



Article

Determining Factors of Fe Tablet Consumption among Pregnant Women at BPM S Tangerang

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ABSTRACT

Maternal Mortality Rate (MMR) is an indicator of the success of maternal health efforts and assesses community welfare. The sample in this study was all 56 pregnant women in the third trimester at BPM S Tangerang Banten in 2023. The data analysis used was univariate and bivariate with the chi square test. there is no significant relationship between age and consumption of Fe tablets where $p \text{ value} = 0.050 > \alpha = 0.05$, there is no significant relationship between education and consumption of Fe tablets where $p \text{ value} = 0.982 > \alpha = 0.05$. There is no significant relationship between work and tablet consumption where the $p \text{ value} = 0.158 > \alpha = 0.05$. There is a significant relationship between the frequency of ANC visits and the consumption of Fe tablets in pregnant women where the $p \text{ value} = 0.046 < \alpha = 0.05$. There is no significant relationship between gravida and the consumption of Fe tablets where the $p \text{ value} = 0.301 > \alpha = 0.05$. Conclusion: The factor causing the low consumption of Fe tablets is ANC visits.

I. INTRODUCTION

Maternal Mortality Rate (MMR) is an indicator of the success of maternal health efforts and assesses community welfare. The maternal mortality rate (MMR) in Indonesia is currently still far from the target to be achieved. According to WHO (World Health Organization) in 2018, 40% of maternal deaths in developing countries were related to anemia in pregnancy. The most common cause of anemia in pregnancy is iron deficiency (Proverawati, 2023). Anemic mothers cannot tolerate blood loss like healthy women without anemia.

Anemia in pregnancy is a condition where the hemoglobin (Hb) level in the blood is below 11 gr% in TM I and III or less than 10.5 gr% in TM II, whereas in pregnancy the normal Hb in pregnant women is 11 gr%. In a normal pregnancy, pregnant women will experience a decrease in Hb levels in TM II, therefore Hb checks must be carried out in early pregnancy to see initial data and repeated in TM III to prepare for delivery (Waryana, 2019). Factors of anemia in pregnancy include iron deficiency anemia, megaloblastic anemia and hypoplastic anemia. Maternal compliance plays a very important role in increasing Hb levels. This compliance includes the correct number of tablets consumed, the correct method of consuming them and the regularity of the frequency of consuming Fe tablets.

The low number of pregnant women consuming Fe tablets is due to non-compliance in consuming Fe tablets, such as not or forgetting to consume Fe tablets and the habit of consuming coffee or tea at the same time as meals which can reduce the absorption of Fe tablets in the body which results in the benefits of Fe tablets being reduced (Waryana, 2018). Compliance in consuming Fe tablets is the strictness of pregnant women in carrying out recommendations or orders from health workers. Every pregnant woman gets a minimum of 90 Fe tablets and it will be beneficial if taken regularly and routinely every day during pregnancy (Waryana, 2018). Mother's non-compliance in consuming Fe tablets can provide a greater chance or impact of developing anemia (Sarwono, 2018). One component of health services for pregnant women is the provision of 90 iron (Fe) tablets (Indonesian Health Profile, 2023). Anemia due to iron deficiency is still common in developing countries. The rate of iron deficiency anemia in Indonesia reaches 40.1% (Ministry of Health 2023 in Sulistyoningih, 2019). About 1,040 mg is stored during pregnancy, 300 mg is transferred to the fetus, 200 mg is lost during childbirth, 50-75 mg for placenta formation and 450 mg for red blood cell formation. Iron needs will not be met from diet alone, therefore iron supplementation is very necessary (Sulistyoningih, 2019).

To prevent anemia in pregnant women, the government through the Ministry of Health has distributed iron tablets to antenatal care centers, such as posyandu, polindes, poskesdes, poskeskel, puskesmas and involving health workers such as midwives, nurses, posyandu cadres in accordance with the Service Guidelines Antenatal issued by the Directorate of Basic Medical Services (2018).

Iron is a very important element for forming hemoglobin (Hb). In the body, iron has functions related to transport, storage, utilization of oxygen and is in the form of hemoglobin, myoglobin or cytochrome (Sarwono, 2018). The 4 micron mineral iron is most abundant in the bodies of humans and animals, namely 3-5 grams in the body of an adult human. Iron is needed by workers to support their work activities and if pregnant women do not comply with consuming iron, it can result in pregnant women suffering from anemia (Waryana, 2019).

II. METHODS

The type of research used is analytical descriptive research (Suhron, 2024) which aims to look at the relationship between social demographics and maternal factors on the consumption of Fe tablets in pregnant women at BPM. S Tangerang Banten in 2023. The population in this study was pregnant women in the third trimester who consumed Fe tablets at BPM S Tangerang Banten, totaling 56 people. The sample in this study used a total sampling technique, namely sampling where all members of the population are sampled, jSo the research sample consisted of 56 pregnant women in the third trimester. Method of collecting data Researchers used secondary data obtained from medical records.

III. RESULT

Table 1.
Frequency Distribution of Fe Tablet Consumption in Pregnant Women in BPM S Tangerang Banten in 2023

Consumption of Fe Tablets	Frequency	Presentation
Consumption of fe tablets (≥ 90 tablets)	37	66,1%
consume fe tablets (< 90 tablets)	19	33,9%
Total	56	100,0%

Based on the table above, it is found that the frequency distribution of Fe tablet consumption among pregnant women is that the majority consume Fe tablets (≥ 90 tablets) as many as 37 people (66.1%) and the minority with low consumption of Fe tablets (< 90 tabs) is 19 people (33.9%).

Table 2.
Frequency Distribution of Maternal Factors on Fe Tablet Consumption in Pregnant Women by Age at BPM S Tangerang Banten in 2023

Mother's Age	Frequency	Presentation
≤ 20 Years	2	3,6%
21-34 Years	49	87,5%
≥ 35 Years	5	8,9%
Total	56	100,0%

Based on the table above, it is found that the majority of mothers aged 21-34 years are 49 people (87.5%) and the minority of mothers aged ≤ 20 years are 2 people (3.6%).

Table 3.
Frequency Distribution of Social Demographic Factors on Tablet
Consumption
Fe in Pregnant Mothers based on Maternal Education at BPM S
Tangerang Banten in 2023

Education	Frequency	Presentation
Basic education (Elementary, MI, SMP, MtS)	12	21,4%
Secondary education (SMA, MA, SMK)	33	58,9%
Higher Education (Diploma, Bachelor, Master, Doctor)	11	19,7%
Total	56	100,0%

Based on the table above, it is found that the majority of mothers in secondary education are 33 people (58.9%) and the minority of mothers in primary education are 21 people (21.4%).

Table 4.
Frequency Distribution of Social Demographic Factors on Consumption
Fe Tablets in Pregnant Women based on Occupation
Mother at BPM S Tangerang Banten in 2023

Mother's job	Frequency	Presentation
Not working (IRT)	28	50,0%
Working (private sector, workers, employees, civil servants/ABRI)	28	50,0%
Total	56	100,0%

Based on the table above, it is found that there are 28 people (50.0%) who do not work and who work.

Table 5.
Frequency Distribution of Maternal Factors on Fe Tablet Consumption
in Pregnant Women based on Frequency of ANC Visits
at BPM S Tangerang Banten in 2023

Frequency of ANC visits	Frequency	Presentation
Ya $\geq$ 6x	31	55,4%
Not <6x	25	44,6%
Total	56	100,0%

Based on the table above, it is found that the majority of ANC visits as recommended is $\geq$ 6x, there are 31 people (55.4%) and the minority frequency of ANC visits is not as recommended < 6x, there are 25 people (44.6%).

Table 6.
Frequency Distribution of Maternal Factors on Consumption
Fe Tablets for Pregnant Women based on Gravida in BPM
S Tangerang Banten in 2023

Pregnant	Frequency	Presentation
Primigravida	23	41,1%
Multigravida	33	58,9%
Total	56	100,0%

Based on the table above, it is found that the majority of multigravidas are 33 people (58.9%) and the minority of primigravidas are 23 people (41.1%).

Table 7.
Relationship between maternal age and consumption of Fe tablets
At BPM S Tangerang Banten in 2023

Mother's Age	Take fe tablets				Total	P	
	Consumption of fe tablets (≥ 90 tablets)		Consumption of fe tablets (<90 tablets)				
	Rude I came	Presen one	Freku next	Presen one			
≤20 years	2	3,6 %	0	0,0 %	2	3,6%	0,050
21-34 years old	34	60,7%	15	26,8%	49	87,5 %	
>35 years	1	1,8%	4	7,1 %	5	8,9%	
Total	37	66,1%	19	33,9 %	56	100.0 %	

Based on table 7 above, the results show that the majority are mothers who consume fe tablets (≥ 90 tabs) between the ages of 21-34 years as many as 34 people (60.7%), and the minority of mothers who consume fe tablets at the age of ≤ 20 years are 0 people (0.0%). The results obtained by the Chi Square test show the value p amounted to 0.050, so the results showed that there was no significant relationship between age and consumption of Fe tablets in pregnant women.

Table 8.
Relationship between maternal education and consumption of Fe tablets
At BPM S Tangerang Banten in 2023

Education	Take fe tablets				Total	
	Consumption of fe tablets (≥90 tablets)		consume Fe tablets (<90 tabs)			
	Rude I came	Present but	Rude I came	Presen one	Rude I came	Present but
Basic Education (Elementary, MI, SMP, MtS)	8	14,3%	4	7,1%	12	21,4%
Secondary Education (SMA, MA, SMK)	22	39,3%	11	19,6%	33	58,9 %
College (Diploma, Masters, Bachelor, Doctor)	7	12,5%	4	7,1 %	11	19,6%
Total	37	66,1%	19	33,9 %	56	100.0 %

Based on table 8 above, the results show that the majority are mothers who consume Fe tablets (≥90 tablets) in secondary education (SMA, MA, SMK) as many as 22 people (39.3%), and the minority of mothers who consume Fe tablets (<90 tablet) in basic education (SD, MI, SMP, MTS) as many as 4 people (7.1%) and in tertiary institutions (diploma, master, bachelor, doctor) as many as 4 people (7.1%). The results obtained with the Chi Square test show the value *p* amounted to 0.982, so the results showed that there was no significant relationship between education and consumption of Fe tablets in pregnant women.

Table 9.
Relationship between Maternal Occupation and Fe tablet Consumption
At BPM S Tangerang Banten in 2023

Freku get out only the ANC	Take fe tablets				Total		p
	Consumption of fe tablets (≥ 90 tablets)		Consumption of fe tablets (<90 tablets)		Rude Uen and	Pres in one	Val ue
	Rude Uen and	Pres in one	Rude Uen and	Pres In one			
Of > 6x	24	42, 9%	7	12, 5%	31	55, 4%	0,0 46
No ≤ 6x	13	23, 2%	12	21, 4%	25	44, 6%	
Total	37	66, 1%	19	33, 95%	56	100 ,0%	

Based on table 9 above, the results show that the majority are mothers who consume Fe tablets (≥ 90 tablets) in mothers who work as many as 21 people (37.5%), and the minority of mothers who consume Fe tablets (<90 tablets) in mothers who do not 7

people (12.5%) work. The results obtained with the Chi Square test show the value p amounted to 0.158, so the results showed that there was no significant relationship between work and consumption of Fe tablets in pregnant women.

Table 10.
Relationship between frequency of maternal ANC visits and consumption of Fe tablets
At BPM S Tangerang Banten in 2023

Work	Take fe tablets				Total	
	Consumption of fe tablets (≥ 90 tablets)		consume fe tablets (<90 tablets)		Rude I came	Presen one
	Rude I came	Pres in one	Rude I came	Pres in one		
No Work (IRT)	16	28, 6%	12	21,4 %	28	50,0%
Work (Private, Labor, Officer, Pns/A BRI)	21	37, 5%	7	12, 5%	28	50,0%
Total	37	66, 15%	19	33, 9%	56	100, 0%

Based on table 10 above, the results show that the majority are mothers who consume Fe tablets (≥ 90 tablets) at a frequency of ANC visits $> 6x$ as many as 24 people (42.9%), and a minority of mothers who consume Fe tablets (< 90 tablets) at a frequency of ANC visits $< 6x$ as many as 7 people (12.5%). The results obtained with the Chi Square test show the value p amounted to 0.046, so the results showed that there was a significant relationship between the frequency of ANC visits and the consumption of Fe tablets in pregnant women.

Table 11.
Relationship between maternal gravida and consumption of Fe tablets
At BPM S Tangerang Banten in 2023

Game life	Take fe tablets				Total	
	Consumption of fe tablets (≥ 90 tablets)		consume fe tablets (< 90 tablets)		Rude Uen And	Pres In one
	Rude Uen and	Pres In one	Rude Uen and	Pres In one		
Prim cream	17	30, 4%	6	10, 7%	23	41, 1%
Multi for	20	35, 7%	13	23, 2%	33	58, 9%
Total	37	66, 1%	19	33, 9%	56	100, 0%

Based on table 11 above, the results show that the majority are mothers who consume Fe tablets (≥ 90 tablets) in multiparous mothers, 20 people (35.7%), and a minority of

mothers who consume Fe tablets (<90 tablets) in primiparous mothers. as many as 6 people (10.7%). The results obtained with the Chi Square test show the value p amounted to 0.301, so the results showed that there was no significant relationship between gravida and consumption of Fe tablets in pregnant women.

IV. DISCUSSION

1. Consumption of Fe Tablets in Pregnant Women

The low level of pregnant women consuming Fe tablets is non-compliance with actions related to one's own behavior, pregnant women consuming Fe tablets, including compliance with the number of tablets consumed, how to consume Fe tablets, when to consume Fe tablets, and the frequency of Fe tablets consumed. Based on the research results, it was found that the frequency distribution of Fe tablet consumption among pregnant women at BPM S Tangerang Banten in 2023 was 56 people. The majority consumed Fe tablets (90 tablets) as many as 37 people (66.1%) and the minority consumed Fe tablets (<90 tabs) as many as 19 people (33.9%).

The results of Detty Afriyanti's research in 2023 showed that the majority of pregnant women consumed Fe tablets, namely 86.7%. This is because pregnant women believe that the impact that will occur if they do not consume Fe tablets is that they will get tired more quickly and will experience bleeding when giving birth. Women who do not consume enough Fe tablets will cause them to experience iron deficiency anemia, anemia during labor will cause weakness in the uterine muscles which is a sign of uterine atony which ultimately results in bleeding, so it is very important to consume 90 Fe tablets when pregnant.

2. Relationship between Age and Consumption of Fe tablets in pregnant women

Based on the results of the research carried out, it can be seen that the frequency distribution of maternal age with consumption of Fe tablets in pregnant women is the majority in mothers aged 21-34 years, there are 49 people (87.5%) and the minority in mothers aged ≤ 20 years is 2 people (3, 6%). Meanwhile, based on the results of statistical tests using the test *Chi-square* value is obtained p amounted to 0.050, so the results showed that there was no significant relationship between age and consumption of Fe tablets in pregnant women. This is in line with research by Sarlani (2023), showing that of the 46 pregnant women at the Sampara Community Health Center who were sampled, the majority were pregnant women aged 21-34 years as many as 28 pregnant women (60.9%), the minority were pregnant women aged 21-34 years. <20 years as many as 10 people (21.7%). Meanwhile, based on the results of statistical tests using the test *Chi-square* value is obtained p amounted to 0.051, so the results showed that there was no significant relationship between age and consumption of Fe tablets in pregnant women.

The increasing public awareness of not getting married and getting pregnant at a young age, namely < 20 years > 35 years, is at risk of bleeding, causing the mother to become anemic because iron intake will be divided between her biological growth and the fetus she is carrying, while women who are pregnant > 35 years will experience physiological function. the body is not optimal, because it has entered the beginning of degeneration.

3. Relationship between maternal education and consumption of fe tablets in pregnant women

Education is an effort to provide formal knowledge based on lower levels of education to higher levels of education. Meanwhile, informal knowledge is knowledge obtained from outside the scope of education (Anggraeni, 2018). According to Thomson (2023) education is the influence of the environment on individuals to produce appropriate changes in their habits or habits of behavior, thoughts and feelings., The higher a person's education, the different their thinking patterns will be. Pregnant women who have higher education will have good behavior, one of which is how to take Fe tablets because one of the benefits of consuming Fe tablets as recommended is that it can reduce the risk of anemia which causes bleeding, no contractions.

Based on the results of the research conducted, it shows that the majority are mothers who consume Fe tablets ≥ 90 tablets in secondary education (SMA, MA, SMK) as many as 22 people (39.3%), and a minority of mothers who consume Fe tablets < 90 tablets in basic education (SD, MI, SMP, MtS) as many as 4 people (7.1%) and in higher education (Diploma, Bachelor, Master) as many as 4 people (7.1%). The results obtained with the Chi Square test show the value p amounted to 0.982, so the results showed that there was no significant relationship between education and consumption of Fe tablets in pregnant women.

Pregnant women, both those with low education and those with high education, have the same opportunity to obtain information through media that are currently easy to obtain, such as using the facilities of their Android cellphones to access information so that they know about the benefits of Fe tablets.

4. Relationship between maternal employment and consumption of fe tablets in pregnant women

According to Anggraini (2018), work is the activity of carrying out income-seeking economic activities in both the formal and informal sectors which is carried out regularly and earns a wage. The activities or efforts that pregnant women carry out every day based on where they work will make pregnant women feel more tired so they forget to take Fe tablets.

Based on the results of research conducted by researchers, the results showed that the majority of mothers who consumed Fe tablets ≥ 90 tablets were 21 working mothers (37.5%), and the minority of mothers who consumed Fe tablets < 90 tablets were 7 mothers who did not work. (12.5%). The results obtained with the Chi Square test show the value p amounted to 0.158, so the results showed that there was no significant relationship between work and consumption of Fe tablets in pregnant women.

The results of this research are in line with research conducted by Aisyiyah (2023) showing that most of the 28 respondents, the majority were 18 working mothers (64%), the minority were 10 people (34%) among non-working mothers. Based on the research results, it can be seen that there is no relationship between mother's occupation and consuming Fe tablets. The chi-square test results obtained p value = 0.463 $>$ 0.05.

Mothers' awareness of the importance of consuming iron tablets during pregnancy, while the majority of respondents who do not work as (housewives) have bad actions is influenced by several factors, such as socio-cultural factors which believe that if they consume iron tablets, bleeding will occur during childbirth.

Apart from that, the factor is that mothers don't like the taste and smell of medicines so the iron tablets given by midwives are only stored, while working mothers have a good attitude, because working mothers don't want to experience anemia in their pregnancy, namely by consuming the tablets. the iron the midwife gave him.

5. Relationship between frequency of ANC visits and consumption of Fe tablets in pregnant women

Antenatal care is a planned program in the form of observation, education and medical treatment for pregnant women to achieve a safe and satisfying pregnancy and birth process (Mufdlilah 2019). Currently, 6x antenatal care services are recommended, with details of 2x in the first trimester, 1x in the second trimester and 3x in the third trimester.

Based on the results of research conducted, it shows that the majority of mothers who consume Fe tablets (≥ 90 tablets) at ANC visit frequency $> 6x$ are 24 people (42.9%), and the minority of mothers who consume Fe tablets do not comply with recommendations at ANC visit frequency $\leq 6x$ as many as 7 people (12.5%). The results obtained with the Chi Square test show the value p amounted to 0.046, so the results showed that there was a significant relationship between the frequency of ANC visits and the consumption of Fe tablets in pregnant women. By regularly making ANC visits, the mother is motivated to consume Fe tablets.

6. Relationship between Gravida and Fe tablet consumption in pregnant women

Gravida is a pregnant mother (Prawirohardjo, 2023). According to Melvianti (2018), mothers with 2 or more pregnancies are considered experienced and tend to have regular pregnancy checks so that mothers consume Fe tablets as recommended, while mothers with less than 2 pregnancies do not regularly check their pregnancies and do not consume Fe as recommended because the mothers are inexperienced and don't know much about pregnancy.

Based on the results of research conducted, it shows that the majority of mothers who consumed Fe tablets ≥ 90 tablets were 20 in multiparous mothers (35.7%), and the minority of mothers who consumed Fe tablets < 90 tablets in primiparous mothers were 6 people (10, 7%). The results obtained with the Chi Square test show the value p amounted to 0.301, so the results showed that there was no significant relationship between gravida and consumption of Fe tablets in pregnant women.

The results of this study are in line with research conducted by Ilah Sursilah 2023 showing that the majority who consumed Fe tablets (≥ 90 tablets) were 20 people (23.3%) in multiparous mothers, a minority of primiparous mothers who consumed Fe tablets (< 90 tablets) as many as There are 10 people who don't work (21.6%). Based on the research results, it can be seen that there is no relationship between mother's occupation and consuming Fe tablets. The chi-square test results obtained p value = $0.052 > 0.05$.

V. CONCLUSION

The largest frequency distribution of Fe tablet consumption among pregnant women was 37 people (66.1%) out of 56 pregnant women in the third trimester.

1. The distribution of frequency of consumption of Fe tablets among pregnant women based on maternal age, the largest was 21-34 years old, with 49 people (87.5%).

2. The distribution of frequency of consumption of Fe tablets among pregnant women based on education, the largest was secondary education (SMA, MA, SMK) as many as 22 people (39.3%).
3. The distribution of frequency of consumption of Fe tablets among pregnant women based on their occupation was the largest among working mothers, 21 people (37.5%).
4. Distribution of frequency of consumption of Fe tablets among pregnant women based on frequency of ANC visits with the largest frequency of ANC visits > 6x as many as 24 people (42.9%).
5. The distribution of frequency of consumption of Fe tablets in pregnant women based on gravida was greatest among multiparous mothers as many as 20 people (35.7%).
6. Based on statistical tests, it was found that there was no significant relationship between age and consumption of Fe tablets in pregnant women p value = $0.050 > \alpha = 0.05$
7. Based on statistical tests, it was found that there was no significant relationship between education and consumption of Fe tablets in pregnant women p value = $0.982 > \alpha = 0.05$.
8. Based on statistical tests, it was found that there was no significant relationship between work and consumption of Fe tablets in pregnant women where the p value = $0.158 > \alpha = 0.05$.
9. Based on statistical tests, it was found that there was a significant relationship between the frequency of ANC visits and the consumption of Fe tablets in pregnant women where the p value = $0.046 < \alpha = 0.05$.
10. Based on statistical tests, it was found that there was no significant relationship between gravida and consumption of Fe tablets in pregnant women where the p value = $0.301 > \alpha = 0.05$.

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