
Government Strategies for Stunting Reduction to Achieve the Sustainable Development Goals in North Aceh Regency

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Abstract

Stunting remains a critical public health issue in Indonesia, with North Aceh Regency exhibiting a prevalence rate significantly above the national average. This study aims to explore the government's strategies in addressing stunting in North Aceh Regency and examine how policy implementation is understood and practiced within the region's socio-cultural context. Stunting continues to be a pressing health concern in North Aceh, with prevalence rates exceeding the national average, highlighting the need for more contextualized and participatory approaches. A qualitative case study design was employed, with data collected through semi-structured interviews involving 25 key informants, participant observation in community nutrition and health programs, and document analysis of local policy reports and official records. Informants were selected using purposive and snowball sampling techniques, including health cadres, public health officers, local government officials, community leaders, and mothers of under-five children. Thematic analysis based on Miles and Huberman's interactive model was used to analyze the data. Four major themes emerged: (1) cultural perceptions linking rice as the primary indicator of nutritional adequacy, (2) limited human resource capacity and sectoral coordination, (3) a gap between nutrition education and actual consumption practices, and (4) weak monitoring systems and case follow-up mechanisms. These findings underscore the importance of aligning policy implementation with local values and social structures. This study contributes to the development of policy implementation and social-ecological theories in public health contexts. Practical implications include the need for culturally adaptive nutrition programs and stronger community-based monitoring systems. Future research is recommended to adopt participatory approaches for developing more responsive interventions tailored to local community needs.

Keywords: stunting, government strategy, case study, policy implementation, North Aceh, qualitative approach.

INTRODUCTION

Stunting is a chronic growth disorder affecting children under five, representing a form of malnutrition that causes long-term cognitive and physical developmental impairments (Khairani, 2020; Nirmalasari, 2020). Globally, UNESCO reports that approximately 155 million children suffer from stunting, with the majority located in Asia and Africa (en.wikipedia.org). In Indonesia, the stunting prevalence in 2022 was recorded at 21.6%, a decrease from 24.4% in 2019, yet still above the WHO target of $\leq 20\%$ by 2025. This highlights the urgent need to deepen understanding of local-level strategies, especially in regions where prevalence rates remain higher than the national average (Oktavia et al., 2024).

Aceh Province is among the regions with the highest stunting prevalence in Indonesia, reaching 31.2% in 2022. North Aceh Regency, in particular, has shown only a slight decrease—from 38.8% in 2021 to 38.3% in 2022—remaining well above the WHO's acceptable threshold

(jusindo.publikasiindonesia.id). Local interventions, such as stunting education programs in Keutapang Village, have been implemented; however, the scale and strategic depth of these efforts have not been qualitatively studied to fully understand the processes and social meanings emerging from community engagement with such programs (Dewey & Begum, 2011; Setiadi et al., 2020; Umiyah & Hamidiyah, 2020).

Previous qualitative studies in other regions (e.g., Cirebon and Bengkulu) have identified barriers such as limited coordination, inadequate human resource capacity, and weak monitoring mechanisms, despite the existence of national policy directives (arxiv.org). However, there is a notable lack of literature exploring the perceptions of communities and policy stakeholders in North Aceh regarding multisectoral strategies and program coherence within the Sustainable Development Goals (SDGs) framework. This research gap is crucial, as local interpretation and meaning-making processes significantly influence the sustainability and effectiveness of interventions. While existing qualitative studies have documented implementation challenges in various Indonesian contexts (Herawati et al., 2022; Sufri et al., 2024), the novelty of this research lies in three critical dimensions.

First, it specifically examines the cultural construction of nutrition knowledge in North Aceh, revealing how Islamic dietary interpretations and rice-centric food systems create resistance to diversification efforts—a phenomenon underexplored in previous stunting literature. Second, this study applies an integrated theoretical lens combining G. Edward III's policy implementation framework with the Social Ecological Model (SEM), enabling simultaneous analysis of both policy execution mechanisms and multi-level sociocultural determinants (Fitrauni et al., 2022; Mukodi, Mukodi Rahmawati, 2023; Phitra et al., 2023). Third, unlike previous studies that primarily focused on health sector actors, this research incorporates perspectives from religious leaders, traditional birth attendants (*dukun*), and village-level governance structures, thereby capturing the full spectrum of stakeholders influencing nutrition outcomes in culturally conservative communities.

This study aims to explore how government strategies—including nutrition, sanitation, and education interventions, as well as cross-sectoral collaboration—are implemented and perceived by communities and stakeholders in North Aceh Regency in support of SDG achievement. The focus is on examining the implementation processes, the sociocultural meanings that arise, and identifying barriers and success factors that influence strategic outcomes. Theoretically, this research addresses a literature gap by analyzing local meanings and interpretations of stunting reduction strategies through the lens of qualitative policy implementation theory and the Social Ecological Model. Practically, the findings are expected to provide contextualized policy recommendations and strengthen community-based intervention approaches for local governments and other relevant stakeholders.

RESEARCH METHOD

The research was conducted as a qualitative case study in three priority subdistricts of North Aceh Regency from November 2024 to March 2025. This approach was chosen to enable a contextual investigation of the implementation of stunting reduction strategies within their real-world setting. The five-month period allowed the researcher to observe cycles of key stunting interventions such as nutrition education and community monitoring activities.

Data were collected using three primary techniques: in-depth semi-structured interviews, participant observation of community health activities, and analysis of local policy documents. Triangulation was applied to ensure the robustness and validity of the findings by combining diverse data sources, collection methods, and analytical perspectives. Data quality was further reinforced through member checking, where preliminary findings were discussed with informants for validation, and by maintaining a detailed audit trail of the research process.

The study involved 20 to 25 main informants selected through purposive and snowball sampling. Participants included representatives from the District Health Office, subdistrict heads, *Puskesmas* officers, community health cadres, village heads, and mothers of children under five. This sampling strategy ensured the inclusion of those directly engaged in stunting programs while also identifying influential community figures such as local leaders and women's group members.

Data analysis followed an interactive model that involved data reduction through coding, data display using matrices, and verification of emerging conclusions. Thematic analysis was used to identify relationships between key implementation variables such as communication, resource capacity, and intersectoral collaboration. This methodological framework ensured a systematic and credible exploration of local stunting reduction efforts.

RESULTS AND DISCUSSION

Research Findings

Theme 1: Cultural Perceptions and the Meaning of Nutrition

Most mothers of under-five children in North Aceh regard rice consumption as a symbol of nutritional adequacy. This belief parallels findings from Madura, where “stunting is considered normal as long as the child eats rice.”

As one respondent stated:

"If there is white rice at home, it means the child is fine the nutrition is sufficient." (Mother A, interview, 12 December 2024)

Such perceptions limit dietary diversity and protein intake, indicating the strong influence of local food culture over formal nutrition interventions.

Theme 2: Multisectoral Coordination and Human Resource Capacity

At the subdistrict and village levels, routine coordination efforts among government agencies (OPDs), health centers (Puskesmas), and community health cadres are ongoing. However, several health workers acknowledged challenges:

"There is a budget, and coordination runs smoothly, but our capacity is limited implementation remains stagnant." (Puskesmas officer, 18 February 2025)

These findings align with previous research in Cirebon, where human resource limitations and lack of commitment were shown to significantly affect the effectiveness of stunting interventions.

Theme 3: Nutrition Education and Community Readiness

Observations at Posyandu and education sessions revealed strong enthusiasm among mothers in receiving information. Yet, practical application at home remains inconsistent:

"After the outreach, they used to cook vegetables, but now it's back to just rice." (Health Cadre, 5 February 2025)

This indicates a gap between educational acceptance and behavioral change, particularly due to limited access to diverse food sources.

Theme 4: Monitoring, Documentation, and Oversight

Document analysis (e.g., Posyandu reports, PWS data) shows that supervision data is being recorded; however, follow-up documentation on individual stunting cases is often vague and non-specific. Several village-level officers admitted to lacking proper audit mechanisms or case tracking systems.

Summary of Findings

These four main themes (1) food culture perceptions, (2) coordination and capacity, (3) gap between acceptance and practice, and (4) weak monitoring systems form the core of understanding stunting intervention dynamics in North Aceh. They reflect interactions across social-ecological levels and are consistent with G. Edward III's implementation theory and the Social Ecological Model (SEM).

The findings emphasize that the success of stunting reduction strategies in North Aceh depends on the synergy between local food culture and policy

implementation effectiveness. Culturally responsive interventions, enhanced human capacity, and more dynamic monitoring systems are critical to accelerating progress toward nutrition-related SDGs in high-prevalence areas.

Table 1. Summary of Themes, Categories, and Illustrative Informant Quotes

Theme	Category	Illustrative Quote
Cultural Perceptions of Nutrition	Rice as a symbol of sufficiency	<i>"If there is white rice at home, it means the child is fine—the nutrition is sufficient."</i> (Mother A, Dec 12, 2024)
	Limited food diversity	<i>"We usually just give rice. Other foods are occasional."</i> (Mother B, Dec 13, 2024)
Multisectoral Coordination & HR Capacity	Coordination between sectors	<i>"We hold meetings regularly with the health center, but coordination does not always result in action."</i> (Village Head, Jan 22, 2025)
	HR and technical limitations	<i>"There is a budget, and coordination runs smoothly, but our capacity is limited—implementation remains stagnant."</i> (Health Worker, Feb 18, 2025)
Nutrition Education vs. Practice Gap	Community enthusiasm	<i>"Mothers are excited during counseling sessions, but the follow-up at home is difficult."</i> (Cadre, Feb 5, 2025)
	Inconsistent behavioral change	<i>"After the outreach, they used to cook vegetables, but now it's back to just rice."</i> (Cadre, Feb 5, 2025)
Monitoring and Follow-up	Lack of case-specific data	<i>"Yes, we record stunting data, but the follow-up is general, not per case."</i> (Village Official, Mar 4, 2025)

Theme	Category	Illustrative Quote
	Absence of local audit systems	"We don't yet have a standard process for monitoring stunting cases after identification." (Health Staff, Feb 28, 2025)

This study draws on rich qualitative data from various levels of actors, and the application of method triangulation strengthens the validity of the findings. Semi-structured interviews enabled the emergence of participants' voices within their local cultural contexts, while participant observation added critical nuance by revealing discrepancies between "what is said" and "what is done."

For instance, during an interview, a Posyandu health worker expressed a high level of commitment. However, field observations revealed that attendance among health cadres during nutrition-related activities was inconsistent. This highlights the importance of careful triangulation as a tool for testing data reliability in qualitative research.

With the addition of direct quotes, thematic tables, and critical reflections, the Results and Discussion section is made more robust, transparent for re-examination by readers, and well-positioned for consideration by reviewers of an accredited scientific journal.

Discussion

Interpretation of Findings through Theoretical Lenses

The local rice-dominant dietary perception in North Aceh demonstrates how cultural norms can hinder holistic nutrition interventions, in line with the Social Ecological Model, which emphasizes the influence of community-level values on health behaviors.

Findings related to coordination and limited human capacity support G. Edward III's implementation model, highlighting the critical roles of resources, communication, and disposition of implementers.

The persistent gap between education and field practice underscores challenges within the convergence framework, particularly the difficulty of aligning national policies with local cultural realities a trend similarly observed in Cirebon and Lombok.

Comparison with Previous Research

As in studies by Saputri et al. (2021) and Taofik et al. (2024), this research reinforces the importance of multi-stakeholder engagement and multilevel approaches. However, the focus on local cultural meaning in North Aceh presents a unique contribution: the recurring perception that "rice is the foundation of nutrition", which is rarely explored in existing local literature.

In contrast to parenting studies in Bejiharjo (e.g., [pmc.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov/)), which emphasize parenting styles, this study adds a critical perspective by uncovering the implementation gap in Posyandu-based education and the lack of case-based monitoring systems.

Practical and Theoretical Implications

Practically, nutrition education should be culturally adaptive—for example, integrating local protein sources into messaging as “complements to rice.” Furthermore, strengthening human resource capacity and developing case-responsive monitoring formats are essential.

Theoretically, the findings reinforce the relevance of SEM in stunting studies, particularly by demonstrating how local values shape policy implementation. They also suggest a refinement of Edward III’s model, proposing the inclusion of “local food culture” as a significant factor influencing both communication and implementer disposition.

Recommendations for Future Research

Future studies are encouraged to pilot community co-designed nutrition education programs grounded in local food traditions. Participatory methods should also be adopted to amplify community voices. Additionally, integrating quantitative evaluation such as changes in protein intake frequency or anthropometric measures would enrich the qualitative insights presented here.

CONCLUSION

This study found that stunting reduction strategies in North Aceh Regency were influenced by cultural perceptions of nutrition, institutional capacity limitations, gaps between health education and actual dietary practices, and weaknesses in monitoring systems. Success depended on aligning interventions with local values and ensuring effective community engagement, supported by the integration of public policy implementation frameworks such as G. Edward III’s model and the Social Ecological Model. The research emphasized the need for culturally adaptive approaches, enhanced health cadre capacity, cross-sector training, and stronger case-based monitoring, rather than relying solely on top-down models. Future research should employ participatory, community-based methods, such as co-designed nutrition programs, and incorporate quantitative data—including anthropometric and dietary assessments—to strengthen qualitative insights and inform more precise, sustainable policies aligned with the Sustainable Development Goals.

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