

Women's empowerment and gender equality programs to support stunting elimination in South Central Timor Regency



Herliana Monika Azi Djogo^{1*}, Yulia M.K Letor², Angela Muryanti Gatum³,
Yohanes Dion⁴

ABSTRACT

Introduction: Stunting remains a significant public health concern in Indonesia, particularly in East Nusa Tenggara Province, where it is the most prevalent among all Indonesian provinces at about 42.6 percent. Empowerment initiatives represent a crucial approach to addressing this issue. Women's empowerment holds profound significance as it governs and nurtures human resources within the household, especially children, who represent the nation's future generation. This community service aims to implement a women's empowerment program by establishing a group of Women Providing Health Information (*Perempuan Pemberi Informasi Kesehatan*) and enhancing women's access to national health services.

Methods: We conducted an experimental quantitative study involving mothers with children aged 12 to 59 months. Inclusion criteria included mothers with children aged 12 to 59 months residing in Kesenana Village. Data were analyzed using the Wilcoxon test. The mothers' classes aimed to enhance mothers' knowledge regarding the first 1000 days of life and the nutritional requirements during this period. The study included 35 participants, with the questionnaire on stunting knowledge serving as the primary instrument.

Results: The findings revealed a notable increase in participant knowledge in the post-test compared to the pre-test, with a mean rank of 88.00 and a p-value of 0.000.

Conclusions: The results underscore the continued need for a gender- and culture-based approach to health promotion to mitigate the incidence of stunting. Effective health education on stunting reduction requires collaborative efforts between health workers and local communities, with mutual support being essential.

Keywords: Stunting; women empowerment; and gender equality.

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¹Department of Health, Faculty of Nursing, Universitas Citra Bangsa, Kupang, Indonesia;

²Department of Health, Faculty of Nursing, Universitas Citra Bangsa, Kupang, Indonesia;

³Department of Health, Faculty of Nursing, Universitas Citra Bangsa, Kupang, Indonesia;

⁴Department of Health, Faculty of Nursing, Universitas Citra Bangsa, Kupang, Indonesia.

*Corresponding author:

Herliana Monika Azi Djogo;
Department of Health, Faculty of Nursing, Universitas Citra Bangsa, Kupang, Indonesia;
monikaherliana@gmail.com

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INTRODUCTION

Currently, Indonesian women have encountered diverse obstacles when trying to access healthcare, as indicated by the country's maternal mortality rate of 305 per 100,000 live births, which falls short of the national target of 183 per 100,000 live births by 2024.¹ These challenges encompass the high cost of care, the distance to health facilities, and social and cultural norms that restrict women's choices and ability to access healthcare. Additionally, Indonesia continues to grapple with a significant issue of malnutrition, specifically stunting. Stunting, a nutritional concern, is among the priority programs in Indonesia's health development context. The Basic Health Research (*Risikedas*) revealed that the

national prevalence of stunted toddlers was 30.8 percent in 2018. Nearly a third of Indonesian toddlers face nutritional challenges, resulting in shorter height compared to their peers. This figure remains well above the standard set by the WHO, which is 20 percent.²

East Nusa Tenggara (NTT) Province holds the highest position for stunting incidence, with 42.6 percent, surpassing other provinces in Indonesia.² Assuming there are roughly 633 thousand children under five years old in East Nusa Tenggara Province, around 270 thousand of them are impacted by stunting, which negatively affects IQ and productivity.³ The high prevalence of stunting among children under five is supported by the significant proportion of toddlers experiencing

malnutrition, which stands at 29.5 percent. This indicates that three out of ten toddlers in NTT suffer from malnutrition. This rate exceeds the national proportion of malnourished children under five, which is 17.7 percent. Another contributing factor to stunting is the low level of maternal knowledge and the lack of gender equality.^{4,5} Besides, the percentage of people living in economic deprivation in East Nusa Tenggara in September 2021 was 20.44 percent, contributing to stunting.⁶ Poverty conditions coincide with low purchasing power among people, resulting in difficulties accessing nutritious food.

According to the data from the NTT Provincial Health Service (2015), stunting still occurs in all districts/cities in NTT.

South Central Timor is the district with the highest stunting incidence rate, at about 56.0% (2018), making it the highest on a national scale.⁷ This district is also categorized as a district in the underdeveloped region of Indonesia based on criteria including community economy, human resources, facilities and infrastructure, regional financial capacity, accessibility, and characteristics outlined in Presidential Regulation Number 63 of 2020.⁸

The Indonesian government requires assistance in enhancing efforts to achieve national development aligned with sustainable development goals (SDGs), Goal 2 on hunger and Goal 3 on health, focusing on health services and federal nutrition programs. However, there are persistent barriers to accessing adequate healthcare, especially for impoverished and young women, who play a vital role in shaping the nation's future generation. This endeavor also corresponds to Goal 5 concerning gender equality within the social development pillar of (SDG) goals.⁹ The government strategies and programs that have been implemented must be sustained. All government policies aimed at enhancing children's health and nutritional status should persist; nevertheless, these programs need to be refined to incorporate gender-sensitive approaches.

Based on the previous study conducted in East Central Timor Regency, specifically in three villages—Niki-Niki, Kuanfatu, and Kesetnana—it was found that 25.5% of 286 toddlers aged 12–60 years experienced stunting. Additionally, 52.4% received complementary foods that were inappropriate for their age, 68.2% of toddlers did not receive exclusive breast milk, and 74.1% of toddlers experienced infectious diseases. Factors such as maternal knowledge, number of children, and provision of complementary feeding (MPASI) are significantly associated with the incidence of stunting, with a p -value of 0.000. Conversely, having more than two children is identified as the dominant factor in the incidence of stunting.^{4,10}

Kesetnana Village is among the 40 pilot villages recommended by the Ministry of National Development Planning (*Bappenas*) and the Coordinating Ministry for Human Development and Culture

for community service initiatives. This selection was made because the village has the highest incidence of stunting in the TTS district. A significant portion of the women residing there still lack national health insurance, posing challenges for them, particularly pregnant women, to access fair, equitable, and quality health services. Therefore, providing health information, including nutritional guidance for pregnant women and toddlers, is crucial.

METHOD

The research began with an initial discussion with the program partner regarding the issues faced by the target group. Subsequently, the topic and method were determined. The researchers conducted research from August to October 2023. Participants were women with children aged six to fifty-nine months old. The process began by obtaining approval from the Village Head. Subsequently, the authors sought participants and discussed the goals and objectives of the study. The author offered written informed consent to prove the person was willing to participate. This activity was preceded by basic health checks, including checking vital signs, hemoglobin, and blood glucose.

The mother's class commenced with measuring mothers' knowledge about stunting. The class lasted for 120 minutes, utilizing a focus group discussion method (Figure 1a). After the mother's class activity, the mothers' knowledge was reassessed using the same questionnaire as the pre-test. Knowledge enhancement was measured using the stunting questionnaire, with a Cronbach's alpha score of 0.912. The pre-and post-test results were then analyzed.

The course material focused on stunting prevention during the first 1000 days of life. The material was developed following the balanced nutrition guidelines for the first 1000 days of life set by the Indonesian Ministry of Health Standard. It included a demonstration of a healthy kitchen menu based on local foods (Figure 1b) and the distribution of height stickers to 35 families with children under five to enhance awareness of independently monitoring their children's growth.

Following that, the researchers enquired about the participants' willingness to join a group of women who provided health information. This group includes the head of the Family Empowerment and Welfare Committee, as well as members, cadres, and several mothers with stunted children. The group of 15 women will disseminate health information from the mother's class to residents of Kestnana village.

ETHICAL CONSIDERATION

The approval was granted by the Ethical Review Board of Universitas Citra Bangsa (EC No. 035/A/2023). Mothers who were willing to participate in this study were provided with informed consent.

RESULT

Participant's Characteristics

Based on the analysis, the total number of participants was 35. The majority of mothers, 71.4%, were married at ≥ 20 years of age, while 28.5% of mothers were married at < 20 years of age. Additionally, most of the mothers have a middle educational background, namely 85.7%.

Regarding marital status, the data revealed that most participants (70.5%) were married at ≥ 20 years of age. Regarding the education level, most mothers have a middle educational background (85.3%).

Table 2 illustrates that most participants' knowledge about stunting was poor (97%) before following the mother class activity, while only 3% had fair knowledge.

Table 3 illustrates that all participants' knowledge significantly improved following the mother class activity, reaching a 100% enhancement rate.

Based on the statistical results of the Paired T-Test, the p -value was 0.000, where $p < \alpha$ ($0.0000 < 0.05$). This result indicates a significant difference in mothers' knowledge before and after attending the mother class. Additionally, there is a significant effect on the mean rank, which increased from 28.94 to 88.0. Thirty-four participants completed both pre and post-test questionnaires. The mean values increased by 59.06 points, demonstrating a significant improvement in participants' knowledge, as indicated by the Paired T-Test result ($p < 0.05$) (Table 4).

In addition to measuring mothers'

Table 1. The participant's age at marriage and level of education

Characteristic	N	%
The mother's age at marriage		
< 20 years	10	29.4
≥ 20 years	24	70.5
Level of education		
Basic education	-	-
Middle education	29	85.3
Higher education	5	14.7
Employment		
Employed	9	26.5
Unemployed	25	73.5

Table 2. Displays the participants' knowledge of stunting before the mother class activity

Pre Test	Frequency	Percentage (%)
Good	-	0
Fair	1	3
Poor	33	97
Total	34	100

Table 3. Participant's Knowledge of stunting After Mother Class Activity

Post	Frequency	Percentage (%)
Good	34	100
Fair	-	0
Poor	-	0
Total	34	100

Table 4. The Influence of Mother Class Activity on Participant's Knowledge of Stunting

Variable	n	Mean	P value
Pre-test	34	28.94	0.000
Post-test	34	88.0	

**Figure 1.** (a) mother class activity, and (b) local menu prepared by participants.

knowledge of stunting before and after the test, the researcher also demonstrated cooking a healthy kitchen menu using local ingredients, including fish in yellow sauce, chicken roulade, egg-coated eggplant, and steamed banana cake. At the end of the class activity, the mothers, the author, and the team distributed height monitor stickers to 34 households with children aged 12 to 59 months old so that families could independently measure their children's height (Figure 1).

DISCUSSION

Possessing knowledge might motivate someone to seek out additional information regarding a topic they believe is essential to comprehend. Aligning with previous research, it was observed that mothers' knowledge significantly impacts the occurrence of stunting.⁴ Most mothers with stunted children had poor knowledge about nutrition and feeding practices, including breast milk for children under five. Poor nutritional status in

children can be associated with mother's knowledge. The suboptimal nutritional status of children can be attributed to mothers' knowledge deficits, as they, being the primary caregivers, may struggle to provide nutritious meals. Knowledge as a cognitive aspect is a fundamental domain in developing a person's behaviors—insufficient knowledge is needed in forming long-lasting behaviors. However, behavior lacks longevity if it lacks a foundation in knowledge and awareness. This is consistent with the findings in Bangladesh, which highlight a substantial link between knowledge and maternal conduct in reducing stunting.¹¹ Similarly, a study in Southeast Sulawesi suggests that heightened knowledge can empower well-informed women to make informed decisions and act with greater objectivity and openness, especially in addressing and preventing toddler stunting.¹²

In addition to knowledge, economic factors are closely linked to children's nutritional status. According to Table 1, most participants were regular housewives (73.5%). This group is highly economically reliant on their husbands as providers. Furthermore, the prevailing patriarchal cultural practices in Timorese society often marginalize women's involvement in decision-making processes. This situation can significantly affect their ability to fulfill nutritional requirements beyond the standard balanced menu, as well as their reproductive health rights and contraceptive choices. The author believes that an increase in participants' knowledge in this activity can occur because the method used is a focus group discussion. Participants have the opportunity to explore the knowledge and experience they have regarding stunting in children. This aims to assess the extent of participants' understanding of stunting management and prevention. Following the previous activity, health education about stunting and gender equality is given in the mother's class through lectures and question-and-answer sessions. This method allows for direct interaction between speakers and participants, enabling an optimal learning process. As part of the evaluation process, participants can re-demonstrate how to conduct a health education activity and prepare

nutritious food using local ingredients. This finding is in line with previous studies that describe the significant relationship between women's empowerment and the prevention of stunting and the reproductive health of mothers.^{5,13,14} Empowering women allows mothers to enhance their understanding and practices regarding stunting prevention. The community service concluded with the provision of height monitoring stickers, intending to raise mothers' awareness of independently tracking their children's growth, particularly their height, within their homes.

However, this study has limitations because of a small sample size, which could potentially impact the outcomes related to mothers' knowledge. It is crucial to conduct further research with a larger sample size to elucidate and validate our findings.

CONCLUSION

Providing information through mother's classes significantly impacts maternal knowledge. Despite regular provision of health information by health workers, this health education needs to include gender issues. Women, who play a significant role in caring for children, are often overlooked in terms of their rights, such as reproductive rights, access to health services, and participation in the family economy. Gender-based health education aims to increase public awareness, especially among women, about their roles and rights within the family.

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CONFLICT OF INTERESTS

The authors declare no conflict of interest in this community service.

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AUTHOR CONTRIBUTION

The conceptualization of the article was primarily led by the First Author (HMAD), who formulated the initial framework exploring the intersection of women's empowerment, gender equality programs, and their impact on stunting elimination. The first, second, and third authors (HMAD, YMKL, & AMG) jointly designed the methodology, outlining the research approach and data collection methods, as well as the analysis techniques employed to investigate the effectiveness of women's empowerment and gender equality. All authors contributed to the review and editing process, providing critical feedback and ensuring the accuracy and clarity of the content presented in the final manuscript.

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