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Research Article

An Analysis of Factors Influencing Pregnant Women's Understanding of Fe Tablet Benefits at Motoboi Kecil Health Center, Mubago City

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Abstract: The consumption of iron tablets (Fe) among pregnant women in 2013 reached 90.32%, an increase from 82.09% in 2011, showing an improvement of 8.23 percentage points and meeting the target of 90%. Iron tablets are essential for preventing anemia during pregnancy, which can lead to adverse outcomes such as low birth weight and premature birth. This study aims to identify various factors that may influence pregnant women's knowledge about the benefits of iron tablet consumption at the Kotamobagu Small Motoboi Health Center in Mubago City, North Sulawesi. The research employs a cross-sectional descriptive analytical approach, using univariate analysis to examine primary data collected through questionnaires. A sample of 30 pregnant women was selected incidentally for the study. The results indicated a strong correlation between pregnant women's awareness of iron tablets and several demographic and socio-economic factors. Specifically, the chi-squared test revealed significant relationships between pregnant women's knowledge and their age ($p = 0.020$), education level ($p = 0.020$), parity ($p = 0.035$), and source of information ($p = 0.039$). These findings suggest that demographic factors such as age and education, along with access to reliable information sources, significantly contribute to the level of knowledge about iron tablet consumption. The study's findings can be used to enhance public health strategies, particularly in increasing awareness among pregnant women about the importance of consuming iron tablets to prevent anemia and improve maternal and fetal health outcomes. Educating pregnant women and providing accessible sources of information are crucial in improving Fe tablet consumption rates and reducing related health risks.

Keywords: Fe Tablets; Knowledge; Pregnant Women

1. Introduction

In 2014, the WHO reported 289,000 maternal deaths, or AKI, which means that about 800 women die every day due to pregnancy and childbirth problems. On the other hand, the infant mortality rate (AKB) in Indonesia reaches 359 deaths per 100,000 live births. This is contrary to the goals of the Sustainable Development Goals (SDGs), which aim to lower the Maternal Mortality Rate (MMR) to less than 70 deaths per 100,000 live births by 2030. To achieve this goal, the government will face many challenges (SDKI, 2012). "In 2013, 37.1% of pregnant women in Indonesia were anemic, which means their hemoglobin levels were less than 11.0 grams/dl. The rate of pregnant women in urban areas is 36.4% and 37.8%, respectively. Anemia in pregnancy occurs when a woman's hemoglobin level is less than 10.5 grams/dl during the second trimester of pregnancy, according to Riskedas. This is due to hemodilution. Anemia is a condition in which the size and number of red blood cells or hemoglobin concentration is below normal, which can affect the blood's ability to transport oxygen throughout the body. Anemia can occur in a person if they are unwell and do not eat enough. Anemia in pregnant women can endanger the health of the child and mother".

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Anemia increases the risk of miscarriage, premature labor, and low birth weight babies. In addition, anemia usually causes the mother and baby to die (WHO, 2014). Hamna (2013) showed that ninety percent of maternal deaths occur both during the delivery process and after childbirth. Maternal mortality was caused directly by bleeding 30.3 percent, eclampsia 27.1 percent, and infection 7.3 percent. Chronic energy deficiency during pregnancy (37%) and anemia during pregnancy (40%) are indirect causes of pregnancy death.

Each iron tablet, or iron tablet, contains 200 mg of ferro sulfate, or 60 mg of elemental iron, and 0.25 mg of folic acid. Ningrum Value (2013) Iron is not only an important part of the enzyme system, respiratory system, and immune system, but also an important part of hemoglobin synthesis. Sunririnah One type of supplement, additional blood tablets contain iron. The mineral necessary for the formation of hemoglobin, or red blood cells, is iron (Soebroto, 2012). Because your blood volume increases by 25% during pregnancy, iron is essential for the formation of the baby's blood supply. As a result, it is highly recommended to start iron consumption as soon as you find out that you are pregnant. After giving birth, you should continue to take blood supplement pills (Fe tablets) for at least forty days, with one tablet every day (Waryana, 2012).

Several factors, such as maternal age, education level, parity (gravida), sources of information, and awareness, contribute to the likelihood of anemia in pregnant women. Pregnant women's awareness of nutrition, below-average family income, and irregular diet are all factors that have the potential to cause anemia (Rahmawati, 2014). Therefore, the research in question is "Analysis of Factors Affecting Pregnant Women's Knowledge of the Benefits of Fe Tablets at the Kotamobagu Small Motoboi Health Center".

2. Research methods

Study Design "This research has an analytical nature using a cross sectional approach. Data collection uses primary data by filling out a questionnaire with a sample of 30 respondents using the accidental sampling method".

3. Result and Discussion

This is because formal education is not the only way to get information; Non-formal education can also help you to learn more. There are two sides to one's knowledge of an object: the positive side and the negative side. A person's attitude will be determined by these two characteristics: the more positive aspects and things a person knows, the better his view of certain things will be. However, based on experience and research, it can be proven that a behavior based on knowledge can last longer when compared to behavior that is not based on information (Notoadmodjo, 2010).

Table 1. Relationship between Age and Pregnant Women's Knowledge of Fe Tablets

	Knowledge						Total		P value
Age	Less		Enough		Good				
	F	%	F	%	F	%	F	%	
<20 years	2	66.7	1	33.35	0	0.0	3	100	
20-35 years old	1	5.0	4	20.0	15	75.0	20	100	
>35 years old	2	28.6	3	42.9	2	28.6	7	100	
Total	5	16.7	8	26.7	17	56.7	30	100	0.020

"This study found that none of the respondents (0.0%) under the age of 20 had very good knowledge, one respondent (33.35%) under the age of 20 had sufficient knowledge, and two respondents (66.7%) under the age of 20 had less knowledge. Of the respondents aged 20-35 years, 15 (75.0%) had good knowledge, 4 (20.0%) had sufficient knowledge, and 1 (5.0%) had less knowledge. Respondents aged >35 years with strong knowledge were 2 respondents (28.6%), and respondents with the age of >35 years with sufficient knowledge were 3 respondents (42.9%), while >35 years old with insufficient knowledge was 2 respondents (28.6%)".

"From the results of the statistical test, a p value of 0.020 ($p < 0.05$) was obtained, so it can be understood that Ho was rejected, where there was a significant relationship between age and pregnant women's knowledge about Fe tablets.

Age shows that pregnant women understand iron tablets better and are more obedient in consuming them (Suhartono, 2011). According to this study, high-risk age groups have a 3-4 times greater chance of suffering from anemia. The results of this study are in line with Ainun's (2012) research, which found a significant relationship between age and skill".

Table 2. The Relationship Between Parity and Pregnant Women's Knowledge About Fe Tablets

	Knowledge						Total		P value
Parity	Less		Enough		Good				
	F	%	F	%	F	%	F	%	
Primipara	0	0.0	0	0.0	4	100.0	4	100	
Multipara	2	11.1	4	22.2	12	66.7	18	100	
Grande Multipara	3	37.5	4	50.0	1	12.5	8	100	
Total	5	16.7	8	26.7	17	56.7	30	100	0.035

The results of the study showed that there were four primipara respondents (100%) with very good knowledge and no primipara respondents (0.0%) with sufficient knowledge. None of the primary respondents had less knowledge (0.0%), 12 multipara respondents had very good knowledge (66.7%), and 4 multipara respondents had sufficient knowledge (22.2%).

Among the multipara respondents who had "less knowledge, as many as 2 respondents (11.1%). Grandemultipara respondents who have high knowledge are 1 respondent (12.5%), while grandemultipara respondents who have sufficient knowledge are 4 respondents (50.0%). Of the grandemultipara respondents who had less knowledge, 3 respondents (37.5%).

With a p value of 0.035 ($p < 0.005$), it can be concluded that Ho was rejected, because there was a significant correlation between education and knowledge of pregnant women about Fe tablets.

According to Nanda (2013), maternal parity has an impact on maternal knowledge because mothers who have had more than one child will have more experience compared to mothers who have just had one or two children. This experience can make a limited contribution to mother's knowledge".

Table 3. The Relationship Between Education and Pregnant Women's Knowledge About Fe Tablets

	Knowledge						Total		P value
Education	Less		Enough		Good				
	F	%	F	%	F	%	F	%	
Low	2	66.7	1	33.35	0	0.0	3	100	
Intermediate	1	5.0	4	20.0	15	75.0	20	100	
Tall	2	28.6	3	42.9	2	28.6	7	100	
Total	5	16.7	8	26.7	17	56.7	30	100	0.020

This study found that 0 respondents (0.0%) had low education and good knowledge, 1 respondent (33.35%) had low education and sufficient knowledge, 2 respondents (66.7%) had low education and poor knowledge, and 15 respondents (75.0%) had secondary education and good knowledge. There were 4 respondents (20.0%) who had secondary education and sufficient knowledge, 1 respondent (5.0%) had secondary education and less knowledge, and 2 respondents (28.6%) were highly educated and well knowledged. Of the respondents who are highly educated and sufficiently knowledgeable, three people (42.9%) are highly educated and sufficiently knowledgeable, while two people (28.6%) are highly educated but have less knowledge".

"The results of the statistical test produced a p value of 0.020 ($p < 0.005$), which indicates that Ho was rejected. This means that there is a significant relationship between education and pregnant women's knowledge about Fe tablets.

Education is a basic human need for self-development. Higher levels of education are also positively correlated with a person's ability to acquire and develop science and technology. The level of education about health is also positively correlated with a person's awareness of their health problems. According to Notoadmodjo (2010)".

Table 4. The Relationship Between Information Sources and Pregnant Women's Knowledge About Fe Tablets"

	Knowledge						Total		P value
Resources	Less		Enough		Good				
	F	%	F	%	F	%	F	%	
Media	4	26.7	5	33.3	6	40.0	15	100	
Non Media	1	6.7	3	20.0	11	73.3	15	100	
Total	5	16.7	8	26.7	17	56.7	30	100	0.039

This study found that 0 respondents (0.0%) had low education and good knowledge, 1 respondent (33.35%) had low education and sufficient knowledge, 2 respondents (66.7%) had low education and poor knowledge, and 15 respondents (75.0%) had secondary education and good knowledge. There were 4 respondents (20.0%) who had secondary education and sufficient knowledge, 1 respondent (5.0%) had secondary education and less knowledge, and 2 respondents (28.6%) were highly educated and well knowledged. Of the respondents who were highly educated and sufficiently knowledgeable, three (42.9%) were highly educated and sufficiently knowledgeable, while two (28.6%) were highly educated but less knowledgeable.

The results of the statistical test produced a p value of 0.020 ($p < 0.005$), which indicated that Ho was rejected. This means that there is a significant relationship between education and pregnant women's knowledge about Fe tablets.

The basic human need is education to develop oneself. Acquiring and developing science and technology is easier with a higher level of education. Notoadmodjo (2010) stated that higher health education is related to awareness of health problems. According to research conducted by Anita (2013) "According to the results of Hanifah (2014) research, which also states that there is a significant relationship between information sources and the level of knowledge of pregnant women about iron tablets. The results of Nita Eka's (2013) research also show a significant relationship between information sources and the level of knowledge of pregnant women about iron tablets".

4. Conclusion

The results showed that four independent factors were significantly correlated with pregnant women's knowledge of Fe tablets at the Motoboi Kecil Health Center in Kotamobagu. The findings of the chi-square test showed a significant association for age ($p = 0.020$), education ($p = 0.020$), parity ($p = 0.035$), and knowledge source ($p = 0.039$).

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