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Original Research

Personal Hygiene Skills are Not Related to Infections in School-Age Children

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Abstract

Introduction: The incidence of infection in school-age children can be caused by the negligence of children in carrying out personal hygiene, namely washing hands and due to contact with individuals who have been infected with pathogens. Infectious diseases that often suffer are upper respiratory infection, diarrhea, and intestinal worms with symptoms of fever. Preventive efforts that can be done by children are personal hygiene (washing hands). Prevention of infection in children is done by teaching school-age children to wash their hands properly. The objective of this study was to analyze personal hygiene skills (hand washing) with the incidence of infection in children.
Methods: The method in this study was a pre-experimental study with a pretest-posttest design. The samples were 20 respondents of school-age children. Differences in pretest-posttest personal hygiene skills (hand washing).
Results: The results are based on data collected from 20 subjects, the results of the pretest-posttest personal hygiene skills (hand washing) in the Wilcoxon test, there was a significant difference, namely (p = 0.541).
Conclusion: There was no correlation between personal hygiene (hand washing) and the incidence of infection.

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INTRODUCTION

School-age children are children aged 6-11 years or 13 years of human groups [1]. In general, school-age children experience problems or disturbances that occur, one of which is experiencing an infectious disease [2]. Allergen, nonallergen, and viral infectious diseases, and viral rhinitis are types of rhinitis that have a high rate of disease transmission [3]. Six viruses are known to cause rhinitis, namely rhinovirus, parainfluenza virus, coronavirus, respiratory syncytial virus, influenza virus, and adenovirus, which then cause clinical manifestations such as runny nose, stuffy nose, sneezing, watery eyes, sore throat, weakness, and even pain. headaches and muscle pain [3]. The resulting clinical manifestations can interfere with a person's daily activities, the most frequent cause of absenteeism at school and at work [4]. The spread of the virus can occur through contact with infected individuals, namely when the pathogen exits the respiratory tract when coughing or sneezing [5].

Personal Hygiene, one of which is washing hands in the right way, can break the chain of infection spread [6]. The percentage of households in Indonesia who wash their hands with soap, which is one indicator of personal hygiene, is still 47.2% [7]. The low value illustrates the high risk of society to suffer from infectious diseases, especially infants to school-age children, and the elderly. Therefore, in order to promote the general welfare and educate the nation's life, as stated in the Preamble to the 1945 Constitution of the Republic of Indonesia, infection prevention and control activities must be carried out from an early age, namely from school age children [8].

General interventions for school-age children who are at risk of developing infectious diseases are carried out by providing health education and teaching how to wash hands properly. The planned approach method uses a demonstration method of personal hygiene skills with proper hand washing 6 steps correctly, namely:

1. Pour the liquid hand rub on the palm of the hand then wipe and rub both palms gently in a circular direction.
2. Wipe and rub the backs of both hands alternately
3. Rub between fingers until clean
4. Clean the fingertips alternately with interlocking positions
5. Rub and rotate both thumbs alternately
6. Put the fingertips into the palm of the hand then rub gently

Based on the description above, the researcher is interested in conducting further research on "The relationship of personal hygiene (hand washing) with the incidence of infection in school-age children at SD YBPK Wonorejo, Malang district. Providing education is about personal hygiene (hand washing) with 6 steps to properly wash hands. Educational methods for personal hygiene skills (hand washing) can also be used for targets with low or high education, and when education is conducted, students can actively participate and provide feedback on the educational materials provided. Leaflets were chosen as media because they are easy to store, economical and can serve as reminders for students. The purpose of this study was to analyze personal hygiene skills

(hand washing) with the incidence of infection based on symptoms of cough or cold and/or fever in SD YBPK Wonorejo, Malang district.

METHODS

This study used a pre-experimental research with a pretest-posttest design. The scope of this research covered the fields of Pediatric Nursing and Community Nursing. This research was conducted at SD YBPK Wonorejo, Malang district. The Health Research Ethics Committee of STIKES RS Baptis Kediri, has reviewed the protocol the research proposed by the researcher with the ethical approval number 001.1/1/IV/KEPK-3/STIKES RSBK/2021 states that the protocol has met all the ethical requirements, The samples of this study were school-age children, at SD YBPK Wonorejo, Malang district. Parents who allowed their children to participate were proven by informed consent. Subjects were taken by total sampling. Measurement of child infection based on signs and symptoms of infectious disease based on symptoms of cough or cold and/or fever in the last three months and validated by the teacher's statement regarding the health status of the child's condition in the last three months. The independent variable in this study was personal hygiene skills (hand washing). The dependent variable in this study was the incidence of infection.

RESULTS

Based on table 1, it was known that the general data characteristics of children according to gender, most of them were male, namely 14 respondents (70%). Characteristics of the average age aged 7 - <8 years, namely 10 respondents (50.0%) and aged 8-9 years, namely 10 respondents (50.0%), Characteristics of the average class First grade, namely 10 respondents (50.0%), and second grade, namely 10 respondents (50.0%).

Based on the table 2 shows that the most Personal Hygiene Behavior of children is less, namely 8 respondents (40%). data were taken from direct observation of respondents, namely one observation on April 17, 2021 and one observation in June 18, 2021, SD YBPK Wonorejo, Malang District.

Based on table 3, based on symptoms of cough or cold and/or fever it showed that more than 50% there was no incidence of infection, namely 13 respondents (65%).

Based on table 4, the results showed that most of the personal hygiene was poor, namely 6 respondents (75%) had no incidence of infection. In the category of Personal Hygiene, there were 4 respondents (57.1%) who did not experience sufficient infection and 3 respondents (60.0%) had good personal hygiene, 3 respondents did not experience infection. While in the category of Personal Hygiene enough there were 3 respondents (42.9%) experienced the incidence of infection, Personal hygiene was good and less than 2 respondents (40%) experienced the incidence of infection.

Table 1
General data characteristics of children in SD YBPK Wonorejo, Malang District (n=20)

Demography Data	Frequency	Percentage (%)
Gender		
Male	14	70
Female	6	30
Age		
7 - < 8 years old	10	50
8 – 9 years old	10	50
Class		
First grade	10	50
Second grade	10	50
Total	20	100

Table 2
Characteristics of Personal Hygiene Behavior of children in SD YBPK Wonorejo, Malang District (n=20)

Personal Hygiene Behavior	Frequency	Percentage (%)
Good	5	25
Sufficient	7	35
Poor	8	40
Total	20	100

Table 3
Characteristics of data on the incidence of infection in children at SD YBPK Wonorejo, Malang District (n=20)

Infection Incidence	Frequency	Percentage (%)
None	13	65
Infection	7	35
Total	20	100

Table 4
Personal Hygiene Skills (hand washing) with the incidence of infection in school-age children at SD YBPK Wonorejo, Malang District (n=20)

Personal Hygiene (Hand Washing)	Infection Incidence				Total	
	None		Infection			
	F	%	F	%	F	%
Poor	6	75 %	2	25 %	8	100%
Sufficient	4	57,1 %	3	42,9 %	7	100%
Good	3	60 %	2	40 %	5	100%

DISCUSSION

Identifying Personal Hygiene Behavior of children at SD YBPK Wonorejo, Malang District.

Based on the results of the study, hand washing behavior was found to be 40% less in school-age children at SD YYBK Wonorejo Malang. Hand washing behavior that is not shown is 100% wrong in steps 3 to 6, namely rubbing between the fingers, cleaning the fingertips, rubbing the thumbs, cleaning the fingertips, the behavior that has been carried out is only pouring soap and rubbing the backs of the hands and palms [8]. Hand washing is the most important basic technique in infection prevention and control, and hand washing is a procedure/action to clean hands using soap and running water or hand rub with antiseptic (based on alcohol), as well as reducing the transmission of microorganisms [4] [9].

Hand washing behavior in school-age children at SD YBBPK Wonorejo Malang is an infection prevention and control behavior, using soap and running water available in the sink in front of the class as an antiseptic so that it can reduce the transmission of microorganisms to school-age children when they are doing activities at school. Lack of behavior in children, especially in washing hands, this shows the concept of behavior has not been implemented properly and conditions of transmission of microorganisms on the hands into the child's body can occur, this condition is at risk of infection in children, the purpose of hand washing is to: a) eliminate microorganisms on hands, b) prevent cross infection, c) maintain sterile conditions, d) protect themselves and patients from infection, e) provide feeling fresh and clean [9].

The behavior of school-age children at school aims to protect their hands from micro-organisms so that the risk of infection can be reduced to children, through the behavior of washing hands every time they enter class and when they take a break the children's hands will be clean and the microorganisms attached to the hands can be reduced. even removed, so that when children eat or play contamination from microorganisms can be reduced or prevented. Another goal is that children entering class will be fresher and cleaner so that the learning process runs better, and children concentrate more on learning. On the other hand, this lack of behavior can hinder the achievement of learning objectives.

The regular hand washing technique is to clean hands with soap and clean running water [10]. To realize an attitude into a real action, a supporting factor or an enabling condition is needed, such as a facility. In addition to the facility factor, supporting factors from other parties are also needed [3].

The results showed that the implementation of hand washing behavior in school-age children at SD YBBPK Wonorejo used the Hand-Wash method, which seemed to provide hand washing equipment in the form of a sink with running water and hand soap. When children enter class, they are required to wash their hands, and when children are going to rest, they are also

required to wash their hands. Availability of infrastructure such as washbasin with running water and soap is a supporting factor so that children want to wash their hands. Class teachers will provide education and supervision so that children do hand washing behavior properly. The condition of the behavior of washing hands shows that there are stages that are not carried out, especially in cleaning the fingers, between the fingers, thumb and fingertips in children. The role of the desert in the mentoring and monitoring process needs to be increased.

Practice is divided into several levels, namely as follows: Perception, Guided Response, Mechanism, and Adoption. A person's behavior is very complex, namely three areas, regions, or behavioral domains they are cognitive (cognitive), effective (affective), and psychomotor (psychomotor). There three domains are translated in 8 creativity (cognitive), taste (effective), and intention (psychomotor) [11].

The formation of hand washing behavior in school-age children at SD YBPK Wonorejon Malang is carried out programmatically by the school with the implementation of the health education process by class teachers. The class teacher shapes the child's perception of hand washing behavior by explaining to the child and the impact if the child does not wash his hands, there will be a lot of bacteria and germs that will enter the child's body through the mouth because of dirty hands, so the child gets sick easily. Children's efforts in guided responses by the teacher showing how to wash hands 6 steps in the form of demonstrations and children following all demonstrations until the children show the correct behavior in washing hands. Which is repeated becomes a habit and the child will adopt the behavior of washing hands everyday without being ordered. The existence of hand washing behavior that has not been adopted by the child, the role of the class teacher in the mechanism stage needs to be repeated, so that the child really has the 6 step hand washing behavior correctly.

Lack of personal hygiene skills is for children. This shows that school-age children's behavior of washing hands when going to eat or after activities has not become a habit for school-age children. In this case, the family has a good role in getting children to have the knowledge, skills, and attitudes in carrying out hand washing before eating, after activities at home through therapeutic interactions with families. Personal Hygiene (Handwashing) for school-age children at SD YBPK Wonorejo while at school has received support from the school. This is evidenced by the availability of hand washing facilities in each class.

Indicators of increasing the ability of parents to practice hand washing habits in children need to be further improved, this needs support from parents who can work together or be actively involved while training their children to wash their hands at home.

Identifying the incidence of infection in children at SD YBPK Wonorejo Malang District

Based on the results of the study, it was found that the incidence of infection in school-aged children during the last 6 months was 35% of school-age children at SD YBPK Wonorejo

Malang.

Acute Respiratory Infection (ARI) is an acute infection that attacks one or more parts of the respiratory tract from the nose to the alveoli, including the adnexa (sinuses, middle ear cavity, pleura) [12].

Based on the results of observations and interviews conducted by researchers when conducting research at SD YBPK Wonorejo Malang, each respondent in the indicator for the last 3 months did not experience infection, it was proven that the child did not have infection. Based on the results of interviews according to one parent, in the last 3 months the child did not experience infections such as cough, cold, diarrhea, fever/fever, and intestinal worms. According to researchers, the signs and symptoms of infection are not always experienced by school-age children at SD YBPK Wonorejo, Malang District.

Analyzing Personal Hygiene (hand washing) with the incidence of infection in school-age children at SD YBPK Wonorejo Malang District.

The results of statistical tests showed that there was no relationship between Personal Hygiene and the incidence of infection in school-age children at SD YBPK Wonorejo Malang. This is evidenced by = 0.526 where > which means Ho is accepted, H1 was rejected. So, personal hygiene skills (hand washing) were not related to the incidence of infection in school-age children at SD YBPK Wonorejo Malang. Children's behavior in good hand washing correlates with a greater incidence of infection (40%) than hand washing behavior in children with poor incidence of infection (35%)

Predisposing factors, Enabling factors, Reinforcing factors Reinforcing factors are factors that strengthen the occurrence of certain behaviors [13]. The incidence of infection in children is influenced by education and factors. knowledge of child supervisors, family income, residential density, and smoking behavior of family members [10], the incidence of infection in children is influenced by nutritional status and immunization in children [14].

The results showed that hand washing behavior were not associated with the incidence of infection in children. This shows that the behavior of washing children's hands at school does not reflect the behavior of children at home or in the environment where they play. According to Lorence Green, the predisposing factor of children's behavior in washing hands will be influenced by the knowledge and values of parents in washing hands, if parents do not have the same values as taught in schools in washing hands, of course, children's obedience only applies at school, in enabling factors it does not all hand washing facilities are available at home, or parents do not facilitate sink facilities at home and soap for children to wash their hands, so behavior at home does not get support. The reinforcing factor is that the school has not carried out sufficient training or socialization to parents as a companion to changes in children's behavior at home, the proportion of health to wash hands should also be carried out to parents.

The incidence of infection in children is still high and not related to hand washing behavior, this shows that there are other

factors that can increase the incidence of infection, such as education and knowledge of child supervisors, family income, residential density, and smoking behavior of family members, nutritional status and immunization in children. The education factor for children who are still in elementary school is of course the role of mentoring by parents is very decisive (parental parenting). Parental education and knowledge on health is lacking, especially the Wonorejo community, which is a rural community in the hills far from urban areas, with community education that is not yet high so that parental education and parental knowledge also need support to be improved if lacking. The behavior of Nika's parents is smoking at home, this will increase the incidence of infection in children, especially respiratory tract infections. Smoking behavior at home is a behavior that is still a social culture that occurs in Indonesia, as well as in the Wonorejo community of Malang. Factors in the nutritional status of children, if the nutritional status of children is less, of course, immunity and body resistance in dealing with infections are also low.

Hand washing is the most important basic technique in infection prevention and control [15]. According to [6], the purpose of hand washing is to: a) eliminate microorganisms on hands, b) prevent cross infection, c) maintain sterile conditions, d) protect themselves and patients from infection, e) provide feeling fresh and clean. Notoatmodjo said that the form of a person's response to a stimulus is shown in two forms, the first is covert behavior, this is shown in the form of attention, perception, knowledge/awareness, and other reactions that are not visible. While the second is overt behavior, namely in the form of real actions, such as washing hands before eating [4]. Action (practice) is one of the components that form a person's behavior for the psychomotor domain, in addition to knowledge (knowledge) for the affective domain, and attitudes or responses (attitude) for the affective domain [11]

The results showed that there was no relationship between personal hygiene (hand washing) with the incidence of infection in school-age children at SD YBPK Wonorejo Malang. Hand washing behavior is not a major factor in the incidence of infection. Other factors related to the incidence of infection such as the physical environment, rural areas, mountainous areas have not been much polluted

Based on the results of the cross tabulation of Personal Hygiene and the incidence of infection in school-age children, it showed that Personal Hygiene did not experience infection, namely 6 respondents (75%), personal hygiene did not experience the incidence of infection, namely 4 respondents (57.1%) and good hygiene, no infection, namely 3 respondents (60%), The incidence of infection can be influenced by good nutritional status, parents who always provide support by providing nutritious food to children. For children who get good nutrition, they will not easily get infections such as coughs, colds, diarrhea, fever/fever, and intestinal worms.

CONCLUSION

Based on the results of research conducted on 20 respondents, data were taken from direct observation of respondents, namely one observation on April 17, 2021 and one observation in June 18, 2021, SD YBPK Wonorejo, Malang District, it can be concluded that children's skills in Personal Hygiene (hand washing) at SD YBPK Wonorejo, Malang District. most of them are poor in hand washing skills. The incidence of infection in school-age children at SD YBPK Wonorejo, Malang District is mostly no infection. There is no relationship between the applications of Personal Hygiene (hand washing) with the incidence of infection in school-age children at SD YBPK Wonorejo Malang.

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