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Performance of Stunting Reduction Acceleration Team: An Explorative-Qualitative Study in Indonesia-Timor Leste Border Area

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Abstract

Stunting is a complex issue influenced by multiple factors, including specific factors within and outside the health sector. Achieving a significant reduction in stunting needs the involvement of relevant local government offices in the Stunting Reduction Acceleration Team (SRAT). This study aimed to investigate SRAT performance in a specific context of accelerating stunting reduction in Malaka District. This qualitative study, with a phenomenological approach, was conducted in Malaka District, Indonesia, and Timor Leste Border Area from July to September 2023. This study revealed four major themes of SRAT performance to accelerate stunting reduction in Malaka District: activities to accelerate stunting reduction, challenges faced in implementing the programs, supporting factors for program implementation, and alternative activities initiated by the local government. This study showed that the many local government agencies responsible for specific and sensitive interventions have effectively fulfilled their mandates and roles in accelerating the elimination of stunting in Malaka District. However, inadequate internal coordination within SRAT has led to a dearth of harmonization in its execution.

Keywords: border area, stunting, Stunting Reduction Acceleration Team

Introduction

Stunting prevalence among toddlers is a significant public health concern in Indonesia.¹ Based on the 2022 Indonesian Nutritional Status Survey (INSS), the prevalence of stunting in Indonesia was 21.6%.² According to multiple national health research datasets, East Nusa Tenggara (ENT) Province has consistently ranked the highest frequency of stunting in Indonesia since 2013.²⁻⁵ Specifically, the province's prevalence of stunting is 36.3%, encompassing all the provincial districts and cities, including Malaka District.² Stunting data by Malaka District Government reveals a decline in prevalence from 2019 to 2022: 32.2%, 26.2%, 21.5%, and 15.8%, respectively.^{2,5} However, it is imperative to persist with diverse initiatives to reach a target of a 14% reduction in emissions by 2024.¹ Stunting evidently has detrimental effects on a child developmental trajectory, manifesting in a range of adverse consequences, including impairments in cognitive growth, diminished learning capacities,⁶ and the potential for enduring metabolic problems such as diabetes, hypertension, and obesity.⁷ Numerous interventions, encompassing health and cross-sectoral interventions, have been implemented, yet stunting is a significant concern at both national and regional levels.

The Central Government commits to reducing the prevalence of stunting by implementing Presidential Regulation No. 72 of 2021, which focuses on accelerating the decrease of stunting. This regulation serves as the overarching legal framework for all the national strategies aimed at accelerating stunting rate reduction and achieving the 14% target of reduction by 2024.¹ The Presidential Regulation also functions as a reorganizational measure to accelerate the national stunting reduction by implementing a family-based intervention approach involving the local government's role in safeguarding families at risk of stunting. The Malaka District Government established a Stunting Reduction Acceleration Team (SRAT) within Malaka Regent Decree No. 110/HK/2022 to supervise the implementation of the presidential decree.⁸ The Malaka District SRAT employs several officers at the local government to address stunting through specific and sensitive intervention services. The formed SRAT coordinates, synchronizes, and facilitates assistance to reduce stunting at the district, subdistrict, and village/urban village levels.

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Stunting is a complex issue for multiple factors, including specific factors in and out of health sector. To achieve a significant reduction in stunting, relevant local government offices are required to involve in the SRAT to effectively perform their duties in implementing various technical programs aimed at accelerating stunting reduction in Malaka District. The local government responds to the national strategy to accelerate stunting reduction by establishing a district-level SRAT and implementing several derivative regulations. However, evaluation of the implementation of those regulations should be taken within a structured research framework according to situations described in this study.

Previous studies found that SRAT is evidently efficacious in mitigating the stunting prevalence at subdistrict level. This positive outcome is attributed to collaborative efforts of multiple stakeholders, including nutrition officers at primary health care, village midwives, integrated health care (IHC) cadres, and supplementary feeding (SF) cadres.⁹⁻¹¹ Another study also examined the efficacy of local government initiatives, such as the SRAT implementation and other intervention programs to accelerate stunting rate reduction.¹² However, studies of duties and performance of regional technical organizations responsible for overcoming stunting, which includes specific and sensitive services, have not been researched at the district level, especially in Malaka District.

This study provides sequential and comprehensive data and information. It builds upon the findings of a previous general situation analysis on the acceleration of stunting reduction in Malaka District. The results of this analysis were derived from a higher education assistance program implemented in Malaka District, as mandated by the Deputy for Population Control at the National Population and Family Planning Agency No. 5/KEP.DALDUK/D2/2022.¹³ This program established an Implementation Team for Higher Education Assistance, specifically aimed at accelerating stunting reduction in districts and cities within ENT Province in 2022.

The significance of this study is that findings on SRAT performance can serve as a valuable contribution to the Malaka District Government. This, in turn, can facilitate the implementation of corrective measures. This initiative is to optimize effectiveness of SRAT in implementing several programs aimed at accelerating the stunting reduction. SRAT performance assessment then should regularly be done to determine effectiveness of efforts to implement policies for acceleration in stunting reduction and achievement in predetermined national reduction targets. Therefore, this study aimed to investigate the SRAT performance in the context of accelerating stunting reduction in Malaka District.

Method

This qualitative study, using a phenomenological approach, was conducted to comprehend the district-level SRAT performance in facilitating the decrease of stunting in Malaka District, as well as many influential elements of this process. The phenomenological approach was applied by exploring experience of each participant in implementing stunting reduction program. This study took place in Malaka District, the border region of Indonesia and Timor Leste, during July to September 2023.

The study procedure commenced by initiating an application for ethical review to guarantee adherence to ethical principles governing health research. Subsequently, preliminary investigation into the constitution of SRAT following the most recent legislation enacted in 2023 had been carried out. Furthermore, an interview guide was created in the form of a formulation of the problem to be investigated and data collected from the purposively-selected informants. The study participants voluntarily participated after filling out an informed consent consisting of information sheet and consent form. A total of nine informants came from Health, Women's Empowerment and Child Protection, Population Control and Family Planning, Agriculture, Food Security and Fisheries, Public Works and Public Housing, Village Community Empowerment, Information and Communication, and Regional Planning, Research and Development Offices with duties of specific and sensitive intervention service programs related to stunting reduction in Malaka District.

The reliability and credibility of qualitative data were assessed by member checking and theoretical triangulation techniques. Member checking was done during the interview process and at the end of the session by asking informants for feedback about the response which had been conveyed. Theoretical triangulation was applied by using various theories to explain and reveal the unique discovery of this study.

The data-gathering methods employed in this study encompassed formal interviews and examination of secondary data sources. The study took structured interviews, by applying an interview guide, to gather data on the implementation of programs and activities and to identify elements facilitating or hindering the implementation. Additionally, the study carried out a secondary data analysis consisting of exact underpinning data related to each implemented program and

activity, from each office to be examined. Subsequently, the data obtained from the structured interviews underwent processing and analysis through qualitative data analysis techniques to categorize themes based on relevant keywords.

Results

Table 1. Thematic Analysis Result

Topics	Subtopic	Description
Specific Intervention	Activity	a. Anemia screening and giving blood supplement tablets to adolescent girls
		b. Health education and provision of iron supplementation for prospective brides and grooms who take pre-wedding courses
		c. Supplementation feeding for malnourished toddlers
		d. Nutritional actions at school (counseling about the contents of my plate/ <i>isi piringku</i> activity, exercise, and breakfast together)
		e. SF for pregnant women with CES
		f. Requiring pregnant women to have an ultrasound twice during pregnancy
		g. Postpartum visits (home visits)
	Supporting factor	a. Direct FWE involvement in IHC activities
		b. The ENT Governor's policy is to add Moringa powder for SF in toddlers
	Obstacle factor	a. Malnourished toddler refuses to be referred to Therapeutic Feeding Center
		b. Unavailability of diet formula for malnourished toddlers for outpatient services
		c. Lack of public awareness
		d. Lack of MCH books
		e. Lack of ultrasound equipment in community health centers
		f. Lack of obstetricians for emergency maternal referral services
	Alternative program	2H2 (2 days after delivery) Center
Sensitive Intervention	Activity	a. Village Community Empowerment Office Coordination and monitoring of the use of 30% of village funds for handling stunting
		b. Communication and Information Office Publication of activities related to stunting
		c. Social Office 1) Providing information to beneficiary families through FHP assistants 2) Monitoring FHP companion activities 3) Outreach of the use of social assistance
		d. Food Security and Fisheries Office 1) Providing food assistance in the form of rice (10 kg), frozen chicken, 1 kg eggs (10 pieces), and fish for stunted children in 127 villages 2) Formation of a Sustainable Food Patterns group 3) Providing fish seeds to communities in coastal areas
		e. Agriculture Office 1) Provision of 14.175 tons of rice seeds to be planted on 567 hectares of land spread across 7 villages (funding source: general allocation funds) 2) Provision of 7.85 tons of rice seeds to be planted on 227 hectares of land in 7 villages in Malaka District (funding source: state budget) 3) Assistance to farmer groups by placing 1 P2L (a community program) person in each village
		f. Public Works and Public Housing Office 1) Provision of hygienic water in 4 villages with a total of 820 house connections in 2022; providing clean water in 6 villages with a total of 850 house connections by 2023 2) Sanitation assistance would be provided through the provision of toilets in 1 village with a total of 95 units in 2022; in 2023, it was provided to 9 villages with a total of 684 units.
		g. Population Control and Family Planning Office 1) Organizing stunting convergence actions 1, 2, 3 for cross sectors 2) Health education regarding stunting 3) Providing a stunting kit containing educational games 4) Contraceptive preparation
		h. Regional Planning, Research and Development Office 1) Carrying out the SRAT coordination function 2) Organizing 8 stunting convergence actions
		a. Village Community Empowerment Office 1) Helped by the existence of NGOs and their programs 2) Budget support in monitoring safety, hygiene, and happiness/ <i>3K</i> program
		b. Social Office 1) Helped by having a FHP companion
		c. Food Security and Fisheries Office 1) Assistance from the Regional House of Representatives aspiration funds 2) Provision of fish seeds from the Regent 3) Helped by the existence of agricultural instructors in each village
		d. Agriculture Office 1) Assistance to field agricultural instructors in each village
	Supporting Factors	

Topics	Subtopic	Description
		2) Strengthening the Moringa commodity by the Provincial Government as an addition to complete SF for stunted children
	e. Public Works and Public Housing Office	1) There is assistance in every activity
		2) Intervention from the province in terms of providing hygienic water
	f. Population Control and Family Planning Office	1) FA Team in each village
		2) Cadres and FA Team mobilize the community and help cross-sector coordination
	g. Regional Planning, Research and Development Office	1) NGOs involvement
		2) District regulation to allocate 30% of village funds to accelerate stunting reduction
Obstacle Factors	a. Village Community and Empowerment Office	1) Activities have not run smoothly because of sectoral ego
		2) Political dynamics cause changes in health cadres
		3) There is no detailed report on the use of 30% of village funds for stunting
		4) It is not yet certain whether the SF is on target or not
		5) Empowerment of village communities is still lacking
		6) There are children who are not weighed because of family matters in another city
	b. Communication and Information Office	1) Lack of programmers
		2) Facilities are inadequate
		3) Budget limitation
	c. Social Office	1) Budget limitation
		2) Lack of FHP assistance staff in the large assistance area
		3) Barriers to updating data due to unavailability of budget and human resources
	d. Food Security and Fisheries Office	1) Budget limitation
		2) Transportation costs related to procuring seeds from outside Malaka District
	e. Agriculture Office	1) Budget limitation
		2) Obstacles in planning and difficulties in intervention in stunting locus villages due to delays in the first action of stunting convergence actions
	f. Public Works and Public Housing Office	The remote location and steep terrain slow down the mobilization of goods
	g. Population Control and Family Planning Office	Budget limitations hamper the implementation of convergence actions to accelerate stunting reduction
	h. Regional Planning, Research and Development Office	1) The SRAT internal meeting has not yet been held
		2) There is no technical guidance regarding the foster parent program
		3) There is no good coordination between teams in SRAT
Alternative programs	a.	the domains of gardening, animal confinement, and aquatic facilities/3K Program
	b.	Foster parent/orang tua asuh program
	c.	Use of Moringa powder in all SF for stunted children

Notes: SF = supplementary feeding, CES = chronic energy shortage, FWE = Family Welfare Empowerment, IHC = integrated health care, ENT = East Nusa Tenggara, MCH = maternal and child health, FHP = Family Hope Program, SRAT = Stunting Reduction Acceleration Team, NGO = non-governmental organization, FA = family assistance.

This study's findings indicated that actions to accelerate stunting reduction encompassed two categories: targeted intervention services and sensitive intervention services. Intervention service activities refer to specific actions directly contributing to stunting management. The emphasis of accelerating the reduction is placed on prioritizing interventions during the first 1,000 days of life. Nevertheless, in Malaka District, targeted intervention services have been implemented to cater to the needs of adolescent girls and school children.

The Health Office provided some targeted intervention services for various demographic groups. These services encompass a range of activities to address the health needs of young women, pregnant women, postpartum mothers, infants, toddlers, and school children. The implemented interventions encompass anemia screening and administration of iron supplementation tablets to female adolescents; dissemination of health education and provision of premarital counseling services, including the provision of tetanus toxoid vaccination for individuals participating in wedding preparation courses; provision of therapeutic feeding for undernourished toddlers; implementation of nutritional interventions within educational settings, including counseling on dietary composition, physical exercise, and breakfast consumption; implementation of therapeutic feeding for pregnant women with acute malnutrition; mandatory biweekly ultrasound examinations for pregnant women; and conducting postpartum home visits.

Discussion

Specific Intervention Services

Iron supplementation tablet interventions and screening for anemia among female adolescents were implemented as a preventive measure against stunting in offspring during their childhood. The significance of such endeavor in Malaka District, which is close to the border, lies in the fact that a substantial number of young ladies opt to enter into matrimony after completing secondary education. Iron supplementation tablet administration has been empirically demonstrated to effectively mitigate the occurrence of anemia among female adolescents.¹⁴ The implementation of anemia screening and provision of iron supplementation tablets to young women was a proactive measure to equip them for a safe pregnancy in subsequent years. Previous studies have established a correlation between anemia in female adolescents and the occurrence of anemia during pregnancy, resulting in adverse outcomes for both the mother and the newborn, including stunted growth.^{15,16}

Furthermore, guidelines for preventing stunting were provided to individuals about to get married. This intervention was administered when individuals planning to get married participated in a sequence of pre-marriage courses a church served. The initiatives encompassed health education and the provision of iron supplementation tablets. The provision of health education during pre-wedding period was expected to elevate knowledge and awareness of the soon-to-be bride and groom on necessary preparations for a healthy pregnancy phase, as well as the effective measures to avoid stunting among under-five children.¹⁷

In addition, achieving a healthy pregnancy could be facilitated by effective collaboration between partners to ensure sufficient nutrition during pregnancy and jointly make informed decisions on their health circumstances. Conversely, a deficiency in comprehension will lead to a deficiency in attentiveness toward the partner's gestation state, thus yielding adverse consequences for both the maternal figure and the offspring. To safeguard well-being of the soon-to-be bride and groom, they were provided with health education and iron supplementation tablets. These measures aimed to address nutritional requirements of their bodies and prepare prospective mothers for pregnancy to prevent anemia during gestation. The efficacy of iron supplementation tablets in mitigating the prevalence of stunting among the under-five had been substantiated.^{18,19}

Previous studies have stated that implementing interventions during the preconception phase might effectively mitigate the incidence of stunting.^{20,21} Nevertheless, available premarital intervention in Malaka District was restricted to individuals engaged in premarital courses, specifically targeting the soon-to-be brides and grooms. To mitigate adverse consequences, the FA team has implemented a data collection procedure at village level to vet those soon-to-be brides and grooms. This intervention aimed to provide them with the necessary knowledge and skills to navigate a successful pregnancy. To note, some individuals had previously had children before enrolling in premarital classes at the church.

The subsequent intervention entailed the provision of supplementary nutrition for 90 days to pregnant women diagnosed with chronic energy shortage. Technical guidelines guided the SF administration and consider the individual's dietary requirements. The SF was prepared by healthcare personnel in accordance with technical guidelines. The SF implementation was anticipated to enhance the nutritional well-being of expectant mothers, thus facilitating optimal fetal growth within the womb. Consequently, mothers were more likely to deliver infants with favorable nutritional status, including adherence to established standards for body length.

Unfavorable pregnancy conditions could significantly contribute to problems for both the fetus and the mother, ultimately impacting the long-term health status of infant.²² During the program implementation, several challenges were encountered. A notable obstacle was the present SF recipients who did not avail themselves of the opportunity to receive additional food. Consequently, the cooking team visited each recipient's residence to provide the SF. However, it was worth noting that the food delivery was not facilitated by the village office or supported by funding from the health center.

Pregnant women were typically advised to receive a minimum of six prenatal check-ups, encompassing various assessments and examinations, including at least two instances of ultrasound imaging throughout the course of their pregnancy. This condition aligned with protocols established by Indonesian Ministry of Health of the guidelines for prenatal healthcare.²³ The primary objective of pregnancy ultrasonography, following established guidelines, is to take a comprehensive assessment for potential complications during pregnancy, such as intrauterine growth restriction. The timely identification of the issue enables implementation of suitable preventive measures, thus facilitating the delivery of a newborn with a typical body length. The most influential factor in determining growth status throughout the initial two years of life is the body length at birth.²⁴

The provision of pregnancy services in Malaka District continues to face obstacles for the absent maternal and child handbooks at 20 Primary Health Cares. This issue arose from deficiencies in procurement systems at Indonesian Ministry of Health. Moreover, in 2022, three ultrasound devices would be accessible exclusively within three designated healthcare facilities. Consequently, this limited availability was anticipated to impede the ultrasound service provision, typically recommended to be administered twice throughout course of a pregnancy. A subsequent challenge pertains to insufficient obstetricians, necessitating a redirection of emergency maternal referral services to hospitals situated beyond the confines of Malaka District.

Health services were delivered through home visits throughout postpartum period. Malaka District, located in the Indonesia-Timor Leste border, is characterized by a strong preservation of cultural customs, particularly those related to the postpartum period. According to findings, postpartum mothers were typically advised to refrain from leaving their residence for 40 days following childbirth. The circumstances above significantly influenced inadequate provision of postpartum services that ought to be received. Nevertheless, healthcare professionals did home visits to assess health conditions of both mothers and newborns.

A strategy to accelerate the decline of stunting in newborns and toddlers is SF provision. The Malaka District's primary objective is to prioritize interventions to mitigate stunting and reduce the stunting prevalence. This entails shifting a focus of Public Nutrition Program from exclusively targeting stunted infants to encompassing malnourished toddlers, regardless of their stunting status. This intervention is to mitigate the incidence of chronic malnutrition, which could ultimately lead to stunted growth. The local food-based SF is implemented in accordance with the technical criteria for the provision of local SF, specifically focusing on the utilization of the ENT moringa powder by 2023.²⁵

Moringa powder, derived from the plant species *Moringa oleifera*, and its many preparations have been found to possess potential therapeutic properties for addressing stunting.^{26,27} A prior longitudinal investigation demonstrated a positive correlation between SF and children's body length and height enhancement.^{28,29} Within its execution, there existed groups of undernourished young children whose families decline to be directed to the Therapeutic Feeding Center for financial constraints related to lodging and sustenance for accompanying family members. Consequently, these children receive treatment for malnutrition via outpatient care. However, an additional challenge arises in the form of limited access to necessary resources. The development of a diet for outpatient treatment involves the responsibility of family to provide the necessary ingredients, which are then further developed by a nutritionist.

Interventions pertaining to the stunting issue are also implemented during the school-age period. Prior study findings indicate a significant impact of nutritious dietary intake in mitigating stunting among school children.^{30,31} Furthermore, engaging in group exercise activities and promoting communal meals in educational institutions could assist parents in safeguarding their children's nutritional well-being during periods of limited supervision. Ensuring sufficient nutritional intake during the school day has a potential to lift up children's physical activity levels and cognitive performance.¹⁸

Sensitive Intervention Services

Sensitive intervention services encompass a range of activities with an indirect association with stunting phenomenon. Non-health interventions, such as providing nutritious food, social assistance, hygienic water and environmental sanitation, regulation of pregnancy spacing and the number of children, and coordination within the team to accelerate stunting reduction, are typically sensitive interventions.

The Central Government has restricted the utilization of local finances for initiatives for the acceleration program. The responsibility for coordinating and monitoring the allocation of 30% of village revenues towards addressing stunting lies with Malaka District Government, overseen by the Village Community and Empowerment Office. According to Village Minister Regulation Number 7 of 2021, a stipulation mandates allocating 30% of village funds towards various initiatives. These initiatives included the construction or renovation of village maternity huts, IHC, contractual agreements with village health workers such as midwives and other healthcare professionals, SF provision, the establishment of sanitary facilities and access to hygienic water, training, and guidance for community health cadres, provision of incentives for these cadres, and the development of roads leading to healthcare facilities. According to this regulation, villages in Malaka District were assigned several responsibilities, including establishing a decree for a monitoring team responsible for weighing operations, organizing cross-sector meetings to prepare for the weighing operation, relocating targets during the weighing process, overseeing weighing activities at the IHC in collaboration with cadres, conducting visits to

individuals who fail to attend the weighing sessions, promoting awareness of the 3K program (pertaining to gardening, animal husbandry, and fish farming), and formulating village regulations restricting families with infants or pregnant women from undertaking prolonged travel outside the designated area.

The local government demonstrates a commendable response to regulations imposed by the Central Government. This has been achieved by establishing derivative regulations specifically governing the utilization of village finances. Nevertheless, the precise allocation and utilization of 30% of village funding for addressing the issue of stunting in rural areas remains uncertain, mostly due to inadequate communications and coordination mechanisms. The existing sectoral ego has hindered an optimal implementation of intervention efforts in rural areas. One persistent challenge which continues to face is absent adequate monitoring and evaluation mechanisms, resulting in the suboptimal implementation of novel initiatives like the utilization of 'Foster Parents' program for stunted children. Besides, many political factors in Malaka District has led to alterations in the composition of qualified health personnel.

To date, the local governing body has taken measures to address the issue of malnourished children by offering supplementary food assistance. This study's findings indicated variations in the duration of SF provision observed in two villages of Malaka District. Nevertheless, the present non-governmental organizations (NGOs) implementing programs at village level also plays a role in facilitating interventions indirectly contributing to the stunting mitigation in rural areas. The Food Security and Fisheries Office may facilitate stunting management through indirect measures such as providing food aid. Such activity involves providing some food assistance in the forms of essential commodities, including rice, frozen poultry, eggs, and fish. The challenges were mostly associated with financial constraints, resulting in providing food aid on a single occasion.

Apart from providing food assistance, a Sustainable Food Patterns initiative exist to specifically support families at risk of stunting. These activities are designed to cater to households including infants, toddlers, pregnant mothers, and stunted children. The family members susceptible to experiencing stunting are thereafter assembled into a collective unit and provided with instruction by agricultural educators. The arising limitations are associated with financial limitations of the project since it is sponsored by the ENT Provincial Government.

Consequently, the progress of the project cannot be predetermined, as it is contingent upon the availability of funds and potential transfers from the ENT Provincial Government. Nevertheless, there exist other corroborating elements that contribute to the indirect management of stunting. Several supportive factors can be identified, such as the provision of fish seed aid through the aspiration funds of the RRC and the provision of seeds by the Head of Malaka District. In addition, the community benefits from the presence of field agricultural instructors stationed in each village, who play a crucial role in disseminating knowledge of effective planting methodologies.

To overcome the situation, targeted interventions in the form of food assistance were implemented in collaboration with the Agriculture Office. A total of 14.175 tons of rice seeds was allocated for cultivation on 567 hectares of land across seven villages in Malaka District. These seeds were sourced from general allocation funds. Additionally, 7.85 tons of rice seeds was provided for cultivation on 227 hectares of land in the same seven villages, sourced from the state budget. In addition, farmer groups are supported by field agricultural instructors strategically deployed in each village, ensuring that each community had one instructor assigned.

Nevertheless, certain challenges hinder a complete implementation of this initiative in villages affected by stunting. The occurrence can be attributed to Malaka District's delayed implementation of the first stunting convergence action measures in 2023, posing challenges in delivering interventions in communities with a high prevalence of stunting. The delay above resulted in the Agriculture Office proceeding with activity planning without consulting the stunting locus communities. This should have been included in the first stunting convergence action, that is a situation analysis. Numerous actions have been taken to surmount the diverse challenges, encompassing the reinforcement of support at the village level by deploying field agriculture instructors in each village. This initiative aims to achieve a planting realization rate of 100%. Apart from that, the direction of the Governor of NTT Province regarding increasing Moringa commodities as a complementary effort to Integrated SF also aims to increase nutritional intake for malnourished children.

Stunting is a physiological state characterized by impaired growth resulting from prolonged malnutrition, primarily caused by insufficient nutrient consumption or recurrent illnesses. To mitigate the incidence of diseases among children, it is imperative to implement intervention measures encompassing provision of hygienic water and sanitation facilities. The Public Works and Public Housing Office enforces initiatives to address stunting by facilitating the provision of hygienic water in four villages, encompassing 820 house connections, in 2022. Additionally, hygienic water installation would be provided in six villages, totaling 850 house connections, in 2023.

Furthermore, efforts to improve sanitation would be made through the provision of 95 units of toilet in one village in 2022. Subsequently, in 2023, sanitation assistance was extended to nine villages, comprising a total of 684 units. Access to hygienic water is essential for producing nutritious food in domestic settings. The provision of uncontaminated water facilitates the ability of individuals to make nutritious meals for their households, particularly for infants and young children. Additionally, it enables hand hygiene practice before and after meals, reducing the risk of contracting infectious ailments such as diarrhea among toddlers. Even though the provision of hygienic water has not yet been extended to all villages affected by stunting, the ENT Provincial government has implemented further interventions to further enhance the coverage of house connections in villages of Malaka District.

As per the directives of the Indonesian President, the responsibility of accelerating the stunting reduction has been assigned to the National Population and Family Planning Office. At the regional level, specifically in Malaka District, the Women's Empowerment and Child Protection Office assumes the role of implementing secretary for the SRAT established in accordance with the Decree of the Head of Malaka District Number 110/HK/2022 pertaining to SRAT in Malaka District. The Women's Empowerment and Child Protection Office is responsible for overseeing and coordinating various programs to accelerate the stunting reduction in Malaka District as part of its secretarial duties.

The Family Planning Office conducts internal activities, such as health education (HE) aimed at addressing stunting in rural communities. These interventions are implemented through IHC programs, directly engaging with the target population. The HE provision is facilitated by family planning counselors. The challenges under the initiatives due to financial constraints have resulted in the inability of HE to extend its outreach to the people residing in 127 villages of Malaka District. Nevertheless, it is anticipated that the present family assistance team at the local level would facilitate a dissemination of information to the respective communities under their jurisdiction. In addition to the HE, the Women's Empowerment and Child Protection Office is currently preparing for weighing operations and the distribution of stunting kits including educational games. However, as per the technical instructions, this distribution is currently restricted to Family Planning Communities.

The prevention of stunting is also achieved by implementing measures to control inter-pregnancy intervals and size of families. Concerning this matter, the Women's Empowerment and Child Protection Office makes arrangements for the provision of contraceptives to individuals classified as reproductive-age couples. The stunting management is indirectly influenced by pregnancy spacing and total of children. During the gestational period, women undergo hemodilution, a process leading to physiological anemia. The restoration of this condition is recommended during postpartum period; however, if subsequent pregnancies occur in close succession, there is an increased chance for the mother to have recurrent anemia. This syndrome leads to inadequate fetal nutrition, resulting in impaired intrauterine growth and the possibility of postnatal stunting in the child.

Furthermore, the Women's Empowerment and Child Protection Office also facilitates cross-sectoral operations through convergence actions to accelerate stunting reduction. As of August 2023, the third stunting convergence action has been successfully taken. Such initiative was delayed for financial constraints. Less reach of the series of interventions in villages of Malaka District hinders their effectiveness in addressing stunting in targeted areas.

The responsibility of coordinating cross-sector efforts falls within the purview of the Regional Planning, Research and Development Office, serving as a coordinator for the working group's initiatives for the stunting reduction acceleration in Malaka District.⁸ The findings revealed their efforts to do the reduction in Malaka District. However, there had been poor cooperation in the team, as evidenced by the absent internal meetings of SRAT. This syndrome results in suboptimal coordination among the local government agencies, leading to a lack of consolidation in their actions.

The Malaka District Government has implemented many local initiatives, such as the 2H2 center program to accelerate stunting reduction. This intervention is to monitor pregnant individuals within a two-day period before and after giving birth. The ultimate objective of the 2H2 Center Program is to mitigate the incidence of maternal mortality in Malaka District. The subsequent pioneering endeavor is the 3K program, encompassing domains of gardening, animal confinement, and aquatic facilities. The primary objective of this initiative is to improve the capacity of vulnerable families susceptible to stunting, enabling them to meet their nutritional requirements through the utilization of self-accessible gardens and ponds.

The program implementation involves diverse officers responsible for different aspects. These include the agricultural, food security and fisheries, Village Community Empowerment, and FWE services, as well as the active participation of NGOs. Also, a program has been established to support caregivers of stunted children. This initiative has

been mutually agreed upon and is outlined in the roadmap and regional action plan aimed at reducing the prevalence of stunting, maternal mortality rate, and infant mortality rate in Malaka District from 2022 to 2026.³² The lack of specific indicators and intervention strategies for children with stunted growth has resulted in suboptimal implementation of the program.

Conclusion

Many local government agencies responsible for particular and sensitive interventions have effectively performed their duties in accelerating the stunting reduction in Malaka District. However, the low performance of internal coordination within SRAT has resulted in a lack of harmonization in its implementation. An active participation of the Head of Malaka District is crucial in taking the performance control to improve alignment between SRAT. This study is limited to structured interviews and secondary data analysis. It is strongly recommended that mixed methods and field studies be conducted at the subdistrict to village levels and their alignment with existing NGOs.

Abbreviations

INSS: Indonesian Nutritional Status Survey; ENT: Nusa Tenggara Timur; SRAT: Stunting Accelerating Reduction Team; IHC: Integrated Healthcare Center; SF: supplementary feeding; FA: Family Assistance; NGO: non-governmental organizations; FWE: Family Welfare Empowerment; HE: health education.

Ethics Approval and Consent to Participate

This study has successfully undergone the health research ethics assessment conducted by the health research ethics commission from STRADA Institute of Health Sciences, No. 000302/EC/KEPK/1/07/2023.

Competing Interest

The authors declare that there is no significant competing interest in this study.

Availability of Data and Materials

The data presented in this study is available in this article.

Authors' Contribution

MPMN is responsible for preliminary study, data collection, data analysis, and manuscript submission, while VN is responsible for data collection and manuscript preparation.

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