Implementation of the Anti-Anemia Student Program (Mahamia) in Classes of Pregnant Women

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Abstract

The prevalence of anemia among pregnant women based on WHO data is still quite high at 41.8%. Anemia has a bad effect on the mother, both in terms of pregnancy, childbirth, and postpartum, namely abortion, premature, low birth weight, prolonged labor, postpartum hemorrhage, shock, intrapartum and postpartum infection, and can even cause maternal death. Adherence to consuming Fe tablets was measured by the accuracy of the amount, method, and frequency of consumption per day. The non-compliance of pregnant women taking Fe tablets can have a greater chance of developing anemia. The Class Program for Pregnant Women (KIH) is a means to learn together about health for mothers in groups that aim to increase knowledge and skills about pregnancy, pregnancy care, understanding, attitudes, and behavior of pregnant women in nutritional management, including giving Fe tablets to control anemia. Midwifery students as prospective health workers must have competence in providing midwifery care for pregnant women, one of the competencies is handling anemia and pregnant women. The purpose of this study was to determine the increase in Hb in pregnant women through the Anti-Anemia Student Program (Mahamia) through KIH. This study used a true experimental design with a pre-posttest control group design. The research was conducted in the working area of Public Health Center Leuwigajah Cimahi, with purposive sampling, the number of intervention groups was 20 respondents and the control group was 20 respondents. The research analysis used a paired t-test with the result that there was an increase in the mean Hb in the intervention group before and after treatment was 9.075 to 11.180 with an ap value of 0. 000 (p> 0.05), and there was an increase in the mean Hb in the control group before and after treatment, 10.150 to 11.016 with an ap value of 0.000 (p> 0.05). From the research results, it is hoped that the Mahamia Program through KIH can increase Hb levels in pregnant women who are anemic.

Prevalensi anemia ibu hamil berdasarkan data WHO masih cukup tinggi yaitu sebesar 41,8%. Anemia memberikan pengaruh buruk bagi ibu, baik dalam masalah kehamilan, persalinan, nifas, yaitu abortus, prematur, BBLR, partus lama, perdarahan post-partum, syok, infeksi intra partum maupun post-partum bahkan dapat menyebabkan kematian ibu. Kepatuhan mengonsumsi tablet Fe diukur dari ketepatan jumlah, cara, dan frekuensi konsumsi perhari. Ketidakpatuhan ibu hamil meminum tablet Fe dapat memiliki peluang yang lebih besar untuk terkena anemia. Program Kelas Ibu Hamil (KIH) merupakan sarana untuk belajar bersama tentang kesehatan bagi ibu dalam kelompok yang bertujuan meningkatkan pengetahuan dan keterampilan mengenai kehamilan, perawatan kehamilan, pemahaman, sikap dan

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perilaku ibu hamil dalam pengaturan gizi termasuk pemberian tablet Fe untuk penanggulangan anemia. Mahasiswa kebidanan sebagai calon tenaga kesehatan harus memiliki kompetensi dalam melakukan asuhan kebidanan pada ibu hamil, salah satu kompetensinya adalah melakukan penanganan pada ibu hamil anemia. Tujuan penelitian ini untuk mengetahui peningkatan Hb pada ibu hamil melalui program Mahasiswa Anti-Anemia (Mahamia) melalui KIH. Penelitian ini menggunakan rancangan *true experiment* dengan *pre-posttest with control group design*. Penelitian dilakukan di Wilayah kerja Puskesmas Leuwigajah Cimahi, dengan *purposive sampling*, jumlah kelompok intervensi 20 responden dan kelompok kontrol 20 responden. Analisis penelitian menggunakan uji t berpasangan dengan hasil terdapat peningkatan rerata Hb pada kelompok intervensi sebelum dan setelah diberikan perlakuan yaitu 9.075 menjadi 11.180 dengan nilai p 0.000 (p>0.05), dan terdapat peningkatan rerata Hb pada kelompok kontrol sebelum dan setelah diberikan perlakuan yaitu 10.150 menjadi 11.016 dengan nilai p 0.000 (p>0.05). Dari hasil penelitian Program Mahamia melalui KIH mampu meningkatkan kadar Hb pada ibu hamil yang anemia.

Kata Kunci: Anemia; Ibu Hamil; Kelas Ibu Hamil; Mahamia

Introduction

Anemia is a nutritional problem in Indonesia that must be taken seriously, especially nutritional anemia. Nutritional anemia is a health problem that plays a role in causing high maternal mortality rates, infant mortality rates, and low work productivity, work performance, sports achievements, and learning abilities (Ramadani & Mayoritha, 2012). Overcoming nutritional anemia is one of the potential programs to improve the quality of human resources. Pregnant women are a group that is vulnerable to nutritional problems, especially anemia due to iron (Fe) deficiency (Ramadani & Mayoritha, 2012) (Fatimah et al., 2011). According to (Riskesdas, 2018)in Indonesia, the prevalence of anemia in pregnant women is quite high, namely 48.9%, an increase from 2013 of 37.1%. Citing the health profile of Cimahi City, the prevalence of anemia in pregnant women is 8.81% (Cimahi City Health Office, 2018).

Iron tablets during pregnancy are very important because they can help the process of forming red blood cells so that they can prevent anemia/anemia. Iron deficiency (iron deficiency anemia) during pregnancy can have an adverse impact on both the mother and the fetus, including low birth weight (LBW), premature birth, and bleeding during delivery. The success of the program to prevent and treat anemia in pregnant women depends on the distribution of iron supplements in adequate quantities and individual adherence to treatment.(Eka Devi Utami, Lilin Turlina, 2010) (Agustiningsih &

Muwakhidah, 2018) (Anggraini, 2018). The impact if pregnant women do not want or don't regularly take iron tablets at the right dose can cause anemia or anemia will not be treated.(Adi et al., 2012) (Lestari, 2015). There are several factors that influence the adherence of pregnant women to consuming iron tablets, including the behavior of health workers, the mother's motivation, family role, mother's knowledge. Non-compliance occurs because pregnant women feel nauseous due to the taste and smell of iron tablets, and feel bored so pregnant women often forget and are lazy to consume them (Lestari, 2015).

There are many causes that make pregnant women disobedient in taking iron tablets, an appeal to health workers is needed to increase the knowledge of pregnant women by providing health education about the benefits of iron tablets (Lestari, 2015) (Nursani, 2018). Health education is an activity to convey messages to individuals, groups or communities in the hope that with health education one can gain knowledge about health and this knowledge is expected to influence behavior change (Handayani, 2013).

The Pregnant Women Class (KIH) is a health program that is expected to play a role in reducing morbidity and mortality due to pregnancy, childbirth and the puerperium. KIH is a shared learning tool that pregnant women need to follow in order to gain sufficient knowledge, so as to prevent complications in pregnancy and to be able to change behavior to be positive so that it is expected that mothers can have their pregnancies checked and give birth to health workers. The purpose of holding KIH is to increase mother's knowledge about maternal and child health, so as to reduce the occurrence of maternal mortality (Andriani et al., 2016) (Agustiningsih & Muwakhidah, 2018) (RI Ministry of Health, 2014). The purpose of this study was to determine the increase in hemoglobin in pregnant women through the Anti-Anemia Student Program (Mahamia) through classes for pregnant women.

Methods

This study uses a true experiment design with pretest-posttest with control group design. The sample in this study were pregnant women with anemia in the 1st and 2nd trimesters in the working area

of the Leuwigajah Health Center, South Cimahi, with a total of 40 pregnant women. Technique*sampling* used is*purposive sampling*in a manner*random sampling.*

The sample in this study was divided into 2 groups, namely the intervention group and the control group. The intervention group and the control group were previously examined for hemoglobin (Hb). Furthermore, the intervention group was given Health Education through the pregnant women class for 4 meetings, then monitored compliance with Fe consumption and fulfillment of balanced nutrition using a monitoring card by midwifery students (Anti Anemia Student program), while the control group was given Health Education in the pregnant women class 2 meetings and without monitoring compliance with Fe consumption, the evaluation was carried out for 2 months (8 weeks). Doing the final test (*posttest*)performed to determine the increase in hemoglobin levels. Data analysis used paired t test. The following is the flow of this research:
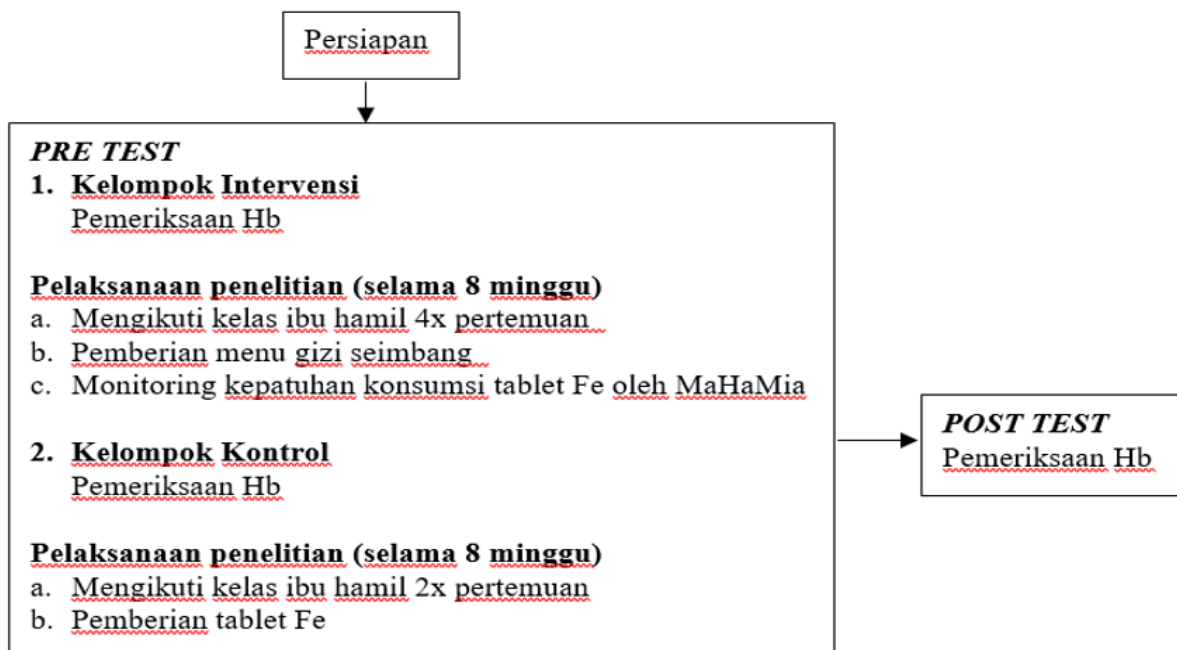

Figure 1. Research Flow

Results and Discussion

This research was conducted in the Work Area of the Leuwigajah Community Health Center, Jl. Kihapit Barat RT. 08/09 Leuwigajah Kec. South Cimahi, Cimahi City, with research respondents being first trimester pregnant women who experience anemia. This study aims to determine the increase in Hb in pregnant women through the Anti-Anemia Student (Mahamia) program through pregnant women classes. This research was conducted in April - September 2020 in the working area of the Leuwigajah Health Center, Cimahi City. During the pretest, Hb examination was carried out for pregnant women in the first trimester at the Leuwigajah Health Center and the working area of the Leuwigajah Health Center. This examination aims to determine the Hb level of pregnant women. Based on the results of the examination, pregnant women with anemia were divided into 2 groups, namely the intervention group and the control group. After the pretest activities, the intervention group participated in class activities for pregnant women which were held every 2 weeks for 4 meetings, followed by monitoring adherence to taking Fe tablets and consuming a balanced nutritional menu once every 1 week by midwifery students (Mahamia Program). In the control group, class activities for pregnant women were carried out every 1 month for 2 meetings, pregnant women were given Fe tablets without any monitoring from Mahamia. In the Posttest activity, pregnant women were collected again for Hb examination at the Leuwigajah Health Center. Based on the research, the results of univariate and bivariate data were obtained as explained in the table below: followed by monitoring adherence to taking Fe tablets and consumption of a balanced nutritional menu once a week by midwifery students (Mahamia Program). In the control group, class activities for pregnant women were carried out every 1 month for 2 meetings, pregnant women were given Fe tablets without any monitoring from Mahamia. In the Posttest activity, pregnant women were collected again for Hb examination at the Leuwigajah Health Center. Based on the research, the results of

univariate and bivariate data were obtained as explained in the table below: followed by monitoring adherence to taking Fe tablets and consumption of a balanced nutritional menu once a week by midwifery students (Mahamia Program). In the control group, class activities for pregnant women were carried out every 1 month for 2 meetings, pregnant women were given Fe tablets without any monitoring from Mahamia. In the Posttest activity, pregnant women were collected again for Hb examination at the Leuwigajah Health Center. Based on the research, the results of univariate and bivariate data were obtained as explained in the table below: In the Posttest activity, pregnant women were collected again for Hb examination at the Leuwigajah Health Center. Based on the research, the results of univariate and bivariate data were obtained as explained in the table below: In the Posttest activity, pregnant women were collected again for Hb examination at the Leuwigajah Health Center. Based on the research, the results of univariate and bivariate data were obtained as explained in the table below:

Table 1. Frequency Distribution of Respondent Characteristics

Variable	F	%
Intervention Group		
Age		
No Risk	19	95.0
Risk	1	5.0
Education		
Low education	3	15.0
Moderate education	10	50.0
Higher education	7	35.0
Work		
Doesn't work	17	85.0
Work	3	15.0
Parity		
Primipara	6	30.0
Multipara	11	55.0
grandmulti	3	15.0
Total	20	100.0
Control Group		
Age		
No Risk	17	85.0
Risk	3	15.0

Education_		
Low education	5	25.0
Moderate education	13	65.0
Higher education	2	10.0
Work		
Doesn't work	10	50.0
Work	10	50.0
Parity		
Primipara	7	35.0
Multipara	10	50.0
grandmulti	3	15.0
Total	20	100.0

Based on Table 1, it shows that in the intervention group there were 19 respondents (95%) with age not at risk, as many as 10 respondents (50%) with medium or high school education levels, as many as 17 respondents (85%) did not work or were housewives, as many as 11 respondents (55%) were multiparous. In the control group there were 17 respondents (85%) of non-risk age, 13 respondents (65%) with medium or high school education levels, 10 respondents (50%) did not work or were housewives, 10 respondents (50%) are multiparous.

Table 2. Differences in Average Hb Before and After in the Intervention Group and the Control Group

Variable	Pre	Post	% Increase	p-value*
Hb_Intervention				
Means	9075	11.180	23.2%	0.000
Median	9050	10,950		
SD	1.0452	0.8532		
Minimum-Maximum	7.2-10.6	9.8-13.4		
Hb_kontrol				
Means	10,150	11016	8.5%	0.000
Median	10,200	11.150		
SD	.3791	.7802		
Minimum-Maximum	9.4-10.9	9.2-12.1		

*paired t test

Based on the table. 2 shows that there was an increase in the average Hb in the intervention group before and after being given treatment, namely 9,075 to 11,180 with a percentage increase of 23.2% and a p value of 0.000 (p> 0.05), it can be concluded

that there is a difference in Hb values before and after being given treatment in the intervention group. In the control group, it was found that there was an increase in the average Hb before and after being given treatment, namely 10,150 to 11,016 with a percentage increase of 8.5% and a p value of 0,000 (p> 0.05), meaning that there was a difference in Hb values before and after being given treatment in the control group. This study showed an increase in the average hemoglobin before and after anemic pregnant women attended classes for pregnant women, with a p-value of 0.000> 0.005. Good health behavior such as adherence to taking Fe Tablets during pregnancy cannot be formed just like that, but is influenced by many factors. According to(S. Notoadmodjo, 2012)Health behavior is an individual response to certain objects related to the incidence of disease, the health care system, food and drink, and the environment. Notoatmodjo also stated that efforts to change individual behavior for the better required knowledge, facilities, and support. There are 3 factors that influence behavior change, namely: predisposing factors such as knowledge, attitudes, beliefs, beliefs, values, and so on, supporting factors

such as the physical environment and health facilities or facilities and driving factors such as health workers, community leaders, and groups. Mother's knowledge about Fe tablets will affect adherence behavior in taking Fe tablets which can then result in a high or low incidence of anemia in pregnant women. Knowledge is not only obtained from formal education. Knowledge can be obtained from the social environment, mass media information, family or husband support as well as from health worker counseling(Mandagi, 2019). Counseling and motivation of health workers is another factor that can influence knowledge. Education and motivation are useful when the patient learns that new healthy behaviors are important. If health workers provide motivation to consume iron tablets in pregnant women, consumption of iron tablets will be easier to achieve (Agustiningsih & Muwakhidah, 2018).

The results showed that there was a significant difference in the increase in Hb levels between pregnant women who attended 4 classes of pregnant women and pregnant women who attended 2 classes of pregnant women. That is, the Intervention Class for Pregnant Women (KIH) indirectly

affects hemoglobin levels of pregnant women by providing recommendations to pregnant women regarding consumption patterns of iron-containing foods and recommendations for taking blood-boosting tablets during pregnancy. The increase in the respondent's Hb level in this study is likely as a result of learning experiences in the class of pregnant women, as well as the first benchmark for evaluating the implementation of the class training program for pregnant women, which is then followed by changes in behavior by conducting antenatal care visits according to the schedule based on ideal standards (Handayani, 2013) which states that there is an effect of the support of health workers, in this case in the class of pregnant women, with the behavior of pregnant women towards anemia. Pregnant women who have the awareness to take part in the Pregnant Women Class will increase their knowledge about the importance of maintaining health during pregnancy, maintaining behavior with a balanced nutritional diet so that they do not suffer from anemia, so that they will get normal deliveries and healthy babies. A good understanding of pregnant women about pregnancy will support pregnant women to

have a motivation to do something that is positive and useful so that it creates positive behavior from the results of attending classes for pregnant women.

The increase in hemoglobin in the intervention group was 23.2% greater than the control group which only had an increase in hemoglobin of 8.5%. This shows that companion support does play a role for respondents in increasing adherence to consuming Fe tablets (Aditianti et al., 2015). The role of a companion in taking medication in pregnant women with anemia can increase maternal compliance in consuming Fe tablets so that consuming full Fe tablets can increase the increase in Hb in pregnant women, so the prevalence of anemia can be reduced (Handayani, 2013). In the intervention group that involved midwifery students in controlling pregnant women taking Fe, the assistance with taking this medicine could strengthen the desire of pregnant women to consume Fe tablets. With a strong desire in pregnant women, it can increase maternal adherence in consuming Fe tablets (Waliyo & Agusanty, 2013). After consuming Fe for two months by administering 60 tablets 1x1 per day involving anti-anemia students as a

companion for taking medication, the intervention group showed an increase in the average Hb before and after being given treatment, namely 9,075 to 11,180 with a percentage increase of 23.2%.

In the control group, there was only an average increase in HB of 8.5%, this was due to mothers who did not regularly take fe tablets. Maternal irregularity can occur because pregnant women feel nauseous due to the taste and smell of tablets. In addition, iron tablets consumed every day cause boredom, so pregnant women forget and are lazy to consume them. Motivation is the most dominant factor associated with adherence to consuming fe tablets. The better the motivation, the more obedient pregnant women are in taking Fe tablets, so it is important for companions to take medication involving students to monitor, record and remind and provide support to pregnant women.

Conclusion

Based on the results of the paired t test, it was found that there was an increase in the average Hb in the intervention group before and after being given treatment, namely 9,075 to 11,180 with a percentage increase

of 23.2% and a p value of 0.000 (p> 0.05). In the control group it was found that there was an increase in the average Hb before and after being given treatment, namely 10,150 to 11,016 with a percentage increase of 8.5% and a p value of 0,000 (p> 0.05). The Mahamia program through KIH was able to increase Hb levels in anemic pregnant women in the Working Area of the Leuwigajah Health Center in South Cimahi, Cimahi City, West Java.

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