

FACTORS ASSOCIATED WITH THE INCIDENCE OF PERINEAL RUPTURE IN NORMAL DELIVERY

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ABSTRAK

Latar Belakang: Ruptur perineum adalah robekan atau cedera pada jalan lahir perineum yang terjadi pada saat persalinan baik secara spontan maupun akibat episiotomi dan persalinan yang dibantu. Umumnya, ruptur perineum terjadi pada kelahiran primipara dan seringkali pada kelahiran berikutnya. Di Indonesia, ruptur perineum dialami oleh 75% wanita yang melahirkan pervaginam. Dari 1951 kelahiran spontan pervaginam, 57% wanita menerima jahitan perineum, 8% karena episiotomi dan 29% karena robekan spontan.

Tujuan Penelitian: untuk mengetahui hubungan berat badan lahir, usia ibu, dan paritas ibu dengan kejadian ruptur perineum pada persalinan normal di wilayah kerja Puskesmas Karya Mukti tahun 2021.

Metode: Desain penelitian yang digunakan dalam penelitian ini adalah kuantitatif dengan metode survei analitik menggunakan pendekatan cross sectional. Dalam desain penelitian cross-sectional, para peneliti mengumpulkan data dari banyak individu yang berbeda pada satu titik waktu. Populasi dalam penelitian ini adalah seluruh ibu yang bersalin normal pada bulan Januari – Agustus 2021 di wilayah kerja Puskesmas Karya Mukti, sebanyak 57 orang. Teknik pengambilan sampel yang digunakan dalam penelitian ini adalah total sampling. Karena jumlah populasi kurang dari 100 maka seluruh populasi dijadikan sampel penelitian yang terdiri dari 57 orang.

Hasil: uji statistik Chi-Square pada variabel berat lahir diperoleh p-value 0,019 ($< = 0,05$), pada variabel usia ibu diperoleh p-value 0,023 ($< = 0,05$) dan pada variabel paritas diperoleh p-value dari 0,014 ($< = 0,05$). Artinya ada hubungan yang signifikan antara berat badan lahir, usia ibu dan paritas dengan kejadian ruptur perineum di wilayah kerja Puskesmas Karya Mukti.

Saran : Sebaiknya Puskesmas Karya Mukti lebih aktif memberikan penyuluhan kepada bidan terkait dengan kejadian kejadian ruptur perineum.

Kata kunci: Berat lahir, Paritas, Ruptur perineum, Usia ibu

ABSTRACT

Background: Perineal rupture is a tear or injury to the perineal birth canal that occurs during delivery either spontaneously or as a result of an episiotomy and assisted delivery. Generally, perineal rupture occurs in primiparous deliveries and often in subsequent deliveries. In Indonesia, perineal rupture is experienced by 75% of women who give birth vaginally. Of the 1951 spontaneous vaginal births, 57% of women received perineal sutures, 8% was due to episiotomy and 29% was due to spontaneous tears.

Research Objective: to determine the relationship of birth weights, maternal age, and maternal parity with the incidence of perineal rupture in normal delivery in the working area of Karya Mukti Public Health Center in 2021.

Methods: The research design used in this study was quantitative with an analytical survey method using a cross sectional approach. In cross-sectional research design, the researchers collected data from many different individuals at one point in time. The population in this study were all mothers who gave birth normally in January – August 2021 in the working area of Karya Mukti Public Health Center, as many as 57 people. The sampling technique used in this study was total sampling. Because the total population was less than 100, the entire population was used as the research sample consisting of 57 people.

Results: statistical test, Chi-Square on birth weight variable was obtained p-value of 0.019 ($< = 0.05$), on maternal age variable was obtained p-value of 0.023 ($< = 0.05$) and on parity variable was obtained p-value of 0.014 ($< = 0.05$). It meant that there was a significant relationship between birth weight, maternal age and parity with the incidence of perineal rupture in the working area of Karya Mukti Public Health Center.

Suggestion: It is recommended that Karya Mukti Public Health Center should be more active in providing counseling to midwives related to the incidence of the incidence of perineal rupture.

Keywords: Birth weight, Maternal age, Parity, Perineal rupture

INTRODUCTION

Perineal rupture is a tear or injury to the perineal birth canal that occurs during delivery either spontaneously or as a result of an episiotomy and assisted delivery. Generally, perineal rupture occurs in primiparous deliveries and often in subsequent deliveries (Kuswanti, 2017).

Perineal ruptures generally occur in the midline and can become extensive if the fetal head is born too quickly, and the angle of the pubic arch is smaller than usual so that the fetal head is forced to be born later than usual. Then, the fetal head passes through the pelvic inlet with a larger size than the suboccipitobregmatic circumference, or the infant is delivered by vaginal surgery. There is a sudden urge and because of the movement of the vulva so that the integrity of the skin is damaged and the continuity of the tissue and blood capillaries are separated (Amalia, 2015).

During delivery exposition, the woman reproductive organs, especially the perineum, will stretch. This exposition stretch can cause a tear or the so-called perineal rupture. Factors causing perineal rupture include maternal factors such as parity, precipitate delivery, prolonged labor and maternal age. Fetal factors include large baby, odd head position, buttocks born and shoulder dystocia. The narrow perineum and perineal elasticity cause birth canal ruptures or perineal lacerations (Sarmala 2019).

Perineal rupture is an indirect cause of maternal death worldwide because it can cause infection and postpartum hemorrhage. Perineal rupture should get great attention because the impact of perineal rupture will interfere the mothers' health. It is because there will be an infection in the suture wound, so that other complications arise such as bladder infection, birth canal infection and, bleeding. If there is no quick treatment it can cause death (Sarmala 2019).

Based on data from the World Health Organization (WHO) there were 2.7 million cases of perineal rupture in women giving birth. In addition, the cases are estimated to reach 6.3 million in 2050 along with the increasing number of midwives who do not know well about midwifery care. In America, there are 26 million maternity mothers and 40% of whom experience perineal rupture. In Asia, perineal rupture belong to serious problem in society, where

50% of the incidence of perineal rupture in the world occurs in Asia. The prevalence of maternity mothers who experience perineal rupture in Indonesia with the incidence of suture wound infection is 5%, 7% is with bleeding and 8% is with postpartum maternal mortality. In East Java, perineal rupture experienced by maternity mothers with bleeding is 7%, and 5% is with infection of suture wounds (Ziliwu et al., 2019).

In Indonesia, perineal rupture is experienced by 75% of women who give birth vaginally. Of the 1951 spontaneous vaginal births, 57% of mothers received perineal sutures, 8% due to episiotomy and 29% due to spontaneous tears (Kemenkes RI, 2017).

As many as fifty percent of the incidence of perineal rupture in the world occurs in Asia. Meanwhile, in Indonesia, the incidence of perineal rupture in the age group of 25 years to 30 years is 24% and at the age of 32 years to 39 years is 62% (Syahroni, 2018). In South Sumatra, the incidence of perineal rupture in 2010 reached 43% of the total number of postpartum mothers (Anggraini, 2019).

Information obtained from e Karya Mukti Public Health Center in 2018 as many as 22 maternity mothers (32.8%) experienced perineal rupture from 67 normal deliveries and in 2019 as many as 39 people (50.6%) from 77 normal deliveries. In 2020, there were 48 maternity mothers experienced perineal rupture (50.5%) from 95 normal deliveries, while in the January-May 2021 period, 12 maternity mothers (38.7%) experienced perineal ruptures from 31 normal deliveries.

Various efforts are continuously made to reduce this infant mortality rate because infant mortality has become a national priority program and is a global commitment as stated in the SDGs. The priority program that can prevent perineal rupture is the Delivery Planning and Management of Complications Program Implementation (Dinas Kesehatan Provinsi, 2019).

Based on the above background, the researchers were interested in conducting a study entitled "Factors Associated with the Incidence of Perineal Rupture in Normal Delivery in Karya Mukti Public Health Center Working Area, Ogan Komering Ulu Regency in 2021".

RESEARCH METHODOLOGY

The research design used in this study was quantitative with an analytical survey method using a cross sectional approach. In cross-sectional research design, the researchers collected data from many different individuals at one point in time.

The population in this study were all mothers who gave birth normally in January – August 2021 in the working area of Karya Mukti Public Health Center, as many as 57 people. The sampling technique used in this study was total sampling. Because the total population was less than 100, the entire population was used as the research sample consisting of 57 people.

In this study, the data were obtained from medical records using the check list. The data collected were in the form of data on the number of deliveries, incidence of perineal rupture and birth weight, maternal age and maternal parity in the working area of Karya Mukti Public Health Center in 2021. Data analysis used Univariate and Chi Square for bivariate analysis.

RESEARCH RESULTS

Univariate Analysis

Table 1.

Frequency Distribution of Respondents Based on Perineal Rupture Incidence in the Working Area of Karya Mukti Public Health Center in 2021

Perineal Rupture Incidence	Frequency (N)	Percentage (%)
Yes	18	31,6
No	39	69,4

From the table 1 above, it shows that of the 57 respondents 18 respondents (31.6%) experience perineal rupture and 39 respondents (69.4%) does not experience perineal rupture.

Table 2.

Bivariate Analysis

Table 5.

The Relationship between Birth Weight and the Incidence of Perineal Rupture in the Working Area of Karya Mukti Public Health Center in 2021

Birth Weight	The Incidence of Perineal Rupture				Total	Sig	OR
	Yes	%	No	%			
At risk	10	55,6	8	44,4	18	0,019	4,844
No risk	8	20,5	31	79,5	39		

Based on table 5 above, it shows that of the 18 respondents, 10 respondents (55.6%) are with

Frequency Distribution of Respondents Based on Birth Weight in the Working Area of Karya Mukti Public Health Center in 2021

Birth Weight	Frequency (N)	Percentage (%)
At risk	18	31,6
No Risk	39	68,4

The table 2 above shows that of the 57 respondents, 18 respondents (31.6%) have a risky birth weight and 39 respondents (68.4%) have a low birth weight

Table 3.

Frequency Distribution of Respondents Based on Age in the Working Area of Karya Mukti Public Health Center in 2021

Age	Frequency (N)	Percentage %
High Risk	27	47,4
Low Risk	30	52,6

The table 3 above shows that out of 57 respondents, 27 respondents (47.4%) are at high risk age and 30 respondents are at low risk age (52.6%).

Table 4.

Frequency Distribution of Respondents Based on Parity in the Working Area of Karya Mukti Public Health Center in 2021

Parity	Frequency (N)	Percentage %
Primipara	23	40,4
Multipara	34	59,6

The table 4 above shows that of the 57 respondents, 23 respondents (40.4%) are primiparous and 34 respondents are (59.6%) multiparous.

risky birth weight and experience perineal rupture. Then, out of 39 respondents, 8 respondents (20,

5%).are with a low risky birth weight and experience perineal rupture.

Based on the results of the Chi-square test, p value obtained was 0.019 <0.05. This indicates

that there is a significant relationship between birth weight and the incidence of perineal rupture.

Table 6
The Relationship between Age and the Incidence of Perineal Rupture in the Working Area of Karya Mukti Public Health Center in 2021

Age	The Incidence of Perineal Rupture				Total	Sig	OR
	Yes	%	No	%			
High Risk	13	48,1	14	51,9	27	0,023	4,643
Low Risk	5	16,7	25	83,3	30		

The table 6 above shows that of the 27 respondents, 13 respondents (48.1%) are at high risk age of experiencing perineal rupture, and out of the 30 respondents, 5 respondents (16.7%) are at low risk age of experiencing perineal rupture.

Based on the results of the Chi-square test, p value obtained was 0.023 <0.05. This indicates that there is a significant relationship between age and the incidence of perineal rupture.

Table 7.
The Relationship between Parity and the Incidence of Perineal Rupture in the Working Area of Karya Mukti Public Health Center in 2021

Parity	The Incidence of Perineal Rupture				Total	Sig	OR
	Yes	%	No	%			
Primipara	12	52,2	11	47,8	23	0,014	5,091
Multipara	6	17,6	28	82,4	34		

Based on the table 7 above, of the 23 respondents, there are 12 respondents (52.2%) in primiparas who experience perineal rupture. Then, of the 34 respondents, 6 respondents (17.6%) are in multiparas and experience perineal rupture.

Based on the results of the Chi-square test, the p-value obtained was 0.014 <0.0. This indicates that there is a significant relationship between parity and the incidence of perineal rupture.

DISCUSSION

The results of the Odds Ratio showed the OR value of 4.844. It means that respondents in the group of risky body weight have a tendency of 4.844 times to experience perineal rupture compared to respondents in the group of no risk body weight.

The results of this study are in line with the results of a study carried out by Nurulicha (2017) showing that there was a significant relationship between birth weight and the incidence of perineal rupture in maternity women at the Private Practice Midwife, Mekarsari Village, Bogor Regency. Later, the results of a study conducted by Anna Mariana (2017) also show that there was a relationship

between birth weight and the incidence of perineal rupture with the p-value of 0.001 and an OR value of 8.411 in which the baby's birth weight has an 8 times risk of perineal rupture. It is also in line with the results of a study carried out by Syahroni (2018) showing that there was a significant relationship between birth weight with perineal rupture (p-value = 0.000 (p <0.05)) at the Maternity Clinic Hj. Nirmala Sapni Krakatau Krakatau Pasar 3 Medan.

Based on the results of the present study, it is found out that the bigger the baby is born through the mother's birth canal, the bigger the rupture in the birth canal, especially the perineal rupture that will occur during the delivery. Birth weight affects the stretching of the perineum so that a rigid perineum is easy to rupture. Birth weight is the baby's weight weighed within the first 1 (one) hour after birth (WHO, 2017).

The greater the baby's birth weight will increase the risk of perineal rupture. Big babies are babies born weighing more than 4000 grams. This occurs because the bigger the baby, the baby's birth weight will increase the risk of rupture of the perineum because the perineum is not enough to

withstand the stretch of the baby's head with body weight. Being overweight regarding birth weight can be caused by several factors including mothers who suffer from diabetes, mothers who have a history of giving birth to big babies, heredity factors, and the influence of nutritional adequacy. Babies' birth weight generally ranges from 2500-4000 grams (Pertiwi, 2019).

The results of the Odds Ratio was obtained an OR value of 4.643 which means that respondents who are at high risk age have a tendency of 4.643 times to experience perineal rupture compared to respondents who are at low risk age.

The results of the present study are in line with the results of a study carried out by Nurulicha (2017) showing that there was a significant relationship between maternal age and the incidence of perineal rupture in maternity women at Private Practice Midwife, Mekarsari Village, Bogor Regency. The results of a study conducted by Lina Sarmala (2018) also show that there was a significant relationship between age and the incidence of Perineal rupture at Panebahan Senopati Hospital, Bantul, with a p-value of 0.000 (< 0.05). It is also in line with the results of a study carried out by Neng Nurul Saidah (2019) showing that there was a relationship between maternal age and the incidence of perineal rupture at PKU Muhammadiyah Bantul General Hospital with p-value obtained of 0.000 < (0.05).

At the age of <20 years, the reproductive organs have not functioned perfectly, so that when pregnancy and childbirth occur, it is easier to experience complications. In addition, the perineal muscles and abdominal muscles have not worked optimally, resulting in prolonged or stuck labor that requires further action (Pertiwi, 2019).

According to Walyani (2015), age determines a mother's health. Women belong to high risk group if they get pregnant when they are under 20 years old and over 35 years old. Age is useful for anticipating the diagnosis of health problems and the actions taken. Women who give birth to children at the age of 35 years tend to experience postpartum hemorrhage due to perineal rupture.

Based on the results of the present study, even though the mother's age is categorized in to normal group, if she does not exercise and rarely have sex, she can experience perineal lacerations. The flexibility of the birth canal is reduced when the expectant mothers rarely exercise or their genitalia is often exposed to infections. The infection will affect the connective tissue and muscles in the lower limbs and make them lose their flexibility.

Swimming is recommended to overcome the problem because it can flex the birth canal and the surrounding muscles.

The results of the Odds Ratio showed an OR value of 5.091, which means that respondents who are primiparous have a tendency of 5.091 times to experience perineal rupture compared to respondents who are multiparous.

The results of the present study are in line with the results of a study carried out by Neng Nurul Saidah (2019) showing that there was a relationship between parity and the incidence of perineal rupture at PKU Muhammadiyah Bantul Hospital with the p-value of 0.035). Then, the results of a study conducted by Lina Sarmala (2018) show that there was a significant relationship between parity and the incidence of perineal rupture at Panebahan Senopati Hospital Bantul, with a p-value of 0.010 (< 0.05). It is also supported by a study conducted by Lidia Widia (2017) showing that there was a significant relationship between parity and the incidence of perineal rupture (with the p-value of 0.009) at Batulicin 1 Health Center, Tanah Bumbu Regency.

Based on the results of the present study, perineal rupture often occurs in mothers with primiparas who have a greater risk of experiencing perineal rupture than mothers with more than one parity. This is because the birth canal has never been through the baby's head.

Parity is the number of fetuses weighing more than 500 g that have been born alive or dead. If the weight is unknown, then a gestational age of more than 24 weeks is used. Perineal rupture mostly occurs in all first deliveries (primipara) and not infrequently in subsequent deliveries (multipara) (Pertiwi, 2019).

CONCLUSION

Based on the results of the study, it could be concluded that there was a significant relationship between birth weight, maternal age and parity with the incidence of perineal rupture in the Working Area of Karya Mukti Public Health Center in 2021. It was indicated by the Chi-Square on the birth weight variable that obtained the p-value of 0.019 (< = 0.05), on the maternal age variable that obtained p-value of 0.023 (< = 0.05) and on the parity variable that obtained the p-value 0.014 (< = 0.05).

SUGGESTIONS

For the Head of Karya Mukti Public Health Center It is recommended that Karya Mukti Public Health Center should be more active in providing counseling to midwives related to the incidence of

the incidence of perineal rupture. In addition, this study can be used as reference in an effort to improve health services, especially in handling perineal rupture in the working area of Karya Mukti Public Health Center. For the Rector of Universitas Kader Bangsa Palembang. This study can be used as the references for literature and knowledge to develop scientific insight and knowledge for students, especially the students of Midwifery Study Program at Universitas Kader Bangsa Palembang. For Future Researchers This study can be used as a reference for further study with the same topic under study but with the different focus. In addition, this study also can be used as a reference for the students of Midwifery Study Program who want to conduct a study with the same interest.

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