

COMMUNITY SERVICE ARTICLES

**Clean And Healthy Living Behaviour Education  
With The Manufacture Of Oralit Solution As A Dehydration Prevention**

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**Abstract:** Diarrhoea is one of the health problems that often occurs in school-age children and can cause dehydration if not treated properly. The implementation of *Clean and Healthy Living Behaviour* (PHBS) and providing education on the manufacture of simple oralit solution is an effective preventive effort to increase the awareness and skills of students. This activity was carried out in the context of community service activities on August 20, 2025, at SMPN 3 Kutalimbaru Satu Atap, Namo Rube Julu Village, Kutalimbaru District, Deli Serdang Regency, North Sumatra Province, involving 30 students. The method used is in the form of interactive counselling about PHBS through banner media, discussions, and *quizzes*, which is then followed by making an oralit solution using simple ingredients such as sugar, salt, and water. The results of the activity showed an increase in students' understanding of the importance of maintaining personal hygiene, food, and the environment, as well as skills in making oral rehydration solution as a first aid for dehydration. This activity received a positive response from the participants, even though there were still obstacles in the form of limited time and sanitation facilities. Overall, PHBS education accompanied by the practice of making oral hygiene is proven to increase the knowledge and awareness of students, so it is expected to be able to become a habit that is applied consistently both at school and at home.

**Keywords:** PHBS, oralit, dehydration

## INTRODUCTION

Washing hands with soap is one of the most effective methods in preventing the spread of diseases, especially diarrhoea. The implementation of handwashing habits

in the school environment is actually able to reduce the rate of absenteeism due to illness and improve general health conditions. Washing your hands at important times, such as before eating and after activities in

the toilet, plays a very important role in breaking the cycle of spreading germs and viruses that cause disease. Therefore, instilling the habit of washing hands from a school age is crucial to form a clean and healthy lifestyle that is sustainable.<sup>1</sup>

Clean and Healthy Living Behaviour or Perilaku Hidup Bersih dan Sehat (PHBS) is an effort made to encourage the independence of individuals and families in maintaining and improving health. This behaviour is born from the awareness formed through the learning process, so that it can become a habit that supports improving the quality of health.<sup>2</sup> Health is understood functionally as an asset or resource that allows individuals to live a productive life, both in a personal, social, and economic context.<sup>3</sup>

Dehydration is a condition in which the body experiences a fluid imbalance, which occurs due to the amount of fluid that comes out of the body exceeding the intake of fluids that enter, especially through the consumption of drinking water. In less than ideal body conditions, such as having diarrhoea, fever, fatigue, or excessive sun exposure, the risk of losing body fluids increases significantly. Meanwhile, in certain pathological conditions such as kidney failure, heart failure, diabetes, antidiuretic hormone disorders (ADH), as well as the use of drugs such as diuretics and *angiotensin converting enzyme* (ACE) inhibitors, the body's ability to maintain balance and regulate fluids and electrolytes can be disrupted.<sup>4</sup>

The implementation of PHBS is one of the important efforts in disease prevention. Simple habits such as washing hands with soap, maintaining the

cleanliness of food and drinks, using proper sanitation facilities, and disposing of garbage in its place, play a role in cutting off the transmission of germs that cause diarrhoea. High school-age adolescents are in a vulnerable group because most of their activities are carried out in school environments with high levels of interaction. If PHBS is not carried out properly, the likelihood of diarrhoea will increase, and if not treated, it can cause complications in the form of dehydration.<sup>5</sup>

Oralite plays an important role in maintaining the body's electrolyte balance, especially when there is significant fluid loss. Although Oralit is easily absorbed by the intestines, its use should still follow the recommended dosage. Drinking water is indeed important to prevent dehydration, but it does not contain the salts and electrolytes needed by the body, so Oralit is more recommended as a replacement for lost body fluids. Oralite works by replacing electrolytes and minerals lost due to conditions such as diarrhoea, persistent vomiting, or excessive physical activity. In the case of diarrhoea, Oralit is also a form of first aid to prevent dehydration. The high death rate from diarrhoea is generally not caused by the infection itself, but rather by failure to cope with fluid loss or poorly managed dehydration.<sup>6</sup>

Based on the results of initial observations at SMPN 3 Kutalimbaru Satu Atap, Namo Rube Julu Village, Kutalimbaru District, Deli Serdang Regency, North Sumatra Province, the cleanliness condition of the school environment is still far from meeting PHBS standards. Inadequate sanitation facilities and low awareness of students in

implementing the habit of washing hands consistently show that the implementation of PHBS in the school has not been running optimally. In addition, the knowledge and skills of students regarding the importance of implementing PHBS and making Oralit solutions as an effort to prevent dehydration are still very limited. This condition confirms that planned and sustainable educational interventions are needed to improve students' understanding and practice in running PHBS and making Oralit solutions effectively. Therefore, this research has a high urgency as a strategic preventive step to form healthy lifestyle habits from an early age, while making a real contribution to reducing the risk of environmental diseases such as diarrhoea and dehydration in high school students.

## METHOD

The method used in the implementation of this community service activity is the provision of PHBS education by making Oralit solution as a dehydration prevention. We carried out this activity at SMPN 3 Kutalimbaru Satu Atap, Namo Rube Julu Village, Kutalimbaru District, Deli Serdang Regency, North Sumatra Province, which was held on Wednesday, August 20, 2025. The activity was carried out for the students of SMPN 3 Kutalimbaru Satu Atap, Namo Rube Julu Village, Kutalimbaru District, Deli Serdang Regency, North Sumatra Province. The first activity we carried out was education about PHBS, followed by the manufacture of Oralit solution for dehydration prevention. PHBS educational activities are carried out using media in the form of banners and presenting material about PHBS by

covering 4 major points, namely washing hands with soap and running water, eating and drinking that has been cooked, maintaining the cleanliness of food and drinks, maintaining environmental cleanliness, and avoiding triggers.

Education about handwashing behaviour with soap is given to students through explanations and direct demonstrations. The stages of hand washing taught include: wetting hands with clean running water, taking enough soap, and then rubbing them all over the surface of the palms and backs of the hands. After that, participants were directed to clean between the fingers, the back of the fingers, the thumbs, and the tips of the nails in the right way. Next, the hands are rinsed using clean running water and dried with a tissue or disposable towel. This activity is carried out to form daily hygiene habits, especially before meals and after defecation, which is significantly related to a reduction in the incidence of diarrhoea.<sup>7</sup>

The *workshop* activity for making a simple Oralit solution is carried out using ingredients that are easy to obtain in the community, namely sugar as much as six teaspoons ( $\pm 30$  grams), half a teaspoon of table salt ( $\pm 3.5$  grams), and one large glass of boiled water ( $\pm 200$  ml) or one litre as needed. The containers used are first washed and sterilised with hot water to prevent contamination. Next, sugar and salt are dissolved in boiled water until they are evenly mixed without any crystals settling. The solution that has been made is recommended to be used within a maximum of 24 hours. If this time limit is passed, the solution must be disposed of because it is at risk of being contaminated

by microorganisms. Oralite replaces fluids and electrolytes lost during diarrhoea and vomiting, so it can prevent dehydration<sup>8</sup> After the counselling activity, an interactive quiz question and answer session was held for participants. After the community service activity was over, the participants were given small prizes as a form of gratitude for participating in the activity.



Figure 1. Providing Education



Figure 2. Providing Education



Figure 3. Oralite Manufacturing



Figure 4. Oralite Manufacturing

## RESULTS AND DISCUSSION

Community service activities with the theme of PHBS education and the manufacture of Oralite solution as a dehydration prevention at SMPN 3 Kutalimbaru Satu Atap, Namo Rube Julu Village, Kutalimbaru District, Deli Serdang Regency, North Sumatra Province ran smoothly with the active participation of all participants. The students showed increased knowledge about the importance of PHBS as well as basic skills in making simple Oralite solutions. The enthusiasm of the participants can be seen from the direct involvement in the practice, so that the purpose of the activity, to increase students' understanding of PHBS and basic skills in making Oralite solutions, can be achieved.

In addition, we hope that this community service can raise students' awareness about the importance of maintaining personal and environmental hygiene. Students became more aware of the early symptoms of dehydration and how to handle it independently through the manufacture of a simple Oralite solution using easy-to-find ingredients. In addition, it is expected that students will change positive behaviours, such as washing their hands before eating, bringing their own drinking water, and maintaining the

cleanliness of the classroom. However, the limitations of sanitation facilities and the lack of sustainable information are still obstacles in the consistent implementation of Clean and Healthy Living Behaviours.

## CONCLUSION

After carrying out a community service program with several activities, one of which is "PHBS education and the manufacture of Oralit solution as a dehydration prevention", it can be concluded that the community service program has been completed well.

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