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Factors Associated with Pregnant Women's Knowledge about the Benefitsof Iron Tablets in the Rasana'e Timur Community Health Center Area, Bima City

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ABSTRACT

The global prevalence of anemia is estimated at approximately 51% (Arisman, 2015). In 2018, the incidence of anemia among pregnant women was 48.9%, with a notably higher prevalence of 84.6% observed in those aged 15-24 years (Riskesdas, 2018). Findings from the 2018 Basic Health Research indicate that 73.2% of pregnant women consumed iron tablets, but only 38.1% adhered to the recommended intake of up to 90 tablets. The research aimed to identify factors associated with maternal knowledge about the benefits of iron tablets. Employing a quantitative cross-sectional study design with a population of 120 respondents, a sample of 54 respondents was determined using the Slovin formula. The study was conducted at Rasana'e Timur Community Health Center in 2023, utilizing accidental sampling. Bivariate data analysis, employing correlation tests, revealed that age and knowledge were not significantly correlated (correlation coefficient = 0.133, P>0.05), while education and knowledge exhibited a significant correlation (correlation coefficient = 0.004, P<0.05). In conclusion, age did not demonstrate a correlation with knowledge, whereas education displayed a significant association with maternal knowledge. Recommendations include an increased focus on healthcare professionals providing education regarding the benefits of Fe tablets.

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1. INTRODUCTION

Law No. 36 of 2009 on health mandates that health efforts aim to maintain the well-being of mothers so that they can give birth to healthy, intelligent, and high-quality generations, while also reducing maternal and infant mortality rates. The health efforts, as outlined in the law, encompass promotive, preventive, curative, and rehabilitative measures. Initiatives to preserve maternal health should commence during pregnancy, emphasizing nutrition and dietary intake, as these factors significantly influence fetal growth. The Maternal Mortality Rate (MMR) serves as a key indicator to enhance overall health and evaluate the successful implementation of health development. Maternal mortality is defined as the number of women who die during pregnancy, childbirth, and the postpartum period (42 days after delivery) due to complications associated with pregnancy and its management. According to data from the World Health Organization (WHO) in 2017, the global maternal mortality rate reached 211 per 100,000 live births. The estimated global prevalence of anemia is around 51%. Based on the 2013 Basic Health Research (Riskesdas), 37.1% of pregnant women suffer from anemia, indicated by a hemoglobin level less than 11.0 grams/dl, with almost equal prevalence in urban (36.4%) and rural (37.8%) areas. In 2018, the incidence of anemia in pregnant women increased to 48.9%, with a higher prevalence among those aged 15-24 years at 84.6%.

Anemia in pregnant women is a complex issue due to the vital role of red blood cells in transporting nutrients and oxygen for fetal growth. The effort to elevate hemoglobin levels aims to

prevent anemia in pregnant women and mitigate the risk of bleeding during childbirth. Pregnant women are recommended to consume a minimum of 90 iron (Fe) tablets throughout pregnancy. The substantial content of these iron tablets significantly contributes to preventing anemia and reducing bleeding during childbirth. However, a substantial number of pregnant women do not adhere to the recommended intake of 90 iron tablets. According to the 2015 Basic Health Research (Riskesdas), only 18% of pregnant women who received iron tablets routinely consumed them for the recommended 90 days. In 2013, out of the 89.1% of pregnant women consuming iron tablets, only 33.3% followed the advised intake of 90 tablets, as per the Riskesdas findings. The 2018 Riskesdas results indicated that 73.2% of pregnant women consumed iron tablets, with only 38.1% adhering to the recommended intake of 90 tablets. Based on data from the Directorate General of Public Health, Ministry of Health of Indonesia, iron tablet provision to pregnant women reached 79.0% in 2014, 85.17% in 2015, and in 2016, only 40.2% of pregnant women consumed ≥ 90 iron tablets, while 53.1% consumed < 90 tablets. Iron tablet provision has not yet reached the target set by the central government, aiming for 90% coverage. Similarly, the percentage of iron tablet provision to pregnant women in 2017 was 80.81%, still falling short of the 90% target. In 2018, the percentage of iron tablet provision to pregnant women decreased to 73.2%.

Knowledge is one of the influencing factors in the consumption of iron tablets (Fe) by pregnant women. According to Rahmawati and Subagio, the non-compliance of pregnant women in consuming iron tablets as recommended by health professionals is an impact of their lack of awareness regarding the importance of sufficient iron intake during pregnancy. In addition to knowledge, another significant factor that plays a crucial role in compliance is the attitude of pregnant women. Pregnant women with positive attitudes understand the importance of attending prenatal care and consuming iron tablets. Adherence to iron tablet consumption by pregnant women is influenced by various factors. Health behavior is influenced by predisposing factors, including age, education, knowledge of pregnant women about anemia and the benefits of iron tablets, as well as disruptive side effects that may lead women to reject the prescribed iron tablets. Enabling factors include the availability of health facilities, while reinforcing factors encompass government policies, support from spouses and family, and assistance from healthcare professionals. Based on this background, research is conducted to explore the factors related to the knowledge of pregnant women regarding the benefits of iron tablets (Fe).

2. METHOD

The research employs a quantitative method with a cross-sectional study design. The independent variables consist of age and education, while the dependent variable is knowledge. The alternative hypothesis posits a relationship between age and education factors with knowledge, while the null hypothesis suggests no such relationship. The population comprises 120 respondents, and the sample size is calculated using the Slovin formula, resulting in 54 respondents. The research is conducted at Rasana'e Timur Community Health Center in 2023. The research instrument utilizes a questionnaire with various questions. Accidental sampling is employed as the sampling technique, and bivariate data analysis is conducted using correlation tests[9].

3. RESULTS AND DISCUSSION

Here are the research findings on the factors related to pregnant women's knowledge regarding the benefits of iron tablets (Fe):

Frequency Distribution of Age, Education, and Knowledge

Table 1. Frequency Distribution of Age, Education, and Pregnant Women's Knowledge aboutIron Tablets (Fe).

Characteristics Variable		Frequency	Precentage (%)
Age	<20	1	1.85
	20-35	47	87.04
	>35	6	11.11

Characteristics Variable		Frequency	Precentage (%)
Education	Elementary	12	22.22
	Secondary	39	72.22
	Higher	3	5.56
Knowledge	Good	13	24.07
	Suffcient	32	59.26
	Insuffcient	9	16.67

Based on Table 1, among 54 respondents, the majority belong to the 20-35 age category, comprising 47 respondents (87.04%). The highest educational attainment is secondary education, encompassing 39 respondents (72.22%). The predominant knowledge level is categorized as sufficient, involving 32 respondents (59.26%).

Based on the research results, it is observed that among 54 pregnant women, the majority belong to the age category of 20-35 years, constituting 47 respondents (87.04%). The highest educational attainment is secondary education, involving 39 respondents (72.22%), and the knowledge level is predominantly categorized as sufficient, with 32 individuals (59.26%).

The age range of 20-35 years is considered a mature stage for reproductive health. Age significantly influences an individual's cognitive abilities and thought patterns. As one grows older, there is a concurrent development in cognitive abilities and thought processes, leading to an enhancement in acquired knowledge. Education, too, is a pivotal and essential factor that all individuals must obtain. The higher an individual's level of education, the better their ability to assimilate various forms of information, thereby expanding their knowledge. Someone with extensive and diverse knowledge is better equipped to lead a healthy life, particularly pregnant women who are more attentive to their pregnancy needs, such as the requirement for iron nutrients found in both food and iron tablets. A higher level of education serves as an asset in receiving information, influencing an individual's knowledge. Information garnered through both formal education (the respondents' last educational level) and non-formal education (the surrounding environment) contributes to this knowledge.Pengetahuan ini mempunyai hubungan umur/pendidikan ibu dalam mengkonsumsi tablet Fe10.

Knowledge is the result of knowing, occurring after individuals sense a specific object. Sensation takes place through human sensory organs, namely sight, hearing, smell, taste, and touch. Consequently, the knowledge one possesses shapes an individual's actions through the process of behavior adoption, involving awareness, interest, consideration of the stimulus's merits, and attempting to adopt it according to the held knowledge. In line with the research conducted by Zulfaizah (2019), it reveals that 33 pregnant respondents have good knowledge, with a percentage of 48.5%. There are 20 respondents (29.4%) with insufficient knowledge, and 15 respondents (22.0%) *The Effectiveness of Using Aloe Vera Facial Soap and Aloe Gel on the Degree of Acne Vulgaris in Students of SMA Negeri 2 Bayang Putri Bunga Anggreno Setiawan, Ade Teti Vani, Budi Yulhasfi* with sufficient knowledge. The difference between this study and previous research is that this study predominantly falls into the category of sufficient knowledge, whereas the previous research had a category of good knowledge[11].

Table 2. Correlation Test Results of Age and Education on Pregnant Women's Knowledge

Independent Variables	Knowledge (sign / p <0.05)
Age	0.133
Education	0.004

Based on Table 2, the correlation test results indicate that the correlation between age and knowledge has a P-value of 0.133, suggesting insignificance. However, the correlation between education and knowledge shows a significant P-value of 0.004. The significance value or Sig. (2-tailed) is 0.004 for the relationship between knowledge and education, indicating significance as the Sig. (2-tailed) value of 0.004 is < 0.05. This implies a significant correlation between the knowledge variable and education. In contrast, for the relationship between knowledge and age, the Sig. (2-tailed)

value is 0.133, signifying no significance, given that the Sig. (2-tailed) value of 0.133 is > 0.05. This means there is no significant correlation between the knowledge variable and age.

First and foremost, it's crucial to acknowledge that age is just one of many factors influencing an individual's education and knowledge levels. Various other variables, including access to education, social environment, the desire to learn, and learning abilities, also play significant roles. Access to education can be limited for some individuals due to factors like financial constraints, geographic challenges, or social barriers. While age may show correlations with education and knowledge in certain instances, it's important to note that these correlations are complex and not always linear. Understanding the dynamics of individual development, changes in educational policies, and the ongoing advancements in technology and culture is essential to comprehending the intricate relationships between age, education, and knowledge[12].

4. CONCLUSION

Based on the data analysis results, it can be concluded that there is a significant relationship between the level of education and the level of knowledge among the respondents, with a significance value of 0.004. This finding reaffirms that the higher an individual's level of education, the better their knowledge. On the other hand, this study did not find a significant relationship between age and knowledge, with a significance value of 0.133. Nevertheless, it is important to note that these results are correlational and cannot imply causation. Further research with a more in-depth design and involving additional variables may be necessary to gain a more holistic understanding of the factors influencing the relationship between education, age, and knowledge in this population group.

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