping to increase abdominal pressure [15].

In the second stage, the group of mothers who carried out the Tata Gym experienced faster labor progress. One of the causes of the slow progress of labor is anxiety facing childbirth, and having a weak physique. Labor pain felt by the mother can reduce the ability of the uterus to contract, thus hampering the progress of labor [13]. Gymnastics is useful for strengthening and maintaining the elasticity of the abdominal wall muscles, ligaments, pelvic floor muscles associated with childbirth [16]. Pregnancy yoga aims to prepare pregnant women physically, mentally, and spiritually to face the labor process. Exercise and yoga during pregnancy provide benefits during pregnancy and childbirth [17]. Sri Wahyuni (2013) reported that there was a significant relationship between pregnancy exercise and childbirth [18].

The group of mothers who did the Tata Gym felt lighter labor pains. This is in line with the results of Simamora's research in Apriana (2011) [19]. In accordance with Annisa's research (2017), the average pain scale of the first stage in primigravida who does pregnancy exercise is 7.3 with a minimum value of 5 and a maximum of 9 and the average in primigravida who does pregnancy yoga is 5.6 with a minimum value of 4 and a maximum of 8 [20].

V. CONCLUSION

Tata Gym is more effective to increase the progress of labor in the second stage and reduce labor pain than Yoga.

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