

# INTERCIENCIA

Revista de Ciencia e Tecnología de América - Journal of Science and Technology of the Americas - Revista de Ciência e Tecnologia das Américas

COMUNIDADES ARBÓREAS EM TERRA FIRME NA REGIÃO  
AMAZÔNICA DO GUIAPORE

BREVE HISTORIA DEL SPONDYLUS EN EL PACIFICO SURAMERICANO:  
UN SIMBOLO QUE RETORNA AL PRESENTE

**VOLUME 44 ISSUE 1**



**2019**

## Emotional Demonstration; Approach to Behavioral Change Washing Hands with Soap in the Spermonde Islands

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### Abstract

This study aims to see the effectiveness of the Emo Demo method approach to children's knowledge and behavior about the importance of CTPS before and after counseling. This study uses a quasi-experimental design method with One Group Pretest Posttest Design. Sampling of respondents was carried out by a total sampling method of 105 respondents divided into three islands (Pulau Lae-lae, Barrang Lompo, and Lumu-lumu). The results showed differences in the level of knowledge before and after the intervention ( $p = 0.002$ ) on Lae-lae Island and Barrang Lompo, and on Lumu-lumu Island ( $p = 0.625$ ) there were no differences. There were differences in attitudes before and after intervention in Lae-lae Island ( $p = 0,000$ ) and Barrang Lompo Island ( $p = 0.002$ ), and in Lumu-lumu Island ( $p = 1,000$ ) there was no difference.

**Keywords:** Behaviour, Knowledge, Emotional Demonstration

### Introduction

People who live on small islands have isolated lives (Selomo, et al., 2018). Island communities are more vulnerable to illness and death due to disease, which is mostly related to inadequate sanitation, inadequate water supply, and inability to maintain cleanliness (Ersel, 2015). Sanitation is still a difficult tool to be accessed by 2.6 billion people in the world. As many as 40.2% of the population of Indonesia do not have access to adequate sanitation. Indonesia experiences an economic loss of Rp56.7 trillion per year due to poor sanitation conditions.

Lack of access to good sanitation makes a culture of clean and healthy living behavior that is not good in everyday life such as the habit of washing hands with soap (Tauso & Azizah (2013) ; Mara et al. (2010) ; Susilawaty et al. (2018)) . The results showed that of 30 respondents who experienced diarrhea there were 2 respondents (6.7%) whose hand washing behavior with soap was classified as good and 28 respondents (93.3%) whose hand washing behavior with soap was classified as poor (Selomo et al., 2018).

Washing hands with soap is one of the factors that can prevent the transmission of bacteria, viruses and parasites found in contaminated food and drinks. Data from UNICEF Indonesia states that washing hands with soap can reduce the risk of diarrhea by 42 - 47% (Musyaraffah, et, al.,2019).

The relationship between hand washing behavior and the incidence of diarrhea proves there is a significant relationship between hand washing behavior and the incidence of diarrhea.

Handwashing habits do not arise just like that, but must be accustomed since childhood. Children are agents of change to provide education both for themselves and their environment

while teaching clean and healthy lifestyles (Rompas, et, al. 2013)

Based on this phenomenon, researchers are interested to see the effectiveness of counseling using the emo-demo method to change the behavior of environmental sanitation better, namely washing hands with soap in school-age children in the spermonde islands of Makassar.

## Literature Review

### *Health Education*

Health Education is an activity and effort to improve individual health knowledge, at least about the management of disease risk factors and clean and healthy living behavior in an effort to improve health status, prevent re-emergence of disease and recover disease. According to Septiana (2014), health education is a planned effort to influence others, whether individuals, groups or communities, so that they can do as expected by health education practitioners. Health education as an important tool for health promotion in improving public health and increasing health capital (WHO, 2012).

Health Education aims to positively influence individual and community health behaviors and living and work conditions that affect their health (Coalition Of National Health Education Organizations (2010).

### *Emotional Demonstration*

The Emo Demo was developed based on the Behavior-Centered Design (BCD) theory. BCD is a new approach to achieving behavior change in the field of public health. BCD was initiated by the Environmental Health Group of the London School of Hygiene and Tropical Medicine (LSHTM). BCD uses science and creativity because this theory holds that behavior can only change in response to something new, challenging, surprising or interesting.

### *Wash Hands With Soap (CTPS)*

Washing hands is one of the sanitation measures by cleaning the hands and fingers by using water or other liquids by humans in order to be clean, as part of religious rituals, or other purposes. Handwashing habits do not arise just like that, but must be accustomed since childhood. Children are agents of change to provide education both for themselves and their environment while teaching clean and healthy lifestyles (Rompas, et, al. (2013)). The purpose of washing hands is to reduce microorganisms on the hands and prevent contamination, prevent or reduce the incidence of infection, maintain the texture and integrity of the skin of the hands properly. The benefits of washing hands according to (Potter & Perry, 2006) namely:

- a. Killing germs in the hands, hands become clean and free of germs.
- b. Prevent disease transmission and reduces the cause of the spread of infection.
- c. Reducing the transfer of microorganisms from fecal specimens to the hands.

## Materials and Methods

This research is a quantitative study using a quasi-experimental design with the One Group

Pretest Posttest Design which was carried out on the Three Islands that constitute the Spermonde Islands group, namely Lae-lae Island, Barrang Lompo Island and Lumu-Lumu Island. Site selection is based on distance (closest, middle and farthest) and the level of occupant density which is quite high compared to other islands. The study was conducted in May - July 2019.

The study was conducted at SD Inpres Lae-lae I, Lumu-Lumu Public Elementary School and Barrang Lompo Elementary School in Makassar City. The population in this study amounted to 105 respondents who were all grade IV, V and VI students in three elementary schools. The sample in this study is the total population. The inclusion criteria referred to are willing to be respondents, elementary students grade IV, V, and VI, can read and write correctly. The sample on Barrang Lompo Island consisted of 45 respondents. The sampling technique in this study uses saturated samples or total sampling.

The questionnaire is in the form of pre-test and post-test. Primary data were obtained from questionnaire data and observations made to assess the practice of CTPS during counseling. Data processing using Mc Nemar test sign rank test at a significance level of 0.05 (5%). Analysis of research using univariate analysis and bivariate analysis. The data that has been obtained is presented in tabular form accompanied by an explanation of the variables studied.

## Results

The data collection method used aids in the form of a questionnaire to 105 elementary school students grade IV, V, and VI from all the respondents in three islands, namely the islands of Lae-lae, Lumu-lumu, and Barrang Lompo.

### *Differences in the Knowledge Level of Elementary School Students in the Spermonde Islands of Makassar City*

Table 1: Frequency Distribution of Samples by Gender of Students in the Spermonde Islands of Makassar City

Gender	Frequency					
	Lae-lae Island		Barrang Lompo Island		Lumu-lumu Island	
	n	%	n	%	n	%
Male	12	40	22	48.9	17	56.7
Female	18	60	23	51.1	13	43.3

Based on table 1, the sample frequency distribution based on the sex of the respondents in each island is Lae-lae Island with 30 students, Barrang Lompo Island with 45 students, and Lumu-Lumu Island with 30 students. Most respondents in this study were female, namely Lae-lae Island with 18 respondents (60%), Barrang Lompo Island with 23 respondents (51.1%) and Lumu-Lumu Island with 43.3%.

Tabel 2 : Distribution of Knowledge Levels Before and After the Intervention of Elementary Students in the Spermonde Islands of Makassar City, 2019

Category		Post Knowledge (after the intervention)		Total
		High	Low	
<b>SD Inpres Lae-lae I</b>				
Pre Knowledge (after the intervention)	High	19	1	20
	%	63.3	33.3	96.6
	Low	10	0	10
	%	33.4	0	33.4
Total	N	29	1	30
	%	96.7	33.3	100
<b>SD Negeri Lumu-lumu</b>				
Pre Knowledge (after the intervention)	High	26	1	27
	%	86.7	3.3	90
	Low	3	0	3
	%	10	0	10
Total	N	29	1	30
	%	96.7	3.3	100
<b>SD Inpres Barrang Lompo</b>				
Pre Knowledge (after the intervention)	High	33	0	33
	%	73.3	0	73.3
	Low	10	2	12
	%	22.2	4.4	26.7
Total	N	43	2	45
	%	95.6	4.4	100

Based on table 2, the level of knowledge of student respondents in the three islands of the Spermonde Islands of Makassar City before and after being given counseling intervention with the Emo Demo approach, most have high knowledge during the pretest and post test, as many as 19 students (63.3%) in SD Inpres Lae-lae I, 26 students (86.7%) in Lumu-Lumu Public Elementary School, and 33 students (73.7%) in Barrang Lompo Elementary School. While students who have a low level of knowledge during pre-test and have experienced an increase in post-test in the three Spermonde Islands, namely as many as 10 students (33.3%) in SD Inpres Lae-lae I, 3 students (10%) in Lumu-Lumu Public Elementary School, and 10 students (22.2%) at Barrang Lompo Inpres Elementary School.

Tabel 3 : Distribution of Student Knowledge Scores Before and After Intervention in the Spermonde Islands of Makassar City

Score of Knowledge	n	Min	Maks	P-Value
<b>SD Inpres Lae-Lae I</b>				
<i>Pre-Test</i>	30	3	4	0,002
<i>Post-Test</i>	30	8	10	
<b>SD Negeri Lumu-lumu</b>				
<i>Pre-Test</i>	30	4	10	0,625
<i>Post-Test</i>	30	4	10	
<b>SD Inpres Barrang Lompo</b>				
<i>Pre-Test</i>	45	3	10	0,002
<i>Post-Test</i>	45	4	10	

Based on table 3, it shows that there are significant differences in the level of student knowledge before and after counseling interventions with the Emo demo approach in two elementary schools, namely SD Inpres Lae-lae I and Barrang Lompo State Elementary School with a significance value of 0.002 ( $<0.005$ ). Whereas for Lumu Lumu State Elementary School there was no significant difference in the level of students' knowledge before and after counseling intervention with the Emo demo approach with a significance value of 0.0625 ( $> 0.005$ ).

*Differences in Attitudes of Elementary School Students in the Spermonde Islands*

Table 4 : Distribution of Student Attitudes Before and After Intervention in the Spermonde Islands of Makassar City

Category		Post attitude (after the intervention)		Total
		Good	Poor	
<b>SD Inpres Lae-lae I</b>				
<b>Pre attitude (after the intervention)</b>	Good	16	0	16
	%	53.3	0	53.3
	Poor	13	1	14
	%	43.3	3.3	46.7
<b>Total</b>	n	29	1	30
	%	96.7	3.3	100
<b>SD Negeri Lumu-lumu</b>				
<b>Pre attitude (after the intervention)</b>	Good	28	1	29
	%	96.6	3.3	96.7
	Poor	1	0	1
	%	3.3	0	3.3
<b>Total</b>	n	29	1	30
	%	96.7	3.3	100
<b>SD Inpres Barrang Lompo</b>				
<b>Pre attitude (after the intervention)</b>	Good	34	0	34
	%	75.6	0	75.6
	Poor	10	1	11
	%	22.2	2.2	24.4
<b>Total</b>	n	44	1	45
	%	97.6	2.2	100

Based on table 4, the attitudes of students in the three islands of the Spermonde Islands in Makassar City before and after being given counseling intervention with the Emo Demo approach were mostly in the pre-test and post-test categories, as many as 16 students (53.3%) in SD Inpres Lae-lae I, 28 students (96.6%) in Lumu-Lumu Public Elementary School, and 34 students (75.6%) in Barrang Lompo Elementary School. Whereas students who had less category attitudes during pre-test and experienced an increase in post-test in the three Spermonde Islands, as many as 13 students (43.3%) in SD Inpres Lae-lae I, 1 student (3.3%) in Lumu-Lumu Public Elementary School, and 10 students (22.2%) at Barrang Lompo Inpres Elementary School.

Table 5 : Distribution of Student Attitude Scores in the Spermonde Islands of Makassar City Before and After the Intervention

Score of Knowledge	n	Min	Maks	P-Value
<b>SD Inpres Lae-Lae I</b>				
<i>Pre-Test</i>	30	2	4	0,000
<i>Post-Test</i>	30	9	10	
<b>SD Negeri Lumu-lumu</b>				
<i>Pre-Test</i>	30	3	10	1,000
<i>Post-Test</i>	30	4	10	
<b>SD Inpres Barrang Lompo</b>				
<i>Pre-Test</i>	45	3	10	0,002
<i>Post-Test</i>	45	4	10	

Based on table 5, it shows that there are significant differences in the attitudes of students before and after counseling intervention with the Emo demo approach in two primary schools, namely SD Inpres Lae-lae I with a significance value of 0,000 ( $<0.005$ ) and Barrang Lompo State Elementary School with grades significance of 0.002 ( $<0.005$ ). Whereas for Lumu Lumu Public Elementary School there was no significant difference in the attitude of students before and after counseling intervention with the Emo demo approach with a significance value of 1,000 ( $>0.005$ ).

## Discussion

### *Differences in Knowledge Levels of Handwashing with Soap (CTPS) Before and After Counseling with the Emotional Demonstration Method in the Spermonde Islands of Makassar*

Based on the results of research that have been collected using a tool in the form of a questionnaire to 105 elementary school students grade IV, V, and VI from the total number of respondents on three islands it was found that there was an increase in respondents' knowledge about Handwashing with Soap (CTPS) on Lae-lae Island and Pulau Barrang Lompo, but there was no increase in respondents' knowledge on Lumu-Lumu Island.

The level of knowledge on the two islands carried out in primary schools is 99% included in the high knowledge category. This is because the respondent already has good knowledge before the intervention is given and when given an intervention the respondent pays close attention to the counseling delivered to the emotion method, even when the game is carried out the respondent actively answers the games related to the education given. The games provided after counseling also help respondents to recall important things that have been conveyed related to CTPS. In addition, they were also very enthusiastic when the practice of hand washing took place. Research that has been conducted is in line with ZAFWAN research (2018) which shows that from 42 respondents, there are differences before and after health promotion interventions on knowledge variable ( $p = 0.015$ ) in fifth grade children of SD Borong Jambu I in Makassar City.

The third research location is Lumu-lumu Island where the results obtained are that there is no increase in knowledge. The level of knowledge on the Lumu-lumu island is included in the low knowledge category. The level of knowledge is low because the respondent's initial information about CTPS is still low, this can be seen from the results of the pretest and some

respondents are not active in arguing when giving lectures on CTPS conducted by researchers. Research conducted on Lumu-Lumu Island is in line with research by FAJAR & MISNANIARTI (2011), in the East Senuro Village which showed that of 93 respondents found that 52.7% of respondents had good knowledge but there was no relationship between knowledge of CTPS behavior with  $p$ value = 0.625.

*Differences in Handwashing with Soap (CTPS) Attitudes Before and After Counseling with the Emotional Demonstration Method in the Spermonde Islands of Makassar*

Attitudes clearly show the connotation of the suitability of reactions to certain stimuli which in everyday life are emotional reactions to social stimuli (RIKA (2016)). Based on the results of research that have been collected using a tool in the form of a questionnaire to 105 elementary school students grade IV, V, and VI from the total number of respondents on three islands it was found that an increase in respondents' knowledge about Handwashing with Soap (CTPS) on Lae-lae Island and Pulau Barrang Lompo.

Respondents' attitudes that have increased are influenced by respondents' knowledge which is also high. One of the ways taken during the intervention is to provide a direct illustration of the process of germs moving from hands and food, as well as CTPS songs accompanied by hand washing movements that help respondents to remember steps CTPS.

Subsequent research was carried out on Lumu-Lumu Island, where the results of the study showed that there were no differences in the attitudes of respondents before and after counseling CTPS with the emo demo method in Lumu-Lumu Public Elementary School. The attitude of the respondents who did not experience an increase was influenced by the knowledge of the respondents, because of the low knowledge, the attitude of the respondents also did not change either before and after the counseling also went less smoothly because some of the children who were not respondents were roaming in the classroom so that it disrupted the counseling process. Even at the time of counseling, respondents did not pay close attention to the information delivered up to the method of emotion. This study is not in line with research conducted by SITORUS & FRANSISCA (2014), where from 71 respondents there was an influence of health education on the attitude of washing hands with soap in SDN 157 students ( $p = 0.001 < 0.05$ ).

## Conclusion

Based on research that has been done, there are differences in respondents' knowledge before and after CTPS counseling with the emo demo method on Lae-lae Island and Barrang Lompo Island. But there was no difference in respondents' knowledge before and after CTPS counseling with the emo demo method on Lumu-Lumu Island. There were differences in the attitudes of respondents before and after the counseling of CTPS with the emo demo method on Lae-lae Island and Barrang Lompo Island. But there was no difference in the attitude of the respondents before and after counseling CTPS with the emo demo method on Lumu-Lumu Island.

## REFERENCES

ADRIANI, S. 2018. "Edukasi Konsumsi Buah Dan Sayur Pada Remaja SMP Melalui Metode Emotional Demonstration". **Universitas Hasanuddin**.

AMARETA, D.I. & ARDIANTO, E.T. 2017. “Penyuluhan Kesehatan Dengan Metode Emo Demo Efektif Meningkatkan Praktik CTPS Di MI Al-Badri Kalisat Kabupaten Jember”. **Seminar Nasional Hasil Penelitian**, pp. 246–250.

COALITION OF NATIONAL HEALTH EDUCATION ORGANIZATIONS. 2010. “**Health Education. Health Education**”. Available at: [http://www.cnheo.org/files/empl\\_guide.pdf](http://www.cnheo.org/files/empl_guide.pdf).

FAJAR, N.A. & MISNANIARTI. 2011. “Hubungan Pengetahuan Dan Sikap Terhadap Perilaku Cuci Tangan Pakai Sabun Pada Masyarakat Di Desa Senuro Timur”. **Jurnal Pembangunan Manusia**, 5(1).

MAHDALI, M.I., INDRIASARI, R. AND THAHA, R. 2014. “Efek Edukasi Gizi Terhadap Pengetahuan, Sikap Serta Perubahan Perilaku Remaja Obesitas Di Kota Gorontalo”. **Jurnal Kesehatan Masyarakat**, pp. 1–13.

MARA, D. ET AL. 2010. ‘Sanitation and health’, **School of Civil Engineering, University of Leeds, Leeds, United Kingdom**, 7(11). doi: 10.1371/journal.pmed.1000363.

MUSYARRAFAH, M., ANDITIARINA, D., & ZUBAIDI, F. F. 2019. “Edukasi Hidup Bersih dan Sehat di Daerah Tujuan Wisata, Dusun Nipah, Desa Malaka, Kecamatan Pemenang, Kabupaten Lombok Utara”. **JPMB: Jurnal Pemberdayaan Masyarakat Berkarakter**, 2(2), 100-108.

POTTER. & PERRY. 2005. “**Buku Ajar Fundamental Keperawatan**”. Jakarta: EGC.

ROMPAS, M.J., TUDA, J. AND PONIDJAN, T. 2013. “Hubungan Cuci Tangan Pakai Sabun Dengan Kejadian Diare Pada Anak Usia Sekolah Di SD GMIM Dua Kecamatan Tantareran”. **Ejournal Keperawatan**, 1, pp. 1–8. DOI: 10.1007/s13398-014-0173-7.2.

SARACH, R. 2015. “Pengaruh Penyuluhan Tentang Cuci Tangan Pakai Sabun (Ctps) Terhadap Sikap Pencegahan Diare Pada Siswa Kelas V Sdn Triharjo Sleman Tahun”. **Sekolah Tinggi Ilmu Kesehatan 'Aisyiyah**. Available at: <http://digilib.unisayogya.ac.id/737/1/NASKAH%20PUBLIKASI%20pdf.pdf>

SELOMO, M. BIRAWIDA, A. ZAENAB, NATSIR F. 2018. “Potensi Risiko Kejadian Diare Akibat Kondisi Sanitasi Di Pulau Kecil Kota MAKASSAR”. **Jurnal Nasional Ilmu Kesehatan (JNIK)**, 1, pp. 1–16

SEPTIANA. 2014. “Pengaruh Pendidikan Kesehatan Terhadap Tingkat Pengetahuan Remaja Tentang Kesehatan Reproduksi Di SMP Islam Ruhama Ciputat”. **Universitas Islam Negeri Syarif Hidayatullah**. Available at: <http://repository.uinjkt.ac.id/dspace/bitstream/123456789/25662/1/Septiana-fkik.pdf>.

SUSILAWATY, A., LAGU, A. M. H., BASRI, S., MAISARI, U., & AMANSYAH, M. 2018. “Environmental Sanitation Risk Assessment in Balang Lompo Island, Mattiro Sompe Village, Liukang Tupabbiring District, Pangkajene and Kepulauan District”. **Al-sihah: The Public Health Science Journal**. 10(2).

TAUSO, S. A. & AZIZAH, R. 2013. "Relationship between Basic Sanitation and Housewife Behavior with Diarrhea in Toddlers in Bena Village, East Nusa Tenggara". **Jurnal Kesehatan Lingkungan**. 7(1), pp. 1–6. doi: 10.1088/1742-5468/aa9bb3.

WORLD HEALTH ORGANIZATION. 2012. "**Health Education: Theoretical Concepts, Effective Strategies and Core Competencies**". DOI: 10.1177/1524839914538045.

ZAFWAN, M. .2018. "Pengaruh Intervensi Promosi Kesehatan Terhadap Pengetahuan Sikap Dan Perilaku Cuci Tangan Pada Anak Kelas V Sekolah Dasar Inpres Borong Jambu I Kota Makassar". **Universitas Hasanuddin**