International Journal of Health, Economics, and Social Sciences (IJHESS)
Vol. 8, No. 2, April 2026, pp. 1156~1168
DOI: 10.56338/ijhess.v8i2.10539
Website: https://jurnal.unismuhpalu.ac.id/index.php/IJHESS

The Effect of Health Education Using a Flip Chart on Compliance with Fe Tablet Consumption in Pregnant Women in the Working Area of the South City Health Center

Sulmina[1]*, Ridha Hafid[2], Siti Hajar Salawali[3]
[1,2,3]Program Studi Ilmu Keperawatan, Fakultas Olahraga Dan Kesehatan, Universitas Negeri Gorontalo

***Corresponding Author:** E-mail: Sulmina@gmail.com

Article Info

Article history:

Received 16 Dec, 2025
Revised 19 Jan, 2026
Accepted 04 Mar, 2026

Keywords:

Health education, Flip Chart, Compliance

ABSTRACT

Compliance of pregnant women in taking Fe tablets is an important effort in preventing anemia during pregnancy, but the level of compliance is still relatively low due to the lack of understanding of pregnant women regarding the benefits and proper ways to consume Fe tablets. Health education using flip chart media is one of the methods that can increase understanding and encourage changes in compliance behavior. This study aims to determine the effect of health education using flip sheets on compliance with Fe tablet consumption in pregnant women in the working area of the South City Health Center. The results of the Wilcoxon test obtained a p value = 0.000 ($p < 0.05$), which shows a significant influence of health education using flip sheets on compliance with Fe tablet consumption in pregnant women. It was concluded that health education using flip sheets was effective in increasing compliance with Fe tablet consumption. It is recommended that the South City Health Center optimize the use of flip sheet media in antenatal care services.

INTRODUCTION

Anemia is one of the global health problems that still occurs in pregnant women, especially in developing countries which is characterized by hemoglobin levels below 11 g/dL which are most often caused by iron deficiency (Senjaya et al., 2022). This condition can interfere with maternal and fetal health and increase the risk of pregnancy complications, premature birth, and maternal and infant death (Asmin et al., 2021).

Globally, the prevalence of anemia in pregnant women is still difficult to suppress to achieve the target of reducing by 50% by 2030. By 2024, the prevalence rate of anemia among pregnant women in the world will be recorded at 41%, even higher in developing countries at 53%, while in developed countries it will reach 49%. This condition shows that the prevention efforts that have been carried out have not been fully successful despite the continuous improvement of health interventions. This indicates that cases of anemia in pregnant women are getting more serious and require more intensive global attention (Safitri, et al., 2025).

Based on the results of Riskesdas in 2018, the prevalence of anemia in pregnant women in Indonesia reached 48.9%, which according to the WHO classification is included in the category of severe public health problems because it exceeds the threshold of ≥ 40%. The results of the 2023 Indonesian Health Survey (SKI) show a decrease in prevalence to 27.7%, which although it has decreased quite significantly, is still in the category of moderate public health problems with a range of 20–39.9%. This pattern shows that cases of anemia in pregnant women are still a serious challenge at the national level, where the prevention efforts that have been carried out have not been fully effective in reducing the incidence rate

The Gorontalo Provincial Health Office (2024) recorded a prevalence of anemia in pregnant women of 22.9%, which shows that this region's achievement is almost reaching the national target of the 2020-2024 RPJMN of 22%, but it is still slightly above the expected threshold. The highest cases were recorded in Kota

Selatan District with 33 cases of anemia in pregnant women, especially in the second trimester, followed by Kota Timur District (21 cases) and Dumbo Raya District (18 cases). This condition shows that despite improvements compared to previous years, anemia in pregnant women is still a significant public health problem in Gorontalo Province. Therefore, it is necessary to strengthen nutrition education programs and increase compliance with the consumption of Blood Supplement Tablets (TTD) as a strategic step to reduce the prevalence of anemia in a sustainable manner.

Anemia in pregnant women is one of the public health problems that is still a serious challenge, both at the global, national, and regional levels. This condition is caused by various factors, including low iron intake, chronic blood loss, infectious diseases, and low adherence in taking iron supplements or Fe Tablets (Ersila, 2024). The impact of anemia on pregnancy is very dangerous, such as an increased risk of premature birth, low birth weight, bleeding during childbirth, and even maternal and infant death. Therefore, the treatment of anemia is a priority in maternal health programs (Sitepu, et al., 2021).

The Indonesian government has established efforts to prevent anemia through the Maternal and Child Health Program (KIA), which is the administration of at least 90 Fe tablets during pregnancy. This intervention is expected to be able to meet the increased iron requirement during pregnancy. However, the fact is that the level of compliance of pregnant women in consuming Fe Tablets is still low, which is the main cause of the high prevalence of anemia (Rustiawan & Pratiwi, 2022). Several studies have stated that low adherence is caused by a lack of knowledge, misperception of side effects such as nausea and constipation, and the mistaken belief that Fe Tablets cause large babies and difficult labors (Hamranani et al., 2020).

According to *the Health Belief Model* theory, low perception of the risk and seriousness of the disease is the main factor in non-compliance. When pregnant women do not understand the dangers of anemia, they are not motivated to take Fe Tablets regularly (Zakiyyah et al., 2025). In addition, *compliance theory* emphasizes that obedient behavior is influenced by knowledge, attitudes, and environmental support. Thus, increasing knowledge through proper health education is the key to the success of anemia prevention programs (Nurbaya et al., 2022).

One of the effective methods in health education is the use of *flip chart media. Flip charts* are visual aids in the form of flip sheets containing images and educational messages that are systematically compiled so that they are easy to understand by the public. This media has been proven to increase interest in learning and help participants understand information better than ordinary lecture methods. Based on visual learning theory, messages accompanied by pictures will be easier to remember and understand than mere verbal information (Transita & Suciptaningsih, 2024).

Research supports the effectiveness of this media, for example the research of Handayani (2023) which found that education using *flip charts* increased pregnant women's compliance in consuming Fe Tablets by up to 78%, The research of Baruroh et al. (2022) reported a significant increase in the knowledge and behavior scores of pregnant women towards anemia after being educated using *flip* charts. In addition, this method is in line with the principles *of adult learning* where adults more easily receive practical and contextual information (Nelish, 2022).

The advantage of *flip charts* over other media is that they are portable, interactive, and easy to use, so they are suitable for application in various health facilities, including in areas with limited facilities. Compared to one-way lectures or *leaflets* , *flip charts* encourage two-way interaction between health workers and pregnant women. This media is also effective in reaching people with low literacy levels because it uses simple sentences and communicative images (Azzahra & Darmiyanti, 2024).

However, the reality is that not all health centers make maximum use *of flip chart* media. Many health workers have not received training on the use of this media, while counseling activities are still dominated by conventional verbal methods. This condition can be seen from initial observations at the South City Health Center, where of the 112 pregnant women who received the Fe Tablet, only 35 people (31.3%) took the tablets regularly during the second and third trimester. Most mothers mentioned that they did not understand the importance of the Fe Tablet and had never been educated using visual media such as *flip charts.*

RESEARCH METHODS

This research is a quantitative research with a pre-experimental design with a one group pretest-posttest design. The research was carried out in November 2025 - January 2026. The population of all pregnant women receiving Fe tablets was 112 people, with a sample of 20 respondents selected using accidental sampling techniques.

Data Analysis

Univariate analysis

Univariate analysis aims to explain or describe the characteristics of each research variable in the form of percentage distribution. Univariate analysis in this study will be carried out using a frequency distribution table consisting of age, education, occupation, and compliance.

Bivariate analysis

The bivariate analysis in this study will initially use **a parametric test**, namely **a *paired t-test***, to determine the difference in the level of compliance with Fe tablet consumption before and after being given health education using flip *charts*. Paired t-tests are chosen if the data tested are normally distributed and are dependent samples. Before performing the parametric test, a data normality test will be carried out using *the Shapiro-Wilk* or *Kolmogorov-Smirnov test.*

However, if the data does not meet the assumption of normality (abnormal distribution), then the analysis using parametric tests is incorrect. Alternatively, a **non-parametric *Wilcoxon Signed-Rank Test will be used***, which is suitable for paired data with abnormal distributions. This test aims to see the difference in the level of compliance with Fe tablet consumption before and after health education.

The results of the analysis will be seen based on the significance value (*p-value*), where if the *p-value* < 0.05, it can be concluded that there is a statistically significant difference between before and after the intervention, which means that the health education provided has an effect on increasing the adherence of pregnant women in consuming Fe tablets.

RESULTS

Respondent Characteristics

Table 1 Distribution of Respondents by Age

No.	Age	Quantity (N)	Present (%)
1	16 years old (early teens)	1	4,2
2	25 years old (late teens)	10	41,7
3	35 years old (early adult)	12	50,0
4	45 years old (late adult)	1	4,2
Total		**24**	**100**

Source: Primary Data, 2025

Based on Table 1, it is known that most of the respondents (50.0%) are in the age category of 26-35 years, namely 12 respondents. Meanwhile, a small number of respondents (4.2%) were in the age category of 12-16 years and 36-45 years, each as many as 1 respondent.

Characteristics of respondents based on gestational age

Table 2 Distribution of Respondents by Gestational Age

No.	Gestational Age	Quantity (N)	Present (%)
1	ond trimester (14-27 weeks)	16	66,7
2	rd trimester (28-40 weeks)	8	33,3
Total		**24**	**100**

Source: Primary Data, 2025

Based on Table 2, it is known that most of the respondents (66.7%) are in the second trimester of pregnancy (14-27 weeks), which is as many as 16 respondents. The small number (33.3%) were in the third trimester gestational age category (28-40 weeks), namely 8 respondents.

Compliance with Fe Tablet Consumption in Pregnant Women in the Working Area of the South City Health Center Before Being Given Health Education Using *a Flip Chart*

Table 3 Distribution of Respondents Based on Compliance Before Education

No.	Obedience Before Education	Quantity (N)	Present (%)
1	edient	5	20,8
2	n-compliant	19	79,2
Total		**24**	**100**

Source: Primary Data, 2025

Based on Table 3, it is known that most respondents (79.2%) were not compliant in consuming Fe tablets before being given health education using flip charts, namely 19 respondents. The small number of respondents (20.8%) have complied in consuming Fe tablets, namely 5 respondents.

Compliance with Fe Tablet Consumption in Pregnant Women in the Working Area of the South City Health Center after being given health education using *flip chart*

Table 4. Distribution of Respondents Based on Compliance After Education

No.	Compliance After Education	Quantity (N)	Present (%)
1	edient	22	91,7
2	n-compliant	2	8,3
Total		**24**	**100**

Source: Primary Data, 2025

Based on Table 4, it is known that most of the respondents (91.7%) are compliant in consuming Fe tablets after being given health education using flip charts, namely 22 respondents. As for a small number of respondents (8.3%) who do not comply in consuming Fe tablets, namely 2 respondents.

The Effect of Health Education Using *Flip Charts* on Compliance with Fe Tablet Consumption in Pregnant Women in the Working Area of the South City Health Center

Table 5 Effect of Flip Sheet Education on Fe Tablet Consumption Compliance

Yes	Groups	Statistical test results				P value
		N	Red	Min-Max	Std Deviation	
1	*Pretest* pregnant women before flip chart education	24	3,46	2-5	1,103	0,000
2	Postest pregnant women before flip chart education	24	4,92	4-5	0,282	
Differences		1,46				

Source: Primary Data, 2025

Based on Table 5, it is known that compliance with Fe tablet consumption in pregnant women has increased after being given health education using flip *charts*. In the pre-intervention measurement, the average compliance value was 3.46 with a standard deviation of 1.103, a minimum value of 2 and a maximum of 5, while in the *post-intervention measurement (posttest*) the average value increased to 4.92 with a standard deviation of 0.282, a minimum value of 4 and a maximum of 5. The results of *Shapiro Wilk*'s normality test showed that the data was not normally distributed ($p < 0.05$), so the *Wilcoxon Signed-Rank Test was used*. The results of *the Wilcoxon* test obtained a p value = 0.000 ($p < 0.05$) which shows that there is a significant influence of health education using flip sheets on compliance with Fe tablet consumption in pregnant women in the work area of the South City Health Center.

DISCUSSION

Compliance with Fe Tablet Consumption in Pregnant Women in the Working Area of the South City Health Center before being given health education using *flip charts*.

Based on the results of the research conducted, it is known that most of the respondents (79.2%) did not comply in consuming Fe tablets before being given health education using flip charts, namely 19 respondents. The small number of respondents (20.8%) have complied in consuming Fe tablets, namely 5 respondents.

The results of the study were found that most of the respondents were not compliant in consuming Fe tablets before being given health education using flip *charts*, namely as many as 19 respondents showed that before being given health education using flip *charts*, the level of compliance with Fe tablet consumption in pregnant women was still relatively low.

In line with previous research conducted by Wigati, Nisak & Azizah (2021) which showed that the level of non-compliance with Fe tablet consumption is still more dominant than compliance where more than half of respondents (57.6%) do not comply in consuming Fe tablets. Supported by research by Hernawati (2022), which states that the majority of pregnant women's compliance levels in the consumption of iron tablets are non-compliant (57.2%).

Based on **the operational definition**, non-compliance is a condition when pregnant women do not take Fe tablets as recommended which is characterized by at least one inconsistency in the consumption of Fe tablets. The results of the study showed that respondents tended to skip the consumption of blood-boosting tablets due to busy activities such as taking care of the household, taking care of children, and some

respondents who still had work activities outside the home.

According to Fauzia (2025), the busyness factor has an impact on the consistency of Fe tablet consumption because pregnant women must divide their time and energy for various responsibilities so that personal health activities can be a lower priority. Alwin (2025) also stated that a busy daily routine and multitasking can reduce adherence to medication or supplementation, including the consumption of Fe tablets because pregnant women tend to forget or delay taking tablets due to focusing on homework and other work.

This is in line with the findings of previous research conducted by Wati (2024) showing that pregnant women's adherence to iron supplement consumption is still low and is influenced by various factors including lack of awareness as well as practical reasons such as being busy or not having time to take tablets every day which causes many pregnant women to not reach the recommended amount of consumption ≥90 tablets during pregnancy. In addition, research conducted by Novianti (2024) shows that the level of compliance with Fe tablet consumption is low due to daily busyness factors can be one of the important obstacles in compliance with Fe tablet consumption in pregnant women.

The results of the study showed that respondents who did not comply in consuming Fe tablets were exhausted because they felt nauseous when taking them. This feeling of nausea makes respondents stop consumption before the tablets run out, so compliance with the use of Fe tablets is not met.

Physiologically, the nausea experienced by pregnant women after consuming iron tablets is caused by several mechanisms. Fe tablets can irritate the gastric mucosa, trigger excessive stomach acid production and slow down gastric emptying causing discomfort and nausea. In addition, during pregnancy the hormone progesterone increases which leads to relaxation of the smooth muscles of the digestive tract and slows down bowel movements. These hormonal changes make the stomach more sensitive to stimuli from iron, so the effects of nausea and vomiting are easier to appear than women who are not pregnant. Additional factors in the form of strong tablet smell or taste can also trigger a more intense nausea reflex in pregnant women (Putri, 2025).

Research conducted by Maryanto (2021) found that most pregnant women who did not comply with Fe tablets reported symptoms of nausea and vomiting after taking them and these side effects were negatively related to compliance with Fe tablet consumption. In line with the results of a study conducted by Lujuk, Sinaga & Erwina (2023) showed that after taking blood-boosting tablets in pregnant women, respondents experienced nausea, dizziness, and digestive discomfort that could reduce their desire to continue consuming iron supplements.

The results showed that respondents who did not comply with the Fe tablets took Fe tablets because they did not take Fe tablets for the recommended period until the tablets ran out, did not comply with the dosage recommended by health workers, and did not take Fe tablets at the same time every day, for example at night after meals.

Individual non-compliance in consuming Fe tablets to the point of exhaustion can reduce the effectiveness of supplementation. Fe tablets must be consumed consistently in the recommended amount because if they are not consumed, the intake of iron received by the body becomes insufficient to prevent or overcome anemia. In addition, not adhering to the dosage recommended by health workers can cause iron levels in the blood to be unstable so that the benefits of supplementation are not maximized (Ludin, Wulandari & Meiranny, 2023).

Non-compliance in taking Fe tablets at different times each day, for example at night after meals also affects iron absorption. Iron is absorbed more optimally when consumed at a consistent time, ideally in the morning when the stomach is relatively empty or as recommended by health professionals. Changes in the time of consumption can slow down absorption and reduce the effectiveness of Fe tablets, so that the supplementation program does not run with the expected results (Fahmie, 2024).

According to *the Health Belief Model* (HBM) theory, a person's health behavior is influenced by an individual's perception of the vulnerability and seriousness of a health problem, the benefits of action, and perceived *barriers*. In this context, busyness, inconsistency in the time of consumption, and non-compliance with the dosage and duration of consumption of Fe tablets reflect the presence of obstacles felt by pregnant women that reduce compliance even though Fe tablets have been provided and recommended by health workers (Laili & Tanoto, 2021).

In addition, based on *adherence theory*, adherence to medication or supplementation is influenced by understanding, motivation, and support from the environment and health workers. Non-compliance in taking Fe tablets shows that some pregnant women do not fully understand the importance of regular and continuous consumption of Fe tablets to prevent anemia during pregnancy. Therefore, health education interventions using easy-to-understand media play a cue *to action* that can increase understanding and encourage changes in the behavior of pregnant women towards compliance with the consumption of Fe tablets as recommended (Putri, 2025).

The results of a study conducted by Akili, Wulansari, and Salawali (2025) show that patients' adherence to therapy is influenced by psychosocial factors, especially the support received and the level of understanding of the benefits of treatment. In her study on chemotherapy adherence in breast cancer patients, it was found that

patients who received adequate support and education tended to have better levels of adherence than patients with low understanding. This reinforces that the provision of clear and easy-to-understand information through health education plays an important role in increasing awareness and motivation of individuals to comply with the therapy undertaken, including in the context of compliance with the consumption of Fe tablets in pregnant women.

Based on the results of the study that has been described, the researcher assumes that the low adherence to Fe tablet consumption in pregnant women before being given health education is influenced by behavioral, perception, and daily habit factors, especially busy activities, lack of consistency in consumption time, and lack of optimal understanding of the dosage and duration of Fe tablet consumption.

Based on the results of the research conducted, it is known that a small number of respondents have complied in consuming Fe tablets before being given health education using flip *charts*, namely 5 respondents (20.8%) with a questionnaire score of 5. These results show that before being given health education using flip *charts*, the level of compliance with Fe tablet consumption in pregnant women is already relatively good.

In line with previous research conducted by Nadiya, et al, (2023) at the Peusangan Health Center, Bireuen Regency, showed that most pregnant women were compliant in consuming Fe tablets, namely 30 people (65%). Supported by research by Mardiah, et al (2022) which stated that most pregnant women were compliant in consuming Fe tablets, namely 29 people (53.7%)

Based on the operational definition, compliance is a condition when pregnant women take Fe tablets in accordance with the recommendations of health workers without any inconsistencies characterized by the consumption of Fe tablets according to the recommended dose, duration, and time and no tablets are missed.

Based on the results of the study, it is known that of the 5 respondents (20.8%) who obediently consumed Fe tablets, all showed consumption behavior in accordance with the recommendations of health workers, namely taking blood-boosting tablets regularly without missing even though they have daily activities, taking Fe tablets for the recommended period until the tablets run out, complying with the prescribed dose, and taking Fe tablets at the same time every day. for example at night after eating.

Pregnant women's compliance is reflected in the implementation of Fe tablet consumption which is carried out in an orderly and sustainable manner during pregnancy. Regular consumption patterns without any violation of the stipulated provisions show that pregnant women carry out the recommended consumption of Fe tablets optimally as part of efforts to maintain pregnancy health (Nur, 2025).

Conditions like this show that the practice of consuming Fe tablets has been running according to the purpose of iron supplementation, which is to support the fulfillment of iron needs of pregnant women. Consistent adherence allows the supplementation process to take place effectively so that it can contribute to maintaining iron balance during pregnancy (Tarigan, Sitompul & Zahra, 2021).

In health behavioral theory according to Lawrence Green, health behavior is influenced by predisposition, supportive, and reinforcing factors. Pregnant women's compliance in consuming Fe tablets reflects the readiness of behaviors and habits that have been formed, so that the implementation of Fe tablet consumption can be carried out consistently according to recommendations. This internalized behavior allows pregnant women to consume Fe tablets regularly as part of health care practices during pregnancy (Maulida, Fitrianingtyas & Sari, 2023).

In addition, *the Theory of Planned Behavior* can also be used to explain the adherence to Fe tablet consumption. This theory states that a person's behavior is influenced by intentions formed from attitudes, subjective norms, and perceptions of behavior control. In the context of compliance with Fe tablet consumption, obedient behavior shows that pregnant women have a strong intention to carry out the recommendations for Fe tablet consumption and feel able to implement it consistently in daily life. Thus, the compliance shown by the respondents reflects the existence of good behavioral control of the practice of consuming Fe tablets during pregnancy (Putri, 2025).

Based on the results of the study that has been described, the researcher assumes that the compliance with the consumption of Fe tablets that has been possessed by a small number of pregnant women before being given health education reflects the consumption behavior that has been formed and carried out consistently according to the recommendations of health workers. This adherence shows that the practice of consuming Fe tablets has been in line with the goal of iron supplementation during pregnancy, thus potentially supporting the fulfillment of iron needs and the prevention of anemia in pregnant women.

Compliance with Fe tablet consumption in pregnant women in the work area of the South City Health Center after being given health education using *flip charts*.

Based on the results of the research conducted, it is known that most of the respondents were compliant in consuming Fe tablets after being given health education using flip *charts*, namely 22 respondents (91.7%). The small number of respondents were not compliant in consuming Fe tablets, namely 2 respondents (8.3%).

Based on the results of the research conducted, it is known that most of the respondents were compliant in consuming Fe tablets after being given health education using flip *charts*, namely 22 respondents (91.7%) with a questionnaire score **of 5.** These results illustrate that the health education provided is able to increase the

understanding and consistency of respondents in carrying out the recommendations for Fe tablet consumption in accordance with the stipulated provisions. The results of the study showed an increase in compliance with Fe tablet consumption after being given health education using flip *charts*. Before education, some respondents had a compliance score of less than 5 which indicated that there was still a discrepancy in the consumption of Fe tablets. After the education was provided, the respondent's compliance score increased to 5 which indicates that the respondent had taken Fe tablets in accordance with the recommendations of health professionals without any discrepancies in terms of dosage, duration, and time of consumption. This increase in score shows that health education plays a role in improving and improving Fe tablet consumption behavior in pregnant women.

In line with previous research conducted by Sugihastuti, Sugesti & Yolandia (2022) showed that most pregnant women obediently consumed Fe tablets, namely 66 respondents (91.6%). This result is in line with the research of Inayah, et al, (2024) which showed that most pregnant women obediently consumed Fe tablets, namely 61 respondents (81.3%).

Based on the results of the study, of the 22 pregnant women who obediently consumed Fe tablets after being given health education using flip *charts*, as many as 11 respondents were in the category of early adulthood which is the phase of productive age and tended to be able to receive and apply health information properly. In addition, as many as 13 respondents had a high school education (SMA) level so that it allowed respondents to more easily understand health information conveyed through visual and written media and were better able to apply educational messages to daily Fe tablet consumption behavior.

The dominance of adherence in the early adult age group shows that educational messages conveyed through flip sheets can be optimally received by pregnant women who are at the stage of mature cognitive and psychological development. In this phase, individuals are generally able to process information more systematically and translate it into real actions, so that educational messages are not only understood, but also implemented in Fe tablet consumption behavior consistently (Putri, 2024).

In addition, the background of secondary to upper education plays a role in facilitating the understanding of the educational material presented. Flip-back media that combines short text and illustrations supports a more effective learning process so that pregnant women can capture the essence of the message more quickly and accurately. A good understanding of this educational material is reflected in changes in Fe tablet consumption behavior that is more regular and in accordance with the recommendations of health workers after the intervention is given (Yunita, 2021).

According to adult cognitive development theory, individuals in early adulthood have better abstract, analytical, and reflective thinking abilities, making it easier to understand health information and integrate it into everyday behavior. At this stage, individuals tend to have optimal learning capacity and are able to make health decisions independently. These conditions support the successful delivery of health education, including education on the consumption of Fe tablets, because the information received can be processed effectively and applied consistently (Hestri, et al., 2025).

In addition, multimedia learning theory explains that learning will be more effective when information is conveyed through a combination of text and visuals. *Flip chart media* takes advantage of this principle by presenting health messages in a simple, structured, and visual way, making it easier to understand, especially for individuals with high school education. With a better understanding, respondents tend to be able to remember educational messages and apply them in the behavior of consuming Fe tablets in accordance with the recommendations of health workers (Ningrum, 2025).

Based on the above results, the researcher assumes that the increase in compliance with Fe tablet consumption in pregnant women after being given health education using *flip charts* is influenced by the effectiveness of educational media in accordance with the characteristics of the respondents, especially early adulthood and high school education level. In this group, mature cognitive abilities and ease of receiving visual and written information allow educational messages to be well understood and applied consistently in daily behavior. The use of flip sheets that present information in a simple, structured, and visual manner plays a role in strengthening understanding, increasing awareness, and facilitating an effective learning process, thereby encouraging changes in the behavior of pregnant women towards compliance with Fe tablet consumption in accordance with the recommendations of health workers.

Based on the results of the research conducted, it is known that a small number of respondents are not compliant in consuming Fe tablets, namely 2 respondents (8.3%). This shows that although health education using flip *charts* has been able to increase the compliance of most pregnant women, there are still individuals who experience obstacles in implementing the recommendations for the consumption of Fe tablets.

In line with research conducted by Nadiya, et al (2023) at the Peusangan Health Center, Bireuen Regency found that a small percentage of pregnant women did not comply with consuming Fe tablets, namely 13 respondents (35%). Supported by research conducted by Yunika (2021), it shows that a small percentage of pregnant women do not comply with consuming Fe tablets, namely 25 respondents (44.6%).

Based on the results of the research conducted , it is known that of the 2 respondents (8.3%) who are not compliant. This non-compliance is not only caused by physical factors or consumption time, but also related to

behavioral changes that cannot occur instantly. Some people need time to adjust their daily routine to the tablet consumption schedule, form new habits, and follow the recommended dosage. This condition suggests that continuous monitoring, reminders, and guidance from health workers are important to help respondents get used to it so that adherence to Fe supplementation can be gradually improved.

The process of getting used to taking Fe tablets on a regular basis requires consistency and discipline, and for some people this change in behavior occurs gradually. In the absence of reminders or support from health workers, individuals tend to skip doses or delay the time of consumption so that the effectiveness of supplementation can be compromised. This suggests that ongoing interventions, such as education, regular monitoring, and motivational boosting, are essential to improve adherence in iron supplementation programs (Salsabila, 2023).

In addition , of the 2 respondents (8.3%) who did not comply, all were IRTs. This shows that housewives experience non-compliance due to busy household routines, lack of time management, and the habit of consuming Fe tablets consistently in daily life. In addition, all non-compliant respondents also still drink blood supplement tablets not with water but with tea, coffee, or milk.

The domestic roles and responsibilities that housewives carry out can affect the consistency of health behaviors, including in consuming Fe tablets. Household activities that take place throughout the day cause pregnant women to place personal needs, such as supplement consumption, as a lower priority. This condition shows that compliance is not only influenced by the availability of free time, but also by the individual's ability to form habits and set health priorities in the midst of daily routines (Novianti, 2024).

In addition to routine factors, the way Fe tablets are consumed also plays an important role in the effectiveness of iron supplementation. Consumption of Fe tablets with drinks other than water, such as tea, coffee, or milk, has the potential to inhibit iron absorption due to the presence of certain inhibitory contents. This suggests that even if pregnant women continue to take Fe tablets, a lack of understanding of the proper way to consume them can cause the benefits of Fe tablets to be suboptimal. Therefore, health education needs to emphasize not only consumption compliance, but also on the correct way to consume Fe tablets so that the goal of preventing anemia in pregnant women can be maximally achieved (Maysaropah, Noviyani & Ciptiasrini, 2024).

According to *habit formation theory*, a healthy behavior will be formed and sustained if it is done repeatedly in a consistent context of time and situation. In pregnant women, non-compliance in taking Fe tablets can occur when the behavior has not been internalized as part of the daily routine. A busy domestic routine can interfere with the habit-forming process, so it is easy to miss the consumption of Fe tablets even if individuals have basic knowledge about the importance of iron supplementation during pregnancy (Ludin, Wulandari & Meiranny, 2023).

In addition, social cognitive theory explains that health behavior is influenced by the interaction between individual factors, the environment, and the behavior itself. Lack of examples of appropriate behavior, lack of reinforcement from the surrounding environment, and low *self-efficacy* in applying the correct way to consume Fe tablets can affect the compliance of pregnant women. In this context, a lack of understanding of the proper way to consume Fe tablets, including the selection of the type of companion drink, suggests that the learning environment and experience have not fully supported the formation of effective and sustainable Fe tablet consumption behaviors (Oktavilantika, Suzana & Damhuri, 2023).

Based on the description above, the researcher assumes that non-compliance with Fe tablet consumption that is still found in a small percentage of pregnant women after providing health education using *flip charts* is influenced by behavioral factors, domestic routines, the lack of consistent consumption habits, and lack of understanding of the proper way to consume Fe tablets. The role of housewives with dense domestic activities has the potential to inhibit the formation of health habits, while the consumption of Fe tablets with drinks other than water shows that there are still limitations in the practical understanding of the effectiveness of iron supplementation.

The Effect of Health Education Using *Flip Charts* on Fe Tablet Consumption Compliance in Pregnant Women in the Working Area of the South City Health Center.

Based on the results of a study conducted on pregnant women, it is known that the adherence to Fe tablet consumption in pregnant women has increased after being given health education using flip charts. In the pre-intervention measurement, the average compliance value was 3.46 with a standard deviation of 1.103, a minimum value of 2 and a maximum of 5, while in the *post-intervention measurement (posttest*) the average value increased to 4.92 with a standard deviation of 0.282, a minimum value of 4 and a maximum of 5. The results of *Shapiro Wilk*'s normality test showed that the data was not normally distributed ($p < 0.05$), so the *Wilcoxon Signed-Rank Test was used*. The results of *the Wilcoxon* test obtained a p value = 0.000 ($p < 0.05$) which shows that there is a significant influence of health education using flip sheets on compliance with Fe tablet consumption in pregnant women in the work area of the South City Health Center.

In line with the results of a study conducted by Mursaha & Ryadinency (2025) which stated that there is an effect of education using *flipchart media* on the adherence to the consumption of blood plus tablets to

prevent anemia in pregnant women at the North Wara City Health Center. In line with research conducted by Sembiring (2022), the effect of counseling using flip sheet media on compliance with the consumption of blood supplement tablets in pregnant women at the Titipapan Health Center.

The results of the analysis showed that the provision of health education using flip *chart media* was able to encourage changes in the behavior of pregnant women in a more obedient direction in consuming Fe tablets. This increase in compliance shows that the information conveyed through visual and structured media is easier to understand and remember, so that respondents can apply the recommendations for Fe tablet consumption more consistently in their daily lives. In addition to improving understanding, education with flip sheets also acts as a behavior reinforcement by providing a clear explanation of the importance of the correct dosage, time, and how to consume Fe tablets, thereby supporting the achievement of more optimal health behaviors in pregnant women.

Changes in compliance with Fe tablet consumption in pregnant women occurred gradually along with the series of activities carried out during the study. On the first day, the researcher explained the purpose and benefits of the activity and filled out the initial checksheet, respondents began to realize the importance of consuming Fe tablets and felt directly involved in the process to be undertaken. Education on the second day became an important point of change because the material delivered through *flip charts* helped respondents understand anemia, the benefits of Fe tablets, the correct way to consume, and the role of the family with simple language and easy-to-understand visuals. After that, on the third to sixth days, respondents were given the opportunity to apply the knowledge independently without supervision, so that the habit of taking Fe tablets began to form in their daily routine. On the seventh day, the monitoring and filling out of the final checksheet accompanied by feedback and appreciation made the respondents feel appreciated for the efforts that had been made while strengthening the obedient behavior that had begun to form.

Changes in compliance over a seven-day period can occur because health behaviors can basically begin to form through the repetition of actions in a relatively short period of time, especially when supported by good understanding and strong motivation. In the context of the education provided, it is able to increase the awareness and knowledge of pregnant women so that pregnant women are encouraged to immediately implement the recommendation for the consumption of Fe tablets in their daily lives. Repeated daily consumption of Fe tablets over a seven-day period helps pregnant women establish an initial routine that facilitates the formation of obedient behaviors. A seven-day period is enough to show real and measurable initial behavioral changes, especially when individuals receive clear information, moral support, and feedback on the behaviors that have been carried out (Safitri, 2024).

According to the *theory of planned behavior*, behavioral changes are influenced by individual intentions formed from attitudes towards behavior, subjective norms, and perceptions of self-control. The health education provided is able to form a positive attitude of pregnant women towards the consumption of Fe tablets by explaining the benefits and risks, as well as strengthening subjective norms through the emphasis on the role of health workers and family support. When pregnant women feel that these behaviors are important and receive social support, the intention to obey will increase and can be manifested in real actions even in a relatively short time, such as during a seven-day period (Triharini, et al., 2025).

In addition, based on *the Transtheoretical Model (Stages of Change),* behavioral change occurs through several stages, ranging from awareness to action. Health education plays a role in shifting pregnant women from the stage of being unprepared or hesitant to the stage of action, where individuals begin to actively carry out recommended health behaviors. This seven-day period is the initial phase of the action stage where pregnant women try and apply the consumption of Fe tablets regularly. The success of undergoing this stage shows that changes in compliance can occur in a short time if educational interventions are able to encourage the readiness and commitment of respondents to change (Tage, et al., 2025).

Based on the explanation above, the researcher assumes that the increase in compliance with Fe tablet consumption in pregnant women in the work area of the South City Health Center occurs because health education using *flip charts* is able to convey information clearly, attractively, and easily understandable so as to encourage changes in respondents' attitudes and awareness of the importance of Fe tablet consumption. The delivery of structured material accompanied by direct interaction, discussion, and time for respondents to practice the recommendations independently allows the formation of an initial routine of consuming Fe tablets in daily life. In addition, the monitoring and feedback process at the end of the activity strengthens the motivation of pregnant women to obey so that changes in compliance can be seen clearly within seven days as an initial response to the educational intervention provided.

CONCLUSION

Most of the respondents were not compliant in taking Fe tablets before being given health education using flip-back sheets (*Flip Chart*), which was 19 respondents (79.2%). A small number of respondents have complied in consuming Fe tablets, namely 5 respondents (20.8%)

Most of the respondents complied in taking Fe tablets after being given health education using flip sheets (*Flip Chart*), which was 22 respondents (91.7%). The small number of respondents were not compliant in consuming Fe tablets, namely 2 respondents (8.3%).

Correlation test results *Wilcoxon Signed Rank Test* Obtained Scores *p value* by 0.000 ($p < 0.05$). This shows that There is a significant influence of health education using flip sheets (*Flip Chart*) on compliance with the consumption of Fe tablets in pregnant women in the working area of the South City Health Center

SUGGESTIONS

The South City Health Center is advised to continue to optimize health education using flip-back media (*Flip Chart*) as part of antenatal care services, especially in increasing compliance with Fe tablet consumption in pregnant women. Education should be carried out on an ongoing basis and not only emphasizes the importance of consuming Fe tablets, but also the correct way of consumption and the right time.

Educational institutions are expected to use the results of this research as learning materials and references in the development of health promotion and education materials, especially related to the prevention of anemia in pregnant women.

Researchers are further advised to develop studies with longer intervention and observation periods to assess the long-term sustainability of Fe tablet consumption compliance. In addition, research can add other variables such as family support, level of knowledge, motivation, and sociocultural factors that have the potential to affect pregnant women's compliance.

REFERENCES

Abadi, E & Putri, L. A. R. (2020). Macronutrient consumption in pregnant women with Chronic Energy Deficiency (SEZ) during the Covid-19 pandemic. Manang Health Journal, 6(2).

Aida, M. (2025). Overview of Pregnant Women's Behavior in the Consumption of FE Tablets in the Practice of Independent Midwives BDN Y (Doctoral dissertation, Bhakti Kencana University).

Aisyah, S., & Andriani, A. (2023). The effectiveness of counseling using flip sheet and power point media on increasing the knowledge of adolescent girls about anemia at SMAN 11 Banda Aceh. NASUWAKES: Journal of Scientific Health, 16(2), 102-109.

Akili, N. L., Wulansari, I., & Salawali, S. H. (2025). The Relationship of Family Support and Anxiety with Chemotherapy Adherence in Breast Cancer Patients. Gorontalo Journal of Public Health, 8(1), 1-9.

Asmin, E., Salulinggi, A., Titaley, C. R., & Bension, J. (2021). The relationship between knowledge and compliance of pregnant women consuming blood-boosting tablets with the incidence of anemia in South Leitimur and Ambon Bay Districts. Journal of Community Health Epidemiology, 6(1), 229–236.

Astuti, H. (2022). The Effect of Education Using E-Booklets on Knowledge and Compliance of Taking Iron Tablets in Pregnant Women in Kapanewon Samigaluh (Doctoral Dissertation, Polytechnic of the Ministry of Health, Yogyakarta).

Ayupir, A. (2021). Health Education and Iron (Fe) Tablet Therapy for Hemoglobin in Adolescent Women. HIGEIA Journal Of Public Health Research And Development, 5(3), 441–451.

Azzahra, L., & Darmiyanti, A. (2024). The Role of Educational Psychology in the Learning Process in the Classroom for Diverse Students. Journal of Psychology, 1(4), 23.

Baruroh, D., Komang Suwita, I., & Aroni, H. (2022). Before and after education using flipbooks on knowledge about anemia in pregnant women in the working area of the Jatibening Health Center, Situbondo Regency. Journal of Nutrition, 1(2), 29–35.

Dolo, L. S., Yusuf, A., & Azis, R. (2021). Analysis of factors affecting the adherence to treatment of elderly people with hypertension during the covid-19 pandemic at the Bulili Health Center, Palu City. PREPOTIF: Journal of Public Health, 5(2), 828-842.

Dolorosa, M., Rosida, Nikma Alfi, & Utami, ratih dwilestari praise (2023). The Effect of Health Education Using Audiovisual Media on the Level of Knowledge and Attitude of Parents in Handling Fever Seizures in Children at Posyandu RW 05 Keprabon. Kusuma Husada University Surakarta.

Elmika, R., Simbolon, D., & Yuliantini, E. (2018). Nutrition Education with CAMIL is as Effective as Leaflets in Anemia Prevention Behavior in Pregnant Women. Journal of Health Science and Technology, 6(1), 82-93.

Ernawati, A. (2022). Health promotion media to increase maternal knowledge about stunting. Journal of Research and Development: Information Media for Research, Development and Science and Technology, 18(2), 139–152.

Ersila, W., & ST, S. (2024). The role of cadres in optimizing food safety in pregnant women. Challenges and Problems of Public Health Sciences, 27.

Fahmie, M. A. S. (2024). Overview of Knowledge, Iron Intake and Habits of Consuming Blood Supplement Tablets in Adolescent Girls at SMA Negeri 14 Bandar Lampung in 2024 (Doctoral Dissertation, Polytechnic of the Ministry of Health, Tanjungkarang).
Garpenassy, M., Saudah, N., & Prasastia, C. (2024). Overview of physiological changes in pregnant women in the 1st trimester in the working area of the Puri Health Center, Mojokerto Regency.
Hakimia S, H., Albertus, J., Panjongko, J., & Erna P, Y. (2023). Counseling on Fe Tablet Consumption Using Educational Videos for Young Women at SMPN 17 Semarang. Proceedings of the Public Health Seminar, 1 (October), 252–257.
Hamranani, S. S. T., Permatasari, D., & Murti, S. A. (2020). Factors that affect the adherence to taking Fe tablets in adolescents. Journal of Professional Nursing Research, 2(5474), 1333–1336.
Handayani, R. (2023). The Effect of Nutrition Counseling on Anemia Using Video Media on Knowledge and Compliance of Taking Blood Supplement Tablets in School-Age Adolescents in Batu Ampar District. Palangkaraya Health Polytechnic, 1(1), 1–14.
Hidayah, E. R. (2020). The Effectiveness of Nutrition Counseling through Rotary Wheels and Leaflets on Balanced Nutrition Knowledge and Attitudes in Elementary School Students (Doctoral Dissertation, Polytechnic of the Ministry of Health Yogyakarta).
Inayah, M., Sari, E. P., Rahmawati, E., & Aisyah, S. (2024). Factors related to compliance with consuming Fe tablets in pregnant women at PMB Husniyati, Palembang City. Journal of Indra Husada Health, 12(2), 96-101.
Jayul, A., & Irwanto, E. (2020). The online learning model is an alternative to the physical education learning process in the midst of the Covid-19 pandemic. Journal of Recreational Health Education, 6(2), 190-199.
Ministry of Health of the Republic of Indonesia. (2021). Guidelines for the Prevention and Control of Anemia in Pregnant Women. Jakarta: Ministry of Health of the Republic of Indonesia.
Ministry of Health of the Republic of Indonesia. (2022). Technical Instructions for Giving Blood Supplement Tablets for Pregnant Women. Directorate of Community Nutrition, Directorate General of Public Health. Jakarta: Ministry of Health of the Republic of Indonesia.
Laikingis, E. A. (2025). Study on the Implementation of Specific Nutrition Interventions in Naitae Village, West Fatuleu District in 2023. Antigen: Journal of Public Health and Nutrition Sciences, 3(2), 174-185.
Laili, N., & Tanoto, W. (2021). The public health belief model in the implementation of the Covid-19 vaccine. Scientific Journal of Nursing Health, 17(3).
Ludin, P. F., Wulandari, R. C. L., & Meiranny, A. (2023). Compliance of Pregnant Women in Taking Fe-Tablets: Literature Review. Indonesian Health Promotion Publication Media (MPPKI), 6(10), 1933-1939.
Maulida, L. S. (2020). The Effect of the Use of Viesif Media (Exclusive Breastfeeding Education Video) in Counseling on the Knowledge and Attitudes of Pregnant Women in the Working Area of the Umbulharjo 1 Health Center (Doctoral dissertation, Polytechnic of the Ministry of Health, Yogyakarta).
Maulida, N. I., Fitrianingtyas, R., & Sari, M. P. (2023). The Effect of Education on Knowledge, Attitudes, Consumption Behavior of Blood Supplement Tablets and Hemoglobin Levels of Pregnant Women in the Second Trimester (Doctoral dissertation, dr. SOEBANDI University).
Maysaropah, S., Noviyani, E. P., & Ciptiasrini, U. (2024). Effectiveness of Egg and Fe Tablet Consumption on Increasing Hemoglobin Levels in Adolescent Girls Experiencing Anemia at the Ciputat Health Center in 2023. Quantum Wellness: Journal of Health Sciences, 1(4), 64-70.
Muhammadiah, M. U., Tamam, M. B., Wijanarko, T., Mahendika, D., Mas'ud, I. A., Yufrinalis, M., & Setiadi, B. (2023). Empowering Youth for a Brighter Future: Providing Education, Mentorship, Employment Opportunities, and Mental Health Support. Journal of Western Science, 2(05), 354-363.
Mulyati, N., Makmun, I., & Cahyaningtyas, D. K. (2025). The Relationship between Nutritional Status and Hemoglobin Level on the Incidence of Anemia in Pregnant Women in the Third Trimester. Qamarul Huda Health Journal, 13(1), 41-49.
Mursaha, S., & Ryadinency, R. (2025). The Effect of Education Using Flipchart Media on Knowledge and Compliance Actions for Consumption of Blood Supplement Tablets to Prevent Anemia in Pregnant Women at the North Wara City Health Center. Indonesian Journal of Science and Public Health, 2(1), 201-209.
Mursaha, S., & Ryadinency, R. (2025). The Effect of Education Using Flipchart Media on Knowledge and Compliance Actions for Consumption of Blood Supplement Tablets to Prevent Anemia in Pregnant Women at the North Wara City Health Center. Indonesian Journal of Science and Public Health, 2(1), 201-209.

Mutalazimah, M., Isnaeni, F. N., Mardiyati, L., Pujiani, K. N., Bella, S., Study Program, P., Nutrition, I., & Health, I. (2021). Education on the Prevention of Disturbances Due to Iodine Deficiency (GAKY) Based on Learning Media Flipchart Article Info. LPM Journal of Medicine, 24(4), 753–754.

Novianti, S. (2024). Behavioral Factors Affecting the Consumption of Fe Tablets and the Incidence of Anemia in Pregnant Women at the Karanganyar Health Center, Tasikmalaya City. Journal of Nusantara Health and Midwifery, 2(1), 1-5.

Novianti, S. (2024). Behavioral Factors Affecting the Consumption of Fe Tablets and the Incidence of Anemia in Pregnant Women at the Karanganyar Health Center, Tasikmalaya City. Journal of Nusantara Health and Midwifery, 2(1), 1-5.

Nur (2025). The Relationship of Knowledge About Anemia with Blood Supplement Tablet Consumption Compliance in Pregnant Women in the Second Trimester in the Working Area of the Pamboang Health Center (Doctoral Dissertation, University of West Sulawesi).

Nur Azizah, F., Carlian, E., & Pratiwi, W. (2022). The Effectiveness of the Use of Flip Chart Media on the Knowledge of Pregnant Women in the Consumption of Fe tablets. Journal of Edubase, 3(2), 101–108. Ibn Khaldun University Bogor.

Nurbaya, N., Haji Saeni, R., & Irwan, Z. (2022). Improving the knowledge and skills of Posyandu cadres through educational and simulation activities. JMM (Journal of Independent Society), 6(1), 678.

Nurjaman, A. (2021). Improving critical thinking skills in Islamic religious education learning through the implementation of the "Assure" learning design. Publisher Adab.

Prihatiningsih, T., Wulandari, R. D., & Shaluhiyah, Z. (2019). Adherence to iron supplementation amongst pregnant mothers in Surabaya, Indonesia. Asia Pacific Journal of Clinical Nutrition, 28(3), 543–550.

Priyanto, S., & Irawati, D. (2020). anemia in pregnancy. E-Book Publisher Stikes Majapahit.

Putri, A. A., & Salsabila, S. (2023). The Impact of KEK Disease on Pregnant Women. Student Scientific Creativity Journal, 1(3), 246-253.

Putri, C. C. A. (2025). The Influence of Health Education through Animated Videos on Pregnant Women's Knowledge of Exclusive Breastfeeding in the Working Area of the Margorejo Health Center, Pati Regency (Doctoral dissertation, Sultan Agung Islamic University, Semarang).

Putri, D. (2025). Literature Review of Behavioral Barriers to Compliance in Iron Tablet Consumption in Pregnant Women. VitaMedica: Journal of General Health, 3(3), 405-415.

Putri, D. (2025). Literature Review of Behavioral Barriers to Compliance in Iron Tablet Consumption in Pregnant Women. VitaMedica: Journal of General Health, 3(3), 405-415.

Putri, D. T. (2024). The Effect of Video Media (Audio-Visual) on Fe Tablets on Knowledge and Compliance in Consuming Blood Supplement Tablets in Pregnant Women at the Bumi Agung Runyai Health Center, Way Kanan Regency in 2024 (Doctoral dissertation, Polytechnic of the Ministry of Health, Tanjungkarang).

Putri, D., Diarti, D. P., Kartika, R. C., Ratri, P. R., & Olivia, Z. (2024). The Effectiveness of Counseling-Based Nutrition Education Using Flipchart Media on Knowledge of Anemia in Pregnant Women. HARENA: Journal of Nutrition, 4(2), 75-80.

Putri, D., Diarti, D. P., Kartika, R. C., Ratri, P. R., & Olivia, Z. (2024). The Effectiveness of Counseling-Based Nutrition Education Using Flipchart Media on Knowledge of Anemia in Pregnant Women. Journal of Economics, 5(1), 101-110.

Putri, E. M. R. (2023). The Relationship between Motivation and Compliance with Taking Blood Supplement Tablets in Pregnant Women with Anemia at the Nguter Sukoharjo Health Center (Doctoral dissertation, Kusuma Husada University, Surakarta).

Rangkuti, N. A., & Harahap, M. A. (2020). The relationship between knowledge and age of pregnant women and high-risk pregnancies at the labuhan rasoki health center. Journal of Education and Development, 8(4), 561931.

Raza, S., Hameed, R., Batool, S., et al. (2023). Methods used to assess adherence to iron supplementation in pregnant women: A systematic review. Nutrients, 15(1), 140.

Retnowati, Y., Gusriani, G., & Umami, N. (2023). Education for Pregnant Women (Edumil) to Prevent Anemia and Stunting. Borneo Community Health Service Journal, 3(2), 67-71.

Rustiawan, A., & Pratiwi, A. (2022). Evaluation of the program of giving blood supplement tablets to pregnant women at the Gedongtengen Health Center. Scott, 61-71.

Safitri, H., Norhapifah, H., Anam, K., & Masyita, G. (2025). The Effect of Fe Tablet Consumption Compliance on the Incidence of Anemia in Pregnant Women in the Third Trimester at the Gunung Sari Ulu Health Center, Balikpapan City. Innovative: Journal Of Social Science Research, 5(2), 3539-3555.

Safitri, R. (2024). The Relationship between Internal Motivation and Compliance with Consuming Anti-Hypertension Drugs (OAH) in the Elderly at the Puskesmas Bersama Malang City (Doctoral dissertation, STIKes Panti Waluya Malang).

Salsabila (2023). Overview of Knowledge and Attitudes as well as Teachers' Support in Consuming Fe Tablets in Adolescent Women at Mts Nurul Huda, Pringsewu Regency (Doctoral Dissertation, Polytechnic of the Ministry of Health, Tanjungkarang).

Sitepu, S. A., Purba, T. J., Sari, N. M., Sitepu, M. S., & Hayati, E. (2021). The impact of anemia on pregnant women and childbirth. Journal of Community Service of Putri Hijau, 1(4), 47-53.

Sopiana (2023). Development of Interactive E-LKPD Based on Liveworksheet on Flat Building Materials for Class IV Elementary School (Doctoral dissertation, Hamzanwadi University).

Sugihastuti, L., Sugesti, R., & Yolandia, R. A. (2022). The Relationship between Tea Drinking Habits, FE Tablet Consumption Compliance and Nutritional Status on the Incidence of Anemia in Pregnant Women. Indonesian Journal of Interprofessional Health, 2(1), 203-210.

Thirunavukkarasu, B., Kuppusamy, M., & Kar, S. S. (2023). Assessment of adherence to oral iron supplementation guidelines in patients with iron deficiency anemia: A cross-sectional study. Cureus, 15(6), e39494.

Wickramasinghe, N. D., Gunathunga, M. W., Peiris, T. S., & Hemachandra, N. A. (2020). Maternal compliance to recommended iron and folic acid supplementation in pregnancy, Sri Lanka: A hospital-based cross-sectional study. BMC Pregnancy and Childbirth, 20, 506.

Widhiastuti, R., Pratwi, A., Yani, M., Febriani, Z., Muslim, F. J., Anastasia, D. Z., & Aryani, B. T. (2025). Education on the Prevention of Anemia in Pregnant Women in Coastal Areas: Strategies to Improve Maternal Health of Fishing Communities. Journal of Community Service of the Nation, 2(12), 5746-5749.

Widyaningsih, R., & Pratiwi, R. D. (2022). The Effectiveness of Health Education on Increasing Knowledge and Compliance of Pregnant Women in Consuming Fe Tablets at the Karanganyar Health Center. Indonesian Journal of Public Health Sciences, 3(1), 45–52.

Wigati, A., Nisak, A. Z., & Azizah, N. (2021). The incidence of anemia is based on the adherence of pregnant women in the consumption of Fe tablets. Indonesia Journal of Midwifery, 5(1), 1-7.

World Health Organization. (2021). The Global Prevalence of Anemia in Women of Reproductive Age and Pregnant Women: WHO Report 2021. Geneva: WHO Press.

Wulandari, S., Sanjaya, D. M., & Yulastini, F. (2025). Education on the Compliance of Blood Supplement Tablet (Fe) Consumption as an Effort to Prevent Anemia in Pregnant Women. SAMBARA: Journal of Community Service, 3(2), 260-267.

Wulandini, P. (2020). The Relationship of Pregnant Women's Knowledge About Anemia with Compliance with Consuming Fe Tablets in the Puskesmas RI Karya Wanita Pekanbaru Area. Tower of Knowledge: Journal of Research and Scientific Studies, 14(2).

Yulinda, F., & Sari, A. (2022). The Effectiveness of Back-to-Back Media Education on Protein, Iron, and Hemoglobin Intake in Anemic Adolescent Girls at MAN 2 Samarinda. Journal of Nutrition, 8(3), 210-218.

Yustanti, S. V. (2020). Making a Nutrition Flipchart for Hypertensive Patients as Nutrition Education at the Situbondo Regency Auxiliary Health Center (Doctoral dissertation, Jember State Polytechnic).

Zakiyyah, N., Rahayu, S., Wulandari, R., & Utami, I. T. (2025). The relationship between adolescent knowledge and adherence to Fe tablet consumption with the incidence of anemia in Mts. 3 (August 2024), 63–78.