

## Training on Procedures for Selecting and Processing Healthy Food as One of the Implementations of the Healthy Kitchen Program to Address Stunting

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### ABSTRACT

This Community Service activity aims to improve the knowledge and skills of mothers with toddlers and Posyandu (Integrated Service Post) cadres in selecting healthy food ingredients and in processing them to maintain nutritional value. The implementation method uses a participatory approach, including interactive lectures, group discussions, demonstrations of nutritious cooking menus, and evaluation through pre- and post-tests. The activity was attended by 35 participants, consisting of 25 mothers of toddlers and 10 Posyandu cadres. The results of the activity showed a 35% increase in participants' knowledge after the training, as well as an increased ability to prepare balanced menus using local ingredients. This activity supports the implementation of the DASHAT program by empowering families and cadres as agents of nutritional change at the household level.

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## INTRODUCTION

Stunting is a form of chronic malnutrition characterized by a child's height below usual growth standards due to long-term malnutrition, repeated infections, and a lack of psychosocial stimulation (Data, 2025; Nurulliah, 2025; Simarmata & Patriawati, 2024). This condition typically occurs from conception to age 2, known as the golden period or the first 1,000 days of life (HPK). The impact of stunting includes not only impaired physical growth but also delayed cognitive development, decreased productivity, and an increased risk of non-communicable diseases in adulthood (De Onis et al., 2013; Suryanegara et al., 2023). According to the 2022 Indonesian Nutritional Status Survey (SSGI), the prevalence of stunting in Indonesia reached 21.6%, a decrease from 24.4% in 2021 but still far from the national target of 14% by 2024 (SSGI 2024: *National Stunting Prevalence Decreases to 19.8%*, 2025). West Java Province has a stunting rate of 20.2%, while Bogor Regency is a priority area with a high prevalence, especially in rural areas such as Gunung Pancar (Data, 2025; *Summary of 100 Priority Districts/Cities for Stunting Intervention - TP2S*, 2025). The leading causes of stunting in this region include lack of balanced nutritional intake, low maternal knowledge about nutritious food, limited access to quality food, and suboptimal parenting practices (Banjarmasin & Asuh, 2021; Saputra et al., 2023; Zen Rahfiludin et al., 2018).

One of the government's strategic approaches to accelerating stunting reduction is the Healthy Kitchens to Overcome Stunting (DASHAT) program, initiated by the National Population and Family Planning Agency (BKKBN). This program empowers communities by managing healthy kitchens using local resources to improve families' knowledge and skills in providing balanced, nutritious meals for pregnant and breastfeeding mothers and toddlers (Almeida et al., 2021; Politano & López-Berboa, 2020). The DASHAT approach emphasizes the synergy between nutrition education, food processing, and changes in family consumption behavior (Amelia, 2020; Ophie & Tjarono, 2019). Mothers with toddlers and integrated health post (Posyandu) cadres are important target groups for the DASHAT program because they play a direct role in fulfilling nutritional needs and monitoring children's growth and development (Apriani, 2018; Hatijar, 2023). However, various studies show that most communities, especially in rural areas, still have low levels of nutritional literacy. Many mothers are unaware of the principles of "Isi Piringku" (My Plate), the composition of a balanced diet, or how to choose safe, high-quality food ingredients. Furthermore, improper food processing practices such as repeated oil use, cooking at high temperatures for too long, or excessive washing can reduce the nutrient content of foods (Ernawati et al., 2013).

Research shows that nutrition education interventions accompanied by hands-on practice can improve mothers' ability to prepare balanced, nutritious meals and help reduce stunting rates at the community level (*Indonesia Launches Free Meals Program to Feed Children and Pregnant Women to Fight Malnutrition* | AP News, 2025). For example, training activities that integrate cooking demonstrations, interactive discussions, and family support have been shown to increase consumption of animal protein and vegetables among toddlers (Maulina & Rachmayanti, 2021; Zen Rahfiludin et al., 2018). Therefore, training on healthy food selection and processing procedures should be conducted sustainably, with active community involvement. Gunung Pancar Village, Babakan Madang District, Bogor Regency, is an area with abundant local food potential, including green vegetables, tempeh, tofu, freshwater fish, and tropical fruit. However, this potential has not been optimally utilized due to limited community knowledge about nutritional value and proper processing techniques. Through this community service activity, a team of lecturers and students from the Faculty of Medicine and Public Health, Universitas Kristen Indonesia (UKI), in collaboration with the Gunung Pancar Community Health Center, conducted training on "Procedures for Selecting and Processing Healthy Food as an Implementation of the DASHAT Program."

This training aims to improve the knowledge and skills of mothers and integrated health post (Posyandu) cadres in selecting nutritious foods, understanding the principles of balanced nutrition, and preparing food to maintain its nutritional content. Thus, this activity is expected to strengthen the capacity of families and cadres, who are the spearheads of community-based stunting prevention, and to support the achievement of the national target to accelerate stunting reduction in Indonesia.

## **IMPLEMENTATION AND METHODS**

### ***Time and Venue***

The activity was held in February 2024 at the Gunung Pancar Village Hall, Babakan Madang District, Bogor Regency.

### ***Participants***

Participants included 35 people: 25 mothers with toddlers and 10 Posyandu (Integrated Service Post) cadres from the Gunung Pancar area.

### ***Activity Methodology***

The implementation method used a participatory approach, consisting of:

1. Interactive lecture: Presentation of material on the concept of balanced nutrition, the importance of meeting macro and micronutrient needs, and the dangers of malnutrition for child growth and development.
2. Group discussion: Participants discussed family eating habits and challenges in providing nutritious food.
3. Healthy cooking demonstration: Practical training on selecting local ingredients and techniques for washing, cutting, and processing to ensure nutritional value is maintained.

4. Pretest and posttest evaluation: Conducted to assess participants' knowledge improvement after the training.
5. Mentoring and follow-up: Posyandu cadres were encouraged to integrate nutrition messages into routine Posyandu activities.

### ***Tools and Materials***

Educational aids included balanced nutrition posters, DASHAT leaflets, short educational videos, and simple cooking utensils. The ingredients used included green vegetables, fish, eggs, tempeh, tofu, and local fruits.

### ***Data Analysis***

Pretest and posttest results were analyzed descriptively to determine improvements in participants' knowledge scores.

## **RESULTS AND DISCUSSION**

This community service activity was held in February 2024 at the Gunung Pancar Village Hall, Babakan Madang District, Bogor Regency, in collaboration with the Gunung Pancar Community Health Center and local village officials. Thirty-five participants, including 25 mothers with toddlers and 10 integrated health post (Posyandu) cadres from several hamlets around Gunung Pancar, participated.

The activity lasted one day and was divided into several sessions:

1. Session 1  
Interactive Education and Lecture: Presentation of material on the concept of balanced nutrition, the role of nutrition in preventing stunting, and the principles of "Isi Piringku" (My Plate). A team delivered the material of nutrition and public health lecturers from the Christian University of Indonesia.
2. Session 2  
Group Discussion and Identification of Local Nutritional Problems: Participants discussed family eating habits, the availability of local food ingredients, and challenges in preparing nutritious food.
3. Session 3  
Healthy Cooking Demonstration and Training: Practical activities focused on selecting local ingredients, proper washing and cutting techniques for vegetables, and cooking using steaming and light stir-frying methods to maintain nutritional value.
4. Session 4  
Pretest and Posttest Evaluation: Participants' knowledge was measured before and after the training using a simple 15-question questionnaire about balanced nutrition and healthy food preparation.
5. The evaluation results showed a significant increase in knowledge across all learning indicators.

**Table 1. Increase in Knowledge of DASHAT Gunung Pancar Training Participants (n=35)**

No	Knowledge Indicators	Before Training (%)	After Training (%)	Improvement (%)
1	Understanding the principles of balanced nutrition	45	82	+37
2	Able to select nutritious food ingredients	52	88	+36
3	Understanding how to prepare healthy foods	48	83	+35
4	Able to prepare a balanced menu for toddlers	40	78	+38
5	Awareness of the dangers of nutritional deficiencies	50	86	+36

The average increase in knowledge scores reached 36.4%, indicating that the training was effective in enhancing participants' understanding of the importance of balanced nutrition and healthy food processing techniques. In addition to increased knowledge, observations also showed improvements in participants' practical skills in preparing balanced menus using local ingredients such as tempeh, catfish, green vegetables, and tropical fruits. The Posyandu (Integrated Service Post) cadres who attended expressed their commitment to continuing similar activities through healthy cooking demonstrations during monthly Posyandu activities. The village government also plans to support the sustainability of these activities through integration with the Village Healthy Kitchen program.



**Figure 2. Documentation of Activities**

This training activity demonstrated that hands-on nutrition education was highly effective in improving the knowledge and skills of mothers and integrated health post (Posyandu) cadres. This aligns with the research findings of Fitriani et al. (2023), which showed that nutrition training accompanied by demonstrations and group discussions increased nutritional knowledge by 30–40% among mothers of toddlers in rural areas (Fitriani, 2015). The increased knowledge of participants regarding healthy food selection indicates that educational interventions can improve the community's ability to select sources of protein, complex carbohydrates, and vegetables and fruit as sources of vitamins and minerals (Ernawati et al., 2013). Knowledge about the combination of food ingredients on a family's plate is crucial because most participants previously focused solely on carbohydrate sources (white rice), with limited consumption of side dishes and vegetables. According to the *Isi Piringku* guidelines from the Indonesian Ministry of Health, a balanced diet includes 50% fruits and vegetables and 50% staple foods and side dishes. Prior to the training, only around 40% of participants were aware of this concept. After the training and live demonstration, understanding increased to over 80%. This finding is consistent with the research of Wahyuni, et al (2023) who reported that nutritional literacy can increase significantly after providing visual materials and direct practice through community cooking workshops (Wahyuni et al., 2023)

In terms of skills, the training also had a positive impact on food processing practices. Most participants stated that they had just learned that cooking techniques such as steaming and quick stir-frying can maintain vitamin and mineral levels better than frying in a lot of oil. This is supported by research by Sari, et al. (2025), which showed that vitamin C and B complex levels decrease by up to 40% when food is processed at high temperatures or repeatedly in oil (Sari et al., 2025). This training activity also contributed to strengthening the implementation of the Healthy Kitchen Program to Overcome Stunting (DASHAT) at the village level. This program aims to optimize the role of families in meeting nutritional needs by utilizing local resources. The results showed that 85% of participants felt motivated to apply the DASHAT menu in their respective homes. A community-based educational approach has been shown to increase the sustainability of healthy behaviors compared to solely information-based interventions.

In addition to increasing knowledge, this activity also strengthens the network between Posyandu cadres and village officials in integrating nutrition messages into community activities. According to Mursyidah (2024)), Posyandu cadres have a strategic role as agents of nutritional behavior change due to their social closeness and high level of trust in the community (Mursyidah, 2024). By increasing the capacity of cadres through training like this, the sustainability of nutrition education can be maintained at the grassroots level. In general, this training supports the concept of community empowerment in stunting prevention. Approaches based on local practices, such as the use of typical Gunung Pancar foods (tempeh, cassava, moringa leaves, and freshwater fish), have a greater impact because they are easily accepted and implemented by the community.

The limitations of this activity were the relatively short implementation time and the lack of long-term follow-up to assess changes in household consumption behavior. However, the commitment of participants and the support of the village government created opportunities for program sustainability through cross-sector collaboration (village, community health center, and BKKBN). Therefore, the results of this activity demonstrate that participatory nutrition training, such as the Healthy Food Selection and Processing Training, effectively increases nutritional literacy, practical skills, and public awareness in preventing stunting through a family- and community-based approach.

## CONCLUSIONS AND RECOMMENDATIONS

Training on healthy food selection and preparation has successfully improved the knowledge and skills of mothers and integrated health post (Posyandu) cadres in Gunung Pancar in preparing and preparing balanced, nutritious menus. This program contributes to the implementation of the Healthy Kitchen to Overcome Stunting through an educational, participatory, and local food-based approach.

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