

# The Effect of Video on the Change of Attitude Toward Stunting Prevention among Children in State Senior High School 1 Topoyo, Central Mamuju

Ismail Kamba<sup>1</sup>, Amran Razak<sup>2</sup>, Sirajuddin Saifuddin<sup>3</sup>, Sukri Palutturi<sup>4</sup>

<sup>1</sup>Department of Community Nutrition, Mulawarman University, <sup>2</sup>Department of Health Policy Administration, Hasanuddin University, <sup>3</sup>Department of Community, Nutrition, Hasanuddin University, <sup>4</sup>Department of Health Policy Administration, Hasanuddin University

## Abstract

The reduction of infants stunting is still very limited to pregnant women and Baduta or Children under two years old. Form of education provided to society need to be more persuasive in order to increase action to solve practical problems and improve their health. This study aimed to examine the effect of video compared to video plus explanation on students' attitude in order to prevent stunting in the State Senior High School 1 Topoyo, Central Mamuju. This research was conducted on January 7<sup>th</sup>, 2018 until January 7<sup>th</sup>, 2019 in Topoyo, Central Mamuju Regency, West Sulawesi Province. The population of this study were all male and female students at State Senior High School 1 Topoyo totaled 710. Control sample was decided by using a ratio of 1:1, so that the total of sample are 342 students (171 + 171). The results showed that there was attitude change before and after intervention by watching video and video plus material explanation from instructor about first 1000 days of life (1000 Hari Pertama Kehidupan / HPK) and stunting prevention among children under five years old, which means that the video had an influence ( $p = 0.000$ ); there was no change found in the control group after intervention ( $p = 0.713$ ). Furthermore, there was difference between the use of video and the use of video accompanied by explanation ( $p = 0.000$ ). It is suggested that efforts targeting public attitude change toward stunting prevention should be done earlier, ranging from primary to secondary education. Socialization about stunting prevention need to arrange systematically by government, so that the negative impact of malnutrition will be minimized.

**Keywords:** Attitude, Stunting, HPK.

## Introduction

Based on data from Global Nutrition Report, Indonesia is ranked 15th of back sequence<sup>1-3</sup>. Hence, Indonesia is considered as the 15th worst stunting case in the world after Madagascar<sup>2-4</sup>. The worst stunting rank in the world are Timor Leste (57.7 %), Madagascar (49.2 %), Guatemala (48.0 %), Pakistan (45.0%), Lao People's Democratic (43.8 %), Republic Mozambique (43.1%), Nigeria 43.0%), Malawi (42.4%), the Central African Republic (40.7%), Ethiopia (40.4), Chad (38.7%), India (38.7%), Mali (38.5%) and Indonesia which is ranked fifteen in the world stands at 36.4 %<sup>1-3</sup>.

One third of children in the world who are stunted are in India, and children in rural areas are worst affected<sup>5-7</sup>. The determinants of stunting among indigenous

children in Jharkhand and Odisha Village, India, require intervention and treatment<sup>8,9</sup>. World Health Organization (WHO) reported that a total of 49.2% of children were chronically malnourished in Madagascar<sup>6,10</sup>, placing the country suffered the highest prevalence of stunting in the world<sup>6, 11</sup>. Short children as a result of chronic malnutrition will cause short term and long term adverse consequences if not addressed at an early age<sup>5</sup>. Short-term risks are susceptible to various infectious diseases such as diarrhea and pneumonia due to a weakened immune system<sup>12</sup>.

The results of basic health research in West Sulawesi found that the proportion of the national short toddler occurred between 2007 and 2013. This proportion is 19.2 percent of short and 18 percent of very short. Total

stunting of 37.2 percent<sup>(13)</sup>. West Sulawesi ranked top 5 and stood at a very short category at 22.3 percent, while short category was 25.7 percent. Toddlers with nothing short category stood at 52.0 percent. This means that there are approximately 48.0 percent of children under five in West Sulawesi who suffered stunting. The average percentage is much higher than the national average which the difference in numbers is about 10.2 percent compared to 37.2 percent of national stunting<sup>13</sup>. As is known, stunted children are not able to reach their developmental potential, they have weak cognitive performance and low educational achievement than those with good nutrition. Children who are chronically undernourished experience the highest prevalence of stunting. Stunting due to chronic malnutrition will cause a short child if not addressed at young age<sup>6</sup>. Various infectious diseases such as diarrhea and pneumonia will be exist because of weakened immune system<sup>6,11</sup>.

Learning media as a part of messenger technology is a tool that can be used for learning purposes. On this occasion, a research on learning media effectiveness, especially video, is proposed. This research aims to

find out the impact of video on the change of students' attitude for stunting prevention among children under five years old in State Senior High School 1 Topoyo.

## Materials and Method

The research design uses "Quasi-Experiment", namely pre-test and post-test with control group design.

The research was conducted on January 7<sup>th</sup>, 2018 until January 8<sup>th</sup>, 2019. The experiment was located in State Senior High School 1 Topoyo, Central Mamuju Regency, West Sulawesi Province.

The population of this study were all male and female students at the schools amounted to 710 people. By using proportional random sampling, the total of 171 students were included in the experimental group and 171 students were included in control group. Therefore the total of sample are 342 respondents.

## Results and Discussion

### Research Results

Characteristics of respondents include the following:

**Table 1. Characteristics of Respondents**

Characteristics n		Intervention Group		Control Group	
		%	n	%	n
Gender	Man	53	31,0	121	70,8
	Woman	118	69,0	50	29,2
	Total	171	100	171	100
Age (Year)	16 Years Old	12	7,0	20	11,7
	17 Years Old	113	66,1	91	53,2
	18 Years Old	46	26,9	60	35,1
	Total	171	100	171	100
Level Education of Parent	Elementary School	89	52,0	101	59,1
	Junior High School	36	21,1	19	11,1
	Senior High School	34	19,9	50	29,2
	PT/University	12	7,0	1	0,6
	Total	171	100	171	100
Parent Job/ Profession	Farmer	125	73,1	150	87,7
	Civil Servant	9	5,3	11	6,4
	Entrepreneur	37	21,6	10	5,9
	Total	171	100	171	100

The table above shows that the number of respondents aged 17 years are more than other respondents as many as 113 respondents (66.1%). Female respondents are many more than male respondents as many as 118 respondents (69.0%). Mostly level of parent's education is primary school as many as 89 respondents (52.0%). Mostly respondents' parents work as farmer, as many as 125 respondents (73.1%).

The experiment process was conducted by instructional video playback with presenting HPK material. This material lead learners to understand the ways of stunting prevention in children under five. The treatment was given to students in experimental group. The effectiveness of the treatment was seen by measuring the change of students' attitude from pretest to post-test. Meanwhile, for more objectivity, measurements were also carried out in the control group at Vocational High School 1 Topoyo. There are no intervention in the control group.

This study also included control group to compare attitudes of students toward 1000 HPK material and prevention of stunting among children under five which was not given intervention / treatment. Uptake ability of students toward other information sources may give influences. Therefore, the control group was selected from same area and same level of knowledge to control certain aspects. Vocational High School 1 Topoyo which is located in same district was selected as group control. Pretest and post-test were also conducted in the control without any intervention or treatments.

Attitude of Students Toward Material about Stunting Prevention

Attitude is the value preference that are individually owned by students. The attitude

is a form of approval or rejection depending on the values and norms inherent in the students during their development. The improved attitudes of students in learning before and after intervention can be seen in the following table:

**Table 2. Students' Attitude Before and After Intervention (Intervention Group/SMAN 1 Topoyo and Control Group SMK Topoyo) In Central Mamuju Regency, West Sulawesi, 2018**

Group	Attitude	Measurement Results				Analysis
		Pretest		Post Test		
		n	%	N	%	
Intervention	Well	131	76,6	149	87,1	p=0,000
	Less	40	23,4	22	12,9	
	Total	171	100	171	171	
Control	Well	111	64,9	125	73,1	p=0,000
	Less	60	35,1	46	26,9	
	Total	171	100	171	100	

The table above showed that in the Intervention Group, Pretest measurement results with Well category was 131 (76.6%) and Less category was 40 (23.4%); and the measurement results of Post Test were 149 (87.1%) for Well Category and 22 (12.9%) for Less Category. The value of p = 0.000 means that there was effect of the intervention on the attitude change respondents in the prevention of stunting in State Senior High School 1

Topoyo. Meanwhile, the Pretest measurement results of Control Group were 128 (74,9%) for Well Category and 43 (25.1%) for Less Category.

Furthermore, the researchers compared the effect of video (without explanation) and video plus explanation on attitude change. The difference of attitude by using the two different video categories can be seen in the following table:

**Table 3. Attitude Difference between Intervention Using Video and intervention using Video Plus Explanation in State Senior High School 1 Topoyo, Central Mamuju Regency, West Sulawesi Province, 2018**

Category	Knowledge	Measurement Results		p
		n	%	
Video	Well	87	50,9	0,000
	Less	84	49,1	
	Total	171	100,0	
Video Plus	Well	131	76,6	
	Less	40	23,4	
	Total	171	100,0	

The analysis result of attitude difference after watching the video and video plus is  $p = 0.000$ , which means there is difference in the attitude after watching the two video category. In another word, video presentation accompanied by explanation is more effective in changing students' attitude for stunting prevention in State Senior High School 1 Topoyo, Central Mamuju Regency, West Sulawesi.

### Discussion

The measurement result that there was difference result of pretest and post test proved that there was effect of video on attitude change among students in treatment group. Meanwhile, there was no video influence in the control group that showed that there was no significant result from pretest to post test. This is probably because of the formation of attitude which is influenced by many variables, such as trust, credibility, culture, ideology, and so on. In addition to those factors, attitude formation is also influenced by psychological factors, sociological factors and physiological factors. Psychological factors can be recognized when your attitude is affected by your feeling or mood (sad, happy, angry, so on). The sociological factor includes certain social values giving stereotype on person as well as concept or particular aspect of culture gives impact on person attitude. Physiological factors also affect attitude when person is in a state of fatigue or physical unstable.

Students' attitude may probably predicts whether students show a particular behavior or not. However, it does not mean that if person has positive attitude on

learning then he or she will learn well or get good results. Attitude is relatively sedentary mental tendency to react in particular condition.

Video plays that illustrate the risk of children who are malnourished are expected to lead students to the understanding of these events which finally can direct them to a desired direction. The influence of others are considered which we tend to be the same as the main assume for ourselves. This trend arises because of the urge to join in and avoid troubles. This matter causes video plays need to be accompanied by explanation by teachers or instructors who understand about the material broadcast. When comparing both methods of learning using video only and video plus, there was a difference, which video plus is more effective in changing students' attitude.

Attitude requires in-depth study before it becomes a form of decision. Attitude is manifested in the form approval or rejection on something or someone. Personal attitude can be ambiguous or unambiguous because of some factors. Dishonesty or variability of a person may probably cause the difficulty of making decision. In certain social condition, people sometimes have a different attitude. People sometimes have to declare similarity with other people in order to overcome fear of alienation, isolation or afraid of being hated, and other specific social reasons from social environment. Someone who has different attitude from common people or majority may feel afraid of being extremely different.

The treatment made differently did not make a difference. It is clear that the process of attitude change is a complicated and long process. It is not easy to change attitude because it was born from a personal faith. Faith is the individual human right to express their existence. Attitude is affected by personal values that prevailed at the time. Adolescent has the value reference that comes from peers. It is not really surprising that teenagers are often in conflict with their parents because they want to show their existence. Therefore, to change their attitude quickly to be more positive, students or teenagers should be included in a participatory discussion as a part of learning method. Students are encouraged to initiate and identify their own problems and solutions. Learning should be sourced from the students, not from teachers.

Attitude will be easily formed if the emotional factors involved in personal experience. This personal experience is intertwined in someone's life and it is need to be raised. The experience will help in forming the understanding toward social stimuli. When the students watch the video, they will require a response on what they have watched. Involvement of teachers or instructors after watching the video will provide reassurance on the material and confirmation on students' attitude. The influence of someone who is supposed to be important for students or has an authority is more stronger on students' attitude toward a thing. People who are usually considered as important figure for individuals are the elderly, people with higher social status, peers and close friends, teachers and spouses. Setting the video also requires careful planning by linking the matter with the traditions and culture. For example, mostly Japanese people are relatively short before the Second World War, but there was a change in posture after the revolution of nutrition in Japan.

### **Conclusion**

Changes in attitude measured by pretest and post test after intervention by watching videos and video plus showed that there was video effect on students' attitude (the measurement result  $p = 0.000$ ). The finding was supported by result that there was no attitude change in the control group that was not given by video intervention (the measurement result  $p = 0.713$ ). Besides, there is a difference between using video only and using video plus explanation as a medium of learning (the measurement result  $p = 0.000$ ). Based on the research results, it is suggested that public awareness and attitude

related to stunting prevention need to be addressed early, ranging from primary to secondary education. The dissemination and socialization of stunting prevention should be managed systematically by the government in collaboration with many parties including education sector to minimize the negative effect of malnutrition.

**Sources of Funding:** This research was funded by the researchers themselves. In other words, the source of funds is independent funds

**Ethical Clearance:** This research took recommendation for ethical approval from university with reference number: 4718/UN4.14.8/TP.02.02/2019.

**Conflict of Interest :** Nil

### **References**

1. Haddad L, Achadi E, Bendeck MA, Ahuja A, Bhatia K, Bhutta Z, et al. The global nutrition report: actions and accountability to accelerate the world's progress on nutrition. *The Journal of nutrition*. 2015;145(4):663-71.
2. Nutrition IC. *The Achievable Imperative for Global Progress* New York. NY United Nations Children's Fund. 2013.
3. Rakotomanana H, Gates GE, Hildebrand D, Stoecker BJ. Determinants of stunting in children under 5 years in Madagascar. *Maternal & child nutrition*. 2016.
4. Aguayo VM, Nair R, Badgaiyan N, Krishna V. Determinants of stunting and poor linear growth in children under 2 years of age in India: an in-depth analysis of Maharashtra's comprehensive nutrition survey. *Maternal & child nutrition*. 2016;12(S1):121-40.
5. Moschovis PP, Addo-Yobo EO, Banajeh S, Chisaka N, Christiani DC, Hayden D, et al. Stunting is associated with poor outcomes in childhood pneumonia. *Tropical Medicine & International Health*. 2015;20(10):1320-8.
6. Onis M, Branca F. Childhood stunting: a global perspective. *Maternal & child nutrition*. 2016;12(S1):12-26.
7. Requejo JH, Bryce J, Barros AJ, Berman P, Bhutta Z, Chopra M, et al. Countdown to 2015 and beyond: fulfilling the health agenda for women and children. *The Lancet*. 2015;385(9966):466-76.

8. Ngaleka A, Uys W, editors. M-learning with whatsapp: A conversation analysis. International Conference on e-Learning; 2013: Academic Conferences International Limited.
9. Hung TTM, Chiang VCL, Dawson A, Lee RLT. Understanding of factors that enable health promoters in implementing health-promoting schools: a systematic review and narrative synthesis of qualitative evidence. *PloS one*. 2014;9(9):e108284.
10. Gaire S, Delbiso TD, Pandey S, Guha-Sapir D. Impact of disasters on child stunting in Nepal. *Risk management and healthcare policy*. 2016;9:113-27.
11. Hadi AJ, Manggabarani S, Tombeg Z, Ishak S, Said I. Consumption Pattern and Nutrition Conseling Roles on Obesity of Integrated Primary School Students. *Unnes J Public Heal*. 2019;8(1):45–50.
12. Chirande L, Charwe D, Mbwana H, Victor R, Kimboka S, Issaka AI, et al. Determinants of stunting and severe stunting among under-fives in Tanzania: evidence from the 2010 cross-sectional household survey. *BMC pediatrics*. 2015;15(1):165.
13. Prendergast AJ, Humphrey JH. The stunting syndrome in developing countries. *Paediatrics and international child health*. 2014;34(4):250-65.
14. Anwar Mallongi, Ruslan La Ane and Agus Bintara Birawida, Ecological risks of contaminated lead and the potential health risks among school children in Makassar coastal area, Indonesia. *J. Environ. Sci. Technol.*, 2017. 10: 283-289.
15. Dasar RK. *RISKESDAS 2013*. Jakarta: Kementerian Kesehatan RI. 2013.