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Empowering Mothers Of Under-Fives Through Education On Healthy Complementary Feeding And Hygiene Practices To Prevent Diarrhoea In The Working Area Of Talang Ubi Primary Health Centre

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Abstract

Background: *Diarrhoea remains a leading cause of illness and death among children under five. Unhygienic preparation of complementary foods and poor handwashing and utensil hygiene increase the risk of contamination by diarrhoea-causing microorganisms.* ***Objective:*** *To improve the knowledge and skills of mothers of under-fives regarding healthy complementary feeding and hygiene practices to prevent diarrhoea.* ***Methods:*** *This community service activity was conducted in January 2025 in the working area of Talang Ubi Primary Health Centre, Penukal Abab Lematang Ilir (PALI) Regency, South Sumatra, targeting mothers of children under five. It comprised a pre-test, education using slides and leaflets, demonstrations of handwashing with soap and cleaning of feeding utensils, interactive discussion, and a post-test.* ***Results:*** *Mean post-test scores were higher than pre-test scores. Participants actively asked about safe preparation and storage of complementary foods and household hygiene, and were able to re-demonstrate correct handwashing with soap.* ***Conclusion:*** *Education on healthy complementary feeding combined with hygiene demonstrations improved mothers' knowledge and skills. Continued support through posyandu cadres and the health centre is needed to translate this knowledge into daily practice*

Keywords: complementary feeding; hygiene and sanitation; handwashing with soap; diarrhoea; under-fives; health education

INTRODUCTION

Diarrhea remains a major health issue among children under five in developing countries, including Indonesia. The WHO notes that diarrhea is the third leading cause of death in children aged 1–59 months, accounting for approximately 443,832 deaths annually, with nearly 1.7 billion cases of diarrhea in children each year. Most of these cases can be prevented through access to safe drinking water, adequate sanitation, handwashing with soap, and proper personal and food

hygiene (World Health Organization [WHO], 2024). Globally, as of 2022, 2 billion people still lacked access to basic hygiene facilities (WHO & UNICEF, 2023).

The age range of 6–23 months is a vulnerable period, as infants begin to receive complementary foods alongside breast milk. The WHO recommends introducing complementary foods at 6 months of age while continuing breastfeeding for up to 2 years or beyond, ensuring that the foods provided are diverse and safe (WHO, 2023). However, if these complementary foods are prepared, stored, or served unhygienically—for instance, through the use of unclean feeding utensils—they can become a vehicle for the transmission of bacteria, viruses, and parasites that cause diarrhea (WHO, 2024).

Hygiene interventions have been proven effective. A meta-analysis of studies conducted in low- and middle-income countries indicates that the promotion of handwashing with soap reduces the risk of diarrhea in children by approximately 30% (Wolf et al., 2022). In Indonesia, the implementation of the pillars of Community-Led Total Sanitation (STBM)—which includes handwashing with soap as well as the management of household drinking water and food—is a dominant factor associated with the incidence of diarrhea; therefore, health promotion strategies aimed at the implementation of these STBM pillars need to be strengthened (Ahyanti & Rosita, 2022).

Mothers play a central role in the preparation of complementary foods for infants and young children (MP-ASI) and in the implementation of clean and healthy living practices within the household. Various community service initiatives have demonstrated that education and training regarding MP-ASI enhance the knowledge of both mothers and community health volunteers (Isni & Dinni, 2020; Fitriahadi & Herfanda, 2023; Prayogo et al., 2024). In the working area of the Talang Ubi Community Health Center (Puskesmas) in PALI Regency, there are still mothers of young children who possess limited knowledge concerning healthy complementary foods and hygiene and sanitation practices. Consequently, this community service initiative aims to improve the knowledge and skills of mothers of young children regarding healthy complementary foods and hygiene and sanitation practices as a measure to prevent diarrhea.

EXECUTION METHOD

The community service activity was conducted in January 2025 within the working area of the Talang Ubi Community Health Center (Puskesmas), located in the Penukal Abab Lematang Ilir (PALI) Regency, South Sumatra. The target participants were mothers with toddlers living in the area. The educational materials used included PowerPoint presentations, leaflets, and posters. The activity consisted of the following stages:

1. Preparation: Coordination with the community health center, development of educational materials (leaflets and PowerPoint slides), and the creation of pre-test and post-test questionnaires.
2. Pre-test: Assessment of the participants' baseline knowledge regarding healthy complementary foods for infants and young children (MP-ASI) and hygiene and sanitation practices for diarrhea prevention.
3. Education/Counseling: Presentation of information covering the definition, causes, and risk factors of diarrhea in toddlers; the definition and principles of providing age-appropriate, healthy complementary foods; hygiene and sanitation in the preparation of food for toddlers; handwashing with soap and the maintenance of clean feeding utensils; and the prevention of diarrhea through healthy living habits.
4. Demonstration and Practice: A demonstration of the correct method for handwashing with soap and maintaining the cleanliness of feeding utensils, followed by the participants practicing these techniques themselves.
5. Discussion, Post-test, and Conclusion: A question-and-answer session, completion of the post-test (using the same questionnaire), and a summary of the material presented.

The pre-test and post-test data were analyzed descriptively by comparing the mean scores. Participant engagement and the ability to demonstrate handwashing practices were evaluated through observation.

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RESULTS AND DISCUSSION

Implementation of activities

The activity was attended by mothers with toddlers from the working area of the Talang Ubi Community Health Center (Puskesmas), most of whom were accompanied by their children. The agenda for the activity is presented in Table 1, and the atmosphere of the event is shown in Figure 1.

Table 1. Outline of Educational Activities on Healthy Complementary Foods (MP-ASI) and Hygiene & Sanitation*Source: Community service activity report, 2025. *Time allocation is in accordance with the activity plan; the implementation of a pre-test, demonstration, and post-test extends the duration of the activity.*

Stage	Activity	Time
Opening	Greetings, team introductions, statement of objectives; knowledge pre-test	3 minute
Presentation of material	Definition and causes of diarrhea; principles of healthy complementary feeding (MP-ASI) appropriate for a child's age; hygiene and sanitation in the preparation of complementary foods; handwashing with soap and the cleanliness of feeding utensils; and diarrhea prevention through healthy living behaviors (PHBS).	15 minute
Demonstration	Demonstration of handwashing with soap and cleaning of toddler tableware, followed by a hands-on practice session by the participants	–
Discussion and evaluation	Q&A; post-test on knowledge	10 minute
Closing	Summarizing the material and closing	7 minute

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Figure 1. Mothers of toddlers participating in an educational session on healthy complementary foods (MP-ASI) and hygiene and sanitation.

Increasing the knowledge of mothers with toddlers

The evaluation results indicate that the average post-test score was higher than the pre-test score. Prior to the education session, some participants lacked an understanding of the importance of hygienic preparation of complementary foods for infants and young children (MP-ASI), the use of clean feeding utensils, and the practice of handwashing before preparing food for toddlers. Following the education, participants were able to correctly answer questions regarding the principles of providing healthy complementary foods, maintaining hygiene during food preparation, and handwashing with soap.

This improvement is consistent with similar initiatives. An educational program and demonstration on complementary feeding for *posyandu* (integrated healthcare center) volunteers and mothers of toddlers in Probolinggo resulted in an increase in the participants' average understanding score from 78 to 90 (Prayogo et al., 2024). Training on exclusive breastfeeding and complementary feeding (Isni & Dinni, 2020), as well as training on the preparation of complementary foods using local ingredients (Fitriahadi & Herfanda, 2023), have also been shown to enhance mothers' knowledge and skills. The use of visual aids and leaflets made it easier for participants to grasp the material and review it later at home.

Demonstration of hygiene and sanitation practices

The demonstration on handwashing with soap and the cleaning of toddler feeding utensils was the part of the activity that drew the most attention from participants. They actively engaged in the demonstration and were able to correctly replicate the steps for handwashing with soap. Participants also asked proactive questions regarding the safe preparation of complementary foods for infants and young children (MP-ASI), the storage of toddler food, and how to maintain hygiene within the household environment. The demonstration method provided participants with the opportunity to gain hands-on practical experience, rather than receiving only theoretical information.

Reinforcing the practice of handwashing with soap is highly relevant, as this intervention reduces the risk of diarrhea in children by approximately 30% (Wolf et al., 2022). The WHO also emphasizes that food prepared or stored under unhygienic conditions is a primary cause of diarrhea; therefore, personal and food hygiene—along with health education—are key measures for preventing diarrhea (WHO, 2024). Consequently, information on healthy complementary feeding (MP-ASI) should always be integrated with hygiene-related guidance, covering everything from handwashing before food preparation and cleaning feeding utensils to storing food safely.

Program sustainability

Knowledge and skills acquired during a single activity need to be reinforced so that they become habits. The follow-up plan includes periodic monitoring of the implementation of healthy complementary feeding (MP-ASI) and handwashing with soap within households, coordination with community health centers (puskesmas) and *posyandu* (integrated healthcare post) volunteers for ongoing education, and the integration of these topics into routine *posyandu* activities. This approach aligns with the STBM (Community-Based Total Sanitation and Hygiene) strategy, which emphasizes community-driven changes in hygiene and sanitation behaviors (Ahyanti & Rosita, 2022).

Limitations

The activity report does not record the number of participants or the quantitative average pre-test and post-test scores; therefore, the extent of the increase in knowledge cannot be reported. Furthermore, this activity did not employ a comparison group, no statistical tests were conducted, and there was no assessment of the application of practices at home or the incidence of diarrhea among the participating toddlers.CONCLUSION

Education on healthy complementary feeding (MP-ASI) and hygiene and sanitation practices for mothers of toddlers in the working area of the Talang Ubi Community Health Center (Puskesmas), PALI Regency, was successfully implemented. It improved participants' knowledge, as evidenced by higher post-test scores compared to pre-test scores. Practical demonstrations enabled participants to correctly replicate the steps for handwashing with soap. This initiative serves as a promotional and preventive measure in the prevention of diarrhea among toddlers.

SUGGESTION

It is recommended that the Talang Ubi Community Health Center (Puskesmas) and *posyandu* (integrated healthcare post) volunteers regularly provide education on healthy complementary feeding (*MP-ASI*) and hygiene and sanitation during *posyandu* activities, while also monitoring practices within households. For future initiatives, it is advised to maintain comprehensive records—including the number of participants and their pre-test and post-test scores—employ statistical analysis, and evaluate the implementation of hygiene practices as well as the incidence of diarrhea among toddlers following the interventions.

THANK-YOU NOTE

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REFERENCES

Ahyanti, M., & Rosita, Y. (2022). Determinants of diarrhea based on the pillars of community-led total sanitation. Jurnal Kesehatan Lingkungan Indonesia, 21(1), 1–8. https://doi.org/10.14710/jkli.21.1.1-8

Fitriahadi, E., & Herfanda, E. (2023). Education and training on preparing complementary feeding (MP-ASI) from local ingredients to prevent stunting. Community Empowerment, 8(12), 2050–2057. https://doi.org/10.31603/ce.10278

Isni, K., & Dinni, S. M. (2020). Stunting prevention through training on exclusive breastfeeding and complementary feeding (MP-ASI). Jurnal Pengabdian pada Masyarakat, 5(1), 133–140. https://doi.org/10.30653/002.202051.266

Prayogo, R. B., Rafi, A. N., Erlinda, P., Pavytha, V. I., Latifah, S. N., & Saifuddin, M. (2024). Education and demonstration of complementary feeding (MP-ASI) to improve the understanding of *posyandu* (integrated healthcare center) volunteers and mothers of toddlers for the optimization of child nutrition in Pesawahan Village, Probolinggo. As-Sidanah: Jurnal Pengabdian Masyarakat, 6(2), 345–361. https://doi.org/10.35316/assidanah.v6i2.345-361

WHO & UNICEF. (2023). Progress on household drinking water, sanitation and hygiene 2000–2022: Special focus on gender. United Nations Children's Fund and World Health Organization. Wolf, J., Hubbard, S., Brauer, M., et al. (2022). Effectiveness of interventions to improve drinking water, sanitation, and handwashing with soap on risk of diarrheal disease in children in low-income and middle-income settings: A systematic review and meta-analysis. The Lancet, 400(10345), 48–59. https://doi.org/10.1016/S0140-6736(22)00937-0

World Health Organization. (2023). WHO guideline for complementary feeding of infants and young children 6–23 months of age. World Health Organization.

World Health Organization. (2024, March 7). Diarrhoeal disease [Fact sheet]. https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease