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# Strengthening Community-Based Total Sanitation (CBTS) in Stunting Prevention at Telaga Dewa Public Health Center, Bengkulu City

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**Abstract**

**Background:** Poor sanitation is one of the main causes of the high prevalence of stunting and infectious diseases, especially in developing countries like Indonesia. Community-Based Total Sanitation (CBTS) is a strategic approach that involves active community participation in creating a clean and healthy environment through five main pillars: stopping open defecation, handwashing with soap, safe management of drinking water and food, household waste management, and household liquid waste management.
**Aims:** The goal of this activity is to strengthen CBTS (Comprehensive Integrated Service Delivery System) in preventing stunting and reducing the risk of infection spread.
**Methods:** The method used in this research was health education on strengthening CBTS, encompassing the stages of planning, preparation, implementation, and evaluation.
**Results**: Results show that before the intervention, the average knowledge score of respondents was 2.88 with a standard deviation of 0.71 and a standard error of 0.14. After the intervention, the average score increased to 4.35 with a standard deviation of 0.63 and a standard error of 0.12. The increase in the average score of 1.46 points indicates that the intervention had a positive impact on increasing respondents' knowledge.
**Conclusion:** This CBTS strengthening education program can increase public understanding and knowledge about CBTS and its relationship to stunting in toddlers. Through synergy between the government, the community, and other stakeholders, CBTS can become a sustainable solution to address complex public health issues. Practical strategies for strengthening CBTS in local communities, including community empowerment, and community-based education, are needed.

## A. Introduction

Good sanitation is one of the main pillars in improving the quality of public health (Alum et al., 2024). In the context of public health in Indonesia, strengthening sanitation based on the Community-Based Total Sanitation (CBTS) approach is an effective strategy to create a clean and healthy environment (Azwari et al., 2025; Indah et al., 2022). CBTS is an approach that involves active community participation to achieve the five pillars of sanitation, namely ending open defecation, washing hands with soap, safe drinking water and food management, household waste management and household liquid waste management (Fitrianingrum, 2020; Zuhri & Faresta, 2025).

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Stunting is a chronic nutritional problem characterized by a child's height being lower than the standard for their age (Scheffler et al., 2020; Scheffler & Hermanussen, 2022). This condition reflects growth disorders that occur during the first 1,000 days of life due to prolonged malnutrition and repeated infections (Islam et al., 2020; Meliati et al., 2025). According to the 2022 Basic Health Research, the prevalence of stunting in Indonesia remains high, at around 21.6%, and poses a major challenge to human resource development (Kustanto et al., 2025; Wulandari et al., 2025).

One environmental factor that significantly contributes to stunting is poor sanitation (Aprihatin et al., 2020; Saputri et al., 2020). Inadequate sanitation such as the lack of healthy latrines, safe clean water, and proper waste management can increase the risk of infectious diseases, particularly diarrhea and intestinal worm infections (Amanabo-Arome & Abbas, 2021; Cha et al., 2021; Challa et al., 2022). Both of these diseases cause the loss of essential nutrients and interfere with nutrient absorption in children's bodies (Shrestha et al., 2020).

The importance of implementing CBTS is becoming increasingly apparent in efforts to prevent stunting and infectious diseases. Stunting, which is a condition of failure to thrive in children due to chronic lack of nutritional intake and repeated infections, is closely related to poor sanitation. An unhealthy environment will increase the risk of exposure to diarrhea, worms, and other infections that can inhibit the absorption of nutrients in the child's body.

Stunting is a health problem that has a very significant long-term impact on child development. The first and most visible impact is disruption to physical growth, especially the child's height which tends to be shorter than children of the same age.

Therefore, improving sanitation not only reduces infectious diseases but is also a crucial strategy for stunting prevention. Efforts to increase access to adequate sanitation must be integrated with nutritional interventions and the promotion of clean and healthy living behaviors (PHBS) to break the chain of stunting.

Stunting also has huge social and economic impacts. Children who experience stunting tend to grow into individuals with a lower quality of life, potentially trapping them in poverty. Stunting can reduce a child's ability to complete education properly, which will affect their access to decent work in the future.

Research evidence shows that children living in environments with inadequate sanitation have a 1.4–2 times higher risk of stunting compared to children living in environments with good sanitation. Furthermore, open defecation and low handwashing practices exacerbate exposure to environmental pathogens. The aim of this study is to increase public knowledge about strengthening community-based total sanitation (CBTS) in preventing stunting in toddlers.

## B. Methods

The method used in this study was health education at Telaga Dewa Public Health Center, Bengkulu City through several steps, namely: CBTS counseling involved providing information on the importance of CBTS for health, 5 pillars of CBTS, and the negative impacts of not doing CBTS. Explanation of the 5 pillars of CBTS: providing information about the importance of doing CBTS such as stopping open defecation (SBS), washing hands with soap, safe drinking water and food management, household waste management and household liquid waste management, for personal health and prevention of stunting. This outreach activity was carried out directly in the field and respondents were given questionnaires before and after health education about CBTS.

### 1. Planning Stage

The planning team activity begins with the formation of a team to run well and orderly. The team consists of extension workers, demonstration designers, preparation of facilities and infrastructure by carrying out their respective functions. The team's duties include:

a. Creating extension materials, packages, and door prizes.
b. Preparing all supporting tools for extension activities (laptops, banners, and tools needed when delivering materials).
c. Arranging the activity schedule.
d. Preparing and determining activities at Bangun Jaya Health Center

**2. Preparation Stage**

These stages are carried out several days before the implementation of the extension activities, stages are as follows:

a. The team holds a briefing to finalize the planning.
b. Agree with the person in charge on the implementation time

**3. Implementation Stage**

The implementation of community service is carried out with the stages of opening the event, delivering materials, quizzes with prizes, handing over door prizes and giving gifts.

**4. Evaluation and Follow-up Stage**

Evaluation was one of the most important components at the end of the activity. Measuring changes in participant understanding through pre-tests and post-tests. The research was conducted by filling out questionnaires before and after health education on community-based total sanitation (CBTS) with the incidence of stunting in toddlers, then the data were analyzed bivariately using a paired t-test.

## C. Results and Discussion

### 1. Results

From a series of educational programs to prevent stunting and infectious diseases that have been implemented, the results achieved show an increase in public knowledge. Previously, people who came to the health center did not know about CBTS, after education was carried out, the community understood and knew about the five pillars of CBTS and their health benefits. Knowledge is an important aspect in shaping individual behavior. This is intended to obtain information related to the root of the problem of stunting and alternative solutions to the problem (Boekoesoe et al., 2023).

**Table 1**. Differences in Average Respondent Knowledge Before and After Health Education

| Knowledge | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Before | 2.8846 | 26 | 0.71144 | 0.13953 |
| After | 4.3462 | 26 | 0.62880 | 0.12332 |

From the table above, the descriptive analysis results in Table 1 show an increase in respondents' knowledge scores after the intervention. Before the intervention, the average respondent knowledge score was 2.88 with a standard deviation of 0.71 and a standard error of 0.14. After the intervention, the average score increased to 4.35 with a standard deviation of 0.63 and a standard error of 0.12. The 1.46-point increase in the average score indicates that the intervention had a positive impact on increasing respondents' knowledge. Furthermore, the decrease in the standard deviation from 0.71 to 0.63 indicates that knowledge scores after the intervention were more homogeneous than before the intervention, meaning that differences in knowledge among respondents were smaller.

Based on these results, it can be concluded descriptively that the intervention successfully increased respondents' knowledge levels. However, to ensure that this increase is statistically significant, inferential analysis, such as a paired sample t-test, is needed to examine the difference in scores before and after the intervention in the same group. Efforts to overcome stunting can be done with sensitive nutrition interventions by implementing CBTS. CBTS is related to the environment. An environment with poor sanitation behavior and hygiene causes infectious diseases. Infectious diseases that are continuously not handled properly can increase cases of stunting in toddlers. Health centers are innovators in efforts to reduce stunting cases as well as drivers of the implementation of CBTS. Maternal nutritional knowledge, knowledge of feeding, and knowledge of personal hygiene have an effect on improving nutritional status, where improving community nutrition has the potential to reduce stunting rates.

The implementation of Community-Based Total Sanitation (CBTS) has been proven to have a major impact on preventing stunting and infectious diseases. CBTS, which consists of five main pillars, aims to create a clean environment through changes in community behavior. Other efforts to overcome stunting are through innovations in the CBTS program, which are the creations of innovations from each health center. Efforts to reduce stunting with several innovations and creativity are very necessary, considering the characteristics of each region are different (Rahmuniyati, 2020).

For example, stopping open defecation (BABS) is the first step to reduce the spread of bacteria and germs that cause disease. If this practice is implemented, the risk of diseases such as diarrhea that have an impact on stunting can be significantly reduced. The Community-Based Total Sanitation Program (CBTS) aims to encourage communities to achieve sanitary conditions by changing hygiene and sanitation behavior through community empowerment (Maksum et al., 2024). Efforts to reduce stunting cases have been carried out through environmental factors by implementing the five pillars of CBTS. The five pillars of CBTS include: stopping open defecation (BABS), washing hands with soap, safe drinking water and food management, household waste management, and household liquid waste management (Rahmuniyati & Sahayati, 2021).

Washing hands with soap (CTPS) is another important pillar that helps break the chain of transmission of germs from hands to the body. Studies show that this simple habit can reduce the risk of infections such as diarrhea by up to 40%. Likewise, the management of safe drinking water and food, which ensures that what people consume is free from contamination. A clean environment free from household waste and liquid waste also plays a major role in creating healthy family conditions. The results of Muslimin's study (2024), showed that 116 people had latrines and experienced stunting (80.6%), compared to 2 people who did not have latrines and experienced stunting (100.0%). With a p value of 0.911 ($p > 0.05$), it can be concluded that there is no relationship between stopping open defecation and stunting.

With an approach that directly involves the community, CBTS not only creates a clean environment, but also builds collective awareness of the importance of health. These results show that CBTS is an effective solution in preventing stunting and infectious diseases, as well as a real step towards a healthier Indonesia. The following is documentation of the implementation of the activity. According to Muslimin B, (2024) Counseling is quite effective in increasing participant knowledge. In addition, for this community service activity to be successful, all parties must work together well.

**Figure 1**. Educational Activities for the Community at Telaga Dewa Health Center, Bengkulu City

## 2. Discussion

Stunting is a condition of growth failure in children due to chronic malnutrition and repeated infections, especially during the first 1,000 days of life (HPK). One environmental factor that plays a significant role in stunting is sanitation. The Community-Based Total Sanitation Program (CBTS), initiated by the Indonesian Ministry of Health in 2008, seeks to change community behavior regarding sanitation through five main pillars: Stop open defecation (BABS), Wash your hands with soap (CTPS), Safe household drinking water and food management, Safe household waste management, Safe household liquid waste management.

The study results showed an increase in respondents' knowledge of the CBTS pillars after education, which positively impacted hygienic behavior and potentially reduced stunting among toddlers. Prior to education, most respondents demonstrated low to moderate levels of knowledge, particularly regarding

the importance of handwashing with soap, drinking water management, and the relationship between sanitation and child health.

Knowledge prior to education: low awareness regarding sanitation and stunting. Before receiving education, most mothers/families did not understand that poor sanitation, such as open defecation and unsafe drinking water, can cause children to experience repeated infections, which can lead to stunting. This aligns with WHO findings (2020), which state that low sanitation literacy is a factor hindering stunting prevention efforts in developing countries. This lack of knowledge is also reflected in daily behaviors, such as not washing hands with soap after defecation, not boiling drinking water, and littering in the home environment, all of which risk worsening the health of children in the community.

Post-Education Knowledge: Significant Improvement and Behavioral Change. After the CBTS education program was provided, there was a significant increase in community understanding of the importance of the five pillars of CBTS. Education was conducted through outreach, focus group discussions (FGDs), and visual media (posters or videos). Respondents began to understand the link between poor sanitation and infectious diseases such as diarrhea, worms, and environmental enteric dysfunction (EED), which are indirect causes of stunting. This increased knowledge resulted in changes in household behavior, for example: Increased compliance with handwashing with soap before eating and after defecating. Changes in the habit of defecating in the open to using healthy latrines. Increased awareness of treating drinking water before consumption.

Poor sanitation makes children more susceptible to gastrointestinal infections, such as diarrhea and intestinal worm infections, which impair nutrient absorption and contribute to stunting. Open defecation, for example, increases environmental contamination and facilitates the spread of pathogens, which then leads to recurrent infections in children. According to the WHO (2020), children living in environments with poor sanitation are 2-3 times more likely to experience stunting than children living in environments with good sanitation.

A study by Putri et al. (2020) showed that the successful implementation of the CBTS pillars, particularly open defecation and handwashing with soap and water, was significantly associated with reduced stunting rates. Community-based sanitation interventions such as CBTS have been shown to increase hygienic behavior and improve environmental conditions, which indirectly reduce the burden of infectious diseases that contribute to stunting. Furthermore, CBTS implementation encourages community participation, raises collective awareness, and strengthens local empowerment, representing a holistic and sustainable approach to stunting prevention.

The Specific Role of the CBTS Pillars in Stunting Prevention: Pillar 1 (Stop Defecating): Open defecation practices increase the risk of fecal contamination in the environment. A fecally contaminated environment leads to the spread of enteric pathogens, which can trigger chronic diarrhea and environmental enteric dysfunction (EED), two conditions that are often indirect causes of stunting. Pillar 2 (HWWS): Washing hands with soap before eating and after using the toilet can reduce the risk of gastrointestinal and respiratory infections, thereby preventing nutritional loss due to disease. Pillar 3 (Safe Drinking Water and Food): Access to safe drinking water and hygienic food preparation help prevent microbiological contamination that is harmful to children.

Gaps in CBTS Implementation and Challenges Although the CBTS program has been implemented in many regions, significant challenges remain in terms of local government commitment, the availability of sanitation infrastructure, and changes in community behavior. Some regions with low CBTS coverage also show a high prevalence of stunting, highlighting the importance of synergy between sanitation and nutrition programs. CBTS plays a crucial role as an environmental intervention in stunting prevention. The program's success can improve environmental health and reduce the burden of infectious diseases, which are key risk factors for stunting. For optimal results, CBTS needs to be supported by nutrition education, basic health services, and cross-sectoral commitment.

### 2.1. Implications

The results of this study indicate that the implementation of the CBTS program, particularly its pillars, such as stopping open defecation (BABS), handwashing with soap (CTPS), and safe household water and food management, is significantly associated with a reduction in stunting prevalence in toddlers. The practical implication is that community-based sanitation interventions can be used as a supporting strategy in stunting reduction programs, in addition to specific nutrition interventions. The government

and policymakers can integrate CBTS more systematically into action plans to accelerate stunting reduction at the regional and national levels.

### 2.2. Research contribution

This research contributes to filling the gap in the literature regarding the relationship between community-based sanitation and children's nutritional status. Furthermore, it confirms that promotive and preventive approaches through changes in sanitation behavior have an indirect impact on children's health status. These findings can also serve as supporting evidence for the formulation of cross-sectoral policies between the health sector and the environment or infrastructure sector.

### 2.3. Limitations

Some limitations of this study include: 1) The study design was cross-sectional, meaning it cannot directly demonstrate cause-and-effect relationships. 2) Data on sanitation behavior were obtained through interviews and limited observations, which could potentially lead to social bias or underreporting. 3) Other variables, such as family economic status, parental education, and access to health services, which also influence stunting, have not been analyzed in depth. 4) The unique local context of the study area means that the results of this study cannot necessarily be generalized to other regions with different characteristics.

### 2.4. Suggestions

1. For Future Researchers: It is recommended to conduct longitudinal studies or quasi-experiments to examine the long-term effects of CBTS interventions on stunting, as well as to include a broader range of control variables for multivariate analysis.
2. For the Government and Policymakers: It is necessary to strengthen the comprehensive implementation of CBTS, including the dissemination and education of clean and healthy living behaviors (PHBS) targeting mothers and families with toddlers.
3. For the Community: It is necessary to increase awareness and active participation in maintaining environmental sanitation as part of a collective effort to prevent stunting.
4. For Non-Governmental Organizations (NGOs) and the Private Sector: They can play a role in community empowerment and provide technical and financial support for the implementation of the CBTS program.

## D. Conclusion

In conclusion, poor sanitation is significantly associated with stunting in toddlers. Poor sanitation, including limited access to clean water, substandard waste disposal, and a lack of sanitary toilet facilities, can increase the risk of exposure to infectious agents, particularly diarrhea and worm infections, which can lead to reduced nutritional intake and impaired nutrient absorption.

Toddlers living in environments with poor sanitation tend to have a higher risk of stunting than those living in environments with adequate sanitation. This confirms that stunting prevention efforts require not only nutritional interventions but also improvements in sanitation, environmental management, and education on clean and healthy living behaviors in the community. Strengthening Community-Based Total Sanitation (CBTS) is an important step to prevent stunting and infectious diseases. By involving the community directly in implementing the five pillars of CBTS, such as stopping open defecation, washing hands with soap, managing safe drinking water and food, and managing waste and liquid waste, we can create a clean and healthy environment. This clean living habit not only reduces the risk of diseases such as diarrhea and worms, but also supports optimal child growth and development.

The success of CBTS requires cooperation between the government, the community, and various other parties. Continuous education, provision of sanitation facilities, and strong policy support are the keys to the sustainability of this program. With CBTS the community is not only empowered to live healthier, but also contributes directly to creating a generation free from stunting and more productive in the future. Therefore, CBTS is an effective long-term solution to improve the quality of health and life of the community.

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**F. Author Contribution Statement**

The author contributed fully to all stages of the research, from developing the research design and collecting field data, analyzing and interpreting the results, to drafting the article. He also conducted a literature search to support the theoretical framework, ensure the validity of the research instruments, and integrate the findings with the context of public health issues related to sanitation and stunting. The entire writing and revision process for the article was carried out independently, including formatting adjustments to comply with journal requirements.

**References**

Alum, E. U., Obeagu, E. I., & Ugwu, O. P. C. (2024). Enhancing quality water, good sanitation, and proper hygiene is the panacea to diarrhea control and the attainment of some related sustainable development goals A review. *Medicine (United States)*, *103*(38), e39578. https://doi.org/10.1097/MD.0000000000039578

Amanabo-Arome, U. H., & Abbas, A. M. (2021). Environmental and Health Implications of Poor Sanitation in Nigeria. *Merit Research Journal of Agricultural Science and Soil Sciences*, *9*(10), 101–104. https://doi.org/10.5281/zenodo.5745751

Aprihatin, Y., Barlian, E., Fatimah, S., Yanti, E., & Armaita. (2020). Impact of environmental sanitation and infection disease as a determining stunting factor for children. *Sumatra Journal of Disaster, Geography and Geography Education*, *4*(2), 209–211. https://doi.org/10.24036/sjdgge.v4i2.336

Azwari, T., Dewi, A., Ariyani, E., Aulia, A., Rahman, F., & Prismadanu, A. (2025). Strategies for Community-Based Total Sanitation in Improving Hygiene Behavior: A Case Study of Purwosari II Village, Tamban District. *Jurnal Public Policy*, *11*(2), 157–168. https://doi.org/10.35308/jpp.v11i2.11072

Boekoesoe, L., Maksum, T. S., & Hiola, D. S. (2023). Edukasi Pilar Sanitasi Total Berbasis Masyarakat (CBTS) dan Optimalisasi Peran Kader Posyandu Menuju Desa Zero Stunting. *Jurnal Sibermas (Sinergi Bersama Masyarakat)*, *12*(2), 244–254. https://doi.org/10.37905/sibermas.v12i2.18450

Cha, Y. E., Fu, Y. Z., & Yao, W. (2021). Knowledge, practice of personal hygiene, school sanitation, and risk factors of contracting diarrhea among rural students from five western provinces in China. *International Journal of Environmental Research and Public Health*, *18*(18). https://doi.org/10.3390/ijerph18189505

Challa, J. M., Getachew, T., Debella, A., Merid, M., Atnafe, G., Eyeberu, A., Birhanu, A., & Regassa, L. D. (2022). Inadequate Hand Washing, Lack of Clean Drinking Water and Latrines as Major Determinants of Cholera Outbreak in Somali Region, Ethiopia in 2019. *Frontiers in Public Health*, *10*(May), 1–11. https://doi.org/10.3389/fpubh.2022.845057

Fitrianingrum, R. E. (2020). Community-Based Total Sanitation Health Promotion Strategy in Kebaman Village, Srono District, Banyuwangi Regency. *Journal for Quality in Public Health*, *3*(2), 611–618. https://doi.org/10.30994/jqph.v3i2.111

Indah, F. P. S., Cardiah, T., Rahmat, A., Sulandjari, K., Andiyan, A., & Hendayani, N. (2022). Effect of Community-Based Total sanitation Program with diarrhea Incidents in toddler at communities near rivers. *Materials Today: Proceedings*, *63*, s349–s353. https://doi.org/10.1016/J.MATPR.2022.03.538

Islam, M. S., Zafar Ullah, A. N., Mainali, S., Imam, M. A., & Hasan, M. I. (2020). Determinants of stunting during the first 1,000 days of life in Bangladesh: A review. *Food Science and Nutrition*, *8*(9), 4685–4695. https://doi.org/10.1002/fsn3.1795

Kustanto, A., Rachmat, O., & Setyadi, S. (2025). The Prevalence of Stunting in Indonesia: An Examination of the Health, Socioeconomic Status, and Environmental Determinants. *Journal of Iranian Medical Council*, *8*(1), 67–79. https://doi.org/10.18502/jimc.v8i1.17062

Maksum, T. S., Nakoe, M. R., & Hutuba, A. H. (2024). Strengthening the CBTS Pillars and Developing Moringa Leaf Powder Beverage Products as a Preventive Effort Against Stunting Occurrence. *Jurnal Kolaboratif Sains*, *7*(10), 3667–3674. https://doi.org/10.56338/jks.v7i10.6224

Meliati, L., Sudarmi, S., & Halimatusyaadiah. (2025). Influence of the First Thousand Days of Life on Stunting Incidence. *J Holis t Nurs Midwifery*, *35*(3), 161–167.

https://doi.org/10.32598/jhnm.35.3.2622

Nisa, L. S. (2018). Kebijakan Penanggulangan Stunting di Indonesia. *Jurnal Kebijakan Pembangunan*, *13*(2), 173–179. Google Scholar

Rahmuniyati, M. E. (2020). Peran puskesmas dalam upaya mengurangi kasus stunting melalui program sanitasi total berbasis masyarakat (CBTS). *Prosiding Seminar Nasional Multidisiplin Ilmu*, *2*(1), 511–517. Google Scholar

Rahmuniyati, M. E., & Sahayati, S. (2021). Implementasi Program Sanitasi Total Berbasis Masyarakat (CBTS) Untuk Mengurangi Kasus Stunting Di Puskesmas Wilayah Kabupaten Sleman. *PREPOTIF : Jurnal Kesehatan Masyarakat*, *5*(1), 80–95. https://doi.org/10.31004/prepotif.v5i1.1235

Saputri, R. A., Anggraeni, D., Sujadmi, & Sopamena, N. (2020). Environmental Sanitation and Stunting (Study of the Role of Women in Stunting Intervention). *Journal of Physics: Conference Series*, *1655*(1). https://doi.org/10.1088/1742-6596/1655/1/012083

Scheffler, C., & Hermanussen, M. (2022). Stunting is the natural condition of human height. *American Journal of Human Biology*, *34*(5), 1–13. https://doi.org/10.1002/ajhb.23693

Scheffler, C., Hermanussen, M., Bogin, B., Liana, D. S., Taolin, F., Cempaka, P. M. V. P., Irawan, M., Ibbibah, L. F., Mappapa, N. K., Payong, M. K. E., Homalessy, A. V., Takalapeta, A., Apriyanti, S., Manoeroe, M. G., Dupe, F. R., Ratri, R. R. K., Touw, S. Y., K, P. V., Murtani, B. J., … Pulungan, A. (2020). Stunting is not a synonym of malnutrition. *European Journal of Clinical Nutrition*, *74*(3), 377–386. https:/doi.org/10.1038/s41430-019-0439-4

Shrestha, A., Six, J., Dahal, D., Marks, S., & Meierhofer, R. (2020). Association of nutrition, water, sanitation and hygiene practices with children's nutritional status, intestinal parasitic infections and diarrhoea in rural Nepal: A cross-sectional study. *BMC Public Health*, *20*(1), 1–21. https://doi.org/10.1186/s12889-020-09302-3

Wulandari, D. T., Azizah, N., Rahmawati, V. E., & Annuchasari, H. (2025). Community-Based Insights on Maternal Nutrition Knowledge and Its Role in Preventing Stunting and Wasting in Rural Indonesian Children. *Journal of Current Health Sciences*, *2025*(3), 145–154. https://doi.org/10.47679/jchs.2025128

Zuhri, I. El, & Faresta, R. A. (2025). Investigating Community of Practice in Sumbawa and Manggarai to Support Environmental Sustainability Through CBTS Development Plan. *IOP Conference Series: Earth and Environmental Science*, *1493*(1). https://doi.org/10.1088/1755-1315/1493/1/012003

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