



## The Effect of PHBS Education with Animated Videos on Students' Knowledge Levels

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### ABSTRACT

Background: Clean and Healthy Living Behavior (PHBS) is a program aimed at changing people's behavior so that it does not lead to unhealthy behavior. Nationally, it was found that the proportion of those with good PHBS did not increase by half (41.3%). The results of the PHBS Initial Knowledge Survey at Mts Nurul Iman School obtained a score of 60% in the fair category, less than 30%, and 10% in the good category. In order to achieve the highest scientific level, it is necessary to establish education at the scientific level of the students at Mt. Nurul Iman. Objective: To find out whether or not there is an influence of PHBS education with animated videos on the level of knowledge of Mts Nurul Iman students. Method: quantitative with a Quasi experiment with a two-group pretest posttest with a control group design with a population of 240 and a sample of 150 using the Slovin formula with an error rate of 5%. Results: This study used the Wilcoxon test, p-value 0.000 <0.05, and found that there was an effect of PHBS education with animated videos on the level of knowledge. Conclusion: In this study, the results of the pre-test were in the average category (90.7%) and the post-test results were in the good category (80%). Suggestion: For Other Researchers This research is expected to be used as basic data for similar research, and this research is expected to provide input for future research in making other studies.

**Keywords:** PHBS Education, Video Animation, Knowledge Level

### Introduction

A schoolchild's childhood is very different from adulthood. At this age there are many health problems that determine the quality of the child in the future. These health problems include general health, developmental disabilities, behavioral disorders, and learning disabilities. Clean and Healthy Living Behavior (PHBS) is a program aimed at changing people's behavior so that it does not lead to unhealthy behavior. Educational institutions are one of

the PHBS target groups, which is the focus of the suggestions. (Anik, 2013) in (Sulistiyani et al. 2020).

Herna's study (2020) states that the ability of schools to carry out PHBS is still low based on Indonesia's health profile in 2015. Provinces with low PHBS figures are West Sumatra (36.34%), Banten (40.21%) and West Papua. (42.56 %). Quoting Rizki Fadhilah's study "PHBS Research in Tangerang Regency in 2022" by Tumiwa (2015), it was stated that 55.9% of respondents were in the "good PHBS" category and 44.1% of respondents were in the "poorly good" category. The data shows that that the PHBS status in Tangerang Regency households is still low.

In a 2022 study by Rizki Fadhilah, the World Health Organization (WHO) said that up to 100,000 Indonesian children died every year from diarrhea, while data from the Indonesian Ministry of Health showed that every 1,000 to 300 children died. around 33.3% experienced diarrhea throughout the year. Riskesdas (2018) stated that the prevalence of diarrhea based on the diagnosis of health workers was 6.8% based on the diagnosis of health workers or 8% based on the symptoms experienced. According to Sulistyan's study in the UMS 2020 medical journal, primary data from Gatak Medical Center shows the incidence of respiratory tract infections in 2019 was 6,869. At that time, there were 1,906 cases of ulcers and 1,697 cases of influenza.

The results of the PHBS Initial Knowledge Survey at Mts Nurul Iman School obtained a score of 60% in the Fair category, less than 30% and 10% in the Good category. To achieve the highest scientific level, it is necessary to provide education at the scientific level of Mts Nurul Iman students.

## **Objective**

The purpose of this study was to determine whether there is an effect of PHBS education with animated videos on the level of knowledge of Mts Nurul Iman students.

## **Method**

This research is a quantitative research, which uses a Quasi experiment method with a two group pretest posttest with control group design where this design uses a control group. The population in this research is 240 female students of Madrasah Tsanawiyah Nurul Iman and the sample uses the Slovin formula with an error rate of 5 % with the results of 150 respondents divided into 75 for the experimental group and 75 for the control group for offline questionnaire submission.

The instrument in this research was a questionnaire with 31 statements about clean and healthy living behavior, then the data obtained was processed through several stages, namely editing, coding, data entry and cleaning. then the prerequisite analysis in this research is the normality test, univariate analysis using frequency distribution and bivariate using the Wilcoxon signed rank test.

## Results

If  $\text{sig} > 0.05$  then the data is normally distributed and if  $\text{sig} < 0.05$  then the data is not normally distributed. Based on the data results above with  $\text{sig} < 0.05$  then it can be concluded that this research data is not normally distributed.

Table 1. Frequency distribution of the experimental group

Karakteristik	Pre Test						Posttest					
	Baik		Cukup		Kurang		Baik		Cukup		Kurang	
Jenis Kelamin	N	%	N	%	N	%	N	%	N	%	N	%
Perempuan	5	11,6	38	88,4	0	0	35	81,3	8	18,6	0	0
Laki-laki	2	6,3	30	93,8	0	0	25	78,1	7	21,9	0	0
Kelas	N	%	N	%	N	%	N	%	N	%	N	%
7	2	6,5	29	93,2	0	0	19	61,3	12	38,7	0	0
8	5	11,4	39	88,6	0	0	41	93,2	3	6,8	0	0

The results of the frequency distribution of gender characteristics in the experimental group, namely women, were 43 respondents, the average pre-test knowledge was in the sufficient category (88.4%) and the average post-test was in the good category (81.3%). Meanwhile, 32 male respondents had average pre-test knowledge in the sufficient category (93.8%) and average post-test knowledge in the good category (78.1%). Meanwhile, the results of the frequency distribution of class characteristics were 31 respondents for class 7 with average pretest knowledge in the sufficient category (93.2%) and posttest in the good category (61.3%) for 44 respondents, namely class 8 with average pretest knowledge in the sufficient category (88.6%) and the posttest was in the good category (93.2%).

Table 2. Control group frequency distribution

Karakteristik	Pre Test						Posttest					
	Baik		Cukup		Kurang		Baik		Cukup		Kurang	
Jenis Kelamin	N	%	N	%	N	%	N	%	N	%	N	%
Perempuan	0	0	40	100,0	0	0	0	0	40	100,0	0	0
Laki-laki	0	0	35	100,0	0	0	0	0	35	100,0	0	0
Kelas	N	%	N	%	N	%	N	%	N	%	N	%
7	0	0	32	100,0	0	0	0	0	32	100,0	0	0
8	0	0	43	100,0	0	0	0	0	43	100,0	0	0

The results of the frequency distribution of gender characteristics in the control group were 40 female respondents with an average of pre-test and post-test knowledge in the sufficient category (100%), while 35 male respondents had an average of sufficient pre-test and post-test knowledge (100%). Meanwhile, the results Frequency distribution of class characteristics was 32 respondents for class 7 with average pretest posttest knowledge in the

sufficient category (100%), for 43 respondents, namely class 8 with average pretest and posttest knowledge in the sufficient category (100%).

Table 3. Analisa uji bivariate

Kelompok	Z	P-Value
Pretest eksperimen- posttest eksperimen	-6,900 <sup>b</sup>	0,000
Pretest kontrol- posttest kontrol	000 <sup>c</sup>	1,000

The results of the knowledge data test using the Wilcoxon test showed that the experimental group had a value of p-value = 0.000 or < 0.05, so H<sub>0</sub> was rejected and H<sub>a</sub> was accepted, while the control group had a value of 1,000 > 0.05, so H<sub>0</sub> was accepted, with a confidence level of 95%. It can be concluded that there is an influence of PHBS education with animated videos on the level of knowledge of Mts Nurul Iman students. This is in line with research by Salsabila Aulia Arina et al (2022).

## Discussion

From the pretest results above, it can be seen that the majority of students' knowledge is in the sufficient category, therefore, to increase knowledge, it is necessary to provide interventions to increase students' knowledge, this of course cannot be separated from good education, knowledge of clean living behavior and Health needs to be given to school students to create a healthy environment and themselves which will create comfortable conditions for learning. Knowledge about PHBS should be given from an early age, starting with oneself (Riesti Cahyaningrum 2016).

Posttest results above the majority of students' scores are in the good category as much as 80%. There is an increase in students in the good category, health problems are a very complex problem that is interrelated with other problems outside of health, the level of public health is influenced by four main factors, namely environment, knowledge, behavior, health services and heredity, education or health promotion is essentially an intervention effort aimed at behavioral factors. However, in reality, educational intervention or health promotion is also needed because behavior also plays a role in these factors, behavior and knowledge are very continuous so that you can choose whether to behave well or not based on knowledge. If the knowledge is good, you can choose good behavior (Hamyatri et al. , 2021).

Education using visual media or animated videos can influence a person's knowledge because knowledge is the result of knowledge and occurs after someone finds certain objects, images. Human knowledge is mostly absorbed from the eyes and ears, each individual has different knowledge, the more five senses are used, the higher the knowledge obtained, this research is in line with Zulfia Anisa with the results of the sig value. 0,000 (zulfia anisa et al. 2022).

PHBS education influences the level of knowledge, this is in line with Arina's research, this is in line with Aulia's research with sig values.  $0.001 < 0.05$  which indicates that before receiving education, the majority of respondents did not have sufficient knowledge about PHBS at school (Aulia Salsabila et.al 2022).

Animated video media is media with moving images with audio in audiovisual form and this media can display inanimate images that look like they are alive and all creation is done by computer from characters, movements, sounds and other effects (Afridzal, 2018). Animated video media is media with moving images with audio in audiovisual form and this media can display inanimate images that look like they are alive and all creation is done by computer from characters, movements, sounds and other effects (Afridzal, 2018).

This animated video media has an impact on the development of early childhood, such as the development of a person's thinking power and can motivate children because this media is very interesting for them starting from the appearance of animated images, interesting characters and sounds, therefore PHBS education with this animated video has an effect on the level of knowledge. This is in line with research (Siska Ramadania, 2022) with a significant value of  $0.000 < 0.05$ .

Supported by information in the form of health education material produced which describes the meaning, benefits and objectives of PHBS in schools as well as the application of the eight PHBS indicators in schools, delivered concisely, clearly and precisely. So it can help increase respondents' knowledge after providing the material. The role of educators with experience and knowledge in health promotion can provide appropriate information and methods for respondents. Health education also influences a person's level of knowledge. This is in line with research (Rusdiyana, 2019) with a significant value of  $0.000 < 0.05$  and Sulistiyani's research with a significant value of  $0.000 < 0, 05$ .

After receiving health education about PHBS at school, respondents experienced a significant increase in knowledge after receiving educational intervention about PHBS at school. This increase in knowledge involves many factors, including materials, facilities, equipment and can also influence the learning process and outcomes (Nurmala 2018). in line with natoatmodjo that changes in a person can occur as a result of learning and this will influence a person's behavior (Zarkasyi et al., 2019).

## **Conclusion**

The conclusion of the results of this research is that there is an influence of PHBS education with animated videos on the level of knowledge of MTs Nurul Iman students. For the next recommendation or suggestion from researchers is to separate the control and experimental groups regarding the research location for respondents because of concerns or high risk of bias between groups. control and experiment

## **Conflict of Interest**

Conflict of facilities and infrastructure, the solution: collaboration with campuses and research sites (schools), The research locations for the control and experimental groups are

worried about bias. The solution is to separate the locations for the control and experimental groups in different buildings during research implementation.

### **Ethical consideration**

Before this research was carried out, it had previously passed the ethical test with number 058/LPPM-UYM/VI/2023. The protocol had been carefully reviewed and that the research title "The effect of PHBS education with animated videos on the level of knowledge of female students at Mts Nurul Iman, Tangerang Regency 2023" was already in place. Approved and signed by the Head of LPPM.

And for schools or research sites, permission has been given with letter number 0123/MTsS NI/KB/Suket/07/2023 stating that they are authorized/allowed to conduct research and signed by the principal of MTs Nurul Iman.

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