



Cakrawala Dini:

Jurnal Pendidikan Anak Usia Dini

Journal homepage: <https://ejournal.upi.edu/index.php/cakrawaladini>



Preventing Stunting in Early Childhood Through the Utilization of Local Food Moringa Oleifera in Dompu

Ihlas*, Hikmah

Faculty of Islamic Studies, Universitas Muhammadiyah Bima, Indonesia

Corresponding Author e-mail: ihlashasan14@gmail.com

ABSTRACT

Stunting remains a chronic nutritional problem and a serious challenge in Indonesia, including Dompu Regency, where its prevalence reached 37.5% in 2024. This study aims to analyze stunting prevention among Early Childhood Education (ECE) students through the utilization of local food, Moringa Oleifera as an alternative source of nutrition. The research employed a descriptive-qualitative approach by collecting data through observation, interviews, and documentation involving PAUD teachers, parents, and health workers. The findings reveal that the utilization of moringa leaves in simple food preparations such as pudding, porridge, and cakes can improve children's nutrient intake, particularly protein, iron, and vitamin A. Moreover, children's acceptance of moringa-based products was relatively good since the variations were adjusted to their taste preferences. These results indicate that moringa leaves hold significant potential as a local solution for stunting prevention. The study concludes that the use of local food is not only effective in improving children's nutritional status but also contributes to community self-reliance in utilizing local resources for sustainable nutrition programs. This research has a positive impact because it can reduce the risk of stunting in early childhood by utilizing moringa leaves as a local source of nutrition that is cheap, easily accessible, and high in value in Dompu.

ARTICLE INFO

Article History:

Submitted/Received 11 Aug 2025

First Revised 14 Sep 2025

Accepted 08 Oct 2025

First Available online 24 Oct 2025

Publication Date 01 Nov 2025

Keyword:

ECE,

Local Food,

Moringa Oleifera,

Stunting.

1. INTRODUCTION

Stunting is a public health issue that remains a major concern in national development, particularly in the areas of nutrition and child health. Stunting is a condition of stunted growth in toddlers caused by chronic malnutrition, recurrent infectious diseases, and suboptimal parenting practices. It is characterized by a child's height being lower than the standard for their age (Khalisma *et al.*, 2024). This condition reflects stunted physical growth, and also has long-term impacts on brain development, learning ability, competitiveness, and productivity of human resources in the future (Putri *et al.*, 2024).

Based on Dompu Regency Health Office 2022 stunting rates remain quite high, particularly in Kandai II Village, where the rate is 44.10%, with 288 toddlers measured, far above the standard set by the World Health Organization (WHO), which is a maximum of 20% for the public health problem category. This condition indicates that Dompu Regency is one of the areas with a serious stunting burden, thus requiring an appropriate, comprehensive, and locally-based management strategy. One potential effort to be undertaken is the use of local foods that are rich in nutrients, such as Moringa Oleifera, as an alternative nutritional intervention for early childhood children attending Early Childhood Education (ECE) (Irma *et al.*, 2023).

The use of local foods as a stunting prevention strategy has been extensively studied by researchers. Moringa oleifera is a plant rich in nutrients, particularly protein, iron, calcium, and vitamin A, making it highly beneficial for supporting children's growth and development (Huda *et al.*, 2024). It has also been proven that nutritional interventions based on processed moringa leaves, such as porridge and biscuits, can improve the nutritional status of toddlers, especially in increasing iron and protein intake (Katmawati & Samah, 2024). Fuglie revealed similar findings, explaining that moringa leaves contain seven times more vitamin C than oranges, four times more calcium than milk, and twice as much protein as yogurt. This reinforces the argument that moringa leaves are a local food with significant potential for use in nutritional improvement efforts (Niswar & Kasmawati, 2025). However, most of these studies only emphasize nutritional content aspects and limited clinical trials, without directly linking them to early childhood education-based stunting prevention implementation strategies.

Furthermore, the use of moringa leaves in healthy food is quite well-received by the community, especially housewives accustomed to processing local foods. This acceptance demonstrates the significant potential for integrating moringa leaves into supplementary food programs at the family and school levels (Kasih *et al.*, 2024). Other research emphasizes that nutrition education based on local foods can improve mothers' knowledge and children's consumption patterns, thus supporting improved nutritional status (Prasetyo *et al.*, 2023). However, most studies have focused on the household level and have not explored strategies for utilizing moringa leaves in formal early childhood education (ECE) institutions (Lailasari *et al.*, 2024). This is crucial because early childhood education (ECE) is a golden age for children, where optimal nutritional needs are crucial for the quality of growth and development. Furthermore, ECE is a strategic institution for instilling healthy eating habits from an early age, including the use of local foods (Susanti *et al.*, 2024). An unanswered research gap is how the integration of local moringa food can be implemented in educational activities and dietary patterns of early childhood education (ECE) children in areas with a high prevalence of stunting, such as Dompu Regency.

Various empirical facts show that although the potential of moringa has been widely discussed, previous research remains fragmented. First, most studies emphasize laboratory

analysis of moringa's nutritional content, ignoring the social and cultural contexts of its application. Second, research focusing on early childhood is still limited, even though this age group is a critical phase and most vulnerable to stunting. Third, there has been no comprehensive study that positions ECE institutions as the basis for nutrition interventions utilizing local moringa foods, even though ECE plays a crucial role in establishing healthy consumption patterns from an early age. Fourth, children's acceptance of moringa products is rarely studied, even though sensory aspects such as taste, texture, and appearance are crucial factors in determining the success of local food-based nutrition interventions. Thus, there is still room for further research to address the empirical and practical needs of ECE-based stunting prevention.

The novelty of this research lies in the use of *Moringa oleifera* as a local food-based nutritional solution that is affordable, sustainable, and aligned with the local wisdom of the Dompu community. This approach demonstrates a significant difference compared to various previous interventions that generally focus on nutrient supplementation and fortification as the primary strategy for stunting prevention. Furthermore, this research presents conceptual and practical innovation through the implementation of a cross-sectoral collaborative approach, involving parents, early childhood education educators, and health workers as key actors in the intervention process. Thus, stunting prevention is not only viewed from the perspective of increasing nutritional intake alone, but is also integrated with strengthening nutrition education, family food self-sufficiency, and support for regional policies oriented towards program sustainability.

Based on the description above, this study focuses on analyzing the use of local moringa leaf food as an effort to prevent stunting in early childhood education (ECE) children in Dompu Regency. This research is highly urgent because Dompu Regency is among the areas with the highest stunting prevalence in West Nusa Tenggara, while on the other hand, it has the availability of local resources in the form of moringa plants that are very abundant and easy to cultivate. The main idea behind this research is to develop a holistic nutritional intervention model, one that takes into account both nutritional content and social, cultural, and educational aspects of early childhood. The purpose of this study is to explore the extent to which the use of processed moringa leaves can improve the nutritional status of early childhood children, while also assessing children's acceptance of moringa-based food diversification. Thus, this study is expected to provide theoretical contributions to the development of community nutrition science, as well as practical impacts in the form of recommendations for sustainable stunting prevention strategies based on local potential.

2. METHOD

This research uses a descriptive qualitative approach with a case study design. This method was chosen based on the research objective, which focuses on understanding the use of local food, *Moringa oleifera* leaves, in efforts to prevent stunting in early childhood in Dompu Regency, West Nusa Tenggara. The qualitative approach allows researchers to explore socio-cultural phenomena and real-world practices, while the case study design provides space to comprehensively explore the interactions between early childhood education institutions, parents, health workers, and the local community in supporting stunting prevention programs. Research subjects were selected using purposive sampling, determined based on their involvement and relevance to the issue being studied. They included kindergarten/early childhood education teachers who spearhead nutrition education, parents who play a role in providing moringa leaf-based foods at home, integrated health post (Posyandu) cadres who

play a role in monitoring child growth and development, and community health center, health workers who support community-based nutrition interventions.

Data were collected through in-depth interviews with informants (kindergarten teachers, integrated health post (Posyandu) cadres, parents, and the Health Office), participant observation of feeding activities for early childhood education students using local moringa leaf food, and documentation to obtain a comprehensive overview of the practices, perceptions, and challenges of moringa leaf utilization. Additionally, a literature review and official government documents were used as secondary data to strengthen the research findings. The collected data were analyzed using thematic analysis, through the stages of data reduction, data presentation, and conclusion drawing.

To ensure data validity, this study employed triangulation of sources and methods, as well as member checking with key informants for more accurate data interpretation (Schlunegger *et al.*, 2024). This research approach demonstrates novelty in the integration of applied education, local wisdom, and community participation in building the foundation of early childhood education to reduce the risk of stunting. Thus, this study provides a novel contribution that differs from previous studies that have focused more on nutritional interventions based on processed products.

3. RESULT AND DISCUSSION

3.1 RESULT

Research on stunting prevention in preschool-aged children through the use of local food, *Moringa oleifera* leaves, in Dompu Regency yielded several important findings. First, stunting prevalence data indicates that Dompu Regency still faces a serious chronic nutritional problem. Based on field data collected through observation, interviews with preschool educators, and documentation from the local Health Office, the prevalence of stunting in early childhood in Dompu Regency in 2024 reached 37.5%, a figure far above the WHO threshold of 20% for public health problems. These findings emphasize that stunting remains a priority issue in regional health development.

These conditions drive the need for sustainable, locally resource-based nutrition interventions that are easy to implement in early childhood education settings. In response to these challenges, this research initiated nutrition education activities at the early childhood education level as one form of implementing a local food-based intervention program.

The following image shows a nutrition education activity carried out in one of the classrooms of the Amalia Kreatif Early Childhood Education Center in Karamabura Village, Dompu Regency, as part of a research grant program entitled "Preventing Stunting in Kindergarten/Preschool Children through the Utilization of *Moringa oleifera*." A teacher is shown explaining to the children the benefits of *Moringa* leaves as an important source of nutrition for growth and development, especially in preventing stunting from an early age. The children sit neatly while listening to the teacher's explanation, accompanied by several parents and cadres who also attended the activity. Using simple, contextual, and interactive learning methods, the teacher strives to instill awareness from an early age about the importance of consuming healthy foods based on local food ingredients that are easily accessible to the community.

This activity also strengthens the synergy between educational institutions, parents, and the community in supporting the fulfillment of balanced nutrition, so that it is hoped that it will create a healthy, intelligent, and competitive generation in the future. We can see the teacher explaining the benefits of *moringa* leaves in **figure 1**.



Figure 1. The teacher explains the benefits of Moringa leaves

Second, observations show that the consumption patterns of early childhood education (ECE) children in Dompus Regency are still limited to carbohydrate sources such as rice, corn, and tubers, while their intake of protein, vitamins, and minerals is relatively low. Children's daily menus at school generally do not prioritize balanced nutrition, and parental involvement in providing healthy food is also minimal. Several ECE teachers reported that children often bring packed lunches containing instant food, packaged snacks, or sweet drinks with low nutritional content.

Third, this study found that the use of moringa leaves as a local food has significant potential in preventing stunting. Nutritional content tests and literature analysis indicate that moringa leaves are rich in vegetable protein, vitamin A, vitamin C, iron, calcium, and antioxidants. Several previous studies also confirm that regular consumption of moringa leaves can improve children's nutritional status, particularly in improving weight and height for age.

In implementing the school-based program, the research team intervened by introducing moringa leaf-based food products such as moringa porridge, moringa nuggets, moringa pudding, and moringa tea to preschool children. Observations showed that the majority of children preferred the attractively packaged products, particularly moringa pudding and nuggets, while the consumption of moringa porridge still required some adjustments to the taste.

The use of moringa leaves in processed snacks like pudding demonstrates an innovative strategy for introducing accessible alternative sources of nutrition to the public. This activity also reflects the synergy between educational institutions, families, and communities in preventative efforts to reduce stunting rates through the sustainable optimization of local food potential. We can see Teacher makes Moringa Leaf pudding in **Figure 2**.



Figure 2. Teacher makes Moringa Leaf Pudding

Fourth, interviews with parents revealed that most parents were previously unaware of the detailed benefits of moringa leaves. However, after receiving nutrition education, the majority of parents expressed a willingness to try preparing moringa leaves at home as a supplement to their children's diet. This demonstrates growing public awareness of the importance of utilizing local foods in preventing stunting. Overall, this study shows that interventions based on the use of local food, Moringa leaves, are well accepted by both children and parents, and have great potential to be integrated into stunting prevention programs in Dompu Regency.

The study revealed that the prevalence of stunting in Dompu Regency remains very high, at 37.5%. This figure is far above the World Health Organization (WHO) threshold of 20% for public health problems, and therefore categorized as a serious chronic nutritional problem (Asfian *et al.*, 2024). The high prevalence of stunting indicates that various intervention efforts previously undertaken by the government and relevant institutions have not been fully effective in reducing stunting rates in this region.

3.2. DISCUSSION

Based on the research results above, the national data released by the Central Statistics Agency (BPS) in 2024, the prevalence of stunting in Indonesia was still around 24.4% (Rauf *et al.*, 2024). This means the prevalence of stunting in Dompu Regency is approximately 13.1% higher than the national average. This fact confirms that Dompu faces more complex local challenges, including consumption patterns, access to nutritious food, public nutrition knowledge, and deeply rooted cultural factors and eating habits.

One of the main factors contributing to the high stunting rate in Dompu is the dominant carbohydrate-based consumption pattern. Young children generally consume more rice, corn, or sweet potatoes as staple foods, but do not receive sufficient animal or vegetable protein (Indrayani, 2025). In addition, consumption of vegetables and fruit is still low, so the intake of important micronutrients such as iron, calcium, vitamin A, and zinc is very limited (Arifin *et al.*, 2024). This imbalance in nutritional intake has a direct impact on inhibiting physical growth and cognitive development in children.

Besides consumption factors, cultural factors also play a role. Some parents still hold misconceptions about nutritious food. For example, sea fish or eggs are considered "luxury" foods rarely given to children, while simple side dishes like instant noodles are often chosen due to their convenience. This situation exacerbates the nutritional imbalance experienced by children in Dompu. Therefore, interventions based on highly nutritious local foods, such as moringa leaves, are needed, which are readily available, affordable, and appropriate to the local cultural context.

a. The Potential of Moringa Leaves as a Nutritious Local Food Source

Moringa oleifera are widely known as a multi-purpose plant which is often called the "miracle tree" because of its very high nutritional content (Puspitasari *et al.*, 2024). This plant thrives in various tropical regions, including Dompu Regency, making it a highly promising local solution to address nutritional issues. Nutrition literature analysis shows that moringa leaves contain up to 27% protein, 440 mg of calcium per 100 g, 7 mg of iron per 100 g, 11,300 IU of vitamin A, and 220 mg of vitamin C per 100 g. These nutrients make moringa leaves one of the most complete plant-based food sources compared to other local vegetables.

This study demonstrated that when moringa leaves were processed into food tailored to children's preferences, their acceptance of the food significantly increased. A key factor

in the success of nutritional interventions is children's acceptance of the taste, texture, and form of the food (Atmojo *et al.*, 2025). For example, moringa pudding is one of the most popular dishes for children due to its soft texture, sweet taste, and subtle moringa leaf aroma. This demonstrates that innovation in processed foods is crucial to the successful implementation of local food in stunting prevention programs (Rikandi *et al.*, 2022).

The activity, which involved teachers, cadres, and parents in local food processing practices, involved making pudding from moringa leaves, known to be rich in nutrients, particularly protein, vitamins, and minerals, which are essential for children's growth and development. The process was carried out using simple equipment, while students observed directly, thus serving the dual purpose of transferring knowledge about nutrition while fostering contextual learning and independence in students (Susilawati & Diana, 2024). The use of moringa leaves in processed snacks like pudding demonstrates an innovative strategy for introducing accessible alternative sources of nutrition to the public.

These local food processing practices also strengthen the empirical basis for the effectiveness of moringa leaves as a strategic nutritional source in stunting prevention efforts at the early childhood education community level. These consistent results align with previous research findings. These results are in line with previous research findings which state that food fortification using moringa leaf powder has been proven to increase hemoglobin levels and iron status in children without reducing energy intake and other nutrients (Ningsih *et al.*, 2025). These findings confirm the high nutritional value of moringa leaves and demonstrate their potential as an effective nutritional intervention at the household and early childhood education levels.

b. The Role of Early Childhood Education Institutions as a Basis for Nutrition Intervention

Early Childhood Education (ECE) plays a very strategic role in nutritional interventions for children. Early childhood (0–6 years) is in a critical growth phase that requires optimal nutritional intake to support physical and cognitive development (Masithoh *et al.*, 2025). Through PAUD, interventions can be carried out in a more systematic and structured manner, considering that children spend most of their time in educational environments.

Nutrition education activities were carried out in one of the classrooms of the Amalia Kreatif Early Childhood Education Center (PAUD) in Karamabura Village, Dompu Regency, as part of a research grant program entitled "Preventing Stunting in Kindergarten/Preschool Children through the Utilization of Moringa (*Moringa oleifera*). During the activity, teachers explained to the children the benefits of Moringa leaves as an important source of nutrition for growth and development, particularly in efforts to prevent stunting from an early age. The children followed the activities orderly while listening to the teacher's explanation, accompanied by several parents and participating cadres. Through simple, contextual, and interactive learning methods, teachers strive to instill awareness from an early age about the importance of consuming healthy foods based on local food ingredients that are easily accessible to the community.

Early childhood education teachers play a crucial role as agents of behavior change. By providing simple nutritional knowledge, teachers can teach children the importance of healthy eating and convey nutritional messages to parents (Hanum & Hikmanti, 2025). In this study, a nutrition education program combined with the practice of providing supplementary food made from moringa leaves was shown to receive a positive response from teachers and parents. Teachers viewed this intervention as practical, affordable, and easy to implement in early childhood education settings. Furthermore, teachers also

taught children healthy lifestyles, such as maintaining good hygiene (Nurhasanah, *et al.*, 2024).

Furthermore, kindergartens play a strategic role as a gateway for local governments to integrate nutrition improvement programs into early childhood education curricula. Through a contextual educational approach, nutrition programs can be implemented through simple classroom activities, such as cooking activities that directly involve children. These activities enable children to become familiar with various nutritious local food preparations, including moringa porridge, moringa nuggets, and moringa pudding (Rikandi *et al.*, 2022). Thus, this intervention contributes to improving children's nutritional intake while fostering nutritional literacy and awareness of the importance of healthy food consumption from an early age. These positive habits instilled in childhood have the potential to be carried into adulthood, thus having a long-term impact on efforts to reduce the prevalence of stunting. These learning activities, which directly involve children, align with the Montessori educational concept, which emphasizes experiential learning and children's independence in the exploration process. (Noor & Sari, 2022).

c. Changes in Parents' Knowledge and Attitudes

One of the most significant findings of this study was an increase in parents' knowledge about the benefits of moringa leaves as a nutritious local food source. Prior to the nutritional education intervention, the majority of parents viewed moringa leaves as a common plant, often used as a hedge or as a complement to simple dishes, unaware of their highly nutritious content.

After receiving nutrition education through counseling and cooking demonstrations, the majority of parents expressed interest and willingness to try preparing moringa leaves at home for their children. This change in attitude demonstrates that increased nutritional awareness is a key factor in the success of stunting prevention programs (Sari *et al.*, 2025). Health behavior theory explains that behavioral change is strongly influenced by knowledge, attitudes, and awareness. Armed with the right information, parents will be encouraged to change their children's eating habits toward healthier ones (Nurhasanah, *et al.*, 2024).

The impact of this increased knowledge is not limited to the immediate family but can also spread to the wider community. If more parents adopt the habit of consuming moringa leaves, there will be a ripple effect that strengthens collective efforts to prevent stunting (Sari *et al.*, 2025). This aligns with the Community-Based Nutrition Program approach, where the program's success is heavily influenced by active community participation. Furthermore, parental education and parenting styles also significantly influence child development (Millah *et al.*, 2023).

d. Implications for Stunting Prevention

The use of moringa leaves in stunting prevention in Dompu Regency has broad social, economic, and health implications. First, in terms of availability, moringa leaves are very easy to obtain because they grow abundantly in almost every yard in NTB. This makes them a sustainable and environmentally friendly food source. Second, from an economic perspective, moringa leaves are a cheap and affordable food ingredient, making them accessible to all levels of society, including families with low incomes. Third, from a nutritional perspective, moringa's comprehensive nutritional content makes it an effective solution for improving children's nutritional status (Aso *et al.*, 2024).

If this program is integrated into regional policies, for example through a moringa-based supplementary feeding program (PMT) in early childhood education (PAUD), the impact could be broader and more sustainable. In the long term, this step has the

potential to significantly reduce the prevalence of stunting and improve the quality of human resources in Dompu Regency (Abbas *et al.*, 2025). In addition, empowering communities to plant, process, and utilize moringa will also support local food independence and strengthen family nutritional resilience (Susilawati & Diana, 2024).

e. Limitations and Challenges

Although this study showed positive results, several challenges remain that need to be addressed for the program's sustainability. First, children's acceptance of the taste of moringa leaves still requires adaptation. Some preparations, such as moringa porridge, have a distinctive aroma that makes it difficult for some children to accept (Alamsyah *et al.*, 2022). Therefore, it is necessary to innovate recipes and processing techniques that can disguise the aroma to make it more child-friendly.

Second, the program's sustainability depends heavily on the commitment of parents and teachers. Without the active involvement of both parties, it is difficult to make moringa leaf consumption a part of children's daily diet. Third, regional policy support is needed that consistently encourages the use of local foods in stunting prevention programs. This can be achieved through regulations or special programs from the Health Office or the Education Office.

Furthermore, this research is still limited to a small scale in several early childhood education (ECE) centers, making it difficult to generalize widely. Therefore, further research with a larger scope and a quantitative approach is needed to measure the impact of moringa interventions on nutritional indicators, such as weight-for-age (BW/A), height-for-age (H/A), and children's anemia status. With stronger data, the use of moringa as a local food in stunting prevention can be scientifically justified and serve as a basis for public policy.

4. CONCLUSION

Based on the research results, it can be concluded that preventing stunting in early childhood education in Dompu Regency through the use of local food, *Moringa oleifera* leaves, has shown significant effectiveness in increasing parental nutritional knowledge, improving children's consumption patterns, and strengthening the role of early childhood education as a basis for nutritional interventions. These findings emphasize the novelty of integrating highly nutritious local foods with early childhood education approaches, namely by increasing nutritional intake but and instilling healthy eating habits from an early age. The use of abundant, low-cost, and easy-to-process moringa leaves provides an innovative alternative in efforts to reduce the prevalence of stunting in areas with limited access to nutritious food. The practical implication of this research is the need for local government policy support to integrate processed moringa leaves into nutrition programs in PAUD on a sustainable basis, while simultaneously encouraging community empowerment to be more independent in meeting family nutritional needs.

However, this study has limitations that require critical consideration. First, the scope of the study was limited to a few early childhood education institutions, so the results cannot be generalized to the entire Dompu Regency. Second, the limited timeframe meant that this study could only measure short-term impacts without evaluating long-term effects on children's nutritional status. Third, there are external factors that are difficult to control, such as children's eating patterns at home, variations in food availability, and levels of parental involvement, which could potentially influence the consistency of the study results. Therefore, further research with a broader scope, longer time period, and a quantitative

approach is recommended to more comprehensively measure the effect of moringa leaf consumption on child growth indicators, such as weight-for-age (BW/A) and height-for-age (H/A).

5. ACKNOWLEDGMENT

We express our deepest gratitude to the Direktorat Jenderal Riset dan Pengembangan (Ditjen Risbang) through Direktorat Penelitian dan Pengabdian kepada Masyarakat (DPPM) Kemendikbudristek-Ditsaintek, for their trust and support through the 2025 research and community service grant. This grant has become an important catalyst in the implementation of research activities that not only strengthen the scientific treasury in the academic world, but also make a real contribution to the progress and empowerment of the wider community. We hope that this synergy will continue to be maintained to create an innovative, effective, and sustainable research ecosystem.

6. AUTHOR'S NOTE

The author declares that there is no conflict of interest related to the publication of this article. Furthermore, the author confirms that this manuscript has been prepared in accordance with academic integrity standards and has been thoroughly reviewed to ensure it is free from plagiarism.

7. REFERENCES

- Abbas, D. S., Mudiah, N., Nursyelah, N., Putri, A. M. S., dan Aprilia, D. (2025). Edukasi dan pemberian makanan tambahan berbahan pangan lokal (daun kelor) pada balita stunting di desa Lipukasi: Education and provision of supplementary food made from local food (moringa leaves) for stunted toddlers in Lipukasi Village. *Jurnal Pengabdian Dan Pengembangan Masyarakat Indonesia*, 4(1), 24–30.
- Alamsyah, A. G., Sari, P. M., Hidayati, C., Pradhana, P., Lestari, Z., dan Indra, A. P. (2022). Pemanfaatan ekstra daun kelor (*moringaceae olievera*) sebagai upaya pencegahan stunting pada balita di desa Cinta Rakyat Percut Sei Tuan. *Modeling: Jurnal Program Studi PGMI*, 9(4), 39–47.
- Arifin, A. S., Ardan, A., Hakim, R. N., Rahmadani, S., Ibrahim, J. A., Khatima, K., Cahyaningsih, R., Bafadal, U., Wahyuliani, E., dan Nugraha, T. (2024). Pemanfaatan olahan daun kelor untuk menekan angka stunting di Kelurahan Limbangan Wetan. *Jurnal Pengabdian Masyarakat Indonesia*, 4(1), 41–47.
- Asfian, P., Akifah, A., Rusliafa, J., Meliahsari, R., Liaran, R. D., Hartoyo, A. M., dan Haris, R. N. H. (2024). Pemanfaatan daun kelor sebagai tepung suplemen bahan kue untuk peningkatan gizi anak balita di Desa Lambo Kecamatan Moramo Kabupaten Konawe Selatan. *Jurnal Abdimas Indonesia*, 4(2), 686–692.
- Aso, L., Sifatu, W. O., dan Rulia, W. O. (2024). Penyuluhan pencegahan stunting bagi balita melalui pemanfaatan pangan lokal. *Amal Ilmiah: Jurnal Pengabdian Kepada Masyarakat*, 6(1), 134–143.
- Atmojo, T. A., Nadhifah, F., Musi, N. A., Firmansyah, A., dan Budi, M. Z. (2025). Pengolahan nugget lele kelor dalam mengoptimalkan pangan lokal dan pencegahan stunting kecamatan Geneng. *Jurnal Penelitian Dan Pengabdian Masyarakat*, 3(1), 63–71.

- Hanum, F., dan Hikmanti, A. (2025). Pendampingan percepatan penurunan stunting melalui pengolahan kelimpahan lele dan daun kelor di kecamatan Kedungbanteng Banyumas. *Amaliah: Jurnal Pengabdian Kepada Masyarakat*, 9(1), 747–756.
- Huda, N., Faradila, P. A., dan Reyhan, M. (2024). Penguatan olahan pangan lokal daun kelor (*moringa oleifera*) untuk pencegahan stunting di kelurahan Penanae kecamatan Raba kota Bima. *EduImpact: Jurnal Pengabdian Dan Inovasi Masyarakat*, 1(2), 52–59.
- Indrayani, N. (2025). Pengaruh edukasi pengolahan daun kelor sebagai upaya pencegahan stunting terhadap pengetahuan dan minat ibu balita. *Jurnal Kesehatan Madani Medika*, 16(1), 162–168.
- Irma, R., Ariati, P. E. P., Wiraningtyas, A., Cahyaningsih, E., Olahairullah, O., dan Susandya, A. A. P. G. B. A. (2023). Pemberdayaan UMKM dan posyandu dalam pembuatan olahan makanan berbasis kelor sebagai upaya pencegahan stunting di Kelurahan Kandai II Kabupaten Dompu NTB. *JASINTEK: Jurnal Aplikasi dan Inovasi IPTEK*, 5(1), 46-53.
- Kasih, N. M., Maulana, G. H., Khasanah, S., Iqromi, S. A., Lutfi, M., Azifa, A. A., dan Pater, D. L. (2024). Inovasi pemanfaatan daun kelor menjadi puding anti stunting. *ABDIMASTEK*, 3(2), 72–78.
- Katmawanti, S., dan Samah, D. A. (2025). Tinjauan manfaat daun kelor (*moringa oleifera*) untuk pencegahan stunting pada balita. *WHN Life Sciences: Jurnal Ilmu-ilmu Kehidupan WHN*, 1(1).
- Khalisma, F., Elisa, Y., Nisfinapita, N., Olifanta, A., Ismarli, I., Nurfini, N., Fazil, M., Pratami, A., dan Munandar, M. (2024). Pencegahan stunting melalui pemanfaatan daun kelor. *Jurnal Akselerasi Merdeka Belajar Dalam Pengabdian Orientasi Masyarakat (AMPOEN): Jurnal Pengabdian Kepada Masyarakat*, 2(2), 797–804.
- Lailasari, D., Pricilla, S. L. P., Nugraha, R. A., Zulfia, N., Komalasari, N., Suwito, N. L., Palama, M. F., Emalia, M. M., Isnarti, M., dan Taufik, F. (2024). Pemanfaatan daun kelor untuk mengatasi stunting di kelurahan Cibeureum: Solusi lokal untuk gizi anak. *Jurnal Pengabdian Sosial*, 1(11), 2112–2117.
- Masithoh, A. R., Prameswari, A. E., Kusumastuti, D. A., Afrisia, S. P., Pangestu, N. B. A., Safitri, A. A., Selvy, N. A., dan Rizqi, M. H. R. (2025). Edukasi kesehatan dan pemberian makanan tambahan puding daun kelor sebagai upaya pencegahan stunting pada balita. *Jurnal Abdimas Indonesia*, 7(1), 1–7.
- Millah, R. L., Handayani, H., Fadillha, S. R., Triapriliawati, M., and Yulianti, N. A. (2023). Analysis of the effect of parenting patterns on the character in RA al-Iqro Cigugurgirang. *Cakrawala Dini: Jurnal Pendidikan Anak Usia Dini*, 14(1), 33-42.
- Ningsih, N. S. R., Zahra, F., Syaifuddin, M. D. A., Wulan, F. A., Sunarti, S., Azmi, P., Apriliani, B. A., Hawari, B. S. Z. A. Z., Prayoga, G. S., dan Pratama, D. N. A. (2025). Pemberdayaan masyarakat desa Bugbug dalam pencegahan stunting melalui edukasi peningkatan gizi anak dan pelatihan pembuatan nugget daun kelor (*moringa oleifera*). *Jurnal Wicara Desa*, 3(2), 227–234.
- Niswar, D., dan Kasmawati, K. (2025). Sosialisasi pemanfaatan puding daun kelor sebagai makanan pendamping asi dan gizi untuk mencegah stunting. *Jurnal ABDINUS: Jurnal Pengabdian Nusantara*, 9(2), 312–322.

- Noor, F. A., and Sari, A. R. (2022). Impact of practical life on montessory method on the concentration of children in TK PKK Bhakti Tamanan. *Cakrawala Dini: Jurnal Pendidikan Anak Usia Dini*, 13(2), 91–98. <https://ejournal.upi.edu/index.php/cakrawaladini/article/view/47032>
- Nurhasanah, N., Rachmayani, I., Suarta, I. N., and Arifamahira, Y. (2024) Analysis of the clean and healthy lifestyle program implementation in the city of Mataram. *Cakrawala Dini: Jurnal Pendidikan Anak Usia Dini*, 15(1), 31-40.
- Prasetyo, Y., Permatasari, P., and Susanti, H. (2023). The effect of mothers' nutritional education and knowledge on children's nutritional status: A systematic review. *International Journal of Child Care and Education Policy*, 17, 1–16. <https://doi.org/10.1186/s40723-023-00114-7>
- Puspitasari, S. A., Mulyani, E., Norma, R., Aditia, R., Afifah, R. N., Marifah, S., Mubarak, S. S., Yosika, W., dan Restiani, Y. (2024). Pemanfaatan daun kelor sebagai olahan makanan "Moringa Cookies Bar (Mocoobar)" untuk mencegah stunting. *SELAPARANG: Jurnal Pengabdian Masyarakat Berkemajuan*, 8(3), 2588–2599.
- Putri, R. J., Halid, N. H. A., Himaniarwati, H., Baco, J., Mutma'innah, P., Indriani, F., Sari, S., Ningsih, R., dan Mutiara, M. (2024). Literasi gizi melalui pemanfaatan dalam pengolahan daun kelor untuk pencegahan stunting pada anak di desa Pangan Jaya kecamatan Lainea kabupaten Konawe Selatan. *Jurnal Mandala Pengabdian Masyarakat*, 5(1), 123–127.
- Rauf, E. U. T., Wisnaningsih, W., Juwita, F., Kusumastuti, R. R. H., dan Pradana, K. C. (2024). Pemanfaatan daun kelor yang ditangani untuk menurunkan angka stunting di desa Tejang Pulau Sebesi. *Jurnal Abdi Masyarakat Saburai (JAMS)*, 5(01), 11–19.
- Rikandi, M., Lamona, A., dan Sari, W. K. (2022). Pemanfaatan daun kelor sebagai upaya pencegahan kejadian stunting pada anak usia pra sekolah di Tk 'Aisyiyah 6 Padang. *GEMASSIKA: Jurnal Pengabdian Kepada Masyarakat*, 6(1), 47.
- Sari, F. Y., Majid, N. K., Laraswati, D., Kalimasadha, P. P., Al Shammy, M. A., dan Sukamto, I. S. (2025). Edukasi pemanfaatan daun kelor untuk pencegahan stunting di wilayah kerja puskesmas Gambirsari kota Surakarta. *Edukasi Masyarakat Sehat Sejahtera (EMaSS): Jurnal Pengabdian Kepada Masyarakat*, 7(2), 6–13.
- Sari, S. F., Prayogo, M. S., ADR, A. Z., Akmalina, N. I., Hariyanti, M., Mubarroq, A. S., Annisa, T. N., Latifah, I., dan Hasanah, W. (2025). Strategi pencegahan stunting melalui pelatihan pengolahan PMT berbasis bahan lokal dengan metode Participatory Action Research. *Menulis: Jurnal Penelitian Nusantara*, 1(8), 476–484.
- Schlunegger, M. C., Zumstein-Shaha, M., and Palm, R. (2024). Methodologic and data-analysis triangulation in case studies: A scoping review. *Western Journal of Nursing Research*, 46, 611–622. <https://doi.org/10.1177/01939459241263011>
- Susanti, A., Mayasari, E., Kasumayanti, E., ZR, Z., dan Za, A. F. S. (2024). Manfaat kelor (moriga oleifera) sebagai upaya pencegahan stunting pada anak usia dini. *Jurnal Ners*, 8(1), 347–351.
- Susilawati, S., dan Diana, D. (2024). Implementation of practical life learning in developing independence character in children aged 4-5 years. *Cakrawala Dini: Jurnal Pendidikan Anak Usia Dini*, 15(2), 149-160.