THE INFLUENCE OF NUTRITION EDUCATION ON YOUTH WOMEN 'S KNOWLEDGE ABOUT BLOOD ADDED TABLETS AT SMKN 03 PAGUYAMAN KAB BOALEMO

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ABSTRACT

Iron supplement tablets (TTD) are nutritional supplements containing 60 mg of elemental iron and 0.25 folic acid (according to WHO recommendations). TTD when taken regularly and according to the rules can prevent and overcome nutritional anemia. The dosage for giving iron tablets to young women is recommended to consume regularly 1 tablet every week and 1 tablet every day during menstruation. This study aims to determine the effect of nutrition education on female female students' knowledge of iron supplement tablets at SMKN 03 Paguyaman, Boalemo Regency. The method in this study used a quantitative approach with the experimental method *Pre-Experimental Designs* with a *one group pre and post test design research design* . In this study, a pre-test was given before being given treatment and a post-test after being given treatment, but in this design there was no control (comparison) group. The results showed that there was a significant influence before and after nutrition education on female students' knowledge about Blood Supplement Tablets at SMKN 03 Paguyaman Regency with a value of p = 0.004 (p <0.05).

Keywords: Nutrition Education, Knowledge, Young Women, Blood Supplement Tablets

INTRODUCTION

Health and nutrition problems in Indonesia during the First 1000 Days of Life (HPK) Period are the focus of attention because they not only have an impact on maternal and child morbidity and mortality, but also have permanent consequences for the quality of life of individuals into adulthood. The emergence of nutritional problems at the age of children under 2 years is closely related to the health and nutrition preparation of a woman to become a prospective mother, including young women [10].

Adolescence is a transitional period between childhood and adulthood which begins at the time of sexual maturity that is Among age 11 or 12 year until with 20 year, that is approaching period mature young. On period this occur speed growth and development physique, mental, emotional as well as social [11].

Population teenager in Indonesia reach 20% from total population population Indonesia is about 30 million people. *World Health Organization* mentioned that many nutritional problems in adolescents are still neglected because there are still many unknown factors, even though teenager is source power man Indonesia which must protected because potential which very big in effort national quality development . circumstances health and nutrition group

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age 10-24 year in Indonesia still concern [13].

One of the global public health problems is anemia, the largest number of people who experience anemia are women who are not pregnant, namely 468.4 million people. According to the World Health Organization (WHO), anemia in pre-pregnant women is a hemoglobin level of less than 12 gr/dl. So far, iron deficiency anemia is a common cause of anemia. This is detrimental because it can affect morbidity and mortality [12].

The reason why young women don't want to take Fe tablets is between other knowledge nutrition about tablet Fe which relate evaluation cognitive about the advantages and disadvantages of consumption of Fe tablets. Behavior consuming Fe tablets related to desire and intention in adolescents after knowing Fe tablets (Permaesih & Herman, 2018). The results of Weliyati & Riyanto's research (2018) were mostly (96.4%) teenager Princess which Becomes sample study no wish consume supplement substance iron During menstruation, due to lack of knowledge about prevention anemia in moment teenager Princess experience menstruation [7].

Data Riskesdas 2018 show that the prevalence of anemia in WUS aged 15 years and over was 8.1% while pregnant women are 6.9%, whereas according to data from the Gorontalo Provincial Health Office it shows that the prevalence of anemia in WUS aged 15 years and over was 16.4% , while pregnant women were 5.66%, and based on data from the Boalemo District Health Office it showed that the prevalence of anemia in WUS aged 15 years and over was 3.81% , while pregnant women are 25.7% [10]

Adolescent girls at puberty very risky experience anemia nutrition iron. Thing this caused how much iron is lost during menstruation Moreover it is exacerbated by a lack of iron intake, where iron in young women is very high needed body for acceleration growth and development [11].

THEORITICAL REVIEW

Education is an effort that is planned to influence a person, be it an individual, group or society with the aim that that person does what is expected by the educator. Nutrition education is an educative approach to produce the individual/community behavior needed to improve or maintain good nutrition [6].

In addition, education is the provision of one's knowledge and abilities through learning, as a result of which a person or group of people who receive education can do as expected by educators, from those who do not understand to understand and those who are unable to cope with their own health to be able to cope independently [5] .

Based on data from the Bongo Zero Health Center, Kec. Paguyaman District of Boalemo 20 20 prevalence anemia on teenager 30 %. The amount incident case Anemia in female students shows that there is still a lack of consumption of substances iron nutrition (Fe) in teenagers Princess [9]

Based on area data work Public health center The Bongo Zero Health Center has 2 high schools, the results of the health screening were obtained

incident anemia on month February 2 020 that is female student SMK N 3 Paguyaman as many as 35 out of 118 students, SMAN 2 Paguyaman as many as 15 out of 130 students, Percentage of anemia cases shows that the most cases are in SMK N 0 3 Paguyaman is 35 case (50 %) [9].

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Educational Method

According to previous research, education/educational methods are classified into 3 parts, namely: [12]

1) The method is based on an individual approach.

   This method aims to lead new behavior so that the individual wants a new change or innovation. The basis for using this method is that a person must have various problems associated with changing the behavior. Approach methods that can be used in this case are guidance and counseling as well as interviews.

2) The method is based on a group approach.

   The method used in this counseling is in groups. In this case the promoter does not need to look at the size of the target group and their level of education.

   a) Large group means that counseling participants must be > 15 people. In large groups, the appropriate method is:
      (1) Lecture
      (2) Seminar

   b) Small Group

      These groups are usually less than 15 people. The appropriate method for this group is:
      (1) group discussion
      (2) Brainstorming(Brain storming).
      (3) Snow ball (Snow balling).
      (4) Small groups (Buzz group).
      (5) Playing a role (Role play).
      (6) Simulation games (Simulation games).

3) The method is based on the mass (Public) approach.

   The purpose of this method is general regardless of age, gender, occupation, social status, and level of knowledge, therefore the message conveyed must be designed in such a way as to be accepted by the masses. The following are some examples of methods that are suitable for the mass approach method.

   a) Public lectures (Public speaking).
   b) Speech or discussion.
   c) Simulation
   d) Writing or magazine
   e) Billboards

Knowledge

Knowledge is a result of knowledge from humans on the combination or cooperation between a subject who knows and an object that is known. All that is known about a particular object . According to previous research , knowledge is the result of human sensing, or the result of knowing someone about an object through the senses they have (eyes, nose, ears, and so on). So knowledge is a variety of things that are

obtained by someone through the five senses.[8]

There are 4 levels of knowledge, namely descriptive knowledge, causal knowledge, normative knowledge and essential knowledge. Descriptive knowledge is a type of knowledge which in the way it is conveyed or explained in an objective manner without any element of subjectivity. Causal knowledge is knowledge that provides answers about cause and effect. Normative knowledge is a knowledge that is always related to a standard and norms or rules. Essential knowledge is a knowledge that answers a question about the nature of things and this has been studied in the field of philosophy. According to previous research [14] , a person's knowledge of objects has different intensities, and explains that there are six levels of knowledge, namely as follows:

1) Know *(know)*
   Know is defined as remembering a material that has been studied previously. Also known as *recall* towards something specific to a material being studied or stimulation which already received.
2) Understand
   Understand interpreted as something ability explain in a manner Correct, about object which is known and could interpret Theory the in a manner Correct. Person which has understand to object or Theory the must could explain, mention example, conclude, predict,and etc to object studied.
3) Application
   Application is defined as the ability to use the material what has been learned in *real* (actual) situations or consultations. Application this could interpreted application or use law, formulas, methods, principles, and so on in contexts or situations another.
4) Analysis
   Analysis is the ability to describe material or something object to in component, but still in in structure organization the, and still there is connection one same other. This analytical ability can be seen from the use of the word because could describe, differentiate, and group.
5) Synthesis
   Synthesis show on something ability for doing or connect part something form whole which new. With say other synthesis that something ability to construct new formulations from existing formulations there is.
6) Evaluation
   Evaluation this related with ability for To do justification or evaluation to something Theory or object. This assessment is based on a self-determined criteria or use criteria which existed before.

According to previous research [14] , the factors that influence knowledge are as follows:

1) Level Education
   Low education will affect the level of knowledge which is obtained. The higher the education, the more knowledge obtained will the more many, also on the contrary.
2) Status Social Culture

Status social culture also participate influence level knowledge somebody with status which different so knowledge which even obtained

different.

3) Environment
   Environment is whole condition which there is around human beings and their influences on development knowledge and behavior people or group.
4) Means and Infrastructure
   With the infrastructure that supports the knowledge that will be obtained will be greater when compared with lack of means and infrastructure .

Teenager

Adolescence can also be defined as a period of transition from children going to mature. In period transition the which accompanied with enhancement hormonal which enough as well as enhancement nutrition which obtained, so happen change-change internal (change physique and psychic) nor external changes (psychosocial changes). However physical changes impressed faster rather than change psychosocial.

Adolescence is a period of transition from children to adulthood. The process of reaching maturity is usually marked by puberty which is closely related to changes in physical and psychological aspects. Changes in the physical aspect are the most important because they take place quickly, drastically and are in the reproductive organs. The reproductive organs require special care. Knowledge and good care are determining factors in maintaining reproductive health. Adolescent reproductive health is a healthy condition involving the reproductive system, functions and processes possessed by adolescents [2].

Body Health World (WHO) define teenager as the age period between 10 - 20 years and dividing the age period the in two part that is teenager beginning 10-15 year and late teens 15-20 years. Nonetheless, as a guide general we can use limitation age 11- 24 year and not yet marry for teenagers Indonesia.

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Stages of Adolescent Development

There is three Step development teenager in process adjustment self going to maturity that is :

1) Teenager early (*ealy adolescence*)
   A teenager at this stage is still amazed change which occur on her body alone and encouragement- the impetus that accompanied the change. they develop thoughts new, fast interested on opponent type and easy stimulated in a manner erotic, also decrease control to "ego" cause para teenager beginning this difficult understand and understandable person mature.
2) Remaja madya (*middle adolescence*)
   On Step this teenager very need guys. He happy if many friend which love it. There is trend "narcissistic" that is love self alone with like friends who have the same characteristics with himself. Moreover he was in a state of confusion because of her don't know which one to choose; sensitive or not

caring, many- crowded or alone, optimistic or pessimistic and etc.

3) Teenager end (*late adolescence*)
   This stage is the consolidation period towards the adult period marked with achievements five Thing that is ;
   a) Interest which more steady to functions intellect
   b) His ego seeks opportunities to unite with people person other and in experiences new.
   c) formed identity sexual which no will changed again
   d) Egocentrism (too concentrate attention on self alone) replaced with balance Among interest self alone with person other.

Blood Supplement Tablets

Iron supplement tablets (TTD) are nutritional supplements containing 60 mg of elemental iron and 0.25 folic acid (according to WHO recommendations). TTD when taken regularly and according to the rules can prevent and overcome nutritional anemia. The recommended dose of iron tablets for young women is to consume 1 tablet every week and 1 tablet every day during menstruation [13].

Blood supplement tablet supplements are given to prevent young women from the risk of iron anaemia. The consumption of iron tablets is strongly influenced by the awareness and compliance of young women. Awareness is a supporting factor for young women to consume well. Compliance is influenced by several factors including tablet shape, color, taste, and side effects of blood supplement tablets [14] besides that the level of knowledge is also related to adherence to taking iron tablets .

Benefits of Iron Tablets Add Blood

According to previous research [2] the benefits of Blood Add Tablets are as follows:

1) Replacement of iron lost with blood in women and girls during menstruation.
2) A substitute for iron for pregnant and lactating women, so the need for iron is very high which needs to be provided as early as possible since adolescence
3) Treat women and girls who suffer from anemia
4) Improving learning ability, work ability and quality of human resources as well as the next generation.
5) Improving the nutritional and health status of young women.

METHODOLOGY STUDY

This study used a quantitative approach with the experimental method *Pre-Experimental Designs* with the research design *one group pre and post test design* . This method was used because in this study the sample was not randomly selected. This type of research is analytic experimental research with a quantitative approach. According to previous research [4] Quantitative research is research that places more emphasis on information expressed in a number form, where the number represents a variable. This study aims to determine the effect of nutrition education on female students' knowledge of the tablet added virgin at SMKN 03 Paguyaman, Boalemo District.

This research was conducted from 01 September to 31 October 20 22 . This research was conducted at SMK KN 0 3 Bongo Zero Kec. Paguyaman Kab.

Boalemo.

The population in this study were all female students (rematri) class X, XI and XII (Ten , Eleven and Twelve) SMK N 0 3 Paguyaman with a total of 118 students with a total sample of 35 respondents. Data analysis was performed using univariate and bivariate using SPSS 21.0 for Windows.

RESULTS AND DISCUSSION

1. Univariate analysis

a. Characteristics of Respondents

The characteristics of the respondents shown include the age category of the respondents and the class of respondents at SMKN 3 Paguyaman, Bolemo Regency.

Distribution of Vulnerable Age Characteristics a Respondent n

Source: Data Primary, 2022

Based on the table above, it can be seen that most of the young women who were sampled belonged to the early adolescent category (10-15 years), namely as many as 21 people with a percentage of 60%, while late adolescents (15-20 years) totaled 14 people with a percentage by 40%. In class characteristics, it can be seen that the number of respondents is distributed over three classes, namely class X as many as 13 people with a percentage of 37.1%, class XI as many as 15 people with a percentage of 42.9% and class XII as many as 7 people with a percentage of 20%.

b. Characteristics of Knowledge Respondents

The characteristics of the respondent's knowledge displayed include before and after being given nutrition education on the knowledge of young female students about blood-boosting tablets at SMKN 03 Paguyaman, Boalemo Regency, which can be seen in the following table :

Distribution Characteristics Respondent Knowledge

	Variable	N	%
1	Prior Knowledge	8	
	- Well	23	22.9 %
	- Enough	4	65.7 %
	- Not enough	35	11.4 %
	Amount		100 %
2	After Knowledge		
	- Well	26	74.3 %
	- Enough	9	25.7 %
	- Not enough	0	0 %
	Amount	35	100 %

Source: Data Primary, 2022

Based on the table above, it can be seen that before being given nutrition education on the knowledge of female

	Variable	N	%
1	Age category		
	- Late Teens	14	40 %
	- Early Teens	21	60 %
	Amount	35	100 %
2	Class Category		
	- Class XII	7	20 %
	- Class XI	15	42.9 %
	- Class X	13	37.1 %
	Amount	35	100 %

female students about iron supplement tablets, only 8 respondents had knowledge in the good category with a percentage of 22.9%, while those who had knowledge in the sufficient category the number is more, namely as many as 23 respondents with a percentage of 65.7% and those who have knowledge in the less category total 4 respondents with a percentage of 11.4%. However, after being given nutrition education on the knowledge of young female students about iron tablets there was an increase where most of the

respondents had knowledge in the good category as many as 26 respondents with a percentage of 74.3%, while those who had knowledge in the sufficient category were 9 respondents with a percentage of 25.7 %.

2. Bivariate Analysis

The influence of nutrition education on the knowledge of female students about Blood Supplement Tablets which is displayed includes the *pretest* and *posttest* can be seen in the following table :

The Effect of Nutrition Education on Knowledge of Young Women Students

Variable	Means	Standard Deviation	Standard Error	Sig/ P value	N
Pretest	68,28	12,715	12.71	0.004	35
Posttest	79,14	9,194	9,19		35

Source: Data Primary, 2022

Based on the above, the mean or average value of the respondents before education was 68.28 which means the category is poor while after education it increases to 79.14 which means the category is good. The p-value between before and after counseling obtained a significance value of 0.004 or a probability value of <0.05, thus indicating that there was a significant effect between before and after nutrition education on female female students' knowledge of blood-boosting tablets at SMKN 03 Paguyaman, Boalemo Regency.

DISCUSSION

1. The Influence of Knowledge of Young Female Students Before and After Being Given Nutritional Education About Blood Supplement Tablets

Based on the results of the study, the average before carrying out nutrition education on the knowledge of young female students about blood-supplementing tablets was in the sufficient category with a percentage of 65.7% . Thus these results indicate that the knowledge of female students about iron tablets at SMKN 03 Paguyaman needs to be educated. After the education was carried out, there was an average increase in the knowledge of female students about blood supplement tablets in the good category with a percentage of 74.3%. So from this study it is assumed that young women who have sufficient or insufficient levels of knowledge will be at greater risk for not taking iron supplement tablets and tend to be wrong in choosing good food intake for the iron needs needed in the body compared to young women who have poor knowledge. good.

The results of this study are in line with previous studies [5]. regarding nutrition education on video-based anemia knowledge, obtained an average score of knowledge of young women before education of 52.00%, after being given education, the average score of knowledge of young women increased to 83.60 which means there was a significant difference in knowledge of young women between before and after given video-based education about anemia.

According to previous research [3] knowledge about nutrition will affect one's consumption pattern. Knowledge about anemia and low nutrition in adolescents will lead to deviant consumption choices in adolescents. So that the intake of incoming nutrients will not meet the needs, especially the need for

iron.

1. **The Influence of Nutrition Education on Young Female Students' Knowledge About Blood Supplement Tablets**

Based on the results of the study, it was shown that there was an effect of nutrition education on female students' knowledge of blood supplement tablets based on the p-value between before and after education to obtain a significance value of 0.004 or a probability value of <0.05.

From the results of this study it can be assumed that by educating young women about blood-supplementing tablets, it will affect their knowledge which can later be applied in everyday life to realize nutritional needs. Education is something that plays an important role in the growth and development of children, adolescents, until they reach maturity. Even more than that, with the knowledge they have, they will certainly pass it on to their relatives by providing information and understanding about health to find out the benefits of iron tablets to avoid certain diseases and can improve family health status.

This is in line with previous research [5] in his research which concluded the same thing, obtained an average score of knowledge of young women before being given nutrition education of 5.1% after being given nutrition education, the average score of knowledge of young women increased to 8 .71%, with a p-value <0.05 which means that there is a significant difference in the knowledge of young women between before and after being given nutrition education. The same thing was conveyed in his research, namely that there was a difference in the average score of knowledge before and after being given education about anemia which was originally 69.88% to 77.70% meaning that there was an effect of education on nutrition education on knowledge with a value (p <0.05).

Nutrition education about blood supplement tablet knowledge is very much needed which aims to provide knowledge to young women, so that the educated young women will get a complete understanding of the benefits of blood supplement tablets and a healthy lifestyle, with the hope that these young women will adopt new behaviors that good, especially in terms of taking iron tablets.

Behavior based on knowledge will last longer than behavior that is not based on knowledge. or the result of knowing someone about an object through the senses they have (eyes, nose, ears, and so on). Most of a person's knowledge is obtained through the sense of hearing (ears) and the sense of sight (eyes). A person's knowledge of objects has different intensities or levels [6].

Knowledge has an influence on a person's attitude according to *Precede theory* , knowledge is a predisposing factor, namely a factor that facilitates the occurrence of a person's behavior. the level of knowledge is included in the information factor that influences a person's beliefs then will influence attitudes so that they will have the intention to behave.

This study has limitations that may affect the results of the study, these limitations are:

1. The more intensity of education that is

carried out, the results obtained will be better.

2. The conceptual framework used in this study only connects variables that are thought to have a relationship with the dependent variable, so there are still other possible variables that have not been included in the conceptual framework.

CLOSING

Conclusion

1. The average effect of the knowledge of young female students before being given education about iron tablets was 68.28% in the sufficient category.
2. The average effect of the knowledge of young female students after being given education about iron tablets was 79.14% in the good category.
3. There was a significant influence between before and after nutrition education on female students' knowledge of iron supplement tablets at SMKN 03 Paguyaman, Boalemo Regency, with a value of p=0.004 (p<0.05).

Suggestion

1. For health workers, to be able to carry out nutrition education activities on a regular basis to increase the knowledge of young female students about iron tablets.
2. For female female students, it is hoped that they can maintain food consumption patterns so that the nutritional intake in the body can be fulfilled properly.
3. For researchers, so that it can become material for scientific development studies to add information about nutritional education for young women about iron tablets.

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