

## Development of the Martabe Module for Stunting Prevention in Accordance with Local Context in Padangsidempuan, North Sumatera, Indonesia

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### ABSTRACT

Stunting prevention in Indonesia has become a national priority, yet local culture-based approaches have not been fully optimized. This study aims to develop a Martabe (Marsipature Hutana Be), or the collaborative approach to community development module, grounded in the local culture of the Batak Angkola ethnic group in North Sumatera to accelerate the reduction of stunting rates. An exploratory qualitative approach was used to understand stunting prevention behavior within the Batak Angkola community. In-depth interviews with seven key community stakeholders, academics, entrepreneurs, a mining company, media figures, lawyers, and cultural leaders—revealed that the values of togetherness, cooperation, and social harmony embedded in the Martabe culture are highly relevant and hold great potential to support stunting prevention efforts. The Martabe module was developed in four main sections: early detection of families at risk of stunting, applying Martabe values in stunting prevention, nutrition intake based on local foods, and child health and family self-reliance. Each section is designed to enhance community acceptance of nutritional interventions through the involvement of community leaders, local media, and economic empowerment initiatives. This research also highlights the importance of cross-sector collaboration and integrating Martabe cultural values with public policy to achieve a more significant and sustainable impact. The findings emphasize that strengthening the synergy between bureaucratic institutions, local communities, and other stakeholders is crucial to maintaining the relevance and effectiveness of stunting prevention efforts in North Sumatera.

**Keywords:** Module; Stunting; Culture; Martabe; Indonesia

### INTRODUCTION

Since 2018, the government has implemented the Stunting Reduction Acceleration Program, intending to reduce stunting prevalence to 14% by 2024(1). This effort is in response to the high prevalence of stunting, which reached 30.8% in 2018, and its significant impact(2). Stunting is not only an issue of height but also affects children's motor and cognitive abilities, causes metabolic disorders, lowers future productivity, and increases vulnerability to non-communicable diseases(3–5). Over the five years of its implementation, stunting prevalence

has decreased by 9.3 percentage points, from 30.8% in 2018 to 21.5% in 2023(6). According to the 2023 Indonesia Health Survey (SKI), stunting prevalence in North Sumatera in 2023 stood at 18.9%, a decrease of about 2.2% from the previous year's 21.1% in 2022. In Padangsidempuan City, stunting prevalence remains at 26.1%, slightly reduced by 2.7% compared to 2022(7).

One approach that can be optimized to reduce stunting rates is utilizing local wisdom and culture(8). Angkola, one of the Batak ethnic groups in North Sumatera, is a community that has adapted to diverse cultural and religious influences. Some follow traditional customs and norms, others prioritize religious values, and some try to harmonize and accommodate both(9). A local culture-based approach allows interventions to be tailored to the characteristics of the community, thus increasing acceptance and program effectiveness(8,10–13). Local culture encompasses norms, values, habits, and practices deeply rooted in society, which can provide more targeted solutions when combined with health and nutrition programs(14). Batak Angkola is an indigenous area in South Tapanuli that does not adhere to local government administrative boundaries. It encompasses the entire South Tapanuli Regency and is distinct from the Natal area, where the population mixes Mandailing and coastal residents with slightly different dialects(15).

The Batak Angkola culture is one of the sub-ethnic groups of the Batak, characterized by its unique customs, traditions, and beliefs. Located in South Tapanuli, North Sumatera, the Batak Angkola community has preserved a culture closely tied to the Dalihan Na Tolu kinship system, marriage customs, and other sacred ceremonies. At the same time, this community has also experienced significant influences from Islam and modernization, which have the potential to alter traditional cultural structures(15,16). Traditional cultural values remain significant among the Batak people, with initiatives like the "Marsipature Hutana Be" movement encouraging North Sumatera nomads to return and contribute to their villages(17).

A culture-based approach offers several advantages, including a deeper understanding of community habits, belief systems, and parenting patterns(18). For instance, in some cultures, certain food taboos for pregnant women or children may worsen nutritional conditions(19). By understanding and approaching the community through a cultural lens, the stunting reduction and prevention programs are expected to be more effective. However, Indonesia's culture-based approach to reducing stunting has not been fully maximized despite its potential(9). The programs implemented are often uniform and do not consider regional social and cultural differences. Therefore, it is essential to study further how local culture can be integrated into more sustainable and targeted stunting reduction strategies(20–27).

This study explores how a local culture-based approach can be optimized to accelerate stunting reduction and identify cultural factors that support or hinder the implementation of nutritional interventions at the community level. Developing a local culture-based module in the Padangsidempuan area of North Sumatera Province is based on qualitative research results covering various aspects of stunting, from basic understanding, risk factor identification, and early detection methods to culturally-based interventions. The MARTABE values of togetherness, cooperation, and independence have been discussed as relevant philosophical foundations in stunting prevention efforts.

## METHOD

The research employs an exploratory qualitative design to investigate the behavioral patterns related to stunting prevention within the Batak Angkola community. This design allows the researcher to gain a deep understanding of the cultural values and practices present in the Batak Angkola community. Data was collected through in-depth interviews with seven community components, including bureaucrats, academics, entrepreneurs, mining company representatives, media figures, lawyers, and cultural leaders. These interviews aimed to explore the perspectives and experiences of each component regarding the application of MARTABE culture in stunting prevention.

Analysis was conducted using content analysis techniques involving coding and grouping information from the interviews to identify key themes related to cultural values and their contributions to stunting prevention. The interview findings served as a basis for developing a module based on MARTABE culture. This module consists of several sections, including early detection, application of cultural values in stunting prevention, local food-based nutritional intake, and child health and family independence.

## RESULTS AND DISCUSSION

Cultural capital is an asset inherent in individuals. It is reflected in the form of educational qualifications, accumulated knowledge, and various skills, which can drive the process of social mobility to improve one's status in society(9). Based on this, the module is divided into four parts: (1) "Early Detection for Families at Risk of Stunting Based on Local Culture (MARTABE)," (2) "MARTABE Values (Marsipature Hutana Be): A Solution to Prevent Stunting in Families," (3) "MARTABE Module: Local Nutrition as a Solution to Prevent Stunting," and (4) "MARTABE Module: Child Health and Family Self-Reliance in Stunting Prevention". The module concept is designed to provide practical and comprehensive guidelines for families, especially those at risk of stunting.

The issues surrounding women in the Angkola Batak community are not only related to social marginalization but also closely connected to public health concerns such as stunting. In a strict patrilineal kinship system, women are often positioned as subordinates, which can affect decisions regarding the health and nutrition of the family. This marginalization frequently results in women, particularly mothers, lacking a voice in decisions related to food and child care, which are crucial for preventing stunting(28–32). Limited access to education and health information for women can also impact their understanding of proper nutrition for children. When women are not provided with adequate education or do not have inheritance rights, their ability to ensure good nutrition for their children becomes hindered. Additionally, after marriage, women lose their rights to their father's home. They are viewed as part of their husband's family, which can diminish social support and access to resources necessary for maintaining family health(33,34).

Therefore, the marginalization of women in the Angkola Batak community has a direct impact on child health, including the risk of stunting. To address the issue of stunting, it is essential to empower women by providing access to education, health information, and equal rights in family decision-making(35). By improving the status of women in society, a more supportive environment for the health and nutrition of children can be created, ultimately reducing the incidence of stunting in the community(36).The concept of the Martabe module integrates a local cultural approach of the Angkola Batak ethnic group in North Sumatera for stunting prevention, ensuring that interventions are more readily accepted and have a long-term impact through four key strategies.

- 1) **Module 1: Early Detection of Families at Risk of Stunting** emphasizes the importance of social mapping and local wisdom in identifying stunting risks. Involving community leaders, local media, and nutritional interventions based on regional foods is essential to ensure that this approach is relevant to and accepted by the community's needs.
- 2) **Module 2: MARTABE Values in Stunting Prevention** highlights the importance of togetherness, cooperation, and independence in increasing social support and community involvement to promote family health. Stunting can be effectively prevented by enhancing community education on nutrition, collaborating to provide nutritious food, and strengthening family independence.
- 3) **Module 3: Nutritional Intake Based on Local Foods** focuses on utilizing local food resources to prevent stunting. This approach involves food diversification, developing community gardens, and promoting nutritious local processed products, enabling families to access affordable, healthy food that aligns with local eating habits.
- 4) **Module 4: Child Health and Family Independence** emphasizes nutrition education for parents, economic empowerment, and strengthening local health services such as Posyandu and health cadres. Families are taught to monitor their children's growth and development independently and to practice parenting methods that support their children's physical and mental health to prevent stunting.

The result from in-depth interviews with seven community components regarding the potential application of the local MARTABE culture in stunting prevention shows that these cultural values are highly relevant and have great potential to support such efforts(22,37,38). Here are the main points from each component:

- 1) **Bureaucrats:** The values of togetherness, cooperation, social harmony, and sincerity serve as critical pillars in implementing stunting prevention policies. While there has been a positive impact, integrating MARTABE values into public policy must be enhanced through closer collaboration between bureaucracy and local communities.
- 2) **Academics:** The MARTABE culture, with the "Poda Nalima" concept emphasizing physical and mental cleanliness, can be a foundation for stunting prevention through a culturally-based approach. Academics are expected to be more active in developing culturally-based curricula, conducting research, and community service to support this strategy.
- 3) **Entrepreneurs:** Togetherness and cooperation are applied in business practices and local economic empowerment, indirectly contributing to stunting prevention. Business partnerships that support the local economy can strengthen family welfare and reduce the risk of stunting.
- 4) **PT. AR (Mining Company):** PT. AR's CSR programs emphasize the values of togetherness and cooperation, mainly through economic and educational development. These programs support the health of families at risk of stunting through community participation in social and health activities.
- 5) **Media Figures:** Local media promotes MARTABE cultural values, such as togetherness and cooperation, in stunting prevention efforts. Media also facilitates public education and awareness about stunting, although challenges such as the influence of technology on the younger generation remain an obstacle.
- 6) **Lawyers:** Law can strengthen the application of MARTABE values in stunting prevention by serving as a tool for control and supervision. Traditional law and the value of togetherness in this culture support efforts to protect families and prevent stunting through cross-sectoral cooperation.
- 7) **Cultural Leaders:** Values such as cooperation and togetherness, inherited through traditional practices, form a critical foundation for supporting families at risk of stunting. Cultural leaders play a role in

promoting and preserving these cultural values despite facing challenges from modernization and a lack of interest among younger generations.

## CONCLUSION

The Martabe module was developed based on the specific needs of the Batak Angkola community in their efforts to prevent stunting. The development of the module begins with the importance of early detection for families at risk of stunting, rooted in local cultural values. Applying the local MARTABE culture in stunting prevention holds significant potential, but it requires more robust integration with public policy and preserving cultural values amidst social change. In-depth interviews with seven community components highlight that togetherness, cooperation, and social harmony inherent in the MARTABE culture are highly relevant to support stunting prevention efforts. Every community component, from bureaucrats, academics, and entrepreneurs to cultural leaders, acknowledges the importance of this culturally-based approach.

However, closer collaboration between bureaucracy and local communities is essential to achieve a more significant and sustainable impact. Academics must also be more active in developing culturally-based curricula and conducting research that supports implementing these values. On the other hand, entrepreneurs and companies play a strategic role in supporting family welfare through economic empowerment, reducing the risk of stunting. Local media and legal figures should be involved in disseminating information and overseeing the implementation of these cultural values. In contrast, cultural leaders are responsible for preserving this cultural heritage to ensure its relevance, especially for the younger generation. Therefore, the next step is strengthening cross-sector collaboration with a structured and planned approach, ensuring that the MARTABE values remain essential in stunting prevention efforts in North Sumatera.

## AUTHOR'S CONTRIBUTION STATEMENT

All authors have read and agreed to the published version of the manuscript.

## CONFLICTS OF INTEREST

The authors declare no conflict of interest

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## ETHICAL CLEARANCE

Ethical approval has been obtained from the Ethical Commission of Health Research, Faculty of Public Health, Hasanuddin University, with protocol number 22224093014.

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