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Regularity of Antenatal Care Based on Mother's Education, Pregnancy Status, and Gravida Status

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Abstract: Antenatal care (ANC) is crucial to directly reducing maternal morbidity and mortality. ANC is considered a screening process for possible risk pregnancies so that mothers with pregnancies at risk are treated more quickly, but low utilization of health services can cut off the importance of prenatal care that should be carried out on an ongoing basis so that it does not harm the mother and her baby. This study was conducted to know the effect of maternal education, pregnancy status, and gravida status on the regularity of antenatal care. This research is a quantitative study with a cross-sectional design. The population in this study were pregnant women who had previously performed antenatal care, and the sampling technique was purposive sampling—data analysis using chi-square. The results showed that 39.6% of respondents had primary education, 11.3% were unplanned pregnancies, and 58.5% were 2nd or more pregnancies (multigravida). There was no relationship between maternal education and the regularity of antenatal care ($P=0.36>0.05$), but there was a relationship between pregnancy status ($P=0.02<0.05$) and gravida status ($P=0.040.05$) with the regularity of antenatal care. Factors that influence the regularity of antenatal care in this study are pregnancy status and gravida status. There is a need for health education related to the importance of family planning for those going to get married.

Keywords: Antenatal care, maternal education, pregnancy status, and gravida status

1. Introduction

Globally it is estimated that out of 210 million women who become pregnant, 8 million of them experience life-threatening complications every year, and every minute some women die in various parts of the world due to complications of pregnancy and childbirth, which means that 1400 women die every day. In addition, out of half a million women who die from complications of pregnancy and childbirth every year, 99% of them occur in developing countries such as sub-Saharan Africa and Asia. In developing countries, the risk of death is 200 times higher than in developed countries. The cause of death, which is relatively high in developing countries, is due to the lack of availability of services and the lack of utilization of existing health facilities.[1]

The target for reducing maternal mortality globally is set through the SDG's program, where the maternal mortality rate in 2030 is targeted to be 70 per 100 thousand live births. The maternal mortality rate in Indonesia alone in 2017 was 117/100000 live births. [2] The maternal mortality rate in Central Java Province in 2019 was 76.9/100000 live births, while in Tegal Regency, it was 12/100000 live births.[3] Efforts to accelerate the reduction in maternal mortality are carried out through various efforts, one of which is providing guarantees that every mother can access quality health services, one of which is maternity services. [4] Antenatal care (ANC) is crucial to directly reducing maternal morbidity and mortality. ANC is considered a screening process for possible risk pregnancies so that mothers with

high-risk pregnancies are treated more quickly, but low utilization of health services can cut off the importance of prenatal care that should be carried out on an ongoing basis so that it does not harm both the mother and her baby.[5]

Globally, in 2006-2014, only 64% of pregnant women underwent routine antenatal checks, according to WHO recommendations.[6] Factors that influence the use of antenatal care include the mother's education, place of residence, gestational age, gravida, parity, pregnancy status (planned/unplanned), and the number of live children.[1]

Pregnant women in the Philippines who live in rural areas are more likely to have regular antenatal checkups, while pregnant women in Indonesia who live in urban areas are more likely to have regular antenatal checkups.[7] Based on this description, research related to the influence of maternal education, pregnancy status, and gravida status needs to be carried out, especially in rural areas.

2. Methods

This research is a quantitative study with an observational research design using a cross-sectional that is a research design by measuring or observing at the same time. The population in this study were pregnant women in the 1st, second and third trimesters who had/had had an antenatal checkup. The sampling technique used was purposive sampling. The variables in this study consisted of independent variables consisting of maternal education, pregnancy status, and gravida status, while the dependent variable consisted of antenatal care. Mothers who carry out routine checks every month are categorized as having regular checkups. This research used primary data to conduct this research at Dukuhwaru Health Center, Tegal Regency. The data collection was carried out by filling out a questionnaire on google form from 6 to 13 July 2021. The collected data was analyzed using Chi-Square.

3. Results and Discussion

Table 1 Characteristics of Respondents

Variables	F	%
Mother's Education		
1. Primary Education	21	39.6%
2. Secondary Education	16	30.2%
3. Higher Education	16	30.2%
Pregnancy Status		
1. Unplanned pregnancies	6	11.3%
2. Planned pregnancies	47	88.7%
Gravida Status		
1. Primigravida	22	41.5%
2. Multigravida	51	58.5%

The results showed that the education of mothers in this study was 39.6% had primary education. This basic education includes an elementary school and junior high school. The respondents' current pregnancies were 88.7% planned pregnancies, 11.3% unplanned pregnancies, and 58.5% were second pregnancies or more, usually known as multigravida.

The data from the variables above were then tested for the relationship to the regularity of pregnancy examinations carried out by the respondents, and the results are as follows:

Table 2 Regularity of antenatal care Based on Mother's Education, Pregnancy Status, and Gravida Status.

Variables	Antenatal care		General	P-value
	Irregular	Regular		
Mother's Education				
1. Primary Education	5 (23.8%)	16 (76.2%)	21 (100%)	0.36
2. Secondary Education	3 (18.7%)	13 (81.3%)	16 (100%)	
3. Higher Education	1 (6.3%)	15 (93.7%)	16 (100%)	
Pregnancy Status				
1. Unplanned pregnancies	3 (50%)	3 (50%)	6 (100%)	0.02
2. Planned pregnancies	6 (12.8%)	41 (87.2%)	47 (100%)	
Gravida Status				
1. Primigravida	1 (4.5%)	21 (95.5%)	22 (100%)	0.04
2. Multigravida	8 (25.8%)	23 (74.2%)	31 (100%)	

The relationship test table above shows that a P-value of 0.36 is obtained at the mother's education level. The value is more significant than 0.05, meaning that there is no relationship between mothers who have primary education or higher education with the regularity of antenatal care. Most mothers with higher education and primary education carry out regular antenatal care. In line with research conducted in Indonesia, the same opinion states that the level of education of pregnant women in rural areas does not significantly affect adherence to antenatal visits. This is possible because other factors influence mothers to have regular antenatal care, such as cultural factors, family economic status, husband's education, and family support.[8]

When viewed in more detail, Mother's education shows that respondents with elementary education are nine people, junior high school is 12 people, high school is 16 people, and advanced education after high school is as many as 16 people. In 2008 the Indonesian government issued a 9-year compulsory education rule.[9] The existence of regulations related to compulsory education impacts the education of citizens in Indonesia, which is getting better. This improvement in education impacts pregnant women's knowledge about the importance of regular prenatal checkups, and those who already have good knowledge about the importance of regular antenatal care participate in sharing information. Furthermore, the experience of women with primary education through friendship circles and pregnancy classes that were followed impacted the absence of influence of maternal education with antenatal care regularity. The results of this study are in line with research at the Balla Health Center, Mamasa Regency, which stated that there was no relationship between maternal education and antenatal care visits.[10]

Different results were found in Ethiopia. In Ethiopia, women who had primary education tended not to carry out antenatal care and tended to be late for antenatal care.[11] Similar findings at Dayanand Medical College and Hospital, Ludhiana, Punjab, India, where mothers with low education were associated with lower antenatal care utilization.[12] This is because women with higher education have broad access to information, can make their own decisions regarding health, can change views regarding the importance of carrying out routine and timely antenatal care, so that education for women is considered important to achieve sustainable development goals related to maternal and child health. Furthermore, it can reduce infant mortality by implementing effective maternal health services.[11][12] Pregnancy status on the regularity of antenatal care in this study obtained a value of $p = 0.02$. The value is less than 0.05, meaning that there is a relationship between pregnancy status and the regularity of antenatal care. In planned pregnancies, 87.2% of respondents had regular antenatal care, while 50% did not have regular antenatal care in unplanned pregnancies. The results of this study are in line with research conducted in South Africa which states that more women carry out regular and timely pregnancy checks with planned pregnancies than women with unplanned pregnancies.[13] In a planned pregnancy, the mother-to-be tends to be happy with her pregnancy, so she is more motivated to have regular and timely antenatal care, while in an unwanted pregnancy, the mother may find out her pregnancy too late, cannot accept her pregnancy, and is not ready for another pregnancy. So that there

is a tendency to delay, be reluctant to carry out a pregnancy test, even to the point of neglecting the pregnancy.[14] In line with this statement, 69% of unplanned pregnancies in southern Ethiopia were reluctant to have antenatal care and were four times more likely to experience late antenatal care.[15] Research in the district of Tanzania showed that nearly half of the women there had an unplanned pregnancy two years after the previous pregnancy. Delays and irregularities in antenatal care occur in women with unplanned pregnancies, and the cases are higher in the second and third trimesters. Lack of family support for pregnant women without planning is suspected to be a contributing factor, so there is a possibility of being late in recognizing the risks/danger signs that may be experienced by the woman while pregnant.[16]

The p-value of the gravida status of the respondents in this study was 0.04, the value was <0.05 , meaning that there was a relationship between gravida status and the regularity of antenatal care. For primigravida respondents, 95.5% had regular antenatal care, while for multigravida respondents, the regularity for antenatal care was smaller than for primigravida respondents, only 74.2%. This study is in line with research in Bhutan. There is a relationship between gravida status and antenatal care. In multigravida, women are more likely to be late and not routinely carrying out antenatal care. This is influenced because multigravida women feel that they already have experienced during previous pregnancies, plus a lack of support from the surrounding environment and information. Hence, multigravida women are more likely to be late and not carry out antenatal care routinely.[17] The same finding in South Africa also stated that 85.4% more primigravida mothers used routine antenatal care.[15] Primiparous mothers tend to be more interested in antenatal care because they are pregnant for the first time and want to monitor their pregnancy's progress optimally.

4. Conclusion

The characteristics of the respondents in this study were that most had primary education, planned pregnancy status, and were multigravida. The regularity of antenatal care in this study was influenced by pregnancy and gravida. There is no relationship between the regularity of antenatal care with maternal education. The importance of information related to family planning that is given to both teenagers and those who are about to get married (included in pre-marital counseling).

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