

Development of Local Food Processing for Stunting Prevention in the Early Life of Toddlers in Karanganyar Village, Kawalu District, Tasikmalaya City, Indonesia

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ABSTRACT

In Indonesia, stunting continues to be a significant nutritional issue, particularly for young children. Failure to give children the nourishment they need during their crucial early growth and development stages is one of the causes. The activity aims to help mothers and cadres create local food processing to meet their nutritional needs and stop and lessen stunting. Community service occurs in Karanganyar Village, Kawalu District, Tasikmalaya City. The distribution of questionnaires to gauge the level of community knowledge before and following the exercise is one of the activities, along with counseling and training on regional food processing. Following this practice, the posyandu cadres' expertise and abilities changed, making them more equipped to prepare tasty and nutrient-dense snacks from local food sources.

INTRODUCTION

Stunting Failure to reach one's growth potential is due to chronic malnutrition and recurrent illnesses during childhood, and it is brought on by a linear growth disorder and the cumulative effects of poor nutrition, unfavorable health, and bad parenting (Ariyah et al. 2015). According to Unicef, stunting limits a child's physical and cognitive capacity and causes lifelong damage. Children are stunted if their height for age is more than two standard deviations below the WHO Child Growth Standards median (Agung AD et al. (2022). A lack of nutritional intake causes failure to thrive in children under five for a long time and repeated infections. These two factors are influenced by inadequate parenting, especially in 1,000 FTL. The first thousand days of life (1000 FTL) is a phase of life that begins from the formation of the fetus at the time of pregnancy (270 days) until the child is two years old (730 days) (Mulcaire-Jones & Scanlon, 2022). In this period, vital organs (brain, liver, heart, kidneys, bones, hands or arms, legs, and other body organs begin to form and continue to develop. Children are classified as stunted if the length or height per age (TB / U) is less than minus two standard deviations (< -2 SD) standard standards WHO-MGRS (Multicentre Growth Reference Study) (Ministry of Health RI, 2018).

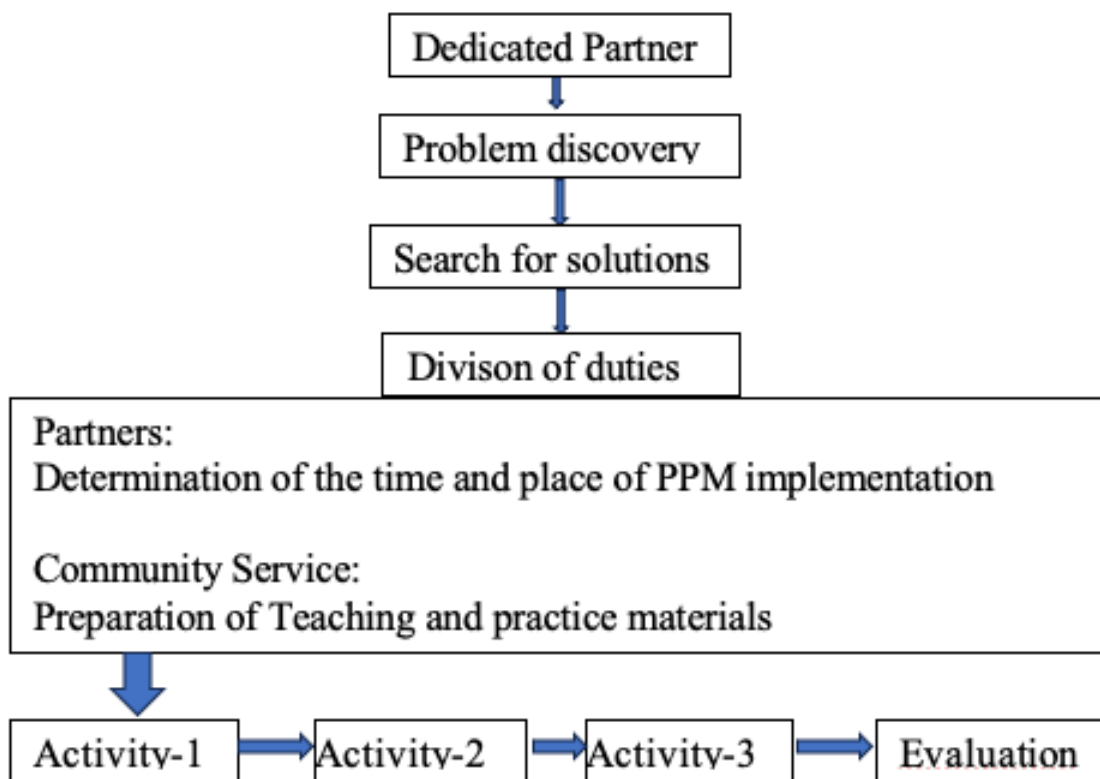
City Tasikmalaya is one of the priority cities for stunting intervention. Accumulatively, in 2022, the stunting prevalence is 22.4 percent. This figure is still relatively high; the Government targets to reduce the stunting rate to below 14 percent in 2024. Karanganyar Village, Kawalu District, located in Tasikmalaya City, makes accessing foodstuffs easy. The mothers can quickly obtain food ingredients such as sweet potatoes and corn and horticulture such as vegetables and fruits such as bananas in the village. Likewise, aquaculture fisheries, such as carp, gourami, tilapia, and catfish, are readily available.

Due to the existence of local food readily available in Karanganyar Village and the problem of stunting, there is a need for specific and appropriate nutritional interventions on food consumed through local foodstuffs. It is expected to solve the problem of preventing malnutrition or stunting. Using local food is the best way to handle stunting because of the abundant raw materials in agriculture. Plenty of local food the community produces has not been optimally utilized in stunting prevention. This local ingredient is a good thing because it has no side effects. Raw materials such as soybeans and cassava, tilapia fish, and other cheap commodities can be processed into materials given to their children.

However, according to Intisari & Rosnina (2019), the abundance of local food sources cannot guarantee the fulfillment of nutrition can be achieved. Lack of knowledge and awareness to be creative and innovative so that local food is attractive to toddlers causes existing resources not to be processed optimally. For this reason, efforts are needed to overcome these problems, one of which is by socializing about food sources of protein and its benefits for toddler growth and development. In addition, food processing training utilizing local food sources must be carried out for mothers of toddlers so that feeding is more varied.

IMPLEMENTATION AND METHODS

From the partners' condition, the community service activities methods include counseling and training on local food processing and disseminating questionnaires to determine the level of community knowledge before and after the exercise. Hence, the way of implementing community service. The activity link scheme can be depicted in the flow chart as follows:



Picture.1 Bagan the Flow Chart

RESULTS AND DISCUSSION

These community service activities in community health improvement schemes began with remarks from the Head of the Community Service Team to mothers under five, posyandu cadres, and local PKK mothers. The number of participants who participated in the service activities was 30 people. The instructor conducted a pretest activity (Figure 1) at the beginning of this counseling by distributing some questions in the existing questionnaire. Pretest activities are carried out to measure the knowledge of mothers under five related to stunting and food that helps children's growth and development.



Figure.2 Filling Out the Preliminary Knowledge Questionnaire of Mothers of Toddlers

Furthermore, the Counsellor provided education regarding stunting, its causes, and prevention. The introduction to stunting here explains the concept of stunting and the characteristics of children with this condition. Counseling on the grounds of stunting contains the leading cause of stunting, namely long-term (chronic) malnutrition. Lack of nutritional intake can occur since the baby is still in the womb because the mother does not meet the nutritional needs during pregnancy. In addition, children whose dietary needs are not met during their growth and development can also experience stunting.

The instructor also gave delivery information about variations in children's growth and development in this activity. The counseling focuses on providing nutritious food, especially animal protein, which is adequate to prevent stunting in toddlers. Healthy and protein-rich local food is conveyed so mothers under five can utilize existing local resources. Figure 2 shows stunting education activities in two different locations.





Figure 3. Stunting counseling activities at two activity locations.



Figure 4. Focus group discussion during extension activities.

Some other perceptions and constraints conveyed by local mothers, namely hereditary conditions that affect children's genetics, are believed to be shared in the local community. In addition, the amount of dose or portion of food needed for children. Another known problem is that it is still dominated by carbohydrates in food presentation for children and the processing of various foods by adjusting to the availability or potential of existing local food.

Therefore, in this counseling activity, several materials were also presented, such as how to process food that is good and appropriate for children. Ideal height and weight that are following the age of the child. This counseling activity also displayed examples of processed foods supporting children's growth and development and preventing stunting. Furthermore, at the end of the service activities, the Counsellor conducted a posttest to measure changes in mothers' knowledge of toddlers. The posyandu cadres also assisted in this activity to help understand the questions given by the service team. An average yield of the ability pretest and posttest is presented in the graph as follows:

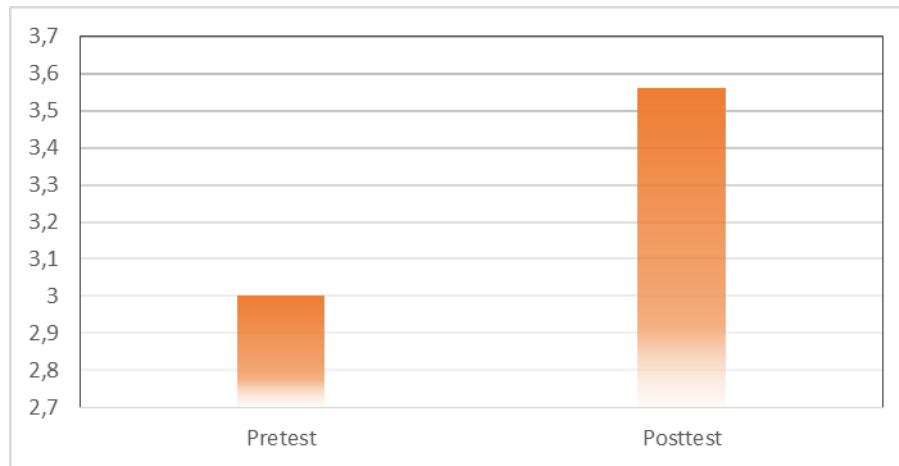


Figure 5. Differences in knowledge before and after counseling

The pretest and posttest posttest give pretty different results. The average knowledge of mothers of toddlers before the encoding activity is in reasonably good condition, namely, knowing stunting and food variations quite well. After this activity, the knowledge of the mothers is in good condition.

Table. 1 Output of Posttest and Pretest

	N	Mean Rank	Sum of ranks
Post- Negative ranks	0	0,00	0,00
Pre Positive ranks	33	17,00	561,00
Ties	0		
Total	33		

The pretest and posttest results showed that the mother's knowledge had increased by showing a positive rank value of 33. In contrast, the opposing ranks and ties were valued at 0, meaning there was no decrease in value or the exact value between the pretest and posttest posttest.

Table. 2 Output of Wilcoxon Test

	Frequency	Median±SD	Min-Maks	P value
	N			
Post	0	5.00±0.98	4-7	0,001
Pre	33	8.00±0.83	6-9	
	0			
Total	33			

The results showed a p-value of 0.001 ($p < 0.05$) with the conclusion that there were differences in maternal knowledge about animal protein and vegetable protein to prevent stunting from before intervention to after intervention by utilizing local food protein sources, with a positive influence indicated by a positive rank value of 33.

Although the Counsellor carried out this activity for a day, it slightly changed mothers' understanding. With the addition of this knowledge, mothers can apply it in their daily lives, especially in preventing stunting among toddlers in Tasikmalaya City.

CONCLUSIONS AND RECOMMENDATIONS

Community outreach activities regarding stunting, delivered using the counseling method and focus group discussions, have gone well. Mothers of toddlers were enthusiastic about this activity and gave an excellent response to the implementation of this activity. Service activities can provide increased new knowledge, especially in preventing stunting through the use of local food in Tasikmalaya City. Programs like these should be continued to help kids and teenagers learn about food so they can contribute to good eating habits by making use of local resources.

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