

**Compress Warm Effect on Pain Labor Coverage Active Phase I in the Maternity Ward of Regional Public Hospital Prof. Dr. Aloei Saboe City Gorontalo****Dwi Nur Octaviani Katili<sup>1\*</sup>, Rona Febriona<sup>2</sup>, Nurhalida A. Tuna<sup>2</sup>**<sup>1</sup>Lecturer Study Program D-IV Midwife Educationalist Faculty of Health Sciences Muhammadiyah University of Gorontalo, Jl. Prof. Dr. H. Mansoer Pateda, Pentadio Timur, Telaga Biru District, Gorontalo Regency, Gorontalo 96181, Indonesia.<sup>2</sup>Bachelor of Applied Midwifery Study Program D-IV Midwife Educationalist, Muhammadiyah University of Gorontalo, Jl. Prof. Dr. H. Mansoer Pateda, Pentadio Timur, Telaga Biru District, Gorontalo Regency, Gorontalo 96181, Indonesia.**\*Corresponding author***Dwi Nur Octaviani Katili***Article History***Received: 11.06.2018**Accepted: 25.06.2018**Published: 30.06.2018***DOI:**

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**Abstract:** The objective of this research is to find out the influence of warm compression on childbirth pain active phase stage I. this research used Quasi Eksperimental method with non equivalent control grup pre-test and post-test approach. Technique of collecting data used Accidental sampling with 30 samples of respondents. Collecting data used T-test. From the statistical test paired T-test result showed T value 6,959 with Asymp sig: 0.000 when  $0.000 < 0.05$ . It's means the influence of warm compression on childbirth pain of active phase stage I.**Keywords:** Warm Compression, Maternity Ward, Child Birth Pain, Active Phase I.**INTRODUCTION**

Birth pain is pain due to myometrial contraction with the mechanism of biological and biochemical changes. Various nursing actions can be done to alleviate the pain felt by the mother to prevent birth complications [1]. Handling and supervision of labor pain especially in the first stage of the active phase is very important, because this as a determining point whether a delivery mother can give birth to normal or end with an action. Given the impact of pain is significant for both mother and baby, then there should be efforts to reduce the pain. These efforts are with nonpharmacological and pharmacological therapies. Nonpharmacologic therapy is a therapy performed without the use of drugs but by providing various techniques that can at least slightly reduce the pain during labor [2].

In addition, not a few mothers who choose to perform labor with cesarean section because they do not want to give birth normally to avoid pain. Section cesarea is a tendency that is offered and accepted by both parties (maternity and doctor) as a reasonable way of delivery. Actually worth living section cesarea is a risky action. Section cesarea without medical indication will harm the whole patient (infection, bleeding, pain, cost, etc.), even the baby (respiratory, death, illness, intensive care) [3].

The World Health Organization (WHO) says the average operating standard of Section cesarea is about 5-15%. Even the WHO Global Survey on Maternal and Perinatal Health 2011 data shows 46.1% of all deliveries with Section cesarea. In 2010 the case of Section caesarea in the United States amounted to 30.3%. Basic Health Research Results 2013 showed the birth of cesarean section by 9.8% with the highest proportion in Jakarta (19.9%), and the lowest in Southeast Sulawesi (3.3%) [4]. One way to limit or minimize high cesarean demand due to avoiding pain

is nonpharmacological therapy where the therapy does not harm the maternal mother and the baby is a warm compress. The action is for distraction that can inhibit muscle pain-inducing and can increase satisfaction during labor because the mother can control her feelings and strength [5]. The use of warm compresses for areas of tension and pain is thought to be able to relieve pain. Warm reduces muscle spasms caused by ischemia that stimulates neurons that block further transmission of pain stimulation causing vasodilation and increased blood flow to the compressing area. Emotional pain and tension increase levels of cortisol and catecholamines that can affect the duration and intensity of labor. Blood pressure and fetal heart rate increase, so the concentration of the mother during labor becomes disrupted. All of that will have a bad effect on the smoothness of labor [6].

Based on data from Ministry of Health 2013, Gorontalo Province was ranked 5th, which is about 14.9% for the demand figure of Section caesarea. The results of preliminary observations conducted in

regional public hospital Prof. Dr. Aloei Saboe, found that from January to July of 2017 the operation of the Cesarean Sectio was 83.9% including cesarean sectio at the sole request of the maternity mother because she was afraid of labor pain to be faced. While there are many non-pharmacological methods that can be done to overcome the pain, one with the method of warm compress. From the results of interviews conducted by researchers with one of the midwives in the Hospital has not been applied nonfarmakologis methods Warm Compress to reduce labor pain. The general objective of this research is to know the influence of warm compress on labor pain in stage I Active Phase in Maternity Room of regional public hospital Prof. Dr. Aloei Saboe City of Gorontalo.

**RESEARCH METHODS**

This research uses experimental design with the design of Quasi Experiment method (Experimental Semu) that is experimental activity that aims to know a symptom or influence caused as a result of intervention or certain treatment. With the Non Equivalent Control Group Pre-test and post-test in this study researchers wanted to learn about the effect of giving warm compresses to labor pain by looking at the differences between the groups that were given warm water compress and the group that was not given warm water compress. The variables used are Warm Compress as independent variable and Labor Pain of Kala I Active Phase as Dependent variable. Population used in this research is 105 mother inpartu in Maternity Room of regional public hospital Prof. Dr. Aloei Saboe of

Gorontalo City from 25 January to 10 March 2018. The sampling technique used is Accidental Sampling, which is a case taking or respondent who happens to exist or available on the spot in accordance with the research context [7]. Primary data includes data obtained from the observation sheets used by the researcher. The observation sheet obtained data about the influence of warm compress on labor Pain I Kala I Active Phase in the Maternity Room of Prof. Dr. Dr. Aloei Saboe City of Gorontalo. Likewise data on labor pain is obtained from the observation sheet. While secondary data obtained from maternity data in Medical Record and number of mother giving birth with Warm Compress.

**RESULTS AND DISCUSSION**

This study was conducted from 25 January to 10 March 2018 in the Maternity Room of regional public hospital Prof. Dr. Aloei Saboe Kota Gorontalo with primary and secondary data collection. This research was conducted in regional public hospital Prof. Dr. Aloei Saboe City. By sampling using the technique of Accidental sampling, where the determination of the sample by chance that anyone who by chance / asidental met with the researchers can be used as a sample. The sample of the study were 30 respondents (15 respondents of warm compress intervention group on labor pain and 15 control group respondents without intervention).

**Univariate Analysis**

**Table-1: Respondent Characteristics**

Characteristics	Category	Control		Intervention	
		F	%	F	%
Age	20-25	7	46.7	7	46.7
	26-30	3	20.0	3	20.0
	31-35	2	13.3	2	13.3
	36-40	3	20.0	3	20.0
Education	Primary School	2	13.3	2	13.3
	Junior High School	4	26.7	1	6.7
	Senior High School	5	33.3	10	66.7
	College/University	3	20.0	1	6.7
Work	No School	1	6.7	1	6.7
	Housewife	9	60.0	11	73.3
	Government employees	4	26.7	1	6.7
	employees	2	13.3	3	20.0
Parietas	Primipara	6	40.0	3	20.0
	Multipara	7	46.7	8	53.3
	Grande Multipara	2	13.3	4	26.7

Source: primary data, 2018.

Based on table-1 it was found that the majority of respondents in the control class were 20-25 years old as many as 7 respondents (46.7%), respondents aged 26-30 years balanced with the number of respondents aged 36-40 were each 3 respondents (20.0 %), while respondents aged 31-35

years as many as 2 people (13.3%). In the intervention class respondents, the majority of respondents were 20-25 years old as many as 7 respondents (46.7%), and at the age of 26-30 years were 3 respondents (20.0%), 36-40 respondents were 3 (20.0%) and respondents aged 31-35 years as many as 2 respondents (13.3%). In the

education characteristic, the majority of respondents in the control class are 5 (33.3%) of high school education, and uneducated respondents are 1 respondent (6.7%). In the intervention class, the majority of education respondents were also educated SMA as many as 10 respondents (66.7%). The majority of the work in the control class is as housewife (IRT), which is 9 respondents (60.0%), the

same as the control class, the majority of respondents in the intervention class also work as IRT as many as 11 respondents (73.3). In the control class, the majority of respondents to the characteristics of parity are 7 respondents (46.7%), and in the Intervention class the majority of respondents also are Multipara is 8 respondents (53.3%).

**Table-2: Frequency Pre-test and Post-test Class Control of Respondents Based on Decreased Labor Pain in Maternity Room of regional public hospital Prof. Dr. Aloi Saboe February of 2018. (N = 15)**

Category	Control			
	Pre-test		Post test	
	F	%	F	%
No Pain	0	0 %	0	0 %
Mild Pain	2	13.3 %	5	33.3 %
Medium Pain	7	46.7 %	8	53.3 %
Pain Weight	6	40.0 %	2	13.3 %

Source: primary data, 2018

Table-2 shows that labor pain pre-test of control class most of the respondents experience pain in moderate pain level that is 7 respondents (46.7%). Then the severe pain as much as 6 respondents (40.0%) and mild pain as much as 2 respondents (13.3%), after

observation 20 minutes later in the post test control grade pain level changes that is in severe pain, 1 respondent experienced pain reduction to moderate pain, and 3 respondents in severe pain experienced decreased pain to mild pain.

**Table-3 Frequency Pre-test and Post-test Class Intervention Respondents Based on Decreased Labor Pain in the Maternity Room of regional public hospital Prof. Dr. Aloi Saboe February of 2018. (N = 15)**

Category	Intervention			
	Pre-test		Post-test	
	F	%	F	%
No Pain	0	0 %	2	13.3%
Mild Pain	3	20.0%	10	66.7%
Medium Pain	7	46.7%	3	20.0%
Pain Weight	5	33.3%	0	0%

Source: primary data, 2018

In table-3 it can be seen that Intervention class before being given warm compress treatment majority of respondents also many who experience moderate pain are 7 respondents (46.7%), respondents who experienced severe pain as much as 5 respondents (33.3%), and respondents who experienced pain light as much as 3 respondents (20.0%). After being treated

20 minutes later there was a decrease of pain, 5 respondents who experienced severe pain turned into a mild pain, 4 respondents who experienced pain was experiencing a decrease in pain into mild pain 2 people, and no pain 2 people.

**Bivariate Analysis**

**Table-4: Pain Scale Pretest Birth Control and Pretest Interventions**

Category	Mean	N	Std. Deviation
Pre-test Controls	3.27	15	0.704
Pre-test Intervention	3.13	15	0.743

Source: primary data, 2018

Based on table-4 control class that is not treated the average pain is 3.27 with the standard deviation 0.704, whereas in the intervention class

before being treated the average pain is 3.13 with the standard deviation 0.743.

**Table-5: Pain Scale Post-test Control Post-test and Post-test Intervention**

Category	Mean	N	Std. Deviation
Post-test Controls	2.80	15	0.676
Post-test Intervention	2.07	15	0.594

Source: primary data, 2018

In table-5 it can be seen that in the control class that was not treated and after the observation 20 minutes later the average pain to 2.80 with the standard

deviation of 0.676, and in the intervention class treated by the average pain was changed to 2.07 with standard deviation of 0.594.

**Table-6: Influence of Warm Compress on Pain of Labor in Maternity Room of regional public hospital Prof. Dr. Aloei Saboe City of Gorontalo 2018. (N = 30)**

Category	N	Mean	SD	t hitung	P value
Pre-test Pain	30	3,13	0,743	6,959	0,000
Post-test Pain		2,07	0,594		

Source: primary data, 2018

In table-6 it is known that the average value of the pain scale in the pre test stage is 3.13, while in the post test stage the average value is lower that is equal to 2.07. Based on the results of research in the Maternity Room of Prof. Dr. Aloei Saboe City of Gorontalo 2018 which is processed by paired t test is obtained t value equal to 6,959, whereas p value obtained is 0.000 mean  $p < 0,05$  so indicate existence of influence of warm compress to pain of labor moment stage active in delivery room regional public hospital Prof. Dr. Aloei Saboe City of Gorontalo.

where at this age the reproductive organs are mature and functioning optimally [9].

Based on the results of research presented that, education of respondents can be seen most of the education level has exceeded basic education. The level of education in general affects the ability of a person to receive and understand the situation and the surrounding environment, thus affecting the perspective in solving the problem. Education is one of the factors that affect the knowledge. Respondents' education influences the knowledge of respondents, because the higher the respondent's education the easier it is to receive new information [7].

The results of this study are similar to the results of research conducted by Arsitya in BPS kusni Srimarwanti Dlingo Bantul Yogyakarta 2015 which states that there is a significant influence of warm compress on labor pain by using method of warm compress observation. Arsitya 2013, which states that the reduction of labor pain can be done with several methods, such as with warm compresses, by the use of easy, affordable, uncomplicated, little intervention, warm compresses can make the body feel relaxed thanks to the warmth of water which helps the blood vessels to dilate so that the blood flow becomes smooth and pain can be reduced due to a decrease in the head that suppresses blood vessels. Therefore, warm compresses can be used as a way to reduce pain during labor [8].

Education means the guidance given by a person to the development of others towards a certain aspiration. Main high level of education of a person then the easier in obtaining and receiving information, so the ability of mothers in thinking more rationally. Mothers who have higher education will be more rational that the ideal number of children is 2 people. Work is the status symbol of a person in the community. Bridge work to get the desired health service. Many assumptions that the status of a person's job is high then it can have many children because it is able to meet the needs of everyday life.

The results of the study on the age characteristics seen from the average age of respondents showed that the age group is relatively safe for childbirth Priharyanti [12], explains this age is physically ideal for married and pregnant because of this function of the reproductive organs is still optimal. Mental and emotional maturity at this age has also begun to be ready. According to research ever undertaken by Priharyanti age is safe to give birth and fertility period is in peak condition. Women younger than 20 years old and over 35 years old often have pregnancy complications that can affect fetal growth and development. Early adult age is a productive age

In this case, researchers also argue that work is one of the bridges in obtaining more information about non-pharmacological methods of warm compresses in reducing labor pain. For example, when a person works and works with people who work as a health service then directly the person is easily got information about the method of warm compress or anywhere where the birth that has applied the method, making it easier for the person tesebut in choosing the place of birth later. From 30 respondents in this research, it can be seen that the majority of respondents are Multipara respondents. Parietas are the number of pregnancies that produce a fetus that is able to live outside the womb. Parietas is a condition in women

who have given birth to a fetus weighing 500 grams or more, dead or alive and if weight is unknown then a 22 weeks gestational age limit is used from the first day of the last normal menstrual period.

Primipara, a woman who first gave birth where the fetus reached 28 weeks gestation or more. The woman who has been a child for the first time. Multipara, a woman who has been pregnant with a gestational age of at least 28 weeks and has given birth to pregnancy fruit 2 or more times. Grandemultipara, a woman who has been pregnant with a gestational age of at least 28 weeks and has given birth to pregnancy more than 5 times. In the research that has been done, it was found that there are some respondents who did not experience a decrease in pain. This is caused by several factors such as compression done on the respondent with the category of grandemulti where the respondent is only experiencing mild pain and after being treated, the pain did not change or decrease the pain.

#### **Influence of Warm Compress on K-1 Labor Pain Active Phase**

The level of pain in the control class pre test the average respondent entered the category of moderate pain of severe severe pain respondents as many as 6 respondents. After the re-observation of respondents category of severe pain experienced changes to moderate pain 1 respondents, 3 respondents experienced a change into mild pain and 2 respondents still experienced severe pain. In the intervention class the average category of pain was also included in the category of moderate pain, ie 7 respondents severe pain 5 respondents and respondents light pain as much as 3 people. After a warm compress treatment 20 minutes later pain category experienced a change that is 2 respondents who experienced severe pain turned into a category of pain, 3 other respondents turned into a mild pain. While 4 respondents from pain was experiencing a change of pain into mild pain, and 3 other respondents still experienced moderate pain or did not experience pain changes. This is in line with the opinion of Arsitya that childbirth is a painful physical experience [8].

This study also proved that respondents who were treated with warm compress experienced significant or better pain relief than respondents who were not treated with warm compresses. Although the action is not a substitute for drugs, such action may be necessary or appropriate to shorten episodes of pain lasting only a few seconds or minutes. One method of treatment of non-pharmacological pain during labor is given a warm compress. The principle of pain reduction with natural methods, namely reducing the mother's tension so that it can increase stamina to overcome the pain and not affect the baby being born. In this study tested the hypothesis using Paired T-Test. Paired T-Test test in this study aims to determine the

difference between labor pain before and after a warm compress. After the analysis can be seen that the value of t table amounted to 6.959 with a significance of 0.000. A significance value of  $0.000 < 0.05$  means there is a difference in labor pain before and after a warm compress. Research Akbarzadeh *et al.*, states that labor deliveries in pregnant women given warm compresses are lower than those without warm compresses. This intervention is best done to reduce labor pain in phase 2 [11].

Based on the results of paired t test results can be interpreted that  $H_0$  is rejected and  $H_a$  accepted means there is influence of warm compresses on labor pain phase I active phase in the Maternity Room of regional public hospital Prof. Dr. Aloe Saboe City of Gorontalo. Judging from the above data, it can be stated after warm compressing on painful areas, first stage maternal women experienced significant decrease of pain. Based on the results of the above analysis it can be concluded that the level of labor pain in the first stage maternal women have decreased the level of pain after warm compresses this is in accordance with the theory that warm compresses are factors that affect the reduction of labor pain. Warm compresses can make the body feel relaxed because kehangatan water that helps blood vessels that dilate so that the blood flow smoothly. From the results of this study, researchers assume that non-pharmacologic methods of warm compresses can help reduce labor pain during the active phase I. Because there are significant differences in pain before and after a warm compress. Research Akbarzadeh *et al.*, states that in addition to reducing labor pain, warm compresses are effective in reducing pain after childbirth, improving the perineum intact, reducing episiotomy and the mean length of the episiotomy incision [10].

Based on the results of paired t test can be interpreted that  $H_0$  is rejected and  $H_a$  accepted means there is the influence of giving warm compresses to labor pain during the first phase active in the Maternity Room of the regional public hospital Prof. Dr. Aloe Saboe City of Gorontalo. Judging from the above data, it can be stated after warm compressing on painful areas, first stage maternal women experienced significant decrease of pain. Based on the results of the analysis it can be concluded that the level of labor pain in the first stage maternal women have decreased the level of pain after warm compresses this is in accordance with the theory that warm compresses are factors that affect the reduction of labor pain. Warm compresses can make the body feel relaxed because kehangatan water that helps blood vessels that dilate so that the blood flow smoothly.

From the results of this study, researchers assume that non-pharmacologic methods of warm compresses can help reduce labor pain during the active phase I. Because there are significant differences

in pain before and after a warm compress. Research Akbarzadeh *et al.*, states that in addition to reducing labor pain, warm compresses are effective in reducing pain after childbirth, improving the perineum intact, reducing episiotomy and the mean length of the episiotomy incision [10].

## CONCLUSION

Based on the purpose and the results of the research conducted 30 maternal mothers who experienced labor pain in the maternity wards regional public hospital Prof. Dr. Aloei Saboe Kota Gorontalo, it can be concluded that there is a warm compress effect on labor pain during the active phase I in the delivery room of regional public hospital Prof. Dr. Aloei Saboe City of Gorontalo can be seen from the result of paired t-test statistic test shows significance value  $0.000 < 0.05$ , then  $H_a$  is accepted which means there is influence of warm compress on labor pain phase I active phase in delivery room of regional public hospital Prof. Dr. Aloei Saboe City of Gorontalo. It is expected that the family can do warm compresses to the mother when the mother suffered severe pain before arriving at the health service of the Puskesmas or Hospital in accordance with the techniques taught to overcome the pain felt. this warm compress method becomes a non-pharmacological therapy that can be applied at the time of helping the process of labor to help relieve the pain felt by the mother of maternity.

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