

The Behavior Analysis For Washing Hands With Soap And Indiscriminate Defecation Against Diarrhea In Soe City Sub District Area South Central Timor

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ABSTRACT (10 PT)

Diarrhea can spread through unhygienic behavior, such as preparing food with unwashed hands after bowel movements or allowing a child to play in areas where there is contaminated feces. The purpose of this study was to know the behavior analysis for washing hands properly and indiscriminate defecation against diarrhea in Soe City Sub District Area South Central Timor.

The design of this study was observational with cross sectional approach. The population studied by all people with diarrhea in Soe Sub-District of South Central Timor was 135 people, with cluster random sampling technique obtained 101 respondents. Independent variables were washing hand properly and indiscriminate defecation behavior with dependent variable diarrhea incidence. Data were collected using questionnaires. Data analysis by Ordinal Regression test at $\alpha = 0,05$.

The result shows that most of respondent have washing hands properly in enough category, amount 73 respondent (72,3%), most of respondent have indiscriminate defecation in no indiscriminate category, amount 68 respondent (67,3%) and most respondents had diarrhea incidence in the light category, amount 92 respondents (91,1%). The analysis results using ordinal regression test obtained p-value ($0.001 < \alpha (0.05)$) so H_0 rejected and H_1 accepted which means there is influence of washing hands properly and indiscriminate defecation against diarrhea in Soe City Sub District Area South Central Timor.

Hand washing is the ultimate action and the only way to prevent the onset of the disease. Diarrheal disease was associated with water conditions, but accurately it should be considered also the handling of human feces such as feces and urine, because the germs that cause diarrhea come from these impurities.

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I. BACK GROUND

Until now diarrhea or also often called gastroenteritis, is still health problem in Indonesia, because diarrhea is very dangerous and is one of the causes of the highest mortality and morbidity in children, especially in children aged less than 5 years (toddlers). Diarrhea is a bowel movement with a soft (half liquid) stool with frequency more than 3 times a day or can be a liquid (MOH RI, 2009). Improper digestive, environmental, and dietary conditions cause diarrhea disorders in infants (Pudjiadi, 2012). Diarrhea may spread through unhygienic behavior, such as preparing food by unwashed hands after



bowel movements or allowing a child to play in areas where contaminated feces (Ramaiah, 2007).

According to World Health Organization (WHO) data in 2015, diarrhea is the second leading cause of death in children under 5 years. Globally there are about 2 billion cases of diarrhea every year with a mortality rate of 1.5 million every year. In developing countries, children under 3 years experience an average of 3 episodes of diarrhea per year. Each diarrhea episode will result in the loss of nutrients a child needs to grow, so diarrhea is a cause of malnutrition in children. Diarrhea is an endemic disease in Indonesia and its potential illness of outbreaks that is can accompanied by death. In Indonesia, babies suffer from diarrhea more than 12 times per year and cause death by 15-34% of all become death causes (Mansjoer, 2012). MOH RI (2015) said, by 2015, 72% diseases infectious are caused by uncontrolled disease vectors such as diarrhea due to raw contamination water. Meanwhile, according to Provincial Health Office of NTT in 2015 there are 17,115 cases of malaria, 2,711 cases of dengue and diarrhea cases that reached almost 35 thousand cases (Health Office of NTT Province, 2016).

Community Health Centre SoE City is only one of the health centers in the SoE City District Working Area of South Central Timor District. Diarrheal of diseases in Community Health Centre are decreasing each year, based on data obtained from the Community Health Centre three years in a row, in 2014 the number of diarrhea sufferers recorded as many as 1894 people and no patients who died.

(CFR 0%), in 2015 diarrhea is 1.451 people and no patient died (CFR 0%), so in 2016 diarrhea is 811 people and no patient died (CFR 0%) (DHO) City of SoE, 2016). Despite the decline of cases but if seen from the amount is still quite high because it reaches a thousand cases per year.

The most common cause of diarrheal diseases in developing countries is Infections due to pathogenic strains of *E. coli*. Contamination *E. coli* and other pathogens from stools that occur frequently in foods, as reported in the literature, indicate the contamination presence of fecal matter in food (Hartono, 2015). Habits associated with personal hygiene that are important in the transmission of diarrheal germs is washing hands. Hand washing with soap, especially after defecation, after disposing of feces and before eating, decreased diarrhea by 47% (MoH RI, 2011).

Infections from food will occur when consuming food which contaminating pathogenic microorganisms. These microorganisms will develop in the body, if the amount will cause many symptoms of the disease. The time between consuming food is contaminated with the onset of symptoms of the disease is called incubation time (Fathonah S, 2012). Indiscriminate defecation causes vector diseases such as flies to settle in the feces and then spread throughout the home environment, in addition to the disease vector that spreads e-coli, improper fecal management can lead to e-coli contamination in drinking water sources, can encourage the occurrence of diarrhea (Ministry of Health RI, 2011). Symptoms of the disease generally occur after an incubation period of 12-2 hours and are characterized by abdominal distress, lower abdominal pain, dizziness, defecating, vomiting, fever and headache.

Efforts to reduce the incidence of diarrhea in the community can be done through preventive, promotive and curative efforts. Preventive efforts that can be done is by the application of clean and healthy living behavior (PHBS). One of the implementation of PHBS in the household order that can prevent diarrhea is Hand Washing with Soap (CTPS). CTPS is one of the pillars of the strategy of Total Community Based Sanitation (STBM), as stated in the Decree of the Minister of Health No. 852 / SK / Menkes / IX / 2008. The importance of CTPS has been understood to decrease the incidence of diarrhea by up to 47%. It is important to be known by the community in order to increase awareness

to familiarize the CTPS in daily life (Ministry of Health RI, 2011). While the effort to prevent the behavior of defecation at random to the community, it is necessary efforts to provide information to the public about healthy latrines and risks faced if people do defecate behavior carelessly. Through the counseling, it is hoped that the community will have an increased knowledge of healthy latrines and be moved to avoid inflammation (Pangaribuan, 2009).

METHOD

Design Method

In this research use observational design with cross sectional approach that is research which aims to know the influence of 2 variables or more with data retrieval process which only done once for each research variable (Hidayat, 2011).

Population, Samples and Sampling

The population in this study were all people suffering from diarrhea in Soe Sub-District of Central Timor Tengah South Regency with 135 people with cluster random sampling technique obtained by 101 respondents.

Variable

Independent variables in this research are hands washing properly with soap and BABY arbitrary behavior, while the dependent variable in this research is diarrhea occurrence. The instrument used in this study is a questionnaire.

Data analysis

The statistical test used in this research is ordinal Regression test at 5% deviation level ($\alpha = 0,05$).

RESULT

Behavior of hand washing with soap in the Soe City District of Timor Tengah South Regency

Behavior of hand washing with soap in the Soe City District of Timor Tengah South Regency is as follows:

Tabel 1 . Behavior of hand washing with soap in the Soe City District of Timor Tengah South Regency

No	Behavior of hand washing with soap	Frequency	%
1	Less	23	22,8
2	Enough	73	72,3
3	Good	5	5,0
Amount		101	100,0

Based on table 1 it is known that most respondents have hands washing properly with soap in enough category, that is 73 respondents (72,3%).

Behavior Dispose in Soe District District of South Central Timor Tengah Regency

The Behavior Dispose in the Sub-District of Soe District of South Timor Tengah Regency is as follows:

Tabel 2 . The Behavior Dispose in the Sub-District of Soe District of South Timor Tengah Regency

No	Dispose Behavior	Frequency	%
1	Carelessly Disposal	33	32,7
2	Not Carelessly Disposal	68	67,3
Amount		101	100,0

Based on table 2 it is known that most of the respondents have defecate behavior in indiscriminate category not Babbling, ie 68 respondents (67.3%).

Diarrhea Occurrence in the Soe City District of South Central Timor District

The incidence of Diarrhea in the Soe City District of Timor Tengah South Regency is as follows:

Tabel 3 . The incidence of Diarrhea in the Soe City District of Timor Tengah South

No	Incidence of Diarrhea	Frequency	%
1	Light	92	91,1
2	Medium	9	8,9
3	Weight	0	0,0
Amount		101	100,0

Based on table 3 it is known that most of the respondents have diarrhea incidence in light category, that is 92 respondents (91,1%).

DATA ANALYSIS

Tabel 4 Test Result Statistics on the influence of hand washing properly and indiscriminate defecation of diarrhea occurrence in Soe Sub-district of Kabupaten Timor Tengah South

Variable	Sig.
Behavior of Hand washing with Soap Against Diarrhea Occurrence	0.002
Fecal Behavior Against Diarrhea Occurrence	0.024
Behavior of Hand washing with Soap and Fecal Behavior Against Diarrhea Occurrence	0.001
R-Nagelkerke	0.309

The results of the above analysis shows the probability value as follows:

1. Hand washing properly (X1) variable shows $p\text{-value} = 0.002 < \alpha = 0.05$ so H_0 is rejected and H_1 is accepted which means there is influence of hand washing properly on diarrhea occurrence in Soe Sub-district of District South Cental Timor.
2. Behavioral Behavior Variables (X2) show $p\text{-value} = 0,024 < \alpha = 0,05$ so that H_0 is rejected and H_1 accepted which means there is influence of indiscriminate defecation on diarrhea occurrence in Soe Sub-District of Soe Regency of South Central Regency.
3. The simultaneous test shows $p\text{-value} = 0.001 < \alpha = 0.05$ so that H_0 is rejected and H_1 is accepted which means there is influence of hand washing properly and indiscriminate

defecation on diarrhea occurrence in Soe Sub-District of Soe Regency of South Central Timor District.

4. The value of coefficient of determination of 0.309 value indicates that 30.9% of the value of diarrhea occurrence in Soe Sub-District of Soe Regency of South Central Timor Regency is influenced by the variables studied are the influence of hand washing properly and defecation 69, The remaining 1% is influenced by other variables that are not researched.

DISCUSSION

Behavior of Hand washing properly in Soe Sub-District of Timor Tengah South Regency

Behavior of hand washing properly in Soe Sub-district of South Central Timor District is known that most respondents have hands washing properly with soap in enough category, that is 73 respondents (72,3%). Based on the result of cross tabulation, it is known that the respondents have the age of 26-35 years with hands washing properly with soap in enough category, that is 35 respondents (34,7%), and most of respondent have female gender with hand washing with soap in enough category , 62 respondents (61,4%), have profession as private employee with hand washing properly in enough category, that is 63 respondent (62,4%), while cross tabulation between variables known that respondents have hand washing with soap enough with the incidence of diarrhea in the light category, ie 70 respondents (69.3%).

According to Notoatmodjo (2007), behavior is an activity or activity of the organism (living organism) concerned or all activities or activities either directly observable, or that can not be observed by outsiders. Behavior including health behavior is strongly influenced by one's experience, in an elementary school whose experience has not been much. School-aged children in implementing the practice to maintain personal health is still lacking so many health problems (Setiowulan, 2009). One of the less well-executed behaviors of school children is washing hands properly (Tietjen, 2013).

Based on the results of the research seen that the behavior of respondents in hand washing is less, this is because the respondents involved in this study have not understood and impose the concept of hand washing properly, the cause of this condition include a culture that is less precise and carried out for generations and low intensity of information about washing hands properly received by respondents. Cultural problems that are often encountered in the case of hand washing is only a habit of wetting hands before eating and do not carry out hand washing with soap completely, this condition is often seen in the research process. In most respondents giving information about healthy life behavior is often done but less attention so that respondents do not bring the information into behavior or daily habits. This is due to the limited facilities available in the environment that can support the condition.

Behavior Dispose Behavior in Soe District District of South Central Timor Tengah Regency

The Behavior Behavior in the Sub district of Soe Sub-district, South Central Timor District is known that most of the respondents have the indiscriminate defecation behavior in the non-reckless category, ie 68 respondents (67.3%). Based on the result of cross tabulation, it is known that the respondent has age 26-35 years old with indiscriminate defecation in the category of not defecate, ie 31 respondents (30.7%), and most of the respondents have female gender with defecate category is not defecate, that is 55 respondent (54,5%), have profession as private employee with indiscriminate defecation behavior in the category of no defecate CHAPTER, that is 52 respondents (51,5%), while

cross tabulation between variables known that respondent not CHAPTERy indifferent to the incidence of diarrhea in the light category, ie 64 respondents (63.4%).

Defecate in the irrigation channel, and defecate on the beach or the sea. These places are unfit and unhealthy places to defecate as they can cause new problems that could endanger human health (Kusnoputranto, 2010). Some diseases that can be spread by human feces include typhoid, dysentery, cholera, various worms (bracelets, kremi, mines, ribbons), schistosomiasis, and so on (Notoatmodjo, 2010). Defecation on the beach or open land can invite insects such as flies, cockroaches, thousands of feet, etc. that can spread diseases caused by feces diarrhea, typhus, muntaber, dysentery, worms and itching. The disposal of feces in the open can also become air pollution around and disrupt the environmental aesthetics (Kusnoputranto, 2010).

This study result indicate that most respondents have the behavior of defecate in indiscriminate category not CHAPTER but almost half of the respondents have a habit of defecate CHAPTER. This condition is caused by many factors, such as the availability of land. In the research area that is in the area and the society's economy is not too high a bit difficult to build latrines. This condition causes the families who do not have latrines prefer to use open latrines, especially those on the edge of the river. The problem is that the river in the research area sometimes does not flow especially in the dry season. This has an impact on the occurrence of various environmental health problems that exist in the research area.

Diarrhea Occurrence in the Soe City District of South Central Timor District

Diarrhea Occurrence in Soe Sub-District of South Central Timor District is known that most respondents have diarrhea incidence in light category, that is 92 respondents (91,1%). Based on the result of cross tabulation, it is known that the respondent has the age of 26-35 years with the incidence of diarrhea in the light category, ie 31 respondents (30,7%), and most of the respondents have female gender with diarrhea incidence in light category, that is 76 respondents (75 , 2%), respondents have profession as private employee with the incidence of diarrhea in light category, that is 73 respondents (72,3%).

According Nadesul (2009) hand is the main media for transmission of germs that cause disease. Due to lack of hand-washing habits, children are at high risk of diarrheal and respiratory diseases. Until not infrequently leads to death. According to MOH (2009) washing hands with soap is one of sanitation actions by cleaning hands and fingers using water and soap by humans to be clean and break the germ link. Hand washing with soap is also known as one of disease prevention efforts. Hand washing with water alone is not enough. The use of soap in addition to helping the short washing time, by rubbing fingers with soap removes germs that do not appear oil / fat / dirt on the skin surface, and leave a scent. The combination of cleanliness, scent and fresh feelings is a positive thing after using soap.

The high incidence of diarrhea in respondents can be caused by many things, based on observation on the area of District Soe District South Central Timor District this disease is very likely to occur because the basic sanitation facilities in the study area is still very limited, even though it is in urban areas even counted in the center city, basic sanitation facilities provided by the family are still very limited, such as the unavailability of adequate toilet facilities, most of the informants in providing toilet facilities are only modest regardless of environmental health condition. All waste water and household waste disposed into a river in the District of Soe City, South Central Timor District, causing an uncomfortable atmosphere and susceptible to bacterial contamination in the environment.

The Influence of Hands washing properly with Soap and Fecal Relief Against Diarrhea Occurrence in Soe Sub-District of Timor Tengah South Regency

The result of statistical test using Ordinal Regression test showed the influence of hands washing properly with soap ($p\text{-value} = 0,002$) and indiscriminate defecation ($p\text{-value} = 0,024$) to diarrhea occurrence in Soe Sub-District of South Central Timor District. The simultaneous test shows $p\text{-value} = 0.001 < \alpha = 0.05$ so that H_0 is rejected and H_1 is accepted which means there is influence of hands washing properly with soap and indiscriminate defecation on diarrhea occurrence in Soe Sub-district of Soe Regency of South Central Timor District. The value of the coefficient of determination of 0.309 value indicates that 30.9% of the value of diarrhea occurrence in the Soe Sub-District of Soe Regency of South Central Timor Regency is influenced by the variables studied, namely the influence of hands washing properly with soap and defecation, 69, The remaining 1% is influenced by other un-researched variables.

Diarrheal disease is still a problem in Indonesia. Though various efforts to handle, both medically and behavior change efforts by doing health education continue to be done. But these efforts have not yielded encouraging results. Each year the disease is still ranked top, especially in poor areas (Zein, 2014). The cause of diarrhea is caused by food contamination factors by e-cholli bacteria, caused by several things such as water source contamination, improper food processing and wrong behavior. The wrong form of behavior, one of which is improper hand washing (Mahmudi, 2008). The indiscriminate defecation behavior in the villages can cause disease vectors such as flies to settle in the feces and then spread throughout the home environment, in addition to the disease vector that spreads e-coli, improper fecal management may contribute to e-coli contamination in water sources drinking, and this is what can encourage the occurrence of diarrhea (MOH RI, 2012). Indiscriminate defecating behavior leads to an increased risk of environmental contamination from e-coli bacteria (Suyatno, 2010). According to Djauzi (2008), germs are everywhere, washing hands is one way to eliminate germs and to avoid transmission of disease.

The effect of defecate behavior indiscriminately with the occurrence of diarrhea is the occurrence of contamination of clean water facilities and food to be served to families by bacteria that cause diarrhea. This contamination occurs because of several reasons such as feces that are in the open contaminated to a source of clean water such as rivers, whereas Water Rivers are also a source of water wells. This condition causes the clean water consumed to be polluted and susceptible to diarrhea. The problem is exacerbated by the lack of hands washing properly with soap after activities outside the home.

After doing activities that have the potential to cause the sticking of bacteria that cause diarrhea are required to wash hands to prevent diarrhea. To overcome the germs needed the importance of getting used to wash hands, but not just simply wash your hands but also use soap and done under running water because the soap can reduce or weaken the germs in hand. Hand washing is the most important action and the only way to prevent the onset of disease. Diarrheal disease is often associated with water conditions, but accurately it should be considered also the handling of human feces such as feces and urine, because the germs that cause diarrhea originating from these impurities. The germs of this disease make people sick when they enter the mouth through the hands that have touched the stool, contaminated drinking water, raw food, and utensils that are not washed first or contaminated to where the dirty food so that the results of this study to prove the existence a significant influence between hand washing with soap and BABY behavior on diarrhea occurrence.

Based on the result of the research, it is found that most of respondent have hand washing with soap in enough category, that is 73 respondent (72,3%) and most of

respondent have behavior in category not reckless, 68 respondent (67,3%), but still not a few also experienced the incidence of diarrhea so it can be concluded that there are other factors that affect the incidence of diarrhea such as personal hygiene or personal hygiene of each respondent and environmental hygiene such as the feasibility of latrines at home, and cleanliness of the food processing everyday because if not awake cleanliness of the food processing or kitchen will be the spread of germs that cause diarrhea and eating behavior of respondents will also affect the occurrence of diarrhea this happens because if the respondent eat food indiscriminately as eating in a dusty environment or an open place because there are insects that carry the bacteria cause diarrhea like a fly.

CONCLUSIONS AND SUGGESTION

Conclusion

Most of the respondents have handwashing behavior with soap in enough category, that is 73 respondents (72,3%). Most of the respondents have the behavior in the category of not defecate, is 68 respondents (67,3%). Most of the respondents had diarrhea incidence in the light category, is 92 respondents (91,1%). There is influence of handwashing behavior with soap and indiscriminate defecation of diarrhea occurrence in Soe Sub-District of Central Timor Tengah South Regency (p-value = 0.001).

Suggestion

For Respondents, It is expected to change the behavior of defecate carelessly accompanied by routine to wash hands with soap, especially before eating. For Puskesmas, it is expected to conduct extension activities to motivate the community in behaving the right chapter. For Health Institutions, it is expected to promote health-related prevention efforts of diarrhea through chapter behavior and hand washing with soap along with building proper sanitation facilities in needy areas. For Further Researchers, it is expected to develop this research by conducting other research on factors that affect the incidence of diarrhea such as personal hygiene and cleanliness of the environment with diarrhea.

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