

## UTILIZATION OF LOCAL FOOD INGREDIENTS AND SPICES TO MEET NUTRITIONAL REQUIREMENTS, STRENGTHEN IMMUNITY, AND ADDRESS MINOR AILMENTS IN HOUSEHOLDS

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### Abstract

The Baitul Maal Foundation of PLN (YBM PLN) Research Institute, located at Jl. PLN Duren Tiga no. 102, Pancoran, South Jakarta, has dozens of fostered families who are underprivileged families in the surrounding area. Scholarships for schoolchildren have been in place as a sort of guidance. Students fostered by YBM PLN require nutritional support to help them learn in school and strengthen their immune systems. As a result, community service and education activities that reinforce the concept of eating healthy and nutritious foods as part of a clean and healthy living behaviour (PHBS) are essential. As a result, there is a greater understanding and awareness of the need of proper nutrition for child development, particularly throughout the school years. Fulfilling family nutrition needs, beginning with nutritious and balanced home meals in combination with Indonesian herbs, will boost immunity, prevent disease, and promote students' learning activities.

**Keywords:** Nutrition, Spices, Immunity, School-Age, Education

### INTRODUCTION

The Baitul Maal PLN Foundation (YBM PLN), previously known as LAZIS PLN, was founded in 2006 with the purpose of gathering zakat, infaq, shodaqoh, and waqf (ZISWAF) contributions from the Muslim community and other legitimate sources of funds. The deployment of ZISWAF collection proceeds is determined by the priority ranking of mustahik (persons who are eligible to receive zakat) and may be allocated for productive enterprises. In addition, efforts are underway to improve the quality of zakat collectors. All YBM PLN Amil have taken training and competency examinations administered by the National Agency for the Assessment and Application of Technology (BNSP). As a result, YBM PLN Amil has been granted recognized professional accreditation in professional and standardized zakat fund management. YBM PLN aspires to be a premier ZIS (zakat, infak, shadaqoh) management institution within PT PLN (Persero) by empowering Mustahik (persons who are eligible to receive zakat) to become muzakki (persons who pay it).

YBM PLN Research Institute, located at Jl. PLN Duren Tiga No. 102, Pancoran, South

Jakarta, supports 72 underprivileged foster families. The prevailing form of guidance has been the allocation of scholarships for school students.

To facilitate educational activities and enhance immunity, students must have their nutritional requirements adequately fulfilled (Burrows et al, 2017; Reuter et al, 2020). Therefore, it is essential to implement community service and education activities that promote the adoption of healthy and nutritious eating habits, as well as Indonesian herbs to support immunity as an integral component of a clean and healthy living behaviour (PHBS) (Childs et al, 2019; Nurjanah & Wijanarko, 2022; Hasanah et al., 2024).

Community Service Activities are activities that help to bridge the gap between the world of education and society. Higher Education Institutions that are confronted with societal problems, such as the fostered families of YBM PLN Research Institute, can respond to the concept of consuming healthy and nutritious foods (WHO, 2021). Community Service appears to be the answer to these issues: there remains a deficiency in comprehension concerning health, particularly in the consumption of wholesome and nutritious food as an integral component of a clean and healthy lifestyle (Childs et al., 2019; Nurjanah & Wijanarko, 2022).

## **IMPLEMENTATION METHOD**

This Community Service activity employs skills and knowledge education to promote the utilization of local food ingredients and spices for nutritional fulfillment, immunity enhancement, and the treatment of minor illnesses within families. The education comprised the following stages: Needs Analysis; Planning, which involves preparing Knowledge Sharing materials; Implementation, including pre-tests, lectures, discussions, demonstrations, practical exercises, and post-tests using visual media and tangible objects; and Reflection, consisting of activities conducted with the team and partners.

A needs analysis was conducted through discussions among instructors, YBM secretaries, and potential participants. A potential approach to addressing the lack of awareness about the significance of consuming healthy and nutritious foods as part of a clean and healthy lifestyle is outlined. The intended participants for the education sessions were mothers from families supported by the YBM PLN Research Institute. Women's roles in food procurement and dependent care position them as the primary architects of family health. Mothers, socialized to oversee both the physical and social development of children, serve as the primary agents of health promotion, profoundly influencing the long-term productivity and health of the family unit (Victoria et al., 2008; Childs et al, 2019; Hasanah et al., 2024).

The preparation entailed organizing the educational session and materials that address the participants' needs, emphasizing the significance of nutrition, local foods, and spices that can enhance immunity and alleviate minor ailments.

The community service was carried out at the YBM Office Masjid Baitussalaam PLN Puslitbang Jl. PLN Duren Tiga No. 102, Pancoran, South Jakarta, on Saturday, April 27, 2025. There are two distinct themes: The Use of Local Food Ingredients for Nutritional and Immunity Enhancement, and The Use of Local Spices as Immunity Boosters and Remedies for Minor Ailments within Households. The Children in Indonesia are at significant risk of malnutrition. Malnutrition impedes the potential and squanders the lives of Indonesian youngsters, an occurrence that is unacceptable (UNICEF, 2021). An optimal diet fosters a

robust physique, reducing susceptibility to sickness. Inadequate nutrition results in impaired growth, a compromised immune system, and increased susceptibility to infections. (Calder, 2013; Katona & Katona-Apte, 2008). The herbs that boost immunity include ginger, turmeric, clove, fragrant ginger, galangal, nutmeg, cinnamomum and lemongrass (Hasanah et al., 2024).

Prior to the dissemination of the educational content, the participants completed the pretest. The activity was conducted via face-to-face educational workshops to augment health awareness. The alternative techniques included demonstrations, practical exercises, and conversations utilizing visual media. A post-test was subsequently administered to assess the enhancement of knowledge.

The target outcome of this education session was to increase understanding and awareness of health, particularly regarding the consumption of healthy and nutritious food as part of a clean and healthy lifestyle.

## RESULTS AND DISCUSSION

The outcome is to increase understanding and awareness of the significance of proper nutrition for child development, particularly during school age. Meeting family nutritional requirements through nutritious and well-balanced home-cooked meals, as well as utilizing local herbs, will enhance immunity, prevent disease, and facilitate students' learning activities.

**Table 1. Pretest–Posttest Result**

Test	Average (Mean)	Deviation Standard	Number of Participants
Pretest	8.09	1.312	31
Postets	9.01	0.996	31

Based on the table above, the mean increased from 8.09 to 9.01. This suggests that the intervention was effective. On average, the group was scoring nearly a full point higher on the posttest than they did on the pretest. In the pretest, the scores were more spread out, meaning there was a wider gap between the high-achievers and those struggling. In the posttest, the scores are more tightly clustered around the average. This indicated that the lower-scoring participants likely improved, closing the gap with the rest of the group.

Through this community service, it is emphasized that preparing nutritious meals at home, selecting wholesome and diverse components, and establishing adequate nourishment for the entire family are essential (Glanz et al., 2021; Ruel et al., 2021; Leroy et al., 2025). It is also instructed to youngsters in proper dietary practices from a young age (Vidgen & Gallegos, 2023). The example of daily menus based on local food is stated in Table 2. Using a variety of food colors in daily meals is not only aesthetically appealing but also scientifically linked to improved nutrient intake. Studies demonstrated that color diversity in meals serves as a proxy for dietary diversity, ensuring a broader spectrum of vitamins, minerals, and phytochemicals essential for family nourishment (König & Renner, 2018; Kobayashi & Thielecke, 2024).

**Table 2. Example of Daily Menus Based on Local Food**

Time	Local Food / Combination	Supporting Source
Breakfast	Corn rice + stir-fried moringa leaves + omelet	Hidayat et al, 2021; Divya et al., 2021; Acharya & Gatade, 2020
Lunch	White rice + grilled tilapia + spinach + papaya	Karim, 2024; Bainy et al., 2015; Moorthi, 2023; Lanjhiyana, 2024
Dinner	Rice + clear soup + fried tempeh + papaya	Karim, 2024; Astuti et al., 2023; Lanjhiyana, 2024
Snack	Mung bean porridge/ boiled banana/ cassava tape	Mahgoub et al., 2020; Kumar et al., 2023; Syafitri et al., 2022

To boost immunity, the traditional herbal beverage could be prepared with these ingredients:

- 400 ml water
- 1.5 g ginger powder (Edo et al., 2025)
- 2 stalks lemongrass (Kiani et al., 2023)
- ½ lime (Ariani & Muhsin, 2023)
- 20–30 g honey or palm sugar (optional, for sweetness) (Srikaeo, 2018)

Method:

1. Combine water, ginger powder, lemongrass, and lime in a saucepan.
2. Bring the mixture to a boil over medium heat until aromatic.
3. Remove from heat and strain if desired.
4. Add honey or palm sugar to taste while the beverage is still warm

This beverage represents the integration of local, culturally relevant ingredients with scientifically validated nutritional benefits. Ginger and lemongrass contribute bioactive compounds lime enhances vitamin C intake (Edo et al., 2025; Kiani et al., 2023; Ariani & Muhsin, 2023). Palm sugar or honey provides natural sweetness with added functional properties (Srikaeo, 2018). Together, they form a holistic preparation that supports the immune system and aligns with traditional dietary practices.

The findings of this program showed empirical evidence that the objectives of the community service program were effectively realized, as demonstrated by measurable improvements in participants' knowledge and understanding. This cognitive achievement is expected to be translated and applied in health-related attitudes and behaviors, both at the individual and household levels.



**Figure 1. Documentation of Community Service Activities**

## **CONCLUSION**

The outcomes community service held at the YBM Office Masjid Baitussalaam PLN Puslitbang demonstrated that the objectives were effectively achieved, particularly in enhancing participants' knowledge and understanding related to nutrition and healthy living. These improvements are closely aligned with the principles of Perilaku Hidup Bersih dan Sehat (PHBS), which emphasize clean and healthy behaviors at the individual, family, and community levels. By fostering awareness of balanced diets, proper food and beverage preparation, this program contributed to the broader PHBS goals of preventing disease, promoting well-being that can be started from the family. The integration of local food

resources into daily meals further supports PHBS by encouraging diverse, safe, and culturally relevant dietary habits for long-term health improvements.

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