

Effectiveness of Audio-Visual Media in Health Education about Fruits and Vegetables Consumption in Early Adolescents at Palangka Raya Elementary School

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Abstract

Consumption of fruits and vegetables in Indonesia is still lacking (5%), even though fruits and vegetables play a role in maintaining the condition of blood pressure, blood sugar and cholesterol levels to prevent non-infectious diseases. One way to increase public awareness to consume fruits and vegetables is through health education. Health education through audiovisual media is considered important because it displays elements of moving images and sounds that stimulate more senses. This study aims to determine the effectiveness of audiovisual health education media to increase knowledge, attitudes, and behavior of adolescents in the consumption of vegetables and fruit every day. This research uses quasi experiment method. The sample of this research is grade 6 students of Menteng State 5, Elementary School in Palangka Raya. The results showed an increase in the proportion of knowledge and good attitude after the intervention period (p-value: 0.008 and 0.002). There is no significant relationship between sex with students' knowledge and attitudes towards vegetable and fruit consumption (p-value: 1.0 and 0.71).

Keywords: *fruit and vegetable, knowledge, attitude, gender*

Introduction

The results of basic health research 2010, there are still many people who do not consume enough vegetables and fruits. In 2013, 93.5% of the population aged > 10 years consume vegetables and fruits under the recommendation. In 2018, the consumption of fruits and vegetables that were quite new reached 5 percent.^{1,2,3}

Various studies show that the consumption of vegetables and fruits that are sufficient to play a role in maintaining normal blood pressure, blood sugar and cholesterol levels. Consumption of enough vegetables and fruit also reduces the risk of difficulty defecating (constipation) and obesity. This shows that adequate consumption of vegetables and fruits also plays a

role in the prevention of chronic non-communicable diseases. Consumption of adequate vegetables and fruits is one simple indicator of balanced nutrition. The ripe fruit containing carbohydrates, the higher the fructose and glucose content, which is characterized by a sweeter taste. In the eating culture of the Indonesian urban society at this time, increasingly known sugary juice drinks. In a glass of sugary fruit juice containing 150-300 calories, about half comes from added sugar. Therefore, consumption of overripe fruit and sugary juice drinks need to be limited in order to help control blood sugar levels.

Daily consumption of vegetables and fruit is a government program through the Ministry of Health which is stated in the community movement to increase public awareness of the importance of consuming fruits and vegetables every day. Increasing public awareness especially teenagers one of which is to provide knowledge through health education about the consumption of vegetables and fruit every day, both in schools and directly to the wider community. Health education in schools about the consumption of vegetables and fruits

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each day as well as education in general consisting of students, teachers, teaching media, teaching methods, teaching aids and materials to be taught.

Audiovisual media is media that has sound elements and picture elements. This type of media has better capabilities because it combines audio and visual media. There are 2 types of audiovisual media namely silent audiovisual and motion audiovisual. audiovisual still is a media that displays sound and still images such as sound slides, sound chain films and sound prints. While audiovisual motion is media that can display sound elements and moving images such as video cassette sound films.⁴ The senses that channel much knowledge into the brain are the eyes (approximately 75% to 87%), while 13% to 25%, human knowledge is obtained and transmitted through other senses.⁵

Based on the description above, this research is important to be done to find out the effectiveness of audiovisual health education media to increase knowledge, attitudes, and behavior of adolescents in the consumption of vegetables and fruit every day.

Materials and Method

This research uses quasi-experiment method. The pretest-posttest group design is described as follows: (1) give an experiment to one group that is a group that is treated using audiovisual media (video) (2) provide initial tests for groups and calculate the mean of achievement; (3) providing treatment using audiovisual learning media (video); (4) give a final test for one group and calculate the mean group achievement; (5) calculate the difference between the average value of the initial test and the final test (improvement in learning outcomes) of the group then compare with statistics. In this study, audiovisual media about the consumption of vegetables and fruit every day as an independent variable. Knowledge variable, the attitude of consumption of vegetables and fruits every day as the dependent variable. Characteristics of respondents viewed were age and sex, and favorite food. The research sample was Grade 6 students of Menteng 5 Elementary School in Palangka Raya. The time for conducting research is in the range of May 2019 to August 2019.

Findings and Discussion

Table 1. The Different of Student Knowledge and Attitude Before and After Intervention

Variable	Before Intervention		After the Intervention		p-Value
Knowledge					
Well	61	81.3%	69	92%	0.008
Less	14	18.7%	6	8%	
Attitude					
Well	57	76%	67	89.3%	0.002
Less	18	24%	8	10.7%	

Table 2. The Relationship of Gender and Student Knowledge and Attitude

Variable	Gender		p-value	Odd Ratio	95% CI
	Male	Female			
Knowledge					
Well	29 (90.6%)	40 (93%)	1	1.37	0.26 – 7.32
Less	3 (7%)	3 (7%)			
Attitude					
Well	28 (87.5%)	39 (90.7%)	0.71	1.39	0.32 – 6.04
Less	4 (12.5%)	4 (9.3%)			

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In the learning process until learning outcomes are obtained, there is a process that requires learning media. The learning process becomes more interesting because of the use of media so that it encourages students to love science and likes to search for their own sources of knowledge, students' habits to learn from various sources will be able to instill an attitude to students to always take the initiative to find a variety of learning resources needed. Learning media are all forms and channels used to convey information or messages. Media is one of the communication tools in conveying messages which is certainly very useful if implemented in the learning process, the media used in the learning process is called learning media.⁶

Attractive learning media can increase student interest in the learning process, learning media can also provide stimulation in student learning activities.⁷ The principles that have been used in the media in this study are the effectiveness (accuracy) in achieving learning objectives, relevance: the suitability of the media used with the goals, efficiency: selection and use of media must properly pay attention that the media is cheap and cost-effective, can convey the purpose of purpose, can be used and applied in learning so as to increase student understanding and improve the quality of learning, contextual: the selection and use of learning media must prioritize aspects of the student's social and social environment.⁶

The learning method used is audiovisual, audiovisual media is an intermediary or visual aid used by researchers in learning activities that use material absorption through sight (pictures) and hearing

(sound). The use of audio visual media takes into account the duration, with the duration of the learning meal will be more efficient in the use of time, if learning is planned with the right time then the success rate of learning will also be greater.⁸

Consumption of fruit and vegetable by students can not be separated from the behavior of people who carry out these activities, because the behavior of these people will affect food products to be selected or purchased. Behavior arises because of a driving factor that causes a force to arise so that the individual acts. The driving factor in behavior is determined by two things namely the driving factor from within the individual which includes beliefs, motivation, emotional level and gender. Encouraging factors from outside the individual include knowledge, education, experience, environment, and so on.⁹ Knowledge is more an introduction to an object or thing objectively.¹⁰

Knowledge and attitude are internal factors that influence student behavior. In detail human behavior (which in this case is the consumption of vegetables and fruit) is actually a reflection of various symptoms such as knowledge, desires, desires, interests, motivation, perceptions, attitudes and so on. Knowledge is the result of knowing, and this happens after someone senses a certain object. Most of human knowledge is obtained through the eyes and ears.¹¹ Know is defined as remembering a material that has been studied previously and is the lowest level of knowledge. Before someone behaves he must know in advance what the meaning and benefits of the behavior are for him, so that it can be interpreted that before students behave to consume vegetables and fruit, students must know what information about vegetables and fruit is like.

Attitude is a reaction or response that is still closed from someone to a stimulus or object. One of the social psychologists, states that the attitude is the readiness or willingness to act and not the implementation of certain motives. Attitude is a readiness to react to objects in a particular environment as an appreciation of the object. Attitude is one of the psychological or mental aspects that is formed through the learning process along with one's growth and development. So that what is meant by student attitudes in the consumption of vegetables and fruit is the views or responses of students who

are still closed to the consumption of vegetables and fruit. The formation of attitudes is influenced by internal factors and external factors. Internal factors include physiological and psychological. While external factors are experience, culture, mass media, others that are considered important and the learning process.¹¹

The results showed that there was an influence of audio-visual media on students' knowledge and attitudes between before and after and between the intervention and control groups. Audio-visual media is a medium that involves the sense of hearing and vision as well as in a process that is able to stimulate the sense of sight and sense of hearing together, because this media has sound elements and picture elements.⁴ There was an increase in student knowledge. This type of media has a better ability, because it includes both types of auditive (listening) and visual (seeing) media, which means materials or tools used in learning situations to help writing and words spoken in transmitting knowledge, attitudes, and ideas.¹²

Based on the results of the study, researchers assume that health education using media that involves the sense of hearing and vision as well as in a process that can stimulate the sense of sight and sense of hearing together can affect the level of knowledge and attitudes of adolescents about consumption of vegetables and fruit. Thus, health education is needed by using audio-visual media that can stimulate the sense of sight and sense of hearing together, because this media has sound elements and picture elements that can affect the level of knowledge. The goal is that teenagers can understand vegetables and fruit.

The attitude of growth begins with the knowledge that is perceived as a good or bad thing, and then internalized into him. Knowledge is one of the factors that influence attitude. The better the knowledge the better the attitude, on the contrary the less knowledge, the less good (less) attitude. Someone's experience related to an object can influence the formation of one's attitude towards the object.¹³ By paying attention to attitude we get a tendency to choose whether to accept or reject a suggestion that is accepted as something good or not good. Attitude is an internal ability that plays a role before someone takes action.¹⁴

Conclusion

Percentage and number of respondents based on gender, female gender as many as 57.33% or as many as 43 people and male students as much as 42.67% or 32 people. Before the intervention of students 'knowledge of vegetable and fruit consumption by 81.3% was well knowledge, after the intervention, students' knowledge of vegetable and fruit consumption by 92% was good knowledge. There is an increase in the proportion of knowledge both after the intervention period. The attitude of students before the intervention that is equal to 76% being good, after the intervention as much as 89.3% of students being good. There is an increase in the proportion of good attitudes after the intervention period. As many as 95% of female students are well-informed and 90.6% of male students are well-informed. There is no significant relationship between sex with students' knowledge of the consumption of vegetables and fruit. As many as 90.7% of female students behaved well and 87.5% of male students behaved well. There is no significant relationship between gender and students' attitudes towards consumption of vegetables and fruit.

Ethical Clearance

This research has gone ethical feasibility testing by the Ethical Research Commission of the Polytechnic of Health, Ministry of Health, Palangka Raya.

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