



THE RELATIONSHIP BETWEEN MATERNAL PARITY AND PERINEAL RUPTURE INCIDENCE IN NORMAL DELIVERY AT PMB MINARTI, Amd. b. TRAWASAN VILLAGE KEC. SUMOBITO REGENCY. JOMBANG

By

Sabrina Dwi Prihartini¹, Vivin Eka Rahmawati², Ninik Azizah³, Ruwaidatul Wardah⁴
^{1,2,3,4}DIII Midwifery Study Program, Faculty of Health Sciences, Unipdu, Jombang, Indonesia
Email: sabrinadwiprihartini@gmail.com

Article Info

Article history:

Received Jul 04, 2021
Revised Aug 16, 2021
Accepted Sept 28, 2021

Keywords:

Parity, Perineal
Rupture, Childbirth

ABSTRACT

Childbirth is one of the efforts to start the birth process, most of the births involve the birth canal, one part of the birth canal is the perineum. In labor parity also affects the incidence of perineal rupture, in parity or primiparous mothers there is a greater risk of experiencing perineal tears than mothers with multipara parity. This study aims to determine the relationship between maternal parity and the incidence of perineal rupture in normal delivery at PMB Minarti, Amd.Keb. Trawasan Village, Kec. Sumobito Kab. Jombang. The research design used in this study is a survey research method with an approach cross sectional which describes the relationship between maternal parity and the incidence of perineal rupture in normal delivery. Respondents who were given treatment consisted of 18 people who were divided into two. They are primiparas and multiparas. Measuring tool used by direct observation with patients. Research observations using the hypothesis test used in this study are Uji Chi Square which counted manually and SPSS with a significant level value of 0.05 (Alpha). The results of the study stated that from the primipara group there were 9 people who experienced perineal rupture, 8 people who did not experience perineal rupture, 1 person. Meanwhile, from the multiparous group, there were 9 people who experienced perineal rupture, 3 people and 6 people who did not experience rupture. Based on uji chi square in SPSS the result is that χ^2 count < significant level or $0.016 < 0.05$ then H_0 is accepted, which means that there is a parity relationship with the incidence of perineal rupture in normal delivery. The conclusion from the data above is that there is a relationship between normal delivery between maternal parity and the incidence of perineal rupture at PMB Minarti, Amd.Keb. Therefore, it is recommended for midwives to provide good and professional midwifery care and care for mothers.

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Corresponding Author:

Sabrina Dwi Prihartini
DIII Midwifery Study Program, Faculty of Health Sciences, Unipdu, Jombang, Indonesia
Email: sabrinadwiprihartini@gmail.com

1. INTRODUCTION

Childbirth is one of the efforts to start the birth process, most of the births involve the birth canal, one part of the birth canal is the perineum. The perineum has an important role in helping the normal birth process, the perineum is the part that most susceptible to rupture during labour. Apart from its location between the vagina and anus, the structure of the perineum consists of muscles and mucous lining which are prone to rupture or tear. (Rukiyah, 2010).

Rupture is a wound in the perineum caused by natural tissue damage due to the pressure of the fetal head or shoulders during the delivery process. The shape of the rupture is usually irregular, making it difficult to suture the torn tissue. It is said to be a Grade I perineal tear, if the tear only occurs in the vaginal mucous membrane with or without slightly touching the perineal skin, Grade II, if the tear that occurs is deeper, that is, in addition to affecting

the vaginal mucous membrane, it also affects the perineal transversalis muscle, but does not affect the anal sphincter, level III, if the tear that occurs affects the entire perineum to the anal sphincter muscles. (Rukiyah, 2010)

Parity affects the incidence of perineal rupture. Mothers with parity or primiparous mothers have a greater risk of experiencing perineal tears than mothers with multipara parity. This is because the birth canal has never been passed by the baby's head so that the perineal muscles have not been stretched. Perineal rupture is experienced by 85% of women who give birth vaginally. Perineal rupture needs attention because it can cause dysfunction of the female reproductive organs, as a source of bleeding and a route for infection to enter and exit, which can then cause death due to bleeding or sepsis. (Manuaba, 2012)

According to Stefan, a WHO figure in the field of obstetrics, around the world in 2009 there were 2.7 million cases of perineal rupture in pregnant women. This figure is estimated to reach 6.3 million in 2050, along with the increasing number of midwives who do not know midwifery care properly. (Hilmy, 2010) In America, 26 million birth mothers experience perineal rupture, 40% of them experience perineal rupture due to midwife negligence. 20 million of them are mothers giving birth. And that would put the medical costs to about 10 million dollars a year. (Heimburger, 2009)

Meanwhile, in Indonesia perineal lacerations are experienced by 75% of women giving birth vaginally. In 2013 found that out of a total of 1951 spontaneous vaginal births, 57% of mothers received perineal stitches, namely 28% due to episiotomy and 29% due to spontaneous tears. The prevalence of women giving birth with perineal lacerations in Indonesia in the age group of 25-30 years is 24% and in women giving birth aged 32-39 years is 62%. Maternal mothers who experience perineal lacerations can result in complications such as bleeding, fistulas, hematomas and infections (Champion, 2009).

Normal delivery care and maternal care during labor can minimize the occurrence of perineal rupture because perineal rupture can occur in almost all first deliveries (Primipara) and not infrequently in subsequent deliveries (Prawirohardjo, 1994). Primiparas are considered to be most at risk of spontaneous perineal rupture. In the new paradigm with basic delivery care, primipara is no longer an indication for episiotomy and is only performed with indications of fetal distress.

Based on data at PMB Minarti, Amd. Keb Trawasan Village, Sumobito District, Jombang Regency, starting from January - November 2020, there were 66 normal deliveries, 10 women who experienced spontaneous rupture with 6 primiparas and 4 multiparas.

Based on the data above, the authors are very interested in conducting further research with the title "Relationship between maternal parity and the incidence of perineal rupture in normal delivery" at PMB Minarti, Amd. b. Trawasan Village, Sumobito District, Jombang Regency.

2. RESEARCH METHODS

The research design used in this study is a survey research method with an approach *cross sectional* which describes the relationship between maternal parity and the incidence of perineal rupture. The population in this study were 18 mothers who gave birth at PMB Minarti, Amd. Trawasan Village District, Kec. Sumobito Kab. Jombang. The sample of this research is 18 mother with PMB midwife Minarti, Amd. Keb in Trawasan Village, Kec. Sumobito Kab. Jombang. Selection of the sample in this study using *Non Probability Sampling* with technique *purposive sampling*

This research was conducted at PMB Minarti, Amd. Keb in Trawasan Village, Kec. Sumobito Jombang Regency in December 2021 - May 2022. The instrument used is the MCH Handbook, which is a

3. RESULTS AND DISCUSSION

3.1 Research Results

This research was conducted at PMB Ny. Minarti, Amd. Keb Nglele Village, Sumobito, Jombang. In December 2021 by filling out a form based on the patient's MCH book records and observing data and patients. The sample size taken was 18 respondents as research subjects who met the inclusion and exclusion criteria that had been determined. The results of the study, apart from parity, will describe other characteristics, namely the age of the mother, the birth weight of the baby, parity, the incidence of spontaneous perineal rupture.

3.1.1 General Data

Respondent characteristics in this study include:

3.1.1.1 Characteristics of Mother's Age

Table 3.1 Distribution of Respondents' Characteristics Based on Mother's Age

| Age Group (Years) | Amount | Percentage (%) |
|-------------------|--------|----------------|
|-------------------|--------|----------------|



| | | |
|-------|----|-----|
| 20-25 | 10 | 56 |
| 26-30 | 8 | 44 |
| Total | 18 | 100 |

Source: Primary Data

Of the 18 samples studied, most were found in the 20-25 year age group, namely 10 (56%) people.

3.1.1.2 Characteristics of Education Level

Table 3.2 Distribution of Respondent Characteristics by Education Level

| Last education | Treatment Group | |
|--------------------|-----------------|-----|
| | N | % |
| SD | - | - |
| JUNIOR HIGH SCHOOL | 7 | 39 |
| SMA | 9 | 50 |
| College | 2 | 11 |
| Frequency | 18 | 100 |

Source :Primary Data

Based on table 3.2, the data shows that the majority of respondents with high school education were 9 (50%).

3.1.1.3 Characteristics of Birth Weight

Table 3.3 Distribution of Respondents' Characteristics Based on Baby's Birth Weight

| Baby's Birth Weight (Grams) | Amount | Presentase(%) |
|-----------------------------|--------|---------------|
| 2500 – 3000 | 12 | 67 |
| 3100 – 3500 | 6 | 33 |
| Total | 18 | 100 |

Source: Primary Data

Based on table 3.3 of the 18 cases, the incidence of spontaneous perineal rupture was most often found in babies born weighing between 2500 – 3000 grams, namely 12 (67%) people.

3.1.1.4 Characteristics of Parity

Table 3.4 Distribution of Respondent Characteristics Based on Parity

| Parity | Amount | Presentase (%) |
|-----------|--------|----------------|
| Primipara | 9 | 50 |
| Multipara | 9 | 50 |
| Total | 18 | 100 |

Source: Primary Data

Based on table 3.4 above, it can be seen from 18 respondents that the parity of mothers who gave birth at PMB Ny. Minarti, Amd.Keb Nglele Village, Trawasan, Jombang, there are 9 primiparas (50%) and 9 multiparas (50%).

3.1.2 Specific Data

3.1.2.1 Characteristic Ruptur perineum Spontaneous

Table 3.5 Distribution of Respondent Characteristics Based on Spontaneous Perineal Rupture

| Rupture PerineumSpontaneous | Amount | Presentase(%) |
|-----------------------------|--------|---------------|
| Happen | 11 | 61 |
| Not occur | 7 | 39 |
| Total | 18 | 100 |

Source: Primary Data

Based on table 3.5, out of 18 studies, it was found that 11 (61%) of women had spontaneous perineal ruptures.

3.1.2.2 Relationship Between Parity and Spontaneous Perineal Rupture

Table 3.6 Distribution of Relationship Between Parity and Spontaneous Perineal Rupture

| Free Variables | Dependent variable | | Total |
|----------------|------------------------------|-----------|-------|
| | Spontaneous perineal rupture | | |
| Parity | Happen | Not occur | |
| Primipara | 8 | 1 | 9 |
| Multipara | 3 | 6 | 9 |
| Total | 11 | 7 | 18 |

Source: Primary Data

Table 3.6 shows that there are 9 mothers with primiparas, while 9 mothers with multigravidas. Mothers with primiparas who experienced spontaneous perineal rupture were 8 (44%), while mothers with multiparas who experienced spontaneous perineal rupture were 3 (17%).

4.1.2.3 Chi square calculation

Table 3.7 Calculation of Chi Square Manually

| Parity | The perineum is broken | | | | | | Total |
|------------------|------------------------|-----|----------------|-----------|-----|----------------|-------|
| | Happen | | | Not occur | | | |
| | Fo | fe | X ² | fo | Fe | X ² | |
| Primipara | 8 | 5,5 | 1,14 | 1 | 3,5 | 1,8 | 9 |
| Multipara | 3 | 5,5 | 1,14 | 6 | 3,5 | 1,8 | 9 |
| Frequency | 11 | 11 | 2,28 | 7 | 7 | 3,6 | 18 |

Source: Manual calculation data

From the table above it is obtained x^2 count = 5.88 while the significant level = 3.841. So x^2 count > x^2 table or



5.88 > 3.841 then HI is accepted. Which means there is a relationship between parity and spontaneous perineal rupture.

Table 3.8 Calculation of Chi Square by SPSS

| | Value | Df | Asymp. Sig (2 - sided) |
|--------------------|--------------------|----|------------------------|
| Pearson Chi Square | 5.844 ^a | 1 | .016 |
| N of Valid Cases | 18 | | |

Source: SPSS Calculation Data

From the table above, the results are obtained *Chi-Square Tests Pearson* with a value of 0.016 where the significant level is 0.05 (Alpha). So it can be concluded that the level value < significant value or 0.016 < 0.05 so HI is accepted. That is, there is a relationship between parity and the incidence of perineal rupture in normal delivery.

3.2 DISCUSSION

3.2.1 Maternal Parity

From the results of this study, according to table 4.4, it was found that in the study there were 18 people in the sample, that the parity of mothers who gave birth at PMB Ny. Minarti, Amd.Keb Nglele Village, Trawasan, Jombang, 9 (50%) primipara, 9 (50%) multipara.

Results The characteristics of the respondents based on the age of the mother who experienced spontaneous perineal rupture during delivery were 10 (56%) people.

Parity affects the incidence of perineal rupture. Mothers with parity or primiparous mothers have a greater risk of experiencing perineal tears than multiparous parity mothers. This is because the birth canal has never been passed by the baby's head so that the perineal muscles have not been stretched. Perineal rupture experienced by 85% women who gave birth vaginally. Perineal rupture needs attention because it can cause dysfunction of the female reproductive organs, as a source of bleeding and a route for infection to enter and exit, which can then cause death due to bleeding or sepsis.

From what was concluded above, it turns out that most parities have an effect on ruptured labor, most of which are primiparas who experience spontaneous perineal rupture. In a primipara or a person who has just given birth for the first time when the head comes out. At this time a primipara usually cannot get a strong tension so that a tear occurs.

3.2.2 Rupture of the perineum

From the results found in table 4.5 based on research, out of 18 samples that labor that occurred spontaneous perineal rupture was found in 11 (61%).

Spontaneous perineal rupture occurs in almost all the first deliveries and not infrequently also in subsequent deliveries. Spontaneous perineal rupture is often found in primiparous mothers who have never given birth to a baby. Parity can affect spontaneous perineal rupture because the network structure of the perineal area in primiparas and multiparas is elastic. In nulliparas who have just experienced their first pregnancy (primigravidas) a rigid perineum can be found making it easier and prone to spontaneous perineal rupture, whereas in multiparas who have given birth to babies with more than 1 perineal area the area is more elastic. In addition, nulliparous mothers who are primiparous have never experienced childbirth when compared to multiparous mothers who are multiparous, this affects the management / delivery assistance to be carried out by midwives.

From what was concluded above, perineal rupture can pose a risk to the mother, because most of the labor has ruptured. Where labor uses extra energy if the mother is wrong in pushing and the position of labor for example when pushing the buttocks is raised, it is likely to experience tears or ruptures.

3.2.3 The relationship between maternal parity and the incidence of perineal rupture

Table 4.6 shows that there are 9 mothers with primiparas, while 9 mothers with multiparas. Mothers with primiparas who experienced spontaneous perineal rupture were 8 (44%), while mothers with multiparas who experienced spontaneous perineal rupture were 3 (17%).

According to research in Australia, every year 20,000 mothers will experience perineal rupture due to the ignorance of midwives about good midwifery care. The results of a study from the Bandung Center for Research and Development (Puslitbang), which conducted research from 2009 - 2010 in several provinces in Indonesia found that one in five birth mothers who experience perineal rupture will die (21.74%). (Siswono, 2007).

In Asia, perineal rupture is also quite a problem in society, 50% of the world's perineal rupture occurs in Asia. The prevalence of women in childbirth who experienced perineal rupture in Indonesia was in the age group of 25-30 years, namely 24%, while in mothers aged 32-39 years, it was 62%.

Normal delivery care and maternal care during labor can minimize the occurrence of perineal rupture because perineal rupture can occur in almost all first deliveries (Primipara) and not infrequently also in subsequent deliveries (Prawirohardjo, 1994: 20). Primiparas are considered to be most at risk of spontaneous perineal rupture. In the new paradigm with basic delivery care, primipara is no longer an indication for episiotomy and is only performed with indications of fetal distress.

The number of children ever born to a woman is an important factor in determining the fate of the mother and fetus both during pregnancy and during labour. The very first birth (primipara) usually has a relatively high risk for both mother and child, then this risk decreases at the second and third parities, and will increase again at the fourth parity and so on.

Position can also affect rupture, for example in a half-sitting position, if when the mother squeezes the baby's head is visible, the buttocks should not be lifted, which will result in rupture of the perineum.

Detention of the perineum also affects the occurrence of perineal rupture during labour, lack of containment in the perineum results in less elasticity in the perineum, a stiff perineum results in rupture.

At birth weight in the fetus, the greater the baby's weight at birth, the greater the risk of perineal rupture, because the perineum is not strong enough to hold the stretch of the baby's head with a large baby's weight so that during larger births, rupture often occurs.

The study concluded that parity was significantly related to the incidence of labor dystocia. Pregnant women with parity 1 or more than 5 have a risk of developing dystocia 3.86 times greater than pregnant women with parity 2 to 5. Because the number of children ever born to a woman is an important factor in determining the fate of the mother and fetus. And all this is also due to lack of cooperation or communication between birth attendants and birth mothers.

The results of data processing with the Chi-square test, showed that the calculated chi square was greater than the table Chi-square, namely $5.88 > 3.841$ and p value smaller than α ($0.000 < 0.05$). From the two statements above, it can be concluded that this research hypothesis is accepted, then the conclusion is that there is a significant relationship between parity and the incidence of spontaneous perineal rupture.

4. CONCLUSION

Based on the results of data research and discussion, which has been carried out at PMB Minarti, Amd. b. Trawasan Village, Kec. Sumobito Jombang, the following conclusions can be drawn:

In this study nulliparas who experienced their first pregnancy (primiparas) were found in 9 (50%) and multiparas were found in 9 (50%) people. From a total sample of 18 people, spontaneous perineal rupture was found in 11 (61%) people. So the results of this study indicate a significance value of $0.016 < 0.05$, so it can be concluded that there is a relationship between parity and the incidence of spontaneous perineal rupture at PMB Minarti, Amd.Keb.

5. SUGGESTION

1. For Midwives

It is hoped that this research can be used as input in providing midwifery care to patients and every health worker, especially midwives who provide health services to the community, should further improve the quality of service according to existing procedures, especially in maternity services, in particular for the midwives themselves to expand knowledge, increasing participation in APN training on how to deal with ruptures in normal childbirth.

2. For Institutions/education

Can be used as teaching materials/input to develop the learning process, especially regarding the gaps that occur between theory and reality. So hopefully it can be done developing theory and solving problems about the causes of gaps that occur to develop thinking for students.

3. For researchers

Further research is needed with a larger sample and better research methods so that more risk factors for spontaneous perineal rupture can be studied.



REFERENCES

- [1] Helen, Varney. Dkk. 2008. *Midwifery Care 4th Edition*. Jakarta : EGC Liu, D. 2008. *Childbirth Manual (Labor Ward Manual) Edition 3*, Jakarta : EGC : 136-7
- [2] Manuaba, C, et al. 2012. *Obstetrics-Gynecology Emergency & Social Genecology Obstetrics for the Midwifery Profession*. Jakarta : EGC :163
- [3] Nursalam. 2008. *Concept and Application of Nursing Research Methodology*. Jakarta: Salemba Medika
- [4] Oxorn, Harry. 2010. *Pathology and Physiology of Childbirth*. Yogyakarta: YEM Palimbo, Ardiana. 2011. *The Realtion Between Parity and perineal Rupture*. Sofian, Amru, SpOG. 2012. *Obstetrics Physiology, Obstetrics Pathology*. New Week : EGC
- [5] Sujiyatini. 2011. *Midwifery Care II (Delivery)*. Yogyakarta: Rohima Press Sukarni, Icesmi K. Margareth ZH. 2013. *Pregnancy, Labor and Postpartum*. Yogyakarta: Nuha Medika
- [6] Sukijo, Notoatmodjo. 2007. *Public Health Sciences and Arts*. Jakarta: Rineka Cipta
- [7] Sukijo, Notoatmodjo. 2010. *Health Research Methodology*. Jakarta: Rineka Cipta
- [8] Sulistyawati, Ari. 2010. *Midwifery Care for Maternity Mothers*. Jakarta: Salemba Medika
- [9] Varney, H. 2007. *Textbook of Midwifery Care: Volume 1*. Jakarta : EGC : 523. William. 2010. *Pathology and Physiology*. Yogyakarta: YEM Wiknjosasro, H. 2007. *Obstetric Surgery*. Jakarta : Sarwono Prawiroharjho Library Development Foundation : 175.
- [10] Wiknjosasro, H. 2007. *Obstetrics*. Jakarta :Sarwono Prawiroharjho Library Development Foundation : 181 : 195 : 662-6
- [11] Palibo, A. 2011. *The Realtion Between Parity and Perineal Rupture*.

THIS PAGE IS INTENTIONALLY LEFT BLANK