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THE INFLUENCE OF KNOWLEDGE AND PHYSICAL ACTIVITY ON THE NUTRITIONAL STATUS OF ADOLESCENTS

Nur Arifatus Sholihah[1]*, Kurnia Bend. Yunita Pellondou[2], Camelia Bakker[2]
[1]S1 Public Health, STIKES Griya Husada Sumbawa, Jl. Kebayan, Brang Biji, Sumbawa, Nusa Tenggara Barat 84312, Indonesia
[2]D3 Nursing, STIKES Maranatha Kupang, Jl. Kampung Bajawa, Nasipanaf, Baumata Barat. Aebenu, **Kupang**, Nusa Tenggara Timur 85360, Indonesia
*arifatus93@gmail.com

ABSTRACT
Adolescence is a period where a person experiences a transition period in his life as preparation for adulthood. During this period, adolescents experience a change from child behavior to adult behavior. Judging from the changes, teenagers are experiencing physiological and psychological transitions. Adolescence is a time when many problems can arise, including nutritional needs. Nutritional problems among teenagers that are still common in Indonesia include anemia, stunting (a condition where children stop growing as they get older), wastismang (thin), and obesity (fat). The aim of the research carried out was to determine the effect of knowledge of nutritional action materials on adolescents. The type of research used is descriptive research with a cross sectional approach. The sample in this study was 30 Almuhajirin High School students. The variables studied were knowledge about nutrition and physical activity. Data processing was analyzed descriptively. The influence of knowledge and physical activity on nutritional status using the Chi Square method. The results of the research conducted showed that the pre-test was 47% and the post-test was 56.9%, indicating that there was an influence of advice to expand knowledge as an effort to improve adolescent nutrition. It can be concluded that the higher the level of knowledge about nutrition and physical activity of students, the better their nutritional status will be.

Keywords: adolescents; knowledge; nutritional status; physical activity

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INTRODUCTION

Indonesia is a country whose health problems not only include energy and protein deficiencies such as underweight and stunting, but also excess nutrition and micronutrient deficiencies. One problem of micronutrient deficiency that continues to be a challenge today is anemia. Health behavior is basically a person's response (either passive or active) to stimuli related to illness or disease, the health care system, diet, or the environment. An important aspect of health behavior is the issue of forming and changing behavior. Because changing behavior is the goal of education and the younger generation.

The results of the 2018 Basic Health Survey (Riskesdas) showed that anemia was recorded in 26.8% of children aged 5 to 14 years and 32% of children aged 15 to 24 years. This means that around 3 out of 10 children in Indonesia suffer from anemia. Anemia can cause other health problems such as stunted growth. Pregnant women with anemia may give birth to

babies who are stunted. Cases of anemia are closely related to compliance with taking blood transfusion tablets (TTD), especially in young mothers and pregnant women.

Anemia can cause other health problems such as stunted growth. Pregnant women with anemia may give birth to babies who are stunted. Cases of anemia are closely related to compliance with taking blood transfusion tablets (TTD), especially in young mothers and pregnant women. Nutritional problems that still occur in teenagers include anemia, a disease where the number of red blood cells in the body does not match the normal number of red blood cells. The red blood cell content in men and women is different. According to the Household Health Prevalence Survey, the prevalence of anemia in Indonesia is still quite high, namely around 40.1%. The Ministry of Health also reported that 45.8% of adolescent boys and 57.1% of adolescent girls suffered from anemia. The data above shows that young women are more susceptible to anemia. Women's menstrual cycles are one of the causes of many young women suffering from anemia, especially since knowledge about anemia is still limited.

Riskesdas 2018 data shows that the number of anemia sufferers in Indonesia is still high, namely 32% among young people. This figure means that 3 to 4 of every Indonesian teenager suffers from anemia. Another factor that contributes to the high rate of anemia in adolescents is food intake with less than optimal absorption of nutrients and lack of physical activity. According to the Ministry of Health, stunting is a medical problem characterized by the body not getting nutrition for a long period of time because the food consumed does not contain sufficient nutrients for the body. The main nutritional problem in developing countries is malnutrition or stunting (Fatimah, 2010). Simply put, stunting is a growth disorder caused by various factors that directly affect the body's metabolism.

Riskesdas data in 2018 found that there were 25.7% of teenagers suffering from stunting aged between 13 and 15 years, and 26.9% of teenagers aged between 16 and 18 years. As seen in the 2013 Risksudas data, this figure decreased to 37.2% at that time, while in the 2018 Risksudas data it fell to 30.8%. Adolescents who experience stunting usually have physical limitations and abnormal behavior, and are often bullied by their peers. They have difficulty building self-confidence, suffer from anxiety, and prefer to be alone to the point of experiencing depression (Segal & Webb, 2015). Even ordinary people often hear about obesity. Obesity is known as an unresolved nutritional problem and continues to increase every year in both developed and developing countries. The problem of obesity is one of the main causes of death throughout the world, because obesity is a risk factor for type 2 diabetes, coronary heart disease, high blood pressure and various types of cancer. An imbalance between energy intake and expenditure causes obesity.

Riskesdas data from 2013 shows that the number of obesity sufferers in Indonesia is still very high, especially among teenagers aged 13 to 15 years, where 16% of them suffer from obesity, of which 11.2% suffer from extreme obesity and 4.8% suffer from extreme obesity. overweight.overweight (obesity). Meanwhile, the obesity rate among adolescents aged 16 to 18 years is 13.5%, of which 9.5% are obese and 4.0% are overweight (obese). However, it turns out that excessive spending is still an unresolved health problem. The direct factors causing weight loss are inadequate food intake and infectious diseases. Wasting not only occurs in children, but also occurs in teenagers. Apart from that, indirect factors that cause wasting include family food security, health services, parenting patterns, and an environment that does not meet children's nutritional needs (De Onis & Branca, 2016). Therefore, the aim

of this research is to determine the influence of knowledge and physical activity on the nutritional status of adolescents.

METHOD

This research was carried out in February 2024 at SMAN 1 Sekongkan. The type of research used is descriptive research with a cross sectional approach. The sample in this study was 30 Almuhajirin High School students. The variables studied were knowledge about nutrition and physical activity. Data processing was analyzed descriptively. The influence of knowledge and physical activity on nutritional status using the Chi Square method. The population of this study were all students. The research sample consisted of 30 students, 12 boys and 18 girls, aged 16 to 17 years. The data collection technique in this research was to measure the respondents' height and weight to determine their body mass index (BMI). We also distributed questionnaires containing questions regarding nutritional knowledge and physical activity to 30 students. Data on age, gender and physical activity were collected by filling out questionnaires before and after the test which were distributed directly to respondents.

RESULTS

Table 1.
Gender of Respondents

Jenis Kelamin	f	%
Man	12	40
Women	18	60

Table 1. It was found that the gender of the research respondents who were the most research subjects in counseling was female on the Influence of Knowledge and Physical Activity on the Nutritional Status of Adolescents at Almuhajirin High School. The percentage of female students was 60% of the 30 research samples.

Table 2.
Physical Activity of Respondents

Category	f	%
Heavy	3	10
Currently	18	60
Light	9	30

Table 2 shows that the percentage of physical activity most frequently carried out by respondents was moderate activity, namely 60%. Then, followed by light activity at 30%, and only a few teenagers doing heavy activity at 10%.

Table 3.
Pre-Test Knowledge

Category	f	%
Good	10	33,3
Pretty Good	12	40
Not Good	8	26,7

The table 3, explains the results obtained by researchers, namely the percentage of knowledge of teenagers in the good category with 33.3%. Then the results were quite good, namely 40% and followed by the less good category with a percentage of 26.7%.

Table 4.
Post-Test Knowledge

Category	f	%
Good	16	53,3
Pretty Good	11	36,7
Not Good	3	10

The table 4 shows the results of the answers to the post-test questionnaire after the counseling was carried out, with a percentage of 53.3% with a good category indicating that students understood the material that had been given, then a percentage of 36.7% indicating that respondents had fairly good knowledge, and the poor category good as much as 10%.

DISCUSSION

Gender

Based on the research results, it was found that the gender of respondents who were the most research subjects in counseling was female on the Influence of Knowledge and Physical Activity on the Nutritional Status of Adolescents at Almuhajirin High School. The percentage of female students was 60% of the 30 research samples. Women are the category most involved because they experience nutritional problems. Women's nutritional needs tend to be less than men's, but they have the greatest risk of experiencing problems such as overweight and obesity. Adolescent girls who suffer from anemia are at greatest risk because they have a uterus in which the fetus develops from the food and drink consumed by the mother. Insufficient nutritional adequacy will also affect the incidence of stunting in babies, so there is a need for early detection and involving the female gender to measure nutritional status based on standards from the Indonesian Ministry of Health (Ministry of Health of the Republic of Indonesia, 2024).

Respondents' Physical Activity

Based on the results of the research on the physical activity category, it was found that the percentage of physical activity most frequently carried out by respondents was moderate activity, namely 60%. Then, followed by light activity at 30%, and only a few teenagers doing heavy activity at 10%. Adolescents' physical activity to some extent influences nutritional status because human movement can burn and reduce body weight. According to DJoko Pekik Irianto (2000:5), to get good physical fitness, you can do physical activity, starting from light, but doing it consistently so that you get significant positive results for your health. According to his theory, a behavior that is carried out repeatedly can make the behavior permanent or in everyday language, namely a habit. With increasing fitness levels, teenagers become more active and have better enthusiasm and learning achievements. A person's physical fitness is influenced by several things, including: 1) diet, 2) rest and 3) regular physical activity. To achieve a good level of fitness, these three points must be done well.

Physical activity is the basis for determining nutritional status, for example, healthy teenagers are able to do relatively heavy work in a short time, then the speed and quantity of these activities is extraordinary. In accordance with the standards for measuring physical fitness, the respondents who were measured turned out to often do sports. This activity cannot be separated from encouraging nutritional intake. Data on the time needed to do physical activity shows that work or study activities require the longest time. Meanwhile, the MET value of total activities while studying with recreation and transportation is not much different. This shows that students tend to have little free time and their activities while studying tend to be passive. The results of the relationship between physical activity and nutritional status are in line with research conducted by Serly (2015) in Riau which stated that there was a significant relationship between physical activity and nutritional status. Another study in America stated

that there was a relationship between physical activity and nutritional status based on body mass index in adolescents. Data testing used Chi Square and Spearman analysis (Sulemana, 2006).

***Pre-Test and post-Test* Knowledge (Before and after Counseling)**

Based on the research results obtained by researchers by distributing questionnaires, the results of the pretest questionnaire answers were that the percentage of knowledge of teenagers in the good category was 33.3%. Then the results were quite good, namely 40% and followed by the less good category with a percentage of 26.7%. The pre-test knowledge carried out by the research showed good results so it can be said that the research results when distributing the questionnaires were good. The results of the post-test questionnaire answers after counseling had a percentage of 53.3% with a good category indicating that students understood the material that had been given, then a percentage of 36.7% indicating that respondents had fairly good knowledge, and a poor category of 10 %. Judging from the increase in the pretest and posttest, there is an increase in knowledge based on the pre-test and post-test, namely the percentage of knowledge in the good category is 20%. This means that the counseling carried out by the research team was successful in providing knowledge and material on the nutritional status of teenagers at Almuhajirin High School. This can be caused by several factors, for example the student's educational background and social life. The results of the relationship between the level of dietary knowledge and nutritional status are in line with research conducted by Adhitya (2012) which states that there is a significant relationship between dietary knowledge and nutritional status.

CONCLUSION

The results of research conducted at Almuhajirin High School, as follows, show that: The number of samples used in this research was 30 respondents. The gender sample used to determine the nutritional status of adolescents is 60% female. Most respondents at Almuhajirin High School had good pre-test and post-test knowledge, namely 33.3% and 53.3%. The results of the analysis of respondents at Almuhajirin High School who had fairly good pre-test and post-test knowledge were 40% and 36.7%. Meanwhile, Almuhajirinsma High School respondents who had poor pre-test and post-test knowledge were 26.7% and 10%.

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