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Education Using Habituation Theory With 6 Step Handwashing Jingle on the Implementation of Handwashing With Soap

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ABSTRACT

Introduction: Most health problems that occur in school-aged children are personal hygiene. Bad habits regarding hand washing will cause the development of disease in children because the germs on the hands have not completely died. So that the material is easy to understand, absorb, accept and implement to form healthy habits, appropriate methods and media are needed for health education as an effort to prevent disease transmission due to poor personal hygiene.

Objective: The aim of this research is to determine the effect of education using habituation theory with the 6 step hand washing jingle on the implementation of hand washing with soap.

Method: The research design was a pre-experiment with a one group pre-test and post-test design method with a research population of 3 and 4 grade students of 44 people. The sampling technique uses the Slovin formula with a precision of 5% and uses the Probability Sampling formula, namely Stratified Random Sampling with a sample of 40 people. The instrument is an observation checklist sheet and a Likert scale habits questionnaire.

Result: It was found that the skills of 15% of students were in the quite skilled category, 55% of students were in the skilled category and 30% of students were in the highly skilled category. Meanwhile, 67.5% of students have positive habits and 32.5% of students have negative habits. The results of data analysis using the Wilcoxon Signed Ranks Test showed that the p-value = 0.000 so $p < \alpha$ ($\alpha = 0.05$) wich means education using habituation theory with the 6 steps of hand washing jingle on the implementation of hand washing with soap in children at SDN 2 Bendorejo, Trenggalek Regency is very effective.

Conclusion: To obtain good washing hands with soap skills and habits in students, a consistent health promotion program is needed.

Keywords: Washing Hands with Soap; Habits; Skills; Jingle

INTRODUCTION

Primary school children are the next generation of the nation that needs to be considered, protected and maintained their health, because the age of primary school children is the right time to place a strong foundation for the creation of quality humans (1). In their development, school-age children are vulnerable to health problems caused by the environment or transmission from others because at this age children have a wide range of associations, whether in the school environment, family, or playground so it is easy for disease transmission infections to occur. Lack of hygienic habits and routines, the number of germs, allergens and exposure to pollution in the environment around children can cause diseases that develop in children as they get older.

Most health problems that occur in school-age children are about personal hygiene. Hand washing with soap and running water is one of the indicators of PHBS which is carried out to prevent the entry of germs and disease-carrying dirt into the body and the transmission of disease (2).

Clean and Healthy Living Behaviour (PHBS) is important to introduce to children, especially when entering school age. Children at the age of 7-10 years are at a concrete level of thinking with high curiosity so it is important to instil basic knowledge about health with the aim that children can implement it until they grow up.

Health education is a delivery of material and learning that can affect every habit, habit and knowledge related to health. In conducting health education, there are many ways to make it easier to convey messages to recipients of education, in this case, elementary school children. The selection of appropriate methods and media for health education is carried out so that the material can be understood, absorbed, accepted, and implemented to form a healthy habit.

The method of habituation in school-age children can be done in a fun way so that children are interested in continuing to do it. The demonstration method is an initial method that is suitable as a method used for learning to apply the correct hand washing steps. The demonstration method is a method used by the teacher to demonstrate the movements of a process with the correct procedure (3).

Audio jingle or jingle media can be chosen as a learning media targeting children. This is in line with research conducted by Jayastri in (1) that the method of listening and singing from jingles heard by children affects the implementation of hand washing techniques because it is able to convey educational messages to children, and the pleasant atmosphere of jingles can make it easier for children to absorb messages about the correct hand washing steps.

Based on a preliminary survey at SDN 2 Bendorejo, it was found that each classroom has a sink for handwashing, but these handwashing facilities and infrastructure have not been utilised properly by students. The principal said that only some students want to wash their hands. Related to these problems, researchers are interested in improving students' handwashing skills and habits by educating them using habituation theory with the 6-step handwashing jingle.

METHOD

This research is a quantitative study. The research design used is pre-experiment research with the one group pre-test and post-test design method. The population in this study were all grade 3 and grade 4 students of SDN 2 Bendorejo, totalling 44 students. the sampling technique used the Slovin formula with a precision of 5% and used the Probability Sampling technique, namely Stratified Random Sampling with a sample size of 40 people. Instruments in the form of observation checklists and habit questionnaires with Likert scales. The independent variable in this study is education using habituation theory with the 6-step hand washing jingle. the dependent variable is the skill and habit of hand washing. Data collection techniques with observation, interviews, and documentation.

RESULTS

General Data

Tabel 1. Characteristic of student at SDN 2 Bendorejo

No	Characteristic	Category	Frequency	percentage
1	Age	8 years old	12	30%
		9 years old	20	50%
		10 years old	8	20%
		Total	**40**	**100%**

2	Gender	Male	24	60%
		Female	16	40%
		Total	**40**	**100%**
3	Grade	Grade 3	28	70%
		Grade 4	12	30%
		Total	**40**	**100%**

In table 1. obtained student characteristics which are divided into age, gender and grade. Half of the students are 9 years old, most students are male and most students are in grade 3.

Custom Data

Tabel 2. Results of washing hands with soap skills and habits in students before and after health education using Habituation Theory with 6-step handwashing jingle

Subject character	**Pre (n=40)**		**Post (n=40)**		***p-value***
	f	**%**	**f**	**%**	
Skills					
Not skilled	0	0%	0	0%	
Less skillful	33	82,5%	0	0%	
Skilled enough	7	17,5%	6	15%	
Skilled	0	0%	22	55%	*0,000*
Highly skilled	0	0%	12	30%	
Max Score	6		10		
Min Score	3		5		
Mean	3,87		7,80		
Standart Deviation	0,757		1,418		
Habits					
Positive	14	35%	27	67,5%	
Negative	26	65%	13	32,5%	
Max Score	23		51		*0,000*
Min Score	19		31		
Mean	20,40		41,43		
Standart Deviation	1,057		51		

Based on table 2 it can be seen that there is an increase in skill scores before and after education. The results of the value before being given education on student skills show that almost all students are in the less skilled category. After being given education, the value of student skills was obtained, namely most students in the skilled category.

There is a difference in mean before and after education, namely from 3.875 which has increased to 7.8 with a mean difference of 4.0. The standard deviation before education from 0.757 to 1.418 which shows the wider

variation of data, and there is a difference in the maximum value and minimum value which was originally the maximum value in the pre-test of 6, in the post-test rose to 10, and the minimum value which was originally in the pre-test of 3, in the post-test rose to 5.

Because the significant value is not normally distributed (0,015), the analysis test is carried out using the Wilcoxon Signed Ranks Test nonparametric test with α 5% or 95% confidence level with a p-value of 0.000 which is smaller than α (0,05).

In the habit variable, before health education was carried out, the pre-test results of the habit questionnaire sheet in table 2. stated that most students had negative habits and almost half had positive habits. After health education, most students experienced an increase in having positive habits while almost half of students still had negative habits.

The mean result in the pre-test was 20.40, increasing to 41.43 when the post-test was conducted. The maximum value obtained by students also increased from the pre-test with a value of 23, to 51 in the post-test. Likewise, the minimum value which was originally 19, rose to 31 in the post-test.

After it is known that the value is not normally distributed (0.00), an analysis test is carried out using the Wilcoxon Signed Ranks Test nonparametric test and the p-value is 0.000 which means it is smaller than α (0.05) so that H1 is accepted which means that there is an educational effect using habituation theory with the 6-step hand washing jingle on the habit of washing hands with soap in children at SDN 2 Bendorejo, Trenggalek Regency.

DISCUSSION

Washing Hands with Soap skills and habits in children before health education using Habituation Theory with 6-step handwashing jingle

Before health education was conducted, the results of the pre-test checklist observation sheet for washing hand with soap skills tended to be low. Although there were no students in the unskilled category, most students were in the less skilled category and a small proportion were in the moderately skilled category. None of the students were in the skilled to highly skilled category. When asked by the researcher, all students argued that they had never known and heard about the correct hand washing steps.

The results of the preliminary study conducted on January 15, 2024 conducted an interview with the Principal of SDN 2 Bendorejo with the results that most students in elementary schools wash their hands before and after eating and also when their hands are dirty, but have not used the steps of hand washing properly due to lack of information about hand washing techniques. The principal stated that there has never been health education from the health team on how to wash hands and there is no program specifically related to hand washing.

In fact, the existence of a handwashing program is very necessary for each school, as explained by the Indonesian Ministry of Health that in schools, washing hand with soap should have been included in Teaching and Learning Activities (KBM), especially physical education lessons. This program has been implemented in schools according to research conducted by (4) in Bogor City which recognizes washing hand with soap under the name of the 7 Steps of Handwashing activity, as well as the commemoration of World Handwashing Day which is also an annual routine activity carried out at the Bogor City Health Office. The length of time this program has been running has caused policy holders at the city level and school principals to admit that they have heard and know the existence and importance of the washing hand with soap program in schools.

The existence of the washing hand with soap program in each school can motivate students to wash their hands with the correct techniques and steps. The washing hand with soap program in schools must be supported by all school parties, especially teachers who act as teachers and role models for students. The program can be made as innovative as possible, and must have the main goal that students want to wash their hands with the right steps, as in research Arianty (2020) hand washing programs in schools must increase awareness of the benefits of hand washing through educational activities, increase children's ability and confidence to wash their hands at school. The program can be carried out by emphasizing the normality of handwashing in schools through the creation of simultaneous handwashing events, or playing handwashing jingles every class entry or break time.

Hand washing facilities and infrastructure available at SDN 2 Bendorejo in the form of sinks and water taps are available in each class, but hand washing soap is not yet available in each class sink because according to information from students if placed in each sink it will be used for playing around by grade 1 and 2 students. The incomplete hand washing facilities are also the cause of the lack of implementation of washing hand with soap, in line with research conducted by (5) that the lack of facilities available for washing hands at school and the lack of health education provided by teachers and health workers, so children do not get complete knowledge about the importance of washing hands with soap with the correct technique so that children are less enthusiastic about washing hands with soap.

Similar research was also conducted by (6) on the availability of facilities and hand washing behavior in elementary school children with the results of the study stating that there is a relationship between available facilities and good and correct student hand washing behavior.

The low pre-test score of skills is also due to the lack of information possessed, especially regarding the steps of washing hands properly. This is because elementary school children do not have much experience or information received, both information obtained from the senses of hearing and vision so that education and direction are needed so that children are able to do what is expected. Therefore, a way or technique of delivering information in the form of appropriate health education is needed so that children can wash their hands with the correct technique. In line with community service conducted by (7) which explains community service activities with the implementation of health education have improved skills seen from the results of all students being able to practice the 6 steps of washing hand with soap properly and correctly and there is an increase in skills in students.

Children's habits before education tend to be low because they do not understand information about hand washing, especially the correct hand washing steps and important times to wash their hands. In developing habits in children, of course, it is necessary to provide knowledge first so that children know and realize that these habits are important to do. Knowledge to students can be provided through education or health education, as the purpose of health education in (8), namely the implementation of health education is to provide information about the principles of healthy living, foster healthy attitudes and behaviors and form habits for healthy living.

In addition, the pre-test scores that tend to be low are due to the lack of repetitive stimulus, even though habits are formed from repeated directions, in the case of hand washing, these directions can be obtained from the advice of teachers, parents, or from sources of health information that are seen or heard repeatedly. This assumption is in accordance with the opinion of Burghardt (Syah, 2010: 116) in research (9) which states that habit is a process of shrinking the tendency to respond to stimuli that have been given repeatedly, giving rise to new patterns of behavior that are relatively stable and automatic.

After conducting interviews with students, when asked why they were not accustomed to washing their hands at home, most of the answers were that not many students' homes provided a special place to wash their hands at home. Similarly, at school, although each classroom has its own sink, there is no soap in each sink. In fact, these complete hand washing facilities are the main provision for being able to carry out the habit of washing hands, which is supported by (4) who argue that habituation to clean and healthy living behavior (PHBS) needs to start early, and schools that have adequate hand washing facilities are the place to do this.

Washing Hands with Soap skills and habits in children after health education using Habituation Theory with 6-step handwashing jingle

Hand washing skills that have improved in students after health education is related to students' ability to memorize each hand washing movement quickly. Evidently after carrying out a demonstration of hand washing movements while listening and singing jingles, students are able to memorize and repeat the movements well. This is supported by research conducted by (10) that the motor development of elementary school children aged 6-12 years is characterized by motor activity or agile movements, so that at this age it is an ideal time to be able to learn to improve their skills or psychomotor abilities.

In line with research conducted by salsabila (2020) which states that the age group of 8 to 10 years still needs teacher attention but is more competitive in school activities. Students in this age group judge their own behavior and set their own standards and begin to be independent in developing moral values. In addition, students in this age group are able to maintain interest, think logically about a problem, understand cause and effect, and begin to understand abstract concepts.

Another reason for the increase in skills in students is because of the interest in the 6-step hand washing jingle as a stimulus so that students can spontaneously memorize and sing jingles that cause steps in hand washing to be memorized as well. This is in line with research conducted by (11) which states the relationship between the improvement of children's abilities before and after being given health promotion with audio visual media song “Let's Wash Hands” which states that there are differences before students are given health promotion with audio visual media song “Let's Wash Hands” and after being given health promotion with audio visual media song “Let's Wash Hands”.

Research conducted by Jayastri in (1) also states that the method of listening and singing from jingles heard by children affects the implementation of hand washing techniques because the lyrics in the jingle are able to convey educational messages to children, and the pleasant atmosphere of the jingle can make it easier for children to absorb messages about the correct hand washing steps.

In the implementation of handwashing habit education, in addition to explaining how to wash hands properly and correctly, the important time to wash hands according to the handwashing facility option book. Researchers explained that germs will easily enter the body at these times. In addition, it is also explained to students about the

meaning of habit, which must be carried out wherever and whenever, which means that wherever the place and whenever the time must wash their hands according to the steps that have been taught. In accordance with the opinion (9) that habit comes from the word ordinary, which means repetition or often doing the same thing even though in different times and places, students responded to the explanation well and enthusiastically by asking several questions "if you only play in the house, do you have to wash your hands", "what if there is no hand washing soap at home", "why after handling animals you have to wash your hands" because most male students like to hunt birds when they come home from school.

It is known in table 2. that there is an increase in the value of the post-test results of student habits. Age is one of the factors causing the increase in the value of the post-test that has been carried out. School-age children are a golden age to instill PHBS values and have the potential to be agents of change to promote PHBS both in the school environment, family, and society because at this stage children are very sensitive to stimuli so that they are easily guided, directed and instilled with good habits because children are at the stage of growth and development (5).

In appendix 18, it is known that the diagram of student habits starting from the pre-test and post-test has increased gradually. This increase in habits is mostly experienced by grade 3 students aged 8 to 9 years in student characteristics table 5. Unlike grade 4 students, grade 3 students are more excited and respond more when reminded of the habit of washing hands.

This is in line with research Taylor, (2018) that healthy habits begin to decline or are less practiced as individuals get older, or enter a more mature age. This can happen because as students get older, they are in the process of searching for self-identity and need recognition among their peers. This means that if students are in a habit that is different from their friends, they may adjust the habits of their friends.

The methods and media used to build the habit of Handwashing with Soap in students have been adjusted to the age level so that students can easily accept the method. Quoted from Stephen R Covey's book (1989) which says "sow ideas, grow deeds; sow deeds, grow habits; sow habits, grow character; sow character, grow fate".

Based on this quote, it can be seen that habituation is very important, where when someone wants to instill good habits in children, verbal delivery is not enough, but there needs to be a reminder and direction. This can be done by providing stimulus repeatedly and on a schedule so that children always remember until finally they can form the appropriate character.

The stimulus to familiarize elementary school children to wash their hands with soap in accordance with the 6-step handwashing guideline has been provided through the audio media jingle 6 steps of handwashing which is played on the school speaker every break time. That way after hearing the stimulus, elementary school children will react according to the directions given. If the jingle is interesting, students will memorize and hum without realizing it.

Based on the theory of connectionism or thorndike theory which is in accordance with the habituation method, it is explained that students will react with a response if there is a stimulus or stimulus which later the relationship between stimulus and response will give birth to a habit in students automatically (12). In this case, it can be interpreted that someone who is given a stimulus or direction routinely will give birth to a habit which is a response to the stimulus.

Audio media was chosen based on Edgar Dale Cone's theory about the cone of experience that as much as 20% of what humans hear will be remembered. In addition, listening to music has benefits, one of which can optimize brain function when associated with learning. Audio media has a simple packaging that can make it easier for elementary school students to store information in their minds. The information will later be processed into knowing, understanding, application, analyzing, synthesizing and evaluating (1).

Another thing that caused the increase in scores on the pre-test was the support from the school to instill the washing hand with soap habit. The school has facilitated to play the jingle at recess, and supports the existence of a special washing hand with soap program as a follow-up plan after the research.

Educational facilities are indeed the right place to conduct health education for children. Schools, which are part of educational facilities, can be one of the places to develop children's physical, cognitive, creativity, psychomotor aspects as well as character and moral education (2). Schools have an obligation to provide knowledge and understanding to children, especially in terms of health. Schools have the purpose and function of providing knowledge that later when children have graduated is expected to have a good and smart personality. The expected personality is how he applies a clean and healthy lifestyle in the future.

Analysis of the effect of health education using Habituation Theory with 6-step hand washing jingle on the skills and habits of washing hand with soap in children at SDN 2 Bendorejo.

The results of univariate and bivariate analysis showed a change before and after health education with a p value smaller than 0.05, indicating that there was an effect of health education using Habituation Theory with the 6-step handwashing jingle on the implementation of washing hand with soap in children at SDN 2 Bendorejo.

Students' skills, which were initially low due to the absence of a program on washing hand with soap at school, the lack of complete facilities for hand washing and the lack of information about washing hand with soap, can improve after health education. Another thing that causes the increase in student skills according to the researcher's assumption is due to the ability of students to memorize each movement quickly which is supported due to their motor development, as well as an interest in jingles.

Students' habits, which were initially low because they did not understand information about hand washing, especially the correct hand washing steps and important times to wash their hands and there was no repetitive direction, after health education, students who were accustomed to performing washing hand with soap could increase which was also supported by several factors, namely the age of school children who are very sensitive to stimuli so that they are easy to guide, direct and instill good habits because children are at the stage of growth and development, as well as methods and media that are appropriate for their age.

The indicator of the success of the effect of health education using Habituation Theory with the 6-step hand washing jingle on the implementation of washing hand with soap in children at SDN 2 Bendorejo is if washing hand with soap with 6-step hand washing skills has become a routine and habit inherent in students, as in research (4) which states that the indicator of the success of washing hand with soap implementation is if this activity has become a routine, washing hands is a habit that has been embedded in students.

Similar research has been conducted by (1) regarding the effectiveness of using audio media containing dental health that is played on school speakers every morning with the results of the study, namely there are differences in the level of oral hygiene before and after counseling using audio media and there is a significant difference in increasing knowledge after being given counseling with audio media.

CONCLUSION

Washing hands with soap skills in children before health education using Habituation Theory with 6-step hand washing jingle almost all students are in the less skilled category and a small portion in the moderately skilled category, while washing hand with soap habits in children before health education using Habituation Theory with 6-step hand washing jingle mostly have negative habits and almost half have positive habits. Washing hands with soap skills in children after health education using Habituation Theory with 6-step hand washing jingle has increased, namely most in the skilled category, almost half in the highly skilled category and a small portion in the moderately skilled category, while washing hand with soap habits in children after health education using Habituation Theory with 6-step hand washing jingle has also increased, namely most students have positive habits and almost half have negative habits. Health education using Habituation Theory with 6-step handwashing jingle on the skills and habits of washing hand with soap in children at SDN 2 Bendorejo is very effective.

SUGGESTION

It is expected to continue the existing program by continuing to play hand washing jingles during recess as a stimulus so that students want to wash their hands with the right steps and can become motivators or role models for students in terms of hand washing by providing reminders and examples. Schools are also expected to provide complete facilities and infrastructure for hand washing including towels or tissues, and refillable liquid soap so that washing hand with soap is still well implemented.

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