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RELATIONSHIP BETWEEN PARITY AND FAMILY SUPPORT WITH REGULARITY OF CONSUMPTION OF BLOOD ENHANCER TABLETS IN PREGNANT WOMEN

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ABSTRACT

Anemia in pregnancy is a public health problem that is still highly prevalent in Indonesia and has serious impacts on maternal health and fetal development. The impact of anemia during pregnancy is not only short-term but also long-term, both for the mother and the fetus. One of the recommended preventive efforts is regular consumption of iron tablets (TTD) during pregnancy. However, the level of compliance of pregnant women in consuming TTD is still relatively low. This study aims to analyze the relationship between parity and family support with the regularity of TTD consumption in pregnant women in Muara Batu-Batu Village, Rundeng District. The study used a quantitative approach with a cross-sectional design. A total of 52 respondents were selected using purposive sampling techniques based on inclusion criteria, namely pregnant women who had received TTD from health workers, did not experience pregnancy complications, and were willing to be respondents. Data collection was carried out using questionnaires and documentation, then analyzed using the chi-square test. The results showed that the majority of respondents were grandemultipara (88.5%), unemployed (88.4%), and had hemoglobin levels <11.5 gr% (65.1%). As many as 59.6% of respondents were recorded as irregular in consuming TTD. Statistical tests showed a significant relationship between family support and regularity of TTD consumption (p = 0.003), while no significant relationship was found between parity and regularity of TTD consumption (p = 0.610). This finding confirms that family support, whether in the form of emotional motivation, information, or practical assistance, is a determining factor in increasing compliance of pregnant women. In contrast, the number of previous pregnancies did not have a direct effect. Therefore, increasing education and family involvement needs to be strengthened in maternal health interventions, especially iron supplementation programs.

INTRODUCTION

Anemia during pregnancy remains a significant global health challenge. Based on the WHO report (2021), the prevalence of anemia in pregnant women globally reached 35.6% in 2019 (Asmin et al., 2021). This figure is higher in developing countries such as the Southeast Asian region which reached 47.8%, compared to developed countries such as

the Americas with a prevalence of 18.9%. Indonesia, as a developing country, also faces similar problems with an increasing trend in the prevalence of anemia in pregnant women from 37.1% in 2013 to 48.9% in 2018 (Riskesdas, 2018), especially in the group of women of childbearing age aged 15–24 years (Minasi et al., 2021).

Physiologically, pregnancy causes a faster increase in blood plasma volume compared to the increase in red blood cell volume. This imbalance causes hemodilution and decreased hemoglobin levels, which then triggers anemia. Lack of hemoglobin will have an impact on reducing the blood's ability to transport oxygen, which is very important for fetal development and maternal health during pregnancy (Astuti & Kulsum, 2018; Fitriani et al., 2022; Sihaloho et al., 2024; Simamora & Ristiani, 2024).

The impact of anemia during pregnancy is not only short-term but also long-term, both for the mother and the fetus. Anemia in the first trimester can increase the risk of Small for Gestational Age (SGA) and fetal distress. In the second trimester, it can increase the risk of macrosomia, and in the third trimester it has the potential to affect the child's neurocognitive development, including the risk of autism, brain structure disorders, cognitive delays, and schizophrenia. For the mother, anemia increases the risk of shock, cord decompensation, and postpartum hemorrhage leading to death. Postpartum hemorrhage itself is the main cause of high maternal mortality rates (MMR) in Indonesia (Beckert et al., 2019; Sinha et al., 2021; Wang et al., 2025).

In order to prevent and overcome anemia during pregnancy, WHO recommends giving Iron Supplement Tablets (TTD) of 30–60 mg of iron and 400 μg of folic acid every day during pregnancy (WHO, 2017). In Indonesia, the TTD provision program has been implemented since 1970 and is reinforced by regulations requiring the consumption of at least 90 tablets during pregnancy (Finkelstein et al., 2024; Sartika et al., 2024). This effort is also supported by various programs at the regional level, such as the Medan City Health Office which also distributes TTD since adolescence as preparation for a healthy pregnancy.

The role of health workers, especially midwives, is very important in increasing pregnant women's compliance with iron supplement consumption. Through the provision of Communication, Information, and Education (IEC), midwives can increase pregnant women's awareness of the importance of iron intake through food and supplements (Rumintang et al., 2019). The government has also regulated the provision of iron supplements through the Minister of Health Regulation Number 75 of 2013 concerning Nutritional Adequacy Rates and Number 88 of 2014 concerning Nutritional

Supplementation for Pregnant Women, as the legal basis for implementing this national program (Dieny, 2021).

The need for iron during pregnancy increases significantly, especially towards the end of pregnancy. This increased need aims to support the growth of the fetus, placenta, and prepare the mother's body for childbirth. If iron intake is insufficient, the body will take reserves from the mother's reserves, which can ultimately cause anemia. Continuous iron deficiency can cause serious complications during pregnancy and childbirth (Lestari et al., 2023).

Compliance in consuming TTD is not only influenced by physiological factors, but also various other factors such as sociodemographics, obstetric conditions, and social support. Previous studies have shown that parity, age, knowledge, and family and husband support are important determinants in the regularity of TTD consumption (Winasis, 2018). Family support, especially from the husband, can increase the motivation and discipline of pregnant women in following medical recommendations, including TTD consumption (Irsal et al., 2024).

Parity or the number of births a mother has experienced also plays a role in compliance with iron supplement consumption. Mothers with high parity are at risk of pregnancy complications and tend to have low iron reserves. Therefore, the ideal interval between pregnancies, at least two years, is important for restoring nutritional status and reproductive health (Pratiwi et al., 2022).

Family support, especially from husbands and close friends, plays an important role in the success of iron supplementation programs for pregnant women. This form of support can be in the form of practical assistance, emotional motivation, and providing the right information. According to research by Prayudhistya et al. (2023), pregnant women who receive family support have higher compliance in consuming iron-boosting tablets than those who do not receive support. This support creates a sense of security, self-confidence, and internal motivation in following the recommendations of health workers.

In addition to family support, parity is also thought to influence maternal behavior in consuming supplements. Mothers with low parity tend to be more compliant because the first experience in pregnancy triggers greater concern and caution regarding the condition of the fetus. Conversely, mothers with high parity sometimes have the perception that pregnancy is a natural process that can be lived as before, thus reducing attention to compliance with IBT consumption (Qomarasari, 2023). However, the results

of research related to the influence of parity still show variations that require further study by considering the local cultural and social context.

Other factors that influence the regularity of IBT consumption are the mother's level of knowledge, access to health services, and the quality of interaction with health workers. A study by Kustin (2021) showed that health education carried out continuously and dialogically can increase pregnant women's understanding of the benefits of IBT, while also forming a positive attitude towards routine consumption. Therefore, intervention strategies that involve educational and social aspects simultaneously are very important to ensure the success of the anemia eradication program in pregnant women. This study aims to determine the relationship between parity and family support with the regularity of iron supplement consumption in pregnant women.

RESEARCH METHODS

This study uses an analytical approach with a cross-sectional design that aims to determine the relationship between variables at one measurement time. The subjects of the study were pregnant women who had received iron tablets (Fe) in Muara Batu-Batu Village, Rundeng District, with a population of 60 people in the period January to March 2024. Sampling was carried out using a purposive sampling technique with homogeneous criteria, so that 52 pregnant women were obtained who met the requirements as respondents.

The inclusion criteria in this study included pregnant women who had received iron tablets from midwives at the Sei Bejangkar Health Center in 2023, did not experience pregnancy complications, were cooperative, and expressed their willingness to participate in the study. Meanwhile, the exclusion criteria included pregnant women who had mental disabilities, were mute, and were deaf. To analyze the relationship between parity variables and family support with the regularity of iron tablet consumption, a bivariate test with the chi-square method was used.

RESULTS AND DISCUSSION

Table 1. Respondent characteristics

Variabel	n	%
Mother's Age		
Late Adolescence (17-25 years)	9	20,9
Early Adulthood (26-35 years)	20	46,5
Late Adulthood (36-45 years)	14	32,6
Mother's Education		
Elementary School	6	14

Variabel	n	%
Junior High School	10	23,2
High School	23	53,5
University	4	9,3
Employment Status		
Working	5	11,6
Not Working	38	88,4
Hb levels		
<11,5 gr%	28	65,1
11,5-12 gr%	15	34,9
Family support		
Supportive	22	57,7
Not Supportive	30	42,3
Parity		
Multipara	6	11,5
Grandemultipara	46	88,5
Regularity of Fe Tablet Consumption		
Regular	21	40,4
Irregular	31	59,6

The majority of respondents were in the age range of 26–35 years (46.5%), had a high school education (53.5%), and were unemployed (88.4%). Most respondents also had hemoglobin levels below normal (<11.5 gr%) as much as 65.1%. In terms of obstetric characteristics and social support, most respondents were mothers with high parity or grandemultipara (88.5%) and received family support (57.7%). However, most respondents were recorded as irregular in taking iron tablets (59.6%) (Table 1).

Table 2. Relationship between family support and parity with regularity of Fe tablet consumption

Variables	Regularity of Consumption of Fe Tablets				*P-Value*
	Irregular		Regular		
	n	%	n	%	
Family Support					
Not Supported	23	44,2	7	13,5	0,003
Supported	8	15,4	14	26,9	
Parity					
Multipara	3	5,8	6	11,5	0,610
Grandamultipara	28	53,8	46	88,5	

Most pregnant women who do not receive family support tend to be irregular in consuming iron tablets (44.2%), while pregnant women who receive family support are more likely to consume them regularly (26.9%). The chi-square test showed a significant relationship between family support and the regularity of iron tablet consumption (p = 0.003). On the other hand, although most grandemultiparous pregnant women do not regularly consume iron tablets (53.8%), the results of statistical analysis showed that there was no significant relationship between parity and the regularity of iron tablet

consumption (p = 0.610) (Table 2) .Most pregnant women who do not receive family support tend to be irregular in consuming iron tablets (44.2%), while pregnant women who receive family support are more likely to consume them regularly (26.9%). The chi-square test showed a significant relationship between family support and the regularity of iron tablet consumption (p = 0.003). On the other hand, although most grandemultiparous pregnant women do not regularly consume iron tablets (53.8%), the results of statistical analysis showed that there was no significant relationship between parity and the regularity of iron tablet consumption (p = 0.610) (Table 2) .

The results of the study showed that there was a significant relationship between family support and the regularity of iron supplementation tablet consumption in pregnant women. Pregnant women who did not receive support from their families tended to be irregular in consuming iron tablets, while those who received support showed a higher level of regularity. This finding was supported by the chi-square statistical test which showed a p-value of 0.003, which means that there was a statistically significant relationship. This indicates that family support, both emotional, informational, and instrumental, plays an important role in the success of the iron supplementation program during pregnancy.

This study is consistent with the results of a study conducted by Putri (2023) at the Piyungan Bantul Health Center, which stated that the type of family support, especially from the husband, influences the compliance of pregnant women in consuming Fe tablets. This support is divided into several forms, including instrumental support such as providing food that supports iron absorption, as well as information support in the form of knowledge about the importance of iron tablets. Pregnant women who receive this support are proven to be more compliant in following the recommendations for consuming supplements.

The relationship between family support and the regularity of iron (Fe) tablet consumption in pregnant women has become an important focus in efforts to prevent anemia during pregnancy. Several studies have shown that family support, especially from husbands, plays a significant role in increasing the compliance of pregnant women in consuming iron tablets regularly. Pregnant women who receive family support tend to be more compliant and regular in consuming iron tablets, so that the risk of anemia decreases significantly (Primadewi & Diwyami, 2021; Rhamadayanti et al., 2025). Conversely, lack of family support is often associated with non-compliance and irregular consumption of iron tablets.

In addition, research conducted by Mulyani (2017) also showed similar results. In her research in the Nanggalo Health Center work area, it was found that most pregnant women who did not receive family support showed a low level of compliance in consuming Fe tablets. Statistical tests in the study also stated that there was a significant relationship between the two variables. This strengthens the fact that family involvement, especially in providing moral and physical encouragement, can increase the mother's motivation to consume Fe tablets regularly.

Family support not only influences compliance, but can also influence the mother's perception of the benefits of the supplement. Mothers who feel supported tend to have a better understanding of the importance of iron tablets in preventing anemia during pregnancy. This is obtained both through communication from the family and encouragement to attend regular pregnancy check-ups, which then opens up access to information from health workers (Jalil et al., 2021).

Research in various regions in Indonesia shows that pregnant women who do not receive family support, such as reminders or motivation from family members, are more likely to forget or be reluctant to take Fe tablets regularly. Factors such as fear of side effects, lack of understanding of the importance of Fe tablets, and minimal family attention are the main causes of non-compliance (Yadi & Jasda, 2019). On the other hand, families who actively provide support, either in the form of supervision, motivation, or education, are able to increase the regularity of Fe tablet consumption in pregnant women (Mangopang et al., 2022).

On the other hand, when discussing the relationship between parity and the regularity of iron supplement consumption, the results of the study showed that there was no significant relationship. Although most respondents with grandemultipara status were recorded as irregular in consuming iron supplement, statistically this did not show a significant relationship ($p = 0.610$). This indicates that the number of previous pregnancies does not always affect maternal behavior in compliance with iron supplement consumption.

This study is in line with the findings of Putri et al. (2020), which stated that maternal parity did not have a significant effect on compliance with iron and folic acid supplement consumption. However, there were different results in a study conducted by Harahap and Fitriani (2021), which showed that mothers with a certain parity status (multiparous and primiparous) were actually more compliant in consuming supplements than mothers who had never been pregnant (nulliparous). This compliance is thought to

be related to previous pregnancy experiences, including the risk of anemia and complications during childbirth.

Previous pregnancy experiences can provide mothers with an understanding of the importance of maintaining health during pregnancy, including taking iron tablets. However, on the other hand, mothers with many children also tend to feel more experienced and consider pregnancy to be a normal process. As a result, they may be less vigilant and pay less attention to the recommendation to take iron tablets regularly, which is one of the reasons why parity did not show a significant relationship in this study (Chatterjee & Sennott, 2020).

Studies have shown that negative experiences in previous pregnancies, such as pregnancy loss or health complications, can motivate mothers to pay more attention to health practices and self-care in subsequent pregnancies, although they can also cause anxiety and avoid health services if not adequately supported (Maryam et al., 2024). In addition, challenging pregnancy experiences, such as gestational diabetes, often encourage mothers to adopt a healthy lifestyle and be more disciplined in following medical advice for the health of themselves and their fetuses. Thus, previous pregnancy experiences play an important role in shaping mothers' behavior and understanding of the importance of maintaining health during pregnancy, including compliance with taking iron tablets (McGrath & Chrisler, 2017).

Visits to health facilities and the intensity of education from medical personnel are also influenced by parity status. A study by Saad et al. (2024) explained that primiparous mothers usually have higher motivation to make routine ANC visits because of their first pregnancy experience. In contrast, grandemultiparous mothers often show a decrease in compliance with medical advice because they feel they are already experienced enough. This finding can be a consideration for health workers to not only consider the number of children, but also provide an educational approach that is tailored to the characteristics and experiences of each individual pregnant woman.

CONCLUSION AND SUGGESTIONS

There is a significant relationship between family support and the regularity of iron supplement consumption in pregnant women, where mothers who receive family support tend to be more regular in consuming the supplement. On the other hand, there was no significant relationship between parity and the regularity of iron supplement consumption, indicating that the number of previous pregnancies does not directly affect

supplement consumption compliance. A qualitative approach can also be considered to explore more deeply the motivations and barriers of pregnant women in consuming iron tablets regularly.

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