

THE INFLUENCE OF HEALTH EDUCATION WITH FLIP SHEETS MEDIA ABOUT FE TABLETS ON THE LEVEL OF KNOWLEDGE OF PREGNANT WOMEN AT THE SUNGAI RAYA PUBLIC HEALTH CENTER IN KUBU RAYA

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ABSTRACT

Background : Anemia in pregnant women is a condition in which the mother has an Hb level of less than 11 gr% as a result of the inability of the red blood cell-forming tissue (erythropoietic) in its production to maintain Hb concentration at normal levels (Ariani et al., n.d., 2022 in Rohani et al., 2023). One important effort in preventing and overcoming anemia is the provision of Fe tablets. Non-compliance of pregnant women in consuming iron tablets can have a greater chance of developing anemia (Astriana, 2017 in Rumiati, 2023). To increase knowledge and compliance in consuming Fe tablets, namely by providing health education or education (Widya, 2021 in Rumiati, 2023).

Objective : This study aims to analyze the effect of health education using flipchart media about Fe tablets on the level of knowledge of pregnant women at the Sungai Raya Dalam Kubu Raya Health Center.

Method : This study is a Pre-Experimental design study with a one group pretest-posttest method. The population of this study was all pregnant women who underwent pregnancy check-ups at the Sungai Raya Dalam Health Center from July to September 2023, totaling 535 people, while the sample obtained from the calculation results was 53 pregnant women. The sampling technique used was purposive sampling. The data analysis used was the Wilcoxon test.

Results : The results of this study indicate that there is an effect of health education with flipchart media about Fe tablets on the level of knowledge in pregnant women with a p-value of 0.000 ($p < 0.05$). The knowledge of pregnant women before being given health education with flipchart media was sufficient, then after being given health education with flipchart media it was good.

Keywords : Fe Tablet, Flip Sheet Media, Health Education, Knowledge, Pregnant Women

INTRODUCTION

Anemia is a condition characterized by a decrease in the total or size of red blood cells, or hemoglobin (Hb) concentration, below a set threshold value, thereby reducing the blood's ability to transport oxygen throughout the body. A person is diagnosed with anemia when their Hb level is less than 10 gr. Anemia is categorized as mild anemia when the Hb level is between 9-10 gr%, moderate anemia at 7-8 gr%, and severe anemia when the Hb is less than 7 gr%. In pregnant women, anemia is defined as an Hb level of less than 11 gr%, often due to the inability of erythropoietic tissue to maintain normal Hb concentrations in its production (Ariani et al., tt, 2022 quoted in Rohani et al., 2023).

According to a 2020 report from the World Health Organization (WHO), 99% of maternal deaths occurred in countries with status developing, with a ratio of 230 per 100,000 live births in developing countries compared to 16 per 100,000 live births in developed countries. It is estimated that one third of the world's population suffers from anemia, with iron deficiency identified as the main cause. Anemia contributes to nearly 9% of annual disability problems. Furthermore, globally, an estimated 32 million pregnant women and 496 million non-pregnant women suffer from anemia.

The government's initiative in dealing with iron deficiency anemia in pregnant women focuses on distributing blood-boosting tablets (Fe) to pregnant women. The Ministry of Health continues to strive to reduce the prevalence of iron deficiency anemia among pregnant women by providing iron tablets or blood-boosting tablets, which are given one tablet every day for 90 consecutive days throughout the pregnancy period (Indonesian Ministry of Health, 2015 in Nurmayanti, 2023).

According to the 2018 Riskesdes results, it was found that 48.9% of pregnant women in Indonesia experienced anemia, with 84.6% of anemia cases occurring in pregnant women aged 15-24 years. Therefore, it is important for every pregnant woman to get a minimum of 90 Blood Supplement Tablets (TTD) during her pregnancy to prevent anemia (Indonesian Health Profile, 2021).

In 2021, the coverage of giving a minimum of 90 blood supplement tablets (TTD) to pregnant women in Indonesia will reach 84.2%, an increase from 83.6% in 2020. The province with the highest percentage of giving TTD is Bali with 92.6%, followed by by Jambi with 92.1%, and East Java with 91.3%. On the other hand, West Papua recorded the lowest coverage with only 37.5%, followed by Papua with 56.8%, and Southeast Sulawesi with 64.1%. For West Kalimantan Province, coverage of TTD provision was recorded at 83.7% (Indonesian Health Profile, 2021).

In 2019, the Maternal Mortality Rate (MMR) in West Kalimantan was recorded at 130 per 100,000 live births. Ketapang Regency reported the highest maternal mortality rate with 17 cases, followed by Kubu Raya with 16 cases. In contrast, Bengkayang Regency had the lowest number with only 1 case. Maternal deaths in West Kalimantan that year were mostly caused by anemia, with a total of 35 cases (29.91%). Other main causes include hypertension in pregnancy in 25 cases (21.37%), circulatory system disorders and infections, each of which is present as many as 6 cases (5.13%), prolonged labor as many as 1 case (0.85%), and other causes as many as 44 cases (37.61%) (West Kalimantan Provincial Health Service, 2019 in Ningrum, 2021).

Lack of nutrition and iron during pregnancy can cause various health problems for the mother and fetus, including anemia, bleeding, and abnormal maternal weight gain. Inadequate nutrition also affects the birth process, which can cause difficult and prolonged births, prematurity, post-natal bleeding, and affect growth. from the fetus, which could potentially cause problems like miscarriage, abortion, birth defects, and low birth weight (Purnama and Eti, 2023).

One strategy to prevent and treat anemia during pregnancy is to increase iron intake through consuming blood supplement tablets. These tablets, known as Fe tablets, contain 200 mg of Ferrous Sulfate or 60 mg of elemental iron and 0.25 mg of folic acid. Many pregnant women who experience anemia often face problems such as ignorance, unwillingness, and inability to deal with their health condition. This emphasizes the importance of health education to increase cognitive knowledge and change behavior in order to achieve optimal health conditions (Tarwoto and Wasnidar, 2016 in Nurmayanti, 2023).

From the initial study carried out at the Sungai Raya Dalam Kubu Raya Community Health Center on 10 pregnant women, it was found that 6 of them were inconsistent in consuming Fe tablets and the other 4 were consistent. Based on interviews, this irregularity in consuming Fe tablets occurs because some mothers often forget or experience nausea after consuming the tablets. This lack of regularity in consuming Fe tablets may be caused by low understanding of the benefits of Fe tablets. Based on this problem, researchers were encouraged to study further the effects of health education using flip sheets on pregnant women's knowledge regarding Fe tablets at the Community Health Center.

METHODS

Study This is studies quantitative adopters Pre- Experimental design with one group pretest-posttest method. Pre- Experimental Method chosen for evaluate impact intervention on controlled conditions through one group pretest-posttest design (Sugiyono, 2018 in Rumiati, 2023).

On study This carried out at the Sungai Raya Dalam Community Health Center Kubu Raya on April to May 2024. Population study consists from all Mother undergoing pregnancy inspection pregnancy at the health center the from July until September 2023, with total number of 535 mothers pregnant. Of the population of these, 53 mothers pregnant chosen as sample use technique *purposive sampling*. Instrument research used covers questionnaire for measure knowledge about Fe tablets and sheet come back as an educational medium health. Data analysis was carried out with Wilcoxon test.

RESULTS

1. Pregnant Women's Knowledge Level About Fe Tablets Before Health Education Using Flip Sheet Media

Table 1

Knowledge Level of Pregnant Women About Fe Tablets Before Conducting Health Education Using Flip Sheet Media

No	Knowledge	Frequency	Percent
1	Less	10	18,9
2	Enough	27	50,9
3	Good	16	30,2
Total		53	100.0

Source Data: Processed Data, 2024

According to data in table 1, before the health education session using flip sheet media, it was found that of the total respondents, 27 people (50.9%) had sufficient knowledge about Fe tablets. Apart from that, 16 people (30.2%) had good knowledge, while 10 people (18.9%) had poor knowledge regarding Fe tablets.

2. Pregnant Women's Knowledge Level About Fe Tablets After Carrying Out Health Education Using Flip Sheet Media

Table 2

Knowledge Level of Pregnant Women About Fe Tablets After Health Education Using Flip Sheet Media

No	Knowledge	Frequency	Percent
1	Less	0	0
2	Enough	10	18,9
3	Good	43	81,1
Jumlah		53	100.0

Source Data: Processed Data, 2024

Based on table 2, regarding pregnant women's knowledge about Fe tablets after receiving health education using flip sheets, it was found that 43 respondents (81.1%) had a good level of knowledge, while 10 respondents (18.9%) showed sufficient knowledge.

3. Difference Before and after Education Health With Sheet Media Come back About Fe Tablets Against Knowledge Level On Mother Pregnant

Table 3

Differences Before and After Health Education Using Feedback Media About Fe Tablets on the Level of Knowledge in Pregnant Women

		N	Mean Rank	Sum of Ranks	P-Value
Post Test – Pre Test	Negative Ranks	0	0,0	0,0	0,000
	Positive Ranks	51	26,0	1326,0	
	Ties	2			
	Total	53			

Source Data: Processed Data, 2024

Based on table 3, it can be explained that the Negative Ranks category shows respondents who have a knowledge score after health education that is lower than before, while Positive Ranks shows respondents who have a knowledge score after health education that is higher than before. The Ties category shows respondents whose knowledge score after health education is the same as their knowledge score before. There were 51 pregnant women who experienced an increase in knowledge with an average score of 26.0 and a total sum of ranks of 1326.0. Apart from that, there were 2 pregnant women who had the same knowledge scores before and after health education. The results of the Wilcoxon Signed Ranks Test calculation show a p value (Asymp Sig) of 0.000, which is smaller than 0.05. This indicates that there is a significant difference between knowledge scores before and after health education using flip sheet media. Thus, the alternative hypothesis (H_a) is accepted, which means that health education using flip-sheet media has a significant influence on increasing knowledge about Fe tablets among pregnant women at the Sungai Raya Dalam Kubu Raya Community Health Center.

DISCUSSION

1. Knowledge Level Of Fe Tablets In Pregnant Women Before Health Education Using Flip Sheet Media

Findings beginning study disclose that before held session education health using sheet media in contrast, there were 27 respondents (50.9%) who had assumed knowledge Enough. Knowledge This originate of the sensory processes involved various senses man like sight, hearing, smell, taste, and tactile, with vision and hearing as source main in obtain knowledge. Knowledge cognitive is very crucial in formation action somebody Because based behavior knowledge tend more last longer than those that don't (Notoatmodjo, 2011 in Rumiati, 2023).

Researcher assume that low knowledge This related with lack access to information related consume Fe tablets. This in accordance with findings Misria (2018) in Rumiati (2023), which shows that part big knowledge Mother pregnant before sheet media education come back is at in category enough. Opinion This strengthened by study Darsini and Cahyono (2019) stated that knowledge somebody can influenced by various factor like education, employment, experience, resources information, interests, as well as environment and social culture.

2. Knowledge Level Of Fe Tablets In Pregnant Women After Health Education Using Flip Sheet Media

The research findings showed a significant increase in knowledge after implementing health education sessions using flip sheets, where 43 respondents (81.1%) demonstrated good knowledge. According to Oxford (2020 in Swarjana, 2022), knowledge is a collection of information and skills obtained from experience or education. A flip chart, or flip chart, is defined as a tool for storing messages or health information, often in the form of a book with each page containing images and related text that provides explanations (Jatmika et al., 2019 in Rumiati, 2023). The research results indicate that the use of flip sheets in education increases knowledge, supporting the findings of Baiq Iin Rumintang (2016 in Rumiati, 2023) who suggests that flip sheets are very effective for educating anemia patients, helping them understand the management of their condition more efficiently and effectively. This increase in knowledge shows that there is a positive impact of education using flip-sheet media on anemic pregnant women, as is also supported by research by Fauziatin et al (2019 in Rumiati, 2023) which found that flip-sheets not only increase knowledge but also the attitudes of respondents.

3. Difference Before And After Education Health With Sheet Media Come Back About Fe Tablets Against Knowledge Level On Mother Pregnant

The findings of this study indicate a significant increase in pregnant women's knowledge about Fe tablets after receiving health education using flip sheets. Initially, before the education session, 27 respondents (50.9%) were at a sufficient level of knowledge. However, after the intervention, the number of respondents with good knowledge increased to 43 (81.1%). The Wilcoxon Signed Ranks Test provides a p-value (Asymp Sig) of 0.000, which is less than 0.05, indicating that there is a significant statistical difference before and after providing health education. This confirms that the use of flip-sheet media in health education has a positive influence on the knowledge of pregnant women at the Sungai Raya Dalam Kubu Raya Community Health Center.

Knowledge which includes memory of specific information, correct understanding of objects, application of material in appropriate conditions, analysis of objects into structured components, synthesis of elements into a coherent whole, and evaluation or assessment of material, is a critical domain that forms the basis for individual action (Fenti, 2019).

Health education aims to increase individual knowledge and abilities through learning practices or effective instruction methods. The goal is to facilitate retention of facts and reality, and encourage initiative and self-direction while providing new information and ideas. This process encourages the formation of new, useful behavior (Notoatmodjo, 2010 in Hikmasari et al., 2022). Health education media includes several forms such as

print media (such as booklets, leaflets, flyers, flip charts, rubrics, or posters), electronic media (such as television, radio, and video), as well as outdoor media which includes the use of billboards, banners, exhibitions, banners and big screens in open areas (Notoatmodjo, 2010 in Hikmasari et al., 2022).

As a form of print media, flip charts or flip sheets are an effective tool for storing health messages. Flip charts usually take the form of a book where each page displays a demonstration image and text explaining the image, providing a means of conveying health messages visually and textually. This media is very effective for clarifying and expanding understanding of various ideas, objects or concepts. The messages in the flip chart are arranged in an orderly and clear manner, making it easier to use in an educational context (Jatmika et al., 2019 in Rumiati, 2023).

The findings of this research support the hypothesis proposed by Esthi Widi Astuti (2018) in Harahap (2021) regarding the influence of health education on changes in the knowledge and attitudes of pregnant women in consuming Fe (Ferum) tablets at the Sri Lumintu Maternity Home, Surakarta. The results of this study show a significance value (p-value) of 0.000, which is lower than 0.05, confirming the significant impact of health education on changing attitudes towards consuming Fe tablets.

This research also found that the use of flip-sheet media in health education regarding Fe tablets had a positive influence on pregnant women's knowledge. This is in accordance with the findings of Waliyo (2017 in Rumiati, 2023) which shows that counseling using flip sheets increases mothers' knowledge. Sari's research (2018 in Rumiati, 2023) also supports this finding, showing that education using flip sheets not only increases knowledge but also has a significant impact on the attitudes of pregnant women towards consuming Fe tablets. This education contributes to increasing compliance with the consumption of Fe tablets and increasing hemoglobin levels, thereby helping to reduce the risk of anemia among pregnant women.

Apart from that, based on research by Rumintang (2016 in Rumiati, 2023), nutrition education carried out as an educational effort can change unhealthy behavior into healthy behavior. Health education carried out using simple flip sheets and effective information and education communication (IEC) methods has been proven to encourage anemic pregnant women to be more compliant in consuming Fe tablets and increase their hemoglobin levels.

CONCLUSIONS AND SUGGESTION

1. Conclusion

- a. Before receiving health education using flip-sheet media, around 27 of the pregnant women respondents (50.9%) had a level of knowledge that was categorized as sufficient regarding the use of Fe tablets.
- b. After implementing health education using flip sheets, the number of respondents who showed good knowledge about Fe tablets increased to 43 people (81.1%).
- c. Based on statistical analysis using the Wilcoxon test, the p-value obtained was 0.000 ($p < 0.05$). This shows that there is a significant difference in the level of knowledge before and after implementing health education using flip sheet media. From these results, it can be concluded that health education has a significant effect on increasing pregnant women's knowledge about Fe tablets at the Sungai Raya Dalam Kubu Raya Community Health Center.

2. Suggestion

a. For Research Places

Officers are expected to provide more detailed information about the correct way and time to consume Fe tablets to optimize absorption and reduce the risk of anemia in the mother and fetus.

b. For Further Researchers

It is recommended to continue this research by using different educational methods and media to evaluate pregnant women's knowledge about Fe tablets.

c. For Educational Institutions

The findings from this research can be used as an additional reference regarding the effects of health education through flip sheets on pregnant women's knowledge about Fe tablets.

d. For Pregnant Women

It is hoped that with better knowledge about Fe tablets, pregnant women will consume them more regularly to prevent anemia.

REFERENCES

- Adiputra, M. S. dkk. 2021. *Metodologi Penelitian Kesehatan*. https://www.google.co.id/books/edition/Metodologi_Penelitian_Kesehatan/DDYtEAAAQBAJ?hl=id&gbpv=0
- Anggraini, Dina Dewi, dkk. 2023. *Promosi dan Pendidikan Kesehatan*. Sumatera Barat : PT Global Eksekutif Teknologi
- Bugista, Gusti Verawati. 2021. *Pengaruh Pendidikan Kesehatan Melalui Media Sosial Whatsapp Terhadap Kepatuhan Konsumsi Tablet Fe Pada Ibu Hamil Di Puskesmas Bajoe Kabupaten Bone Sulawesi Selatan*. Tesis. Universitas Hasanuddin Makassar (tidak dipublikasikan)
- Darma, Budi. 2021. *Statistika Penelitian Menggunakan SPSS*. Jakarta: Guepedia
- Darsini, Fahrurrozi, & Cahyono, E. A. (2019). *Pengetahuan* ; Artikel Review. *Jurnal Keperawatan*, 12(1), 97.
- Fenti, Hasnani. 2019. *Faktor yang mempengaruhi akseptor dalam memilih alat kontrasepsi suntik*. *Quality : Jurnal Kesehatan* Vol. 13 No. 1, Mei 2019 e ISSN 2655-2434 (online).
- Hansen, S., Hansun, S., Setiawan, A. F., Podomoro, U. A., Rostiyanti, S., & Tesis, K. 2023. *Etika penelitian : teori dan praktik*. January.
- Harahap, Sari Widya Astuti. 2021. *Pengaruh Edukasi Konsumsi Tablet Fe Terhadap Kepatuhan Ibu Hamil Dalam Mengonsumsi Tablet Fe Selama Kehamilan Di Puskesmas Batunadua Tahun 2021*. Skripsi. Universitas Aufa Royhan Di Kota Padangsidimpuan (tidak dipublikasikan)
- Hikmasari, R., Widyasih, H., & Saputro, N. T. (2022). *Pendidikan kesehatan melalui video dan tingkat kepatuhan dalam mengonsumsi tablet besi pada ibu hamil*. *Journal of Midwifery Information (JoMI)*, 2(2), 232-240.
- Iskandar, Badrianti. 2023. *Tingkat Pengetahuan Ibu Hamil Tentang Konsumsi Tablet Fe Di Puskesmas Banguntapan I*. Karya Tulis Ilmiah. Politeknik Kesehatan Kementerian Kesehatan Yogyakarta (tidak dipublikasikan)
- Jamaliah, Naimatul dan Irma Hartati. 2023. *Pendidikan Kesehatan*. Jawa Tengah : PT Nasya Expanding Management.
- Ningrum, Sinta Eva. 2021. *Asuhan Kebidanan Patologi Pada Ny. I Dengan Anemia Berat Di Rumah Bersalin Mulia Kota Pontianak*. <http://repository.polita.ac.id/id/eprint/59/2/BAB%201.pdf>
- Notoatmodjo, Sukidjo. 2018. *Metodeologi Penelitian Kesehatan*. Jakarta: Rineka Cipta.
- Nurmayanti, Ety. 2023. *Pengaruh Pendidikan Kesehatan Terhadap Kepatuhan Ibu Hamil Dalam Mengonsumsi Tablet Tambah Darah Di Wilayah Kerja Puskesmas Sengkol*. <http://eprints.stikeshamzar.ac.id/id/eprint/582/1/NASKAH%20PUBLIKASI.pdf>
- Prihatiningsih, Diah. 2022. *Mudahnya Belajar Statistik Deskriptif*. Jawa Tengah: CV. Sarnu Untung
- Profil Kesehatan Indonesia. 2021. <https://www.kemkes.go.id/id/profil-kesehatan-indonesia-2021>
- Purnama, Yati, dan Eti Noviatul Hikmah. 2023. *Penyuluhan pentingnya konsumsi tablet Fe untuk ibu hamil di Kelurahan Kendo Kota Bima*. <http://journal.universitaspahlawan.ac.id/index.php/cdj/article/download/11945/9152>
- Ramadhani, Rahmi dan Nuraini Sri Bina. 2021. *Statistika Penelitian Pendidikan: Analisis Perhitungan Matematis*

Dan Aplikasi SPSS. Jakarta : Kencana

- Rohani, dkk. 2023. *Pengaruh pemberian konseling dengan media video dan booklet terhadap peningkatan pengetahuan konsumsi tablet Fe pada ibu hamil anemia*. <https://ejurnal.stikesmitraadiguna.ac.id/index.php/jkp/article/download/240/203>
- Rumiati, Mia. 2023. *Pengaruh Media Lembar Balik Terhadap Peningkatan Pengetahuan Kepatuhan Konsumsi Tablet Fe Pada Ibu Hamil Anemia di Puskesmas Cigeureung*. Skripsi. Universitas Bhakti Kencana PSDKU Tasikmalaya (tidak dipublikasikan)
- Rusdiana H.A. dan Nasihudin. (2019). *Kesiapan Manajemen Akreditasi Institusi Perguruan Tinggi*. Bandung: Pusat Penelitian dan Penerbitan
- Siswanto. 2017. *Metode Penelitian Kombinasi Kualitatif-Kuantitatif Kedokteran Dan Kesehatan*. Jawa Tengah: Bosscript
- Sugiyono. 2018. *Metode Penelitian Kuantitatif, Kualitatif dan R&D*
- Susila dan Suyanto. 2014. *Metode Penelitian Epidemiologi Bidang Kedokteran dan Kesehatan*. Yogyakarta: Bursa Ilmu
- Swarjana, I Ketut. 2022. *Konsep Pengetahuan, Sikap, Perilaku, Persepsi, Stres, Kecemasan, Nyeri, Dukungan Sosial, Kepatuhan, Motivasi, Kepuasan, Pandemi Cobid-19, Akses Layanan Kesehatan – Lengkap Dengan Konsep Teori, Cara Mengukur Varabel, Dan Contoh Kuesiner*. Yoyakarta: ANDI.
- Utarini, Adi, dkk. 2023. *Prinsip dan Aplikasi Untuk Manajemen Rumah Sakit*. Yogyakarta : Gadjah Mada University Press.
- World Health Organization (WHO). 2020. *Prevalence of anaemia in woman aged 15 – 49, by pregnancy status*. Geneva: WHO:2020.
- Zohara, Audy. 2019. *Analisis Pagaruh Kualitas Produk, Harga, Dan Promosi Terhadap Keputusan Pembelian Kartu Selluler Telkomsel*. Skripsi. Universitas Semarang (tidak dipublikasikan)