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THE ASSOCIATION BETWEEN AGE, PARITY, AND BIRTH WEIGHT WITH THE INCIDENCE OF PERINEAL RUPTURE

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ABSTRACT

Childbirth is a process of releasing the results of conception, or referred to as a fetus or baby in the womb. A complication in the postpartum period is perineal rupture. This tear occurs at the birth of the head or shoulder, and there are several other influencing factors, including parity, birth weight, and the mother's age. This study used an analytic survey method with a cross-sectional approach. The population in this study was all mothers who gave birth in normal childbirth, which was recorded in the report register book and midwife information there were 90 normal birth mothers. The sample used was a total of 90 birth weighting mothers. The research was carried out at PMB in the Ogan Komering Ulu Regency area. The analysis presented is Univariate and bivariate. The results showed that there was a significant relationship between age, parity, and birth weight and the incidence of perineal rupture with each p-value of 0.000, 0.007, and 0.004. It is expected that there is a need for education, preparation and monitoring by health workers for mothers who experience complications in their pregnancies, especially those ages <20 and ≥35 years and with primiparous and grand multiparous parity in their pregnancies so that they can be avoided early and conservative treatment is carried out so that the incidence of perineal rupture can be prevented.

Keywords**:** Age, Parity, Birth Weight, Perineal Rupture

1. INTRODUCTION

Efforts to realize quality family health through family development that lives in a healthy environment, where one of the priorities is maternal and child health efforts. Maternal health can be seen by the success of the program through the main indicator of Maternal Mortality Rate (MMR). All deaths during pregnancy, childbirth, and postpartum are defined in the maternal mortality indicator. One of the causes of maternal mortality based on cause is bleeding during childbirth[1].

Maternal mortality based on its causes according to the Indonesian Health profile every year is caused by one of them, namely bleeding. In 2019 the most cases of bleeding were 1,280 cases, in 2020 the number of bleeding cases was 1,330 cases, and in 2021 a total of 1,320 cases. South Sumatra Province has the highest number of maternal deaths based on the profile of the South Sumatra provincial health office due to bleeding, in 2019 there were 38 cases, in 2020 there were 42 people, and in 2021 there were 40 cases. Data on maternal deaths by cause, based on the district level, Ogan Komering Ulu district in 2019 did not find data on maternal deaths due to bleeding, in 2020 the number of maternal death cases due to bleeding was 3 cases and in 2021 there were 2 cases.

Birth weight is the process of opening and thinning the cervix and the fetus descends into the birth canal then ends with the release of a baby who is full-term or almost full-term or can live outside the womb followed by the release of the placenta and fetal membranes from the mother's body through the birth canal or not the birth canal with help or without help[2]. Power is one of the factors that can affect the birth weight process. Power is the strength or power to give birth which consists of his or uterine contractions and the force of the mother undergoing birth weight, another understanding is that it is the primary force or the main force produced by the mother by the contraction and retraction of the uterine muscles[3]. Perineal rupture is one of the complications that occur in the postpartum or puerperium during vaginal delivery as the main cause of alvi incontinence in women in the world and until now its management is still limited. This tear occurs at the birth of the head or shoulder and there are several other influencing factors, including parity, birth weight, and the mother's age[4, 5].

The results of research conducted by Safitri et al. (2019), in his research found that there was a significant relationship between age and perineal rupture (p-value 0.012)[6]. According to Andriani's research (2019), it was found that there was a significant relationship

between age and the incidence of perineal rupture[7]. Likewise, research conducted by Sumarni et al. (2020) found that there was a significant relationship between age and perineal rupture (p-value 0.008)[8].

Research conducted by Haryanti et al. (2021), there is a significant relationship between parity and the incidence of perineal rupture (p-value 0.024)[9]. Husnida et al. research (2022) found that there was a significant relationship between parity and perineal rupture (p-value 0.002)[10]. Research conducted by Haslan et al. (2022), found that there is a significant relationship between parity and the occurrence of perineal rupture (p-value 0.000)[11]. From the results of this study, it was concluded that nulliparous mothers who had just experienced pregnancy for the first time (primigravida) were found with a rigid perineum so that it was easier and more likely to occur spontaneous perineal rupture, in contrast to multigravida mothers who had given birth to viable babies more than once found that the perineal area was more elastic.

The results of research conducted by Anggraini (2020), that there is a significant relationship between birth weight and the level of perineal tears (p-value 0.012)[12]. Haryanti et al. research (2021), the results of her research found that there was a significant relationship between birth weight and the incidence of perineal rupture (p-value 0.012)[9]. Likewise, research conducted by Haslan et al. (2022) found that there was a significant relationship between birth weight and the occurrence of perineal rupture (p-value 0.006)[11].

Childbirth data obtained from PMB in the Ogan Komering Ulu Regency Region from January to December 2022 is from 90 normal birth mothers. Based on the theory, data, and related research, the researcher is interested in researching the title "Relationship between Age, Parity, and Birth Weight with the Incidence of Perineal Rupture".

2. METHOD

This study used an analytic survey method with a cross-sectional approach where the independent variable (age, parity, and birth weight) and the dependent variable (incidence of perineal rupture) all research variables were observed at the same time. The population in this study were all mothers who gave birth to normal birth weight recorded in the report register book and midwife information there were 90 normal birth mothers. The sample used was a total sample of 90 birth weighting mothers. The research location was carried out at PMB in the Ogan Komering Ulu Regency area. The analysis presented is Univariate and Bivariate Analysis. Univariate analysis was used to determine the frequency distribution of age, parity, birth weight, and the incidence of perineal rupture in normal birth weight. Bivariate analysis was conducted to see the relationship between age, parity, and birth weight with the incidence of perineal rupture in normal birth weight, using the chi-square statistical test and a computerized system with a degree of significance (α) 0.05 and a confidence level of 95%, said to have a significant relationship if the p-value ≤ 0.05.

3. RESULTS

Table 1. Frequency distribution of age, parity, birth weight, and incidence of perineal rupture

Variables	n (90)	% (100%)
Incidence of Perineal Rupture		
Yes	59	66
No	31	34
Age		
not at risk	20	22
at Risk	70	78
Parity		
Primipara	23	25,5
Multipara	50	55,5

Grande Multipara	17	19
Birth Weight		
Large weight	21	23
Fair weight	52	58
Underweight	17	19

Table 1.
The results of the frequency distribution of the incidence of perineal rupture were 59 mothers (66%). the age of the mother at risk was 70 mothers (78%). Parity of multiparous birth weighting mothers as many as 50 mothers (55.5%). Birth weight was sufficient for as many as 52 babies (58%)

Table 2. Relationship between age, parity, birth weight and incidence of perineal rupture

Variables	Incidence of Perineal Rupture				n (90)		*p value*
	Yes		No				
	f	%	f	%	f	%	
Age							
not at risk	13	22	7	22,6	20	22	0,000
at risk	46	78	24	77,4	70	78	
Parity							
Primipara	15	25	8	25,8	23	25,5	0,007
Multipara	33	56	17	54,8	50	55,5	
Grande Multipara	11	19	6	19,4	17	19	
Birth Weight							
Large weight	14	23,73	7	22,6	21	23	0,004
Fair weight	34	57,63	18	58,1	52	58	
Underweight	11	18,64	6	19,3	17	19	

**Chi-square*

Table 2. From the results of statistical tests obtained, there is a significant relationship between age and the incidence of perineal rupture (p-value 0.000). The results of this study are in line with research conducted by Safitri et al. (2019), in his research it was found that there was a significant relationship between age and perineal rupture (p-value 0.012)[6]. According to Andriani's research (2019), it was found that there was a significant relationship between age and the incidence of perineal rupture[7]. The results of research conducted by Pemiliana et al. (2019), there is a significant relationship between age and perineal rupture (p-value 0.037)[13]. Research conducted by Sumarni et al. (2020) found that there was a significant relationship between age and perineal rupture (p-value 0.008)[8]. Likewise, research conducted by Hukubun et al. (2021), found that there is a significant relationship between age and the degree of perineal rupture (p-value 0.007)[14]. The relationship between age and the incidence of perineal rupture is influenced by the level of elasticity of the perineum, in mothers with young age, the perineum will be less elastic which results in the perineum tearing easily compared to mothers aged> 35 years which that age the perineum is more elastic due to the normal birth railway more than once[14]. According to Hastuti et al (2016), Maternal age is a factor that can affect perineal rupture. This age is under the age of 20 years and the age group over 35 years is an age that has a 3 times higher risk of perineal rupture[5].

According to researchers, age can affect the incidence of perineal rupture due to the readiness of the organs for reproduction during birth weight. If the reproductive organs have not functioned perfectly it will risk the incidence of perineal rupture, as well as reproductive functions that have decreased will also affect the incidence of perineal rupture.

The relationship between parity and the incidence of perineal rupture from results of statistical tests found that there was a significant relationship between parity and the incidence of perineal rupture (p-value 0.007). This study is in line with the results of research conducted by Pemiliana et al. (2019), it was found that there was a significant relationship between parity and perineal rupture (p-value 0.003)[13]. Research conducted by Safitri et al. (2019), that there is a significant relationship between parity and perineal rupture (p-value 0.002)[6]. Research conducted by Haryanti et al. (2021), there is a significant relationship between parity and the incidence of perineal rupture (p-value 0.024)[9]. Husnida et al. research (2022) found that there was a significant relationship between parity and perineal rupture (p-value 0.002)[10]. Likewise, research conducted by Haslan et al. (2022), found that there is a significant relationship between parity and the occurrence of perineal rupture (p-value 0.000)[11].
Parity can affect the incidence of perineal rupture, generally occurring in primiparas, but not infrequently also in multiparas. The cause of perineal rupture in parity can be caused by partus precipitates, edema and fragility of the perineum, straining too strongly, birth weight with action, and flexibility of the birth canal[15].
Researchers assume that maternal parity affects the incidence of perineal rupture. Parity in the results of this study occurred in primipara and multipara. Where in primipara, one of the causes of perineal rupture is because the perineum is still intact.

The results of the study of the relationship between birth weight and the incidence of perineal rupture showed that there was a significant relationship between birth weight and the incidence of perineal rupture (p-value 0.004). The results of this study are in line with research conducted by Pemiliana et al. (2019), it was found that there was a significant relationship between birth weight and perineal rupture (p-value 0.041)[13]. Research conducted by Anggraini (2020), that there is a significant relationship between birth weight and the level of perineal tears (p-value 0.012)[12]. Sumarni et al. research (2020) found that there was a significant relationship between birth weight and perineal rupture (p-value 0.012)[8]. Haryanti et al. research (2021), the results of his research found that there was a significant relationship between birth weight and the incidence of perineal rupture (p-value 0.012)[9]. Likewise, research conducted by Haslan et al. (2022) found that there was a significant relationship between birth weight and the occurrence of perineal rupture (p-value 0.006)[11].
Birth weight can cause perineal rupture to occur because birth weight is more than 3500 grams, due to the risk of vaginal partus trauma such as shoulder dystocia and soft tissue damage to the mother[16].
According to the researcher, birth weight can affect the incidence of perineal rupture because the baby's birth weight is sufficient and large enough to greatly affect the occurrence of tears in the perineum in birth-weighting mothers.

4. CONCLUSION

Based on the results of the study it can be concluded that there is a significant relationship between age, parity, and birth weight with the incidence of perineal rupture with each p-value respectively (0.000), (0.007), and (0.004). Future researchers can examine maternal characteristics and perineal massage on the incidence of perineal rupture.

5. REFERENCES

1. Kementerian Kesehatan RI. *Profil Kesehatan Indonesia Tahun 2021*.; 2022.

2. Mutmainnah AU, Johan H, Llyod SS. *Asuhan Persalinan Normal Dan Bayi Baru Lahir*. Andi; 2017.

3. Subiastutik E, Maryanti SA. *Buku Ajar Asuhan Kebidanan Persalinan*. 1st ed. PT. Nasya Expanding Management; 2022.

4. Akbar MIA, Tjokroprawiro BA, Hendarto H. *Ginekologi Praktis Komprehensif*. Airlangga University Press; 2020.

5. Kurniawati EM, Hardianto G, Azinar AD, Hadi THS, Wahyuningtyas R. *Seri Buku Praktis Uroginekologi: Ruptur Perineum*. Airlangga University Press; 2022.

6. Safitri ME, Hajar S, Dakhi EF. Hubungan Karakteristik Ibu Bersalin dengan Ruptur Perineum. *Jurnal Ilmiah Ilmu Kesehatan: Wawasan Kesehatan*. 2019;5(2):285-292. https://scholar.archive.org/work/d6knchwudnfbjh5jdguth3o36q/access/wayback/http://journal.stikes-kapuasraya.ac.id:80/index.php/JIIK-WK/article/download/144/124

7. Andriani Y. *Hubungan Paritas Dan Umur Ibu Dengan Kejadian Ruptur Perineum Pada Ibu Bersalin Spontan Di Puskesmas Tegalrejo Yogyakarta*. Universitas 'Aisyah Yogyakarta; 2019. http://digilib.unisayogya.ac.id/4477/

8. Sumarni, Prabandari F, Astuti DP. Pengaruh Faktor Maternal Dan Faktor Neonatal Terhadap Ruptur Perineum Di Kabupaten Banyumas. *Jurnal Bina Cipta Husada*. 2020;16(2):1-14. http://jurnal.stikesbch.ac.id/index.php/jurnal/article/view/10

9. Haryanti D, Dahliana. Hubungan Paritas Dan Berat Bbl Terhadap Kejadian Ruptur Perineum Pada Persalinan Dipuskesmas Gajahmada Tembilahan. *Midwifery Health Journal*. 2021;7(1):20-24. http://ojs.stikeskeluargabunda.ac.id/index.php/midwiferyhealthjournal/article/view/108

10. Husnida N, Iswanti T, Yuningsih N, Sutianingsih H. Pengaruh Paritas, Umur Ibu Dan Berat Bayi Terhadap Ruputure Perineal Pada Ibu Bersalin Di Puskesmas Mandala Rangkasbitung Tahun 2020. *Journal of Midwifery and Health Research*. 2022;1(1):1-9. https://www.researchgate.net/publication/370829629_Pengaruh_Paritas_Umur_Ibu_Dan_Berat_Bayi_Terhadap_Ruputure_Perineal_Pada_Ibu_Bersalin_Di_Puskesmas_Mandala_Rangkasbitung_Tahun_2020

11. Haslan H, Sulfianti, Indryani. Faktor Yang Mempengaruhi Terjadinya Ruptur Perineum Pada Ibu Bersalin Normal di UPT Puskesmas Mare. *Jurnal Suara Kesehatan*. 2022;8(2):1-7. https://journal.unsima.ac.id/index.php/journaliskb/article/view/66

12. Anggraini T. Hubungan Berat Badan Bayi Lahir dengan Tingkat Robekan Perineum Pada Ibu Bersalin Normal di Rumah Sakit Pusri Palembang Tahun 2019. *Jurnal Kebidanan : Jurnal Medical Science Ilmu Kesehatan Akademi Kebidanan Budi Mulia Palembang*. 2020;10(1):53-59. http://journal.budimulia.ac.id/index.php/kebidanan/article/view/224

13. Pemiliana PD, Sarumpaet IH, Ziliwu S. Faktor-Faktor Yang Berhubungan Dengan Ruptur Perineum Pada Persalinan Normal di Klinik Niar Medan Tahun 2018. *Window of Health*. 2019;2(2):170-182. https://jurnal.fkmumi.ac.id/index.php/woh/article/view/623

14. Hukubun Y, Budiono DI, Kurniawati EM. Hubungan Usia, Paritas, dan Berat Badan Bayi terhadap Derajat Ruptur

Prineum di RSUD Jayapura. *Indonesian Midwifery and Health Sciences Journal*. 2021;5(1):103-115. https://e-journal.unair.ac.id/IMHSJ/article/view/28889

15. Oxorn H, Forte WR. *Ilmu Kebidanan: Patologi & Fisiologi Persalinan*. Yayasan Assentia Medica; 2010.

16. Rochmayanti SN, Ummah K. *Pijat Perineum Selama Masa Kehamilan Terhadap Kejadian Rupture Perineum Spontan*. CV. Jakad Publishing; 2019.