The Relationship Of The Age Of Pregnant Women Under 20 Years Old With Premature Delivery

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Article Info	ABSTRACT
	Introduction: There are still many preterm labourers from the age factor of the mother, namely, women who become pregnant at the age of 20 years greatly affects the occurrence of preterm labour. Pregnant women under 20 years old can harm maternal health as well as the growth and development of the fetus because of the immature reproductive apparatus for pregnancy and coupled with psychological, social, and economic stress, thus facilitating the occurrence of prematurity. This study aims to analyze the relationship between the age of pregnant women under 20 years old and premature delivery at the Muhammadiyah General Hospital Medan.. **Method:** This type of research is an analytical survey with a cross-sectional approach. The population in this study was all maternity mothers who gave birth at the Muhammadiyah Medan General Hospital, which amounted to 43 people. The sample was 43 people with a sampling technique, namely a total sampling where the entire population was sampled. Data were obtained by interview using questionnaires and analysis with chi-square. **Result :** Spearman, there is that Probability $(0.001) < α (0.05)$ means Ho rejected, meaning that it is seen that the age of pregnant women under 20 years of age is significantly related to premature delivery. It is expected for health workers to be able to provide information by conducting counselling to mothers who are pregnant under the age of 20 years about the impact/risk that occurs in their pregnancy. *This is an open access article under the CC BY-SA license.*

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1. INTRODUCTION

Preterm labour is childbirth that occurs when the gestational age has not reached the age of 37 weeks. *Premature labour* is an issue that has always been a concern because it is one of the main causes of neonatal death. Premature labour is the cause of high mortality due to the weak condition of the baby. Preterm labour is dangerous because it has the potential to increase perinatal mortality. Preterm labour is influenced by one of them is the age factor of the mother and the multipara grande. From the maternal age factor, women who become pregnant under the age of 20 years are at risk of giving birth prematurely by about 40%.

Pregnancy at a young age itself (adolescence) carries severe risks. The reason is that the mother's emotions are not stable, and the mother is easily tense. While congenital disabilities can arise due to tension in the womb, there is a sense of emotional rejection when the mother is pregnant with her baby. This is due to psychic factors affecting the mother (Fatimah, 2020). Factors of the level of reproductive development play a role in young pregnancy. The level of readiness of the female reproductive apparatus, especially for adolescents, is divided into several stages which, if not paid attention to properly, can trigger the onset of premature birth (Utama N, H, 2015); (Lestari, 2015).

In healthy reproduction, it is known that the safe age for pregnancy and childbirth is 20 – 35 years, while those at risk for pregnancy and childbirth are under 20 years of age (Adinda, 2020). The first pregnant woman at the age of under 20 years, the mother's uterus and pelvis often have not grown to adult size. As a result, the safety and health of the fetus in the womb are doubtful. Possible dangers are that the baby is born not enough months (premature), and bleeding can occur before/after the baby is born (Wahyuningsih, 2020); (WHO, 2017).

In Indonesia, the national prematurity incidence rate does not yet exist, but the incidence rate of low birth weight babies (BBLR) can roughly reflect the incidence of prematurity. Based on a preliminary survey conducted by researchers at Muhammadiyah Hospital Medan in September 2019 from 12 maternity mothers. Of the four mothers, among them gave birth to premature babies.

Based on the background that has been described above, the researcher is interested in researching the Relationship between the Age of Pregnant Women Under 20 Years old and Premature Delivery at the Muhammadiyah General Hospital Medan.

2. METHOD

This type of research is an analytical survey using a cross-sectional type approach, which is a type of research that emphasizes the timing of measuring observation of independent and dependent variable data only once at one time, namely analyzing the relationship between the age of pregnant women under 20 years and premature delivery (Sastroasmoro, 2017). This research was conducted at the Muhammadiyah General Hospital on Jalan Mandala Medan. The reason was that there were still pregnant women under 20 years old who experienced premature delivery. The study was conducted from September- November 2019. The population in this study was all maternity mothers at Muhammadiyah Hospital Medan for September – November 2019. The sample in this study was the entire population used as a sample (total sample) which was 43 people. Data were obtained by interview using questionnaires and analysis with chi-square (Murti, 2011).

3. RESULT

Table 1 Frequency Distribution of Respondents By Education

No	Education	f	%
1.	SD	5	11,6
2.	SMP	12	27,9
3.	SMA	18	41,9
4.	S1	8	18,6
	Sum	43	100

From table 1 above, it can be seen that the majority of education in high schools, namely 18 people (41.9%), and minorities in elementary schools, as many as five people (11.6%).

Table 2 Frequency Distribution According to History of Preterm Labor

No	History of Preterm Labor	f	%
1.	Yes	10	23,3
2.	Not	33	76,7
	Sum	43	100

From the table above, ten respondents have experienced a history of preterm labour (23.3%), and among those who have never experienced a history of preterm labour, as many as 33 people (76.7%).

Table 3 Frequency Distribution According to Newborn Weight

No	BB Newborns	f	%
1.	Under 2500 gr	25	58,1
2.	Above 2500 gr	18	41,9
	Sum	43	100

Table 3 shows that respondents whose baby weight was below 2500 grams were 25 people (58.1%), and those whose weight was above 2500 grams were 18 people (41.9%).

Table 4 Frequency Distribution According to Pregnancy Examination

No	Pregnancy checkup	f	%
1.	Yes	30	69,8
2.	Not	13	30,2
	Sum	43	100

Table 4 shows that 30 respondents had a pregnancy examination (69.8%), and 13 people did not do a pregnancy checkup (30.2%).

Table 5 Frequency Distribution by Type of Labor

No	Types of Childbirth	f	%
1.	Usual	11	25,6
2.	Caesar	32	74,4
	Sum	43	100

From the table above, it can be seen that all respondents chose the normal type of delivery, as many as 11 people (25.6%) and those who chose the type of caesarean delivery, as many as 32 people (74.4%).

Table 6 Frequency Distribution By Parity

No	Parity	f	%
1.	1 – 2 people	20	46,5
2.	3 – 4 people	19	44,2
3.	More than 5 people	4	9,3
	Sum	43	100

The table above shows that the majority at parity 1-2 people as many as 20 people (46.5%) and the minority at parity more than five people as many as four people (9.3%).

Table 7 Frequency Distribution According to The Interval of Childbirth in the Hospital

No	Labor interval	f	%
1.	Less than 2 years old	12	27,9
2.	More than 2 years	31	72,1
	Sum	43	100

From the table above, it can be seen that respondents at childbirth intervals of less than two years, namely 12 people (27.9%) and more than two years, namely 31 people (72.1%).

Table 8 Frequency Distribution of Respondents By Maternal Age

No	Age	f	%
1.	Under 20 years old	23	53,5
2.	Over 20 years old	20	46,5
	Sum	43	100

From the table above, it can be seen that the majority at the age of under 20 years, as many as 23 people (53.5%) and the minority at the age over 35 years, as many as 20 people (46.5%).

Table 9 Frequency Distribution According to Preterm Labor

No	Preterm Labor	f	%
1.	Yes	24	55,8
2.	Not	19	44,2
	Sum	43	100

From the table above, it can be seen that 24 respondents experienced premature birth (55.8%) and among those who did not experience premature birth were 19 people (44.2%).

Bivariate Analysis
The Relationship between The Age of Pregnant Women Under 20 Years Old with Preterm Labor

No	Age	Labor				Total		P
		Prematur		Not Premature				
		f	%	f	%	f	%	
1.	Under 20 years old	18	41,8	5	11,7	23	53,5	0,001
2.	Over 20 years old	6	14	14	32,5	20	46,5	
	Sum	24	55,8	19	44,2	43	100	

Based on the table above, it can be seen that of the 23 people (53.5%) who were under the age of 20 years, there were 18 people (41.8%) who had preterm labour and five people (11.7%) who did not experience premature delivery. Then of the 20 people over the age of 20 years, six people (14 %) experienced preterm labour and 14 people (32.5%) did not experience preterm labour.

From the results of data analysis with the chi-square statistical test, the Probability (0.001) of $< \alpha$ (0.05) means that Ho is rejected, meaning that there is a relationship between the age of pregnant women and the incidence of premature delivery at the Muhammadiyah Medan General Hospital in 2019.

4. DISCUSS

From the results of research at the Muhammadiyah General Hospital Medan in 2019, there were 23 respondents under 20 years old and 20 pregnant women over 20 years old. According to Notoatmodjo (2017); Siregar, (2020), Age is the length of life calculated from birth to the present. Age is a period of new patterns of life; as the age increases, the more age will reach the reproductive age (Al-Fattah, Farel, 2010).

According to Prawirohardjo (2016)a healthy and safe reproductive age is 20-35. In pregnancies under 20 years old, physically and psychically, it is still lacking, for example, attention to meeting the needs of nutrients during pregnancy. In comparison, at the age of over 35, it is related to deterioration and decreased endurance and various diseases that often afflict at this age.

According to the researchers' assumptions, the age of pregnant women affects their pregnancy, especially at the age of under 20 years, which is physically unstable, affecting her pregnancy and biologically, the development of her reproductive organs is not fully optimized.

Distribution of Respondents Experiencing Preterm Labor

From the study results, 24 respondents experienced preterm labour (55.8%), and 19 people did not experience preterm labour (44.2%). According to Kasdu , preterm labour is a delivery that occurs at the gestational age between 20 – 37 weeks or between 140 – 259 days, calculated from the first day of the last menstruation (HPHT). The incidence of preterm labour is thought to have originated from the mother's condition (Ahmalia, 2018).

The incidence of premature events also affects the age of mothers under 20 years and in multigravida whose birth distance is too close, diseases that are directly related to pregnancy, for example, toxaemia gravidarum, antepartum haemorrhage, psychic trauma, and others (Almatsier, 2009). Many mothers give birth to premature babies due to a lack of examination and monitoring during pregnancy (Syamsiedi, 2018).

Until now, premature babies are still one of the important health problems in developing countries. Vilar showed that the incidence of premature events in developing countries is four times greater than in developed countries. In Indonesia, the incidence of premature babies ranges from 22% - 24% of all babies born at one year.

According to the researchers' assumption that respondents who experienced premature labour were largely due to factors of the maternal condition. The mother's young age and the child's distance being too close also greatly affect the baby's premature birth. This happens because the lack of maternal knowledge about the impact of getting pregnant at a young age greatly affects the fetus. This is to the research above.

The Relationship between The Age of Pregnant Women Under 20 Years old with Preterm Labor

From the results of the study, it is known that of the 43 maternity mothers at the Muhammadiyah General Hospital, 23 mothers under the age of 20 years were found,

and of the 23 mothers under the age of 20 who experienced preterm labour as many as 18 people (78.3%).

According to Suririnah, from the maternal age factor, pregnant women who become pregnant under 20 are at risk of giving birth prematurely by about 40%. The age factor also has a close influence on the development of female reproductive organs, where a healthy reproductive period is recommended so that the age of pregnant women and childbirth at the age of 20-35 years, pregnancies outside that age period make women at high risk during childbirth.

Pregnant women under 20 years old can be detrimental to maternal health as well as the growth and development of the fetus due to the immature reproductive apparatus for pregnancy. The complication in adolescent pregnancy (under 20 years) is higher than the healthy reproductive period between 20-30 years. This situation will be even more difficult when coupled with psychological, social, and economic stress, thus facilitating the occurrence of prematurity (Hanifah et al., 2020).

Then based on the results of the statistical analysis of the spearman correlation, there is a probability (0.001) of $< \alpha$ (0.05) means that Ho is rejected, meaning that there is a relationship between the age of pregnant women under 20 years old with premature delivery at Muhammadiyah General Hospital in 2012.

According to the researchers' assumptions, that respondents under the age of 20 are likely to experience premature labour. The respondents experienced premature delivery because the low education of mothers caused the age of pregnant women under 20 years. Therefore, counselling is needed for mothers who do not know the dangers that occur when pregnant under the age of 20 years.

5. CONCLUSION

This study concludes that there is a relationship between the age of pregnant women under 20 years old and premature delivery. It is expected for pregnant women to participate in counselling about the impact of pregnancy at a young age which greatly affects the incidence of premature delivery and other complications.

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