

THE EFFECT OF NUTRITIONAL EDUCATION WITH VIDEO MEDIA ON KNOWLEDGE, ATTITUDES AND ACTIONS TEENAGERS ON BALANCED NUTRITION AT SMPN 2 TABANAN

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ABSTRACT

Background: The diet of teenagers are not proportional and does not implement balanced nutrition, thereby increasing the risk of being overweight, overweight and obese. According to several studies, teenagers' lack of knowledge about nutrition, attitudes and eating habits that are not in accordance with balanced nutrition causes unbalanced eating patterns in teenagers. To overcome this problem, innovative interventions are needed, one of which is education using video media. The aim of this research is to determine the differences in knowledge, attitudes and actions of teenagers regarding balanced nutrition at SMPN 2 Tabanan before and after education using video media.

Method: This type of research is quasi-experimental with a One Group Pretest-Posttest design with a sample size of 43 samples. Data was collected by filling out a questionnaire and then analyzed using the Wilcoxon test.

Results: The results showed that the average knowledge score before and after the intervention was 40.61 to 68.16. The average attitude score before and after the intervention was 76.49 to 79.86. The average action score before and after intervention was 61.54 to 70.30. Based on the results of the Wilcoxon test, it is stated that there is an influence of nutrition education using video media on knowledge, attitudes and actions with a p-value <0.05.

Conclusions: Suggestions that can be made are the use of video media as a student learning media and nutrition education media.

Keywords: Nutrition education; video media; balanced nutrition; knowledge; attitudes; actions

INTRODUCTION

Adolescence is a transition period from childhood to adulthood. The period of growth and development that is occurring in adolescents must be accompanied by adequate food consumption (Ministry of Health of the Republic of Indonesia, 2021). A baseline survey conducted by UNICEF in 2017 showed that adolescents experienced changes in their diet and their physical activity levels. Teenagers spend most of their free time on unproductive activities. Teenagers who regularly consume cakes, moist bread, fried foods and crackers constitute a third of the population, while the other third consume factory-made snacks or processed foods (Ministry of Health, 2017).

The diet of teenagers are not proportional and does not implement balanced

nutrition, thereby increasing the risk of being overweight, overweight and obese. According to data from the 2018 Basic Health Research in Bali Province, teenagers aged 10-14 years consume fruit and vegetables every week with a proportion of 1-2 portions 68.87%, 3-4 portions 13.23%, more than 5 portions 3.06 %, and not consuming 14.83%. The results of research by Emi Tariandini (2018) showed that 79 samples (88.8%) consumed fast food frequently, and 10 samples (11.2%) had the frequency of fast-food consumption classified as infrequent.

According to several studies, teenagers' lack of knowledge about nutrition and eating habits that are not in accordance with balanced nutrition cause unbalanced eating patterns in teenagers. One of the indirect causes of malnutrition in teenagers is their lack of knowledge about balanced nutrition.

However, nutritional education can increase knowledge so that it can prevent malnutrition and meet nutritional needs. One way to prevent nutritional problems in teenagers is to provide nutritional education. With the help of media, nutrition education can simplify and clarify the audience's understanding of what is being conveyed. This can also help educators in delivering material (NRD Safitri & Fitranti, 2016).

In conducting education, various types of media can be used, one of which is video media. Based on research Sartika & Purnanti, (2021) The results showed that video educational media is more effective because it can use the senses of sight and hearing. Education in this research was carried out in stages, namely 3x and 1x every week. This research was conducted on junior high school teenagers because they are still growing, so knowledge and attitudes regarding balanced nutrition are needed to achieve optimal health so that the nation's next generation will be better.

This research aims to determine the effect of nutrition education using video media on teenagers' knowledge, attitudes and actions regarding balanced nutrition at SMPN 2 Tabanan.

METHODS

This type of research is a quasi-experiment with a One Group Pretest-Posttest design. This research was carried out in January - March 2024, with the research target being class VIII students at SMPN 2 Tabanan aged 12-15 years. The sample size was calculated using the Slovin formula with a deviation degree of 15% and 10% estimated drop out, resulting in a sample size of 43 samples. Sampling used probability sampling techniques, with inclusion criteria: registered as a class VIII student for the 2023/2024 academic year and willing to be a research sample. The exclusion criteria were students who were not present during data collection

and students who withdrew from being the research sample.

The data collected consisted of respondent characteristics (gender, age and parents' occupation), pretest and posttest data on knowledge, attitudes and actions of the sample regarding balanced nutrition. The pretest and posttest data will each be presented as a percentage and then categorized into Good = 76%-100%, Fairly good = 56%-75%, Not good = 40%-55% and Bad = <40%.

This research was carried out by providing intervention 3x once a week with the first week's material regarding teenagers and adolescent nutritional adequacy. The second week is with material on balanced nutrition guidelines and general messages on balanced nutrition and the third week is with material on balanced nutrition tumpeng and the contents of my plate.

Data on sample characteristics and pretest were carried out before the first intervention and posttest were carried out after the third intervention. For each intervention given, the sample will fill out a Google form to ensure the sample has watched the video. This research has been approved by the Denpasar Ministry of Health Polytechnic Ethics with number DP.04.02/F.XXXII.25/0693/2023.

Data analysis using statistical programs. Normality test analysis using Kolmogorof-Smirnov in SPSS to determine whether the data is normally distributed or not. Descriptive analysis is used to determine the distribution and percentage of pretest and posttest scores. Wilcoxon test analysis was used because the data in this study was not normally distributed.

RESULTS AND DISCUSSION

3.1 Sample Characteristics

Sample characteristics were categorized into several categories, namely, gender, age and parental occupation. Based on the results of data collection, it was found that

most of the samples were female, namely 24 people (44%), with the largest sample age being 14 years, 23 people (53%). And judging from the parents' occupation, most of the sample's parents worked as private employees, 19 samples (44%).

Table 1. Distribution of Sample Characteristics

Characteristics	n	%
Gender		
Man	19	44.0
Woman	24	56.0
Amount	43	100.0
Age (Years)		
13	18	42.0
14	23	53.0
15	2	5.0
Amount	43	100.0
Parents' job		
Civil servants	6	14.0
Self-employed	14	33.0
Private employees	19	44.0
Farmer	3	7.0
Laborer	1	2.0
Amount	43	100.0

3.2 Sample Knowledge

The increase in knowledge scores after being given nutrition education using video media shows that the sample received and understood the information via video so that there was an increase in scores where before the intervention the sample's knowledge was in the good category by 0% to 33% after the intervention. Can be seen in the following table:

Table 2. Distribution of Changes in Sample Knowledge

Knowledge	Before		After	
	n	%	n	%
Good	0	0.0	14	33.0
Fairly good	2	5.0	21	49.0
Not good	18	42.0	8	19.0
Bad	23	53.0	0	0.0
Total	43	100.0	43	100.0

The difference in the average knowledge score before and after the intervention was 27.55 from the average score before the intervention of 40.61 to 68.16 after the intervention. This research is also in line with research (Ramadhanti et al., 2022) which states that knowledge before the intervention was good (25%) and poor (75%), after being given the intervention there was an increase in knowledge, namely good (91.7%) and poor good (8.3%) with an average knowledge value

before intervention of 68.75 and after intervention increasing to 86.04.

Table 3. Differences in Sample Knowledge Before and After Intervention

Knowledge	n	Mean	p-value
Before	43	40.61	0.001
After	43	68.16	

This research obtained a p-value of 0.001 ($p < 0.05$) based on the Wilcoxon test analysis which showed that the hypothesis was accepted, namely that there was a difference in knowledge before and after nutrition education with video media about balanced nutrition, which means that nutrition education with video media had an effect on teenagers' knowledge about balanced nutrition. This is in line with research (Suprpto et al., 2022) that the results of the Wilcoxon statistical test have increased with a p-value of 0.000 (≤ 0.05) which shows the influence of video media education on the knowledge of Sandi Karsa Makassar Polytechnic students.

3.3 Sample Attitudes

The results of this study show that the sample's attitude has improved, where before the intervention the sample's attitude was in the good category by 70% to 86% after the intervention. In line with Syakir (2018) who says that when someone has heard information several times, an attitude will develop as a result of creating understanding. Because attitude is a person's reaction or response that is still closed to stimuli or objects as well as ways of evaluating things around them, so the experience they have is one of the determining factors in changing their attitude.

Table 4. Distribution of Sample Attitude Changes

Attitude	Before		After	
	n	%	n	%
Good	30	70.0	37	86.0
Fairly good	13	30.0	6	14.0
Total	43	100.0	43	100.0

The difference in the average attitude score before and after the intervention was 3.37 from the average score before the intervention of 76.49 to 79.86 after the intervention. This research is also in line with

research (VA Safitri et al., 2021) who stated that the attitude before the intervention was good (58.3%) and not good (41.7%), after the intervention there was an increase, namely good (91.7%) and not good (8.3%).

Table 5. Differences in Sample Attitudes Before and After Intervention

Attitude	n	mean	p-value
Before	43	76.49	0.001
After	43	79.86	

This study obtained a p-value of 0.001 ($p < 0.05$) based on the Wilcoxon test analysis which showed that the hypothesis was accepted, namely that there were differences in attitudes before and after nutrition education with video media about balanced nutrition, which means that nutrition education with video media had an effect on teenagers' attitudes about balanced nutrition. This is in line with research (Hidayah et al., 2022) which states that there is a difference in the average attitude score before and after the intervention ($p=0.001$) so it can be concluded that education using video media can influence attitudes.

3.4 Sample Actions

The sample's actions after being given nutrition education using video media increased from previously the sample in the good category by 19% to 47%. This shows that the sample has understood the information in the video so that it is manifested in attitudes/reactions which then form actions or habits according to the information conveyed in the video.

Table 6. Distribution of Changes in Sample Actions

Action	Before		After	
	n	%	n	%
Good	8	19.0	20	47.0
Fairly good	19	44.0	13	30.0
Not good	11	26.0	10	23.0
Bad	5	12.0	0	0.0
Total	43	100.0	43	100.0

The difference in the average action score before and after the intervention was 8.76 from the average score before the intervention of 61.54 to 70.30 after the intervention. This is in line with research (Yusriani & Agustini, 2020) which states that actions before the intervention were good

(45%) and after the intervention it was 98%.

Table 7. Differences in Sample Actions Before and After Intervention

Action	n	mean	p-value
Before	43	61.54	0.001
After	43	70.30	

This research obtained a p-value of 0.001 ($p < 0.05$) based on the Wilcoxon test analysis which shows that the hypothesis is accepted, namely that there is a difference in actions before and after balanced nutrition education with video media, which means that nutrition education with video media has an effect on teenagers' actions regarding balanced nutrition. This is in line with research (Shopia et al., 2024) Obtaining results based on the Wilcoxon test showed that the experimental group showed that there was a significant influence between before nutrition education and after nutrition education with a p value of $0.000 < 0.05$ or there was an influence of nutrition education using video motion media on teenagers' balanced nutritional behavior.

Class VIII students at SMPN 2 Tabanan also received information about healthy, nutritious and balanced eating patterns in the PJOK (Physical Education, Sports and Health) subject in class VII. This can also increase students' actions, so that nutrition education using video media about balanced nutrition strengthens students' understanding and actions regarding balanced nutrition.

CONCLUSION

There are differences in the knowledge, attitudes and actions of teenagers before and after nutrition education using video media about balanced nutrition, which means that nutrition education using video media influences the knowledge, attitudes and actions of teenagers about balanced nutrition at SMPN 2 Tabanan.

The limitation of this research is that video media does not have an absolute influence on teenagers' actions regarding

balanced nutrition because it can also be influenced by the learning they have received. Suggestions for schools are to create regular educational programs using media and for researchers to use as a reference for further research by adding the variable of adolescent nutritional status.

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CONFLICT OF INTEREST

There is no conflict of interest in this research.

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