



THE RELATIONSHIP BETWEEN FAMILY SUPPORT AND ANEMIA PREVENTION EFFORTS AMONG PREGNANT WOMEN

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ABSTRACT

Anemia in pregnant women remains a significant health issue and has the potential to cause various complications. The high prevalence of anemia among pregnant women indicates that prevention efforts still need to be improved, particularly through family support. The objective of this study was to determine the relationship between family support and anemia prevention efforts among pregnant women in the service area of the Baros Community Health Center in Sukabumi City. This study employed a correlational method with a cross-sectional approach. The population consisted of all pregnant women in the service area of the Baros Community Health Center in Sukabumi City, with a sample of 119 pregnant women selected using total sampling. The family support variable was measured using the PSS -Fa, with the validity test yielding a calculated r value $>$ the table r value of 0.361, while the reliability test yielded a Cronbach's Alpha value of 0.752. The anemia prevention efforts variable was based on the Guttman scale, with validity test results showing a p -value < 0.05 , indicating validity, except for items 9, 10, and 11, which were therefore excluded from the analysis; the reliability test yielded a Cronbach's Alpha value of 0.373. Data were collected via questionnaires and analyzed using the Spearman rank test. Most respondents had strong family support, and most had effective anemia prevention measures in place; there was a significant association between family support and anemia prevention efforts among pregnant women ($p = 0.000$). There is a link between family support and efforts to prevent anemia in pregnant women. It is hoped that healthcare workers can enhance education and outreach regarding anemia prevention by involving families.

Keywords: anemia; family support; pregnant women; prevention efforts

How to cite (in APA style)

Azahra, S., Susilawati, S., & Budhiana, J. (2026). The Relationship between Family Support and Anemia Prevention Efforts among Pregnant Women. *Indonesian Journal of Global Health Research*, 8(4), 437–444. Retrieved from <https://jurnal2.globalhealthsciencegroup.com/index.php/IJGHR/article/view/1871>.

INTRODUCTION

Anemia is a nationwide issue affecting pregnant women, as it reflects the socioeconomic well-being of communities, and its impact significantly affects the quality of human resources. Anemia during pregnancy is often described as a “potential threat to both mother and child,” making it essential for all stakeholders involved in frontline health care to give this condition greater attention (Fitriyanti & Arianti, 2024). According to the World Health Organization (WHO) in 2023, an estimated 35.5% of pregnant women aged 15–49 worldwide suffer from anemia (WHO, 2023). According to the 2018 Riskesdas, the prevalence of anemia among pregnant women in Indonesia is also relatively high, at 48.9% (Kemenkes RI, 2023). In West Java Province, 63,246 pregnant women were recorded as suffering from anemia. A report on health services from the West Java Provincial Health Office indicates that in 2021, the maternal mortality rate reached 312 per 100,000 live births (Dinkes Jabar, 2021 dalam Ristiana & Sugesti, 2024).

Anemia is a condition in which the number of red blood cells (erythrocytes) and the amount of hemoglobin in the bloodstream are reduced, making it impossible to deliver oxygen to all the body's tissues (Pratiwi et al., 2022). The Centers for Disease Control and Prevention defines anemia in pregnant women as a condition characterized by Hb levels < 11 g/dL in the first and third

trimesters, Hb <10.5 g/dL in the second trimester, and <10 g/dL in the postpartum period (Kusumastuti, 2022). Hemoglobin plays a role in transporting oxygen and distributing it to all the body's cells (Kemenkes RI, 2023). Symptoms of anemia in pregnant women include excessive fatigue, physical weakness, frequent dizziness, loss of appetite, blurred vision, difficulty concentrating, shortness of breath, pale skin, cold hands and feet, and more severe nausea and vomiting compared to the early stages of pregnancy (Fatmawati et al., 2023). In addition, potential effects on the baby resulting from the mother's anemia during pregnancy include low birth weight (LBW), IUGR (Intrauterine Growth Restriction), miscarriage, preterm birth, and the possibility of neonatal death (Nenobesi et al., 2026).

Many factors influence the development of anemia in pregnant women, including consistency in taking iron supplements, nutritional status, knowledge, socioeconomic status, the expectant mother's attitude, and family support (Koerniawati, 2022). Preventing and reducing the incidence of anemia in pregnant women depends heavily on the family's role in maintaining the mother's health. Through the Health Belief Model (HBM) approach, families can change their behavior once they realize that anemia is a serious health issue. If they do not take steps to improve the health of the pregnant woman, this can have negative consequences for both the mother's health and that of the unborn baby (Noviyanti et al., 2024). It is very important for families to provide support, love, care, and a supportive family environment for pregnant women diagnosed with anemia during their pregnancy. One key factor in preventing anemia in pregnant women is family support, as the family is often identified as the smallest community unit that faces significant emotional stress. Family support also helps pregnant women manage their lifestyles, allowing them to feel comfortable at home, maintain a healthy diet, and live happily (Mulya & Kusumastuti, 2022).

Previous research has generally focused more on individual factors such as knowledge, dietary patterns, and adherence to iron tablet intake, while family support in anemia prevention efforts has not yet been studied in depth, particularly at the primary health care level. Furthermore, research on family support in the local context of the Baros Community Health Center (Puskesmas) service area in Sukabumi City remains limited. Therefore, this study aims to examine the relationship between family support and anemia prevention efforts among pregnant women in the Baros Community Health Center service area in Sukabumi City.

METHOD

This study employed a correlational method with a cross-sectional approach. The study was conducted from February to July 2026. The study population consisted of all pregnant women in the service area of the Baros Community Health Center in Sukabumi City, with a sample of 119 pregnant women. The inclusion criteria for this study were women who were currently pregnant and residing in the service area of the Baros Community Health Center in Sukabumi City, pregnant women who were willing to participate as respondents, pregnant women living with their nuclear families, and pregnant women who were already taking iron supplements. The exclusion criteria were pregnant women with chronic illnesses or medical emergencies. The sampling technique used was total sampling. The family support variable used the PSS-Fa instrument; the validity test yielded a calculated r value > table r value of 0.361, and the reliability test yielded a Cronbach's Alpha value of 0.752 (Fitriyah et al., 2024). The variables related to anemia prevention efforts were measured using a Guttman scale; the validity test results showed a p -value of <0.05, indicating validity, with the exception of items 9, 10, and 11, which were therefore excluded from the analysis. The reliability test yielded a Cronbach's Alpha value of 0.373. Data collection was conducted using a closed-ended questionnaire. Data analysis was performed using the Spearman Rank test. The research ethics approval was granted by the Ethics Committee of the Sukabumi College of Health Sciences with number: 001361/KEP STIKES SUKABUMI/2026.

RESULT

Table 1.
Respondent characteristics (n = 119)

Respondent characteristics	f	%
Mother's Age		
<20 Years	1	0.8
20–30 Years	79	66.4
≥35 Years	39	32.8
Gestational Age		
1st Trimester	14	11.8
2nd Trimester	50	42
3rd Trimester	55	46.2
Parity		
Primipara	51	42.9
Multipara	66	55.5
Grandemultipara	2	1.7
Interval Between Pregnancies		
<1 Year	43	36.1
1–3 Years	55	46.2
>3 Years	21	17.6
Highest Level of Education		
No Formal Education	1	0.8
Elementary School	12	10.1
Junior High School	16	13.4
Senior High School	73	61.2
College/University	17	14.3
Employment Status		
Employed	15	12.6
Unemployed	104	87.4
Income		
< Minimum Wage Rp.3,192,807	61	51.3
> Minimum Wage Rp.3,192,807	58	48.7
Health Insurance		
BPJS	100	84
Private	19	16
Accompaniment During Prenatal Checkups		
Family	110	92.4
Alone	9	7.6
ANC Visits According to Gestational Age		
As Recommended	112	94.1
Not As Recommended	7	5.9
Sources of Information on Anemia Prevention Efforts		
Healthcare Professionals	55	46.2
Print Media	12	10.1
Electronic Media	25	21
Family Members	16	13.4
Community Health Workers	9	7.6
And others	2	1.7

Table 1 shows that the majority of respondents were aged 20–30 years 79 people (66.4%), in their third trimester of pregnancy 55 people (46.2%), and multiparous 66 people (55.5%); with an interpregnancy interval of 1–3 years 55 respondents (46.2%), had a high school education 73 respondents (61.3%), were unemployed 104 respondents (87.4%), had an income below the minimum wage of Rp.3,192,807 61 respondents (51.3%), 100 participants (84%) used BPJS for healthcare costs, 110 participants (92.4%) were accompanied by family members during prenatal checkups, 112 participants (94.1%) had ANC visits appropriate for their gestational age, and 55 participants (46.2%) received information about anemia prevention efforts from healthcare workers.

Table 2.
Univariate Analysis

Variable	f	%
Family Support		
Good	113	95
Fair	6	5
Poor	0	0
Anemia Prevention Efforts		
Good	117	98.3
Fair	2	1.7
Poor	0	0

Table 2 shows that the majority of respondents 113 people (95%) have good family support, and the majority of respondents 117 people (98.3%) have good anemia prevention practices.

Table 3.
Uji Normalitas

Variable	P-Value
Family Support	0.001
Anemia Prevention Efforts	0.000

Table 3 shows that the results of the normality test for the variables of family support and anemia prevention efforts yielded a p-value > 0.05, indicating that the data are not normally distributed.

Table 4.
Uji Spearman Rank

Variable	Kekuatan	P-Value
Family Support	0.440	0.000
Anemia Prevention Efforts		

Table 4 shows that the Spearman's rank correlation test yielded a correlation coefficient of $p = 0.000 < 0.05$, indicating a relationship between family support and efforts to prevent anemia. Furthermore, the correlation coefficient was 0.440, indicating a significant relationship with a fairly strong association, as the correlation coefficient falls within the range of 0.40–0.59.

DISCUSSION

The results of the study indicate that the majority of respondents have strong family support. Family support refers to assistance provided to other family members in the form of goods, services, information, and advice that can make the recipient feel loved, valued, and at ease. This assistance consists of behaviors, actions, and acceptance from family members toward an individual experiencing distress. Families believe that those who behave in a supportive manner will always be ready to provide the necessary help and assistance (Inayati & Hasanah, 2022). One factor influencing family support is the highest level of education attained. Education is a systematic effort designed to create a learning environment and process that enables students to actively develop their potential, thereby acquiring the spiritual strength, self-control, personality, intelligence, moral character, knowledge, and skills necessary for life (Sanga & Wangdra, 2023). A mother's level of education is a key factor because it relates to her ability to understand health information. Pregnant women with higher levels of education tend to have a better understanding of the importance of maintaining good health during pregnancy, such as meeting nutritional needs, adhering to iron supplement intake, and undergoing regular prenatal checkups. Additionally, mothers with higher

education generally have better communication skills in conveying their needs and experiences to their families, so that family members better understand and are motivated to provide appropriate support (Ayamolowo et al., 2024).

In addition to education, income also influences the family support received by pregnant women. Income is defined as the amount of money received by individuals, companies, or organizations in various forms, such as wages, salaries, rent, interest, commissions, fees, and profits (Sahri et al., 2022). Families with better economic conditions tend to be better able to meet the needs of pregnant women, such as providing nutritious food, covering the costs of prenatal checkups, and offering other forms of support. Conversely, financial constraints can be a barrier to providing support, particularly of a material nature (Ayamolowo et al., 2024). The study results indicate that the majority of respondents have effective anemia prevention measures in place. Anemia prevention measures refer to a series of preventive actions taken to reduce the risk of anemia, including increasing nutritional intake—particularly iron—administering iron supplements, and providing health education to enhance individuals' knowledge and awareness. These measures aim to foster healthy behaviors so that anemia can be prevented at an early stage (Kusumawati et al., 2023).

Information sources are one of the factors that influence efforts to prevent anemia. Information sources refer to anything that a person can use to acquire new knowledge. Information sources play a very important role in the learning process because they provide various resources that can be used to understand something previously unknown (Susilowati et al., 2021 dalam Nasution et al., 2025). Information provided by healthcare workers plays a key role in efforts to prevent anemia in pregnant women. Healthcare workers such as midwives and nurses provide direct education through antenatal care (ANC) visits, health education sessions, and community health posts. The information provided covers the importance of iron intake, adherence to iron supplementation, and healthy eating habits. Research indicates that the consistent provision of information by healthcare workers can enhance pregnant women's knowledge and encourage them to take more effective measures to prevent anemia (Yuanti et al., 2025).

The results of the study indicate that there is a fairly strong association between family support and efforts to prevent anemia. This is consistent with previous research Nanda & Sasongko (2025) which indicates that there is a relationship between family support and anemia prevention behaviors among pregnant women. This study is also supported by Marhamah & Kumala (2022) which indicates a significant association between family support and efforts to prevent anemia. This is also consistent with Arifah et al. (2024) which suggests that a husband's support can motivate pregnant women to adopt behaviors that prevent anemia.

Family support is a form of support that pregnant women receive to encourage behaviors that prevent anemia. This support can be provided through attention, affection, appreciation, and creating a sense of comfort for the mother during pregnancy. Good support helps pregnant women cope with various discomforts that arise, while also reducing stress levels during pregnancy. With family support, pregnant women are more likely to exhibit positive behavioral changes, including in implementing anemia prevention measures, thereby minimizing the risk of developing anemia (Mulya & Kusumastuti, 2022). Other forms of support that can be provided to pregnant women include encouraging her to embrace her pregnancy, helping her prepare to take on the role of a mother, and offering emotional support to alleviate fear and anxiety leading up to childbirth. Additionally, the family plays a role in helping the mother build a strong bond with the fetus through optimal prenatal care and childbirth preparation. Furthermore, the family needs to prepare other family members to welcome the new arrival, thereby creating a supportive environment for the expectant mother. This comprehensive support will help the mother navigate her pregnancy with greater peace of mind and be better prepared to face the childbirth process (Hendra, 2017 dalam Marhamah & Kumala, 2022).

CONCLUSION

The results of the study indicate that the majority of respondents have strong family support and engage in effective anemia prevention efforts, and that there is a correlation between family support and anemia prevention efforts among pregnant women in the service area of the Baros Community Health Center in Sukabumi City.

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