



Prevention of Diarrhea and Worms in Elementary School
in the Pasirkaliki Health Center area,
Bandung

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ABSTRACTS

National health development is essentially the development of quality Indonesian people where one of the strategic efforts to improve a quality generation is through education and health through the School Health Business (UKS) program. The purpose of this community service is to improve the knowledge and skills of washing hand with soap (CTPS) properly in preventing diarrhea and worms in students at the Kresna and Jatayu State Elementary Schools in the Pasirkaliki Health Center, Bandung. The method used in this activity is participatory training and mentoring for school children through discussions, questions answers, demonstrations, and direct practice simulations in groups. The respondents who took part in this program were 40 elementary school students in grades 4 and 5 who were randomly selected. The results showed an increase in the average score before and after training for elementary school students, the average knowledge (1.7 to 2.83), and the average increase in skills (1.64 to 2.88). Elementary school students showed enthusiasm and were able to demonstrate how to wash hands with soap (CTPS). This activity needs to be followed up in collaboration with the Puskesmas to map out achievements in the implementation of training on the prevention of diarrhea and helminthiasis in primary schools in other Puskesmas.

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1. INTRODUCTION

Schools are places of learning, but can also be a threat/problem with the disease if the environment and the cultivation of personal hygiene/personal hygiene in children are not managed properly. Data obtained from the Bandung City Health Office in 2015 showed that of the 5 most common diseases in children, the first was diarrhea, Acute Respiratory Infections (ARI), worms, cough, cold, and skin. Worms are still a health problem. This disease mainly affects children.

Worms are infectious diseases that are common in tropical and sub-tropical areas. States that as many as 24% of the world's population suffer from worms. Sub-Saharan Africa, America, China, and East Asia have the largest incidence rates. Worms in Indonesia have a prevalence of 45%-65%. Worms still attack many Indonesian people, especially children with the prevalence rate of worms in Indonesia reaching 28.12 percent. The prevalence rate is the basis for providing treatment interventions. For areas with a prevalence of around 20 to below 50 percent, drug administration is done in bulk once a year. Therefore, it is necessary to take steps to control this disease (WHO, 2014).

Threats and disease problems that will attack school children can be avoided of using school health programs through the UKS including training with leaflets, posters, and modules related to health (Kemenkes, 2012). Washing hands with soap is one of the most effective ways to prevent diarrheal disease, as evidenced by several studies showing that there is a significant relationship between CTPS behavior in elementary school students and the incidence of diarrhea. Diarrhea is a condition that can be transmitted by unclean hands when putting food in the mouth (Rane et al., 2017).

The purpose of this community service is to increase the knowledge and skills of washing hands with soap (CTPS) with the intention of elementary school students in preventing diarrhea and worms. To improve this knowledge and skills, elementary school students are given training on diarrhea and worms as well as skills on how to wash hands with soap (CTPS) properly.

Pasirkaliki public health center is one of the public health centers under the Bandung City Health Office, which is used as a place of practice for students of the D3 Nursing Study Program at the Health Poltekkes of the Ministry of Health in Bandung and an MOU has been formed to support the Tridharma of Higher Education for Teaching Education, Research and Community Service. Geographically, is a health center that fosters elementary schools in the context of implementing School Health Efforts (UKS) through implementing a Clean and

Healthy Lifestyle (PHBS) in school settings to prevent the risk of diarrhea and intestinal worms.

The results of the preliminary study are still many students at break time when they want to eat snacks do not appear to wash their hands first, hand washing faucets and water are available even though the number is not with the number of students, there is no visible hand sanitizer as a substitute for water faucets for washing hands. There is no “Dokter Kecil” program yet, posters about diarrhea, worms, and hand washing with soap (CTPS) have not been seen properly.

2. METHODS

The methods used in this activity are interactive, participatory training and mentoring to UKS teachers to school children through discussions, questions and answers, demonstrations, and direct practice simulations in groups. The respondents who took part in this program were 40 elementary school students in grades 4 and 5 who were randomly selected. This school student empowerment activity is carried out in the form of training and communication between trainers and participants, namely elementary school students with andragogy principles and learning reflection from experience.

This training begins with the presentation of material about diarrhea and worms and CTPS skills. Before the training begins, participants are given a pre-test to determine readiness and are given a post-test after the training to find out the results achieved from the training using instruments that have been made about diarrheal diseases, worms, and CTPS. The training steps are given to elementary school students in stages with the following steps:

2.1 Step 1

At this stage, it includes preparations by holding meetings with partners, namely the Kresna State Elementary School and Jatayu Work Area of the Pasirkaliki public Health Center, Bandung City.

2.2 Step 2

At this stage the community service team conducted a pre-test before the training started covering diarrheal diseases, worms and CTPS followed by training students on the meaning, signs and symptoms, prevention, and skills of CTPS through discussion, simulation, and demonstration methods. The students were provided with leaflets and hand sanitizers to take home to better understand and practice CTPS from the training materials.

2.3 Step 3

At this stage, the community service team provides assistance to UKS teachers and students for monitoring and evaluation to see students who are trained in implementing CTPS steps in the context of preventing diarrhea and worms in other students who have not been exposed to the training material.

2.4 Step 4

Evaluation of activities and reporting to related parties, namely the Center for Research and Community Service, politics, Ministry of Health, Bandung, and Pasirkaliki Public Health Center.

Knowledge data were measured using a knowledge questionnaire about diarrhea and worms developed by the community service team, the results were categorized as high ($\geq 76\%$ correct answers), moderate (57% - 75%), and less ($\leq 56\%$). Aspects of the skills of health cadres and mothers of children under five were observed using the Operational procedure of the CTPS skill checklist sheet followed by reflection after the activity.

3. RESULTS AND DISCUSSION

3.1. Results

Participants consisted of students at the Kresna and Jatayu Public Elementary Schools in the Pasirkaliki Public Health Center, Bandung City. The target is 40 grade 4 and 5-grade elementary school students.

3.1.1 Knowledge

Table 1. Knowledge of participants before and after diarrhea prevention training and Worms (n=40)

Result	Knowledge			Mean Score
	Low f (%)	Midle f (%)	High f (%)	
Before	21 (52.5%)	10 (25%)	9 (22.5%)	1.7
After	0	7 (17.5%)	33 (82.5%)	2.83

From table 1 above, it can be seen that the results of the training on handling Acute Respiratory Infections (ARI) children at home to health cadres and mothers under five showed an increase in knowledge from the mean before training 1.7 and after training to 2.83.

The number of participants in the high knowledge category before and after the training increased from 22.5% to 82.5%.

3.1.2 Skills

Table 2. Skills of Handwashing with Soap (CTPS) participants before and after training (n=40)

Result	Skill			Mean Score
	Less skilled f (%)	Skilled f (%)	Very Skilled f (%)	
Before	23 (57.5%)	9 (22.5%)	8 (20%)	1.63
After	0	5 (12.5%)	35 (87.5%)	2.88

From table 2 above, it can be seen that the results of the training on handling Acute Respiratory Infections (ARI) children at home to health cadres and mothers under five showed an increase in skills from the mean before training 1.63 and after training to 2.88. And the number of participants before and after the training increased from 20% to 87.5%.

3.2. Discussion

The National Movement for Community-Based Total Sanitation and washing hand with soap started to be launched by the government, is the "National Movement for Washing Hands with Soap". This movement was carried out as part of the government's policy to control the risk of diseases related to the environment, such as diarrheal diseases, worms, and typhoid.

The awareness of the Indonesian people to wash their hands with soap (CTPS) is proven to be still low, this can be seen from the results of Riskesdas in 2013, the proportion of the population aged > 10 years who behaved properly in washing their hands was 47.0%. There is an effect of providing PHBS counseling about handwashing with soap on students' knowledge, attitudes, and practice of washing hands with soap (Nasir et al., 2020)

Handwashing with soap (CTPS) is one of the output indicators of the STBM national strategy (Community-Based Total Sanitation), that is, every household and public service facilities in a community (such as schools, offices, restaurants, health centers, markets, terminals) are available handwashing facilities (water, soap, hand washing facilities) so that everyone washes their hands properly (Peraturan Menteri Kesehatan Republik Indonesia Nomor 3 Tahun 2014 Tentang Sanitasi Total Berbasis Masyarakat, 2014).

Worms are an infectious disease that is still a public health problem in Indonesia because it spreads in most parts of Indonesia and can lead to a decline in health, nutrition, intelligence, and productivity conditions. In the context of efforts to reduce intestinal worms in the community, especially in groups of children under five and school-age children, it is necessary to increase community empowerment and cross-program and cross-sector commitment (Peraturan Menteri Kesehatan Republik Indonesia Nomor 15 Tahun 2017 Tentang Penanggulangan Cacingan, 2017). Worm infections often occur in elementary school children because their activities are related to the soil (Chadijah et al., 2014).

Simple, healthy behavior such as washing hands with soap is one way to increase public awareness about personal health maintenance and the importance of having a clean and healthy life. Washing hands are often considered a trivial thing in society, even though it can contribute to improving the health status of the community. School-age children have a habit of not paying attention to the need for handwashing in everyday life, especially when in the school environment. This behavior is certainly influential and can contribute to the occurrence of diarrheal disease. Interventions to prevent diarrhea, including safe drinking water, use of good sanitation and washing hands with soap can reduce the risk of disease. Putri et al., (2018) said program's adaptive conservation approach support to growth self-efficacy, it can be seen of the effectiveness of the program in fostering healthy living behaviour.

Handwashing is the most important basic technique in the prevention and control of infection transmission (Purwandari et al., 2015). Washing hands with soap that is practiced properly and correctly are the easiest and most effective way to prevent the spread of disease. Handwashing with soap and water can more effectively remove dirt and dust mechanically from the skin surface and significantly reduce the number of disease-causing microorganisms such as viruses, bacteria, and other parasites on the hands. If you don't wash your hands with soap, you can transmit infection for yourself against bacteria and viruses by touching your nose, eyes, and mouth. It can also spread or transmit the bacteria to other people (Abil Rudi, 2020).

Sri Kartini's research (2016) stated that the proportion of worms in elementary school students in the Rumbai Pesisir sub-district was 16.3%, whereas students infected with *Ascaris lumbricoides* worms were 13.0%, *Trichuris torture* was 2.5% and mine worms were 0.8%. This is evidence that students who do not have the habit of washing their hands can be exposed to 5 times greater incidence of worms than students who have the habit of washing

their hands. Students who have the habit of washing their hands will make it possible to reduce the occurrence of worm infections.

The results show that people have a belief that has been obtained since the time of their ancestors, namely not burying human feces, causing people to pay less attention to environmental conditions and personal hygiene. This has an impact on the behavior of the community, especially children, to defecate in any place. The habit of not using footwear for daily activities causes the worm's life cycle to take place perfectly.

The real action that can be taken by the community, government, and health workers in reducing worms is to break the parasitic life cycle, which can be done starting from the individual level through the use of latrines for defecation and the use of footwear. It is necessary to provide understanding through traditional and religious leaders about the use of latrines that the feces are not buried but directly mixed with water (Suharmiati & Rochmansyah, 2018).

Intestinal worms infect most often people who have poor hygiene and sanitation, especially children who lack an understanding of how to live a clean and healthy life. In addition, the density between people's residences, geographical conditions, and climate play an important role in the transmission of intestinal worms (Luis et al., 2016)

Community service is carried out for one year, starting from January-December 2019. Starting from the stage of preparing the proposal for making a community service report. The place for the implementation of this community service is at the Kresna and Jatayu State Elementary Schools in the Pasirkaliki Health Center, Bandung City, for grade 4 and 5 students with gradual and continuous assistance from UKS teachers.

From the results of training, monitoring, and coaching to provide understanding and skills about preventing diarrhea and worms by washing hands with soap at the Public Elementary School in the Pasirkaliki Public Health Center, Bandung, it is seen as important that it can improve the health status of the community and support the Healthy Community Movement (GERMAS) program.

4. CONCLUSION

The implementation of community service through knowledge and skills training for 4th and 5th graders on the prevention of diarrhea and worms showed an increase in the average score before and after training for elementary school students, the average knowledge (1.7 to 2.83) and the average skill increase (1.64 to 2.88), And the number of participants before and after

the training increased with high knowledge category from 22.5% to 82.5%. While the number of skilled participants.

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