

RELATIONSHIP BETWEEN THE BABY'S BIRTH WEIGHT AND THE INCIDENCE OF PERINEAL TEARING

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ABSTRACT

Childbirth is a physiological process and an important event in life that is often remembered by a woman throughout her life, where birth trauma most often occurs in the perineum. A perineal tear is a perineal laceration that occurs when the baby is born either naturally or through an episiotomy. This study aims to determine the relationship between the baby's birth weight and the level of perineal tear in mothers with normal delivery. The research method is quantitative with a cross-sectional analytical research design. The sample is 298 people. Data were collected by looking at the maternity room register book from January-December 2021. Data were analyzed with the help of Software Statistics Product and Service Solutions (SPSS) Version 25. Research Results: from 298 deliveries 256 respondents experienced perineal tears. 97 respondents to a grade 1 tear (32.6%), 156 respondents to a grade 2 tear (52.3%), and 3 respondents to a grade 3 tear (1%). Of the 298 mothers who gave birth, there were 256 deliveries with perineal tears with 206 (85.5%) baby weights < 3365 gr and 50 (87.7%) baby weights > 3366 grams. Meanwhile, for mothers who experienced intact perineum, there were 42 respondents where the baby's weight < 3365 g was found in as many as 35 respondents (14.5%) and the baby's weight > 3366 there were 7 respondents (12.3%). The results of the chi-square test at $\alpha = 0.05$ obtained $p = 0.821$ ($P > 0.05$) this means that there is no relationship between the baby's birth weight and the incidence of perineal tears. Conclusion: there is no relationship between a baby's birth weight and the incidence of perineal tears.

INTRODUCTION

The main cause of maternal death is associated with complications during pregnancy and childbirth. Childbirth is a physiological process and an important event in life that is often remembered by a woman throughout her life, but there are complications at the time of delivery. The cause of postpartum hemorrhage is 4T, namely *Tonus, Tissue, Tear, and Thrombin* (WHO, 2017)

Perineal tears can occur spontaneously (rupture) or intentionally (episiotomy). Perineal tears are divided into four levels; Grade I to Grade IV. In general, perineal tearing is a tear that occurs during childbirth and is caused by many things such as birth position, mode of delivery, birth canal, and birth weight. In addition, babies who are overweight or have a birth weight above 4000 gr increase the risk at birth that is, their shoulders will droop, they

will have difficulty breathing, and sometimes they will be injured. in the neck, shoulders, and nerves. This happens because the baby's weight is too heavy to pass through the pelvis, causing a rupture of the perineum for the mother who gives birth. (Enggar, P, 2018)

Perineal tears are common in primigravida mothers because the birth canal has never been passed by the baby and the muscles are still stiff and multigravida mothers can also experience perineal tears. The perineum is considered elastic in women who have given birth before, but it was found that women with multigravida still experience tears in the perineum during childbirth. (Anggraini & Anggasari, 2019).

Perineal tearing can be prevented or should not occur if the mother's perineum is elastic or the mother strains well. There are ways to prevent tearing of the perineum, namely, kegel gymnastics and pregnant gymnastics. Addition there is another way to prevent the occurrence of perineal tears that is the perineal massage technique, but not many people know that this massage can prevent perineal tearing, and this massage is very convenient and can

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be done alone without the need to take a long time, it can be done every day and cheaply. (Anggraini & Anggasari, 2019).

According to (Wiknjastro, 2007), Spontaneous perineal tears often occur in childbirth, where the fetus is born too quickly, labor is not done well, there is too much scarring in the previous perineum, and shoulder dystocia in labor. Meanwhile, according to Henderson (2006), some factors can influence the risk of spontaneous perineal tearing, namely the number of births, the way/management of childbirth, and birth weight. (Enggar, P, 2018).

While the world's perineal tear rate in mothers giving birth was 2.7 million in 2015, it is estimated that this number will reach 6.3 million by 2050. In Asia alone, 50% of women who give birth are affected by perineal tears. The author conducted a study on the perineal tear rate through previous studies on the perineal tear rate in maternity mothers. One of the factors causing the occurrence of perineal tears is newborns with body weight above 4000 grams, the heavier the baby, the higher the incidence of perineal tears in mothers. (Russiska et al., 2021).

Based on maternal birth data conducted at BPM Retno Sukengsih Winong Purworejo and medical records in 2020 there were 123 spontaneous deliveries. Of the 123 births, 74 (60.10%) had a perineal tear and 49 (39.9%) did not (BPM Medical Record Retno Sukengsih Winong Purworejo, 2020). (Priestnall, Simon L.Priestnall, et al., 2020). Meanwhile, the results obtained according to another study entitled The relationship between birth weight and the incidence of perineal tearing at Harapan Bunda Surakarta Hospital: 52 (77.6%) cases of rupture. Tears in the perineum were obtained from 52 (77.6%) mothers from 67 samples, consisting of 21 mothers who gave birth with a birth BB of 2500-3000 gr (31.3%) and 31 mothers who gave birth with a birth BB of 3000-3500 gr (46.3%) (Enggar, P, 2018).

A preliminary survey of data obtained from the partus mother register book in January-December 2020 at the RB Puskesmas Senen District related to the title Relationship Between Newborn Weight and Perineal Tear Events, data were obtained: from 215 (52.2%) mothers from 410 samples, consisting of 115 mothers who gave birth with BB born 2500-3000 gr (28.05%) and 100 mothers who gave birth with BB born 3000-3500 gr (24.39%).

A preliminary survey of the results of data from the mother's register book from November 29 to December 16, 2021, at the RB Puskesmas Senen District The Relationship Between Newborn Weight and Perineal Tear Events in the RB puskesmas senen district, obtained the following data: there are 12 total deliveries. Of the 12 found tears 9, Tears in the perineum were obtained from 9 mothers from 12 samples, consisting of 4 mothers who gave birth with a birth BB of 2500-3000 gr and 5 mothers who gave birth with a birth BB of 3000-3500 gr.

An important factor that plays a role in childbirth based on (Wiknjastro, 2007) is the power to push in the mother, the state of the mother's uterus, and the condition of the fetus. The perineum is the area between the vulva and the anus, with an average length of 4 cm. It is determined during childbirth not only by internal genital organs such as the uterus and vagina but also by organs such as muscles, connective tissue, and ligaments that affect the birth canal. The muscles that hold the pelvic floor outwards are the ani externus sphincter, the tuberosus muscle surrounding the vagina, and the transverse perineal muscle. Deeper still finds the strongest inner muscle called the pelvic diaphragm, specifically the levator ani muscle, which holds the pelvic floor in place. Position the lumbar muscles so that they form an anterior triangle called the urogenital triangle. This triangle includes the urethra, vagina, and rectum. (Sarwono Prawirohardjo et al., 2016).

Therefore, in the title, the author is interested in taking research, namely about "The relationship between the birth weight of babies and the incidence of perineal tears at the Senen Health Center". The final results of this study can be used as one thing that officers can do to prevent perineal tears is to control the birth of the head, shoulders, arms, and legs, as well as take time to stretch the skin and thus reduce the risk of perineal tears.

RESEARCH METHODS

This research is quantitative research with an analytical design. The research location is at the Puskesmas, Senen District. The n population of this n study was all maternity mothers in RB Puskesmas Kecamatan Senen starting from January-December 2021 which was recorded in the register book.

Sample is all maternity who experienced perineum tear at the Senen District Health Center from January-December 2021 which was recorded in the medical record in accordance

with the criteria inclusion and exclusion. Criterion Inclusion i.e. data at mother in the complete register book. Criterion Exclusion i.e. data mother in the register book is incomplete. Based on these criteria, a sample of 298 people was obtained.

RESULTS AND DISCUSSION

Table 1 Perineum Tearing Incidents at the Senen District Health Center for the Period of January 2021 to December 2021

Variable	N	%
Whole perineum	42	14,1
Grade I	97	32,6
Grade II	156	52,3
Grade III	3	1,0
Total	298	100

Source: Register Book, 2021.

In table 1, it can be seen that there were 42 (14.1%) respondents who gave birth at the Puskesmas in Senen District who had a whole perineum, namely 42 (14.1%) respondents, and those who experienced a grade I tear were 97 (32.6%) respondents, and there were 3 (1%) respondents who experienced a grade III tear.

Table 2 Weight of Babies Born at the Puskesmas Senen District from January 2021 to December 2021

Variable	N	%
Baby weight < 3365 gr	241	80,9
Baby weight > 3366 gr	57	19,1
Total	298	100

Source: Register Book, 2021.

Based on table 5.1. information was obtained that mothers who gave birth at the Puskesmas Senen District who had babies with a birth weight of <3365gr, there were 241 (80.9%) respondents, and for those who gave birth to babies with a birth weight of >3366gr, there were 57 (19.1%) respondents.

Table 2 The Relationship Between Birth Weight and Perineal Tear Incidence at the Senen District Health Center for the Period of January 2021 to December 2021

Baby's Birth Weight (gram)	Perineal Tearing				Total		OR (Odd Ratio)	P value
	No tearing		Perineal tearing		n	%		
	N	%	n	%				
<3365	35	14,5	206	85,5	241	100	1.214	0,821
>3366	7	12,3	50	87,7	57	100		
Total	42	14,1	256	85,9	298	100		

Source: Register Book, 2021.

The results of the analysis of the relationship between the birth weight of babies and the incidence of perineal tears obtained that there were as many as 206 (85.5%) mothers who gave birth with a baby's birth weight < 3365gr who experienced rupture. While the mother who gave a birth weight of the baby >3366, there were 7 (12.3%) with an intact perineum. The results of the statistical test obtained a value of p = 0.821, it can be concluded that there is no difference in the incidence of a perineal tear with the birth weight of the baby <3365gr with the birth weight of >3366gr. From the results of the analysis, the OR value = 1,214 was also obtained, meaning that mothers who had a baby's birth weight >3366gr had a 1,214 times chance of experiencing a perineal tear compared to mothers who had a baby's birth weight <3365gr.

The perineal tear occurs in the median plane and can spread. Since the head of the fetus is born, the angle of the pubic arch is smaller than usual, forcing the head of the fetus to be born more posteriorly than usual, and the head of the fetus passes through it. Through the entrance, the child is born with the help of a tool (Saifuddin et al., 2002).

Perineal tearing is considered the most important risk factor for fecal incontinence in women (Kamm, 1994). Fecal incontinence can occur after delivery due to rupture of the third degree of the perineum, but it can also occur after a seemingly non-traumatic vaginal labor, after the rupture of the third-grade perineum, up to 85% of women have persistent sphincter defects and up to 50% have complaints of ancestors, although they can perform recovery quickly. (Haadem & Gudmundsson, 1997). Perineal tears can be classified, i.e. First-degree tears are defined as injuries to the skin of the perineum or in the vaginal mucosa. The second degree of tear is defined as an injury to the perineum, including the perineal muscle but not the anal sphincter. Rupture of the third degree is defined as an injury to the perineum involving the anal sphincter complex. (Gommessen et al., 2020)

A total of 603 primipara women (203 with whole perineum/level one tear, 200 with second-degree tearing, and 200 with third/fourth-degree

tearing) were included between July 2015 and January 2018. At 12 months postpartum, 575 women (95%) answered questionnaires 193 with whole perineum/first-degree tear, 193 with a second-degree tear, and 189 with third/fourth-degree tear. A total of 499 women underwent endoanal ultrasound scans and 482 women underwent anal manometry. (Gommesen et al., 2020)

Based on the results of the research that has been carried out, information was obtained that there were 298 maternity mothers, who had the whole perineum, there were 42 mothers, while those who had grade I tears were 97 mothers, grade II tears were 156 mothers, and those who had grade III tears were 3 mothers. It can be known that the majority of mothers who experienced grade II tears were 156 mothers.

In epidemiological studies and clinical practice, birth weight is strongly associated with early childhood morbidity and is therefore considered the main indicator of newborn health. Newborns with low and high birth weight (BBLR) are at increased risk of perinatal death and other adverse consequences of childhood, adolescence, and adulthood. Birth weight is the result of the interaction of biological, socioeconomic, and psychological factors. Among biological factors, the genetic background of the mother and fetus, the nutritional and metabolic status of the mother, binary exposure to diseases and toxins, the functioning of the placenta, and ultimately obstetric characteristics are of great importance. Some authors also believe that factors such as the weight and height of the mother before pregnancy and the weight gain of the pregnant woman are strongly related to birth weight. (Trombe et al., 2020)

Birth weight is the weight of a baby measured during the first 24 hours after birth. The higher the birth weight, the higher the risk of tearing the perineum. A large baby is a baby born weighing more than 4000 grams. Perineal tearing occurs at birth with large babies. This is because the risk of perineal tearing increases as the baby's weight increases. After all, the perineum is not stiff enough to support the stretching of the baby's head with large baby weight. Obesity can be caused by many factors, including maternal diabetes, mothers with large children, genetic factors, and the influence of food. Normal birth weight is about 2500 to 4000 grams. (Saifuddin et al., 2002).

Based on the results of the studies that have been carried out, information was obtained that out of 298 maternity mothers, who had babies with a

body weight of < 3365gr as many as 241 mothers, and those who had babies with a body weight of > 3366gr there were 57 mothers. It can be known that the majority of mothers who give birth have babies < 3365gr.

Relationship between the weight of the baby born and the incidence of perineal tear

Maternal mortality and morbidity are major problems in developing countries, including Indonesia. Mortality during childbirth is often an important factor in the mortality rate of mild to moderate females at the peak of their productivity. Birth weight is a risk factor to increase the incidence of perineal injury at birth. The larger the newborn, the greater the risk of perineal tearing, with a normal body weight of about 2,500-3,800 grams. (Nikmah, 2018)

Normal childbirth can result in cases of perineal tearing in primiparous and multipara mothers. The mucous layer and skin of the perineum in a primiparous mother are prone to tearing which can cause spontaneous bleeding (Wiknjastro, 2006). Factors that affect the rupture perineum include the weight of the newborn, the position of the maternity mother, the way of delivery, and the leadership of childbirth (Enggar, P, 2018). The perineal tear is greater when the newborn's weight is too large or the newborn's weight is more than 4000 grams. (Enggar, P, 2018)

Based on the results of research that has been carried out, information was obtained from 298 maternity mothers as many as 57 mothers who experienced tears with the birth weight of babies >3366gr. The results of the chi-square test on $\alpha = 0.05$ obtained a p-value = 0.821 ($P > 0.05$) this means that there is no relationship between the baby's birth weight and the incidence of perineal tear.

CONCLUSION

From the results of research conducted at the Puskesmas Senen District for the period January 2021 to December 2021, the author can draw the following conclusions: Based on the results of research that has been carried out, information was obtained from 298 mothers as many as 57 mothers who experienced tears with the birth weight of babies >3366gr. The results of the chi-square test on $\alpha = 0.05$ obtained a p-value = 0.821 ($P > 0.05$) this means that there is no relationship between the

baby's birth weight and the incidence of perineal tear.

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