Conference Paper

Factors that Contributed the Management of Stage 1 Labor Pain Maternity Mothers the Delivery Room Dr. Derajat Prawiranegara Hospital Serang in 2019

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Abstract

In women who give birth normally, about 90% of mothers feel labor pain Stage 1. Medically, the pain is categorized as sharp and hot or somatic-sharp and burning. The pain typically starts when the head appears in the vagina. The tissue between the vagina and the anus (perineum) is stretched tight due to the head pushing it open. The mother feels pain due to the tearing of the tissue. Labor pain causes anxiety and fear so that the need for oxygen increases, blood pressure increases, muscles become tense, this condition will lead to prolonged labor, and can be a contributing cause in the death of mothers and babies. To determine the factors that contribute to pain during the first stage of labor in the delivery room dr. Derajat Prawiranegara Hospital Serang in 2019. The research design used was descriptive observational research, to see the factors that contribute to the management of Stage 1 labor pain. The statistical analysis indicates a significant relationship between education, family support, and coping mechanisms with the management of period 1 intrapartum pain, with p-value < 0,05%, while the factors that were not related were age, and parity, for the Stage 1 of labor pain, because the P-value > 0.05%.

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1. Background

Labor is defined as stretching and widening of the cervix, which occurs when the uterine muscles contract to push the baby out. The uterine muscles tighten during contractions. With each contraction, the bladder, rectum, spine and pubic bones receive intense pressure from the uterus. The weight of the head as it moves down the uterine tube also causes pressure. All of that was painful for mother[1]. Medically, pain is categorized as sharp and hot or somatic-sharp and burning. The pain occurs when the head appears in the vagina. The tissue between the vagina and the anus (perineum) is stretched tight due to the head pushing it open [2]. The mother feels pain due to the tearing of the tissue.

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Some mothers feel the bottom will explode, others feel like going to defecate after one month of constipation. According to Judha (2012) [3], the level of labor pain is described by the intensity of pain perceived by the mother during labor. The intensity of labor pain can be determined by asking for the level of intensity or by sulking on the pain scale. For example, the Wong 0-10 scale (numeric scale), a descriptive scale describing the intensity of painless to unbearable pain, scales with cartoon facial profiles and so on. Yanti (2009) in Farida.S, (2016) [4-5], said primigravidas feel more pain at the beginning of labor (stage I) than multigravidas. Primigravidas tend to experience more anxiety, which causes tension and fear. This painful condition will affect the exertion when straining if it is not managed correctly. It will result in childbirth both for the mother and for the baby and can even result in the pain and fatigue[6].

2. Method

The research design used was descriptive observational research, to see the factors that contribute to the management of interstate 1 pain, as independent variables, namely age, education, parity, family support, and coping mechanisms, the dependent variable for labor pain management, observed and measured at the same time as the study. In addition, a cross-sectional study can analyze the relationship between several variables and it is more practical to carry out. This research was conducted in April 20189 in the delivery room of dr. Degrees Prawiranegara Serang. Population and sample of were mothers who gave birth to stage1 inpartu giving birth at dr. Derajat Prawiranegara Serang and recorded in the Medical Record of dr. Prawiranegara degrees from April 2 to June 1, 2019, with inclusion criteria of pregnant women with gestational age 37-42 weeks in 1st stage of labor, single child, head position presentation, at least have junior high school education - PT. Based on these criteria, a sample of 105 mothers who are willing to become respondents is obtained. Before distributing the questionnaire, the questionnaire was tested on 20 people in the Wijaya Kesuma room, then assessed using the Pearson product control method (r) to test the and research the reliability of the questionnaire. The test results get the value of r table (0.263) so that it can be concluded that the questions to the eight variables are accurate and objective (valid). The analysis was continued with the reliability test by comparing the value of r (alpha) table with the value of r (alpha). The results obtained from this study turned out to be the r (alpha) value of 0.705. Previously, it was greater than the value of r table, namely r = 0.263, so the questionnaire value was considered reliable. Data collection was carried out by nurses and midwives whom the researcher appointed as assistants

using questionnaires and observation sheets. Data were analyzed using statistical tests and linear regression logistic tests.

3. Result

TABLE 1: Characteristics of Respondents Based on Age, Education, Parity, Family Support and Coping Mechanisms.

NO	VARIABLES		n	%
	AGE	< 20 Year	12	11.40%
		21 – 34 Year	71	67,6 %
		>35 Year	22	20,0 %
	Total		105	100,0 %

The distribution of respondents with period 1 labor pain from the table above can be seen that most respondents aged 21-34 years were 71 people (67.6%), respondents aged > 35 were 22 people while respondents aged <20 years were 12 people (11, 4%).

TABLE 2: Characteristics of Respondents Based on Education

NO	VARIABLES		n	%
	Education	SMP	49	46,6 %
		SMA	44	42,0 %
		PT	12	11,4 %
	Total		105	100,0 %

The distribution of respondents with period 1 labor pain from the table above can be seen that most

In the education variable, respondents have a junior high school education, namely 49 people (46.6%) and 44 people with high school education (42.0%), the remaining 12 were educated in college.

TABLE 3: Characteristics of Respondents Based on Parity

NO	VARIABLES		n	%
	Parity	Parity 1 x	48	45, 7 5 %
		Parity >2 x	57	54,3 %
	Total		105	100,0 %

The distribution of respondents with labor pain period 1 from the table above can be seen, most respondents gave birth> 2 x, namely 57 people (54.3%), while respondents who gave birth 1 x were 48 people (45,7 %)

The distribution of respondents with period 1 labor pain from the table above can be seen, In the Family Support variable, most respondents came from families that had a

TABLE 4: Characteristics of Respondents Based on Family Supprt

NO	VARIABLES		n	%
	Family Support	Low	12	11,4%
		Medium	47	44,8%
		Good	46	43,8%
	Total		105	100,0 %

moderate support system, namely 47 people (44.8%), high support for 46 respondents (43.8%) and the lowest support there were 12 respondents (11,4%)

TABLE 5: Characteristics of Respondents Based on Coping Mechanism

NO	VARIABLES		n	%
	Coping Mechanism	Yes	70	66,7%
		No	35	33,3%
	Total		105	100,0 %

The distribution of respondents with period 1 labor pain from the table above can be seen in the Coping Mechanism variable, it was found that most of the respondents had a good coping mechanism in conducting stage 1 pain management, namely 70 respondents (66, 7%), but there were 35 respondents (33.3%) whose coping mechanisms were not good.

5 Distribution of Relationship According to Age Status Management of Stage 1 Labor Pain in Maternity RSDP In Serang Regency 2019

TABLE 6

Age	Pain Status			Total	P Value	OR (95%ci)
	Low	Medium	High			
< 20 year	6	3	3	12	0,662	0.585 (2.837-2.403)
	50,0%	25,0%	25,0%	100.0%		
21-35 year	49	15	7	71		
	69,0%	21,1%	9,9%	100.0%		
>35 year	15	5	2	22		
	69,2%	22,7%	9,1%	100.0%		
Total	70	23	12	105		
	66.7%	21,9%	11,4%	100.0%		

The results of the analysis on the variable age of respondents with the highest pain status during the 1st stage of delivery were found in mothers aged <20 years, namely 3 respondents (25%) because the number of respondents was only 12 people. In contrast

moderate pain and low pain were found at all ages, namely 70 respondents (66, 7%). The statistical test obtained P value of 0.662 (> 0.05%), it can be concluded that there is no significant relationship between age and status of period 1 pain in labor. And get the OR value of 0.585 (95% C: 2.837-2.403). This means that there is no significant difference between maternal age <20 with maternal age 21-34 and> 35 years old in managing periodic inpartum pain 1

6. Distribution of Relationship According to Education Status Management of Stage 1 Labor Pain in Maternity RSDP In Serang Regency 2019

TABLE 7

Education	Pain Status			Total	P value	OR (95%ci)
	Low	Medium	High			
Junior High School	28	11	10	49	0,028	8.586 (12,520-14,134)
	57,0%	23,6%	20,4%	100,05		
High School	31	11	2	44		
	70,5%	25,0%	4,5%	100%		
College	11	1	0	12		
	91,7%	8,3%	0,0 %	100,0%		
Total	70	23	12	105		
	66,7%	21,9%	11,4%	100,0		

The results of the analysis on the Education variable obtained the highest results in Junior High School education as many as 10 respondents (20.4%) while the lowest pain was found in respondents with College Education, namely 11 respondents (91.7%).

The statistical test obtained a P value of 0.028 (<0.05%), it can be concluded that there is a significant relationship between education and the status of period1 inpartum pain in mothers with other disorders. The big difference can be seen from the OR, which is equal to 8,586 (95% C: 12,520-14,134) meaning that mothers with a junior high school education have an 8.5 times greater chance of developing labor pain compared to mothers with higher education.

4 Distribution of Relationship According to Parity Status Management of Stage 1 Labor Pain in Maternity RSDP In Serang Regency 2019

The results of the analysis of the relationship between parity and the stage 1 peroiod labor pain status showed that the majority of mothers with parity had never given birth, 33 respondents (68.8%) were able to perform stage 1 period pain management, and only

TABLE 8

Parity	Pain Status			Total	P Value	OR (95%ci)
	Low	Medium	High			
Not Given Birth	33	7	8	48	0,109	0,434 (1.156-1.815)
	68,8%	14,6%	16,7%	100.0%		
>1 Given Birth	37	16	4	57		
	64,9%	28,1%	7,0%	100.0%		
Total	70	23	12	105		
	66,7%	21,9%	11,4%	100.0%		

a small proportion of mothers with 1 birth experience experienced pain management. 1 high birth rate there are 8 respondents, as well as respondents who gave birth> 1 most of them can do pain management during the 1st stage of labor well. The results of statistical test obtained P value of 0.109 (> 0.05%), it can be concluded that there is no significant relationship between parity and period 1 Labor pain. The value can be seen from OR, which is equal to 0,434 (95% C: 4,344-4,433) means that mothers who give birth 1 x with mothers who give birth more than 1 x.

5. Distribution of Relationships According to Family Support Status Management of Stage 1 Labor Pain in Maternity RSDP In Serang Regency 2019

TABLE 9

Family Support	Status Nyeri			Total	P Value	OR (95%ci)
	Low	Media	High			
Less	1	2	10	12	0,03	13,.53 (15.430-16.263)
	8,3%	16,7%	75,0%	100.0%		
Media	31	14	2	47		
	65,9%	29,9%	4,2%	100.0%		
Good	38	7	1	46		
	82,6%	15,2%	2,2%	100.0%		
Total	70	23	12	105		
	66,7%	21,9%	11.4%	100.0%		

The results of the analysis of the relationship between family support for stage 1 pain found that the heaviest period 1 labor pain was found in mothers with low family support of 9 respondents (75.0%), while the lowest value of 1st stage inpartum pain was found in mothers with good family support 38 respondents (82.6%). The results of statistical

tests obtained P value of 0.03 (<0.05%), it can be concluded that there is a significant relationship between family support status and stage 1. pain giving birth at Dr Derajat Prawiranegara.

The value can be seen from the OR, which is equal to 13.530 (95% C: 15.430-16.265) which means that mothers who get low family support have a 13.5 x greater chance of experiencing pain labor during the stage 1 than mothers who get good family support.

6 Distribution of Relationship by Coping Status Mechanism of Mother with Management of Stage 1 Labor Pain in Maternity RSDP In Serang Regency 2019

TABLE 10

Coping Mechanism	Pain Status		Total	P Value	OR (95%ci)
	Yes	Not			
Positive	3	45	48	0.015	3.784 (1.373-10.427)
	6,25%	93,75%	100.0%		
Negative	32	25	57		
	56,1%	43,9%	100.0%		
Total	35	70	105		
	75.2%	24,8%	100.0%		

The results of the analysis of the relationship between the mother's coping response mechanism with period 1 inpartum pain, it was found that 32 respondents (56.1%) felt the first stage of intrauterine pain with negative coping mechanisms, while most of the mothers with positive coping were able to manage pain well, namely as many as 32 respondents (56.1%). 45 respondents (93.75%). The results of statistical tests obtained a P value of 0.015 (<0.05%), which means that there is a significant relationship between coping mechanisms and the response to period 1 pain in labor at the hospital, dr. Derajat Prawiranegara Serang.

The value can be seen from the OR, which is 3,784 (95% C: 1,373-10,427), meaning that mothers with negative coping mechanisms have a greater chance of experiencing stage 1 labor pain 3.7 times greater than mothers with positive coping mechanisms.

4. Discussion

The results of the analysis of the relationship between the age of the respondent and the pain management in the 1st stage showed that as many as 3 mothers (25%) were classified as pain stimuli who were less than 20 years old, while the pain in the stage 1

was low. 66, 7%) but the highest score was found at the age of 21-34, namely as many as 49 respondents (69%). High pain response, which occurs in young mothers <20 years old is caused because it is still in growth and development so that the uterus is still immature and still not elastic, When the head descends to the pelvic floor causing tight pressure and squeezing because the pelvic floor muscles are not yet elastic, this results in a strong pain felt by the mother. In mothers aged 21-35, the uterus is ready to carry the fetus so that the fetus can grow well and in addition, the emotional age at 21-35 years is stable so that she is able to act as an adult[7]. Theoretically, at age 20, some women may not be emotionally ready to get pregnant. At this age, usually most women still focus on marriage and career than other parts of their lives. Bringing in a third person to their newly formed small family may be a bit difficult for some women. Also, some women in their 20s may not want to change their body shape after pregnancy and while breast feeding[8]. Body image problems during pregnancy may be a big problem for most women in their 20s compared to older so that the pain stimuli that arise will be higher than those aged > 21. At the age of> 21-35 this is a fertile age, so it is the best time to get pregnant. Physically, a body is in prime condition to experience a pregnancy at this age. The risk of complications during pregnancy, such as gestational diabetes, high blood pressure, and miscarriage is still low at the age of > 20 and the mother can control the pain of labor[9]. Research shows that in their 20s the risk of developing gestational diabetes is half that of a woman who becomes pregnant at 40[10].

The results of the bivariate analysis obtained a p value of 0.662 which states that there is no significant relationship between age and pain status in the mother, this is because the respondents who are less than 20 years old, who are being studied are on average a lot of support from their husbands and families. So that the results of this study are different from: Melzack and Wall theory in (Rumbin 2008 and A Rahmawati at all 2016) [11-12], states that age affects the degree of labor pain, the younger the age, the more pain, when compared to the older age. The intensity of uterine contractions increases at a young age, especially in early labor, so that the pain is felt longer.

Likewise, the results of research conducted by Komariah (2005) in Magfiroh A (2012) stated that there was a significant effect on the difference in age between younger and older people, this was due to the fact that primiparous youth had more intense sensory than multiparous. many receive pain-reducing drugs [13-14]. According to research. T, (2012) states that the age that is considered safe to undergo pregnancy and childbirth is 20-35 years, in this age range the physical condition is still in prime condition, the uterus is able to provide protection, and mentally ready to face childbirth[15]. Pregnancy at the age of less than 20 years can cause problems, because the physical condition is

not 100% ready. Ages less than 20 years and> 35 years old are classified as pregnant women who have a high risk of 2.88 times for the occurrence of labor complications and pain discomfort due to complications that arise (Astuti. T, 2012)[16].

The results of the analysis of the relationship between education and periodic pain management 1.The results of the analysis on the Education variable obtained the highest results in junior high school education as many as 10 respondents (20.4%) while the lowest pain was found in respondents with college education, namely 11 respondents (91.7%). Notoatmojo (2003) states that the higher the level of education, the more material and knowledge that is owned to achieve good behavior change. So mothers who are highly educated are more tolerant of the pain they experience. Education is a factor that affects a behavior, education can also mature people so they can choose and make decisions appropriately. According to Azwar (1996) in Sulistiyawati. I., (2012) [17-18].

The statistical test obtained P value of 0.028 (<0.05%), it can be concluded that there is a significant relationship between education and the status of period1 inpartum pain in mothers with other disorders. The big difference can be seen from the OR, which is equal to 8,586 (95% C: 12,520-14,134), meaning that mothers with a junior high school education have an 8.5 times greater chance of developing labor pain compared to mothers with higher education. The results of this study are in accordance with research conducted by S Wahyuni and Wahyuningsih, (2016)[19], on the education of high school respondents better able to apply the measures and problems of handling stage 1 labor pain compared to lower education. However, this study contradicts the results of research by Magfiroh, A., (2012)[20] which states that there is no relationship between education and labor pain during the active phase because the P value is> 0.05% (0.530%).

The results of the analysis of the relationship between parity and the stage 1 labor pain status showed that the majority of mothers with parity had never given birth, 33 respondents (68.8%) were able to perform 1st stage pain management, and only a small proportion of mothers with 1 birth experience experienced pain 1 high birth rate, there were 8 respondents (16.7%), as well as respondents who gave birth> 1 most of them were able to manage pain during the stage 1 of labor well.

For the primiparous, the childbirth that she experienced was her first experience and ignorance was a contributing factor to the emergence of pain discomfort. As for multiparents, perhaps the pain is related to past experiences they have experienced (Kartono, 1992)[21].

Primiparous women have a longer labor than multiparous. This causes increased pain during childbirth (Handerson, 2006)[22]. The results of the statistical test obtained a p value of 0.109, so it can be concluded that there is no significant relationship between parity and period 1 labor pain, this is because the respondents who were conducted by the research, although primiparous / experienced labor for the first time but very much supported by husbands and their families, Besides that, she is diligent in participating in prenatal classes (pregnancy exercise) held at the health center during pregnancy checks. Research (2009) in Magfiroh.A, (2012)[23]., Differs from this research, which reveals that pain in one labor is different compared to pain in subsequent labor. This is because the primiparous cervix requires more force to stretch it, so that it causes a greater intensity of contractions during the stage 1 of labor. Research (2007) in Ayu NG (2017)[24], states that most of the multiparous experienced moderate pain levels. Meanwhile, primiparous tend to experience severe pain levels. This was due to the fact that the multiparous had experienced labor before, so it was possible for the mother to better prepare herself for labor pains[25].

The results of this study are also different from research in J Adam (2013), which has the same results as the theory that parity is one of the factors that can cause labor pain[26]. In addition, it can also be due to differences in the opening mechanism of the cervix, namely in the primipara the internal uterine osteum will open first so that the cervix will flatten and thin out, whereas in multipara ostium uteri internum is slightly widened, the internal and external uterine osteum and cervical flattening and thinning occurs at the time. together, so that the pain in multiparous tends to be lighter than that of the primiparous (Wikjosastro, 2005) in Puspita (2013)[27-28].

The results of the analysis of the relationship between the family support with period 1 inpartum pain found that there were 11 respondents (91.7%) who experienced high pain, received low support from the family, while for mothers who had high family support, there were 10 respondents (45, 5%) had low grade 1 pain in labor.

With the support of husbands and families, during the delivery process it can help meet the needs of mothers who give birth as well as help overcome labor pains (Martin, 2002) in Wuryanti (2017)[29]. The results of statistical tests obtained p value of 0.003, so it can be concluded that there is a significant relationship between family support status and period 1 labor pain in laboring mothers.

This research is not in line with the research of Risanto (2010), and the research of Pasaribu W.R.K (2018), which states that mothers who receive psychosocial support during childbirth have lower pain scores than mothers who do not get psychosocial support[30].

The same research conducted by Wibawanto (2003) in Sarwinanti (2015) states that there is a significant difference in the value of pain between mothers who are accompanied by their husbands and mothers who are not accompanied by their husbands during childbirth[31]. In contrast to Puspita.AD., (2013) which states there is no significant difference between mothers who are accompanied by their husbands when giving birth and mothers who are not accompanied by their husbands when giving birth[32].

The results of the analysis of the relationship between the coping status of the mechanism with period 1 labor pain, it was found that there were 42 respondents (87.5%) who had good positive coping in managing the first stage labor pain, while for mothers with a closed attitude, there were still some who 20 respondents (35.1%) have not done coping mechanisms well.

Every individual has a way to deal with stress. This mechanism helps the mother control pain, even though the pain is very disturbing. Sometimes individuals find it difficult to use their coping. Normally the mother can learn to cope with the pain regularly. Mothers who previously had long and difficult labor will experience excessive anxiety about the next birth. However, previous birth experiences do not always adversely affect her ability to cope with pain. A supportive environment can affect the perception of pain. Support during labor helps reduce anxiety and increase the ability to handle discomfort and the effectiveness of other pain reduction methods (Mander, 2003)[33]. Normally people learn to cope with pain at the time of pain, and use the same coping at the time of subsequent pain (Sherwen, 1995) in Anggorowati, A, and Nanda[34].

Statistical analysis obtained a p value of 0.015, it can be concluded that there is a significant relationship between coping mechanisms and pain response in mothers. This study is in accordance with the theory and opinion of previous researchers, as expressed as follows.

Rusdiatin research (2007) states that mothers who have previously experienced childbirth will be better prepared to face the next delivery[35].

5. Conclusion

There is no significant relationship between age and pain status in the age factor relationship between age and pain management. It can be proven from the results of bivariate analysis that the p value is 0.662, meaning that the p value is more than 0.05. This is because respondents who are less than 20 years old, who are being researched, on average receive support from their husbands and families, so that the results of the researchers can be different from Melzack's theory in (Rumbin, 2008) and Rahmawati

2016, and previous researchers. As well as for the parietas variable, the P value was found to be 0.109, there was no significant relationship between parity and period 1 labor pain, this was because the primiparous respondents who carried out the study on average received good support from their husbands and their families so that the mothers felt less pain. moderate pain, this study is different from previous researchers Komariah (2005) in Magfiroh (2012).

The results of statistical analysis on the factor of education with period 1 pain management obtained by the researcher obtained a p value of 0.028, so it can be concluded that there is a significant relationship between education and period 1 pain.This is in line with the theory put forward by Sherwen and Notoatmodjo (2010) and the researcher's opinion. earlier.

The relationship between family support and period 1 pain in childbirth, the statistical test obtained a p value of 0.003, so it can be concluded that there is a significant relationship between family support status and period 1 labor pain in labor, this study is in accordance with the theory of Martin (2002) which was stated and also from the research results of Yummi (2006) as well as research Risanto (2010).

Statistical analysis obtained a p value of 0.15, it can be concluded that there is a significant relationship between coping mechanisms and maternal pain response, this study is in accordance with the previous researcher's opinion theory, as suggested by Mander (2003). Support during labor helps reduce anxiety and increase the mother's ability to handle discomfort and the effectiveness of other pain reduction methods.

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