

Stunting Prevention through Socialization of Clean and Healthy Lifestyle Patterns (PHBS) and Diarrhea

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ABSTRACT

Health problems are often influenced by unhealthy habits and lifestyles, which result in various diseases, one of which is diarrhea. Clean and Healthy Living Behavior (PHBS) is one of the government's programs in the health sector that aims to improve public health. Socialization of PHBS and Diarrhea to mothers of toddlers and integrated health post cadres aims to increase awareness of the importance of clean and healthy living behavior, especially in daily activities at home. This activity was carried out in Rancakalong Village, Rancakalong District, Sumedang Regency, West Java, through an expository method using posters, demonstrations, and direct practice. Participants in the activity consisted of integrated health post cadres and mothers of toddlers, with a total of 20 participants.

INTRODUCTION

Children are important assets for the future of a country because they will be the successors of development. Toddlerhood is the period of the fastest development in a child's life, but it is also a period that is vulnerable to disease. Health disorders during this period can have a negative impact on a child's growth throughout his life. One disease that needs to be watched out for in toddlers is diarrhea. Diarrhea is a condition of stool passing more frequently (three or more times in 24 hours) accompanied by a change in stool consistency to become softer or more liquid, with or without blood or mucus. This disease is characterized by an increase in the frequency of bowel movements more than usual (>3 times per day) with a change in stool texture to become liquid, either with or without blood or mucus. According to the World Health Organization (WHO) in 2012, diarrhea caused nearly one trillion to 2.5 billion deaths in the first two years of a child's life. This disease also contributes to 17% of deaths in children under five worldwide, with around 1.8 billion people dying each year from diarrhea (including cholera), many of whom experience complications such as malnutrition, growth disorders, and immune problems. Based on data from the Journal of Social and Economics Research (JSER) Vol. 1, Issue 1, December 2019, the number of diarrhea cases in children worldwide reaches 1 billion per year, with a death toll of around 99 million. In the United States alone, there are around 16.5 million cases of diarrhea in toddlers each year. Meanwhile, in developing countries, the number of toddler deaths due to diarrhea reaches around 3.2 million per year.

To reduce the incidence and mortality due to diarrhea, it is necessary to focus on a comprehensive treatment strategy. This effort is not only limited to health services, environmental conditions, or genetic factors, but must also consider behavioral factors that theoretically have a major influence on health levels. Given the significant impact of behavior on health, various efforts are needed to change unhealthy behavior to healthier. One of the efforts made by the Indonesian government in this regard is through the Clean and Healthy Living Behavior (PHBS) program, by encouraging the habit of washing hands with soap and running water (Ministry of Health of the Republic of Indonesia, 2014). The PHBS program at the household level aims to implement behaviors that support the creation of households with clean and healthy living behaviors. This program includes ten indicators, namely: childbirth assisted by health workers, exclusive breastfeeding, routine monthly weighing of toddlers, use of clean water, washing hands with soap and clean water, use of healthy toilets, eradication of mosquito larvae at home once a week, consumption of fruits and vegetables every day, doing physical activity regularly, and not smoking in the house. In the PHBS program, the right time to wash hands has been determined, namely before eating, after defecating, after touching poultry or animals, after coughing, sneezing, or cleaning the nose, after taking care of garbage, and after playing on the ground or floor. Dirty hands can be a medium for the transfer of pathogenic bacteria and viruses from the body, feces, or other sources to food.

Based on the explanation above, it is crucial to educate and socialize about the importance of adopting a clean and healthy lifestyle, as well as understanding the relationship between this lifestyle and diarrhea. Therefore, the FK UKI PkM Team conducted public health service activities through socialization on clean and Healthy Lifestyles and diarrhea prevention in the community of Rancakalong Village, Rancakalong District, Sumedang Regency, West Java.

IMPLEMENTATION AND METHODS

The implementation of this community service activity is through socialization involving resource persons (experts in their fields), then a demonstration on the implementation of a Clean and Healthy Lifestyle, a Q&A discussion between resource persons and participants. This activity was attended by residents dominated by mothers as many as 20 participants. The activity was implemented in September 2023 in Rancakalong Village, Rancakalong District, Sumedang Regency, West Java. To find out if there was an increase in knowledge, a questionnaire was distributed in the form of a pre-test filled out by participants before the socialization activity and a post-test after the socialization activity.

RESULTS AND DISCUSSION

The PHBS and Diarrhea socialization activity was carried out at Posyandu Delima 4, Rancakalong Village. The activity lasted for 2 days and was attended by Posyandu Cadres and mothers of toddlers. In addition to participants and the Implementation Team, this activity was also attended by Rancakalong Village Health Workers. The PHBS and Diarrhea socialization on the first day discussed the importance of washing hands, the right time to wash hands, the risks of using unclean water, the importance of food sanitation hygiene and the characteristics of clean and drinkable water. This activity aims to educate about the importance of implementing PHBS in everyday life. This activity began with an opening, filling out a pre-test, delivering material and filling out a post-test, demonstration and practice, and closing.

After completing the pre-test, the activity continued with the delivery of PHBS and Diarrhea material carried out by the FK UKI PkM team. During the delivery of the material, Posyandu Cadres and mothers of toddlers actively participated in discussions related to the material presented. The media used to deliver the material were posters containing procedures for washing hands, the importance of using clean water, and food sanitation hygiene. In addition, the speaker also demonstrated and practiced how to wash hands using songs. After the presentation of the material and demonstration, the activity was continued with filling out a post-test which aimed to determine whether there was an increase in the knowledge of Posyandu Cadres and mothers of toddlers regarding PHBS and Diarrhea materials. Then, a hand washing practice activity was carried out guided by UKI Medical Faculty students for Posyandu Cadres and mothers of toddlers. This aims to maximize and assess the understanding of Posyandu Cadres and mothers of toddlers about the correct way to wash their hands. After the practice, the activity was continued with closing.



Figure 1. Implementation of Socialization on PHBS and Diarrhea in Rancakalong Village

The monitoring results through pre-test and post-test questionnaires are presented in the following table 1:

Table 1. Data Analysis of Pre and Post-Test Questionnaire

No	Item	Pre-test		Post-test	
		Correct	False	Correct	False
Clean and Healthy Lifestyle (PHBS)					
1	The importance of washing hands	30%	70%	75%	25%
2	The right time to wash hands	20%	80%	85%	15%
3	The risks of using unclean water	40%	60%	80%	20%
4	The importance of food sanitation hygiene	20%	80%	70%	30%
5	Characteristics of clean and suitable water for consumption	30%	70%	90%	10%
Diarrhea					
1	Definition of Diarrhea based on the frequency of bowel movements	35%	65%	85%	15%
2	Diarrhea is a contagious disease or not	30%	70%	100%	0%
3	Causes of Diarrhea	40%	60%	70%	30%
4	How to prevent Diarrhea	25%	75%	90%	10%
5	What should be given first to people with diarrhea	35%	65%	75%	25%

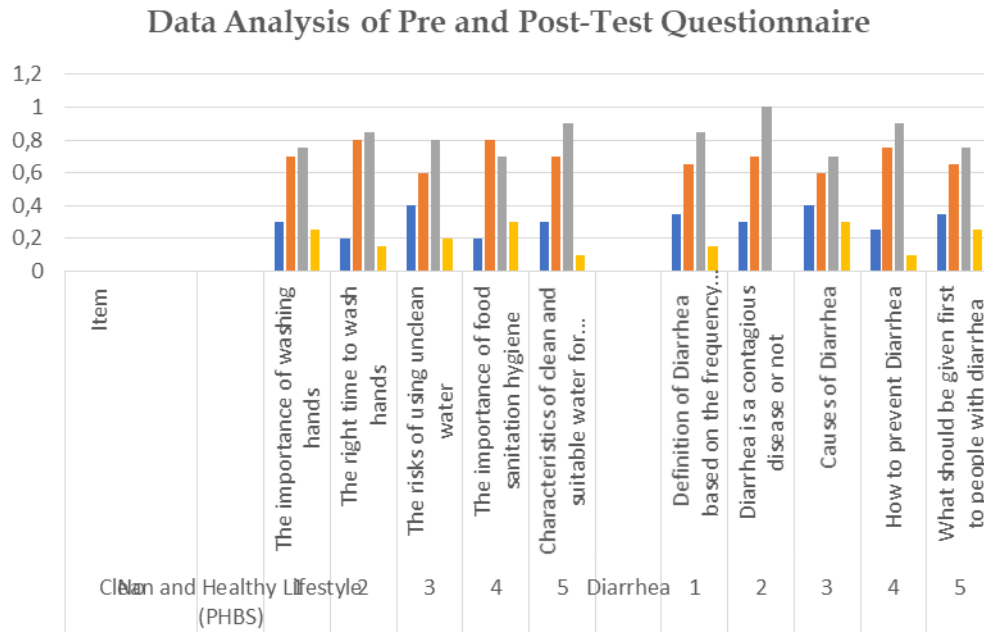


Figure 2. Graph of Pre and Post Test Results on PHBS and Diarrhea

From the data in table 1 above, it can be seen that there were changes in the answers to the questionnaires distributed to participants, where the number of participants who answered correctly for each question item increased. The highest increase for PHBS material was in the question item about the characteristics of clean and drinkable water, while on the topic of Diarrhea, there was a question item about whether diarrhea is a contagious disease or not. On the first day of the training and mentoring activities for Clean and Healthy Living Behavior (PHBS) attended by Posyandu Cadres and mothers of toddlers, the topics discussed included the importance of washing hands, the right time to wash hands, the impact of not using clean water, and the importance of hygiene and food sanitation. This training is an important step in breaking the chain of transmission of bacteria that cause diarrhea, which is also a factor in stunting. The results of the pre-test on the first day showed that public knowledge about the importance of washing hands and food hygiene and sanitation is still low. Factors that influence this condition are the lack of awareness and knowledge of Posyandu cadres and mothers of toddlers about the implementation of clean and healthy living behaviors. This finding is in line with previous research, which stated that the implementation of clean and healthy living behavior is related to the incidence of diarrhea in toddlers.

One of the main elements in preventing diarrhea is the use of clean water. Contaminated water can cause intestinal infections that lead to diarrhea. Therefore, training on the use of clean water in Rancakalong Village is a very important preventive step. In addition to clean water, maintaining food hygiene and sanitation is also a major concern. The people of Rancakalong Village still often ignore the importance of food hygiene, from processing raw materials to serving them. Therefore, this training also focuses on education on how to wash hands properly before preparing food, maintaining the cleanliness of cooking utensils, and cooking techniques that are effective in killing dangerous pathogens. This is an effort to break the chain of transmission of bacteria that cause diarrhea. Increasing clean and healthy living behavior through this training and mentoring is expected to have a long-term positive impact on the people of Rancakalong Village. By reducing cases of diarrhea, the quality of life of the community, especially the health of children as a vulnerable group, will increase. In addition, reducing the number of diseases can also reduce the economic burden on families who have to spend money on treatment.

CONCLUSIONS AND RECOMMENDATIONS

Clean and Healthy Living Behavior (PHBS) is an important effort that needs to be done by every individual in order to form better habits and lifestyles. Implementation of PHBS from an early age, especially in the household environment, is very necessary to prevent health problems. The socialization of PHBS and Diarrhea carried out in Rancakalong Village aims to improve the understanding of Posyandu Cadres and mothers of toddlers regarding health practices and encourage consistent implementation of PHBS in various places and prevent Diarrhea. This activity also succeeded in motivating the community to conduct training, mentoring, and improving clean and healthy living behavior, so that overall the level of community health will be better

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REFERENCES

- Bria MP, Limbu R, Rahayu T, Romeo P. Gambaran Perilaku Hidup Bersih dan Sehat (PHBS) Ibu dengan Kejadian Penyakit Diare pada Balita di Wilayah Kerja Puskesmas Umanen Kabupaten Belu. *SEHATMAS: Jurnal Ilmiah Kesehatan Masyarakat*. 2025 Jan 25;4(1):18-31.
- Elvieta E, Ernita E. Hubungan Ketersediaan Sarana Sanitasi Dasar dan (PHBS) dengan Kejadian Diare Balita di Puskesmas Tanah Pasir Aceh Utara. *Sehat Rakyat: Jurnal Kesehatan Masyarakat*. 2024 May 28;3(2):86-94.

- Firenza MD, Mardiaty M, Syafridah A. Hubungan Pengetahuan Ibu dan Perilaku Hidup Bersih dan Sehat (PHBS) dengan Kejadian Diare pada Balita di Desa Pusong Lhokseumawe. *GALENICAL: Jurnal Kedokteran dan Kesehatan Mahasiswa Malikussaleh*. 2022 Oct 10;1(3):11-20.
- Imamah, D.Y., Akbar, S.H., Nurhalisa, S., Alfaidah, C., Amalia, S., Fakhiroh, L.I., Steven, S., Kirana, K. and Rokhmah, D., 2024. Peningkatan Perilaku Hidup Bersih dan Sehat (PHBS) Melalui Pelatihan Penggunaan Air Bersih dan Higien Sanitasi Makanan untuk Mencegah Diare dan Stunting Di Desa Mandiro Kabupaten Bondowoso. *Jurnal Abdimas Indonesia*, 4(3), pp.789-800.
- Indriati R, Warsini W. Hubungan Perilaku Hidup Bersih Dan Sehat (PHBS) Dengan Kejadian Diare Pada Anak Balita. *KOSALA: Jurnal Ilmu Kesehatan*. 2022 May 31;10(1):21-32.
- Irianty H, Hayati R, Riza Y. Hubungan Perilaku Hidup Bersih dan Sehat (PHBS) dengan kejadian diare pada balita. *PROMOTIF: Jurnal Kesehatan Masyarakat*. 2018 Jun 24;8(1):1-0.
- Kartika AS. Hubungan Penerapan Phbs Dalam Keluarga Dengan Kejadian Diare Pada Balita Di Desa Lengkong Wilayah Kerja Puskesmas Lengkong Kabupaten Sukabumi. *Jurnal Health Society*. 2022 Oct 1;11(2).
- Mansyur M, Wibowo AA, Maria A, Munandar A, Abdillah A, Ramadora AF. Pendekatan kedokteran keluarga pada penatalaksanaan skabies anak usia pra-sekolah. *Majalah Kedokteran Indonesia*. 2007;57(2):63-7.
- Nadeak B, Siagian C, Sormin E, Juwita CP. Analysis of Family and Infant Characteristics of Potential Stunting Event. In 1st World Conference on Health and Social Science (WCHSS 2022) 2023 Jun 14 (pp. 66-71). Atlantis Press.
- Pratiwi P. Hubungan Indikator PHBS dengan Kejadian Diare pada Balita di Wilayah Kerja Puskesmas Olak Kemang Tahun 2022 (Doctoral dissertation, UNIVERSITAS JAMBI).
- Rahmawati E. HUBUNGAN PHBS DENGAN KEJADIAN DIARE. *Humantech: Jurnal Ilmiah Multidisiplin Indonesia*. 2023 May 30;2(7).
- Rahmawati, F., Bintang, M., Yang, A.J. and Sormin, E., 2023. Penyuluhan Pencegahan Stunting dan Pengukuran Antropometri di Posyandu Cempaka RW "A" Kelurahan Kemirimuka, Kecamatan Beji, Depok-Jawa Barat. *JURNAL Comunit  Servizio: Jurnal Terkait Kegiatan Pengabdian kepada Masyarakat, terkhusus bidang Teknologi, Kewirausahaan dan Sosial Kemasyarakatan*, 5(2), pp.1391-1399.
- RAHMAWATI, Fri, et al. Penyuluhan Pencegahan Stunting dan Pengukuran Antropometri di Posyandu Cempaka RW "A" Kelurahan Kemirimuka, Kecamatan Beji, Depok-Jawa Barat. *JURNAL Comunit  Servizio: Jurnal Terkait Kegiatan Pengabdian kepada Masyarakat, terkhusus bidang Teknologi, Kewirausahaan dan Sosial Kemasyarakatan*, 2023, 5.2: 1391-1399.

- Ramadhani IA, Limbong M, Harun B. PENERAPAN PERILAKU HIDUP BERSIH DAN SEHAT ATAU BHBS DENGAN KEJADIAN DIARE PADA ANAK. *Jurnal Madising na Maupe*. 2024 Dec 29;2(2):179-83.
- Rambu SH. Hubungan Perilaku Hidup Bersih dan Sehat (PHBS) Ibu dengan Kejadian Diare pada Balita di Wilayah Kerja Puskesmas Tobadak Kabupaten Mamuju Tengah. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*. 2023 Apr 3;6(4):666-73.
- Rifka P, Nurdin A, Fitria U, Kurnia R. Hubungan Prilaku Hidup Bersih dan Sehat (PHBS) Terhadap kejadian Diare: Literature Review. *Public Health Journal*. 2024 Aug 5;1(2).
- Rosiska M. Hubungan Perilaku Hidup Bersih dan Sehat (PHBS) Ibu dengan Kejadian Diare pada Anak Balita di Puskesmas Sungai Liuk Kota Sungai Penuh Tahun 2020. *Jurnal ilmu kesehatan dharmas indonesia*. 2021 Dec 31;1(2):82-7.
- Ruhardi A, Yuliansari D. Hubungan Perilaku Hidup Bersih dan Sehat (PHBS) dengan Kejadian Diare pada Balita. *Prosiding Penelitian Pendidikan dan Pengabdian 2021*. 2021 Mar 4;1(1):16-22.
- Simarmata VP, Reviani N, Suryanegara W, Langi LA, Prihantini NN, Novelyn S. Counseling on Clean and Healthy Lifestyles (PHBS) in Rancakalong District, Sumedang, West Java. *Asian Journal of Community Services (AJCS)*. 2023;2(11):917-26.
- SIMARMATA, Vidi Posdo Ahapta; PATRIAWATI, Keswari Aji. A Descriptive Study on Stunting in Toddlers & Contributing Factors in Cibungur Village, Sumedang District, Indonesia. *Journal of Complementary and Alternative Medical Research*, 2024, 25.7: 58-72.
- Sormin, E., Ulinata, U., Tampubolon, S.P. and Sinaga, H.S.R., 2023. Strengthening Communities of Earthquake Victims through a Sanitation Program (Installation/Clean Water Supply and Portable MCK in Kampung Tugu Rw 3 Cibeureum Village, Cugenang, Cianjur). *Asian Journal of Community Services (AJCS)*, 2(1), pp.55-64.
- Suryanegara W, Gultom A, Simarmata VP, Sanggu AR, Reviani N. Adolescent Reproductive Health Counseling in the Framework of Stunting Prevention. *AJARCODE (Asian Journal of Applied Research for Community Development and Empowerment)*. 2024 Apr 15;8(1):75-8.
- Toyibah T, Apriani M. Hubungan Prilaku Hidup Bersih Dan Sehat (Phbs) Dengan Kejadian Diare Pada Balita. *Jurnal' Aisyiyah Medika*. 2019;4.
- Tutu CG, Akbar H, Kaseger H. Hubungan Penerapan dan Edukasi PHBS dengan Kejadian Diare pada Balita di Desa Passi II. *Promotif: Jurnal Kesehatan Masyarakat*. 2022 Dec 21;12(2):172-6.