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Research Article

The Relationship of Antenatal Care Service Standards with the Incident of Anemia in Pregnant Women

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Abstract:
The aim of this research is to find out whether there is a relationship between Service Standards Antenatal Care With the incidence of anemia in pregnant women at the Astambul Community Health Center, Banjar Regency. Quantitative research method with cross-sectional. Number of populations and samples using techniques Total Sampling namely 50 respondents, data collection was carried out using observation sheets and register books with testsrank spearman. The results of the study showed that 30 pregnant women (60%) experienced anemia. There were 27 pregnant women whose pregnancy checks did not meet the ANC 10 T service standards (54%). Testrank spearmanThe p-value was 0.002<0.05 with a correlation coefficient of 0.426** which was positive. The conclusion of this research is that H0 is rejected, and Ha is accepted, meaning that there is a strong and significant relationship in the same direction between Service Standards. Antenatal Care with the incidence of anemia in pregnant women at the Astambul Community Health Center, Banjar Regency. Pregnant women must always check their pregnancy according to the time specified based on the midwife's recommendations and continue to take the Fe tablets that have been given by the midwife.
Keywords: Anemia, Antenatal Care, Pregnancy

1. INTRODUCTION

Over the past 19 years, from 2000 to 2019, the prevalence of anemia in pregnant women has reduced by 4.5% worldwide, however in Indonesia, the incidence of anemia in pregnant women has increased by 44.2% since 2015. 42.1%. Anaemia affects 48.9% of pregnant women in Indonesia, according to the 2018 Riskesdas data. The 15–24 age group accounts for up to 84.6% of anemia cases in pregnant women (Purnama et al., 2023; Sulung et al., 2022).

Pregnancy examination is one of the important stages that must be carried out by pregnant women towards a healthy pregnancy, known as Antenatal care. Antenatal care involves evaluating expectant mothers psychologically and physically in order to ensure their health and well-being during the pregnancy, delivery, and postpartum period (Andreucci et al., 2021; Daru et al., 2019).

Provision of services Prenatal Care The government created it in 2009; at first, it was only 5T, but it was later increased to 7T and made 10T the standard of care. Weighing and measuring body weight, uterine fundal height (TFU), fetal appearance, FHR (Fetal Heart Rate), nutritional status value of LILA, administering iron pills, lab testing, case management, and interview are the types of procedures that are utilized as routine care (Gutman et al., 2020). Efforts to prevent anemia in pregnancy.

This can be done by increasing knowledge and changing attitudes to be positive through education about adequate nutritional intake during pregnancy, where education can be provided during visits Antenatal Care, where pregnancy checks in the era of adapting to new normal habits are carried out a minimum of six visits during pregnancy (James & Strouse, 2024).

Based on a preliminary study that looked at data from the previous year on cases of anemia in pregnant women, which was carried out at the Astambul Community Health Center on August 27, 2023. Pregnant women's data from January to December 2022 shows that 547 of them had their hemoglobin levels examined, and 120 of them had anemia. According to data collected on pregnant women between January and July of 2023, 295 of them had their Hb levels checked, and 59 of them had anemia. These anemia cases were caused by the pregnant women's ignorance about the need to take Fe tablets on a regular basis and their failure to attend

appointments. The dietary intake required during pregnancy is not well understood, despite antenatal care guidelines and standards.

Based on this description, the author is interested in researching "Quality Relationships Antenatal Care" with the incidence of anemia in pregnant women at the Astambul Community Health Center, Banjar Regency, South Kalimantan."

2. MATERIAL AND METHOD

This research was designed quantitatively with a research designcross-sectional. The population in this study were all pregnant women in the third trimester at the Astambul Health Center, totaling 50 respondents. This research sample uses the Non-Probability Sampling technique.

The research used to measure variables in this research is using a checklist. The measurements for this research use secondary data in the form of register books.

This research was conducted at the Astambul Community Health Center from July to October 2023. Antenatal Care is the independent variable in this study and the dependent variable is the incidence of anemia.

3. RESULT AND DISCUSSION

Table 1. Distribution of Respondent Characteristics

Age	f	%
20-35 years	35	70
36-35 years	14	28
20-35 years	1	2
Pregnant Women's Education		
Low	30	60
Intermediate	16	32
Tall	4	8
ANC		
Not Compliant with Standard	27	54
Standard Compliant	23	46
Incidence of Anemia		
Anemia	20	40
Not Anemic	30	60
TOTAL	50	100

Source: primary data

Table 2. Relationship between ANC and Incidence Anemia

ANC	Anemia Occurrence						p-value	Spearman Rank (Rho)
	Anemia		No Anemia		Total			
	n	%	n	%	n	%		
No In accordance Standard	16	32	11	22	27	100		
In accordance Standard	4	8	19	38	23	100	0.002	0.426**
Total	20	40	30	60	50	100		

Source: primary data

The table above shows that the majority of respondents aged 20-35 years were 35 people (70%) and the majority of pregnant respondents had low education, 30 people (60%).

Based on the research results, it shows that the majority of respondents are pregnant. As many as 27 people (54%) had their pregnancy checked not according to the 10 T ANC service standard, compared to only 23 people (46%) who had their pregnancy checked according to the 10 T ANC service standard. Pregnant women are deemed to have met ANC service standards if they have completed a 10 T pregnancy examination, which entails weighing and measuring height, monitoring heart rate, checking blood pressure, assessing nutritional status (measuring lila), measuring uterine fundal height, assessing fetal presentation, and assessing nutritional status. in addition to the fetus and laboratory tests (regular and special), tetanus

toxoid, iron supplements, case management, interviews, or counseling (including P4K, postpartum birth control, site antenatal care services, danger indications of pregnancy, labor signs, guidance for mothers throughout pregnancy, etc.). If a pregnant woman has undergone a pregnancy check but has not completed 10 checks (10 T), she may be considered to not satisfy ANC service criteria.

This research is in line with research by (Finkelstein et al., 2020), the frequency of ANC with no risk of anemia was 126 (72.4%) respondents and the frequency of ANC with risk of anemia was 48 (27.6%), it can be concluded that the majority were 126 (72 .4%) of respondents whose frequency of ANC was not at risk of anemia. The results of this research are also strengthened by research conducted by Karami et al (2022) which shows that the majority of respondents make ANC visits irregularly with a percentage of 55.9%. Meanwhile, 44.1% of pregnant women regularly make ANC visits. This research is not in line with research conducted by (Daru et al., 2019). with the results of distribution research. ANC compliance among pregnant women at the Setabelan Surakarta Community Health Center is the highest

24 people complied (66.7%) with 12 people (33.3%) who did not comply. One of the factors that influences order ANC is important for preventing complications in pregnant women, including anemia. Because if the mother does not make an ANC visit, the mother will not receive Fe tablets and there will be no action if there are signs of complications in the mother. Pregnant women who consumed <90 Fe tablets during pregnancy had a higher risk of experiencing anemia than respondents who consumed Fe tablets > 90 items. It is suspected that consumption of Fe tablets is a confounding variable for anemia status. Veny Nurmaari (2019) in his research stated that consumption of Fe tablets is one of the variables that controls factors related to anemia. By carrying out ANC visits according to standards, you can find out various risks and complications of pregnancy so that pregnant women can be directed to make a referral to the hospital. ANC according to standards can prevent anemia because early anemia screening, counseling and administration of Fe tablets can be obtained from antenatal care. In addition, ANC according to standards provides an opportunity for health workers to provide essential health information for pregnant women and their families, one of which is information about fulfilling adequate iron nutrition. It can be explained that the purpose of the ANC examination is to see and find out problems that exist during pregnancy, so that the health of pregnant women and babies can be well monitored until the mother gives birth. Some of the reasons that are often the reason for not having regular check-ups are not having time because you have to work and take care of children, not having any complaints about the pregnancy, not knowing what to check and being lazy.

It can be explained that pregnant women who have their pregnancies checked according to the 10 T ANC service standard at the Astambul Community Health Center are still quite low, namely only 54% compared to only 40% of pregnant respondents experiencing anemia. Research indicates that 10 T ANC visits are still uncommon. This is due to pregnant women's ignorance of the government policy's requirements for ANC visits, which are one 10 T visit per first trimester, one T visit per second trimester, and two T visits per third trimester with 10 T services. Additionally, these visits must adhere to the Midwifery Service Standards (SPK), which cover taking a history, doing a physical examination, performing routine and special laboratory examinations, and providing general and special interventions. It can be explained that ANC 10 T services at the Astambul Community Health Center are still quite low because from the data there are still pregnant women who have never had blood and urine tests (routine and special laboratory tests).

Based on the research results, it shows that the majority of pregnant respondents do not experience anemia, 30 people (60%) compared to pregnant respondents. Only 20 people (40%) experienced anemia. The results of this research are supported by research conducted by Eka Oktavia (2023) which found that the majority respondents did not experience it anemia as much 22 pregnant women (62.9%). Meanwhile, 13 pregnant women (37.1%) experienced anemia. The results of this research are also strengthened by research conducted by Mutia Khairani (2022) with the results of research on the frequency distribution of respondent characteristics based on the incidence of anemia in pregnant women. Of the 90 respondents, the results were found to be mostly non-anemic with 63 respondents (70%), while those who 72 respondents (27%) experienced anemia. This research is not in line with research conducted by Aprilia and Rohmatika (2023) with the results of research on the distribution of anemia incidents among pregnant women at the Setabelan Community

Health Center, Surakarta, with the most anemia being 36 people (100%). This research is also not in line with research conducted by Adriana (2022) which showed that out of 40 respondents, it was found that 9 people (22.5%) did not experience anemia, 27 people (67.5%) had mild anemia. and moderate anemia as many as 4 people (10%).

According to (Churchill et al., 2022), factors that influence anemia in pregnancy are fundamental factors, direct factors and indirect factors. Basic factors consist of socio-economic, knowledge, education, and culture. Indirect factors consist of ANC, parity, age and health history. Direct factors are consumption patterns of Fe tablets, infectious diseases, bleeding and nutritional status.

According to Churchill et al (2022), the most common causes of anemia include nutritional deficiencies, especially iron deficiency. According to the Ministry of Health (2018) anemia can be caused by various factors, for example lack of nutritional intake during pregnancy, the mother's body is more require nutritional intake, infectious diseases such as malaria and increased body requirements due to chronic disease.

It can be explained that if you do not experience anemia at the first visit, it is still possible to experience anemia in subsequent pregnancies. Pregnant women need a lot of nutrients to meet the body's needs for themselves and their fetus. Iron deficiency resulting in a deficiency of hemoglobin (Hb), of which iron is one of the constituent elements. Hemoglobin functions as a source of oxygen which is needed for cell metabolism. Prevention of anemia in pregnant women includes consuming more varied and abundant foods, for example vegetables which contain lots of iron, nuts and animal protein and consuming foods which contain lots of vitamin C, such as oranges, tomatoes and other fruits which can help.

Based on the research results, it was found that the majority of pregnant respondents had their pregnancy checked not according to 10 T ANC service standards and experienced anemia as many as 16 people (59.3%) more than pregnant respondents who had their pregnancy checked according to 10 T ANC service standards and did not experience anemia. 19 people (82.6%). Pregnant women who experience anemia may not be monitored at every ANC visit or at the next one, despite efforts to prevent or improve suboptimal nutrition being made on their part. This suspicion stems from data from puskesmas examinations of pregnant women who experience anemia. Pregnant women cannot know the risks that occur in their pregnancy and cannot prevent them, resulting in anemia during pregnancy.

The significance value or Sig is known. (2-tailed) is 0.002, because the Sig value. (2-tailed) 0.002 < smaller than 0.05, meaning there is a significant (meaningful) relationship between the ANC variable and the incidence of anemia. It can be concluded in this study that there is a moderate and unidirectional significant relationship between the ANC variable and the incidence of anemia. A correlation coefficient number of 0.426** was found based on statistical testing utilizing Spearman Rank (Rho) tests. This indicates that the level of strength of the association (correlation) between the ANC variable and the incidence of anemia was 0.426 or moderate. When a correlation is significant at a significance level of 0.05, it is shown with an asterisk (**). The relationship between the two variables is unidirectional (a unidirectional type of relationship), as indicated by the positive correlation coefficient number of 0.426 in the above results. As a result, it can be concluded that there is a moderate correlation and that the higher the number of visits, the higher the correlation value. ANC according to 10 T indicates a quicker decline in the incidence of anemia.

Research by Adriana (2022) corroborates the findings of this study, demonstrating a significant correlation (p=0.049) between the frequency of ANC visits and the incidence of anemia in pregnant women at the Batu-Batu Community Health Center, Soppeng Regency in 2021. The findings of this study This is also consistent with research by Nurmaari (2019) which found a correlation between the incidence of anemia and the frequency of Antenatal Care (ANC) visits (p=0.001; OR=4) and compliance with taking Fe tablets (p=0.001; OR=3.46). Anemia is four times more common in pregnant women who do not attend ANC checkups on a regular basis, and it is three times more common in pregnant women who do not take their Fe tablets as prescribed. Anemia affects 46.67% of pregnant women who do not take ANC on a regular basis and do not take Fe tablets as prescribed, whereas anemia affects 33.33% of pregnant women who do not take ANC on a regular basis but take Fe tablets as prescribed. Anemia is not experienced by 73.33% of pregnant women who frequently ANC and take their Fe tablets as prescribed, whereas anemia is experienced by 20% of pregnant women who regularly ANC but do not take their Fe tablets as prescribed.

Every pregnancy can have the potential and carry risks for the mother, leading to maternal and child deaths, therefore early detection by health workers and the community is the key to success in reducing the death rate of mothers and babies born to them. One of the government's efforts is the ANC program which must be carried out as early as possible by pregnant women to prevent anemia in pregnant women, increase early detection of pregnancy risks, and prevent pregnancy complications. Antenatal visits are recommended 6 times with a visit frequency of 2 times in the first trimester, 1 time in the second trimester and 3 times in the third trimester (Ministry of Health, RI. 2020).

ANC service standards use 10 T with systematic implementation starting from the initial stage of data collection on pregnant women by village midwives in each village area with the assistance of health cadres. The next stage is socialization of integrated pregnancy checks starting from physical examinations, laboratory examinations, dental examinations and health counseling. The final stage is to summarize the findings and remind pregnant women to carry out integrated ANC examinations at least twice during the first trimester as an early detection of pregnancy risks and in the third trimester as preparation for delivery (Khoeroh & Hafsah, 2023; Rakhmah et al., 2021).

It can be explained that mothers who do not experience symptoms of pregnancy risks rarely have their pregnancy checked or do ANC because they have no complaints. Pregnant women also reasoned that they did not have ANC because during pregnancy they carried out pregnancy checks at the Independent Practicing Midwife with closer consideration. Pregnant women are examined physically only, without the need for supporting tests like hemoglobin level measurements. They are then administered therapy, one of which is a blood-added tablet, once a day at a dose of one by one. However, up until now, blood-added tablets have simply been taken without consideration for the best times to take them at night, to prevent nausea and make regular consumption easier or for any other considerations. If the blood supplement tablets should be taken with orange juice or water without drinking coffee or tea, which can slow down the absorption of the contents of the blood supplement tablets, making the risk of anemia higher.

This research can be used for basic health services (Puskesmas) which should program efforts to optimize ANC visits for pregnant women in their coverage area, so that various risk factors and high-risk pregnancies (including pregnancy anemia) can be detected and handled well, increasing collaboration with cadres regarding service information. pregnancy checks and maximizing cadres in inviting pregnant women to ANC visits.

4. CONCLUSION

Most pregnant women are of productive age, namely 20-35 years (70%) with low education (60%). There are 20 pregnant women who experience anemia (40%). Most of the respondents who had their pregnancy checked did not meet the 10 T ANC service standards, namely 27 people (54%). There is a relationship between the ANC variable and the incidence of anemia at the Astambul Community Health Center in 2023 (p value 0.002) with moderate and unidirectional correlation (0.426**).

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