



Gampong Aware of Stunting Through Strengthening Health Posts Based on Technology Transfer in Alue Naga, Syiah Kuala District, Banda Aceh

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Abstract: Stunting is a chronic nutritional problem that has long-term impacts on a child's physical and cognitive development. The Indonesian Nutrition Status Survey (SSGI) and the Indonesian Health Survey (SKI) reported that the incidence rate of stunting in Banda Aceh in 2023 was 21.7% (Diskominfo Banda Aceh, 2024). This prevalence rate has decreased compared to the previous year, but the achievement in 2024 still does not meet the target set by the Aceh government, which is 14% (Aceh Social Service, 2024). This highlights the urgency of this activity. The goal of the service is to provide direct and interactive education to the community and to enhance the capacity of posyandu counselors through training, as well as to conduct technology transfer in the form of modules and educational videos about stunting. This service has carried out technology transfer in the form of modules and educational videos about stunting, which are used in training health post counselors with the aim of increasing the knowledge and skills of cadres in educating the community. The measurement results show that training and technology transfer in the form of modules and educational videos increased the knowledge, attitudes, and behaviors of cadres and the community ($p < 0.05$). Strengthening the implementation of this service needs to be carried out through improvements in posyandu procedures and regular monitoring and evaluation. Replication of this service can also be implemented to support program expansion and sustainability.

Keywords: Prevention, Reduction, Stunting, Education Module, Educational Video.

Introduction

Stunting is a condition in young children who fail to grow or whose height is not appropriate for their age, caused by chronic malnutrition. This condition makes children more susceptible to illness and can reduce their productivity in the future. The Global Nutrition Report 2016 reported that Indonesia ranks second among countries with the highest prevalence of stunting in the Southeast Asia region (International Food and Policy Research Institute, 2016). Based on this background, the Indonesian government has designated stunting as one of the priority programs in the Indonesia Medium-Term Development Plan (RPJMN) and aims to reduce the

prevalence of stunting by 14% by 2024 (Republic of Indonesia, 2021). The Coordinating Ministry for Human Development and Culture (2025) reported the results of the Indonesian Nutrition Status Survey (SSGI) indicating that the national prevalence of stunting in 2024 is 19.8%. This figure has not yet reached the set target and thus requires further attention.

The Aceh government adopts the national prevalence targets and carries out various efforts to meet them. The Indonesian Nutrition Status Survey (SSGI) and the Indonesian Health Survey (SKI) state that the incidence of stunting in Banda Aceh in 2023 was 21.7% (Banda Aceh Diskominfo, 2024). This achievement still requires cross-sectoral attention in order to reach the

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target of human development quality in Banda Aceh. Achieving targets needs to be supported by increased public knowledge and awareness about stunting prevention. Therefore, information dissemination must be strengthened both through capacity building of health workers and counselors as well as the use of digital media as a source of information.

This service aims to improve the capacity of posyandu (integrated health service post) counselors through training and the use of modules and educational videos on stunting. The expected outcomes include an increase in knowledge, understanding, and skills of at least 80% of posyandu counselors, as well as an increase in community knowledge that can lead to behavioral changes towards a stunting-aware village. This service supports the achievement of the Sustainable Development Goals (SDGs), particularly SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and SDG 17.

Method

Training activities for the posyandu cadres were carried out on August 16, 2025, attended by 22 cadres at the Alue Naga village hall, Banda Aceh. The activities were conducted using a direct interaction method with the posyandu cadres.

Creation of Educational Modules

The educational module is used in cadre training, aiming to serve as a source of information both during training and in providing ongoing education to the community. This module was prepared by an interprofessional team with backgrounds in nutrition and pharmacy, containing basic concepts of stunting, the role of community health workers in stunting prevention, the golden period of the first 1,000 days of life (HPK), education, and other related materials sourced from various references (Ministry of Health of the Republic of Indonesia, 2017; Ministry of Communication and Informatics of the Republic of Indonesia, 2022; Ministry of Health of the Republic of Indonesia, 2022; Ministry of Health of the Republic of Indonesia, 2023; and Ministry of Home Affairs, 2024).

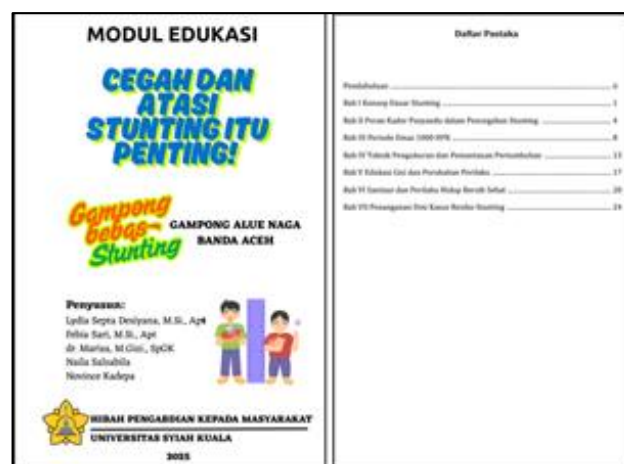


Figure 1. Education Module

Production of Educational Videos

The creation of educational videos was carried out using the Canva application, resulting in 2 (two) videos with durations of 3–4 minutes. The educational videos contained material about stunting and its prevention, as well as the role of nutrition, supplementation, and healthy lifestyle behaviors in reducing stunting. The information sources used were from various relevant guidelines or manuals (Ministry of Health, 2017; Ministry of Communication and Information, 2022; Ministry of Health, 2022; Ministry of Health, 2023; and Ministry of Home Affairs, 2024).



Figure 2. Educational Videos

Posyandu Cadre Training

Cadre training was conducted at the Aluen Naga village head's office, beginning with an assessment of cadres' knowledge, attitudes, and expectations regarding stunting, its prevention, and management. Then, training was carried out using lecture and discussion methods. In addition, cadres were provided with modules and educational videos to enhance their capacity to conduct outreach and education for the community. At the end of the training, a reassessment of the knowledge, attitudes, and expectations of the cadres was conducted to measure the impact of the training.

Result and Discussion

This service has been declared ethically acceptable by the Ethics Committee of the Faculty of Nursing at Syiah Kuala University. The training began with an explanation about stunting. Enforcing the definition of stunting is necessary so that posyandu cadres can distinguish stunting from height inherited from parents. Posyandu cadres need to understand that stunting is a growth and development disorder in children caused by chronic malnutrition, recurrent infections, and inadequate psychosocial stimulation. This growth disorder is diagnosed if a child's height is below -2 SD on the WHO growth chart. Stunting not only affects height but also influences children's intelligence as well as their future work capacity and productivity. The long-term consequences are still not emphasized enough for health workers who will later educate the community.

The training also emphasized the role of posyandu cadres in preventing and addressing stunting. Posyandu cadres act as educators, mobilizers, monitors, motivators, and connectors between the community and health services. To be able to carry out their functions, the cadres must have technical skills such as anthropometric measurement, knowledge of nutrition, communication skills, and the ability to use simple technology.

Posyandu cadres need to encourage the community to achieve balanced nutrition, starting from pregnant women, breastfeeding mothers, to toddlers, and even women of reproductive age also need to receive this knowledge. Proper food composition and meeting supplementation needs are effective steps in the prevention and management of stunting. The role of breast milk needs to be conveyed to the public, starting from the success of early breastfeeding initiation (IMD), exclusive breastfeeding, complementary foods (MP-ASI), and continuing breastfeeding up to the age of 2 years, which is considered the gold standard for babies and very important. Posyandu cadres are expected to receive reinforcement regarding sanitation and clean and healthy living behaviors (PHBS). This is important

in preventing infectious diseases, reducing nutritional loss, and supporting optimal growth.

In order to enhance the capacity of posyandu cadres, this training provides an explanation of anthropometric measurement techniques for infants and children. In addition, training is given on the use of child growth charts in documenting development and early detection of stunting. Early detection is useful in strengthening family counseling and education, as well as providing referrals to health facilities if needed.



Figure 3. Posyandu Cadre Training

The training presentation material is documented in written form in the stunting prevention module distributed to posyandu cadres. The choice of educational modules is considered effective in supporting the continuity of education from the cadres to the community. In addition to the module, the posyandu cadres were also shown an educational video containing information about stunting and its prevention, as well as the role of nutrition, supplementation, and healthy lifestyle behaviors in reducing the incidence of stunting. The educational video is linked on the YouTube channel of Gampong Alue Naga (<https://www.youtube.com/watch?v=xmBoxEwxiCE> and <https://www.youtube.com/watch?v=5KGE7sT0jkl>)

In this community service activity, educational videos are also provided in the form of barcodes to increase the number of people who can access and support the sustainability of education.



Figure 4. Handover of technology in the form of Modules and Educational Video Barcodes

The effect of training on the capacity of posyandu cadres was measured before and after the training intervention. The measurement began with an explanation and a statement of consent to participate as respondents from the posyandu cadres. The parameters measured were knowledge, attitude, and expectations related to stunting.

Table 1. Operational Definition and Assessment Categories.

Parameter	Operational Definition	Assessment Categories
Knowledge	The level of cadre understanding regarding the definition, risk factors, prevention, and management of stunting	Good ($\geq 76\%$); Enough (56 – 75%) and less ($\leq 55\%$)
Attitude	Evaluators' assessment of the importance of stunting prevention and their willingness to carry out IEC and early detection	Positif ($\geq 75\%$); Netral (60 – 74%) and Negatif ($< 60\%$)
Hope	Expectations for support to ensure stunting prevention efforts run optimally	High ($\geq 75\%$); Medium (60 – 74%) and Low ($< 60\%$)

The impact of cadre training will be obtained by measuring knowledge, attitudes, and expectations before and after the training.

Table 2. Results of measurements of the knowledge, attitudes, and expectations of integrated health service post cadres

Category	Pretest		Posttest	
	F	%	F	%
Knowledge				
Good	11	50	20	90,9
Enough	8	36,4	2	9,1
Less	3	13,6	0	0
Attitude				
Positif	15	68,2	19	86,4
Netral	7	31,8	3	13,6
Negatif	0	0	0	0
Hope				
High	22	100	22	100
Medium	0	0	0	0
Low	0	0	0	0

Next, a normality test of the data was conducted before testing the differences in knowledge, attitudes, and expectations of posyandu cadres before and after training. This test was carried out using the Shapiro-Wilk test to determine the data distribution.

Table 3. Data Normality Test Results.

Variable	Sig	Limit	Description
Pretest Cadre Knowledge	0,124	0.05	Normal
Attitude of Pretest Cadres	0,014	0.05	Abnormal
Expectations of Pretest Cadres	0,001	0.05	Abnormal
Posttest Knowledge of Cadres	0,000	0.05	Abnormal
Posttest Cadre Attitude	0,000	0.05	Abnormal
Posttest Cadre Expectations	0,000	0.05	Abnormal

The test results showed that most of the data were not normally distributed, so a non-parametric analysis using the Wilcoxon test will be conducted to measure the differences before and after training.

Table 4. Analysis Results of Differences in Knowledge, Attitudes, and Expectations of integrated health post Cadres

Variable	Group	Sig	Description
Cadre Knowledge	Pre	0,001	There is a Difference
	Post		
Cadre Attitude	Pre	0,046	There is a Difference
	Post		
Hope of Cadres	Pre	1,000	No Difference
	Post		

Training successfully improved and had an effect ($p<0.05$) on the knowledge and attitudes of posyandu cadres. A review article concluded that training conducted using various methods and media had a positive impact on improving the abilities and skills of cadres (Simanjuntak, 2025). Positive reception from training participants towards the materials and media used can result in new learning experiences for the participants, thus contributing to behavioral changes (Paul et al., 2024).

Conclusion

The conclusion of this service is that training and technology transfer in the form of modules and educational videos have an impact on improving the knowledge, attitudes, and expectations of posyandu cadres ($p<0.05$).

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