

HEALTH EDUCATION ABOUT STUNTING AT THE AMANAH MEKAR SERUMPUN COMMUNITY HEALTH CENTER

Hastuti Marlina^{1*}, Sherly Vermita Warlenda²

^{1,2}Universitas Hang Tuah Pekanbaru, Indonesia

hastuti.marlina@htp.ac.id¹

Sherlyvermita13098804@gmail.com²

***corresponding author**

Received: 03-06- 2026

Revised: 17-06-2026

Approved: 25-06-2026

ABSTRAK

Stunting is a chronic nutritional problem that significantly impacts human capital, necessitating integrated interventions at the grassroots level, such as in the Amanah Mekar Serumpun Community Health Center (Puskesmas). This topic was chosen based on the urgency of improving public health literacy and strengthening the role of cadres and health workers in early detection of toddler growth to reduce regional stunting prevalence. This community service activity employed a pre-experimental design with a One-Group Pretest-Posttest Design, combined with interactive health education, processing of local foods rich in animal protein, and quantitative evaluation using structured questionnaires and gain score analysis with 30 participants. The implementation evaluation demonstrated that this discovery-based educational intervention significantly improved mothers' cognitive capacity and cadres' psychomotor skills in independently conducting anthropometric measurements according to standard operating procedures. Overall, this program proved effective in increasing family nutrition awareness and addressing barriers to nutritional adaptation at the household level. However, the limited duration of the intervention underscores the need for follow-up development programs, including digital-based village nutrition clinic models, to ensure continuous and real-time monitoring of toddler growth.

Keywords: Health Education, Stunting, Community Health Centers, Balanced Nutrition, Community Empowerment

INTRODUCTION

Stunting is a global chronic nutritional problem that has a serious impact on the quality of human resources, characterized by a child's length or height being below the standard for their age based on the World Health Organization (WHO) child growth anthropometric indicators. Based on data from the Indonesian Health Survey (IHS) released by the Kemenkes RI, the national prevalence of stunting in 2024 was 19.8%, making it the primary focus of government intervention to achieve the national stunting reduction target, with significant variations in prevalence at the district and city levels in various regions, including Riau Province. The prevalence of stunting in Riau Province is at 20.1%, with a further reduction target set out in the Regional Medium-Term Development Plan to reach 17%. This condition reflects long-term growth disorders that not only affect physical aspects, but also hinder cognitive development, future work productivity, and increase vulnerability to non-communicable diseases in adulthood. Therefore, accelerating stunting reduction requires an integrated, cross-sectoral approach from upstream to downstream, with promotive and preventive efforts as the primary foundation of prevention at the grassroots level (Kemenkes RI, 2023; WHO, 2020).

Integrated Service Posts, as the frontline of community-based public health services, play a strategic role in early detection and regular monthly monitoring of

toddler growth. The Amanah Mekar Serumpun Community Health Center at the local level serves as a crucial intervention hub where mothers, toddlers, and health workers gather to receive growth monitoring services and nutrition counseling. However, the operational effectiveness of Community Health Centers often faces various operational challenges, including limited public health literacy regarding balanced nutritional parenting patterns, low active participation in routine toddler visits, and a lack of in-depth understanding of the long-term impacts of chronic malnutrition. These challenges indicate that interventions based on weight and height measurement alone are insufficient without being accompanied by structured, comprehensive, and ongoing health education for caregivers and parents (Dewi et al., 2021; Rahayu et al., 2022).

Literature reviews over the past decade confirm that community-based health education has proven effective in improving mothers' knowledge, attitudes, and behaviors in preventing and managing stunting independently at home. Research by Christian et al. (2020) shows that nutrition education interventions delivered through an interactive approach in primary health care facilities can improve complementary feeding practices that meet micronutrient adequacy standards. Furthermore, literature from UNICEF and Kemenkes RI (2022) (Kemenkes RI, 2022; Smith et al., 2020) emphasizes that the First 1,000 Days of Life is a critical window during which specific and sensitive interventions must be implemented synergistically. An educational approach that integrates local wisdom and the active involvement of Community Health Center cadres has been shown to have a significant positive impact on improving the nutritional status of toddlers and reducing the incidence of new stunting in both rural and urban areas (Black et al., 2021; Victora et al., 2021).

Based on initial observations and situation mapping in the Amanah Mekar Serumpun Community Health Center work area, specific issues were identified that required immediate intervention through this community service activity. These key issues include the continued presence of toddlers with growth indicators below the red line on the Health Card, mothers' lack of understanding of the importance of providing animal protein from an early age, and cadres' suboptimal use of communicative visual educational media in delivering stunting prevention materials. These obstacles are exacerbated by persistent myths about certain food taboos for pregnant women and toddlers in some local communities, which directly contribute to children's vulnerability to chronic malnutrition and recurrent infections (Lestari et al., 2022; Titaley et al., 2019; Sari et al., 2023; Kusuma et al., 2021).

Referring to the background description and problem identification above, the research questions for this community service activity: what is the level of knowledge of mothers of toddlers regarding the basic concepts of stunting prevention before and after being given education at the Amanah Mekar Serumpun Community Health Center?. In general, the objective of this community service activity is to increase the knowledge, awareness, and skills of mothers of toddlers and health cadres in stunting prevention and management efforts through a comprehensive health education program at the Amanah Mekar Serumpun Community Health Center. Specifically, this activity aims to: (a) evaluate participants' initial level of knowledge before the intervention; (b) provide in-depth education on balanced nutrition, the importance of the 1000 Days of Life, and proper parenting practices; and (c) measuring the increase in participants'

understanding after education to encourage community independence in monitoring children's nutritional status regularly.

ACTIVITY METHOD

The community service program at the Amanah Mekar Serumpun Community Health Center (Puskesmas Amanah) was designed using a pre-experimental design with a One-Group Pretest-Posttest Design, which integrates direct education, interactive discussions, and practical training for cadres and parents of toddlers. This activity focuses on measuring and improving the effectiveness of interventions in increasing knowledge and practical skills in stunting prevention at the household level. The community service team acted as structured facilitators, ensuring that participants systematically went through the initial measurement, intervention, and final evaluation stages using standardized instruments. This intervention method combined health education using communicative visual media such as flipcharts and balanced nutrition posters with the processing of local foods rich in animal protein. Quantitative evaluation was conducted through analysis of changes in scores (gain scores) before and after the intervention (Dewi et al., 2021; Kusuma et al., 2021).

The knowledge levels of toddler mothers were measured through formative and summative evaluations using a descriptive quantitative approach based on pre-test and post-test data comparison. This evaluation aims to objectively measure the extent to which participants' understanding of crucial topics has improved, including the operational definition of stunting, identification of risk factors and chronic causes, understanding the essence of the First 1,000 Days of Life, and the appropriateness of complementary feeding practices that meet micro- and macronutrient adequacy standards. This measurement process is systematically designed to document measurable cognitive changes before and after the educational intervention, allowing for accurate evaluation of the effectiveness of the outreach method (Sari et al., 2023; Titaley et al., 2019).

The primary instrument used to measure the knowledge level of mothers of toddlers is a structured questionnaire that has been empirically tested for validity and reliability. This questionnaire is divided into two main sections: a section on respondents' demographic characteristics (age, education level, and occupation) and a closed-ended knowledge test containing multiple-choice and true-false questions regarding stunting prevention, toddler nutrition management, and utilization of Community Health Centers services. In addition to using written questionnaires for cognitive aspects, the community service team also used anthropometric instruments in the form of an Infantometer tape and Microtoise, as well as participatory observation sheets to assess the cadres' skills in independently conducting early detection of child growth (Kemenkes RI, 2022; Lestari et al., 2022).

The implementation of this community service program is structured into five systematic stages that refer to the Community Health Center community empowerment standard operating procedures: Step 1 (Preparation and Permitting): Conducting administrative coordination with the local Community Health Center, village heads, and Amanah Mekar Serumpun Community Health Center cadres, followed by a preliminary survey, validation of measuring instruments, and preparation of educational materials. Step 2 (Pre-test Implementation): Distributing an initial questionnaire to all mothers of toddlers

present to assess their baseline knowledge and understanding of stunting issues before receiving intervention materials. Step 3 (Interactive Counseling and Education): Presenting comprehensive health materials on stunting prevention, the importance of balanced nutrition, the use of local animal protein, and practical demonstrations of healthy food processing by a team of experts and trained cadres. Step 4 (Post-test Implementation and Evaluation): Re-complete the same questionnaire after the counseling session to measure information retention and increases in knowledge scores, both individually and in groups. Step 5 (Cadre Mentoring and Program Sustainability): Submit the educational guide module, conduct a final evaluation with the Community Health Centerpartner, and formulate a follow-up plan in the form of regular monitoring of toddler growth (Christian et al., 2020; Smith et al., 2020).

RESULTS AND DISCUSSION

The community service program at the Amanah Mekar Serumpun Community Health Center, attended by 30 participants, has resulted in significant changes for individuals, communities, and partner institutions, both in the short and long term. In the short term, this activity increased cognitive awareness and practical understanding among mothers of toddlers regarding the importance of stunting prevention through balanced nutrition management based on local foods. Meanwhile, for long-term impact, increasing the capacity of Community Health Centercadres in early detection of child growth is expected to create an independent and sustainable early warning system for nutrition at the community level (Kusuma et al., 2021; Sari et al., 2023). For academic institutions, this activity strengthens the implementation of the Tri Dharma of Higher Education by downstreaming public health research directly to target groups in need of strategic interventions at the grassroots level.

The achievement of this activity's objectives was realized through interactive outreach methods, demonstrations of the processing of animal protein-rich complementary foods, and technical assistance in participatory toddler growth recording. Indicators of goal achievement were measured using quantitative and qualitative benchmarks, including an increase in the average score (gain score) from the post-test compared to the pre-test, with a target of group learning completion of at least 80% of total participants. Furthermore, operational success was measured by the attendance and active participation of mothers of toddlers during discussion sessions, as well as the ability of Community Health Centercadres to independently operate anthropometric instruments in accordance with standard operating procedures (Dewi et al., 2021; Kemenkes RI, 2022). The following is a summary of activity results:

Table 1. Summary of Quantitative Data on Increased Participant Knowledge

No	Evaluation Indicators	Value/Achievement	Success Target	Status Description
1	Number of Participants (N)	30 people	30 people	Achieved (100%)
2	Average Pre-Test Score	56.4 (scale 0–100)		Initial Baseline
3	Average Post-Test Score	84.2 (scale 0–100)		Significant Improvement
4	Average Gain Score	+27.8 points	≥ 20 points	Achieved

Table 2. Summary of Quantitative Data

No	Evaluation Indicators	Value/Achievement	Success Target	Status Description
1	Group Learning Completion Percentage	86.7% (26 out of 30 people)	$\geq 80\%$	Achieved and Target Met
2	Attendance Rate	93.3% (28 out of 30 invited attendees)	$\geq 80\%$ total attendance	Very Optimal
3	Active Participation of Toddler Mothers During Interactive Discussions	High Category (24 people actively asked questions/gave opinions)	Active Group Participation	Satisfactory
4	Independent Anthropometric Measurement Skills of Cadres	85% of cadres can use measuring instruments according to Standard Operating Procedures	Compliance with technical procedures	Successful
5	Successful Local Food Processing Demonstration	A complementary food menu rich in animal protein was successfully implemented.	Practical Skills	Very Good

The main focus of this activity's output is its applicability, ease of replication, and the utilization of locally available, economically available food ingredients readily accessible to the community at the Amanah Mekar Serumpun Community Health Center. However, this output also has weaknesses, including the limited duration of the outreach, which may not be able to permanently change traditional habits or taboos within a short period of time without regular follow-up support from local health workers (Lestari et al., 2022). Therefore, adapting the communication approach to a more persuasive approach and involving local community leaders is crucial to ensuring that the educational message aligns with the socio-cultural realities of the activity location.

The level of difficulty during this activity was moderate, particularly in aligning the perceptions of participants with diverse educational backgrounds and adjusting the activity schedule to avoid conflicts with the domestic activities of mothers of toddlers. Nevertheless, the production of educational materials in the form of practical modules and visual media has proven to facilitate effective information transfer. There are ample opportunities for further development of this activity through the integration of a simple digital-based monitoring system, further training for cadres on malnutrition management, and stronger cross-sectoral engagement to ensure the sustainability of the comprehensive stunting reduction program (Christian et al., 2020; Smith et al., 2020). The following is documentation of the community service activities.



Figure 1. Group Photo with the Community Service Team



Figure 2. Measuring the Upper Arm Circumference of a Toddler



Figure 3. Measuring Toddler Height and Weight



Figure 4. Registration at Desk One of the Community Health Center



Figure 5. Door prize presentation to one of the participants



Figure 6. Group Photo with Participants



Figure 7. Presentation of Material on Stunting

CONCLUSION

The implementation of community service activities through a health education program on stunting at the Amanah Mekar Serumpun Community Health Center has successfully achieved all the established targets optimally.

1. The results of this activity have proven to have a real positive impact, both for individuals and institutions, as indicated by an increase in the average knowledge score of participants and the achievement of a group learning completion percentage of 86.7%, exceeding the minimum target of 80% of a total of 30 sample participants.
2. From an operational aspect, this program has succeeded in strengthening the capacity of Community Health Center cadres to conduct early anthropometric detection independently and increase critical awareness of mothers of toddlers regarding the importance of fulfilling balanced nutrition and the First 1000 Days of Life (HPK).
3. However, this activity has limitations in the form of a relatively short intervention duration, so it has not been fully able to permanently change habits or cultures of food taboos without further assistance. Therefore, this program holds very prospective development opportunities in the future to be transformed into a digital-based village nutrition clinic model to ensure that toddler growth monitoring can be carried out sustainably and in real-time.

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