



Demonstration and Counseling on the Preparation of Moringa Leaf Porridge for Stunting Prevention and Growth

^{1*}Ibnu Imam Al Ayyubi, ²Eko Prayetno, ³Nurhikmah, ⁴Firda Noerzanah, ⁵La Ode Musaldin

^{1,4}Sekolah Tinggi Agama Islam Darul Falah, ²Universitas Islam Negeri Maulana Malik Ibrahim Malang, ³Universitas Islam Negeri Alauddin Makassar, ⁵Monash University, Australia
¹ibnuimam996@staidaf.ac.id, ²echoprayer99@gmail.com, ³hikmahnur192@gmail.com,
⁴firdanzh@gmail.com, ⁵lmus0003@student.monash.edu

DOI : 1055656/kjpk.v3i1.377

Submitted: (2024-12-04) | Revised: (2025-02-19) | Approved: (2025-04-01)

Abstract

The counseling and demonstration activities on the preparation of Moringa leaf porridge successfully enhanced the knowledge of the community, particularly mothers in Wawobean Village, about the importance of nutrition in preventing stunting in children. Through the education provided, participants understood the nutritional benefits of Moringa leaves and how they can be processed into nutritious food. The participants' enthusiasm during the event demonstrated a high awareness of the importance of proper nutrition for children. This activity is expected to encourage the community to utilize local resources, such as Moringa leaves, to improve children's health and growth, and reduce the risk of stunting in the area. It also highlighted the importance of collaboration between the posyandu cadres and the community in raising awareness about child nutrition and health. Although the activity was successful, there were some challenges in its implementation and preparation, including difficulties faced by some respondents in identifying basic knowledge related to the material presented. This indicates the need for further evaluation of how information is conveyed to ensure better understanding by all participants. Additionally, the low attendance was partly due to scheduling conflicts and other commitments, preventing some invited members of the community from attending. For future research, it is recommended to provide the material periodically and in an easily understandable format, as well as to invite a larger number of participants.

Keywords: Moringa Leaves, Stunting Prevention, Community Education, Nutrition

INTRODUCTION

Stunting is a public health issue of global concern, especially in developing countries like Indonesia (Prianto et al., 2025). According to data from UNICEF (2022), stunting is a condition of impaired growth in children under five years old caused by chronic malnutrition, repeated infections, and inadequate psychosocial stimulation. The impact of stunting is not limited to physical growth impairment but also affects cognitive development and future productivity (Daracantika et al., 2021; Lestari et al., 2022; Pratiwi, 2021; Salsavira & Rosyidah, 2025; Separen et al., 2022). Therefore,



stunting prevention efforts are a national priority in improving the quality of human resources in Indonesia (Prayetno, Amalia, et al., 2024).

In Indonesia, the prevalence of stunting remains relatively high. According to the Indonesian Nutrition Status Survey (SSGI) in 2022, the stunting prevalence reached 21.6%, meaning one in five children experiences growth and development issues (Linda & Dea, 2025). This problem is exacerbated by the low level of public awareness regarding the importance of a nutritious and diverse diet, especially in remote areas. In regions like Wawobean Village, South Wawonii District, Konawe Islands Regency, the stunting issue is more profound. The remote geographical conditions, coupled with limited health facilities and a lack of nutrition education, make it difficult for communities to meet their children's nutritional needs optimally. Furthermore, the low understanding of the importance of a healthy diet further worsens the high stunting rate in this area. Therefore, efforts to enhance understanding of healthy and balanced nutrition, as well as ensure adequate access to nutritious food in remote areas, are crucial (Fitria & Mundari, 2025).

Table 1. Prevalence of Stunting in Several Provinces in Indonesia

Province	Stunting Prevalence %
Aceh	28,3%
Sumatera Utara	23,6%
Jawa Barat	19,7%
Nusa Tenggara Timur	35,2%
Sulawesi Tenggara	22,8%
Sulawesi Selatan	23,1%
Indonesia (Rata-rata)	21,6%

Source: Indonesian Nutrition Status Survey (SSGI) 2022

<https://www.kemkes.go.id/id/home>

The table above shows that the prevalence of stunting in Indonesia remains relatively high, with East Nusa Tenggara as the region with the highest rate. Several other provinces, such as Southeast Sulawesi, also still have significant prevalence rates. This indicates that the issue of stunting is not limited to just one or two regions but is widespread across various areas, including remote regions like Wawobean Village. Therefore, a more focused, region-based approach is needed to address this issue, including through the enhancement of nutrition education, the distribution of nutritious food, and the empowerment of local communities.

As one of the innovative solutions, moringa leaves (*Moringa oleifera*) are widely recognized as a source of nutrition rich in vitamins, minerals, and protein. Moringa leaves have great potential to improve children's nutritional quality, especially in preventing stunting (Dyah & Selviana, 2025). Moringa leaves offer many health benefits for children, including efforts to prevent stunting. Stunting, often caused by malnutrition during children's growth periods, can affect their physical and mental development. Moringa leaves are rich in various essential nutrients, such as vitamins A, C, and E, as well as minerals like calcium, iron, and magnesium, which are vital for children's bodies (Marta et al., 2022). The protein content in moringa leaves is also



quite high, which plays a role in supporting growth and tissue repair. Furthermore, moringa leaves contain antioxidants that can boost the immune system, making children more resistant to infections that can worsen their nutritional condition. By consuming moringa leaves regularly, either as vegetables, juice, supplements, or porridge preparations, children can receive more complete nutrition, contributing to optimal growth and preventing developmental disorders due to malnutrition. Research also shows that moringa leaves can improve iron absorption, which is essential in preventing anemia, one of the risk factors for stunting (Margala & Fairuz, 2025). Therefore, incorporating moringa leaves into daily diets can be a practical and effective solution to support children's nutritional health, enabling them to grow optimally and avoid the negative impacts of stunting. The utilization of moringa leaves as part of stunting prevention efforts also aligns with the movement to increase public awareness about the importance of balanced nutrition, which can help reduce the prevalence of stunting in Indonesia.

Moringa leaves can be processed into various food products that are attractive and easily accepted by children, one of which is moringa porridge. This porridge is not only highly nutritious but also has a taste that children enjoy, making it a good option to increase their nutrient intake. Processing moringa leaves into porridge can help the body absorb its nutrients better due to its soft texture and mild flavor. Moringa porridge becomes a practical and easily accepted choice for children, making it effective in boosting their nutritional intake, especially in areas with high stunting rates. Additionally, moringa porridge can be mixed with other nutritious ingredients, such as rice, corn, or protein sources like chicken and fish, to add variety in taste and nutrition. Thus, processing moringa leaves into porridge and other foods can be an attractive solution to help children achieve better nutrition in Indonesia (Salsavira & Rosyidah, 2025).

In this context, the counseling and demonstration activity on the preparation of moringa leaf porridge is a strategic effort to improve the knowledge and skills of the community, particularly mothers in Wawobean Village. This activity is designed to provide an understanding of the importance of a balanced diet in preventing stunting and to introduce practical ways to utilize local resources like moringa leaves (Athifah et al., 2025). In connection with this, the researcher reviewed several articles to find the novelty and research gaps regarding Demonstration and Counseling on the Preparation of Moringa Leaf Porridge for Stunting Prevention and Growth. The researcher analyzed the literature review from several journal articles using the VOSViewer application, aiming to analyze existing publications on this research to see the extent of connections between them through a network matrix.

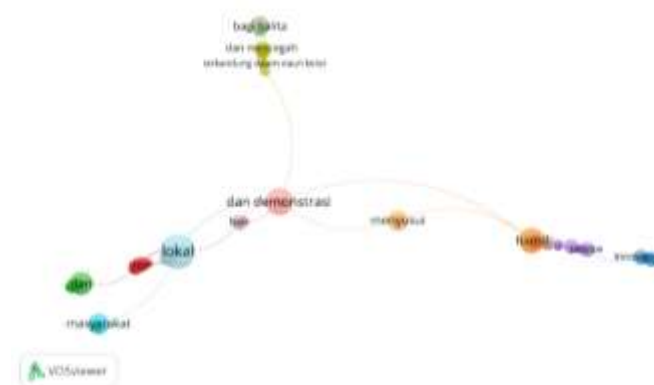




Figure 1. VOSViewer Analysis Results

The bibliometric analysis using VOSviewer examined several indexed articles from Sinta between 2020-2025 with the help of Publish or Perish. Previous researchers have identified several key clusters in research related to demonstrations and counseling on the preparation of moringa leaf porridge as an effort to prevent stunting. The main focus of the research includes aspects of demonstration and counseling, the role of local communities in program implementation at the village level, and the benefits of moringa leaves for pregnant women, breastfeeding mothers, and toddlers in supporting children's growth. Additionally, there is a connection with the concept of service innovation, which indicates the potential for new approaches in local food-based nutrition interventions.

Although various studies have discussed the benefits of moringa leaves, there are still several gaps that need further exploration. Some of these include the effectiveness of demonstrations and counseling in changing community consumption patterns sustainably, the use of digital technology in outreach to make it more widespread and effective (Grass Ramírez et al., 2023; Laudon & Traver, 2020; Nikou et al., 2022; Sirojuddin, 2023; Souza & Debs, 2024), and long-term research on the impact of consuming moringa leaf porridge on children's growth. Therefore, future research could develop more interactive community-based educational models, integrate digital technology in outreach programs, and conduct longitudinal studies to measure the real impact on stunting prevention. With this approach, local food-based interventions can become more inclusive, effective, and sustainable in improving community nutritional status. This interest drives the researcher to further investigate the demonstration and counseling on the preparation of moringa leaf porridge for stunting prevention and growth. This study aims to describe the implementation of counseling and demonstrations on the preparation of moringa leaf porridge and evaluate its impact on increasing community understanding of stunting prevention (Prayetno, Nursalam, et al., 2024). It is hoped that the results of this study can serve as a reference in developing sustainable and contextual community-based intervention programs (Fazila & Ramadhani, 2025).

METHOD

This study combines two methods to achieve more effective goals in increasing the community's understanding of stunting prevention through the utilization of moringa leaves (Creswell, 2010). The first method is education or counseling regarding the benefits of moringa leaves in stunting prevention, aimed at providing the community with knowledge about the importance of balanced nutrition and how moringa leaves can be a practical solution to improve children's nutritional status. The second method is the demonstration of how to make moringa leaf porridge, which aims to show how to process moringa leaves into food that is easily accepted by children. In this activity, participants are directly involved in the process of making moringa leaf porridge, so they can practice the techniques taught during the counseling sessions. This demonstration also serves to provide participants with a direct example of how to prepare moringa leaves in a practical and delicious way, which can be applied



at home to enhance children's nutritional intake. This method was chosen because it has two complementary approaches: education based on theory and practical skills that can be immediately applied. This approach also allows for a more in-depth evaluation of the community's understanding of stunting and how they apply the information gained in their daily lives. Overall, this counseling and demonstration method is expected to provide a deeper understanding of the importance of stunting prevention in a simple and easy-to-apply way, as well as increase awareness in Wawobean Village about the essential role of moringa leaves in creating a nutritious diet and supporting optimal child growth.

Table 2. Research activities

Pre-Activity	1. Coordinate the implementation of the planned activities, including the creation of the event schedule, division of tasks among each department and member, preparation of materials, activity sequence, and coordination with the head of the posyandu cadres. 2. Design and create educational media such as materials and materials that will be used during the activity. 3. Prepare invitations for the guests who will attend the counseling event.
Activity	1. Record the attendance of invited guests. 2. Distribute pre-test and post-test questionnaires to the attending posyandu cadres. 3. Conduct the presentation and demonstration of moringa leaf porridge preparation. 4. Hold a discussion and Q&A session regarding moringa leaf porridge preparations. 5. Distribute moringa leaf porridge.
Post-Activity	1. Evaluate the activity. 2. Summarize the data.

This research was conducted in Wawobean Village, South Wawonii Subdistrict, Konawe Islands Regency, which is an area with a high prevalence of stunting. The activity was carried out over a 1-month period, from July to August 2024. The research subjects were mothers of toddlers and posyandu cadres in Wawobean Village. The subjects were selected purposively based on the following criteria: (1) Mothers with children aged 6 months to 10 years; and (2) Willingness to participate in all stages of the counseling and demonstration activities. A total of 20 participants were included in this study. The research instruments used include: (1) Semi-structured interview guide (2) Pre-test and post-test questionnaires to measure knowledge about nutrition and stunting prevention; and (3) Observation sheets to record participant engagement

in the demonstration. This study follows ethical considerations by obtaining informed consent from participants. Participant identities are kept confidential, and participation in the activity is voluntary without coercion.

RESULTS AND DISCUSSION

The implementation of this community service activity was divided into two sessions. The first session focused on presenting material about stunting and educating on the use of moringa leaves to prevent stunting. The second session involved a demonstration on how to make moringa leaf porridge as an alternative nutrition source and supplement for children to prevent stunting.

Counseling on Stunting and Moringa Leaves

This activity was conducted using direct counseling methods aimed at providing information about stunting, its signs and impacts, as well as ways to prevent it. Participants were also given knowledge about the nutritional content of moringa leaves and their health benefits, particularly in preventing stunting. The activity began with participants filling out a pre-test questionnaire to assess their knowledge before receiving the counseling material. Afterward, the material was presented interactively and in an easy-to-understand manner (as shown in Figure 2), so participants could better grasp the importance of stunting prevention and various steps they could take to improve children's nutritional intake, including using moringa leaves. It is hoped that, through this counseling, the community, especially parents and child caregivers, will become more aware of the importance of healthy eating patterns to support optimal child growth. The goal of this activity was to increase the community's knowledge about stunting and how to address it, such as through the consumption of moringa leaves, and to encourage its application in daily life. Throughout this session, participants were enthusiastic and attentively understood the explanation from the speaker. As a result of this counseling, participants learned about the nutritional content of moringa leaves and their benefits for meeting children's nutritional needs to prevent stunting, allowing them to make use of moringa leaves available around their homes.



Figure 2. Socialization to the community about the benefits of moringa leaf porridge for anticipating and preventing stunting.

Based on Table 1, it is known that the participants in this activity had the following education levels: High School (6 people), Junior High School (10 people), Elementary School (20 people) (Figure 3), and Bachelor's degree (15 people). The majority of participants were housewives (25 people) and small business owners (5 people). Before the activity, participants were given a questionnaire to assess their knowledge about the material to be presented.



Figure 3. Guidance to participants during the socialization session.

After the material was presented, participants were given the same questionnaire again to assess the increase in knowledge and understanding of the material. Table 2 shows the results from the pre-test and post-test questionnaires given to the respondents.

Table 3. Participant Characteristics of the Activity

Variable	Criteria	Frequency
Education	Elementary	20
	Junior High	10
	High School	6
	Bachelor's	15
Emoloyment	Housewife	25
	Self-employed	5
Total		76

Table 4. Pre-test Post-test result

Variabel	Minimum	Maximum
Pre-Test	35	41
Post-Test	60	16

Based on the observations of the pre-test and post-test results, it was found that among the 76 respondents, the minimum pre-test score was 2 and the maximum was 3. On the other hand, the post-test results showed a minimum score of 4 and a maximum score of 5. From these results, it can be concluded that there was a significant increase in the respondents' understanding of stunting prevention and the use of moringa leaves after the material was delivered. As a result of this activity, there was a significant improvement in the participants' knowledge, with 41 participants

demonstrating good knowledge in the pre-test and 35 participants showing relatively poor knowledge. However, after receiving the education, their knowledge increased to 60 participants with good understanding, while only 16 participants showed a lower understanding. During the activity, participants carefully understood the content and benefits of moringa leaves, and they were very enthusiastic and eager about the process of making moringa leaf porridge for stunting prevention.

Demonstration of Moringa Leaf Porridge Preparation

This demonstration activity was conducted to directly show the community how to prepare moringa leaf porridge as an alternative for preventing stunting. Many residents of Wawobean village were not yet aware of the benefits of moringa leaves, particularly that they could be processed into porridge for children (Figure 4). This lack of awareness was the main reason for organizing this activity. The demonstration aimed to teach the people of Wawobean village how to process and utilize moringa leaves into a nutritious and delicious porridge rich in essential vitamins.



Figure 4. a) The process of making moringa leaf porridge; b) Cooking the moringa leaf porridge ingredients; c) The final moringa leaf porridge

During the porridge-making session, many mothers participated with great enthusiasm and excitement. The demonstration took place at the house of the village head of Wawobean, in collaboration with the village's Posyandu (integrated health service post) cadre members. The event was held on July 20, 2024, from 08:00 to 12:00. After the cooking and serving stages were completed, the prepared moringa leaf porridge was distributed to all participants. The event was lively and engaging, with participants showing high enthusiasm. Overall, the activity ran smoothly and successfully.

CONCLUSION

The counseling session and demonstration on moringa leaf porridge preparation successfully increased the community's knowledge, especially among mothers in Wawobean Village, about the importance of nutrition in preventing stunting in children. Through the provided education, participants gained a better understanding of the nutritional benefits of moringa leaves and their potential as a nutritious food source. The high enthusiasm shown during the event indicates an



increased awareness of the importance of fulfilling children's nutritional needs. This initiative is expected to encourage the community to utilize local resources, such as moringa leaves, to improve children's health and growth while reducing the risk of stunting in the area. Additionally, the activity highlights the importance of collaboration between Posyandu cadres and the community in raising awareness of children's nutrition and health. Despite its success, the activity faced some challenges, both in execution and technical preparation. Some participants struggled to grasp basic knowledge about the presented material, indicating the need for further evaluation to improve the delivery of information. Additionally, the low attendance was due to scheduling difficulties and other commitments, preventing some invited community members from participating. Future studies should consider providing regular and easily understandable educational sessions and aim to involve a larger number of participants for a broader impact.

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KUSUMA: *Jurnal Pengabdian kepada Masyarakat*

E-ISSN 3089-2805

Vol. 02, No. 01, Tahun 2024 | Hal. 43 – 52

<https://ojs.staisdharma.ac.id/index.php/kjpkm/index>

