

Penta Helix Collaboration in Accelerating the Reduction of Stunting Rates in East Nusa Tenggara, Indonesia

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Abstract Stunting poses significant health and economic productivity challenges, impacting both short-term and long-term outcomes. East Nusa Tenggara (hereafter abbreviated NTT) has the highest number of stunting cases nationwide. In order to contribute to the integrative and holistic approach described in Presidential Regulation 72 of 2021, this research attempts to actualize a comprehensive policy backed by a variety of resources and stakeholder involvement. This study takes a qualitative approach using descriptive methodologies. The results show that, in spite of concerted efforts by the government, communities of Non-Governmental Organizations (NGOs), the media, academia, and businesses to address issues like the ownership of JKN/KIS cards or the National Health Insurance Healthy Indonesia Card, parenting awareness, nutritional intake, and sanitation problems in the North West Rote District, the stage of collaborative action planning reveals challenges in putting innovative policies into practice successfully. As a result, there are concerns that stunting rates may rise by February 2023 in Rote Ndao Regency. Stunting has detrimental effects on health, which can persist in both the short and long term. The high prevalence of stunting in NTT suggests that there may be significant health challenges faced by individuals in the region, including increased susceptibility to diseases and reduced overall well-being. Concerns regarding rising stunting rates in Rote Ndao Regency by February 2023 are speculative and lacking empirical evidence. Making precise future predictions is challenging without a thorough analysis of present trends and factors affecting stunting rates.

Keywords Stunting, Penta Helix Collaboration, Stakeholder, Public Administration, Collaborative Governance

1. Introduction

As part of efforts to enhance the quality of human resources, there is a concern regarding stunting, which is a component of Double Burden Malnutrition (hereafter abbreviated with DBM), and has extremely negative short- and long-term effects on both economic productivity and health. The principal aim of the health reforms is to improve the health system, which would further contribute to economic growth [1]. Short-term symptoms of stunting include a child's height being below average for his age group and issues with brain cell development, which will ultimately result in a lower than ideal level of intelligence [2], [3]. Long-term cognitive decline in children will result in decreased productivity and negative effects on families' and nations' economies, including slower economic growth, greater poverty, and inequality [4]. Given that 28 out of every 100 toddlers in Indonesia are stunted, the country nevertheless has a comparatively high stunting rate [5].

In accordance with Regulation No. 15 of 2018 issued by the Minister of National Development Planning/Head of the National Development Planning Agency, related to the update of the Government Work Plan for 2019, the government is implementing a program aimed at

addressing the issue of stunted growth in children. The determination of target areas for stunting interventions at the district/city level relies on various variables, such as the quantity of stunted toddlers, the prevalence rate, and the degrees of poverty [3], [6]. Since its inception in 2018, the targeted areas for interventions aimed at mitigating stunting have consistently expanded each year. The number of districts/cities increased from 100 in 2018 to 160 in 2019 and further to 260 in 2020. By 2021, the number of districts/cities will rise to 360 [4], [7]. In contrast, Presidential Regulation Number 72 of 2021 addresses the need to expedite the reduction of stunting in a comprehensive, integrated, and high-quality way by promoting collaboration, synergy, and synchronization among stakeholders. It is anticipated that the issue of stunting will be resolved [8], [9]. Based on data from the Ministry of Health, the stunting rate in Indonesia in 2023 was recorded at 21.5 percent, only down 0.1 percent from the previous year. The low reduction in stunting is due to the lack of an effective implementation model for the programs that have been established.

In the country, the province with the largest number of cases of stunting is East Nusa Tenggara (NTT). The prevalence of toddlers that are stunted is still erratic. The prevalence of stunting was 30.1% in 2018, decreased to 27.9% in 2019, and continued to decline to 27.5% by August 2020. However, as reported by the NTT Provincial Health Service, the percentage increased to 42.62% in 2021, making it the highest in Indonesia. Rote Ndao Regency ranks seventh in terms of elevation among the regencies in NTT. It has a stunting prevalence rate of 40.1%, which is lower than six other districts. These districts include Kupang Regency with a rate of 40.4%, East Manggarai Regency with a rate of 42.9%, Southwest Sumba Regency with a rate of 44%, Alor Regency with a rate of 44.8%, North Central Timor Regency with a rate of 46.7%, and the highest regency, South Central Timor, with a rate of 48.3% [10]. The 2023 Indonesian Health Survey (hereafter abbreviated SKI) report from the Ministry of Health of the Republic of Indonesia revealed that the prevalence of stunting in Indonesia is still high. According to data released by SKI, NTT Province is in second place with the highest prevalence of stunting nationally.

The Rote Ndao Regency Government needs assistance to carry out development initiatives on its own since it is a public body with constraints, particularly in creating agreement, exchanging viewpoints, and maintaining a commitment to resolving issues [11], [12]. It's to address the issue that the government is unable to adequately address its difficulties. Thus, in order to lower the stunting rate in Rote North West District, the government of Rote Ndao Regency must work in tandem with several entities, including academia, business, the community, the government, and the media. This type of cooperation is referred to as "penta helix collaboration." [13]. Using the penta-helix collaboration concept to foster cooperation can expedite the reduction of stunting rates. Specifically, in the

Rote North West District, there were 722 toddlers who experienced stunted growth, accounting for a prevalence rate of 46.13% based on data from 2019. There are now 223 toddlers who can yet be saved from harm [14]. In order to achieve this ambitious objective, it is imperative to engage multiple stakeholders to distribute responsibilities [15].

The partnership of these five stakeholders is expected to achieve a policy supported by a variety of interconnected resources synergistically. The penta helix model is advantageous for addressing complex issues involving multiple stakeholders with diverse interests in a single place, particularly in expediting the decrease in the prevalence of stunting in the North West Rote District of Rote Ndao Regency [16], [17].

2. Literature Review

2.1. Collaborative Governance

Collaborative governance is an emerging approach in government administration where diverse policy players convene in a forum to establish a shared agreement [2], [18]. The theoretical foundation of collaborative governance is derived from various scientific studies, encompassing organization theory, public administration theory, leadership theory, strategic management theory, policy studies, planning, environmental management studies, network theory, conflict management theory, and communication theory [19]. The theoretical foundation of collaborative governance shapes the perspective and focus of its primary elements [19], [20]. Collaborative governance is a type of government regulation where public agencies actively engage non-government stakeholders in a formal, consensus-driven, and deliberative decision-making process. The goal is to develop and implement public policies or regulate public programs or assets [21], [22].

2.2. Penta Helix Stakeholder Concept

The penta-helix concept emerged from two earlier models—the triple helix theory and the quadra helix theory—that involved key actors: such as government, entrepreneurs, academics, and civil society [23]. Subsequently, stakeholders in the penta-helix concept were streamlined to five, with a specific emphasis on the mass media. As the conversation progressed, the penta helix model became recognized as the framework, including Academics, Business, Community, Government, and Media [24]. The penta-helix model is a useful approach for addressing complex issues involving multiple parties, each representing different interests, inside a single place [25]. We can optimize the utilization of the pentahelix cooperation concept as a foundation for collaborative efforts aimed at fostering social transformation in society.

In order to achieve a grand vision, it is imperative to engage multiple parties and distribute responsibilities among them. Any goal can be achieved by starting with academics or other jobs [13], [14]. Whatever function is performed, the goal is always to be present as a means of collaboratively addressing community needs and creating long-lasting social change [19], [20].

2.3. Stunting

In the syndrome known as stunting, failure to grow linearly serves as a marker for some pathological conditions that are linked to higher rates of morbidity and mortality, diminished potential for physical growth, impaired neurodevelopmental and cognitive function, and an increased risk of developing chronic illnesses as an adult [21], [22]. Additionally, children with severely stunted development are more likely to experience sepsis, meningitis, tuberculosis, hepatitis, and increased morbidity and mortality from infections, particularly pneumonia, diarrhea, and other diseases [15], [24], [25]. In summary, stunting raises the risk of infection because it impairs the function of the epithelial barrier and modifies immunological responses [16], [17], [26].

3. Materials and Methods

This qualitative study was conducted in North West Rote District, Rote Ndao Regency, chosen for its proximity to 10 sub-districts and high prevalence of stunting. The investigation centers on Ratner's theory, which posits that collaborative governance is comprised of three stages or phases: the identification of obstacles and opportunities, the discussion of strategies for influence, and the planning of collaborative action [22], [27].

The necessary data for this research is derived from primary sources, specifically gathered through in-depth interviews conducted by the research team with the informants. Secondary data refers to information that is contained in documents, photographs, or other necessary records. The data collection in this study involved the utilization of interview techniques, including conducting in-depth interviews with relevant individuals and acquiring comprehensive information pertaining to the overarching scope of the research [28]. The informants on this research are: 1) Mr. Sherwin Ufi as Head of Division at Regional Development Planning, Research and Development Agency or Bappelitbangda, 2) Mrs. Dr. Patmi Wulandari, Head of Busalangga Community Health Center, 3) Human Development Cadre (hereafter abbreviated KPM) of Oetutulu Village, Mrs. Nuryani Killak, 4) Cliffpin R. Retta S.gz, Nutrition Management Staff at Busalangga Community Health Center. This qualitative descriptive data refers to the type of data that describes the qualitative characteristics of a phenomenon

or object without using quantitative numbers or measures. It is usually used in the context of qualitative research where the researcher is interested in understanding aspects such as perceptions, attitudes, motivations and subjective experiences of individuals or groups.

The data analysis methodology employed in this research is Creswell's method, introduced in 2016. It serves as the initial stage for researchers to begin processing and organizing data for analysis. The second phase involves comprehensively analyzing the data and documenting the overarching concepts conveyed by the sources in order to ascertain the extent of the information provided. The third step involves doing a thorough study by means of coding [29]. Coding is performed in accordance with the research topic. The fourth step categorizes findings to align with research objectives. The fifth step presents the report qualitatively. The sixth step involves interpreting the existing data and conducting a validity test through source triangulation.

The interview refers to the penta-helix concept, including government, corporate sector, academia, civil society, and mass media. It outlines emerging indicators of the penta-helix approach to prevent stunting [30], [31]:

1. In the penta helix concept, the government assumes three distinct roles. Initially, it serves as a regulator and overseer, responsible for implementing regulations and managing social change. In fulfilling these duties, the government remains actively engaged in various aspects including planning, execution, monitoring, oversight, promotion, financial allocation, licensing, and other related activities. Additionally, the government facilitates coordination among stakeholders who play a role in advancing social change [32].
2. Businesses serve as enablers in achieving goals through business processes, generating added value, and ensuring sustainable growth. Within the pentahelix collaboration concept, they support Micro, Small, and Medium Enterprises (MSMEs) by providing technological infrastructure, capital, and business networks, thereby enhancing their benefits [33].
3. Universities act as drafters, conducting research and identifying development opportunities. They also enhance knowledge and skills by providing the latest concepts, theories, and models relevant to current conditions [22].
4. In pentahelix collaboration, civil society groups with shared interests act as accelerators, promoting their products and services and liaising between stakeholders to foster social change [24].
5. Mass media supports promotional publications for public products and services and helps build the brand image of social changes in society. By providing easy access to information, media attracts new collaborators to jointly create impactful social change [27].

This study employed a methodology for recognizing obstacles and opportunities, namely through a phase in which each participant articulates the issues and opportunities, while other participants attentively listen to each problem presented by the relevant stakeholders [33]–[35]. The study of Identification of obstacles and opportunities is carried out with a focus on three main challenges that require attention, the important stakeholders who have an impact on these challenges, and the potential outcomes that can be accomplished through collaboration [36]. The themes of questions posed to informants included: 1) Main Problems, 2) Key Actors that will influence decisions on stunting issues, 3) Efforts or achievements in addressing the problems, 4) Effectiveness of the measures taken, 5) Collaborative Steps

4. Results and Discussion

4.1. What Are the Primary Issues that Need to be Tackled?

The primary challenge encountered by the Rote Ndao Regency Government, particularly in the North West Rote District, faces the challenge of stunting. This issue greatly impacts the welfare of Indonesian society, especially in the North West Rote District of Rote Ndao Regency, not just impacting children's physical growth but also leading to cognitive impairments, which in turn negatively impact their abilities and accomplishments [25]. In contrast, the Indonesian government has enacted Presidential Regulation No. 72 of 2021, which aims to accelerate achieving the eradication of stunting through thorough integration and high-quality methods facilitated by effective coordination, synergy, and synchronization among all stakeholders involved [26]. This signifies that collaboration among multiple stakeholders is essential for addressing the issue of stunting in Indonesia. The Regent Regulation No. 46 of 2022 has been successfully implemented by the Rote Ndao Regency Government, which focuses on expediting the reduction of stunting and the eradication of MMR/B. This regulation was developed through a collaborative effort involving various stakeholders, including the government, civil society organizations, academic institutions, and the media [31]. Josua Dethan, during an interview on July 17, 2023, the Head of the North West Rote Subdistrict expressed that:

"To find out the main problems that must be addressed in this phase of identifying obstacles and opportunities, all stakeholders are invited to the stunting discussion forum, namely a coordination and convergence meeting at the Rote Ndao Regency level. The Rote Ndao Regency Forkopinda attended the meeting. The individuals involved in addressing the stunting issue

include the chair of the Rote Ndao Regency Regional People's Representative Assembly (abbreviated DPRD), government representatives from various OPDs (abbreviated OPDs), village chiefs, heads of health centers, village cadres, traditional and religious leaders, as well as representatives from non-governmental organizations and the media.

The results of the interviews indicate that the sub-district level does not carry out the phase of identifying possibilities and impediments; instead, the district level does. Deliberation activities aim to reinforce the commitment to penta helix collaboration to expedite stunting reduction [25]. With the aim of establishing effective coordination that engages all stakeholders in cooperative communication, this action kicked off the establishment of a forum involving government, universities, businesses, media, and non-governmental organizations to discuss stunting care [22], [26].

The findings of an interview conducted on July 19, 2023, with Mrs. Dr. Patmi Wulandari, who serves as the Head of the Busalangga Community Health Center, and Clifpin R. Retta S.gz is a Nutrition Management Staff member at the Busalangga Community Health Center indicate that the following issues/obstacles exist in Rote North West District:

"The primary impediment to the gradual decline in stunting rates in the Rote North West District is the insufficient availability of BPJS/JKN KIS cards for the total population, only 4.04% possess JKN KIS cards, which are primarily only 0.86% of civil servants, TNI/Polri personnel, and pensioners have JKN/KIS cards, leaving others still needing one. This situation leads to instances where family members fall ill but do not go to the hospital right away for treatment; alternatively, if a family member gets ill and needs to be referred to a hospital for treatment, this becomes problematic because it costs a lot of money. Sanitation issues (clean water and latrines) are another cause. "It was further explained that even though people already have toilets in their homes, access to clean water is very far away, causing people to prefer to defecate in places that do not require as much water."

According to the interview findings, numerous individuals still want assistance comprehending the value of obtaining a JKN/KIS card and the procedure involved. Furthermore, the spread of some illnesses, such as diarrhea in kids, is caused by people pooping anywhere and by the general lack of knowledge about environmental hygiene in the society [21], [27]. The following are barriers that Rote North West District is facing in its efforts to reduce stunting rates more quickly. Parents often lack understanding about effective parenting techniques because individuals who marry young or without adequate planning typically have children who are stunted [24], [31]. After the child is born, the parents

leave the youngster with their grandparents while they go to work to support themselves financially. The statement above indicates that the general population still needs to comprehend the definition of stunting, the underlying elements that contribute to it, and its implications for the future. Due to food intake that falls short of nutritional demands for a considerable amount of time, from conception until the child is two years old, short toddlers result from chronic nutritional issues [20]. After reviewing the concepts of stunting and the penta helix and analyzing the results of the interviews, the issues that need to be addressed right now are environmental cleanliness and public awareness, the availability of sufficient health care facilities, and government socialization regarding stunting and prevention [10], [11], [13].

4.2. Who Are the Key Actors that Influence Decisions in this Area?

There are factors that influence the problem-solving process [12]. As mentioned by Division Head Mr. Sherwin Ufi at Regional Development Planning, Research and Development Agency (Bappelitbangda), in an interview on July 20, 2023, he stated that:

"The government has the biggest role in accelerating the reduction in stunting rates. The government is the main actor because regulations, funding capabilities, personnel, infrastructure, and data and information support it. Regulatory support will mobilize existing resources, including personnel and facilities/equipment. The government organizations involved range from Regional Leadership to technical implementing organizations. In terms of handling stunting, the relevant local government organizations are the Health Service, Social services for women's protection, child protection, population control and family planning (hereafter abbreviated P3AP2KB), Service, Social Service, Agriculture Service, Fisheries Service, Public Works Department of Housing and Settlement Areas, Village Community Empowerment Service, Research and Development Planning Agency and the lowest government element, namely the sub-district government, sub-district/village. Community Health Center and Integrated Service Post. Apart from providing funds to carry out programs to accelerate stunting reduction, this government organization also provides data and information support to help all stakeholders take steps to address existing problems in the area."

The interview results indicate that the government plays a vital role. Nevertheless, to carry out the strategy aimed at expediting the reduction of stunting in the Rote North West District, the government requires collaboration with other stakeholders [9], [10]. As a key participant, the government is responsible for establishing a range of programs, particularly those aimed at expediting the decrease in stunting rates in Rote Ndao

Regency, particularly in the Rote North West District [11]. Through the Rote Smart movement, the Rote Ndao Regency government has implemented several innovation initiatives, such as: 1) Cross-sector Weight Operation Movement, 2) Mama Boi Program, 3) Foster Brother Adoption Movement, and 4) Local food for stunted children, initiated under Regent Regulation Number 11 of Rote Ndao on March 22, 2021.

In implementing these programs, the government acknowledges the need for collaboration and welcomes the participation [7], [13]. In this Pentahelix Collaboration, key participants include academics, businesses, NGOs (for example: Usaid Momentum, Cita Bangsa Foundation) along with community figures, religious leaders, and the media. This implies that scholars do more than only impart knowledge but also teach skills to help those affected by stunting turn local foods into nutritious options and appealing meals [9].

The media in this partnership contribute to spreading information about stunting, its risks, and advancements in its management [11], [12]. Information and publications are distributed through health media channels like banners, billboards, and posters. Additionally, social media platforms are utilized to communicate various messages on addressing stunting, along with electronic and internet media, including Rote online media, Malole Voice Radio, and RRI Rote Ndao [9], [10]. Based on the description, all pentahelix actors contribute to reducing stunting in Rote Ndao Regency, particularly in the North West Rote District, where the government plays a vital role [7].

4.3. What Can We Achieve Together?

Rote North West Sub-district is a sub-district in Rote Ndao Regency that prioritizes stunting prevention. Based on the data collected, Table 1 displays the evolution of stunting trends in Rote North West District from 2019 to February 2023.

Table 1. Stunting Monitoring through Weighing Operations from August 2019 to February 2023

No.	Sub-District	Year	Monthly Monitoring of Stunting Rates	
			February (%)	August (%)
1	Northwest Rote	2019	-	41,53
2		2020	39,39	25,85
3		2021	26,45	26,02
4		2022	25,09	22,1
5		2023	23,4	-

Source: DPMD Rote Ndao Regency (2023)

February 2023, though it showed fluctuations in the past two years. Specifically, it was recorded at 25.09% in February 2022, decreased to 22.1% in August 2022, and rose to 23.4% by February 2023. These fluctuations

include low awareness of JKN/KIS card ownership, varying parenting practices, and limited parental knowledge about children's nutritional needs under the 1000 HKP program, as well as sanitation issues, such as access to latrines and clean water [10], [11]. As a result, even with access to a latrine, people may still defecate in places other than the latrine itself. The community's lack of support in bringing their children to posyandu for weighing and additional food is also influenced by seasonal changes [7], [12], [13]. Based on the findings of an interview conducted on July 22, 2023, with Mrs. Nuryani Killak from KPM Oetutulu Village, it was stated that:

"Multiple factors contribute to increased stunting rates in the Rote North West District. Initially, individuals believe that offering supplementary nourishment is a remedy, diverting their focus away from their children's dietary regimen at home. Furthermore, because of their demanding schedules, parents fail to consistently accompany their children to the posyandu. Furthermore, children are highly vulnerable to illness when there is a shift in seasons. "This is what causes the following weighing operations to have a big influence on the decrease in the weight of toddlers, which, as a consequence, increases the number of stunting cases."

According to the description, numerous challenges exist in addressing stunting, yet these can be overcome through collaborative efforts. Hence, the government must recognize barriers and prospects that may occur consistently. Consequently, managing these situations necessitates the active participation of all stakeholders [2], [4], and in order to jointly achieve the objective of stunting, it is imperative that the government, alongside other stakeholders and the communities and families impacted by stunting, actively back all initiatives [5], [6].

4.4. What Is the Most Effective Approach to Achieving Change?

To expedite the decrease in stunting, the government has implemented a policy to address the different challenges experienced during the initial stage. These policies have been developed as tactics and innovations to speed up the decrease of stunting. As per Mr. Sherwin's statement during an interview held at his office on July 20, 2023, he stated:

"The Rote Ndao government has introduced a new initiative called the Cross-Sector Weighing Operation as part of the Rote Smart movement. This operation focuses on tracking the growth of children and their development, specifically during the first 1000 days of life. It is conducted in every posyandu, involving the monitoring of children's nutritional progress. Additionally, providing local complementary food (PMT) to stunted children is crucial, utilizing locally available, and highly nutritious

food. Last, provide adopted brothers and sisters access to the third movement (hereafter abbreviated GKA2). The objective of this effort is to guarantee that every kid suffering from stunting and pregnant mothers at high risk receive a minimum of one foster brother from State Civil Service (hereafter abbreviated ASN), Indonesian National Army (hereafter abbreviated TNI), Indonesia Police, entrepreneurs and others who are prepared to offer their attention through extra nourishment or guidance. Moreover, the Mama Boi program is community-driven initiative to prevent maternal and infant mortality during childbirth. "The Mama Boi program was born from the idea that handling stunting must start from the time the fetus is formed in the mother's womb because there is a strong relationship between stunting and the mother and baby."

As stated in the description above, Rote Ndao Regency, including Rote North West District, has utilized some strategies that are thought to be beneficial in lowering stunting rates. The preceding explanation demonstrates that the stunted growth observed in children cannot solely be attributed to their parents' economic disadvantage. It is influenced by parenting practices and the level of awareness regarding the significance of providing appropriate weaning food (MPASI) and ensuring its nutritional value for children. The Mama Boi program is an innovative initiative aimed at preventing maternal and infant fatalities that are classified as high or extremely high risk [4], [7], [10]. Chronic Energy Deficiency (KEK), which results in infants being born stunted, is one sign of pregnant women who are at risk. In light of the previous explanation, it is evident that the government is continually employing several strategies that are considered highly efficient in driving progress toward expediting the decrease in stunting rates [8], [9], [11].

4.5. How Can Collaboration be Carried Out and Maintained?

In order to sustain collaboration, it is imperative to possess an open mindset and engage in effective communication [13]. The effective management of stunting within the framework of the penta helix partnership necessitates a systematic and time-consuming approach. According to an interview with Josua Dethan on July 27, 2023, he stated the following:

"The primary factor is establishing mutual trust and a strong commitment from all involved parties is essential, including the government, stakeholders, and various societal entities like community leaders, religious figures, community organizations, and families. This encompasses parents, spouses, expectant mothers, children, and teenagers to enhance the capabilities of both individuals and institutions. "There is also recognition from internal collaboration in carrying out their respective roles to achieve the goal, namely

accelerating the reduction of stunting rates in Rote North West District."

Subagyo's stance supports the statement by regarding collaboration as a collective drive, a self-reinforcing process comprising four mutually advantageous components [11]: 1) Mutual trust: This develops as parties collaborate, get to know each other, and demonstrate trustworthiness, responsibility, and reliability. 2) Mutual understanding: This involves stakeholders understanding and respecting each other's positions and interests, even in disagreement. 3) Internal legitimacy. The honor results from internal collaboration. In this scenario, it is essential for the actors involved in collaboration to possess trustworthiness and credibility in their mutual interests [15]–[17]. Collaboration actors must recognize a mutual reliance among them, which will foster enduring

collaboration [19], [20]. Regarding the previous statement, the collaboration process is ongoing. It is upheld with a strong dedication to expediting the management of stunting through various interventions, as elucidated from interviews conducted with all entities or components of the Penta helix. This has resulted in collaboration within the Penta helix, as depicted in Table 2.

Table 2 demonstrates that all pentahelix actors perform their jobs proficiently. The penta helix cooperation research specifically mentions Ratner's theory, which outlines three distinct stages/phases that make up the collaborative governance process, namely [11], [13]: listening phase including "identifying obstacles and opportunities", dialogue phase including "debating strategies for influence", and choice phase including "planning collaborative action".

Table 2. Results of Pentahelix Collaboration in Accelerating the Reduction of Stunting Rates in North West Rote District, Rote Ndao Regency

No.	Element of Pentahelix	Results of Collaboration
1	Government	<ol style="list-style-type: none"> 1. Concern Policy 2. Create a program for innovation 3. Promoting the interests of pregnant and nursing moms 4. Fostering cooperation with universities, businesses, the public sector, and the media
2	Academics	<ol style="list-style-type: none"> 1. Conducting dissemination 2. Sending KKN and internship students to offer guidance and instruction 3. Give empowerment
3	Private Parties	<ol style="list-style-type: none"> 1. Helping the community 2. Keep working together with the government 3. Respect and implement the government's innovation program
4	Community Figures and Religious Figures	<ol style="list-style-type: none"> 1. Educating and fostering awareness within the community by offering Posyandu Cadres, expectant moms, and nursing mothers' guidance and training 2. Helping youths and aspiring brides understand 3. Offer behavior-building and capacity-building interventions 4. Observe and acknowledge the rules that the government has imposed
5	Society and Youth	<ol style="list-style-type: none"> 1. Observe and acknowledge the rules that the government has imposed 2. Make use of the government-provided resources 3. Follow guidelines from the government, NGOs, businesses, religious, and traditional leaders, and improve your actions to help reduce stunting rates
6	Media	Acting as an expander, its primary purpose is to facilitate the dissemination and promotion of information to a wider audience. Concerning the implementation and outcomes of the stunting reduction acceleration program

Source: Processed Research Results (2023)

Table 3 shows the only entities that the government, specifically the regional authorities and their organizations, along with non-governmental organizations such as the National Citadel Foundation and the USAID Momentum Foundation or the 1000 Days Fund Foundation, are involved in these three stages. This nonprofit organization's goal is to stop stunting in the first thousand days of life. In Rote Ndao Regency, non-governmental organizations (NGOs) play a crucial role in expediting stunting management by monitoring toddlers taking part in the program of Stunting Center of Excellence (SCE) [12], [15], coordinating with the Health office in handling stunting is needed, Social services for women's protection, child protection, population control and family planning (hereafter abbreviated P3AP2KB) and Community and Village Empowerment Service (hereafter abbreviated DPMD) as well as Regional Development Planning, Research and Development Agency (hereafter abbreviated Bappelitbank). As the first line of defense against stunting, our primary goal is to teach health professionals and posyandu cadres. In the course of a thousand days, we have touched about 11,000 houses in 1000 period (hereafter abbreviated HPK), and specifically, it aims to promote more prenatal checkups and blood supplement tablet intake, as well as families with expectant mothers. Along with posyandu cadres and young children, the media also serve as expanders and primarily focus on publication [8], [13], meanwhile, private and academic actors just offered guidance and support, which meant that their involvement was insufficient from the beginning and that the outcome was not what was intended [25], [31].

Table 3. Engagement of Stakeholders at Each Stage of the Pentahelix Collaboration to Accelerate the Reduction of Stunting Rates in Rote North West District, Rote Ndao

No.	Collaboration Stages	Actors Involved
1	Identify Obstacles and Opportunities	Government
		NGO
		Media
2	Debat Strategies to Influence	Government
		NGO
		Media
3	Planning Collaborative Actions	Government
		NGO
		Academics
		Private party
		Media

Source: Processed Research Results (2023)

5. Conclusions

When it came time to identify possibilities and hurdles,

the government and communities (NGOs) agreed on several difficulties that needed to be addressed, including those about the National Health Insurance Healthy Indonesia Card or JKN/KIS card ownership, awareness of the significance of poor parenting styles, people's comprehension and knowledge, children's inadequate nutritional intake in 1000 HKP, and sanitation issues (clean water and latrines). In the Debate Strategy stage, the government tackles various possibilities and challenges to accelerate stunting reduction, influencing actions by the government, NGOs, and the media. Each group develops plans during the joint action planning stage (academics, government, society, media, business). Nonetheless, the objective remains the same: the community must be able to comprehend and apply innovative policies and programs. Since collaborative efforts to combat stunting are still ineffective, stunting rates will still rise in North West Rote District, Rote Ndao Regency, in February 2023.

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