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Characteristics of Adolescent Pregnancy at Sanglah Hospital Denpasar Period of January 2018 - December 2020

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Abstract: ***The average birth rate in Southeast Asia is 47 births/1000 adolescents, higher than the South Asian average of 35 births/1000 adolescents and close to the global average of 44 births/1000 adolescents. Pregnancy in adolescents can have a biological impact on the mother and fetus, as well as social and economic impacts. The biological impact in question is complications during and after pregnancy, including during childbirth. Therefore, this study will examine the characteristics and complications that occur in pregnancy in adolescents. This research is a retrospective descriptive study with variables taken from secondary data sources. The study was carried out at Sanglah Hospital Denpasar from December 2020 to January 2021. The research target population was pregnant women aged 15 to 19 years who came to the IRD Midwifery Sanglah Hospital Denpasar. During a period of three years from 2018 to 2020, 194 cases of adolescent pregnancy were found out of a total of 3606 cases, both those who gave birth and those who had abortions, which were obtained from the medical record data of the IRD Obstetrics and Gynecology at Sanglah Hospital Denpasar. Based on the table above, adolescent pregnancy has some of the highest characteristics including lower secondary education level (47.4%), high school education level (52.6%), unemployed (70.0%), primigravida (93.3%), and only 74.2% of pregnant adolescents are married. This study also found that preterm delivery is the most common complication in adolescent pregnancy.***

Keyword: Adolescent Pregnancy, Characteristics

1. Introduction

Pregnancy and birth are moments that will always be memorable and require energy from both the mother and family. After the birth of a baby, father and mother must be ready to take care of the child for optimal growth and development. Therefore, a father and mother need physical, psychological and material readiness in caring for a baby. Adolescent pregnancy is a pregnancy that occurs in women aged 15-19 years. Pregnancy is a challenge for many countries including Indonesia because it brings various impacts. The health impact is related to the immaturity of the maternal reproductive organs at the age of adolescence so that there is a risk of disturbing the physical health of the mother and fetus. Complications of pregnancy both maternal and fetal, operative mode of delivery both vaginally and by Caesarean section (CS) are higher than pregnancy in adulthood. On the social aspect, possible impacts such as school age, not achieving maximum work potential, poverty and low social and economic status.

The prevalence of adolescent pregnancy in Sub-Saharan Africa is 19.3% higher than the overall prevalence of adolescent pregnancy in Africa (18.8%). This finding is much higher three times than Latin America (6.4%), four times higher in Southeast Asia (4.5%) and twenty-six times higher in East Asia (0.7%).[1] In Southeast Asia generally still stagnant or even increasing with varying ranges in each country. The average birth rate in Southeast Asia is 47 births/1000 adolescents, higher than the South Asian average of 35 births/1000 adolescents and close to the global average of 44 births/1000 adolescents.[1][2][3] In 2020 The birth rate at the age of 15-19 years in Indonesia is 47.37 births per 1000 adolescents. The pregnancy rate at the age of 15-19 years in Indonesia has decreased gradually from 129.45 births per 1000 adolescents in 1975 to 47.37 births per 1000 adolescents in 2020.3 Research in several countries and health service centers including Sanglah Hospital shows the adolescent pregnancy rate quite high even up to 3.03%-4.5%.[4]-[7] Meanwhile, according to Riskesdas 2013, adolescent pregnancies nationally reached 1.97%. Most of these adolescent pregnancies are spread out in rural populations.[3] The prevalence of pregnancy complications and surgery in adolescent pregnancies tends to be higher, although some studies are controversial.[7]-[24] Nearly 95% of adolescents who give birth come from low- and middle-income countries. Indonesia is one of the countries in the top five with the highest number of adolescent pregnancies.[25],[26] Several risk factors that increase the incidence of adolescent pregnancy are socioeconomic status, education level, environmental factors, and family factors. [27]-[33]

Pregnancy in adolescents can have a biological impact on the mother and fetus, as well as social and economic impacts. The biological impact in question is complications during and after pregnancy, including during childbirth. Complications that can occur include anemia, premature birth, Cephalopelvic Disproportion (CPD) and other pregnancy complications. While the fetus can be in the form of premature birth, low birth weight, lower APGAR scores, congenital abnormalities, neonatal complications, infant mortality, disturbances in the relationship between maternal and infant care, duration of breastfeeding, and the occurrence of violence and neglect of infants. [33]

The prevalence of early pregnancy is quite high and the health and social impacts it causes are also significant. Therefore, a population approach is needed to prevent this

adolescent pregnancy. However, to carry out this approach, the characteristics of adolescent pregnancy need to be known in advance so that the approach taken is more focused. Therefore, this study will examine the characteristics and complications that occur in pregnancy in adolescents.

2. Literature Survey

According to the WHO definition of adolescent pregnancy is pregnancy in women aged 15-19 years.[25]Adolescent pregnancy is a health problem, especially in developing countries. This pregnancy will have a biological impact on the mother and fetus as well as the socio-economic impact of the family. Various risk factors that underlie pregnancy in adolescents such as low education level, media exposure, low social economic status and several other factors. The rate of adolescent pregnancy varies from country to country. Generally higher in middle- and low-income countries.[26]

According to World Population Day 2013, approximately 16 million adolescent pregnancies occur globally each year. Another report shows that globally, adolescent births reach 44/1000 adolescents aged 15-19 years.[26] Similar to the 2014 World Health Statistics report, the rate of pregnancy in adolescents is 49 per 1000 women or 1 in 299 adolescent girls.[27]Regionally, the highest adolescent pregnancies occurred in Africa and South Asia. Nigeria is the country with the highest adolescent pregnancy rate. Global and regional surveys show that the incidence of adolescent pregnancy has decreased over time.[26] Nearly 95% of adolescent births come from low- and middle-income countries.[26]

According to WHO data, the adolescent pregnancy rate in Indonesia is the 5th highest after India, Bangladesh, Nigeria and Brazil. However, as a percentage, Indonesia is not included in the top 10 countries with the highest percentage of adolescent pregnancies.[26]

The impact of adolescent pregnancy includes biological and socio-economic impacts. The biological impacts in question are physical health conditions and mental health both in the short and long term.[34] Complications that often occur include anemia, premature birth, CPD and others. Meanwhile, in the fetus, it can be in the form of prematurity, low birth weight, stunted fetal growth, fetal distress, and perinatal death.[35]

3. Methods

This research is a retrospective descriptive study with variables taken from secondary data sources. The study was carried out at Sanglah Hospital Denpasar from December 2020 to January 2021. The research target population was pregnant women aged 15 to 19 years who came to the IRD Midwifery Sanglah Hospital Denpasar.

The study took secondary data in the form of medical records of pregnant patients in the 2018-2020 period at Sanglah Hospital Denpasar. All pregnant patients aged 15 to 19 years will be included in the study sample. The data will then be distributed based on education level, employment status, number of deliveries (primiparous or multiparous), hemoglobin level, number of ANC (antenatal care), complications, and actions taken. This research was previously approved by the ethics committee of Sanglah Hospital Denpasar.

This study began by looking for patient data by recording the names and medical record numbers of patients who met the criteria for adolescent pregnancy which were taken from the Midwifery IRD register book and the delivery room register at Sanglah Hospital Denpasar from January 1, 2018 to December 31, 2020. After obtaining the name and record number the patient's medical record, data is collected from the medical record storage center. Then the data is entered into the data collection sheet. After the data is collected, the data is summed and tabulated and displayed in the form of tables and narratives.

4. Results

During a period of three years from 2018 to 2020, 194 cases of adolescent pregnancy were found out of a total of 3606 cases, both those who gave birth and those who had abortions, which were obtained from the medical record data of the IRD Obstetrics and Gynecology at Sanglah Hospital Denpasar. Based on these data, the incidence of adolescent pregnancy is 5.37%. This study displays the characteristics of adolescent pregnancy in the form of education level, occupation, parity, marital status, ANC status, complications, and the type of action/mode of delivery. Briefly as in table 1.

Table 1: Frequency and Percentage by Characteristics of Adolescent Pregnancy Period 2018 to 2020

Characteristics	*Frequency*	*Percentage*
Level of education		
Middle down	92	47,4
High	102	52,6
Job		
Work	58	30,0
Jobless	136	70,0
Parity		
Primigravida	181	93,3
Multigravida	13	6,7
Marriage status		
Married	144	74,2
Not Married	50	25,8
ANC status		
Never ANC	25	12,9
<3 times	63	32,5
≥ 3 times	106	54,6

Based on the table above, adolescent pregnancies at the lower secondary education level are 47.4%, this figure is a high number, and is not found at the post-secondary education level and most of them do not work. According to the number of pregnancies, almost all (93.3%) were first pregnancies (primigravida) and most were married. More than half (54.6%) have performed ANC 3 times. Complications that arise in childbirth are quite high up to 37.1%, while according to the method of delivery or the action, most of them are spontaneous vaginal deliveries.

Based on the level of education, in this study, it was found that most of them were high school education levels (52.6%), followed by lower secondary education levels (SD, SMP) (47.4%). When compared with the results of previous studies at Sanglah Hospital 2016-2017, the results of this study showed similar results although with slightly different proportions. In this study, 51.6% high school, 40.7% junior high school, and 7.7% elementary school were found.

Most of the pregnant adolescents did not work (70.0%). This may be related to unwanted pregnancies and sexual relations that have been carried out during school. The results of research at Sanglah Hospital in the previous period (2016-2017) also showed that 65.9% of patients had not worked.[4]Rohman's research also found that 63.4% of pregnant adolescents had not worked.[6] Likewise, other studies found more cases of pregnancy in adolescents who Does not work. The types of work of working youth are mostly private workers, where there are two possibilities that describe the distribution of these characteristics. First, adolescents who are in school are pregnant, so they drop out of school and then don't work. Second, adolescents do not have sufficient sex education to delay sexual activity early.[4]

This study showed that most of the pregnancy cases were primigravida (93.3%). These results are related to the majority of pregnant adolescents with junior high and high school education, and sexual practices before marriage carried out at that age. In addition, the age range of 15 to 19 years has just entered the productive period, so it is rare to get pregnant more than once.

In research at Sanglah Hospital for the 2016-2017 period, it was found that 92.2% were primigravida and 7.8% multigravida. The multigravida rate decreased by 0.5% in this study.4 Another study at a hospital in Kalimantan also showed the primigravida rate to reach 91%.[10] The results of this study are almost the same as the results of this study.

The results of this study showed that only 74.2% of pregnant adolescents were married, and 25.8% were unmarried. The unmarried pregnancy rate is quite high. However, when examined further at the time of pregnancy, the unmarried rate may be higher than 74.2% because most of the time during the examination at Sanglah Hospital, patients who were pregnant out of wedlock were already married. When compared with previous research in 2016-2017 by Nurtino et al, it showed 27.1% of unmarried pregnant adolescents. This shows that the number of unmarried pregnant adolescents decreased by 1.3%. Rohman's research shows that only 0.5% are unmarried, 94.3% are married and live with their partners while the rest are divorced.[6]

Based on table 1 shows 25 (12.9%) adolescent mothers have never performed ANC, 63 (32.5%) performed ANC less than 3 times, and 106 (54.6%) adolescent mothers performed ANC more than 3 times. Previous research at Sanglah Hospital in 2016-2017 showed that those who routinely did ANC more than or equal to 3 days were 58%, less than 3 times 32.2% and the rest did not do ANC.[4] These results show pregnant adolescents in the study on average more rarely perform ANC compared to the previous period.

This study found that preterm delivery was the most common complication in adolescent pregnancy in the period 2018 – 2020. This is in accordance with previous studies which stated that adolescent pregnancy has a higher risk of complications, one of which is preterm delivery.

Table 2: Complications in Adolescent Pregnancy

Complications	*Total*	*%*
No complication	72	37,1
Gestational hypertension	5	2,6
Mild preeclampsia	2	1,0
Severe preeclampsia	16	8,2
Eclampsia	0	0,0
Imminent abortion	13	6,7
Incomplete abortion	16	8,2
Preterm delivery	57	29,4
Post term delivery	5	2,6
Abnormal position	16	8,2
Premature rupture of membrane	20	10,3
Pathological KTG	14	7,2
Intrauterine growth restriction	11	5,7
Low birth weight	46	23,7
Fetal death in uterus	7	3,6
Congenital abnormality	5	2,6
Antepartum hemorrhage	7	3,6
Post-partum hemorrhage	1	0,5
Anemia	30	15,5

Based on the table, it was found that 62.9% of adolescent patients had complications. The most complications were preterm delivery and low birth weight, followed by anemia, premature rupture of membranes, incomplete abortion and severe preeclampsia. This is in accordance with previous studies which showed complications in adolescent pregnancy were higher than in adults. Research in 2016-2017 at Sanglah Hospital showed the rate of childbirth complications in adolescent pregnancies was 71.3%.[4] This figure was higher than previous studies which showed 55.68% of complications occurred in pregnancy.[16] Preterm delivery, anemia and premature rupture of membranes are the three the most common types of complications. This is comparable to the results of this study.[4]

Table 3: Groups of Adolescent Pregnancy by Action

Type action	*Total (194)*	*%*
Spontaneous delivery	102	52,6
Caesarean Section	32	16,5
Forceps extraction	11	5,7
Vacuum extraction	4	2,1
Curettage	16	8,2
Conservative	29	14,9

This study found that the majority (52.6%) of teenage pregnancies did not require any other procedure other than spontaneous delivery. However, it should be noted that teenage pregnancy is one of the risk factors for the need for action at the time of delivery.

The WHO report shows that the number of CS deliveries in adolescents is higher in some studies compared to adults, although several studies show no difference. This higher CS rate may correlate with a higher head-to-hip proportion rate in adolescents. This disproportion occurs because in most adolescents the pelvic bones are still growing (WHO). These results are also explained by another study which showed CS in teenage pregnancy reached 36.9% where dystocia and macrosomia were the two most frequent indications for CS. This figure is much higher than the rate recommended in pregnancy in general (10-15%).[16] In this study, we found that 16.5% required CS and 7.8% required vaginal surgery.

5. Conclusion

The incidence of teenage pregnancy at Sanglah Hospital in 2018-2020 is quite high. This figure has increased by 2.34% compared to the previous period in 2016-2017. The incidence rate of 5.37% is much higher than the national average. Characteristics of teenage pregnancy in this study, it was found that the level of education tends to be middle to lower, only a small proportion are already working, most are primigravida, the married rate is high, the pregnancy complication rate is high, the ANC rate is more than 3 times high, and the number of spontaneous deliveries is high.

6. Future Scope

Based on this research, it can be concluded that the problem is the high rate of pregnancy in adolescents in Indonesia, especially in Bali. Pregnancy in adolescents can be caused by weak government policies on adolescent reproductive health or low knowledge among adolescents about the risks that may occur in pregnancy at a young age. This can be a reference for health workers or power holders to pay more attention by providing education or by establishing appropriate regulations.

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