



## Demonstration Of Supplementary Food Preparation Using Tempe and Moringa Pudding

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### ABSTRACT

Nutritional problems are still the main health issue in Indonesia, including in Labibia Village, Mandonga District, Kendari City. Cases of Chronic Energy Deficiency (KEK) in pregnant women and toddlers T in toddlers show the need for community-based nutrition interventions. One of the efforts made is through a demonstration of making Supplementary Feeding (PMT) made from local ingredients "Moringa Lumen Tempeh Pudding" as a form of empowerment and practical nutrition education for pregnant women, mothers under five, and posyandu cadres. This activity aims to increase participants' knowledge and skills in processing nutritious local food into healthy and attractive menus. The implementation method includes nutrition counseling and hands-on practice of making PMT by involving the community in a participatory manner. The results of the activity showed an increase in participants' understanding of the benefits of tempeh and moringa leaves as a source of protein, vitamins, and minerals to prevent KEK and Toddler T. In addition, participants were able to repractice recipes independently at home. This program has a positive impact on improving family skills in providing nutritious food and encouraging the use of local food as a food security strategy and sustainable nutrition improvement at the household level.

**Keywords:** Community Empowerment; Local PMT; Tempeh; Moringa; Maternal and Toddler Nutrition

### INTRODUCTION

Nutrition problems are still an important health issue in Indonesia, including in the Labibia Village area, Mandonga District, Kendari City. Cases of Chronic Energy Deficiency (KEK) in pregnant women and toddlers are still quite common in the community. This condition is generally caused by a lack of nutritional knowledge, economic limitations, and an unbalanced diet. According to data from the Southeast Sulawesi Provincial Health Office in 2022, more than 2,000 pregnant women were recorded to experience SEZs and nearly 2,000 babies were born with low body weight. In addition, the results of the 2021 Indonesian Nutrition Status Study (SSGI) show that the prevalence of stunting in Southeast Sulawesi reaches 30.02 percent, making it one of the provinces with the highest number of nutritional problems in Indonesia (Health Development Policy Agency, 2024).

In an effort to overcome this problem, students of the Nutrition Study Program, Faculty of Public Health, Halu Oleo University carried out a Demonstration of Making Supplementary Feeding (PMT) made from local ingredients in the form of Moringa Moss Tempeh Pudding in Labibia Village. This activity aims to improve the knowledge and skills of the community, especially pregnant women, mothers under five, and posyandu cadres, in utilizing highly nutritious local food as an effort to prevent SEZs and improve nutrition in toddlers.

The use of local food ingredients such as tempeh and moringa leaves is the main focus because these two ingredients are easy to obtain, cheap, and have high nutritional content. Tempeh is a source of vegetable protein that is rich in

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essential amino acids and iron, while moringa leaves contain vitamin A, vitamin C, calcium, and antioxidants that play an important role in preventing malnutrition (Isnaningsih & Syarif, 2020). Processed innovations in the form of pudding were chosen because they are easy to make, are liked by children, and are suitable as nutritional supplements for pregnant women and toddlers.

## LITERATURE OR CONCEPTUAL REVIEW

Local food has an important role in efforts to improve the nutritional status of the community because it is easy to obtain, affordable, and has a high nutrient content. According to Isnaningsih & Syarif (2020), tempeh as a fermented food is a source of vegetable protein rich in essential amino acids, iron, fiber, and bioactive compounds that support the health of pregnant women and the growth and development of toddlers. The fermentation process in tempeh also increases the bioavailability of nutrients so that it is easier for the body to absorb than unprocessed soybeans.

Moringa leaves (*Moringa oleifera*) are known as one of the foods with a high micronutrient content. Moringa leaves contain vitamin A, vitamin C, calcium, iron, and antioxidants that play a role in preventing anemia, increasing immunity, and supporting children's growth. Research shows that the consumption of food made from moringa leaves can be used as an effort to improve nutritional problems in the community, especially areas with high rates of stunting and chronic energy deficiency.

In addition, an educational approach based on cooking demonstrations is one of the effective methods in improving the practice of selecting and processing nutritious food. The demonstration method has also been proven to improve participants' practical skills, improve consumption behavior, and strengthen family nutrition knowledge (Ministry of Health of the Republic of Indonesia, 2021). This kind of activity is relevant in the context of community empowerment, where the active involvement of participants is key in creating sustainable behavior change.

## MATERIALS AND METHODS

This service activity is part of the Community Empowerment Program carried out by students of the Nutrition Study Program, Faculty of Public Health, Halu Oleo University, in Labibia Village, Mandonga District, Kendari City. This activity was attended by 15 participants consisting of posyandu cadres and mothers who have toddlers. The implementation was carried out through counseling and nutritional demonstrations regarding the manufacture of Supplementary Food (PMT) made from local ingredients, namely Moringa Moss Tempeh Pudding.

The counseling was delivered interactively by explaining the importance of balanced nutrition, the benefits of tempeh as a source of vegetable protein, and the content of moringa leaves which are rich in iron and vitamins. After the counseling session, participants were invited to practice directly the process of making pudding, from processing ingredients to serving. The activity was closed with a discussion and distribution of recipe leaflets.

## RESULTS AND DISCUSSION

This counseling and demonstration activity was attended by posyandu cadres and mothers who have toddlers in Labibia Village, Mandonga District, Kendari City. The number of participants who attended was 15 people, consisting of 10 mothers of toddlers and 5 posyandu cadres. The activity will be held on September 17, 2025 at 09.00 WITA at the Labibia Posyandu Cadre House. The

implementation of the activity began with nutritional counseling on Chronic Energy Deficiency (SEZ) in pregnant women and nutrition for toddlers T, followed by a demonstration of making Supplementary Food Feeding made from local ingredients in the form of Moringa Moss Tempeh Pudding. Participants seemed enthusiastic about participating in the activity and actively discussing the material presented.

The counseling material focuses on the definition of SEZs, causative factors, and how to prevent them through fulfilling balanced nutritional needs during pregnancy. In addition, the implementation team also provided education about the importance of nutrient intake such as protein, iron, vitamins, and minerals for the growth of toddlers T. During the demonstration of making PMT, participants looked active and excited to try the recipes taught themselves. The main ingredients such as tempeh and moringa leaves are explained to contain protein, iron, calcium, and vitamins A and C which are beneficial for pregnant women and toddlers.

The results of the activity showed an increase in the knowledge and skills of the participants. Posyandu women and cadres have become more aware of the importance of balanced nutrition and are able to practice how to make simple PMT from local ingredients. In addition, participants also assessed that Moringa Moss Tempeh Pudding has a taste that children like and is easy to make at home. These findings show that demonstration-based educational activities can have a positive impact on family nutrition understanding and practice, as well as support the use of local foods as an alternative to nutritious supplements.

## CONCLUSIONS

The counseling and demonstration activities for making Supplementary Food Feeding made from local ingredients in the form of Moringa Moss Tempeh Pudding went well and received a positive response from the participants. Participants gained new knowledge about the importance of balanced nutrition as well as skills in processing local ingredients into nutritious supplements.

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Not to forget, appreciation is given to all parties who have provided support both morally and materially, so that this activity can be carried out smoothly. Hopefully this collaboration will continue and provide real benefits for the community in improving nutritional knowledge and preventing Chronic Energy Deficiency (SEZ) and improving the nutrition of toddlers in Labibia Village.

## Conflict of Interests

The authors declared that no potential conflicts of interest with respect to the authorship and publication of this article.

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