

# THE RELATIONSHIP BETWEEN KNOWLEDGE AND ATTITUDE WITH THE BEHAVIOR OF INCREASING HAND WASHING WITH SOAP

Nuridha Fauziyah<sup>1</sup>, Karwati<sup>2</sup>, Witri Dewi Mentari<sup>\*3</sup>

<sup>1</sup>Nursing Study Program, Politeknik Negeri Subang

<sup>2</sup>Nursing Study Program, Faculty of Health Science, Universitas Sebelas April

<sup>3</sup>Public Health Study Program, Faculty of Health Science, Universitas Sebelas April

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## ABSTRACT

The main part of our body that is most contaminated by germs and germs is the hands. When holding something, and shaking hands with someone, of course there are many sources of disease that stick to the skin of the hands, such as germs, parasites and viruses that contaminate our hands and will enter our bodies if we don't wash our hands before eating. Through the hands the source of the disease can enter the nostrils, mouth and eyes when the hands are dirty. According to the Director of Family Health, Ministry of Health of the Republic of Indonesia, Eni Gustina, until now the health status of children cannot be categorized as good, because there are still health problems in Indonesia where every year 1.7 million children die from diarrhea, especially at school age. The purpose of this study was to determine the relationship between the level of knowledge and the behavior of increasing hand washing with soap (Hand washing) at SMK Pelita Nusa Jalancagak. The type of research used was quantitative research methods with a Cross Sectional approach. 0.05 means  $H_0$  is rejected,  $H_a$  is accepted. Based on the results of this study, a conclusion is obtained. There is a significant relationship between knowledge and behavior in washing hands with soap in Pelita Nusa Jalancagak Vocational School students with a P Value of  $0.002 < 0.05$ . There is a significant relationship between attitude and behavior of washing hands with soap in students of SMK Pelita Nusa Jalancagak with a P value of  $0.042 < 0.05$ . After knowing the results of the research that has been done, it is hoped that Pelita Nusa Vocational School students will be able to provide adequate facilities, especially for washing hands with soap.



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### Corresponding Author:

Witri Dewi Mentari

Public Health Study Program, Faculty of Health Science, Sebelas April University,

Jalan Cipadung No 54 Sumedang

Email: [witridewimentari@unsap.ac.id](mailto:witridewimentari@unsap.ac.id)

## 1. INTRODUCTION

The main part of our body that is most contaminated by germs and disease seeds is the hands. When holding something, and shaking hands with someone, there must be many sources of disease attached to the skin of the hands, such as germs, prasin and viruses that contaminate the hands and will enter our bodies if we do not wash our hands first before eating. Through the hands of the source of the disease can enter the nostrils, mouth and eyes when the hands are dirty (Purwandari, et al 2013). According to the Director of Family Health, Ministry of Health of the Republic of Indonesia, Eni Gustina, until now the degree of child health cannot be categorized as good, because there are still health problems in Indonesia where every year children die as many as 1.7 million due to diarrhea, especially at school age.

According to the World Health Organization (2017) diarrhea is a condition where defecation with a more liquid consistency than usual, with three or more times in 24 hours a day. There was an increase in the incidence of diarrhea and deaths caused by it in toddlers from 2015 to 2017. In 2015 diarrhea caused about 688 million illnesses and 499,000 thousand deaths worldwide. Whereas in 2017 almost 1.7 billion cases of diarrhea occurred in children with a figure of around 525,000 thousand people annually experiencing death worldwide, especially in children under 5 years of age (Husniati L, 2018). The morbidity and mortality rate of diarrhea is included in the high category and is influenced by several factors, namely the lack of clean and healthy living behavior (PHBS). One of the PHBS activities is to improve the attitude of washing hands with soap with running water. Proper hand washing can reduce the risk of diarrhea by 42 to 47% (Kartika, et al 2016).

Clean and Healthy Living Behavior (PHBS) is included in all health behaviors that are carried out based on a person's understanding so that they can handle themselves in matters of health, so that they can play an active role in health activities for themselves and others. But not everyone understands what healthy living means, this is evidenced by many people who do various activities regardless of their health, one example is when a child finishes doing work outside the home, parents are not used to children washing their hands and feet when they enter the house and children are left to carry out new activities, another example is when bathroom cleanliness is not considered and left unattended, including the cleanliness of the bathtub. These behaviors seem trivial but can have a big impact when they become a habit (Tentama F, 2018).

Hand washing with soap is the act of disinfecting fingers with soap and running water. Hand washing with soap can protect us from various diseases of the digestive tract and diarrhea. To improve the behavior of HWWS the world organization set on October 15 every year. It is celebrated as World Handwashing Day with soap (global Handwashing Day) To reduce morbidity and mortality from diarrheal diseases Reduction was originally proposed by the 2008 Handwashing public-private partnership (PPPHW) (Ministry of Health, Bureau of Health Promotion and community empowerment). Percentage of handwashing based on Riskesdas 2018 data The correct way is to wash your hands 5 times. Effective handwashing has increased every year since 2007 23.3%, 47% in 2013, even 49.8% in 2018. From this data it can be seen that half of the Indonesian population does not wash their hands properly (Ministry of Health RI, 2018).

Washing hands with water alone is more common, but this has been shown to be ineffective in maintaining health compared to washing hands with soap. Using soap when washing hands actually causes people to spend more time when washing their hands, but using soap can be more effective because the attached fat and dirt will be released when the hands are rubbed and rubbed in an effort to remove them. It is in this inherent fat and dirt that germs live (Musrikawati, I.S, 2017).

According to research conducted by Lestari (2019) on the Relationship between Knowledge and Attitudes Towards Handwashing Behavior in the Pegirian Village Community, the results showed that most respondents had poor knowledge, namely 70.2%, while in the action variable, most respondents had good actions, namely 58.3%. This shows the fact that people still do not understand the behavior of washing hands with soap which is one of the efforts in personal hygiene. Behavior and practice are still not widely applied by the community in everyday life, while the act of washing hands properly includes behaviors that have a positive impact on health (Lestari, A.O.A.W 2019).

Based on a survey conducted by Murwanto (2017), he had 55.9% or sufficient handwashing soap (HWWS) behavior in junior high school, and based on influential factors, he had nine positives, including knowledge, values, and self. found that there are variables from. -Four roles: image, HWWS availability, reliability, HWWS availability, teachers, parents, and alumni. Three negative values, 50%, included cognition, attitude, and the role of health workers. Sinanto & Sitti's (2020) research on knowledge, attitudes and behavior about hand washing with soap in the COVID 19 prevention community in Yogyakarta found that community knowledge was in the good category 100%. The community's attitude was high at 92%, and the community's behavior was good at 98%. They have good knowledge, attitude and behavior about handwashing with soap to prevent COVID 19, and it is important to use media such as social media to streamline health promotion efforts to promote this.

This is based on a preliminary survey of 10th and 11th grade students conducted by researchers at SMK Pelita Nusa Jalancagak Subang. The researcher conducted interviews with 60 students and found data that from 10-15 students did not wash their hands with soap before and after eating, from 5-10 students did not wash their hands with soap after playing, exercising and doing activities. After defecating 5-10 students only wash their hands with water without using soap. This encouraged researchers to conduct a study entitled The relationship between knowledge and attitudes about hand washing with the behavior of increasing hand washing with soap (Hand washing) at SMK Pelita Nusa Jalancagak Subang.

## 2. METHOD

Quantitative research methods can be interpreted as research methods based on the philosophy of positivism, used to research on certain populations or samples, data collection using research instruments, quantitative / statistical data analysis, with the aim of testing predetermined hypotheses (Sugiyono, 2016). 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 means of an approach, observation or data collection at one time (point time approach). This means that each research subject is only observed once and measurements are made of the status of the character or subject variable at the time of the examination. This does not mean that all research subjects are observed at the same time (Notoatmodjo, 2018). The population in this study were 10th and 11th grade students with a total of 141 students. Based on the Slovin formula, the number of samples to be taken from the population is 60 respondents. The independent variables in the study were knowledge of Pelita Nusa Vocational School students, attitudes towards hand washing with soap and the dependent variable in this study was the behavior of increasing hand washing with soap. Instrument research in the form of a questionnaire or list of questions. The questionnaire includes 3 components, namely knowledge, attitude, and behavior of Handwashing with Soap. Furthermore, the knowledge variable consists of 8 statement items, the attitude consists of 6 statement items, and the behavior consists of 7 statement items. 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 (Hastono, 2016).

### 3. RESULTS AND DISCUSSION

#### 3.1. Results

##### 3.1.1 Univariate Analysis

In Univariate analysis, the frequency distribution of each variable will be displayed, both independent variables and dependent variables, while the results of univariate analysis are described as follows:

#### 1. Frequency and Percentage Distribution of HWWS Knowledge

Variables	Frequency	Percentage (%)
Hand washing Knowledge		
- Less	0	0
- Simply	20	33,3
- Good	40	66,6
<b>Total</b>	60	100

Table 1  
Frequency and Percentage Distribution of Hand Washing Knowledge

Based on table 1, it can be seen that the distribution of respondents based on Hand washing knowledge in the moderate category was 20 people (33.3%) and the good category was 40 people (66.6%).

#### 2. Frequency and Percentage Distribution of Hand Washing Behavior Attitud

Table 2  
Frequency and Percentage Distribution of Hand Washing Attitude

Variables	Frequency	Percentage (%)
Hand washing attitude		
- Less	0	0
- Simply	25	41,6
- Good	35	58,3
<b>Total</b>	60	100

Based on Table 2, it can be seen that the distribution of Hand washing attitude respondents in the moderate category was 25 people (41.6) and the good category was 35 people (58.3).

3. Frequency and Percentage Distribution of Frequency and Percentage Distribution of Hand Washing Behavior

Table 3  
Frequency and Percentage Distribution of HWWS Behavior

Variables	Frequency	Percentage (%)
HWWS Behavior		
- Less	1	1,6
- Simply	29	48,3
- Good	30	50
<b>Total</b>	<b>60</b>	<b>100</b>

Based on table 3, it can be seen that the distribution of Hand washing behavior respondents in the poor category is only 1 person (1.6%), 29 people (48.3%) in the moderate category and 30 people (50%) in the good category.

4. Relationship between Knowledge and Behavior of Hand washing Improvement at SMK Pelita Nusa Jalancagak Subang in 2022

Table 4  
Relationship between Knowledge Behavior of Hand washing Improvement at SMK Pelita Nusa Jalancagak Subang Year 2022

Hand washing Knowledge		Improved Hand washing Behavior			Total	<i>p-value</i>
		Less	Simply	Good		
<b>Less</b>		0	0	0	0	
<b>Simply</b>		0	16	4	20	0,002
<b>Good</b>		1	13	26	40	
<b>Total</b>		1	29	30	60	

Based on table 4, it was found that 26 respondents who had good knowledge also had good HWWS improvement behavior. 16 other respondents who have sufficient knowledge, have sufficient HWWS improvement behavior as well. The P value of  $0.002 < 0.05$  means that  $H_0$  is rejected  $H_a$  is accepted, there is a relationship between knowledge about HWWS and student behavior.

5. Relationship between Attitude and Behavior of Hand washing Improvement at SMK Pelita Nusa Jalancagak Subang Year 2022

Table 5  
Relationship between Attitude and Behavior of Hand washing Improvement at SMK Pelita Nusa Jalancagak Subang in 2022

Hand washing attitude		Improved Hand washing Behavior			Total	<i>p-value</i>
		Less	Simply	Good		
<b>Less</b>		0	0	0	0	
<b>Simply</b>		0	16	8	25	0,042
<b>Good</b>		1	13	22	35	
<b>Total</b>		1	29	30	60	

Based on table 5 data that 22 respondents who have a good attitude and have good HWWS improvement behavior as well. 16 other respondents who have a moderate attitude, have sufficient HWWS improvement behavior as well. The P value of  $0.042 < 0.05$  means that  $H_0$  is rejected  $H_a$  is accepted, there is a relationship between attitudes about Hand washing and student behavior.

### 3.2 Discussion

The results of the analysis of the relationship between knowledge and Handwashing with Soap Behavior obtained a P Value of 0.002, this shows that  $< 0.05$  means that  $H_0$  is rejected  $H_a$  is accepted, there is a relationship between knowledge about Hand washing and student behavior. Knowledge is the result of knowing objects through the senses that a person has (eyes, nose, ears, etc.) or the result of human perception. The resulting knowledge is influenced by the subject's attention and the duration of perception. Individual knowledge can be obtained through education and learning processes, experiences of oneself or others, and media which will then be stored in memory through the five senses. Without knowledge individuals have no basis for making decisions and determining actions on a problem at hand.

The results of this study are in line with research conducted by Barrett and Cheung (2021) on Knowledge, Socio-Cognitive Perceptions and the Practice of Hand Hygiene and Social Distancing During the COVID-19 Pandemic: a Cross-sectional Study of UK University Students, that the results of this study found no significant relationship between knowledge and Handwashing with Soap behavior with a p-value of 0.239 ( $p > 0.05$ ).

The results of this study are supported by research conducted by Saptiningsih, et al (2019) on Factors Associated with Hand Washing Behavior in State Elementary School Children 03 Kertajaya Padalarang, that there was no significant relationship between knowledge and hand washing behavior at school with a large p-value of 0.475 ( $p > 0.05$ ). The results of this study are also in line with research conducted by Waruwu (2019) on Factors Associated with Hand Washing Behavior with Soap (Hand washing) in Students of Al Ulum Private Elementary School, Medan Area District in 2018, that the results of this study found no significant relationship between knowledge and Hand Washing with Soap behavior with a p-value of 0.445 ( $p > 0.05$ ). The results of this study are also supported by research conducted by Dajaan et al. (2018) on Hand Washing Knowledge and Practices Among Public Primary Schools in the Kintampo Municipality of Ghana, that there was no relationship between knowledge and Hand Washing with Soap behavior with a p-value of 0.298 ( $p > 0.05$ ).

On the other hand, this study is not in line with research conducted by Zulhelmi (2020) on Factors Associated with Handwashing with Soap Behavior (Hand washing) in Students of State Elementary School 20 Banda Aceh, Kuta Alam District, Banda Aceh in 2019, that there is a significant relationship between knowledge and Handwashing with Soap behavior with a p-value of 0.012 ( $p < 0.05$ ), as well as research conducted by Mukminah, et al (2016) on Factors Associated with Handwashing with Soap Practices in Elementary School Students in the Banyuurip Purworejo Health Center Working Area, that using a p-value of 0.012 ( $p < 0.05$ ), and research conducted by Mukminah, et al. (2016) on Factors Associated with the Practice of Handwashing with Soap in Elementary School Students in the Banyuurip Purworejo Health Center Working Area, that by using the chi square test the results of this study found that there was a relationship between attitude and Hand washing practice with a p-value of 0.009 ( $p < 0.05$ ).

Likewise, research conducted by Solikah Titin and Tri Wahyuni Suksesi (2018) on the Relationship between Knowledge Level, Attitude, and Motivation with Handwashing with Soap Behavior (Hand washing) in Tridadi Sleman DIY State Elementary School Students, also found a significant relationship between knowledge and Handwashing with Soap behavior with a p-value of 0.047 ( $p < 0.05$ ), and similar research conducted by Haryani, et al (2021) on Knowledge and Handwashing Behavior of Vocational School Students as an Effort to Prevent COVID-19, that there is a relationship between knowledge and Handwashing with Soap behavior with a p-value of 0.003 ( $p < 0.05$ ).

According to Notoadmodjo, behavior arises because there is a stimulus of knowledge that he has, after which it is processed in the mind and manifested in a behavior in this case is the behavior of washing hands with soap. Apart from that, knowledge has levels including: knowledge at the level of knowing, knowledge at the level of understanding, and knowledge at the level of application. Meanwhile, according to Bloom's theory, the important domain for the formation of action and acceptance of new behaviors based on knowledge has a long lasting nature for a person, namely knowledge. However, if the behavior is not based on knowledge and awareness, it will not last long. Comparison with Rogers' theory, which says that people who already know (awareness) about something do not necessarily have the right behavior before they do various stages until they finally take the right thing.

The results showed that there was a relationship between knowledge and behavior of Handwashing with Soap in students of SMK Pelita Nusa Jalancagak Subang in 2022. Respondents have not mastered knowledge and attitudes with the behavior of increasing Hand washing. The results of the analysis of the relationship between attitude and Handwashing with Soap Behavior obtained a P Value of  $0.042 < 0.05$  means that  $H_0$  is rejected  $H_a$  is accepted, there is a relationship between attitudes about Hand washing and student behavior. The results of this study are in line with research conducted by Solikah Titin and Tri Wahyuni Suksesi (2018) on the Relationship between Knowledge Level, Attitude, and Motivation with Handwashing with Soap Behavior (Hand washing) in Tridadi Sleman DIY State Elementary School Students, that there is a significant relationship between attitude and Handwashing with Soap behavior with a p-value of  $0.001 (p < 0.05)$ . The results of this study are supported by research conducted by Lestari (2019) on the Relationship between Knowledge and Attitudes Towards Handwashing Behavior in the Pegirian Village Community, that, there is a significant relationship between attitudes and Handwashing with Soap behavior with a p-value of  $0.017 (p < 0.05)$ .

The results of this study are also in line with research conducted by Barrett and Cheung (2021) on Knowledge, Socio-Cognitive Perceptions and the Practice of Hand Hygiene and Social Distancing During the COVID-19 Pandemic: a Cross-sectional Study of UK University Students, also found a significant relationship between attitudes and Handwashing with Soap behavior with a p-value of  $0.001 (p < 0.05)$ . The results of this study are also supported by research conducted by Friani (2020) on the Relationship of Knowledge and Attitudes of Class V SD Students Against Handwashing Behaviors Using Soap (Hand washing) at State SD 097319 Siopat Suhu Simalungun District in 2019, that there is a relationship between attitudes and Handwashing with Soap behavior with a large p-value of  $0.002 (p < 0.05)$ .

Apart from that, this study is in line with research conducted by Mukminah, et al (2016) on Factors Associated with Handwashing with Soap Practices in Elementary School Students in the Banyuurip Purworejo Health Center Working Area, that by using the chi square test the results of this study found that there was a relationship between attitude and Hand washing practices with a p-value of  $0.009 (p < 0.05)$ . Likewise, research conducted by Nuwagaba, Julius et al. (2020) on The Era of Coronavirus: Knowledge, Attitude, Practices, and Barriers to Hand Hygiene Among Makerere University Students and Katanga Community Residents, that there is a significant relationship between attitude and Handwashing behavior with a p-value of  $0.003 (p < 0.05)$  supported also by research conducted by Nuwagaba, Julius et al. (2020) on The Era of Coronavirus.  $0.05$  is also supported by research conducted by Azam, et al (2016) on the Relationship between Knowledge Level, Attitude towards Handwashing Behavior with Soap (Hand washing) at SMPN 1 Surakarta and SMPN 6 Surakarta, that there is a relationship between attitude and Handwashing with Soap behavior with a p-value of  $0.000 (p < 0.05)$ .

However, this study is not in line with research conducted by Effendi, et al (2019) on Factors Associated with Handwashing Behavior Using Soap in Students at SD Negeri 08 Lubuk Linggau, that the results of this study found no significant relationship between attitude and Handwashing with Soap behavior with a p-value of  $0.625 (p > 0.05)$ . This study is also not in line with research conducted by Waruwu (2019) on Factors Associated with Handwashing Behavior with Soap (Hand washing) in Students of Al Ulum Private Elementary School, Medan Area District in 2018, that the results of this study found no significant relationship between attitude and Handwashing with Soap behavior with a p-value of  $0.135 (p > 0.05)$ .

Green's theory (1980) states that attitude is one of the predisposing factors that influence a person's behavior. Attitude is a person's closed response to a stimulus or object, both internal and external so that its manifestation cannot be seen immediately, but can only be interpreted first from this closed behavior, the attitude in reality shows the suitability of a response to a particular stimulus.

Attitude is the driving force to act or respond to a stimulus or object that arises from the experience and development of an individual. An individual's attitude can be said to be positive if he likes an object of psychology while an individual's attitude can be said to be negative if he does not like the object of psychology. Positive attitudes tend to have behaviors that are close or supportive while negative attitudes tend to have behaviors to stay away or not support. Attitude is a mental and nervous state of readiness that has been regulated through experience which can have a directional influence on a person's response to all objects and situations related to it. Students' attitudes towards handwashing with soap can affect whether or not the student's handwashing behavior is carried out.

Action is an individual's response to a stimulus. Knowledge and attitudes can increase the likelihood of taking action. The more a person knows about something, the more likely it is that action will be taken. As with attitudes, the better a person's attitude towards something, the more likely he or she is to act. Attitudes are reactions or judgments that a person still has that affect the disposition of a person's behavior. Behavior is a person's response to a stimulus, and a positive attitude towards the behavior increases the tendency to do it.

The results showed that there was a relationship between attitude and Handwashing with Soap behavior, this was due to respondents having a lack of attitude in Hand washing knowledge so that they had poor Hand washing behavior. The respondent's lack of attitude is due to the respondent's low knowledge of hand

washing with soap knowledge. Respondents who have a positive attitude but have poor HWWS behavior, respondents have considered that hand washing is important but respondents have not properly performed Handwashing with Soap, this is due to the respondents' low knowledge of how to wash their hands, so that the actions of how to wash their hands are not entirely correct. Respondents only wash their hands casually without using soap. Respondents' habit of washing their hands is only to remove germs, lazy or forget to use soap.

#### 4. CONCLUSION

Based on the results of the research and discussion described in the previous chapters, the conclusions that can be drawn from this research are:

1. There is a significant relationship between knowledge and Handwashing with Soap behavior among students of SMK Pelita Nusa Jalancagak with a P value of  $0.002 < 0.05$ .
2. There is a significant relationship between attitude and Handwashing with Soap behavior among students of SMK Pelita Nusa Jalancagak with a P value of  $0.042 < 0.05$ .

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