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Chapter 5

Implementation of Digital Education Innovation in Moringa Leaf Gelato (*Moringa Oleifera*) as a Stunting Preventive Effort Starting with Pregnant Women, Postpartum and Breastfeeding Young Mothers and Toddlers

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Abstract: *Stunting is a condition of failure to grow both physically and in the brain due to malnutrition or lack of nutritional intake during a child's growth period. Stunting often occurs in toddlers aged 12-36 months. Toddlers who experience stunting at this stage usually find it difficult to reach optimal height in the following period. The stunting rate in Bandung district is quite high. Moringa is a plant that has high nutritional content, and its leaves can be used as a basic ingredient for processing food or drinks. Efforts to increase nutritional literacy can be done by expanding knowledge about improving eating behavior in children and providing information on Moringa leaf processing. to prevent stunting in the Bandung district with participants being young mothers after giving birth, young mothers who are pregnant, mothers with toddlers and PKK mothers in the local area. This activity aims to increase knowledge by using Moringa leaves. and increasing local community participation to improve the nutrition of toddlers and post-natal mothers so they can use Moringa leaves as additional food or healthy snacks. The results of this activity were seen in the presence of young mothers who were very enthusiastic about getting education in processing Moringa leaves to prevent stunting, and the community was able to differentiate between toddlers who were in the stunting category or in the low height category due to genetic factors, and the community understood this. The benefits of Moringa leaf extract for preventing stunting by using Moringa leaves in everyday life to prevent stunting*

Keywords: *Stunting, Nutritional Literacy, Moringa Leaves, Gelato*

1. INTRODUCTION

According to the World Health Organization (WHO), stunting is a growth and development disorder that generally occurs in toddlers due to chronic nutrient deficiency and repeated infections, characterized by height below standard. The 2021 Basic Health Research (Riskesdas) results show that the prevalence of stunting in Indonesia in 2021 was 24.4%. Fresh moringa leaves contain various nutrients, such as calcium (1077 mg), iron (6 mg), protein (5.1 g), zinc (0.6 mg), vitamin A (6.78 mg), vitamin B1 (0.3 mg), and vitamin C (22 mg). According to Kurniasih, Irwan Arif, and colleagues (2020), the nutrient content of moringa leaves is 10 times higher in vitamin A compared to carrots, 4 times higher in vitamin E compared to corn oil, 2 times higher in protein, 17 times higher in calcium compared to milk, and 25 times higher in iron compared to spinach, based on the nutrient content per 100 grams. It was found that the concentration of several nutrients is higher in the tender top part of the moringa leaves compared to the young and old leaves. The tender leaves, young leaves, and old leaves

of moringa each have different nutrient concentrations, so all can be utilized according to needs (Irwan, 2020; Marhaeni, 2021; Safangat et al., 2013).

As a highly beneficial functional food, moringa leaves play a significant role in improving body nutrition, especially for pregnant women and malnourished children, thus helping to prevent stunting. According to Dr. Theresia Monica Rahardjo in the book "Moringa Leaves," toddlers suffering from stunting can be given processed moringa leaves regularly. Gradually, these toddlers will experience improvement, from severe stunting to moderate, moderate to mild, and mild to normal. According to the Ministry of Health of the Republic of Indonesia (2018), moringa leaves are a plant rich in vitamins and minerals, containing various beneficial substances.

2. PROBLEM STATEMENT

Stunting is a big problem for society and the future of the country. Stunting prevalence in children under five in Southeast Asia amounted to 29.4%, and this problem became the spotlight of the President of Indonesia. The president invites all Indonesian citizens to reduce stunting rates and prevention and when an event was held in the Bandung district, there were reports from PKK cadres that someone was experiencing stunting. From this data, babies and toddlers who were suffering from stunting in Cipagalo Village generally experienced underweight, short/very short growth, and malnutrition (lack of nutrition) or experienced one of these problems. According to several literatures, one of the biggest factors causing stunting is malnutrition (lack of nutrition). And in accordance with the direction of the Indonesian government, we must promote this stunting case, so we, the lecturers, want to make efforts to reduce stunting rates and prevent stunting by increasing people's knowledge of nutritional literacy.

3. OBJECTIVE

- a. To Reduce the Incidence of Stunting: with efforts to reduce the incidence of stunting in the Bandung area, it is hoped that this can contribute to a good reduction in creating a superior generation of Indonesians.
- b. To Prevent Stunting: Make several efforts to prevent stunting, such as conducting outreach to increase knowledge about what causes stunting and how to overcome or prevent it
- c. To Disseminate of Nutritional Literacy: One of the efforts to increase public knowledge, especially among pregnant women, postpartum mothers, breastfeeding mothers and mothers with toddlers, is by providing nutritional literacy and implementing various innovations in Moringa leaf gelato and various Moringa leaf preparations which are rich in benefits and effective in preventing and reducing stunting. With increasing knowledge, it is hoped that this will have an impact on patterns of providing nutritious food.

4. RELATED WORKS

Activity method through community in relation to the placement of nutritional literacy, which is very important for creating and maintaining healthy nutritional status in public. Steps taken are:

4.1 Coordination with the Head of Ciganitri Village

During the first phase, the village head will discuss the issue of stunting. The goal of this collaborative project is explained, which is to help the village tackle this issue by providing nutritional literacy to mothers to prevent and reduce stunting through the utilization of moringa in moringa gelato. Coordination is carried out so that the village head can provide guidance and cooperation related to the implementation of activities, including the time, place, and location.

4.2 Moringa Utilization Counselling

In the second phase, nutritional literacy is provided through counselling on the benefits of moringa leaves in preventing and reducing stunting. The benefits of moringa leaves in gelato preparations were explained. Children under five years old, pregnant women, and breastfeeding mothers can all benefit from the high nutritional content found in moringa leaves. Literacy interventions were conducted through the distribution of leaflets, interactive discussions, and training on making moringa gelato. If you have more than one paragraph, please insert a line spacing between the paragraphs. Do not insert any space before and after the paragraph. Please insert a line spacing after each paragraph, before the next section.

4.3 Moringa Gelato Making Training.

The third phase involves utilizing moringa leaves through training on making supplementary food in the form of moringa gelato that can be given or served to toddlers. The mothers participate in the training activity by gaining hands on experience. Fresh moringa leaves are the main raw material needed to make moringa gelato. The basic preparation steps for making moringa gelato include picking, soaking, and cleaning the leaves to remove dirt.

5. CONCLUSION

This community service is very useful for post-young mothers giving birth, young mothers who are pregnant, mothers with toddlers and local PKK mothers. Indicated by its presence, very enthusiastic and high-spirited from participants were pregnant, postpartum, and women with toddler. So also, with the supporters of this activity, among others, other sub-district heads, local village officials, village midwives, PKK Mobilization Team, CSR PT. Paragons Technology and Innovation and Mass Media Inspira. By increasing nutritional literacy, we carry out activities to expand knowledge about improving eating behavior in children and counselling on processed moringa leaves to make para guests and invitees very interested in following the method of presenting processed moringa leaves to make nutritious gelato. This activity increasingly makes participants and invited guests attracted by its simple methods and tools that are easy to obtain. The purpose and benefits of this activity can be felt directly by participants and invited guests in increasing public knowledge and awareness about the effectiveness of Moringa leaves and how processing Moringa leaves, like how to make them into nutritious gelato, can help people get it.

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8. AUTHORS' CONTRIBUTION

Ika Zakiah approaches and communicates with partners, coordinates internally with the committee and implementation team, coordinates the preparation of proposal drafts, coordinates all activities, fund usage, and evaluation of the research program implementation, and prepares the research program implementation report. Upus Piataun Khodijah coordinates the preparation of research materials, contacts and coordinates research sources, coordinates the review of the content suitability of research materials, compiles, collects, and administers documents and documentation of the training program implementation, assists the leader in preparing the proposal, evaluating the implementation, and preparing the research program implementation report. Henny Noviany Coordinates, prepares, and arranges the format for filling out documents & documentation and evaluation materials for the research program implementation. Coordinates the attendance of researchers and ensures the smooth implementation of the research. Coordinates field staff in the execution of the research program. Prepares the location, facilities, and administration for the research program implementation. Distributes job descriptions to research participants. Assists the leader in approaching and coordinating with partners, preparing the proposal, and evaluating the implementation of the research program.

9. CONFLICT OF INTEREST DECLARATION

We declare that this article is the original work of the Authors and Co-Authors. This article has not been published before and is not under consideration for publication elsewhere. This research/manuscript has not been submitted for publication and has not been published in whole or in part elsewhere. We attest to the fact that all Authors have made significant contributions to the work, validity, and legitimacy of the data and its interpretation for submission to the ICGSPB.

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