The Effect of Socialization through Video Education The Effect of Food Maturity Level on Food Nutritional Content

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Abstract. This education aims to invite the public to recognize food nutrition and its potential dangers if errors occur in food processing, namely a form of educational video-based learning media, for people who live in Cigugur Girang, Parongpong, Indonesia. The method used is by using educational video dissemination media to 10 adolescent adults in Cigugur Girang with an age range of 17-28 years. Respondents consisted of 4 women and 6 men. The research was conducted through three stages; (1) pre-test before providing education to respondents; (2) education through video media; (3) post-test after providing education to respondents. The results of this study indicate an increase in respondents' knowledge after the implementation of their actions. The results of the study are based on the N-Gain value which is known to be the average value (%). Based on the test value of T (-4.205) < T table (2.023) which means the value of the questionnaire increased not significantly. Based on the completion of this research, it is hoped that more people be able to find out by knowing the level of food maturity and nutritional content.

1. Introduction

Nutrients are substances contained in foodstuffs that serve for the growth of living beings. Humans need adequate nutrition in carrying out all activities that affect growth and health. Nutrients consist of carbohydrates, proteins, fats, vitamins and minerals [1]. These substances are contained in food ingredients that are processed into food. The process of processing food is a process where raw foodstuffs that are not yet suitable for human consumption become suitable for consumption, the process of cooking food includes, boiled, fried, stir-fried, grilled, grilled. Cooking is needed to eliminate bacteria present in food, However, if something goes wrong in cooking the ingredients are not yet mature, it has an impact on the health of our body [2].

Today there are many studies on the degree of maturity of food. discusses the taste of food determined by the degree of doneness of food in Indonesia is intended to be cooked until it is fully cooked [3]. This study is in accordance with the previous, where if a food is cooked with

an improper diet, it causes the emergence of bacteria that can endanger public health [4]. If this is done continuously, it can make people unable to pay attention to their diet by applying a form of nutritional content as a guideline or feeding rules regarding nutritional knowledge as the basis for one's nutritional intake behavior [5]. Processing food must be appropriate because of the vulnerability of chicken meat to the dangers of microbes that contaminate chicken meat, namely salmonella [6]. In the case of chicken as a food ingredient most results in poisoning. As for other poultry such as ducks, burning quail and the like, it is equally dangerous. In processing it, the chicken must be cooked properly. The research, the importance of the behavior of nutritional intake is because the nutritional intake is able to make people able to manage a good diet.

The purpose of this study is to educate the public about nutritional knowledge in order to get the benefits of food consumed optimally. The method used is through digital media, namely educational videos that make it easier to access and disseminate it. With this research, people are more aware of the dangerous things that are often underestimated in the environment for wrong habits that have an impact on public health. This research invites the public to mediate the presence of poisoning due to undercooked food. This research was made to see the effectiveness of nutrition education through the media in adolescents to increase their nutritional knowledge, this research is to educate in processing the right ingredients in order to get maximum nutrition. The elements of novelty in this study are as follows; (1) introduce a form of video-based education to the public where the education is about learning or contains the right cooking methods; (2) the purpose introduced in this study is to relate to the general public not to students alone; (3) the method used in analyzing the data relates to the acquisition of the N-Gain value.

2. Method
2.1. Research subject

The subject of the study was a resident of Cigugur Girang, Parongpong, Indonesia. We took sample samples based on samples of selected areas in Cigugur Girang. The respondents numbered 10 people. The age range of respondents is 17 – 28 years. Respondents consisted of 6 men and 4 women (see Figure 1). The average respondent has not worked or students are 5 people, and there are also 2 people who work as teachers. In addition, there are also professions of farmers, traders, freelancers with a total of 1 person per field. Shows the details of the job details and the age of the respondents (see Table 1).
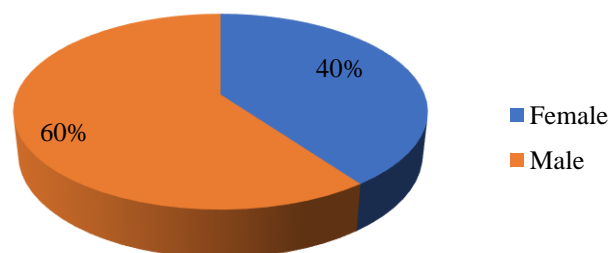

Figure 1. Percentage of Respondents' Gender

Table 1. Data on age and occupation of respondents.

Name	Age (Year)	Profession
A	17	Student
B	22	Teacher
C	20	Freelancer
D	17	Student
E	21	Trader
F	17	Student
G	17	Student
H	17	Student
I	28	Teacher
J	21	Farmer

2.2. Research Design Analysis

The collection of research data was carried out by distributing questionnaires using Google Form to residents of Cigugur Girang village, Parongpong, Indonesia. There are 3 stages in data collection, namely (i) the distribution of pre-test questionnaires; (ii) the provision of educational actions through video media; and (iii) the dissemination of post-test questionnaires. The data processing approach used is a quantitative approach. We made 20 pre-test and post-test questions. Shows the pre-test and post-test questions in this study. The making of the questions is focused on education about the form of public understanding of food processing (see Table 2). Pre-test and post-test question types are types of true and false answer questions. The answer value is marked as 1 for the correct answer and 0 for the wrong answer.

Table 2. Pre-test and post-test questions.

No	Question	Answer	
		True	False
1	Do you know the function of food for the body?		
2	Do you know the nutritional function of food?		
3	Can the influence of food maturity levels change food nutrients?		
4	Is it good if vegetables are overcooked?		
5	Can cooking vegetables too long damage the nutritional content of vegetables?		
6	Are vegetables better that are undercooked?		
7	Can undercooked eggs be consumed for children, pregnant and lactating women?		
8	Are salmonella bacteria harmful to health?		
9	Is it better to consume cooked eggs?		
10	Is it okay to consume undercooked chicken meat?		
11	Is chicken as a food ingredient the highest cause of poisoning?		
12	Is it good to consume red meat often?		
13	Is it safe to consume undercooked red meat?		
14	Is consuming mutton the main cause of high blood pressure?		
15	Is frequent consumption of red meat one of the causes of high blood pressure?		
16	Does salt, oil and butter in mutton cause high blood pressure?		

17	Does Fish contain fewer bacteria than chicken and meat?
18	Can consuming fish increase intelligence?
19	Does fish have a higher protein content than other meats?
20	Is the consumption of eggs, chicken, meat and fish better cooked?

2.2.1 N-Gain Value Analysis

The form of normalization value analysis of gains or called N-Gain has the purpose of recognizing the use of methods or the provision of actions used in the one-group pre-test post-test. The formula used in calculating the N-Gain value in Equation (1).

$$N\ Gain = \frac{Skor\ Posttest - Skor\ Pretest}{Skor\ Ideal - Skor\ Pretest} \tag{1}$$

Meanwhile, in obtaining the N-Gain value, there is a reference that can be the main focus in its inference. Provides information on the categorization of the value of N-Gain according to [7] (see Table 3).

Table 3. Category N-Gain

N-Gain Value	Category
g > 0.70	High
0.30 ≤ g ≤ 0.70	Medium
g < 0.30	Low

3. Results and Discussion

Based on the results of the analysis of the calculation of the N-Gain value, which is carried out to see how much the community understands the processing of maturity levels it affects health after giving material through video-based learning education. this is very important when doing research that connects forms of action in the experimental class [8]. Based on the results of the analysis, it shows a fairly high increase in the results of the N-Gain value in the form of 0.65 (65%) which shows that the video-based learning method can be well received by the community and is able to make themselves understand the structure of managing the maturity of a food and show people's awareness of maintaining food patterns (see Table 4). This shows the effectiveness of the method, especially the value that is quite minimal, namely 0.2 (2%) and the maximum is 0.65 (65%). This final result is influenced by the form of post-test value which is quite increasing, especially to the millennial generation who certainly do not understand the influence of the maturity of a food product they are more careful about the influence caused by it.

Table 4. Analysis of pre-test and post-test gain values.

| No | Name | Score | | N-Gain | Categories |
		Pre-Test	Post-Test		
1	A	75	60	0.6	Medium
2	B	65	95	0.85	High
3	C	45	85	0.72	High
4	D	70	90	0.67	Medium

5	E	75	85	0.4	Low
6	F	80	90	0.5	Low
7	G	70	100	1	High
8	H	70	100	1	High
9	I	50	85	0.7	High
10	J	70	95	0.83	High
Average		67	88.5	0.65	
Min		45	60	0.27	
Max		80	100	1	

the results of the post-test and pre-test of each given question provide a significant difference (see Figure 2). Based on the curve, it shows a significant increase in public understanding from the viewing of these educational videos. Concluded that this shows the provision of quite good material is to use a form of education related to videos, even residents of Cigugur Girang, Parongpong, Indonesia can recognize the form of influence that is quite positive in daily life on respondents [9-11].
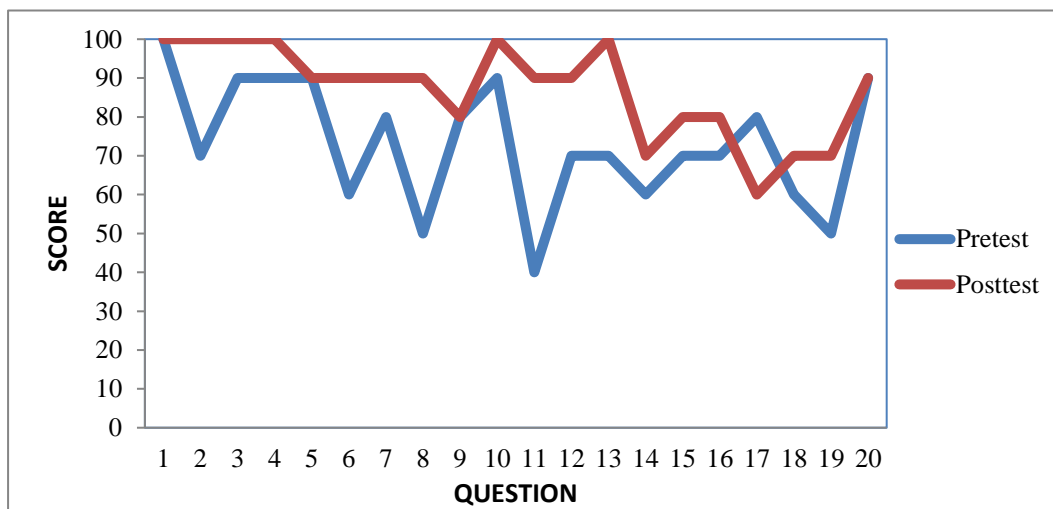

Figure 2. Pre-Test and Post-Test Results.

The results of the T-test used two-paired samples for the mean test, where the mean value of the pre-test was 67.00 out of 10 respondents. While the post-test average value is 88.5 out of 10 respondents (See Table 5). In this test, it was shown that the calculated T (-4.205) was smaller than T Table (2.023).

Table 5. T-test paired two-sample for means

	Pre-Test	Post-Test
Mean	67.00	88.5
Observations	10	10
Pearson Correlation	-0.17	
Hypothesized Mean Difference	0	
df	9	
t Stat	-4.205	

In the question areas analyzed, there is a very positive influence on the increasing understanding of residents regarding the forms of food maturity which have a considerable influence, especially on aspects of good nutritional management. This means that this media is able to provide a deep enough understanding to the community, especially to the younger generation who generally prefer to eat immature food that greatly affects their health and worsens their diet. However, with this media, the younger generation of people are also able to see their influence directly through educational spectacles. This research is in line with the Interactive Media for Learning Nutrition Content in Vegetables and Benefits in the Human Body [12].

4. Conclusion

The study carried out has the aim of educating the public on nutritional knowledge in order to get the benefits of food consumed optimally in the residents of Cigugur Girang Parongpong, Indonesia. There are 3 stages in data collection, namely (i) the distribution of pre-test questionnaires; (ii) the provision of educational actions through video media; and (iii) the dissemination of post-test questionnaires. The results showed an increase in the value where the initial value was 67 to 88.5. The calculation of N-Gain refers to the influence of the treatment given, which shows an average of 0.65 (65%) which means the level of understanding of respondents to their feeding patterns is sufficient through the media. While, from the results of the T test value, it is known that the calculated T (-4.205) is smaller than T Table (2.023) which means the understanding of the respondent's value at the level of food maturity management increases insignificantly.

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