

# EFFECTIVENESS OF HEALTH EDUCATION ABOUT COMMUNITY – LED TOTAL SANITATION (CLTS) ON BEHAVIOR HAND WASHING WITH SOAP (HWWS)

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## Abstract

Hand washing was the most important basic technique in the prevention and transmission of infections, 80% of common infectious diseases and 45% of serious infectious diseases. The habit of washing hands with soap was part of a healthy lifestyle that was one of the three pillars of health development, namely healthy living behavior, the creation of a healthy environment, and the provision of quality health services and affordable by all levels of society. The students surveys result of HWWS behavior in Gumiwang Lor village people proved that from total 525 families, 489 (93%) of them did not wash hands with soap. Many efforts had been done to increase the community awareness and behavior of community-led total sanitation (CLTS). This research was conducted to analyze the effectiveness of health education application on community-led total sanitation (CLTS) behavior of hand washing with soap (HWWS) on health cadres in Gumiwang Lor Village. The method was one group research with pre test- post test design. The sample of research was total sampling. The sample was health cadres in Gumiwang Lor Village which there were 23 people. The research instrument used questionnaire. Data was analyzed by *t- test*. The *p-value of T paired* was 0.000. The *t-test* showed there was a difference of HWWS behavior before and after the application of health education about CLTS. There was an increasing behavior in hand washing with soap (HWWS) after receiving health education on community-led total sanitation (CLTS).

Keywords: Health Education, Community-Led Total Sanitation (CLTS), Handwashing With Soap (HWWS).

## INTRODUCTION

The increasing of infectious diseases of diarrhea and upper respiratory infection disease (URID) in the community caused by lack of perception and behavior PHBS mainly about washing hands with soap. Hand washing is the most important basic technique in the prevention and transmission of infections: 80% of common infectious diseases and 45% of serious infectious diseases. Research by Retno Purwandari, Anisah ardiana, Wantiyah, 2013 showed that promotion and preventive efforts in order to increase the degree of health of the nation and the community can be done with the application of clean and healthy living behavior.<sup>1</sup> The habit of washing hands with soap is part of a healthy lifestyle that is one of the three pillars of health development, namely healthy living behavior, the creation of a healthy environment, and the provision of quality health services and affordable by all levels of society. Research by Riries Sarach, Fathiyatur Rohmah, 2015 showed that hand

washing with soap can reduce diarrhea diseases and upper respiratory tract infections (URID).<sup>2</sup> Global research also shows that hand washing with soap prevents diarrhea and URID. Perceptions and behaviors against hand washing habits find that soap has reached almost every house in Indonesia, but about 3% using soap to wash hands, for the village the figure may be lower. According to WHO study in 2011, hand washing with soap could reduce the risk of diarrhea by 50%. The results of the PHBS implementation of hand washing, according to WHO study in 2007 stated that the incidence of diarrhea decreased by 45% by hand washing with soap, 32% by improving community led total sanitation, and 39% of household drinking water management behaviors. The incidence of diarrhea reduced until 94%. There are many health benefits of washing hands with soap. Hand washing is often regarded as trivial in the community, where as hand washing contributes to improving the health status of the community. Research by Burton, Cobb,

Donarchie, Judith, Curtis and Schmidt, 2011 showed that hand washing with soap is more effective in removing germs than by hand washing using water alone.<sup>3</sup> People think washing hands with soap is not important, they wash their hands with soap only when their hands are dirty, smelly and oily. The results of research by public and private partnerships on handwashing with soap showed that people's knowledge about hand washing with soap is high, but practice in the field is still low.<sup>4</sup>

Hands are the parts of our body that are most polluted with dirt and germs. When holding something and shaking hands, there is certainly a seed disease that is attached to the skin of our hands. Worms, germs and parasites that contaminate the hands, will be swallowed if we do not wash our hands before eating or holding food. In addition, the seeds of disease can also be attached to our hands after holding money, bathroom door, telephone, toy, and the section in public places.<sup>5</sup> Retno Purwandari, Anisah Ardiana, Wantiyah, 2013 showed our own hands all the seeds of the disease can enter the mouth, nose, eyes or ear canal because the habit of putting a finger to the nose, rubbing the eyes, picking the ears not at the right moment / when dirty hands and when our fingers have not been cleaned (not washing hands).<sup>6</sup> One effort to increase community awareness and behavior in sanitation services is through the implementation of community-led total sanitation (CLTS) where one of its pillars is hand washing with soap (HWWS).

National Movement for Community – Led Total Sanitation and hand washing with soap, started by the government in the era of health minister Siti Fadilah Supari. The Movement is a National Movement of Hand washing with Soap. This movement is carried out as part of government policy to control the risk of diseases related to the environment such as deworming, diarrhea, URID disease which can actually be prevented by the habit of washing hands with soap after defecation and before touching food. Luby, Halder, Tronchet, Akhter, Bhuiya & Johson, 2009 showed that the same movement has been done in collaboration with UNICEF, the movement aims to improve hand washing habits in the community, especially before preparing

food, before meals, before feeding the child, after defecation and after cleaning the child's anus. Research conducted by Riries Sarah, Fathiyatur rohmah, 2015 about the influence of counseling about hand washing with soap (HWWS) on prevention attitude of diarrhea in grade V student of Elementary School Triharjo Sleman 2015 showed that there is influence of counseling about hand washing with soap to preventive attitude of diarrhea.<sup>2</sup> Research conducted by Muslikah, Sri Puji Garifati, Purwanto about The implementation of community-led total sanitation (CLTS) with defecation and hand washing behavior with community soap in Caturharjo Village, Sleman, Yogyakarta in 2013 showed that 92.7% of people who participated in community-led total sanitation initiatives CLTS did not recklessly and 86.7 % Behavior following hand washing with soap (HWWS).<sup>7</sup> Research by Leni Setyawati 2012 on evaluation of sanitation program (CLTS) in Bungin Village Tinangkung Subdistrict of Bangjar Regency of Central Sulawesi Province has not been reached maximally, so it is hoped that the community will more effectively participate and support the sanitation program (CLTS).<sup>8</sup> Research by Moh. Fajar Nugraha on the impact of the first pillar-based community-led sanitation program (CLTS) in the Gucialit Village of Gucialit sub-district of Lumajang District shows that the community-led total sanitation program is a program developed by the Ministry of Health of the Republic of Indonesia.<sup>9</sup>

Community-led total sanitation is a program that addresses issues of adverse environmental sanitation conditions that will have an impact on public health. Community-led total sanitation program is a method to trigger public awareness about the impact of poor sanitation can affect their health so that people are aware to improve access to their own sanitation without any subsidy / assistance from the community. There are many benefits of community-led total sanitation, especially hand washing with soap in efforts to improve the degree of public health and the prevention of some infectious diseases. Communities need to gain good knowledge about community-led total sanitation (CLTS) so that they have the motivation to make health efforts related to the pillars in the CLTS, one of them is hand

washing with soap (HWWS). The students surveys in the Village Gumiwang Lor Wuryantoro on 525 family obtained 489 results (93%) family did not wash hands with soap after doing activities related to their work and before eating for example from rice fields or feeding cattle. They just wash their hands with water without soap. Therefore, it is necessary to conduct health education on community-led total sanitation (CLTS) in health cadres to disseminate information to the public to wash hands with soap which is the second pillar of CLTS.

## RESEARCH METHODS

This study used a one group research design pre test-post test design. The population was health cadres of Gumiwang Lor village. The sample of this research was total sampling. The sample was health cadres in Gumiwang Lor Village which were 23 peoples. The independent variable in this research was health education on community – led total sanitation (CLTS), dependent variable was hand washing with soap (HWWS) behavior. The instrument of this study used a questionnaire about total community – led total sanitation (CLTS) consisting of 20 items of questions with scores of one to four for each question. Hand washing behavior questionnaire with soap (HWWS) 10 items of questions with a score of one to four for each question. The instrument was easy to use and scores of less than 20 and 10 could be used to indicate behavioral changes in hand washing with soap (HWWS).

The research period was from February until May 2017 in Gumiwang Lor

### 1. Analysis Univariate

Wuryantoro Village. Data collection was done by selecting research subjects, giving informed consent to prospective respondents, providing information about the intent and purpose of the research. The research activities continued with pre test, namely the questionnaire about total community - led sanitation (CLTS) and hand washing behavior with soap to health cadres. Furthermore, it provided health education to health cadres on total community - led sanitation (CLTS) and handwashing with soap (HWWS) movement. After two months, a post test was conducted that was the same questionnaire to evaluate the results of health education and hand washing behavior on health cadres.

## RESULTS

A univariate analysis was performed on the characteristics of respondents (age, sex, occupation and number of children). Bivariate analysis is used to analyze the influence of free variable with dependent variable. The analysis was conducted to determine the effect of health education on total community - led sanitation (CLTS), on the behavior of hand washing with soap (HWWS). Health education was on total community - led sanitation (CLTS) on hand washing with soap (HWWS) behavior with *T test*. This research was conducted in Gumiwang Lor Wuryantoro Village in health cadres. This study began in February 2017. Total sampling in this study was 23 people. After the data collected, then processed by using statistical tools SPSS program.

**Table 1. Distribution Of Respondents**

No	Variabel	F	%
1.	age :		
	20 – 35yearsold	10	43.5
	>35 years old	13	56.5
2.	gender:		
	Male	3	13
	Female	20	87
3.	Occupation :		
	PE	5	21.7
	E	4	17.4
	Seller	2	8.7

	House Wife	8	34.8
	Farmer	4	17.4
4.	Childrens :		
	1	10	43.5
	2	10	43.5
	3	2	8.7
	4	1	4.3

From table 1 above showed that the age of respondents varies from 24 years to 63 years, most of the respondents are female, Working as a housewife, having one and two children.

2. Bivariate Analysis Bivariate analysis was used to analyze the influence between independent variables with bound variables.

### Smirnov

	Statistic	Df	Sig
CLTS	.159	23	.143
HWWS	.144	23	.200

Tables 2 showed that p-value (Asymp.Sig)> 0.05, Then the data from the independent variable and the dependent variable in the

study was said to be normal distribution. Next paired sample statistic.

**Table 3. Paired Samples Correlations**

	N	Correlation	Sig
Pair CLTS & HWWS	23	.749	.000

The results of paired samples correlations in table 4 indicated a strong and significant relationship between the two variables.

**Tabel 4. Paired Samples Statistics**

Pair	Mean	N	Std. Deviation	Std. Error Mean
HWWS_bef	45.25	23	5.189	1.082
HWWS_aft	48.08	23	6.633	1.383

From the results of paired samples statistics table 4 indicated that there were differences in the application of community-led total

sanitation and hand washing with soap before and after the health education.

**Tabel 5. Paired samples test**

95% Confidence Interval of the Difference								
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	Df	Sig.(2-tailed)
P1	18.174	5.149	1.074	15.947	20.401	16.927	22	.000
P	20.478	4.861	1.013	18.376	22.580	20.206	22	.000
2								

From the test results paired test in table 5 above showed there was a significant influence between the application a community-based total sanitation education (CLTS) for hand washing with soap (HWWS).

## DISCUSSION

This study was conducted from February 2017 to May 2017. The researchers conducted questionnaires to respondents before and after the community-led total sanitation health insurance (CLTS). From the result of the data showed to the behavior of hand washing with soap before and after getting health education from 45.25 to 48.08, there was a difference of 2.83. It indicated the increased scores on hand washing with soap behavior. From the result of paired test in table 5 above showed the value of *t* arithmetic before and after the application of community – led total sanitation (CLTS) was bigger than *t* table so there was significant influence between the application of CLTS health education to the behavior of hand washing with soap. In accordance with the opinion of some references on health education which was an effort or activity to create a conducive community behavior for health, health education made the public know how to maintain their health, how to avoid or prevent things that could harm their health and the health of others, where to look for treatment if they were ill, and so on.<sup>12</sup>

Health education on community-led total sanitation was an effort or activity to create conducive community behavior for health on sanitation programs based on policies from health ministries that employed community empowerment with trigger methods to strengthen a clean and healthy lifestyle culture in society and prevented disease-based environment. Total sanitation was a condition when a community implemented 5 CLTS pillars which were defecation, hand washing with soap (HWWS), treating drinking water (PAM - RT) and food in a safe manner, properly managing household waste (PSRT) and securely managing household wastewater (SPAL). According to Benjamin Bloom (1908) the purpose of education was

to develop or improve the 3 domains of behavior ie cognitive (cognitive domain), affective (affective domain), and psychomotor (psychomotor domain).<sup>11</sup> In accordance with the above theory that health education on community-led total sanitation (CLTS) would improve the knowledge and behavior of health cadres to perform hand washing with soap so that it would disseminate information that had been obtained to the wider community. Research conducted by Riries Sarah, Fathiy Rohmah about the influence of counseling about hand washing with soap (HWWS) on prevention attitude of diarrhea in grade V student of elementary school Triharjo Sleman 2015 showed that there was influence of counseling about hand washing with soap to preventive attitude of diarrhea. The research conducted by Muslikah, Sri Puji Garifati, Purwanto on the relationship between the implementation of community-led total sanitation (CLTS) with the behavior of defecation and washing hand washing with soap on community of Caturharjo Village, Sleman, Yogyakarta in 2013 showed the result that 92.7% of people who followed community-led total sanitation (CLTS) and 86.7% behaved following hand washing with soap (HWWS).<sup>7</sup> Research by Leni Setyawati 2012 on evaluation of sanitation program (CLTS) in Bungin Village Tinangkung Subdistrict of Bangjar Regency of Central Sulawesi Province had not been reached maximally, so it was hoped that the community would more effectively participate and support the sanitation program (CLTS).<sup>8</sup>

Research by Moh. Fajar Nugraha on the impact of the first pillar-based community-led sanitation program (CLTS) in the Gucialit Village of Gucialit sub-district of Lumajang District showed that the community-led total sanitation program was a program developed by the Ministry of Health of the Republic of Indonesia.<sup>9</sup> Community-led total sanitation was a program that addressed issues of adverse environmental sanitation conditions that would have an impact on public health. Community-led total sanitation program was a method to trigger public awareness about the impact of poor sanitation could affect their health so that people were aware to improve access to their own sanitation

without any subsidy / assistance from the community. From the above research showed that good knowledge about community-led total sanitation (CLTS) would increase public awareness to apply the 5 pillars which was the second pillar was hand washing with soap.

## CONCLUSION

This study can be concluded that the age of respondents varies from 24 to 63 years-old, most of the respondents are females, work as housewives, have one and two children. The result of research data analysis shows that *t* value before and after the implementation of CLTS health education is bigger than *t* table so HWWS behavior increase after it has the education of CLTS on health cadres. The *P* value of probability / *p*-value of Paired *T* test result 0.000 shows the difference in HWWS behavior before and after applying CLTS health education, because *p*-value value > 0.05 (95% trust level). The mean result before treatment 18,174, after treatment 20,478 there is a difference of 2,304 which indicates an increase in my HWWS after receiving health education treatment about CLTS.

## SUGGESTION

1. Health cadres are expected to disseminate information and knowledge gained to the entire community.
2. All communities and community health care work together to implement the 5 (five) pillars of community-led total sanitation in order to achieve an optimal level of public health

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