

Article

The Effectiveness of Using Booklets towards Knowledge and Compliance with Iron Tablet Consumption among Pregnant Women at Guguk Panjang Public Health Center, Bukittinggi City

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A B S T R A C T

Anemia in pregnancy can cause complications in childbirth, in 2018 anemia in pregnant women in Indonesia was 48.9%. The government's efforts to overcome anemia is by providing iron tablets. The latest data showed that 34% of pregnant women have not taken iron tablet for less than 90 days, for reason forgot as many as 21.8%. Based on previous results, the booklet was considered very effective in overcoming the problem of anemia. Based on 2018 report in Guguk Panjang Public Health Centre there were 647 pregnant women with anemia. To see the effectiveness of using booklets at the Guguk Panjang Health Center Bukittinggi city.

This study used a one-group pre-test post-test design, which was experimental method. The population in this study were pregnant women in the working area of Guguk Panjang Public Health Centre, Bukittinggi City. The number of samples was 31 respondents with accidental sampling technique.

This study was conducted with the t test, to determine before and after using the booklet the Wilcoxon Signed Ranks Test was conducted. Based on the results of this study, normal distribution can be seen on pre-test knowledge = 0.166, post-test knowledge = 0.001, pre-test adherence = 0.000, post-test adherence = 0.000. For the provision of booklets there is an increase in knowledge of Z = -3.879 with a value of p = 0.000. There is an increase in adherence = -2.239 with p value = 0.025. It can be concluded that there is an increase in knowledge and compliance of pregnant women by using booklets at the Guguk Panjang Health Center, Bukittinggi City.

I. INTRODUCTION

Anemia in pregnancy is a condition in pregnant women with hemoglobin levels below 11 g%. According to data from the World Health Organization (WHO), the prevalence of anemia in pregnant women is 41.8% (WHO, 2001). For national data, based on the results of Basic Health Research (Riskesdas) in 2017, the proportion of anemia in pregnant women was 37.1%, and this figure increased in 2018 to 48.9% (Ministry, 2018).

Anemia in pregnant women can cause stunting. Stunting is a condition of growth failure in children (body and brain growth) due to lack of nutrition for a long time. In Indonesia, the prevalence of stunting under five is still high, namely 29.6%, while the WHO limit is 20%. The prevalence of stunting in West Sumatra in 2017 was 18.6%, and data obtained from the City Health Office of Bukittinggi, children with stunting 14.2%. In 2016-2017, 1 out of 5 pregnant women were malnourished, meaning that 1 out of 5 pregnant women had the potential for anemia

Efforts made by the government to overcome this anemia problem are by implementing a program of giving 90 iron tablets during pregnancy to pregnant women (WHO, 2013). However, although it has long been widely applied, the results have not been satisfactory. A number of literature from various countries shows that non-compliance of pregnant women is a significant factor in the failure of the blood-supplemented tablet program during pregnancy (Subagio, 2012).

Based on the results of Riskesdas 2013, it was found that pregnant women aged 20-34 who were compliant with taking iron tablets were 89.7%. mothers take iron tablets for less than 90 days as much as 34.0%, and 21.8% forgot to take iron tablets (Health Research and Development Agency of the Indonesian Ministry of Health, 2013). Factors that influence the compliance of pregnant women in consuming the iron tablets include: knowledge of pregnant women, education of pregnant women, attitudes of pregnant women, and behavior of health workers (Oktania, 2014). Based on the 2012 BKKBN press release, the factor of knowledge among pregnant women about anemia will affect the behavior of pregnant women in the implementation of anemia prevention programs (Oktania, 2014; BKKBN, 2012).

Low understanding of related health information is the main factor causing client non-compliance with drug therapy and health instructions given by health workers. The data show that about 72% of patients forget all verbal information provided by health professionals. Based on these problems, it is necessary to provide effective media to convey drug information appropriately to improve patient compliance. Patients with a low level of knowledge and education in particular need written educational materials that are easy to read and understand with oral instructions and culturally appropriate pictures, rather than oral instructions alone.

Booklet is a tool for delivering health messages in the form of a book with a combination of text and pictures consisting of at least five pages but not more than forty-eight pages. The advantages of booklet media are that they can provide complete information, are easy to carry anywhere, are more detailed and clear, are composed of attractive and colorful designs (Septiwiharti, 2015).

The study conducted by Budi in 2017 entitled "The Effectiveness of Providing Anemia Media Booklets and Videos on the Knowledge of Young Women in Karangwuni Wates Kulon Progo Village in 2017" showed that the provision of booklet media is considered very effective in overcoming the problem of anemia in adolescents (Budi, 2018). Other studies have also shown that health education using media is also more effective than conducting lecture method education without media. There was an increase in knowledge from 7.7% to 82.1% (Azizah Nur, Siti and Yuli, 2016).

The work area of the Guguk Panjang health centre has the highest number of pregnant women in the City of Bukittinggi in 2018, namely 647 people and is one of the the public health with highest anemia rate in pregnant women in 2018 (Bukittinggi City Health Office, 2018).

Based on these problems, researchers are interested in raising study on "The Effectiveness of Using Booklets towards Knowledge and Compliance with Fe Tablet Consumption among Pregnant Women at Guguk Panjang Public Health Center, Bukittinggi City".

II. METHOD

This was a quantitative research also known as experimental research. The design used in this study was a one group pretest-post-test design, namely a research design that contained a pretest before being treated and a posttest after being given treatment. The population of this study were pregnant women who were in the working area of the Guguk Panjang Public Health Center in Bukittinggi City in 2019. Samples were more than 15 pregnant women. The sampling technique used was accidental sampling, which was sampling based on pregnant women visiting for the next month or more at the Guguk Panjang Public Health Center, Bukittinggi City. This study was conducted from 15 April to 15 October 2019. Conducted at the Guguk Panjang Health Center, Bukittinggi City starting in August 2019 until the end of October 2019.

III. RESULTS

The study was conducted at the Guguk Panjang Health Center, Bukittinggi City, with 32 pregnant women. It was found that pregnant women with Hb test had decreased after the second test namely 15.63%. Characteristics of pregnant women; age, education, parity, and getting information on iron tablets .

Table 1. Description of the characteristics of pregnant women at the Guguk Panjang Community Health Center, Bukittinggi City

Characteristic	F	%
Aged		
20 – 35 years old	28	87.5
> 35 years old	4	12.5
Education		
JHS	7	21.875
SHS	18	56.25
College	7	21.875
Parity		
1 (one)	12	37.5
2 (two)	8	25
≥ 3 (three)	12	37.5
Information		
Not getting information	7	21.875
Printed media	4	12.5
Electronic media	7	21.875
Health workers	14	43.75

The results in table 1 shows that there are still pregnant women aged > 35 years accounted for 12.5%, high school education 56.25%, having 2 children, which is only 25%, and getting information about iron Tablets from Health Workers accounted for 43.75%, there are still pregnant women who were not previously get information about iron Tablets.

The study was initiated by conducting health education and pretests for pregnant women who visited the maternal and child health room at the Guguk Panjang Public Health Center,

Bukittinggi City. The pre-test was carried out using a questionnaire regarding the knowledge of pregnant women about anemia, and the mother's compliance with taking iron Tablets (Fe). The point is to see the ability of pregnant women, and maternal compliance before reading the iron Tablet booklet. Furthermore, pregnant women who have done Hb examination and then record the result of test of the Hb and given a booklet to read and understand the contents of the booklet and to be implemented in families and her self. Pregnant women who have not checked their Hb have their first Hb check after the mother is declared pregnant, and are also given a booklet.

Pregnant women who come for a pregnancy check at the Guguk Panjang health centre at the earliest 1 month later, are re-tested by doing a post-test. The test on these pregnant women used the same questionnaire. The second Hb examination was also carried out to see the effectiveness of the Blood Plus Tablet booklet for pregnant women.

The results of the study on the t test, previously seen whether the distribution of data is normally distributed using the data normality test (Shapiro-Wilk test). The data normality test used Shapiro-Wilk, because the number of samples was 32 pregnant women, meaning less than 50 people. The following table shows the results of the pre-test and post-test in the experimental group checking hemoglobin.

Table 2. Data on the normality of pre-test and post-test knowledge and adherence among pregnant women at the Guguk Panjang Health Center, Bukittinggi City

Statistical test	N Pre test	N post test	Pre test	Post test
Knowledge	32	32	0.166	0.001
Compliance	32	32	0.000	0.000

The test results in table 2 on the Shapiro-Wilk test showed that pre and post test data on pregnant women were not normally distributed (<0.05), namely Post = 0.001, and pre-test was normally distributed, namely = 0.166 (knowledge of pregnant women) and pre and post test In pregnant women the distribution is not normal (<0.05), namely Post = 0.000, and the pre test is normally distributed, namely = 0.000 (on compliance with pregnant women).

Table 3. Average pre- and post-use of booklets on knowledge and compliance of pregnant women with iron consumption at Guguk Panjang Public Health Center, Bukittinggi City

Pregnant women	N	Mean	SD	Std error Mean
Knowledge				
<i>Pre-test</i>	32	5.7188	1.52895	0.27028
<i>Post-test</i>	32	7.3125	1.76777	0.31250
Compliance				
<i>Pre-test</i>	32	3.7813	0.70639	0.12487
<i>Post-test</i>	32	4.1875	0.78030	0.13794

In table 3, the average knowledge of pregnant women before using the booklet is 5.7188. The average knowledge of pregnant women after using the booklet was 7,3125. The average knowledge of pregnant women before using the booklet was 3.7813. The mean of knowledge after using the booklet was 4.1875. This means that there is an increase in the average pre-post use of booklets on the knowledge and compliance of pregnant women in consuming iron tablets.

To find out an increase in knowledge and compliance in pregnant women after and before using iron Tablet booklet using the Wilcoxon Signed Ranks Test.

Table 4. The difference between post-test and pre-test of knowledge and compliance using booklets for pregnant women at Guguk Panjang Public Health Center, Bukittinggi City

Pregnant women	Negatif Ranks	Positif Ranks	Ties	Z	P
Knowledge					
<i>Post-test- Pre-test</i>	0.000	19.000	13.000	-3.879	0.000
Compliance					
<i>Post-test- Pre-test</i>	4	11	17	-2.239	0.025

Table 4 shows that the Wilcoxon Signed Ranks Test shows that the Z value obtained is -3,879 with a p value (Asymp. Sig 2 tailed) of 0,000 for knowledge and the Z value obtained is -2,239 with a p value (Asymp. Sig 2 tailed) of 0.025 for compliance, which means that it is less than the critical research limit of 0.05, so the hypothesis decision is to accept H_a which means that there is a significant increase in the results of the pretest and posttest on knowledge and adherence to the consumption of Iron Tablets using booklets for pregnant women at Guguk Panjang Health Center Bukittinggi City.

IV. DISCUSSION

In table 3, the average knowledge of pregnant women before using the booklet is 5.7188. The average knowledge of pregnant women after using the booklet was 7,3125. This means that there is an increase in the average pre-post use of booklets to the knowledge that pregnant women consume iron tablets. In table 3, the average knowledge of pregnant women before using the booklet is 3.7813. The mean of knowledge after using the booklet was 4.1875. This means that there is an increase in the average pre-post use of booklets on the compliance of pregnant women to consume iron tablets.

Table 4, and the Wilcoxon Signed Ranks Test shows a significant increase in knowledge and compliance of pregnant women. This increase is because mothers who check their pregnancies are aware that the consumption of iron tablets is very important. Pregnant women were also given booklets after a health promotion was carried out, so that mothers could repeat reading the uses of iron Tablets.

Health promotion is an effort to improve public health which is designed and implemented to direct better public health behavior. Health promotion is a system that has a significant impact on society. Health behavior is determined by three main factors according to Lawrence Green (Notoatmodjo, 2012)

Health promotion media, according to (Kholid, 2012), one of which is visual aids, which is used to help stimulate the sense of sight during the educational process. There are two visual aids, namely projected aids and non-projected aids. Projected tools such as slides, OHPs, and film strips. Meanwhile, non-projected are like two-dimensional tools such as images, maps, and charts. Includes print and writing aids such as booklets, flipcharts, posters and flipcharts. Booklets are a medium for conveying health messages in the form of books, either in writing or in pictures. The target of the booklet is people who can read. (Ratna Fitriastutik, 2010), (Astuti, 2017)

The study conducted by Budi in 2017 entitled "The Effectiveness of Providing Anemia Media Booklets and Videos on the Knowledge of Young Women in Karangwuni Wates Kulon Progo Village in 2017" shows that the provision of booklet media is considered very effective in overcoming the problem of anemia in adolescents (Budi, 2018). Other studies have also shown that health education using media is also more effective than conducting lecture method education without media. There was an increase in knowledge from 7.7% to 82.1%. (Azizah Nur, Siti and Yuli, 2016). Study conducted by Ratna in 2010 also showed that the group given the booklet intervention had a greater difference in the increase in the value of knowledge than

groups that were given the image guessing intervention and the control group, respectively 18.67; 12.98; 3.11. (Ratna Fitriastutik, 2010)

Most of the background education of pregnant women is high school education as much as 56.25% and higher education 21.875%, meaning that with the description of the education of pregnant women at the Guguk Panjang Health Center, Bukittinggi City, it is easy to understand and can increase the knowledge and obedience of pregnant women to information obtained for the good of themselves. Before getting health promotion from researchers, there were also 43.75% pregnant women who had received information from health workers, more of which were pregnant women who got information from print and electronic media.

This means that by getting health promotion and information obtained from health workers and other media about iron supplemented tablets for pregnant women, it adds a lot of insight and benefits for knowledge and compliance with taking iron tablets to increase level of Hb of pregnant women. Booklets can help pregnant women to read freely and learn according to what the pregnant woman needs.

V. CONCLUSION

1. There was an effect of using booklets on the knowledge of pregnant women consuming iron Tablets at Guguk Panjang Public Health Center, Bukittinggi City.
2. There was an effect of using booklets on the compliance of pregnant women to consume iron Tablets before and after hemoglobin test in pregnant women at Guguk Panjang Health Center, Bukittinggi City.

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