

The Effect of Labor Holistic Classes on the Belief of Mother against Labor, the Stress Level and Long Time of Second Stage of Labor

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Abstract--

Background: *The process of pregnancy and childbirth is a very valuable experience for women because at this time there were major changes both in the pregnant mother and the family, especially her husband, however not all women experience a pregnancy that goes well and ends with a delivery for the mother and baby.*

The purpose of this study was to determine the effect of the holistic class of labor on stress levels, labor beliefs, and the length of time II labor.

Methods: *This type of experimental research, pre-post test design with control group design, and the population is the third-trimester pregnant women with 33-34 weeks gestational age. They were randomly selected in the district of Tegal. Then the mothers were divided randomly into two groups that were given the Holistic labor class and the control group standard program for pregnant women. The total number of respondents were 30 pregnant women divided into two classes. Mothers in each class were given four times the meeting material for 4 weeks and measured before and after the intervention in the first and fourth weeks and followed until delivery. The analysis of data used t-test.*

Results: *The results showed that there was an influence on the level of stress and confidence of the mother to face labor before attending the holistic classes compared to the standard class of pregnant women ($p < 0.05$) and the differences significantly in the level of stress and confidence of the mother in the Holistic class compared to the standard class of pregnant women ($P < 0.05$). Besides that, there is also the influence of the duration of the second stage of labor with an average length of the second stage of 28.80 minutes and those who did not attend the Holistic class of the average length of the second stage of 80.53 minutes ($p < 0.05$).*

Conclusion: *Mothers must be prepared with the Holistic method of labor to reduce stress and increase maternal confidence in clarifying labor.*

Key words--labor holistic classes, second stage of labor, stress levels, labor beliefs

I. INTRODUCTION

The process of pregnancy and childbirth is a very valuable experience for a woman *because* at this time is a time of increased awareness and major changes both of the pregnant woman and the family, especially her husband. However, not all women experience a pregnancy that goes well and ends with a safe delivery to the

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mother in a healthy condition after childbirth and deliver a healthy born baby. Pre-delivery preparation provides material about the physiology of normal labor and techniques to reduce pain such as breathing techniques, massage endorphins, rebozo techniques, etc., will make the mother understand the natural labor process of labor contractions, the length of time of labor and labor pain so that mother is able to control emotions and apply the techniques that have been taught. Conversely, if they are not implemented, it can cause labor time to be longer so that it causes prolonged labor.

The government has a Class Program for Pregnant Women in every Public Health Center and village to provide knowledge to all pregnant women in order to able to undergo childbirth healthily and to detect high risks for pregnant women and delivery mothers, relating to a working husband.

Pregnant women need labor to be more calm and ready to go through labor. The Holistic Labor Class is a physical, mental, and spiritual preparation for childbirth in pregnant women so that pregnant women can empower themselves, feel calm and ready to face and plan labor without relying on others or information that is not necessarily true. The Holistic Labor Class is conducted routinely once a month. This class will explain the material about physical preparation or MCH (Maternal and Child Health) books, mental preparation including hypnobirthing, material from the pregnant class facilitator manual (Health Office), and spiritual preparation from quoting some hadiths and verses of Al-Qur'an that relate to childbirth (AMANI birth training).

Based on these considerations, it is necessary to study the effect of the holistic class of labor on the stress level (PSS score) and maternal confidence in facing labor (CBSE score), as well as the length of time 2 compared to classes of pregnant women.

II. RESEARCH METHODS

The type of research used in this study is the experiment study with a pretest-posttest with control group design, which is used to analyze the effect of holistic labor classes on decreasing PSS, increasing Childbirth Self-Efficacy (CBSE), and long-time of the 2nd stage of labor. This study involved in two groups consisted of group experiment and control groups. This type of research used in this study is an experimental study with a pretest-posttest with control group design, which is used to analyze the effect of the holistic labor class on decreasing PSS and increasing CBSE score, and also long time of the 2nd stage of labor.

The sampling was carried out randomly by drawing a population of the Public Health Center working area of the Tegal Regency Health Office consists of 29 Public Health Center. The population is classified into 2 clusters based on the area of each public health center namely Kramat Public Health Center and Kaladawa Public Health Center and then an individual sample is determined. This study draws on the characteristics of the population using inclusion and exclusion criteria which are used as research subjects so that there are 30 total mothers with 15 mothers each for the intervention and control groups.

The implementation of holistic labor classes and classes of pregnant women was held within 4 meetings, there were 2 meetings in a 1 week. The Holistic labor classes were held at Griya Hamil Sehat and for the class of pregnant women was held at the Dawuhan Village Hall. The material presented for holistic labor classes was the understanding of holistic labor classes, goals, benefits and targets, guidance and physical, mental and spiritual preparation of mothers in facing pregnancy and childbirth, types of relaxation such as birthing ball, rebozo, bladder, relaxation, and endorphin massage. At the third meeting, the material was presented about

Coping Skills, and then given classes of pregnant women about pregnancy, childbirth, newborns, immunization, myths about pregnancy and childbirth, sexually transmitted diseases and Birth Certificates. The methods which were used were lectures, brainstorming, questions and answers and practicing relaxation together.

The data analysis was begun with the data normality and homogeneity test to determine the characteristics of the data, and then the data was presented in tabular form. Test for normality used Shapiro Wilk.

The bivariate test was used to test the paired groups, in this case, the Wilcoxon Test to test PSS scores before and after the experiment and control groups and CBSE scores before and after the experiment group because the data were not normally distributed. Paired T-test was used to test the CBSE scores in the control group because the data is normally distributed. The bivariate test was used to test an unpaired group, in this case. Mann-Whitney test to test PSS scores, and the length of 2nd stage of labour and the difference between the experiment group and the control group and CBSE scores before, after and the difference between the experiment and control groups because the data are not normally distributed. Independent t-test to test the PSS scores before the intervention between the experiment and control groups because the data is normally distributed.

Ethical Clearance (EC) is a written statement given by the Research Ethics Commission for research involving living things which states that a research proposal is feasible after fulfilling certain requirements. Ethical Clearance in this study was conducted at the health research ethics commission of Dr. Moewardi Solo, Faculty of Medicine, University of Sebelas Maret with number 434 / III / HREC / 2019..

III. RESULTS AND DISCUSSION

A. Characteristics of Respondents

Characteristics of respondents include the characteristics of age, gestational age, education and psychology in the experiment group and the control group can be seen through the following table:

Table 1: Frequency Distribution of Respondent Characteristics

Variable	Groups				*p value
	Experiment (n=15)		Control (n=15)		
	N	%	N	%	
Education	Mean ± SD		Mean ± SD		0.417
SLTP	3	20.0	5	33.3	
SLTA	9	60.0	8	53.3	
PT	3	20.0	2	13.3	
Psikologi (HARS)					0.379
Mild	1	86.7	1	73.3	
Moderat	3		1		
	2	13.3	4	26.7	

ages	26.53±2.53	26.67±2.28	0.881
Gestation	33.60±0.50	33.47±0.51	0.481

Based on table 1, the results of the frequency distribution of the characteristics of the respondents in the experiment group were 26.53 years, 33.6 weeks gestation, 60% senior high school education, 86.7% mild psychological category. Characteristic frequency distribution of respondents in the mean age control group 26.67 years, 33.47 weeks gestational age, 53.3% high school education, 73.3% mild psychological category. After the Levene test is obtained p value > 0.05 means Homogeneous, there is no significant difference in the characteristics of respondents between the experiment and control groups.

B. Bivariate Analysis

a. Data Normality

Data normality test is done before the bivariate test in the experiment group and the control group to determine the test used. The data normality test results with Shapiro Wilk were as follows

Table 2 PSS and CBSE Normality Test Results before and after the intervention was given to the experiment group and control group.

PSS	Mean±SD	P value
Experiment		
Pre	18.00±0.65	0.089
Post	4.27±0.79	0.004
Δ	-13.73±0.45	0.123
Control		
Pre	19.80±3.73	0.291
Post	12.20±0.78	0.245
Δ	-7.60±3.61	0.399
CBSE		
Experiment		
Pre	104.33±10.93	0.004
Post	113.07±9.11	0.344
Δ	-8.73±13.54	0.161
Control		
Pre	94.87±9.60	0.716
Post	94.27±7.94	0.024
Δ	20.±5.16	0.481

Based on table 2, the test results for normality of data in PSS, before and difference are normally distributed with p value > 0.05 in the experiment group and the control group, for after the intervention is not normally distributed with p-value < 0.05 in the experiment group.

While the CBSE data normality test, before the experiment group and after the control group was not normally distributed with p value > 0.05 . For after and the difference in the experiment group and before and the difference in the control group were normally distributed because p value > 0.05 .

b. Homogeneity

A homogeneity test was performed to determine the variance of the intervention group and the control group as a condition in determining further data analysis.

Table 3: Test for homogeneity of PSS and CBSE in experiment and control groups

	Group	Mean±SD	P-value
PSS	Pre-	18.00	0.973
	Experi ment	±0.65	
	Pre- Control	19.80 ±3.73	
CBSE	Pre-	104.33	0.775
	Experi ment	±10.94	
	Pre- Control	94.87 ±9.60	

*Levene's test

Based on table 3, the initial homogeneity test of PSS and CBSE before intervention was given between experiment groups and groups.

There was no difference in initial intervention with p value > 0.05 so that the data variance in both groups was the same or homogeneous.

c. The Effects of a Holistic Class: Holistic labor on maternal stress levels (PSS)

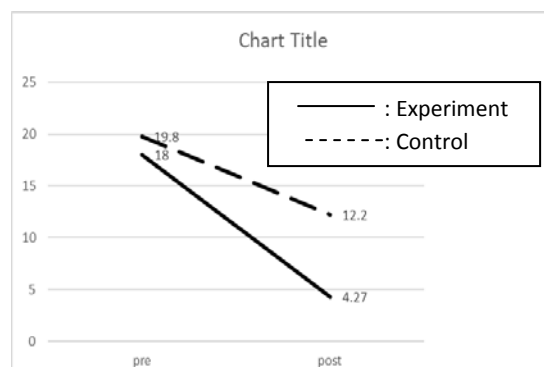
Analysis of the effect of PSS before and after the intervention was given to the experiment group and the control group

Table 4: Differences in PSS before and after the intervention is given to the experiment group and the control group

	Group		p value
	Experiment	Control	
	Mean±SD	Mean±SD	
Pre	18.00±3.73	19.80±3.73	0.225 ^a
Post	4.27±0.79	12.20±0.78	0.005 ^b
p- value	0.001	0.026	
Δ PSS	-13.73±0.45	-7.60±3.61	0.000 ^b

^aT-test Independent,

^bMann Whitney



Graph 1 Mean PSS before and after the intervention in the experiment and control groups

Based on table 4 the results of paired bivariate analysis ($n = 15$) obtained results before and after the experiment group showed a decreasing significantly PPS score (-13.73 ± 0.45) with p -value = 0.001 ($p < 0.05$) means that there are differences in PSS before and after the intervention in the experiment group while in the control group there was slightly decrease before and after standard classes (-7.60 ± 3.61) with p -value = 0.026 ($p < 0.05$) means that there are differences in PSS before and after the intervention in the control group.

Based on table 4 the results of unpaired bivariate analysis ($n = 30$) PSS scores obtained before intervention was given to the experiment and control groups p -value = 0.000 ($p < 0.05$). It is meant that there were significant differences in stress levels in the experiment and control groups. After intervention, the value of p -value = 0.005 and the difference p value = 0.000 means that $p < 0.05$. It is concluded that there were significant differences after and the difference in the PSS score.

Holistic childbirth class is a meeting of pregnant women and their companions (husband, parents or person appointed to assist), discussing and practicing skill of pregnancy and childbirth preparations.⁴ The presence of a companion is very influential during pregnancy and childbirth. A companion who still believes the myths circulating in the community can make pregnant women follow the commands and prohibitions that are not suitable by health science. The presence and support of a husband or family as a companion during pregnancy and childbirth can provide a sense of comfort, safety, enthusiasm, emotional support and can encourage the mother so that the delivery process runs smoothly, reduce pain, shorter labor, decreased labor with cesarean section and surgery, Apgar score < 7 and greater maternal satisfaction in the experience of childbirth experienced by the mother.

Labor holistic classes mothers were provided not only knowledge about pregnancy and birth but also, they were provided some skill how to deal with psikological problems such as anxiety and stress during pregnancy and birth. Holistic classes means that classes provided whole need biological, psychological, spiritual, and socio cultural around pregnancy and birth. Based on reference from Masaru Emoto's book which discusses the miracle of water carried out for 10 years and he was invited by WHO to present the results of his research. It was explained that water molecules from various countries including zam-zam water molecules have properties that are almost the same as the properties of 49 people, namely, water has the properties of hearing, feeling, recording, seeing and even being able to copy.⁴ The human body 70% consists of water and 82% blood. Water has an important role for human body, it is not only for physically that the body needs water, but the mind

and heart will also have an effect when the body faces anxiety and fear. In the case of pregnant women, it will affect the process of both physical growth and development of the fetus and some psychological aspects. The anxiety emerged in pregnant women will affect the process of expenditure of stress hormones or human catecholamines into the blood and make blood flow decrease and muscles tighten so that it makes pregnant women feel uncomfortable. Furthermore the body of pregnant women will physically experience many complaints that will affect the expenditure process hormones such as the hormone oxytocin, endorphins, catecholamines and prolactin needed by pregnant women.¹⁰ Pregnant women who experienced stress during pregnancy and birth will affect an increase cortisol hormone that affect pregnancy outcomes.¹¹ while mothers and husbands who attended labor holistic classes they were trained to some exercise to cope anxiety and stress during pregnancy and stress so they would have ability coping with stress and it would decrease cortisol hormone.

d. Analysis of the effect of CBSE before and after the intervention was given to the experiment group and the control group

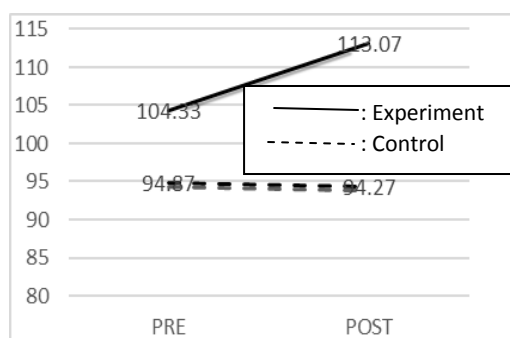
Analysis of the effect of CBSE before and after the intervention was given to the experiment group and the control group

Table 5: Differences in CBSE before and after intervention is given to the experiment group and the control group

	Group		p value
	Experiment Mean±SD	Control Mean±SD	
Pre	104.33±10.93	94.87±9.60	0.008 ^a
Post	113.07±9.11	94.27±7.9	0.000 ^a
P value	0.021 ^a	0.725 ^b	
Δ CBSE	8.74±13.54	0.60±5.16	0.024 ^a

^aWilcoxon, ^bT-test Paired

^aMann Whitney



Graph 2 Mean CBSE scores before and after the intervention in the experiment and control groups

Based on table 5 the results of paired bivariate analysis (n = 15), it was obtained that the results before and after the experiment group with p-value = 0.021 (p <0.05), it means that there are differences in CBSE scores before and after intervention in the experiment group whereas before and after in the control group p-value = 0.725 (p > 0.05) means there is no difference in CBSE scores before and after intervention in control group.

Based on table 5 the results of the unpaired bivariate analysis (n = 30) CBSE results obtained before and after as well as the difference was given interventions in the experiment group and the control group with p-value <0.05 which means there are significant differences between the experiment group and the control group, the experiment group experience an increase of CBSE score significantly (8.74 ± 13.54), while in control group experience a decrease CBSE score (0.60 ± 5.16).

Labor holistic classes the mother enters the labor process during the pregnancy and her companion (husband or family who are willing to accompany) are strongly encouraged to attend the holistic childbirth class because there is a discussion of material about pregnancy preparation and childbirth physically, mentally and spiritually. Pregnant mother, husband or family will understand the importance of pregnancy preparation, childbirth and the benefits felt until the pregnant mother's husband and family are able to empower themselves in dealing with every pregnancy complaint and childbirth process, materials provided in the holistic childbirth class include techniques to reduce feelings sick until the mother feels the sense of security while undergoing labor, this material is what they expect so that her husband and family can help doing the techniques that are taught before the childbirth process, then the patient and family receive guidance on techniques to reduce pain and provide the comfort feeling when contractions so that the patient and family feel confident and able to empower themselves in facing childbirth. These techniques include; rebozo technique, technique breathing, pill balls, compresses of warm water, and relaxation techniques.

The rebozo technique uses a long cloth that is wrapped around the mother's stomach or buttocks and then wiggles to make it easier for the baby's head to descend the pelvic floor and reduce pain so that the opening runs faster.⁴ The technique of abdominal breathing is by breathing in through the nose and exhaling through the wide-open mouth slowly so that the baby gets a good flow of oxygen, reduces tension in the muscles of the entire body, and expedites the flow of blood into the mother's brain. Pilates can be used when entering labor by sitting on it and resting on a flat floor so it does not fall, then rotating clockwise to make it easier for the baby to descend the pelvic floor or by bouncing the pilates ball so that the opening increases and widens the pelvic muscles.

Warm water compresses can be used as a sedative to reduce pain during contractions so that tense muscles can be more relax and are expected to be able to reduce contraction pain. Relaxation techniques can be done when the mother experiences contractions by relaxing the body's muscles with breathing techniques to provide the sense of comfort to the muscles at the time of the contraction.

In addition to the aforementioned techniques also provided material about hypnobirthing. This material can change the mindset of pregnant women and their companions to be able to think positively and confidently in facing childbirth process. As the study was done before that provide coping skill can help mother prepared better to face the delivery.

d. The Effect of Holistic Labor on the Second Stage of Labor

Table 6: Effects of Holistic Labor Class on the Second Stage of Labor

2nd Stage	Mean±SD	P*
Experiment	28,8±12,96	0,0001
Control	80,53±14,39	

* Independent t-test

Based on table 6 it can be seen that the results of labor holistic class measurements have a mean of the length of 2nd stage of labor was 28.80 ± 12.96 while the pregnant women class group was 80.53 ± 14.39 and the result obtained was $p\text{-value} = 0,0001$ ($p < 0.05$) so it can be concluded that H_a can be accepted. This data shows that there was an influence of the labor holistic class on the second stage of labor. The influence of holistic labor on the second time was faster, an average of 28 minutes and 8 seconds while in the control group it was longer 80 minutes and 53 seconds because during the first stage of labor, mother was treated with techniques to reduce pain during labor well, such as rebozo that uses a cloth to shake the stomach during contractions, pressing certain points in the back area, warm compresses in the area of pain during contraction using bladder, breathing techniques when contracting, playing pilates ball by wiggling the hips on pilates ball, and if it is possible, the patient is relaxed. The sense of comfort in the process of opening one until it becomes complete, can make the mother is calmer and it also can control her emotions until the complete opening. It is emerged when the husband is behind the mother, the midwife accompanies the mother in front of the mother, and the mother advises the squatting position before crowning, during contractions. Only a few times have been crowning, after crowning the position of the mother half-sitting leaning on her husband, with a comfortable position the baby is born gently accompanied by the chanting of the holy Quran that was heard during labor, the atmosphere and aroma of therapy that makes the mother becomes calmer. There will be also the sense of more attention and more valued, the delivery process goes according to the expectations of maternity, the husband and family feels a warm family atmosphere that is filled with happy smiles radiate on their faces.^{6,20}, after crowning the position of the mother half-sitting leaning on her husband, with a comfortable position the baby is born gently accompanied by the chanting of the holy Quran that is heard during labor, the atmosphere and aroma of therapy that makes the mother becomes calmer, there will be the sense of more attention and more valued, the delivery process goes according to the expectations of maternity, the husband and family feels a warm family atmosphere that is filled with happy smiles radiate on their faces

IV. CONCLUSION

Intervention of labor holistic classes (Holistic classes) was proven effective to decrease stress level (PSS), increase childbirth self-efficacy (CBSE). In addition, there was also a significant difference in long time period of the second stages of labor.

Recommendation

Antenatal classes should be given holistically not only about knowledge and skill during pregnancy and labor but also support from family and coping skill to prepare childbirth and better outcome.

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