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MATERNAL FACTORS AND ANTENATAL CARE VISITS THAT ARE AT RISK FOR LOW BIRTH WEIGHT (LBW)

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ABSTRAK FAKTOR IBU DAN KUNJUNGAN PERAWATAN ANTENATAL YANG BERESIKO TERHADAP BERAT BADAN LAHIR RENDAH (BBLR)

Latar Belakang: Bayi berat badan lahir rendah masih merupakan salah satu isu kesehatan global dengan berat lahir kurang dari 2500gram. BBLR mempunyai dampak jangka panjang terhadap kehidupan bayi baru lahir dan anak serta berkontribusi signifikan terhadap peningkatan angka kematian dan kecacatan neonatal. Tujuan : Untuk mengetahui faktor maternal dan kunjungan antenatal care yang berisiko terhadap kejadian berat badan lahir rendah. Metodelogi : Desain penelitian yang digunakan adalah metode deskriptif kuantitatif dengan pendekatan *case control* dengan desain penelitian *retrospektif* suatu penelitian dengan melakukan pengamatan bersalin dengan BBLR yang melakukan persalinan di Puskesmas Kemayoran dalam satu kali waktu pada waktu bersamaan. Hasil : Berdasarkan hasil penelitian didapatkan ibu yang mempunyai umur beresiko (umur <20 dan umur >34 tahun) sebanyak 15 responden (65,2%) melahirkan bayi BBLR, ibu dalam kategori umur beresiko (umur 20-34) sebanyak 8 responden (34,7%) melahirkan bayi BBLR. Berdasarkan data hasil penelitian bahwa ibu kategori paritas beresiko (paritas 0 dan paritas lebih dari 4) sebanyak 11 responden (47,8%) melahirkan BBLR. Ibu kategori paritas tidak beresiko sebanyak 12 responden (52,1%). Berdasarkan hasil penelitian didapatkan ibu yang melakukan pelayanan antenatal kurang baik, sebanyak 17 responden (73,9) melahirkan BBLR. ibu yang melakukan kunjungan antenatal yang baik sebanyak 6 (26,9%) melahirkan BBLR. Kesimpulan : Faktor risiko umur didapatkan OR = 4,28 (95%CI:1,4-12,4) bahwa kategori umur ibu beresiko mempunyai peluang melahirkan BBLR 4,28 kali dibandingkan dengan ibu kategori umur yang tidak beresiko. Berdasarkan analisis secara paritas uji statistik didapatkan nilai p = 0,397 dapat disimpulkan tidak ada hubungan bermakna antara paritas terhadap kejadian BBLR. Berdasarkan hasil uji statistik didapatkan nilai p = 0,0001, dapat diartikan ada perbedaan yang signifikan persentase BBLR antara ibu yang memiliki kunjungan antenatal kurang baik dengan ibu yang melakukan antenatal baik.

Kata kunci : Maternal, Antenatal Care, Berat Badan Lahir Rendah, Umur, Paritas.

ABSTRACT

Background Low birth weight babies are still one of the global health issues with a birth weight of less than 2500 grams. LBW has a long-term impact on the lives of newborns and children and contributes significantly to the increase in mortality and neonatal disability.Objective: To determine maternal factors and antenatal care visits that are at risk for the incidence of low birth weight.Methodology: The research design used is a quantitative descriptive method with case control approach with a retrospective research design of a study by observing childbirth with LBW who gave birth at the Kemayoran Health Center at one time at the same time.Results: Based on the results of the study, motherswho have a risk age (<20 years old and >34 years old) as many as 15 respondents (65.2%) give birth to LBW babies, mothers in the at-risk age category (20-34 years old) as many as 8 Respondents (34.7%) gave birth to LBW babies. Based on the data from the results of the study, 11 respondents (47.8%) gave birth to LBW in the at-risk parity category (parity 0 and parity more than 4). Mothers in the parity category are not at risk as many as 12 respondents (52.1%). Based on the results of the study, mothers who performed poor antenatal services gave birth to LBW, as many as 17 respondents (73.9) gave birth to LBW. mothers who had good antenatal visits as many as 6 (26.9%) gave birth to LBW.Conclusion:The age risk factor was obtained OR = 4.28 (95%CI: 1.4-12.4) that the age category of mothers at risk had a chance of giving birth to LBW 4.28 times compared to mothers in the age category who were not at risk. Based on the analysis of parity in the statistical test, the value of p = 0.397 can be concluded that there is no significant relationship between parity and the incidence of LBW. Based on the results of the statistical test, a value of p = 0.0001 was obtained, it can be interpreted that there is a significant difference in the percentage of LBW between mothers who had poor antenatal visits and mothers who did good antenatal visits.

Keywords:Maternal, Antenatal Care, Low Birth Weight, Age, Parity.

INTRODUCTION

LBW babies are still a problem in the world, because they cause disease and death in newborn babies. This is proven by the number of cases which is still quite high, 15% of the 20 million babies worldwide are born with LBW each year (WHO, 2014). The infant mortality rate increases along with the increase in the incidence of LBW babies in a country. The global prevalence of LBW is 15.5%, which means around 20.6 million babies are born each year and 96.55 are in developing countries including Indonesia (Indonesian Ministry of Health Data and Information Center, 2015). Based on 2018 Rikesdas data, it shows that the incidence of LBW in Indonesia has a prevalence of 6.2%. The highest percentage of LBW is in Central Sulawesi Province (8.9%) and the lowest is in Jambi Province (2.6%). LBW babies are female (6.7%) while male (5.7%). The percentage of LBW babies in rural areas (6.3%) and in urban areas (6.1%). Meanwhile, Gorontalo Province has a prevalence of (8.3%).

Low Birth Weight Infants (LBW) is a global health issue that continues to be challenging, affecting millions of babies every year, with heavy birth weight less than 2500grams. LBW is not only an indicator of neonatal health, but also reflects socio-economic conditions and health services in a community. LBW is a very complex problem and contributes to various poor health outcomes because it not only causes high rates of morbidity and mortality, but has a long-lasting impact on future life and makes people more vulnerable to diseases such as disability, mental disorders, growth retardation and cognitive development. , and chronic diseases in the future (Susilowati et al, 2016). According to Who, the exact cause of LBW is not yet known, but it is thought that the cause in countries such as Asia and Africa is nutrition when the mother is pregnant, while the cause in developed countries is thought to be the age of the mother who gives birth over 35 years.

Risk factors for LBW are teenage pregnancy status, nutrition, economic status, education, complications, heavy work, gestational age, previous history of LBW, alcohol, smoking, illegal drugs, history of disease, multiple pregnancies, height and living in the area. height. The condition of LBW babies is caused by conditions since pregnancy, twins, babies with birth defects or conditions as well as placental problems that pose a risk to the development of the baby in the womb.LBW babies without complications can reach their weight loss as they get older. LBW babies tend to experience stunting and in adulthood suffer from diabetes mellitus, hypertension and heart disease (Ministry of Health of the Republic of Indonesia, 2021).

RESEARCH METHODS

Research Types and Designs

This research uses a quantitative descriptive method with an approach *case control*with a retrospective research design, a study by observing births with LBW who gave birth at the Kemayoran Community Health Center one time at the same time.This research will be carried out at the Kemayoran Community Health Center in 2024.The population in this study were all mothers giving birth at the Kemayoran Community Health Center. namely all mothers giving birth at the Kemayoran Community Health Center.

RESEARCH RESULT

This research was conducted on 69 LBW women giving birth at the Community Health Center Kemayoran.

Table 1
Distribution of respondents according to age and birth weight

Group age	Birth weight of baby				p value	OR (95% CI)
	LBW		BBLN			
	F	%	F	%		
Risky	15	65.2	14	30.4	0.009	4.28 (1.4-12.4)
No Risk	8	34.7	32	69.5		

The research results showed that 15 respondents (65.2%) gave birth to mothers who were at risk (age <20 and

>34 years) and 8 respondents (34.7%) were mothers in the at-risk age category (aged 20-34).) gave birth to a LBW baby. In percentage terms, mothers who fall into the age category at risk are more likely to give birth to LBW compared to mothers who give birth to LBW. The statistical test results showed that p = 0.009, there was a significant difference in the percentage of LBW between mothers in the age category at risk and mothers in the age category who were not at risk during pregnancy and childbirth. Analysis of age risk factors

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showed OR = 4.28 (95% CI: 1.4-12.4) that mothers in the age category at risk had a 4.28 times chance of giving birth to LBW compared to mothers in the age category who were not at risk.

year is a high risk pregnancy. Pregnancy at a young age is a risk factor, this is due to the immaturity of the reproductive organs for pregnancy (the endometrium is not yet perfect), whereas at ages over 35 years the endometrium is less fertile and increases the possibility of suffering from congenital abnormalities, which can have an impact on the health of the mother and the development and growth of the fetus. who is being conceived.

The results of this study are in line with research on Indonesian IDHS data that states that mothers aged less than 20 years have a 1.5 times greater risk of giving birth to LBW. Pregnancy at a young age is a risk factor, this is due to the immaturity of the reproductive organs for pregnancy (the endometrium is not yet perfect), whereas at the age of 34 and Pregnancy prognosis

Very over the endrometrium is less fertile and determined by a person's age. Age that is too young or less than 17 years and age that is too old is more than 34 increases the possibility of suffering from congenital abnormalities, which can have an impact on the mother's health. as well as fetal development and growth and the risk of premature birth.

Pregnancies that are not at risk are pregnancies aged 20 to 34 years. At that age, the mother is in a healthy and safe reproductive status.

Pregnancy at age < 20 years and over 35 years can cause anemia, where anemia is a disorder that carries a risk of LBW. Pregnancy on Ages < 20 years are biologically not optimal so they tend to be emotionally unstable, mentally immature so they easily experience shocks which result in a lack of attention to meeting nutritional needs during pregnancy.

Meanwhile, at age > 34 years it is associated with deterioration and decreased endurance as well as various frequent illnesses override on age This.

Table 2
Distribution of respondents according to parity and birth weight

Group parity	Birth weight of baby				p value	OR (95% CI)
	LBW		BBLN			
	F	%	F	%		
Risky	11	47.8	19	41.3	0.397	1.3 (0.47-3.56)
No Risk	12	52.1	27	58.7		

The research results showed that 11 respondents (47.8%) in the parity category at risk (parity 0 and parity more than 4) gave birth to LBW. Mothers in the parity category were not at risk as many as 12 respondents (52.1%). From the percentage results, mothers in the parity category are not at greater risk of giving birth to LBW than mothers giving birth to LBW. The statistical test results obtained a p value = 0.397, it can be concluded that there is no significant relationship between parity and the incidence of LBW and parity is not a risk factor for LBW.

Parity is the number of children conceived and born by a mother.Primiparous parity is a woman who has giving birth to a baby with a fetus weighing more than 2500 grams at 37 to 42 weeks of gestation. They have a 1.32 times greater risk of developing LBW. The parity at risk of giving birth to LBW is parity 0, namely if the mother is pregnant for the first time and the parity is more than four. This can have an effect on Pregnancy due to giving birth too often can affect the condition of the mother's uterus in mothers who are pregnant for the first time.

Table 3
Distribution Of Respondents According To Antenatal Care Visits And Birth Weight

Visit Antenatal Care	Birth weight of baby				p value	OR (95% CI)
	LBW		BBLN			
	F	%	F	%		
Not good	17	73.9	15	32.6	0.001	5.85 (1.9-17.8)
Good	6	26.9	31	67.4		

The research results showed that 17 respondents (73.9) gave birth to LBW mothers who

received poor antenatal care. 6 mothers who had good antenatal visits (26.9%) gave birth to LBW. In percentage terms, mothers who had poor antenatal care were more likely to give birth to LBW than mothers who gave birth to LBW. The statistical test results obtained a value of p = 0.0001, which means there is a significant difference in the percentage of LBW between mothers who had poor antenatal visits and mothers who had good antenatal visits. Analysis of risk factors for the quality of antenatal care found OR= 5.85 (95% CI: 1.91-17.8). organs aged < 20 years can endanger the health of the mother and fetus. Maternal age of 20-35 years is the ideal age for pregnant women because it has The mother's perfect reproductive organs and psychology are at an adult level so that during pregnancy she will be physically and mentally ready. Due to declining physical and reproductive health of mothers, women over 35 years will be at risk during pregnancy or childbirth, one of which is giving birth to a LBW baby (Nisa, 2019). The ideal age for mothers to get pregnant is in line with government regulations.

DISCUSSIONS

The relationship between maternal age and the incidence of LBW

Age is the time span between born and someone's birthday. Increasing a person's age to increase their mental maturity so that they are more motivated to carry out pregnancy checks to avoid difficulties during pregnancy and childbirth (Nisa, 2019). Immaturity of maternal reproductive

According to Law of the Republic of Indonesia Number 16 of 2019 article 7 which states that marriage is only permitted if the man and woman have reached the age of 19 (nineteen) years (Constitutional Court, 2019). The results of the study showed that respondents whose maternal age was at greatest risk for LBW incidents amounted to 41 respondents (46.6%) while respondents whose maternal age was not at greatest risk for non-LBW incidents amounted to 66 respondents (75%). The results of this study are in line with the research of Wahyuni et al., (2021), which showed that the value of p= 0.006 < α 0.05, meaning that there is a relationship between maternal age and the incidence of LBW with an OR value = 5.286, meaning that respondents with maternal age are at risk 5.286 times more likely to experience it. LBW compared to maternal age is not at risk.

Based on theory And results whereas respondents with age research, the researchers assume that LBW is caused by the mother's age < 20 years, where the development of the reproductive system is not optimal and psychological readiness is not good, which can affect the development of the fetus. Maternal age ≥ 35 years also causes LBW because the function of the reproductive system decreases, which can affect the baby's weight growth. The best age for pregnant women is 20-35 years, where the mother's reproductive system is perfect and the mother is psychologically at an adult level to be able to carry out her pregnancy and is physically and mentally ready. The relationship between gestational age and the incidence of LBW. The estimated age of the fetus is known as gestational age and is determined by counting backwards from the first day of the last menstrual period (LMP) until delivery. The gestational age classification includes preterm (42 weeks). Due to suboptimal organ development, the risk of LBW increases along with a shorter gestational age. Risky gestational age is gestational age.Pregnancies of mothers who were not at risk had the highest incidence of not being LBW, amounting to 63 respondents (71.6%). The results of this study are in line with research by Apriani et al., (2021), which showed that the p- value = 0.000, meaning that there is a relationship between gestational age and LBW at Cilacap Regional Hospital. The OR value = 20.213, which means that gestational age in the preterm category is 20.213 times more likely to experience LBW than a term pregnancy.

Based on theory And results research, the researchers assumed that the incidence of LBW was caused by premature birth (less than 37 weeks), namely pregnancy < 37 weeks because the baby's growth was not yet complete. Babies who are in their mother's womb before 37 weeks of gestation cannot develop normally, increasing the chance of them being born weighing < 2500 grams. The growth of body organs improves in babies who spend 37 weeks or more in the mother's womb resulting in a normal weight at birth.

The relationship between parity and the incidence of LBW

The results of the study showed that respondents with maternal gestational age were at greatest risk for LBW incidents, amounting to 59 respondents (67%) Parity is amount child born from the first child to the last child. Primipara is the first mother. Time give birth to child Which age not enough. The results of this research are the pregnancy is at least 28 weeks. Mothers giving birth to more than two fetuses and a minimum gestational age of 28 weeks are known as multiparous. When a mother has given birth more than five times with a fetus whose gestational age is at least 28 weeks, it is known as grande multipara. In primiparas, this is

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related to the unprepared function of the organs in maintaining pregnancy and accepting the presence of the fetus, the mother's skills in carrying out care for herself and her baby as well as the mother's psychological factors which are still unstable (Rochyati, 2003). Mothers who have never given birth to four or more children because parity is too high will cause disruption to the uterus, especially in terms of blood vessel function.

Repeated pregnancies will cause damage to the walls of the uterine blood vessels, which will affect the nutrition of the fetus in subsequent pregnancies so that it can cause growth disorders which will then give birth to babies with LBW. The results of this study are in line with Sistiarani's statement that there is no relationship between the parity of pregnant women and also in line with research by Liza Salawati (2012) which states that there is no relationship between parity (p = 0.085, RP = 5.6) and LBW at RSUDZA Banda Aceh.

Based on theory And results research, the researchers assume that risk parity, especially primipara and grandemultipara, causes the incidence of LBW. Primiparas are characterized by the unpreparedness of the organs to support pregnancy and the presence of the fetus, the mother's inability to care for herself and the fetus properly and the mother's psychological state is still unstable. On the other hand, in grandemultipara, the function of the uterus, especially the blood vessels, is disrupted by mothers who have more than five children or high parity.Repeated pregnancies can result in damage to the walls of the uterine blood vessels which disrupts fetal nutrition and causes growth restrictions resulting in LBW children.

The relationship between the number of ANCs and the incidence of LBW.

Many mothers who give birth LBW do not receive antenatal care in the first trimester, they only have a pregnancy check after entering the fourth month of pregnancy. This can affect pregnancy because the first time a mother receives antenatal care is a very important time because various risk factors and complications can be identified as early as possible so that they can be immediately reduced or eliminated so that LBW births can be prevented. The lack of quality of service received by mothers is that health workers do not provide enough health information, this information is expected to help mothers maintain their health during pregnancy. Efforts to expand antenatal services to make them more effective can be done without forgetting health promotion and risk assessment that influence the incidence of LBW. This can improve the quality of antenatal care so that LBW incidents can be prevented through quality antenatal care. It is hoped that this can add to the collection of books about maternal factors and antenatal care visits that are at risk of LBW incidents in the library and it is hoped that the results of this research can be.

CONCLUSION

From the calculations and statistical tests carried used reference furthermore. as For Material study.Age less than 20 years and age more than 34 years are risk factors for LBW (OR= 4.28; 95% CI=1.4-12.4).Parity 0 and parity >4 are not risk factors for LBW.Poor quality of antenatal care is a risk factor for LBW (OR= 5.85; 95% CI=1.9- 17.8).

SUGGESTIONS

Kemayoran District Health Center Health workers at Kemayoran Central Jakarta Health Center work together with posyandu cadres and community leaders to conduct joint learning, discussions and exchange experiences regarding the risk of LBW incidents in a comprehensive and systematic manner and can be carried out on a scheduled and continuous basis.**STIKes RSPAD Gatot Soebroto** It is hoped that this can add to the collection of books about maternal factors and antenatal care visits that are at risk of LBW incidents in the library and it is hoped that the results of this research can be Used as material refrence for study furthermore.

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