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The Effectiveness of Giving Information on Fe Drugs on Compliance and the Effectiveness of Adding Hemoglobin to Young Women in Central Bangka Regency

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A B S T R A C T

Young women are usually very concerned about body shape, so many eat inadequate food. As a result, young women are more prone to health problems, including anemia. Women of childbearing age tend to suffer from anemia because women experience menstrual cycles every month. Iron deficiency can reduce endurance so it can cause decreased productivity. Iron intake can be obtained through foods sourced from animal protein such as liver, fish, and meat. This research is an observational type using a survey method with a cross-sectional design for young women at the Nurul Falah Air Mesu Islamic Boarding School in March - October 2021. The pre-and post-test stages were carried out before and after being given PIO Fen using 2 treatment and control groups. Samples were taken from as many as 44 young women. The results showed that the pre-test scores were lower in the treatment group than the post-test scores. From the analysis of the paired t-test, it was obtained that the value of p = 0.024 where the value (p <0.05),. Whereas in the control group, it is known that the t count is -0.227, indicating that the pretest value is smaller than the posttest value. From the analysis of the paired t-test, it was obtained that the value of p = 0.747 where the value (p> 0.05). This study concluded that there was an average difference in giving PIO Fe to adherence, whereas without giving PIO, there was no difference, and there was a significant average difference in providing information on Fe drugs between those who were given PIO and not given PIO in female adolescents

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INTRODUCTION

Adolescents are individuals in the 10-19 year age group, divided into two terminations: early adolescents in the 10-14 year age range and late adolescents 15-19 years. Adolescence is a transition from childhood to adulthood that experiences the development of all aspects or functions to enter adulthood. Physical changes due to growth that occur will affect health and nutritional status. The imbalance between intake needs or adequacy will cause nutritional problems, both in the form of problems of excess nutrition and malnutrition. Nutritional problems in adolescents include anemia, obesity, chronic energy deficiency or CED, and deviant eating behaviors such as anorexia nervosa and bulimia (Argana, 2004).

Women of childbearing age tend to suffer from anemia because women experience menstrual cycles every month. Iron deficiency can reduce endurance, so that it can cause decreased productivity. Iron intake can be obtained through foods sourced from animal protein such as liver, fish, and meat. However, because not all people can reach these foods, additional iron intake is needed from iron tablets (TTD).

The main target of BABEL's RJPMN 2015-2019 is to improve mothers' and children's nutritional and health status. This aligns with one of the missions of the Governor and Deputy Governor of the Bangka Belitung Islands Province for 2017-2022, namely the realization of public health development through efforts to improve the quality of services, one of which is human resources.

Data from the 2013 Riskesdas stated that the prevalence of anemia in pregnant women was 37.1 percent. This directly impacts the high prevalence of anemia in young women, which is 25 percent. This is due to a need for nutritional iron intake from food; only about 40 percent of the adequacy should be.

Moreover, one of the efforts is to give blood supplement tablets to young women aged 12-18 years, with a dose of one tablet every week, through strengthening the UKS/M program at educational institutions (girls at SMP/MTS/SMA/SMK/MA). Giving iron supplements to young women aims to meet the iron needs of young women who will become mothers. With sufficient iron intake from an early age, it is hoped that anemia in pregnant women, bleeding during childbirth, LBW, and short toddlers can decrease.

Adolescent girls experience an increased need for iron due to accelerated growth (growth spurt) and menstruation. In addition, young women are usually very concerned about body shape, so many eat inadequate food. As a result, young women are more prone to health problems, including anemia (Sediaoetomo, 2002; Verawaty, 2011).

The main cause of nutritional anemia in young women is a lack of intake of nutrients through food, while the need for iron is relatively high for menstruation and needs. Iron loss above the average can occur in young women with more menstrual patterns and longer periods. Increased need, when accompanied by a lack of iron intake, can result in young girls being prone to low hemoglobin levels (Krummer et al., 2006).

Anemia is one of the main nutritional problems in Indonesia, especially iron deficiency anemia, which is quite prominent in school children, especially

teenagers (Bakta, 2006). Badriah (2011) stated that iron deficiency or anemia is the most common nutritional problem in adolescents, especially young women. Anemia is a continuation of the impact of a deficiency of macronutrients, namely carbohydrates, proteins, and fats, and deficiencies of micronutrients, namely vitamins and minerals. The impact of anemia on young women is stunted growth; the body during the growth period is easily infected, resulting in reduced body fitness/freshness and decreased enthusiasm for learning or achievement. The impact of low iron (Fe) status can lead to anemia with symptoms of paleness, lethargy/fatigue, shortness of breath, lack of appetite, and growth disorders (Barasi, 2009).

THEORETICAL FRAMEWORK

Adolescent girls experience an increased need for iron due to accelerated growth (growth spurt) and menstruation. In addition, young women are usually very concerned about body shape, so many eat inadequate food. As a result, young women are more prone to health problems, including anemia (Sediaoetomo, 2002; Verawaty, 2011).

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METHODOLOGY

The research used was an observational type, with the research method used namely a survey with a cross-sectional design on young women at the Nurul Falah Islamic Boarding School. Do pre and post-tests before and after being given PIO Fe. Measurement of blood HB levels and Compliance with Consuming Fe. Compared to the 2 groups, group 1 was given PIO; Group 2 was not given PIO. PIO is given every week. One tablet weekly and consumed for 8 weeks. The number of samples sampled was 44 young female students.

The instruments used in this study are as follows:

1. Measurement of HB levels using a glucose
2. Microcuvetteused as a tool to take blood samples
3. Lanceta needle used to prick the fingertip
4. Lancing device, namely a tool that is used as a place for needles to make it easier to stick a finger
5. Cotton and alcohol are used as fingertip cleaner
6. The questionnaire was used to see adherence to taking Fe medication

RESULTS

1. Giving PIO on Obedience to Young Women

Table 1. Giving PIO for obedience to young women in Central Bangka Regency

No	Giving PIOs	N	Means
1	Pre test compliance	22	9.36
2	Post test compliance	22	10.23
	Means		-0.864
	Value of t = -2.425		
	Sig. Value (2-tailed) = 0.024		

2. Without being Given PIO on Obedience to Young Women

Table 2. Without being given PIO on adherence to young women in Central Bangka Regency

No	No PIO given	N	Means
1	Pre test compliance	22	8.45
2	Post test compliance	22	8.68
	Means		-0.227
	Value t = -0.326		
	Sig. Value (2-tailed) = 0.747		

3. Providing Information on Fe Drugs on the Effectiveness of Adding Hemoglobin to Female Adolescents

Table 3.Providing information on Fe drugs on the effectiveness of adding hemoglobin to young women in Central Bangka Regency

No	Provision of Fe drug information	N	Means
1	Giving PIOs	22	13.177
2	Without Giving PIO	22	11.155
sig. value Levene's Test for Equality of Variances = 0.818			
	Sig. Value (2-tailed) = 0.000		

DISCUSSION

Discussion Based on Table 1 regarding giving PIO to compliance in young women, it is known that the t count is -2.425, indicating that the pre-test value is smaller than the post-test value. From the results of the paired t-test analysis, it was obtained that the value of p = 0.024 where the value (p <0.05), then Ho was rejected, meaning that there was an average difference in giving PIO on pre-test and post-test compliance in young women in Central Bangka Regency.

The results of research on adherence without PIO Fe to female adolescents showed no average difference without PIO administration to pretest and posttest adherence to female adolescents in Bangka Tengah District.

Adherence to taking Fe tablets is one of the factors considered the most influential in the success of the iron (Fe) supplementation program, in addition to the provision of Fe tablets and their distribution system. The number of young women who are disobedient to the consumption of Fe tablets is due to many factors, such as laziness and side effects that are often felt after taking Fe tablets (Budiarni & Subagio, 2012)

Kurniapuri's research (2015) stated that providing drug information could increase patient knowledge of the proper use of drugs and motivate patients to use drugs by the recommendations given to increase patient compliance and further increase the success of therapy.

Based on Table 2 regarding without giving PIO on compliance in young women, it is known that the t count is -0.227, indicating that the pretest value is smaller than the posttest value. From the results of the paired t-test analysis, it was obtained that the value of p = 0.747 where the value (p> 0.05), then Ho is accepted, meaning that there is no difference in the average without giving PIO on the pretest and post-test compliance in young women in Bangka Tengah Regency.

The importance of giving this iron to someone who is experiencing iron deficiency anemia and there is no absorption disorder is that within 7-10 days, the hemoglobin level can increase by 1.4 mg/KgBW/day (Haryanto, 2006). Giving Fe tablets to young women is very beneficial during menstruation because, at that time, iron loss can occur due to bleeding. Because the average menstrual bleeding 60 ml per month is the same as 30 mg of iron, so women need one milligram of blood supplement tablets daily to maintain the balance (Ministry of Health, 2008).

Yuniarti's research (2015) said that the cause of young women's non-adherence to consuming Fe tablets was the knowledge that young women had about the benefits of Fe tablets consumed and the anemia they suffered from. Individual behavior is influenced by predisposing factors (predisposing), including knowledge. Taking iron tablets can cause annoying side effects, so people tend to refuse the tablets they are given. Enabling factors include the availability of health facilities and infrastructure, and reinforcing factors include family support, support from health workers, and the availability of Fe.

Based on Table 3 regarding the provision of information on Fe drugs on the effectiveness of adding hemoglobin to young women, it is known that the average addition of hemoglobin to respondents who were given PIO was 13,177,

while respondents who were not given PIO were 11,155. The results from the table independent sample test on Levene's Test for Equality of Variances were 0.818 > 0.05, which means that the variance between the groups giving PIO and without giving PIO was homogeneous.

Based on the t-test analysis test results, the value of Sig. (2-tailed) = 0.000 means a significant average difference in the provision of Fe drug information between those given PIO and not given PIO to young women in Central Bangka Regency.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of research and discussion, it can be concluded as follows:

1. There was an average difference in giving PIO Fe to adherence, and without giving PIO, there was no difference in pre-test and post-test compliance in young women in Bangka Tengah District.
2. There is a significant average difference in the provision of Fe drug information between those given PIO and not given PIO to young women in Central Bangka Regency.

FURTHER STUDY

Based on the results of this study, it is hoped that further research will involve other factors influential in increasing hemoglobin

ACKNOWLEDGMENT

Based on the results of this study, it is hoped that researchers will be able to apply anemia patient

REFERENCES

Budiarni W, and Subagio HW, (2012). Relationship of Knowledge, Attitudes, and Motivation with Adherence to Consumption of Iron Folate Tablets in Pregnant Women. Journal of Nutrition College, 1(1): 99-106

Indonesian Ministry of Health. (2008). Program for Overcoming Nutritional Anemia in Women of Reproductive Age (WUS) and Young Women, Directorate of Community Nutrition, Jakarta.

Haryanto, AR, et.al. (2006). Textbook of Internal Medicine Edition 4, Department of Internal Medicine, Faculty of Medicine, Indonesia, Jakarta.

Kurniapuri A, and Supadmi W (2015). The Effect of Providing Information on Antihypertensive Drugs on Compliance with Hypertension Patients at the Umbulharjo I Health Center in Yogyakarta in the November 2014 Period. Pharmaceutical Magazine, Vol. 11 No. 1 of 2015.

Yuniarti, Rusmilawaty., Single (2015). Relationship Between Adherence to Taking Fe Tablets with Anemia Incidence in Young Women at MA Darul Imad, Tatah Makmur District, Banjar Regency. Indonesian Journal of Public Health Publication, Vol. 2 No. 1, April 2015.