

Factors Associated with Compliance of Pregnant Women in Consuming Fe Tablets in the Working Area of the Pardamean Health Center, Pematang Siantar City in 2022

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ABSTRACT

The prevalence of anemia in pregnant women in Indonesia from 2013 was 37.1%, increasing to 48.9% in 2018. One of the causes of anemia is non-adherence in taking Fe tablets. The purpose of this study was to determine factors related to adherence. pregnant women consuming Fe tablets in the Working Area of the Pardamean Community Health Center, Pematangsiantar City in 2022. This type of research is an observational analytic study with a cross sectional design. The population in this study were all pregnant women in the Working Area of the Pardamean Public Health Center, Pematangsiantar City in 2022 from May to June, a total of 174 pregnant women. The sample size is 53 people taken using simple random sampling. The statistical test used is the Chi-square test. There is a significant relationship between knowledge (0.001) and behavior of health workers (0.025) with the adherence of pregnant women in consuming Fe Tablets. There is no significant relationship between the role of the family (0.655) and the compliance of pregnant women in consuming Fe tablets. It is recommended that health workers improve their services for pregnant women, especially controlling and following up consumption of Fe tablets in pregnant women.

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1. INTRODUCTION

The results of the 2012 Indonesian Health Demographic Survey showed an MMR of 359 per 100,000 live births. Meanwhile, the results of the 2015 Inter-Census Population Survey (SUPAS) showed an MMR of 305 per 100,000 live births, still very high compared to estimates by the Ministry of Health (BalitbangKes, 2018). Other data is shown by the World Bank which states that since 2000, the MMR in Indonesia has shown a declining trend, stating that the MMR ratio in Indonesia is 177 per 100,000 live births in 2017. In the Sustainable Development Goals (SDGs), the MMR target is 70 per 100,000 live births in 2030. Hard work is needed to achieve this target, especially when compared to several ASEAN countries, the MMR in Indonesia is still relatively high. The MMR in ASEAN countries is on average 40-60 per 100,000 live births. In fact, the MMR in Singapore is 2-3 per 100,000 live births (WHO, 2019).

The prevalence of anemia in pregnant women in Indonesia from 2013 was 37.1%, increasing to 48.9% in 2018 (Ministry of Health, 2018). Anemia is a condition in which the body has too few red blood cells (erythrocytes), in which the red blood cells contain hemoglobin which functions to carry oxygen throughout the body's tissues (Pemiliana, Oktafirnanda, & Santi, 2019).

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Anemia can be caused by several factors. There are direct and indirect factors. The direct factors are the adequacy of consumption of iron supplement tablets, pregnancy interval, parity, nutritional status, and infectious diseases. The main cause of anemia is a lack of iron intake in food or iron tablets. The incidence of anemia is caused by a lack of iron intake (Suhartati, Hestiana, & Rahmawati, 2017).

According to Berhe et al, the worldwide average prevalence of anemia in pregnant women is 38.2% and in Ethiopia, the average prevalence of anemia in pregnant women is 22%. In his research he explained the risk factors for anemia in pregnant women in the Tigray East Zone, Ethiopia. In the conclusion of this study, the risk factors for anemia in pregnant women are intestinal parasites, the mother's work as a farmer, unprotected sources of drinking water, drinking coffee or tea with meals or immediately after meals and a low diet diversification score. According to them, nutrition interventions should consider risk factors identified early (Berhe et al., 2019).

As a comparison, the prevalence of anemia in pregnant women in Essaouira Maroco Province is quite high, namely 41%. The results of binary logistic regression indicate that anemia is associated with female origin and low literacy levels. The results of his research show that the diet of anemic mothers is low in iron and can be a factor in the development of anemia in this province (Ouzennou, Tikert, Belkedim, Jarhmouti, & Baali, 2018).

The coverage of Fe administration, especially in developing countries (developing countries) has reached 94% but has not met the target of 100%. The effectiveness of efforts to provide Fe tablets also depends on the compliance of pregnant women in consuming the iron tablets given. High coverage of Fe tablets may not have an impact on reducing iron anemia if the adherence of pregnant women in consuming Fe tablets is still low. Iron tablet supplementation is a useful way to treat anemia. In Indonesia, iron supplementation has long been given routinely to pregnant women at Puskesmas and Posyandu, using tablets containing 60 mg/day can increase Hb levels by 1 g% per month. Compliance in consuming iron tablets is the obedience of pregnant women carrying out the recommendations of health workers to consume iron tablets (Pemiliana et al., 2019).

The results of a preliminary survey conducted in the working area of the Pardamean Health Center, Pematangsiantar City, by conducting interviews with 10 pregnant women, it was found that 2 pregnant women did not consume Fe tablets, 4 pregnant women took Fe tablets when they remembered, and 2 pregnant women consumed Fe tablets. only if you don't feel well, and 2 pregnant women take Fe tablets every time before going to bed. The interview results also showed that as many as 5 people did not know the benefits of Fe tablets. From the results of interviews with pregnant women it was also known that there were 3 people who stated that health workers did not remind their mothers regularly to consume pregnant women and only 2 mothers who stated that their husbands and families supported and monitored their regular consumption of Fe tablets.

2. METHOD

This type of research is an observational analytic study using a cross sectional design. The population in this study were all pregnant women in the Work Area of the Pardamean Public Health Center, Pematangsiantar City in 2022 from May to June, a total of 174 pregnant women. The sample in this study were some pregnant women who met the criteria, namely as many as 53 people according to the sample calculation. Inclusion criteria in this study: Trimester II and III, Willing to be Respondents, Original local residents, fully aware and accountable for all questions about their condition. Exclusion criteria in this study: Pregnant women who are not in a state of illness in the last 1 month (worms, bleeding, tuberculosis, and other diseases that bleed a lot). Pregnant women who experience digestive disorders such as nausea and vomiting and blood disorders. Primary data is data taken directly from respondents using a questionnaire. Secondary data is data that is used to complement primary data obtained from research sites such as: recording and reporting of the coverage of pregnant women in the Working Area of the Pardamean Health Center, Pematangsiantar City in 2022. The data analysis used is univariate and bivariate analysis. Bivariate analysis using the Chi-square test.

3. RESULTS AND DISCUSSION

Characteristics of Respondents

Table 1. Distribution of Respondents' Characteristics in the Working Area of the Pardamean Health Center in Pematang Siantar City in 2022

| No. | Characteristics of Respondents | f | % |
|-----|--------------------------------|----|-------|
| 1 | Age | | |
| | <20 years | 8 | 15,1 |
| | 20-35 years | 31 | 58,5 |
| | >35 years | 14 | 26,4 |
| | Total | 53 | 100,0 |
| 2 | Education | | |
| | Elementary | 5 | 9,4 |
| | Junior | 10 | 18,9 |
| | Senior | 30 | 56,6 |
| | Bachelor | 8 | 15,1 |
| | Total | 53 | 100,0 |
| 3 | Gestational Age | | |
| | Trimester 2 | 20 | 37,7 |
| | Trimester 3 | 33 | 62,3 |
| | Total | 53 | 100,0 |

Based on the table above, it can be seen that the highest proportion of respondents is at the age of 20-35 years, namely 58.5%, while the proportion of respondents who are the least is at the age of <20 years, namely 15.1%. Based on education, the highest proportion of respondents were high school graduates, namely 56.6%, while the least proportion of respondents were elementary school graduates, namely 9.4%. Based on gestational age, the highest proportion of respondents was in the 3rd trimester, namely 62.3%, while the least proportion of respondents was in the 2nd trimester, namely 37.7%.

Compliance with Consumption of Fe Tablets

Table 2. Frequency Distribution of Compliance of Pregnant Women Consuming Fe Tablets in the Working Area of the Pardamean Health Center, Pematang Siantar City in 2022

| Compliance with Consumption of Fe Tablets | f | % |
|---|-----------|--------------|
| No | 32 | 60,4 |
| Yes | 21 | 39,6 |
| Total | 53 | 100,0 |

From the table above it is known that there are more mothers who do not adhere to consuming Fe Tablets, namely 32 people (60.4%) compared to mothers who adhere to consuming Fe Tablets, namely 21 people (39.6%).

Bivariate Analysis

Table 3. Relationship between Knowledge and Compliance of Pregnant Women in Consuming Fe Tablets

| Knowledge | Compliance | | Number | p-value |
|-----------|------------|-----|--------|---------|
| | No | Yes | | |

| | n | % | n | % | n | % | |
|--------|----|------|----|------|----|-----|-------|
| Less | 26 | 76,5 | 8 | 23,5 | 34 | 100 | 0,001 |
| Good | 6 | 31,6 | 13 | 68,4 | 19 | 100 | |
| Number | 32 | 60,4 | 21 | 39,6 | 53 | 100 | |

From the table above it can be seen that mothers who are not compliant consume Fe Tablets more in mothers who have less knowledge, namely 26 people (76.5%) compared to mothers who have good knowledge, namely 6 people (31.6%). Meanwhile, mothers who adhered to consuming Fe tablets were more knowledgeable, namely 13 people (68.4%), compared to mothers who had less knowledge, namely 8 people (23.5%). From the results of the chi-square statistical test, it was obtained a value of $p = 0.001$ ($p < 0.05$), so it can be concluded that there is a significant relationship between knowledge and compliance of pregnant women in consuming Fe tablets in the Working Area of the Pardamean Health Center, Pematang Siantar City in 2022.

Table 4. The relationship between the behavior of health workers and the compliance of pregnant women in consuming Fe tablets

| Behavior Of Health Workers | Compliance | | | | Number | | p-value |
|----------------------------|------------|------|-----|------|--------|-----|---------|
| | No | | Yes | | n | % | |
| | n | % | n | % | | | |
| Less | 19 | 76,0 | 6 | 24,0 | 25 | 100 | 0,025 |
| Good | 13 | 46,4 | 15 | 53,6 | 28 | 100 | |
| Number | 32 | 60,4 | 21 | 39,6 | 53 | 100 | |

From the table above it can be seen that mothers who did not adhere to consuming Fe Tablets were more likely to be mothers who rated the behavior of health workers as poor, namely 19 people (76.0%) compared to mothers who rated the behavior of health workers as good, namely as many as 13 people (46, 4%). Meanwhile, mothers who adhered to consuming Fe Tablets were more likely to have good knowledge of the behavior of health workers, namely 15 people (53.6%) compared to mothers who rated the behavior of health workers as lacking, namely 6 people (24.0%). From the results of the chi-square statistical test, it was obtained that the value of $p = 0.025$ ($p < 0.05$), it can be concluded that there is a significant relationship between the behavior of health workers and the compliance of pregnant women in consuming Fe Tablets in the Working Area of the Pardamean Health Center, Pematang Siantar City in 2022.

Table 5. The Relationship between Family Role and Compliance of Pregnant Women in Consuming Fe Tablets

| Family Role | Compliance | | | | Number | | p-value |
|-------------|------------|------|-----|------|--------|-----|---------|
| | No | | Yes | | n | % | |
| | n | % | n | % | | | |
| Less | 20 | 64,5 | 11 | 35,5 | 31 | 100 | 0,655 |
| Good | 12 | 54,5 | 10 | 45,5 | 22 | 100 | |
| Number | 32 | 60,4 | 21 | 39,6 | 53 | 100 | |

From the table above it can be seen that mothers who are not compliant consume Fe tablets more in mothers who have a less family role, namely as many as 20 people (64.5%) compared to mothers who have a good family role, namely as many as 12 people (54.5%)). Meanwhile, mothers who obediently consumed Fe tablets were more likely to have good family roles, namely 10 people (45.5%) compared to mothers who rated the behavior of health workers as lacking, namely 11 people (35.5%). From the results of the chi-square statistical test, $p = 0.655$ ($p > 0.05$), it can be concluded that there is no significant relationship between the role of the family and the compliance of pregnant

women in consuming Fe Tablets in the Working Area of the Pardamean Health Center, Pematang Siantar City in 2022.

Discussion

The results of this study are in accordance with several previous studies, namely research conducted by Rara with the research title Factors Influencing Compliance of Pregnant Women in Consuming Iron Tablets and Its Relation to the Incidence of Anemia in Pregnant Women at the Muaro Kiawai Health Center, West Pasaman District, in 2019 with an analytic observational research design with a cross sectional approach which shows that there is a significant relationship between knowledge and adherence to consuming iron tablets (Rara, 2019).

The results showed that the compliance of pregnant women in consuming iron tablets in the Working Area of the Pardamean Public Health Center, Pematang Siantar City was still low, this could be because there were still many pregnant women who had insufficient knowledge about iron. However, to meet the iron needs of pregnant women and their fetuses, they take iron-containing foods. Because some pregnant women don't like the smell of iron tablets which can cause nausea and black stools when consumed. Some people say that they often forget to take iron tablets so they need special attention from their families, especially their husbands, who are with them every day to remind and motivate their mothers to take iron tablets. Because if you look at the side effects experienced by mothers when taking iron tablets such as nausea, vomiting, difficulty having bowel movements and the smell of iron tablets that pregnant women don't like, they really need motivation from the family, especially husbands, to keep taking these iron tablets.

The impact after consuming iron tablets is that the feces (feces) will turn black, but this is not dangerous. The frequency of these iron tablet side effects depends on the dose of iron in the pill, not the form of the mixture. The higher the dose given, the greater the possibility of side effects. Iron tablets taken on a full stomach will reduce the side effects, but this does not reduce the rate of absorption. Oral administration of iron supplements is inhibited by 2 important factors, namely side effects on the gastrointestinal tract and difficulties in motivating patients who do not perceive themselves as sick (Mulyani, 2017)).

According to research, the adherence of pregnant women in consuming iron tablets according to the recommendations of health workers is an impact of their adherence to the importance of adequate iron intake during pregnancy. The knowledge possessed by pregnant women will affect their behavior. Pregnant women with good nutritional knowledge will also try to provide adequate nutrition for themselves and their fetus (Costa, et al, 2017). Knowledge of pregnant women regarding iron will have an impact on attitudes towards food by applying the information obtained in providing foods that contain a source of iron for needs during pregnancy (Derso, 2017).

The results of this study are in accordance with what researchers have done previously by Rara (2019) with the title Factors Influencing Compliance of Pregnant Women in Consuming Iron Tablets and Their Relation to the Incidence of Anemia in Pregnant Women at the Muaro Kiawai Health Center, West Pasaman Regency in 2019 with the Cross Sectional research design which shows that there is a relationship between the role of health workers and the adherence of pregnant women to consuming iron tablets. The minimum pregnancy health service facilities obtained by pregnant women are measurement of body weight and height, measurement of blood pressure, measurement of fundal height, injection of Tetanus Toxoid (TT) immunization and administration of iron tablets. completely immersed.

Health services in the Working Area of the Pardamean Health Center, Pematang Siantar City, have been good in implementing nutrition programs in the community, as well as the attention of health workers and the affordability of access to health services by the community (Putri, 2016). Health services affect the compliance of pregnant women in consuming iron tablets. This is because half of pregnant women rarely consume iron tablets because iron tablets have side effects on pregnant women which can cause nausea, an unpleasant odor, hard bowel movements and stools. black is often forgotten due to lack of support from the family. Meanwhile, some pregnant women feel the need to consume iron tablets to maintain their own safety and the health of the fetus (Lugowska, 2019).

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Health workers have a very important role to play in increasing the compliance of pregnant women in consuming Fe tablets, namely by providing services to the community according to their needs, such as during antenatal care visits to pregnant women.

4. CONCLUSION

There were more mothers who had less knowledge, namely 34 people (64.2%) compared to mothers who had good knowledge, namely 19 people (35.8%). More mothers rated the behavior of health workers as good, namely 28 people (52.8%) compared to mothers who rated the behavior of health workers as poor, namely 35 people (47.2%). There were more mothers who had less family roles, namely 31 people (58.5%) compared to mothers who had good family roles, namely 22 people (41.5%). There is a significant relationship between the knowledge and behavior of health workers and the compliance of pregnant women in consuming Fe Tablets in the Work Area of the Pardamean Health Center, Pematang Siantar City in 2022. There is a significant relationship between the behavior of health workers and the compliance of pregnant women in consuming Fe Tablets in the Work Area of the Pardamean Health Center Pematang Siantar City in 2022. There is no significant relationship between the role of the family and the compliance of pregnant women in consuming Fe Tablets in the Working Area of the Pardamean Health Center, Pematang Siantar City, in 2022. It is recommended that pregnant women in the Working Area of the Pardamean Health Center, Pematang Siantar City to make regular visits antenatal care to BPM or other health facilities in order to obtain appropriate information and increase knowledge about anemia tablets and their benefits. It is recommended for health workers to improve their services for pregnant women, especially controlling and following up consumption of Fe tablets in pregnant women.

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