



## The Correlation between Knowledge and Habit of Handwashing with Soap on Students of Primary School 101893 Bangun Rejo

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### ABSTRACT

Hand washing is a preventative and curative measure that has evolved into clean and healthy living behavior programs in schools. Hand washing with soap is one of the sanitation measures that humans use to clean their hands and fingers with water and soap in order to stay clean and break the germ chain. Hand washing with soap is also referred to as a preventative measure. This is because the hands frequently act as carriers of germs. The purpose of this study is to ascertain the relationship between knowledge and the habit of hand washing with soap among students at primary school 101893 Bangun Rejo in Tanjung Morawa District. This is an analytical study that takes a quantitative approach and employs a cross-sectional research design. The population was comprised of all 487 students enrolled in primary school 101893 Bangun Rejo. This study enrolled students in grades IV and V, totaling up to 70 students. This sampling technique employs a method known as cluster random sampling. Data were gathered through the distribution of questionnaires and their completion by students. Techniques for data analysis utilizing the Chi-square test. The findings indicated that students lacked knowledge regarding proper hand washing behavior when using soap (31.4 percent). Handwashing with soap is insufficient (34.3 percent). The study's conclusion indicates that there is a statistically significant relationship between knowledge and behavior regarding hand washing with soap ( $p = 0.000$ ). To increase knowledge and practice of proper hand washing, schools must provide facilities that promote clean and healthy living behaviors, particularly hand washing with soap, as well as health education about the importance of continuous hand washing.

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## 1. INTRODUCTION

Handwashing with soap is one prevention effort through sanitation measures by cleaning hands and fingers using water and soap (Mustikawati, 2017). Human hands are often agents that carry germs and cause pathogens to pass from one person or nature to another through direct or indirect contact. According to Law no. 36 of 2009, health is a state of health both physically, mentally, spiritually and socially that allows everyone to live a socially and economically productive life. This means that a person's health is not only measured from the physical, mental, spiritual, and social aspects but is also measured from his productivity in the sense of having a job or producing economically.

School children are the next generation of the nation whose health needs to be maintained, improved and protected (Silviana, 2016). The number of school-age which is quite large, which is 30% of the total population of Indonesia, is a golden age for instilling clean and healthy behavior so that school children have the potential as agents of change to promote instilling clean and healthy behavior, both in the school environment, family and community (Anam, 2016).

Schools have an important role in educating and encouraging handwashing habits from an early age because the handwashing habits learned at school can last a lifetime. In addition, children are also potential agents of change for the surrounding environment. Efforts to break the chain of disease spread can be made by providing education about healthy lifestyles to children; it is important because children spend much time in school (Ma'rifah, 2015). Handwashing is a disease prevention and control measure part of schools' clean and healthy lifestyle program (Kusbiantoro, 2015). Hand washing in Indonesia has not become a culture that is practised by the wider community. In their daily life, many wash their hands only with water before eating, while handwashing with soap are done after eating.

Handwashing with soap is one of the sanitation measures by cleaning hands and fingers using water and soap by humans to be clean and break the chain of germs. Handwashing with soap are also known as an effort to prevent disease. This is done because hands are often agents that carry germs and cause pathogens to transfer from one person to another, either by direct or indirect contact (using other surfaces such as towels and glasses). Handwashing before cooking or eating has the same threshold importance as handwashing after using the restroom to prevent infectious diseases. In comparison, our study found that handwashing before cooking or eating is less frequent than after the toilet, as found in other studies (Tuzun, 2015).

The right times to wash hands with soap are: (1) before and after eating, (2) before preparing food, (3) after removing the child's faeces, (4) after playing and exercising, (5) after defeating (defecation) and urination. There are six steps to proper handwashing, namely wetting the hands and rubbing the palms of the hands, the backs of the hands and between the fingers, the backs of the fingers, rubbing the thumbs and nails and then rinsing with clean water. Hygienic habits or behaviour by handwashing with soap can prevent spreading infectious diseases in the community, such as diarrhoea and helminthiasis. Handwashing behaviour, especially with soap, is still an important target in health promotion, especially related to clean and healthy living behaviour (Putri, 2017). The behaviour of handwashing

with soap turns out to be not a behaviour that is usually carried out daily by the general public. With the low behaviour of handwashing with soap and the high level of handwashing with soap in preventing disease transmission, it is very important to have health promotion efforts with the material of increasing handwashing (Saputri, 2019).

Handwashing with water alone is not enough to protect someone from germs that stick to their hands. The use of soap when handwashing is important to remove invisible germs, oil, grease and dirt on the skin's surface. So that the smell and feeling of freshness after washing your hands with soap cannot be done if you only use water (Husni, 2019).

According to Nadiya (2020), a person's habits and knowledge will impact the disease suffered by that person. The research results Rohmah (2016) showed that the habit of handwashing and using healthy latrines had a significant relationship with the incidence of diarrhoea in children under five. Advice that can be given to mothers of toddlers is to wash their hands before and after defecating and before preparing food for children. The results of the Zulkifli (2017) research show a relationship between clean water coverage and the prevalence of diarrhoea, with the probability value obtained by the research results of 0.027. Other studies have shown that handwashing with soap can reduce 50% of the incidence of avian influenza (Talaat, 2016). Before providing regular counselling to students, schools and health centres provide handwashing facilities with soap that can function properly (Wikurendra, 2018). The results of the Saputri (2019) study show that audiovisual media for fourth graders at Islamic primary school Jamilurrahman Bantul can increase children's knowledge of handwashing with soap.

In addition to functioning as a place of learning, schools can also threaten disease transmission if not managed properly. Moreover, school-age for children is also a period of vulnerability to various diseases. The habit of children consuming snacks freely, plus children not washing their hands with soap before eating, will easily cause various disease-causing germs to enter the body (Kartika, 2015).

Factors that support the application of handwashing with soap are the existence of good knowledge and attitudes regarding handwashing with soap, while the factors that hinder handwashing with soap are the availability of clean water facilities (Mustikawati, 2017) .

Based on the results of an initial survey on March 2, 2019, for students in grades IV and V, researchers at Primary School Bangun Rejo carried out. The researcher interviewed some students in grades IV and V and concluded that almost on average, students before and after eating wash their hands using only water without using soap, and almost on average, students after playing, exercising, and handling their pets do not wash their hands. There are even students who, after defecating, only wash their hands with water without using soap.

## **2. RESEARCH METHODE**

This study uses a cross-sectional design, where the cross-sectional design is a study to study the dynamics of the correlation between risk factors and effects by approaching, observing or collecting data all at once (point time approach). The research will be conducted at primary school 101893 Bangun Rejo, Tanjung Morawa District. The reasons

for choosing the location: 1. There has been no research on the relationship between knowledge and the habit of handwashing with soap in elementary school children; 2. Students of primary school 101893 Bangun Rejo do not yet understand how to wash their hands properly and correctly using soap; 3. Many students of primary school 101893 Bangun Rejo do not wash their hands before and after eating. The research was conducted from November 2018 - July 2019.

The population in this study is the entire object of research or the object to be studied. The population used is all students of Primary school 101893 Bangun Rejo, as many as 487 students. The sample in this study is the object under study and is considered to represent the entire population. The samples in this study were students in grades IV and V. This sampling technique used the cluster random sampling method in which the sampling by random cluster sampling did not consist of individual units but consisted of groups or clusters (clusters). In cluster sampling, the researcher does not list all members or units in the population but lists the number of groups or clusters.

The research variable is the size or characteristic possessed by members of a group different from that of other groups. Another definition says that a variable is used as a characteristic, trait, or measure owned or obtained by a research unit about a certain concept of understanding, such as age, gender, education, marital status, occupation, knowledge income. Variables are divided into dependent and independent variables. Aspects of measuring the knowledge variable: the score of the knowledge section, if knowledge is good, then the score is 5-9, and insufficient knowledge is 0-4. Aspects of measuring the behavioural variable of handwashing with soap: the score for the behaviour section, if the behaviour is good, then the score is 13-24, and bad behaviour is 1-12.

The univariate analysis aims to explain or describe the characteristics of each research variable. The form of univariate analysis depends on the type of data. Bivariate analysis was carried out on two variables, namely dependent and independent. So the statistical test used is the chi-square test which can only be used to determine whether or not there is a relationship between two variables.

### 3. RESULT AND ANALYSIS

The characteristics of the respondents observed by the researcher entitled the relationship of knowledge with habits of handwashing with soap on the students of Primary School Negeri 101893 Bangun Rejo obtained data regarding the characteristics of respondents as follows:

Table 1. Distribution of Characteristics, Knowledge and Habits of Handwashing with Soap

Variabel		
	f	%
<b>Sex</b>		
Male	26	37,1
Female	44	62,9
<b>Age</b>		
10 Years	20	28,6
11 Years	42	60
12 Years	8	11,4

Class		
IV	34	48,6
Va	36	51,4
Knowledge		
Good	48	68,8
Bad	22	31,4
Hand Washing on Soap		
Good	46	65,7
Bad	24	34,3
Total	31	100

This study indicates that from 70 respondents, there are 26 respondents (37.1%) who are male, and 44 respondents (62.9%) are female. The results of this study indicate that it can be seen that respondents aged ten years were 20 people (28.6%), respondents aged 11 years were 42 people (60%), and respondents aged 12 years were eight people (11.4 people). The highest number of respondents based on age was at the age of 11 years, namely 42 people (60%), and the least was at the age of 12 years, namely eight people (11.4%). This study indicates that from 70 respondents, there are 34 respondents (48.6%) in class IV and 36 respondents (51.4%) in class V.

This study indicates that from 70 respondents, there are 48 respondents (68.8%) who have good knowledge and 22 respondents (31.4%) who have poor knowledge. This study indicates that from 70 respondents there are 46 respondents (65.7%) have good behaviour, and 24 respondents (34.3%) have bad behaviour.

**Table 2 Relationship between Knowledge and Habit of Handwashing with Soap**

Variabel	Habit of Handwashing with Soap				Total	P	PR	
	Good		Bad					
	f	%	f	%				
<b>Knowledge</b>								
Good knowledge	41	85,4	7	14,6	48	100	0,63	<b>3,92</b>
Insufficient knowledge	5	22,7	17	77,3	22	100		
Total	46		8		70	100		

This study indicates that respondents with good knowledge and good behaviour in terms of handwashing with soap are 41 respondents (85.4%). Respondents with good knowledge of handwashing with soap but have bad behaviour are seven respondents (14,6%). Statistical test results obtained p-value = 0.000. This shows a relationship between the knowledge variable and the habit of handwashing with soap. This study indicates that individuals who have good knowledge have a 3.92 times risk of having the habit of washing their hands with soap compared to individuals who have insufficient knowledge of having the habit of washing their hands with soap.

#### 4. DISCUSS

Simple healthy living habits, such as handwashing with soap, are one way to prevent coronavirus infection. In addition, it can also increase public awareness of personal health and the importance of implementing clean and healthy living (Rahmawati, 2021; Tarigan, 2020). Internal and external factors in individual children have an important influence on handwashing with soap properly. Lack of facilities available for handwashing in schools and lack of health education provided by teachers and health workers, so children do not know the importance of handwashing with soap with the correct technique so that children are less enthusiastic about washing their hands with soap and there are still many children who are not able to do the right-hand washing technique with soap (Parasyanti, 2020).

Identification happens when an individual adopts the conduct or attitude of another person or group in order to emulate what the individual perceives as a pleasurable relationship. Internalization occurs when individuals accept influence and are eager to follow it since the attitude is consistent with their beliefs and value system (Ashar, 2020).

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The results of this study are in line with research conducted by Pauzan (2017), the results of the statistical test  $p\text{-value}$  of 0.001, where there is a significant relationship between knowledge about handwashing and handwashing behaviour in public elementary school students in Bandung. The results of the Sasmitha (2017) study showed that there was an increase in the average value, median value, drinking value and maximum value after health education with audiovisual was carried out in the intervention group; namely, the mean value of the pre-test was the median value of the pre-test was 74.19 and increased to 86.10 at the post-test.

The results of Andriani (2017) research show that increasing knowledge about handwashing with soap will improve the ability to wash hands with soap; health education plays an important role in increasing knowledge about the ability to wash hands with soap. The results of Juliawan (2019) research showed that health education by singing handwashing songs on the act of handwashing in preschool children at Bakti 3 Kindergarten School Denpasar. The results of Wati (2017) show that students lack knowledge about proper handwashing with soap and lack of health socialization by local health workers. Sensing objects through health education will be able to increase children's knowledge, good knowledge will be able to determine the actions to be taken, including in terms of health (Siregar, 2021).

According Johan (2018), several factors influence the behaviour of handwashing with soap. The factors that influence handwashing with soap include age, education, sources of

information, and knowledge. In this study, older children had better handwashing behaviour than younger children. Knowledge or cognitive domain is a very important domain in shaping one's actions. It is proven from experience and research that things based on knowledge will be more lasting than behaviour that is not based on knowledge (Siregar, 2020). The behaviour of handwashing with soap is caused by differences in bad perceptions, which may also be caused by the lack of a role for health workers to provide counselling about handwashing with soap (Murwanto, 2017).

Schools have an important role in educating and encouraging handwashing habits from an early age because the handwashing habits learned at school can last a lifetime. In addition, children are also potential agents of change for the surrounding environment (Fadhilla, 2015). Counselling on handwashing with soap is one of the health education programs of the school health unit. School health effort is an integrated cross-program and cross-sectoral effort to improve the ability to live healthily and subsequently form healthy and clean living behaviours for students, school members and community members. Information received through print media, electronic media, education/counselling, books and will increase a person's knowledge and usually improve or change his behaviour for the better (Nasution, 2019; Meutia, 2020).

The benefit of developing clean and healthy living behaviour from an early age is that children will have a healthy lifestyle later in life. This means that early children who are accustomed to clean and healthy living behaviour are not easily lost at the next stage of development. In addition, early childhood already has a healthy lifestyle, so they will be free from attacks of various diseases that often occur in early childhood, such as coughs/colds, spots of tuberculosis, diarrhoea, fever, measles, ear infections, and skin diseases. In clean and healthy conditions, various abilities possessed by early childhood will be explored and developed properly, so that early childhood can grow and develop optimally (Novitasari, 2018).

The Putri (2017) study shows that boys have less effective hearing skills, so they cannot speak and listen simultaneously. Gender is very influential in children's ability to wash their hands with soap properly. Girls are easier to accept the material presented because girls are more focused and concentrated on applying the practice of handwashing with soap according to the right steps than boys.

According Tuzun (2015) and Seimetz (2016), the difference in frequency between attitudes toward preventing infectious diseases and certain handwashing behaviors, such as handwashing before meals, also indicates a distinction between attitudes toward health behaviors and the practices of these behaviors in the hand hygiene specialty. On the other hand, the high level of awareness about the importance of handwashing in preventing infectious diseases can serve as a convenient foundation for handwashing promotion activities. The role of schools in increasing motivation for all students and staff to change their behaviour should be considered for future handwashing programs importance of school institutions for participating in the Handwashing with Soap program through school-based health promotion.

Handwashing with water alone is more common, but it has proven ineffective in maintaining health than handwashing with soap. Using soap in handwashing causes people to have to allocate more time when washing hands, but soap is effective because the fat and dirt that sticks will be released when the hands are rubbed and rubbed to remove them. In the fat and dirt that sticks to this disease, germs live.

## 5. CONCLUSION

There is a significant relationship between knowledge and the habit of handwashing with soap in students of Primary school 101893 Bangun Rejo with a p-value of <0.001. The majority of students know the good category of behaviour in handwashing with soap in the good category. It is necessary to socialize the behaviour of washing hands with soap by using various media to increase information to elementary school students to increase the behaviour of washing hands with soap. There is a need for continuous improvement of Communication, Information, and Education activities by involving more people to improve knowledge, attitudes, and behaviour of washing hands with soap to elementary school students.

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