

Relationship Between Behavioral Handwashing With Diarrhea Incidence of School Age Children In Malang Regency

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ABSTRACT

Introduction: The Relationship between Children's Behavior Handwashing with Diarrhea Incident at School Age Malang. Handwashing behavior Considered unimportant thing in the community, whereas Handwashing can Contribute to improve the health status of the community. School-age children have the habit paying less attention to the need for Handwashing in everyday, especially when in the school environment. The behavior could effect and Contribute to the occurrence of diarrhea disease. Handwashing is the most important fundamental technique in the prevention and control of infection transmission. **Methods:** This study was the correlation analysis. Research subjects are of school age children in Malang with cluster sampling technique that is equal to 300 respondents. Data analysis is using Spearman. **Results:** school age children Handwashing behavior in Malang are in good categories (53.7%), moderate (41.7%) and poorly (4, 6%). While the incidence of diarrhea in children of school age in Malang in the low category (59.3%), moderate (37.7%) and high (3%). Relationship between Handwashing and diarrhea incidence Obtained p value = 0.000 is smaller than 0:05 and $r = 0.792$, **Conclusion:** statistically it Proves that there was a significant relationship between the incidence of diarrhea and Handwashing.

Keywords : Behavioral Handwashing, Diarrhea Incidence

INTRODUCTION

The health system is an integral part of national development which has a large role in determining success in achieving national development goals. Health development is done to improve the quality of human resources are characterized by increased levels of population health. Promotive and preventive efforts in order to improve the health of the nation and the people to do with the application of clean and healthy living behavior. Handwashing with soap, is part of a healthy lifestyle, which is one of the three pillars of the health development of healthy behavior, the creation of a healthy environment and the provision of quality health services and affordable by all levels of society. Healthy behavior as simple as washing hands with soap is one way to raise public awareness about the maintenance of personal health and the importance of behaving clean and healthy.

Wash your hands often regarded as trivial in society, but hand washing can contribute to improving the status public health. Based on the phenomenon that is seen that children of school age in the habit of paying less attention to the need for handwashing in everyday life, especially when in the school environment. They usually eat the food they buy around the school without washing their hands first, whereas before they play. Such behavior

certainly influenced and may contribute to the occurrence of diarrheal diseases. Washing hands is the basic technique of the most important in the prevention and control of transmission of infection. Research conducted by Luby, Agboatwalla, Bowen, Kenah, Sharker, and Hoekstra (2009), says that washing hands with soap consistently can reduce diarrhea and respiratory diseases. Wash hands with soap (CTPS) can reduce diarrhea by 31% and reduce disease upper respiratory tract infection (ISPA) as much as 21%. Global Research also shows that the CTPS habits not only reduce, but to prevent the incidence of diarrhea by 50% and up to 45% of ARI (Fajriyati, 2013). Research by Burton, Cobb, Donachie, Judah, Curtis, and Schimidt (2011) shows that handwashing with soap is more effective in removing germs than dry hands only to use traditional water.

People assume CTPS is not important, they wash their hands with soap when hands smelling, greasy and dirty. Results of research by government and private partnerships of CTPS showed that people's awareness of the CTPS has been high, but the practice in the field is still low. (Michael, 2011). The hand is the body part most polluted dirt and germs. When holding something, and shake hands, of course there are germs attached to the skin of our hands. The eggs of worms,

viruses, bacteria and parasites that contaminate the hands, will be swallowed if we do not wash your hands before eating or handling food. Thereby generally worm disease infecting our body. In addition, the germs can also be attached to our hands after handling money, holding the door of the bathroom, holding the receiver general, holds a toy, and the parts in public places (Potter & Perry, 2005). Through our own hands all the germs that can enter the mouth, nostrils, eyes, or ear canal, because the habits put his finger to his nose, rubbed his eyes, scraping the ear canal and not at the right time (when the dirty hands), and when fingers have not been washed (not washing hands), the National Movement and the Community-Led Total Sanitation washing hands with soap, ranging announced by the government in the future health minister Siti Fadilah Supari.

Movement that proclaimed is "National Movement for Handwashing with Soap". This movement is done as part of a government policy to control the risk of diseases associated with the environment, such as diarrheal diseases, de-worming, and typhoid could be prevented by a habit of defecating in latrines, provision of drinking water and hand washing with soap after defecation large and before handling food. " A similar movement has been done in Bangladesh in cooperation with

UNICEF, the movement aims to increase handwashing in the community, especially before preparing food, before eating, before feeding children, after defecating and after cleaning the anus child (Luby, Halder, Tronchet , Akhter, Bhuiya, & Johnston, 2009). research conducted by Adisasmito (2007) by studying the research literature about diarrhea, said that risk factors for diarrhea can be seen from three factors: environmental factors (water supply and latrines); maternal risk factors (lack of knowledge, behavior and hygiene mother) and child risk factors (factors of nutrition and exclusive breastfeeding). IDHS 2007 also says that children who live in areas without clean water and use the facilities outhouse on the river / lake prevalence of diarrhea highest (MOH, 2011).

Children of school age is an age which is prone to various diseases, especially those related the stomach, such as diarrhea, typhoid, intestinal worms, and others. Habits of children consume free snacks, plus kids do not wash their hands before eating cause a variety of disease-causing germs easily enter the body, because the hand is part of our body's most polluted dirt and germs. Habits of school-age children who do not wash their hands before eating can lead to school-age children prone to various diseases, particularly those associated with the stomach, such as diarrhea, typhoid,

intestinal worms, and others. Data East Java in recent Score (2013) say that the achievement PHBs to Malang regency is 63.80%, whereas the estimated incidence of diarrhea was 97.086 cases. Under these conditions the researchers wanted to examine the relationship between handwashing with the incidence of diarrhea in children Primary School in Malang.

METHODS

This study uses analysis of the relationship is a form of analysis variable / data research to determine the degree or strength of the relationship, shape or direction of the relationship between variables, and the influence of one variable to

another variable. The approach used is crosssectional. This study was conducted in Malang on primary school randomly selected a number of 10 schools. The location determination is based on the division of Malang regency into five areas, each area taken two schools -masing randomly .. The sampling technique is clustersampling, the sampling process when a lot of the object under study or data source is very broad. Researchers divided the district of Malang in five clusters. Each cluster selected at random 2 SD. From each school 30 students drawn randomly, so the total sample taken is 300 students. Data analysis using Spearman.

RESULTS

Characteristics of respondents can be seen in table 1 below.

Table 1 Distribution of the characteristics of the respondent

No.	Characteristicsof Respondents	n	Percentage
1	Gender		
	Male	183	39%
	Female	117	61%
2	Frequency of diarrhea		
	more than 6 times	9	3%
	3-5 times		12%
	1-2 times		51%
	never	36,153,102	34%
3	The habit of washing hands at home		
	faucet	157	35%
	bathroom	106	52%
	basin	35	12%
	wash handnever	0	0
	other	2	1%

4hand washing habits in the school

faucet	162	33%
bathroom	98	54%
basin	38	13%
hand washnever	1	0.3%
other	1	0.3%

Source: Primary Data, 2007

Table 1 shows that primary school students in Malang district has had a fairly high awareness to wash

hands, although the media used is less qualified.

Table 2. Overview handwashing in elementary students in Malang

No.	Category	n	Percentage
1	Good	161	53.7%
2	Enough	125	41.7%
3	Not Good	14	4.6%

Source: Primary Data, 2007

Table 2 above shows that the majority of school-age students in Malang district in the habit of washing hands good as many as 53.7%. These figures reinforce the Table 3 Overview of complaints of diarrhea in primary school students in Malang

earlier statement that the elementary students in Malang district has had a fairly high awareness to perform hand-washing.

No.	Category	n	Percentage
1	Low	178	59.3%
2	Average	113	37,7%
3	High	9	3%

Source: Primary Data, 200. Table 3 shows that primary school students in Malang Year 2007 have a complaint of diarrhea by as much as 59.3% lower categories, the categories were as much as 37.7%, 3% higher category. Results of analysis of the relationship handwashing with incidence of diarrhea using Spearman suggests a link between handwashing with diarrhea occurrence with p value 0.000 and r 0.792, the better handwashing, the incidence of diarrhea was lower.

DISCUSSIONS

Hands is part of our body's most polluted dirt and germs. When holding something, and shake hands, of course there are germs attached to the skin of our hands. After holding the door to the washroom (source of diseases that come from human feces), when drying hands with a rag in the kitchen, holding the money, through the armrest public transportation, telephone receiver general, and parts in a public place, the hand is almost certainly contaminated with germs any kind. Handwashing with soap, is part of a healthy lifestyle. Wash your hands well is not only influenced by the way the wash,

but also by the water used and hand wipes are used.

Based on the study of Basic Human Services (BHS) in Indonesia in 2006, people's behavior in washing hands is: after defecation 12%, after cleaning the feces of infants and toddlers 9%, 14% before eating, before feeding the baby 7%, and before preparing food 6% (MOH, 2008). Wash hands with soap (CTPS) is a precaution against diseases that are transmitted through hands, such as diarrhea and upper respiratory tract infections. The results showed that handwashing in elementary school children in Malang in either category by 53.7%, whereas in the criteria of diarrhea was lower by 59.3%. This condition is supported by research

Burton, Cobb, Donachie, Judah, Curtis, and Schmitz (2011) and Pickering, Boehm, Mwanjali, and Davis (2010) shows that handwashing with soap is more effective in removing germs than dry hands only to use traditional water. This study also demonstrated that the provision of clean water both in elementary school and home as a means to wash their hands has also been good. Elementary school children a large part in the habit of washing hands with taps and showers.

Some research shows that the promotion of handwashing, water quality improvement and environmental sanitation has been shown to reduce the incidence of gastrointestinal disease, respiratory disease and lower attendance pupil in developing countries (Chittleborough, Nicholson, Young, Bell & Campbell, 2013). Handwashing maintenance actions need to be maintained to be evaluated whether hand washing is done. Schmidt, et al (2009) says that the structural constraints (provision of clean water) can affect the behavior of washing hands. The media have an important role in the promotion of personal hygiene, including washing hands, so it needs to be put to good use in the era of technology which is too sophisticated.

Program the government launched the Community Based Total Sanitation (STBM) since 2008 supported WHO study (2007) showed that the incidence of diarrhea decreased 32% to improve public access to basic sanitation, 45% to the behavior of washing hands with soap, and 39% conduct safe management of drinking water in the household. Meanwhile, by integrating the three behavioral interventions, the incidence of diarrhea decreased by

94%. This is in line with the government's commitment to achieve the Millennium Development Goals (MDGs) by 2015, which is to increase access to drinking water and basic sanitation continuously to halve the proportion of the population who do not have access (MOH, 2008).

The study by IDHS (2007) says that the highest prevalence of diarrhea in places that are not facilitated with clean water and latrines (MOH, 2011). A similar study also said that the diarrhea can be affected by three factors, namely the environment (clean water and latrines); maternal risk factors (lack of knowledge, behavior and hygiene mother) and child risk factors (factors of nutrition and exclusive breastfeeding) (Adisasmito, 2007). Hand washing is done not only at our hands look dirty, but hand washing is recommended when preparing food, before eating, before feeding children, after defecating and after cleaning the anus child (Luby, Halder, Tronchet, Akhter, Bhuiya , & Johnston, 2009). Hand washing practices are influenced by socio-economic, education and media access television (Rabbi & Dey, 2013). Research conducted by

Mayasari (2012) also showed that there are differences in the level of knowledge among elementary school children in urban and rural related to handwashing. This suggests that access to information and media is very important in supporting the successful promotion of hand washing with soap.

Habituation hand washing is done in Indonesia is the movement of 21 days is expected to increase public awareness of the importance of washing hands with soap. 21 day program motion is triggered by a health soap families who were keen to promote handwashing with soap. 21 movement intent today is bath soap, CTPS before breakfast, before lunch, before dinner, and after the toilet for 21 days in a row without a break. The use of 21 days, due to changes in behavior can be seen after 21 days (Republika, 2012).

Wash hands well is not only influenced by the way the wash, but also by the water used and hand wipes are used. Washing hands with soap is absolutely necessary, and use soap instead of just passing it. Proper hand washing needs to be careful to parts of the toes and between the nails. All the hands do nothing forget to be lathered, if it needs to

be repeated many times, especially if the intention to eat by hand (without a spoon). Sometimes we got it right by washing their hands, but because the laps that we use filthy conditions, then wash our hands useless, because we could be exposed to germs that come from a dirty rag. In brief, the steps of hand washing is as follows: Step 1: wet your hands full; Step 2: soap or antiseptic; Step 3: rubbing really all parts of your hands and fingers for 10-15 seconds, especially for cleaning under the fingernails, between fingers and backs of hands; Step 4: Rinse hands with clean waters flow; Step 5: dry hands with a towel (cloth) paper and use a towel to close the tap, when no towels to dry with air.

Based on the research results the incidence of diarrhea in children elementary school in Malang regency are in the low category 59, 3%, while washing hand in both categories was 53.7%. This shows that good hand washing can reduce the incidence of diarrhea. Based on the data also showed that the achievement of PHBs district is 63.80% Malang (East Java in the latest figures, 2013). That condition illustrates that the behavior of PHBs community began to improve. Good hand washing behavior

needs to be maintained so that the incidence of diarrhea can be suppressed. Diarrhea is a disease caused by the behavior of a person healthy and clean life. Based on the results of research conducted by a public private partnership shows that public knowledge about the CTPS has been high, but the application in society remains low. Rabbi and Dey (2013) says that the gap between knowledge and practice of washing hands with hand washing is still continuing, it is necessary for long-term initiative to make people aware of the importance of CTPS. The introduction of CTPS been done long ago, but the practice in the community is still low, so that activities to promote CTPS needs to be done in an effort to raise awareness in the community.

The results showed no relationship between handwashing with incidents of diarrhea. These results are similar to studies conducted by Rosidi, Handarsari and Mahmudah (2010) which says that there is a connection between handwashing with incidence of diarrhea, 94% of elementary school children accustomed to wash their hands, while 6% are not accustomed to wash their hands, the incidence of diarrhea for a month , 96% of children did not experience

diarrhea and 4% of children with diarrhea. This condition illustrates that hand washing can reduce the incidence of diarrhea. A similar study conducted by Luby, Agboatwalla, Bowen, Kenah, Sharker, and Hoekstra (2009), says that washing hands with soap consistently can reduce diarrhea and respiratory diseases. Wash hands with soap (CTPS) can reduce diarrhea by 31% and reduce disease upper respiratory tract infection (ISPA) as much as 21%. Global Research also shows that the CTPS habits not only reduce, but to prevent the incidence of diarrhea by 50% and up to 45% of ARI (Fajriyati, 2013).

Washing hands is a basic action in a clean and healthy living behavior. Handwashing will not necessarily formed in children, with no habituation early. The emphasis of the importance of handwashing in elementary school children need to be done continuously so that will be formed the habit of washing hands without having to be reminded. Based on the phenomenon that is seen that children of school age in the habit of paying less attention to the need for handwashing in everyday life, especially when in the school environment. They usually eat the food they buy around the school without

washing their hands first, whereas before they play. Handwashing is expected to reduce student absenteeism in the school due to diarrhea. Hand-washing campaign actions need to be done in the primary school, because children at this age are still in the habit of eating snacks at any place. Based on the results of research, when schools want creative activities eg competition hand washing to remind the importance of washing hands, it can reduce the number of absent students of the school (Vindigni, Riley & Jhun, 2011).

The behavior of washing hands will be successful when it is ingrained habits and also available infrastructure and facilities for hand washing. Providing clean water and soap for hand washing is needed. Based on the research results have not all schools provide facilities for hand washing with running water, schools that already use faucets by 33%, while 54% are still using the bathroom. This condition illustrates that the schools have started to realize the importance of providing hand-washing facilities for their students. Based on observations of researchers, schools are located in the periphery (away from town) means for hand-washing is still not adequate, many of which do not provide. MOH (2008) revealed

that the CTPS correct way is that it takes a little soap and running water. Water flows from the tap is not a requirement, the importance of water flowing out of a container may be bottles, cans, buckets tall, barrel-shaped, jerry cans, or scoop. Disabuni wet hands, rubbed the soles and back, especially under the nails of at least 20 seconds. Rinse with water and dry with a clean cloth or kibas-flick in the air. The government still needs to pay attention associated with the provision of hand-washing facilities in public places including schools, if possible the government to make regulations requiring their hand-washing facilities for public areas.

Efforts to promotion and prevention in order to improve the health of the nation and society can be done by applying behavior of clean and healthy living. the habit of washing hands with soap, is part of a healthy behavior, which is one of the three pillars of health development that healthy behavior, the creation of a healthy environment and the provision of quality health services and affordable by all levels of society. Healthy behavior as simple as washing hands with soap is one way to increase public awareness on personal health care and the importance of clean and healthy

living behavior. The hope with hand washing is an activity trivial and worth the cost of this when done regularly by the whole community will reduce infectious diseases and improve the health status of the community.

CONCLUSIONS AND RECOMMENDATION

Behavior wash hands of children of school age in Malang are in both categories, with the use of facilities most hand-washing is the bathroom and the second using the water flowing from the faucet. The incidence of diarrhea in children of school age in Malang regency are in the low category. The relationship between handwashing and diarrhea incidence showed no significant correlation. The incidence of diarrhea is affected by several factors, environmental factors, risk factors maternal dna risk factors in children. Washing hands is a precaution that is inexpensive, yet effective way to reduce disease can be spread by hand (eg diarrhea).

Health workers are expected to increase attention to the factors that cause diarrhea in addition to washing your hands and keep continuing the promotion of hand

washing to raise awareness in the community about clean and healthy lifestyle. Habits of children consume free snacks, plus kids do not wash their hands before eating cause a variety of disease-causing germs easily enter the body, because the hand is part of our body's most polluted dirt and germs. The school is expected to continue to motivate the students to get used to washing hands with soap in schools and homes, in order to prevent diseases caused by dirty hands. The success of hand washing with soap is not only supported by handwashing alone, but also by the facilities and infrastructure necessary to maintain the continuity of handwashing.

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