Factors affecting the event of premium delivery

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ARTICLE INFO

A B S T R A C T

Premature/premature delivery is still a problem in the world, including Indonesia, related to prevalence, perinatal morbidity and mortality, which is the main cause of infant mortality and the second cause of death after pneumonia in children under five years of age. This study aims to determine the factors influencing the incidence of preterm labor in Rsia Stella Maris Medan in 2022. Methods: This type of research is a descriptive study, with a cross-sectional design. Sampling was done by systematic random sampling, where the sample in this study was 64 respondents. Data collection techniques using a questionnaire sheet. Bivariate analysis technique using che square test. Results: most of the incidence of childbirth with age <20->35 years as many as 40 respondents (59.4%) almost most of the incidence of childbirth with parity 5 times as many as 38 respondents (32.9%), most of the incidence of childbirth with There have been 35 respondents (54.7%) preterm deliveries, most of them 44 respondents (68.8%). 68.8%), most of the incidences of childbirth with pregnant women experiencing preeclampsia/eclampsia were (56.2%) and most of the pregnancies with twin pregnancies were pregnant women with singleton pregnancies as many as 36 respondents (56.2%). Conclusion: That there is a relationship between age, parity, history of preterm labor, PROM, Placenta Previa, Preeclampsia/Eclampsia, Twin Pregnancy Affecting Premature Delivery in Rsia Stella Maris Medan in 2022

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A B S T R A K

Persalinan prematur/prematur masih menjadi masalah di dunia termasuk Indonesia terkait prevalensi, morbiditas dan mortalitas perinatal yang merupakan penyebab utama kematian bayi dan penyebab kematian kedua setelah pneumonia pada anak balita. Penelitian ini bertujuan untuk mengetahui faktor-faktor yang mempengaruhi kejadian persalinan prematur di Rsia Stella Maris Medan tahun 2022. Metode: Jenis penelitian ini adalah penelitian deskriptif, dengan desain cross sectional. Pengambilan sampel dilakukan dengan sistematik random sampling, dimana sampel dalam penelitian ini sebanyak 64 responden. Teknik pengumpulan data menggunakan lembar angket. Teknik analisis bivariat menggunakan uji che square. Hasil: sebagian besar kejadian persalinan dengan usia <20->35 tahun sebanyak 40 responden (59,4%) hampir sebagian besar kejadian persalinan dengan paritas 5 kali sebanyak 38 responden (32,9%), sebagian besar kejadian persalinan dengan persalinan preterm sebanyak 35 responden (54,7%), sebagian besar 44 responden (68,8%). 68,8%), sebagian besar kejadian persalinan ibu hamil mengalami preeklampsia/eklampsia sebanyak (56,2%) dan sebagian besar ibu hamil dengan kehamilan kembar adalah ibu hamil dengan kehamilan tunggal sebanyak 36 responden (56,2%). Kesimpulan : Bahwa ada hubungan usia, paritas, riwayat persalinan prematur, KPD, Plasenta Previa, Preeklampsia/Eklampsia, Kehamilan Kembar yang Mempengaruhi Persalinan Prematur di Rsia Stella Maris Medan Tahun 2022

INTRODUCTION

IMR (Infant Mortality Rate) and is one indicator to determine the health status in a country around the world. Based on a report from UNICEF (United Nations Children's Fund, 2018), the AKABA (Toddler Mortality Rate) in the world is 18 deaths per 1000 live births. This figure is still far from the MDGs target of 30/1000 live births. For the Southeast Asia region, the AKABA is also still quite high at 29/1000 live births where the target to be achieved is 24/1000 live births, (Kemenkes RI, 2018).

According to the 2017 IDHS survey, the Neonatal Mortality Rate is 15/1000 live births, the Infant Mortality Rate is 24/1000 live births. Indonesia's target (RPJMN 2024): neonatal mortality rate is 10/100,000 live births, infant mortality rate is 16/100,000 live births. The global target of SDGs 2023 is the infant mortality rate is 12/1000 live births, the neonatal mortality rate is 7/1000 live births. LBW and prematurity are the main causes of infant mortality, namely 38.8/1000 live births, (bojonegorokab.go.id, 2020). In Indonesia, the incidence of prematurity is in second place as a cause of newborn death 0-6 days by 32.4% and fourth as a cause of newborn death by 12.8%. (Trisa, 2019).

Premature delivery is still a problem in the world, including Indonesia, related to prevalence, perinatal morbidity and mortality, which is the main cause of infant mortality and the second cause of death after pneumonia in children under five years of age. Preterm delivery is a contributor to 75% of perinatal mortality and more than 50% of long-term morbidity is related to poor perinatal. Meanwhile, the survival of premature infants has increased in the last 20-30 years and the chances of survival of infants differ in developed and developing countries in the availability of obstetric and neonatal care services.

The incidence of preterm is different in each country, in developed countries such as Europe it is around 5-11%, while in the USA it is 11.5%, while in developing countries the incidence is still much higher, for example in Sudan around 31%, India by 30%, and South Africa at 15% (Osterman et al., 2019).

Berghella (2017) states that more than one million babies die from preterm birth every year in the world or 1 (one) baby every 30 seconds. In Indonesia, the incidence of moon attacks can be reflected roughly based on the incidence of babies with low birth weight (LBW). The national incidence of LBW in hospitals is 27.9% (POGI Bandung Branch, 2018), LBW in Indonesia in 2018 (10.2%) (Riskesdas, 2018), and in 2015 it was 13.03% with the highest percentage namely North Maluku (19.77%), West Kalimantan (19.79%) and West Papua (20.27%), while the lowest was in the Riau Islands (8.38%), DI. Yogyakarta (8.9%) and Bali (9.08%) (BPS, 2018), while according to WHO (2018), it is 15.5%/100 KH or around 675,700 the number of babies born prematurely in Indonesia, (Sriyana, 2010). et al 2020).

Maternal age affects the outcome of a gestational age, the lower or higher the mother, the higher the risk of the mother experiencing preterm birth. The number of parity is one of the predisposing factors for preterm birth, because the number of parity can affect the state of the mother's health in pregnancy (Sriyana, et al 2020).

Based on an initial survey conducted by researchers at RSIA Stella Maris Medan which also facilitates preterm labor with good NICU standards. Data from medical records on the number of mothers giving birth prematurely in 2019 was 350 (10%) of 3530 deliveries, in 2020 as many as 300 (8.3%) of 3601 deliveries, and in 2021 as many as 316 (10%) of 3296 deliveries, so that in 2021 there will be an increase of 1.7% from the previous year.

For this reason, premature events can be prevented by paying attention to risk factors for preterm birth, including previous history of preterm birth, maternal age, gestational age, premature rupture of membranes, placenta previa and preeclampsia/eclampsia. Phenomenon Based on the above researchers are interested in conducting research with the title "Factors Affecting the Occurrence of Premature Delivery in RSIA Stella Maris Medan in 2022.

METHOD

This type of research is descriptive research, with a cross-sectional design, namely research that provides information about the existing situation where all variables are measured at the same time when the research takes place. The type of data is secondary data. The population in this study were all mothers who gave birth prematurely at RSIA Stella Maris for one year calculated from January 1, 2021 to December 31, 2021, namely as much as 316 people.

The sample is the object under study and represents the entire population. If the population is less than 100 people, then the total should be taken from the population. But if the number of subjects is large, it can be taken between 10-15% or 20-25% or more (Arikunto, 2017).

This study uses a cross-sectional or cross-sectional design which can show the relationship between the independent and dependent variables but cannot show a causal relationship. The data used in this study is secondary data sourced from the medical records of RSIA Stella Maris Medan. The variables analyzed from the patient's medical records were collected through the auxiliary format. Furthermore, in this study the data collection process was carried out by selecting the variables needed for later analysis. The location of this research at RSIA Stella Maris Medan on Jl Samanhudi No. 20 Medan.

Based on the research objective, namely to determine the factors associated with cesarean section at RSIA Stella Maris Medan through the distribution and relationship of the independent variable with the dependent variable.

The research was started in March - July 2022 and during that time the collection and processing of library research research data was carried out, submission of preliminary research titles, research implementation and preparation of research reports.

RESULTS AND DISCUSSION

Bivariate analysis was used to see if there was an effect of Maternal Age, Parity, History of Premature Delivery, PROM, Placenta Previa, Preeclampsia/Eclampsia, and Twin Pregnancy with the incidence of preterm labor with a 95% confidence level with = 0.05. The results can be seen in the following table 4.2.

Results Based on the analysis of table 4.2 shows that the results of statistical tests with chi-square calculations obtained p value = 0.039 <0.05, this means that there is an influence between Age and Premature Delivery with an OR of 3,000 (CI 1.041-8.646). The OR value indicates that age has a 3.0 times greater risk of causing preterm labor.

Tabel 4.2
The Effect of Age with the Incidence of Premature Delivery

No	Variable	Premature Labor				Total		P value	OR (95%)
	Mother Age	Premature		Aterm					
		F	%	F	%	F	%		
1	Risk (<20 atau >35 Tahun	24	75.0%	16	50.0%	40	62.5%	0,039	3.000
2	No risk (23-35 tahun)	8	25.0%	16	50.0%	24	37,5%		(1.041-
Total		32	100%	32	100%	64	100%		8.646)

Tabel 4.3
The Effect of Parity with Premature Delivery

No	Variable	Premature Labor				Total		P value	OR (95%)
	Parity	Premature		Aterm					
		F	%	F	%	F	%		
1	Risk (>5 kali)	24	75.0%	14	43,8%	38	59,4%	0,011	3.857
2	No risk (<5 kali)	8	25.0%	18	56,2%	26	40,6%		(1.334-
Total		32	100%	32	100%	64	100%		11.157)

Table 4.4
The Influence of Premature Birth History with Premature Delivery

No	Variable	Premature labor				Total		P value	OR (95%)
	Paritas	Parity		Aterm					
		F	%	F	%	F	%		
1	Risk (>5 kali)	24	75.0%	14	43,8%	38	59,4%	0,011	3.857
2	No risk (<5 kali)	8	25.0%	18	56,2%	26	40,6%		(1.334-
Total		32	100%	32	100%	64	100%		11.157)

Results Based on the analysis of table 4.3, it shows that out of 32 premature deliveries (cases) there are some 24 people (75.0%) who give birth at risk (5 times). The results of statistical tests with chi-square calculations obtained p value = 0.011 > 0.05, this means that there is an influence between parity and the incidence of preterm delivery with an OR of 3.857 (1,334-11,157). The OR value indicates that parity has a 3.8 times greater risk of causing preterm labor.

Results Based on the analysis of table 4.4, it shows that from 32 preterm deliveries there were 23 (71.9%) mothers who gave birth with a history of Premature Delivery (Having Experienced Premature Delivery) before and from 32 mothers with normal/term birth (Control) there were 12 (37.5%) mothers. there is a history of preterm delivery. The results of the test with chi-square calculation obtained p value = 0.006 < 0.05 this means that there is an influence between History of Premature Delivery and OR 4.259 (CI 1.488-12.192) which means that delivery with preterm labor has a risk of 4.2 times greater than labor preterm with no history of preterm delivery.

DISCUSSION

Based on the results of the analysis table 4.2 shows that the results of statistical tests with chi-square calculations obtained p value = 0.039 <0.05, this means that there is an influence between Age and Premature Delivery with an OR of 3,000 (CI 1.041-8.646). The OR value indicates that age has a 3.0 times greater risk of causing preterm labor.

Based on this study, from 70 mothers who gave birth prematurely, there were 34 (48.6%) mothers who gave birth < 20 years and more than 35 years. The optimal reproductive age for a mother is 20-35 years. At the age of less than 20 years, the mother's uterus and pelvis have not yet grown to adult size and at the age of more than 35 years the uterine organs are old so that the birth canal is stiff and easy for complications to occur so that it affects the fetus in the womb and can cause premature birth and low birth weight.

Results Based on the analysis of table 4.3, it shows that out of 32 premature deliveries (cases) there are some 24 people (75.0%) who give birth at risk (5 times). The results of statistical tests with chi-square calculations obtained p value = 0.011 > 0.05, this means that there is an influence between parity and the incidence of preterm delivery with an OR of 3.857 (1,334-11,157). The OR value indicates that parity has a 3.8 times greater risk of causing preterm labor.

This research is supported by Abdul & Nuryani's research (2019). The results of the bivariate analysis showed that as many as 41 (66.1%) pregnant women with parity 1 or 4 experienced premature labor and as many as 21 (33.9%) pregnant women with parity 2- 3 preterm deliveries. The results of statistical tests obtained p value = 0.000 (p <0.05), which means that there is a significant relationship between parity and preterm labor. From the results of the analysis, the OR value was 4.419 (95% CI: 2.079-9.389), which means that pregnant women with parity 1 or 4 had a 4,419 times higher risk for preterm delivery compared to pregnant women with parity 2-3.

Results Based on the analysis of table 4.4 shows that from 32 preterm deliveries there were 23 (71.9%) mothers who gave birth with a history of Premature Delivery (Have Experienced Premature Delivery) before and from 32 mothers who gave normal/term birth (Control) there were 12 (37.5%) mothers. there is a history of preterm delivery. The results of the test with chi-square calculation obtained p value = 0.006 < 0.05, this means that there is an influence between History

of Premature Delivery and OR 4.259 (CI 1.488-12.192), which means that delivery with preterm labor has a risk of 4.2 times greater than labor. preterm with no history of preterm delivery.

The results of this study are supported by research by Haeriyah, S (2019), which shows that 43.3% of mothers with preterm labor experienced preterm labor. Meanwhile, 13.8% of mothers who did not have preterm labor experienced preterm delivery. The relationship between preterm labor and the incidence of preterm labor at the Tangerang District General Hospital 2019 can be carried out.

CONCLUSIONS AND SUGGESTIONS

1. Results Based on the analysis of statistical test results with chi-square calculations, p value = 0.039 <0.05, this means that there is an influence between Age and Premature Delivery with an OR of 3,000 (CI 1.041-8.646). The OR value indicates that age has a 3.0 times greater risk of causing preterm labor.
2. Results Based on the analysis of statistical test results with chi-square calculations obtained p value = 0.011 > 0.05, this means that there is an influence between parity and the incidence of preterm delivery with an OR of 3.857 (1,334-11,157). The OR value indicates that parity has a 3.8 times greater risk of causing preterm labor.
3. Results Based on the analysis of statistical test results with chi-square calculations, p value = 0.006 <0.05, this means that there is an influence between History of Premature Delivery and preterm delivery with an OR of 4.259 (CI 1.488-12.192), which means that the presence of preterm labor has 4.2 times greater risk of preterm delivery compared to deliveries without a history of preterm delivery

ETHICAL CONSIDERATIONS

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Conflict of Interest Statement

No potential conflicts of interest have been reported regarding the submitted articles

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