



## The Effect of Health Education on Obedience of Pregnant Women in Taking Fe Tablets in the Class of Pregnant Women

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### ABSTRACT

Fe tablet that consumed during pregnancy could help in requirements iron supplement for pregnant women needed. Deficiency of iron supplement for pregnant women could lead various of disorder toward baby and pregnant itself. The aim of research to obtain The Effect of Health Education on Obedience of Pregnant Women in Taking Fe Tablets in the Class of Pregnant Women in Tinigi Village, Galang Sub-district, Tolitoli Regency. This is quantitative research with pre experiment method and used one group pretest posttest design. Total of population is 32 respondents and sampling only 10 respondents that taken by purposive sampling technique. Data analysed by Paired sampel t test with health education as an independent variable and obedience of pregnant women in consumed of Fe tablet as a dependent variable. The result of research in pretest toward 10 respondents found about 80% have low obedience and 20% have moderate obedience, and in posttest found that about 40% have high obedience, 40% have moderate obedience and 20% have low obedience. The result of bivariate analyses with paired sampel t test found p value = 0,000 < 0,05. So, it concluded that have The Effect of Health Education on Obedience of Pregnant Women in Taking Fe Tablets in the Class of Pregnant Women in Tinigi Village, Galang Sub-district, Tolitoli Regency. It expected that health staffs should provide the continuity of health education toward pregnant women regarding the importance of Fe tablet consumed during pregnancy.

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### INTRODUCTION

Pregnancy is one of the important indicators in the target of health services that require special attention related to the fulfillment of nutrition in the mother and the fetus she is carrying. Nutrition is one of the factors that affect the quality of human resources, iron deficiency can cause physical growth disorders of the fetus or problems in pregnancy. Every couple must expect a healthy baby, and a healthy baby certainly comes from a healthy mother too. maternal health during pregnancy cannot be separated from what the mother consumes during pregnancy. There are 5 minimum standards of pregnancy care or commonly referred to as 5T, namely weighing body weight, measuring blood pressure, measuring fundus uteri height, Tetanus Toxoid immunization, and giving iron tablets (FE) (Ma' rufah A aini, 2015).

Iron deficiency is the main cause of anemia (Ma' rufah A aini, 2015). Based on data from the World Health Organization (WHO) in 2012 reported that the prevalence of anemia in pregnant women in the world was 41.8% and in Asia was 48.2%. Based on the results of Basic Health Research

(Riskesda), the prevalence of anemia in Indonesia from 2013 to 2018 has increased. The prevalence of pregnancy anemia in Indonesia in 2013 was 37.1% and increased to 48.9% in 2018 (Rosydah, 2019).

In 2017 in Central Sulawesi Province there were 2,621 cases of pregnant women with Hb anemia (<8-11 mg/dl), while there were 217 cases of pregnant women with Hb (<8 mg/dl). In 2018 there was an increase in the number of cases of pregnant women with Hb anemia (<8-11 mg/dl) of 6,665 cases. Pregnant women who experienced anemia with Hb (<8 mg/dl) were 1,279 cases. In addition, according to Riskesdas (Basic Health Research) data in 2018 revealed that the number of pregnant women in Central Sulawesi Province who received Blood Addition Tablets in 2017 was 71.7% and decreased in 2018 to 69.6%.

Administratively, the Tolitoli Regency government consists of 10 sub-districts with details of 98 villages and 6 township with an area of 4,079.77 KM<sup>2</sup>. Data from the Maternal and Child Health program report of the Tolitoli Regency health office in 2020 shows that the number of pregnant women was 5,060 people with the number who

received FE 1 as many as 3,803 people and FE 3 as many as 3,451 people. Galang sub-district is one of 10 sub-districts in Tolitoli Regency with details of 14 villages, of the 14 villages in Galang sub-district the largest number of pregnant women is Tinigi Village and is also the village with the lowest level of Obedience with Fe tablet consumption in pregnant women, the total number of pregnant women in February 2020 was 113 people while only 9 people received Fe tablets or only 14.5%.

Based on the Local Area Monitoring report of the Galang Health Center working area, the number of pregnant women in 2020 was 825 people with the number of mothers who received FE 1 tablets was 766 people and FE 3 was 783 people and based on the Local Area Monitoring report of Tinigi village health post, the number of pregnant women in 2021 was 113 people with the number of mothers who received FE 1 tablets was 9 people and FE 3 was 10 people, with the number of pregnant women entering the 2nd trimester of pregnancy was 45 people.

Previously conducted by Setiawati & Rumintang (2018) regarding the effect of health education on Blood Addition Tablets on the class of pregnant women at Meninting health center, with the results of his research showing that there was an effect on the use of FE tablets before health education and after health education. The low Obedience of pregnant women in consuming FE tablets is a lack of awareness about the importance of FE tablets and the threat of anemia that can arise in pregnant women. pregnant women, fear of having a large baby, fear of bleeding or lack of deeper knowledge about the importance of taking FE tablets during pregnancy.

Related research has also been conducted by Sakdiah (2016) who revealed that there is a significant relationship between the incidence of prolonged partus and iron deficiency anemia for pregnant women. Where anemic mothers have a risk of prolonged partus 1.681 times greater than mothers who are not anemic. In addition to prolonged partus, the impact of iron deficiency in pregnancy is postpartum hemorrhage due to uterine atony, the occurrence of uterine subinvolution causing postpartum hemorrhage, obstacles to fetal growth and development, Low Birth Weight (LBW), infection to death.

Pregnant women's classes are classes for groups of pregnant women with a gestational age of 4 weeks to 36 weeks (before birth), with different material exposure at each meeting. Health education is oriented towards behavior change. The new behavior formed is limited to the target's understanding (cognitive aspect) while changes in attitudes and behavior are indirect goals (Setiawati & Rumintang, 2018).

Pregnant women at the age of 4-6 months of pregnancy may experience some problems in their pregnancy, the statement is justified in research conducted by Puspitasari & Inrianingrum (2020) which states that at the age of 4-6 months or trimester II pregnant women will experience dizziness, fatigue and back pain, dizziness experienced by pregnant women is caused because at the age of pregnancy trimester II the enlarged uterus can press on the blood vessels that cause the mother's head to feel dizzy, dizziness in pregnant women causes the mother to experience rest disorders. In cases of ongoing dizziness, it can have an impact on symptoms of anemia.

Some pregnant women in Galang Sub-district admitted that they were not obedient in consuming Fe tablets because they did not understand the benefits of consuming Fe tablets during pregnancy. The statement is evidenced by the results of the same study as his research conducted by Setiawati & Rumintang (2018) which states that around 45% of pregnant

women are not obedient in consuming Fe tablets because mothers do not understand the benefits of Fe tablet consumption during pregnancy, this statement is due to the lack of information about the importance of iron tablet consumption during pregnancy obtained by pregnant women.

In addition to this, the problem that exists in the field based on the results of preliminary observations of the causes of maternal non-Obedience with Fe tablet consumption is due to the side effects caused after Fe consumption, namely nausea and vomiting. This statement is in accordance with the results of research conducted by Lestari D dwi (2016) which states that one of the factors of non-Obedience of pregnant women in taking Fe tablets is due to the side effects of Fe tablets in the form of nausea and vomiting after taking Fe tablets.

Another factor causing maternal non-Obedience in consuming Fe tablets found during the initial observation was the factor of forgetting to consume because they were busy working. This statement is also in accordance with the results of previous research conducted by Aminin & Dewi (2017), who stated that around 80% of pregnant women did not consume Fe tablets because they forgot to consume it because the mother was busy working or taking care of the household.

After knowing the various causal factors that are the reasons for non-Obedience of mothers in taking Fe tablets, it is recommended that health workers carry out routine control of pregnant women, besides that it is also expected that health workers increase the knowledge of pregnant women about Fe tablets through the provision of health education or health counseling about the importance of Fe tablet consumption during pregnancy.

Based on the above background, the researcher is interested in conducting research on "The Effect of Health Education on Obedience in Taking FE Tablets in Pregnant Women in the Pregnant Women's Class".

## METHOD

This study used quantitative research, with a preexperiment design using a one group pretest posttest design. The population in this study were 32 people in the Pregnant Women's Class of Tinigi Village, Galang Sub-district, Tolitoli Regency from September to November 2021. The sample in this study consisted of 10 people with purposive sampling technique The analysis used was univariate and bivariate analysis using the paired sample T test.

## RESULT AND DISCUSSION

### Respondent Characteristics

Based on table 1 below shows that the characteristics of the most respondents based on age are respondents aged 20-35 years, namely 9 respondents (90%), the most parity is the multigravida category as many as 7 respondents (70%), the last education of the most respondents is Senior high school, namely 7 respondents (70%).

The characteristics of the most respondents based on Job are housewives as many as 7 respondents (70%) and obtained Respondents whose gestational age is the most gestational age of 5 months as many as 7 respondents (70%).

**Table 1.**  
Distribution of characteristics respondents based on age, parity, Last education, Job, and gestational age in the class of pregnant women

Age	f	%
< 20 Years	1	10
20-35 Years	9	90
Total	10	100
parity	f	%
Primigravida	3	30
Multigravida	7	70
Total	10	100
Last education	f	%
Junior high school	2	20
Senior high school	7	70
College	1	10
Total	10	100
Job	f	%
Housewife	7	70
Civil Servant	1	10
Self-employment	2	20
Total	10	100
Gestational Age	f	%
5 month	7	70
6 month	3	30
Total	10	100

Source: Primary Data 2021

**Table 3.**  
Effect of health education on the Obedience of pregnant women in taking Fe tablets in the class of pregnant women

Obedience Level	Pre-test			Post-test			p
	Mean	f	%	Mean	f	%	
good	3.8	1	5	6.7	16	80	0,000
enough		17	80		4	10	
less		2	10		0	0	
Total		20	100		20	100	

Source: Primary Data 2021

Based on table 3, the statistical test results with the paired sample t test obtained the result of p value = 0.000. H0 is rejected and Ha is accepted, which means that there is an effect of Health Education Health Education on the Obedience of pregnant women in taking Fe tablets in the class of pregnant women in Tinigi Village, Galang District, Tolitoli Regency.

## DISCUSSION

### The level of Obedience of pregnant women in taking Fe tablets before health education in the class of pregnant women in Tinigi Village, Galang Sub-district, Tolitoli Regency

The results of measuring Obedience carried out by researchers on 10 respondents using the MMAS-8 questionnaire research instrument before health education was carried out, showed that the most respondents were respondents with a low Obedience category, namely 80% of respondents and 20% with a moderate Obedience category. The mean value before treatment was 3.8000 and the median was 3.0000.

## Univariate Analysis

Based on table 2 below shows that of the 10 respondents, before being given health education, most respondents had a low level of Obedience totaling 8 people (80%) and after being given health education, the number of respondents who had a high level of Obedience became 4 respondents (40%).

**Table 2.**  
Obedience of pregnant women in consuming Fe tablets before and after being given health education in the class of pregnant women

Obedience level Before	f	%
High Obedience	0	0
Medium Obedience	2	20
Low Obedience	8	80
Total	10	100
Obedience Level After	f	%
High Obedience	4	40
Medium Obedience	4	40
Low Obedience	2	20
Total	10	100

Source: Primary Data 2021

According to the researcher's assumption that the average respondent or as many as 80% who were in low Obedience answered not as expected, it was proven through the answers given by respondents on the measuring instrument used. The number of respondents who answered that they did not bring medicine when traveling, forgot to take medicine, and stopped taking medicine if there were no complaints.

This was because most of the pregnant women were pregnant women who had been pregnant before and felt fine during each pregnancy. The experience of previous pregnancies that were fine caused pregnant women to feel that they did not need to take fe tablets regularly.

According to Notoadmodjo (2012), each person's experience of an object can vary because experience has a subjective nature, which affects the contents of his memory. Whatever enters the senses and is noticed will be stored in the memory and will be used as a reference to respond to new things.

In line with research conducted by Premeta (2016), there is a significant relationship between parity and Fe tablet consumption where mothers who have given birth three times or more are more likely to rarely pay attention to their pregnancy compared to mothers who give birth for the first time. This is also in line with research conducted by Ariesta & Muthi (2017), showing there is a significant relationship between parity and adherence to taking Fe tablets at the

kalanganyar health center, where mothers with multigravida have a 4 times higher risk of not being obedient to taking blood supplement tablets, compared to primigravida.

The researcher assumed that of the 10 respondents, 20% were in moderate Obedience because the respondents had taken Fe tablets but not routinely because the respondents often forgot to take Fe tablets when traveling outside the house which was also influenced by a lack of family support so that patients did not routinely undergo their therapeutic regimen or were not routine in taking Fe tablets during pregnancy.

According to Notoadmodjo (2012), people who received social support from family, friends or caregivers to assist with treatment regimens had better adherence to treatment. Unstable living environments, limited access to health care, lack of financial resources, cost of treatment and burdensome work schedules have been associated with decreased adherence rates.

Based on research conducted by Premeta (2016) in the study, it was found that out of 75 TB patients, 65 of them tended to be Obedient in taking drugs because they received motivation in the form of support from the patient's family. The research is also in line with This study is also in line with research conducted by previous studies that there is a significant relationship between family support and adherence to taking medication in patients with Pulmonary TB at Arifin Achmad General Hospital.

Pretest on pregnant women before being given treatment in the form of health education shows that most pregnant women are in low Obedience, the factors that cause this include forgetting, feeling fine if they don't take Fe tablets, and also lack of family support. If left unchecked, this can become a problem that can threaten the health of the mother and fetus. Providing continuous and comprehensive information by health workers about the importance of consuming Fe tablets can be done as one of the efforts made to increase the knowledge of pregnant women so as to increase the Obedience of pregnant women in consuming Fe tablets.

### **The level of Obedience of pregnant women in taking Fe tablets after being given health education in the class of pregnant women in Tinigi Village, Galang Sub-district, Tolitoli Regency**

Based on the results of research conducted on 10 respondents with the aim of seeing Obedience with Fe tablet consumption after being given health education with a pretest-posttest interval of 30 days, the results showed that 40% were in the high Obedience category, 40% were in the moderate Obedience category and 20% were in the low Obedience category. 30 days, the results showed that 40% were in the high Obedience category, 40% were in the moderate Obedience category and 20% were in the low Obedience category. From this, it shows an increase in the average level of Obedience of pregnant women after being given treatment, where the mean value is 6.7000 and the median is 7.0000.

Researchers assume that there is an increase in 80% of respondents from a total of 10 respondents who are divided into 40% with high Obedience and 40% with moderate Obedience, the increase is based on the results of data processing which shows that there is an increase in the level of Obedience of pregnant women after being given treatment, which means that health education has a significant effect on changes in the Obedience of pregnant women, this happens because the information conveyed is information that they have always needed, this information makes pregnant women

realize the importance of fe tablet consumption and the emergence of pregnant women's concern for the health of the baby and themselves if they do not consume fe. if they do not consume fe. The information causes an increase in individual knowledge so that it has an influence on changes in something that is done, where the more information received, the more knowledge they have. This is also evidenced by the significant increase in each point in the measuring instrument distributed after the treatment.

Researchers assume that there is an increase in 80% of respondents from a total of 10 respondents who are divided into 40% with high Obedience and 40% with moderate Obedience, the increase is based on the results of data processing which shows that there is an increase in the level of Obedience of pregnant women after being given treatment, which means that health education has a significant effect on changes in the Obedience of pregnant women.

According to Rodyah (2016), health education is a process of delivering health information to communities, groups and individuals. It is expected that the community, groups and individuals gain knowledge about good health after being given health information so that it can affect behavior. That is, through education it is expected that there will be a positive change in attitude in accordance with what is known and then a change in target behavior.

Based on research conducted by Linggardini & heppy dwi (2016), the p value = 0.0001 ( $p < 0.05$ ) can be concluded that there is a significant difference in knowledge between before and after health education is given to pregnant women. These results are also in accordance with previous research conducted by Indrawati (2016) which states that there are differences in respondents' knowledge about preeclampsia before and after counseling in the Kedungmundu Health Center work area, Semarang. These results are also reinforced by Spratling's (2015) research that health education about cardiovascular disease can increase the knowledge and awareness of mothers who have a history of preeclampsia so that pregnant women can know the risk of cardiovascular disease if they have a history of preeclampsia.

There was an increase in high Obedience of 40% and moderate Obedience of 40% while 20% did not experience an increase or remained at low Obedience. 20% of respondents who did not experience an increase occurred due to feelings of nausea or vomiting felt when taking Fe tablets, these results were obtained through direct statements from respondents who felt uncomfortable with Fe consumption. The researcher assumed that the 20% who did not experience an increase in Obedience or remained at low Obedience were caused by side effects that arose during the use of Fe tablets. The side effects of using Fe tablets can be in the form of feelings of nausea and vomiting after consuming Fe tablets. This side effect of using Fe causes mothers to remain not regularly taking Fe tablets so that there is no change in the level of adherence to taking Fe after being given the treatment.

According to Almatsier (2015) taking blood supplement tablets can cause side effects such as constipation, diarrhea, black stools, dizziness, nausea and vomiting. These side effects are normal and not a dangerous thing. Based on the research journal conducted by Setiawati & Rumintang (2018) with the results that as many as 5 people (16.7%) of the 30 samples of pregnant women were in low Obedience because pregnant women experienced nausea due to the taste and smell of tablets which was a side effect of using Fe tablets. This is in line with research conducted by Hidayah & Anasari (2017) with the result that almost half of pregnant women (49.1%) were not obedient with taking Fe tablets influenced by uncomfortable side effects felt by mothers when taking Fe



tablets, such as nausea, vomiting and heartburn and also constipation.

All respondents in this study had never received health counseling about Fe tablets before. The delivery of information in this study was carried out by health workers who are experts in their fields in accordance with the direction of the head of the Galang Health Center, so that the delivery could be easily understood and accepted by respondents. Related health workers can conduct health counseling to pregnant women about Fe tablets and also about matters related to pregnancy. Relevant health workers are expected to conduct continuous monthly counseling so that pregnant women can better understand and not easily forget what can harm mothers and babies.

### **Effect of Health Education on the Obedience of pregnant women in taking Fe tablets in the class of pregnant women in Tinigi Village, Galang Sub-district, Tolitoli Regency**

There was a change in the level of Obedience with Fe tablet consumption before treatment (pretest) from a total sample of 10 people, 20% of whom were at moderate Obedience and 80% were at the low Obedience level. There is a level of difference in Obedience before treatment and after treatment with an increase in the level of Obedience after treatment (posttest), namely a high level of Obedience of 40%, a moderate level of Obedience to 40% and low Obedience to 20%. The results of statistical tests using the paired sample t test obtained a p value = 0.000 ( $p < 0.05$ ), which means that there is an effect of health education on the Obedience of pregnant women in taking Fe tablets in the class of pregnant women in Tinigi Village, Galang District, Tolitoli Regency.

Based on bivariate analysis, researchers assume that the level of education greatly influences the level of knowledge and the process of receiving information. This assumption is evidenced by the fact that most respondents have upper secondary education, which makes it easier for respondents to receive and implement the information conveyed.

Based on Padila (2015), it is revealed that the level of education greatly influences how a person acts and looks for causes and solutions in his life. According to Edrin et al, (2017) the level of education is a factor that underlies a person in making decisions. This is also in accordance with Ariesta & Muthi's (2017) research that there is a relationship between maternal education and adherence to taking blood tablets where mothers with low education have a 5 times higher risk of not being obedient in taking blood tablets. The research journal by Aminin & Dewi (2017) found a relationship between education and Obedience with taking Fe tablets for pregnant women. In the higher education group, almost half (46.3%) took Fe tablets obediently.

The level of education greatly influences how a person acts and looks for causes and solutions in his life, support from the closest person can increase motivation strong enough to consume Fe tablets. Support from family and health workers can motivate pregnant women to consume Fe tablets. Family support, in this case the husband, to remind his wife to regularly consume Fe tablets is a motivation and enthusiasm for the wife in maintaining the health of herself and her fetus.

The method of health education provided in this study was the lecture or counseling method with media in the form of leaflets, health education was given at the first meeting or after filling out the questionnaire sheet with a time of about 45 minutes. This was influenced by the emergence of awareness of the importance of Fe tablet consumption during pregnancy obtained through the provision of health education. The results of this study are in line with research

by Sulastijah (2015) which states that Obedience in the pregnant women's class group is better, this is due to the knowledge factor of respondents in the pregnant women's class which increases after being given information.

These results are in line with research conducted by<sup>3</sup> with the results that ( $p = 0.000$ ,  $p < 0.05$ ) which means that there is an effect of health education about blood supplement tablets in pregnant women on maternal Obedience in taking blood supplement tablets at UPT BLUD Puskesmas Meninting. this research is also reinforced by research conducted by<sup>6</sup> that there is an effect of health education and SMS reminders on the Obedience of pregnant women in taking iron tablets in the intervention group in pretest and posttest with a p value = 0.014 ( $p < 0.05$ ).

### **LIMITATIONS OF THE STUDY**

This study discusses the influence of health education on the Obedience of pregnant women in consuming Fe tablets but does not use Fe tablet interventions to respondents.

### **CONCLUSION AND RECOMMENDATION**

Based on the results of research on the effect of health education on the Obedience of pregnant women in consuming Fe table in the class of pregnant women in Tinigi Village, Galang District, Tolitoli Regency, the researchers concluded that: The level of Obedience of pregnant women in consuming Fe tablets before being given treatment (pretest) is on average with a low level of Obedience but after being given treatment (posttest) is on average an increase in Obedience with a high level of Obedience and moderate Obedience. This means that health education affects pregnant women's Obedience in taking Fe tablets in pregnant women's classes in Tinigi Village, Galang District, Tolitoli Regency. It is recommended that health workers should strive to provide continuous health counseling to pregnant women about the importance of consuming Fe tablets during pregnancy, this is also an effort to assist the government in achieving the target of Fe tablet consumption for pregnant women for the health of the mother and the unborn child.

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### **Conflict of Interest statement**

The authors declare that they have no involvement with any external parties and this paper is purely from the sources listed in the bibliography and does not contain plagiarism from any journal article. All sources of writing have been listed in the bibliography

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