

Impact of Indonesian Healthcare Worker in Stunting Eradication

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Abstract

Even though the number of cases has reduced yearly, stunting is still a significant condition affecting Indonesian children. The fight against stunting includes attention to sensitive and specific interventions addressing the direct and indirect causes of stunting. Healthcare workers, as front liners, play a significant role in the intervention and eradication of stunting and are actively involved in the prevention, education, advocacy, and data gathering surrounding stunting. Though vital, the role of healthcare workers in the fight against stunting and its impacts have never been discussed extensively, partly due to the vast variation of healthcare workers and layers of medical services (from primary care to advanced hospitalization) included in the care for stunting. This review aims to look at available literature resources that fully describe the numerous roles and the impact healthcare workers had on eradicating stunting in Indonesia. While the healthcare roles in providing intervention of stunting (e.g., medical doctors in the prescription of ONS) is essential, it is crucial to equip healthcare (and the community) with sufficient knowledge of stunting.

Keywords: stunting, healthcare workers, Indonesia, intervention

Abstrak

Meskipun prevalensi stunting menunjukkan penurunan dalam beberapa tahun ini, namun kondisi stunting masih memberi pengaruh yang signifikan terhadap kesehatan anak Indonesia. Upaya menanggulangi stunting termasuk. Dengan strategi intervensi sensitive dan spesifik telah menargetkan penurunan stunting baik secara langsung maupun tidak langsung. Tenaga Kesehatan sebagai lini terdepan dalam penanganan stunting di Indonesia memainkan peranan penting dalam menjalankan upaya preventif, edukasi dan advokasi serta tentu saja eradikasi stunting. Meskipun sangat vital, namun peran dari tenaga Kesehatan belum mendapat banyak porsi kajian serta diskusi yang ekstensif, mengingat tingginya tingkat variasi pelayanan dibidang stunting, terutama sejak tahap layanan primer. Mengingat pentingnya peran tenaga Kesehatan dalam strategi eradikasi stunting, sangat penting untuk membekali tenaga Kesehatan dengan pengetahuan yang baik dibidang penanganan dan pencegahan stunting, termasuk dalam aspek intervensi nutrisi.

Kata kunci: stunting, healthcare workers, Indonesia, intervention

Introduction

Stunting is a condition in which a child has heights below his average age group. Stunting is one indicator of failure to thrive in toddlers due to chronic malnutrition in the first 1,000 days of life. According to the results of the Indonesian Nutritional Status Study of the Ministry of Health, the prevalence of under-fives experiencing stunting in Indonesia is 24.4% in 2021.¹ Thus, almost a quarter of children under five in the country were stunted that year. However, that percentage has decreased compared to the previous few years. In 2020, the prevalence of stunting in Indonesia was predicted to be 26.92%.² Looking at the trend, the prevalence of stunting in Indonesia jumped to 37.2% in 2013 and 30.8% in 2018. As previously stated, the number has tended to decrease in recent years. There are also government targets that aim to drop stunting prevalence in Indonesia below 14% by 2024 (a yearly reduction of 2.7% percent).³

To achieve this target, the Ministry of Health will carry out specific interventions by addressing the direct causes of stunting, such as providing food, preventing infectious diseases, and conducting integrated management of sick toddlers. Meanwhile, the National Population and Family Planning Agency, together with several other ministries, carry out sensitive interventions and; series of activities related to indirect causes of stunting, starting from the provision of proper drinking water and sanitation, nutrition, health services, increasing awareness of care and nutrition, and increasing access to food.⁴

In addition, the government has committed to reducing the incidence of stunting through the implementation of five pillars. As mandated by Presidential Regulation Number 72 of 2021 concerning Acceleration of Stunting Reduction, the five pillars are the commitment and vision of national and regional leadership; communication of behavior change and community empowerment; convergence of specific and sensitive interventions at the center and the regions; food and nutrition security; and strengthening and developing systems, data, information, research, and innovation.⁵

Another essential program is the first 1000-day action (*Aksi Seribu Hari Pertama Kehidupan* – ASHAR), which aims to strengthen health and nutrition service programs for mothers and children in the period of the

first thousand days of life. Inavertly, this program also aimed and had been able to reduce the incidence of stunting. Nevertheless, the incidence of stunting is still considered relatively high because it has not yet reached the WHO standard.⁶

While the government and its related ministries work on programs to reduce stunting, healthcare workers work directly in the field to carry out these programs. Healthcare workers (doctors, nutritionists, nurses) and community healthcare workers (cadre) are the tip of the spear in eradicating stunting in Indonesia. Besides being directly involved in children with stunting, healthcare workers are also actively involved in the prevention, education, advocacy, and data gathering surrounding stunting. Though vital, the role of healthcare workers in the fight against stunting and its impacts have never been discussed extensively.

This review aims to look at available literature resources that would fully describe the numerous roles and the impact that healthcare workers had on eradicating stunting in Indonesia. These include numerous risk factors affecting how health workers work against stunting (e.g., resources, infrastructure, education, benefits, etc.). This review will act as a foundation that will describe current conditions on how healthcare workers in Indonesia fight against stunting and may reveal strengths and weaknesses in which improvement can be made.

Methods

Due to the nature of this study and the limited academic articles explicitly addressing the impacts of healthcare workers on stunting in Indonesia, the researchers of this study had decided to include (aside from scholarly articles) government documents, a news article from credible sources, and reliable presentation from experts as a source of knowledge. The literature search was conducted from 14-16 October 2022 by researchers who are medical doctors with countless experiences in conducting research. Keywords of “healthcare workers,” “impact,” “role,” and “stunting” were used in the search engine to generate relevant articles. Sources included in this study are those that talk about the roles and impact of healthcare workers towards stunting in Indonesia, written in either Bahasa Indonesia or English.

The articles found were then discussed among all the researchers to ensure their validity and relevance to

the study; any studies deemed unreliable and irrelevant were promptly removed. All the information gathered from the articles is then grouped into themes based on the researchers' agreement.

Results and Discussion

Before defining the role of healthcare workers in reducing stunting in Indonesia, it is essential to break down what makes up healthcare workers in Indonesia. According to the law in Indonesia, there is a slight difference between what constitutes healthcare workers and medical workers. A healthcare worker is every person who devotes himself to the health sector and has the knowledge and skills through education in the health sector. Meanwhile, medical workers consist of doctors, dentists, specialist doctors, and specialist dentists.⁷ Due to the complexity of stunting, this manuscript will include all healthcare workers as part of its discussion.

To ease in writing the manuscript, the main role of healthcare workers towards reducing stunting are grouped into prevention, diagnosis and treatment, and monitoring (Table 1). Prevention of stunting includes education, advocacy, and addressing risk factors related to stunting. Diagnosis and treatment include physical examinations, growth measurement, and thorough anamnesis followed by holistic treatment of the patient (including any other underlying conditions or risk factors). Monitoring will include follow ups, evaluation, data management and reporting of patients with stunting. This paper will note that more than one type of healthcare workers (e.g., nurse, lab technician, and doctor) would be involved the effort to reduce stunting.

Since pregnancy, efforts to prevent stunting in infants and toddlers need to be implemented. The principle is to increase nutritional intake in pregnant women by ensuring that they can consume quality

food during pregnancy.⁸⁻¹⁰ Intakes containing folic acid and iron are a combination of nutrients that are very important for pregnant women.^{11,12} When the baby is born, it is essential to ensure that the baby receives exclusive breastfeeding for the first six months; this ensures that food security and sufficient nutrients are received by the children in the first months of life – as stunting primarily affects those with low socio-economic levels.¹³⁻¹⁵ The impact of stunting cannot be reversed; thus, prevention should be a priority.

Malnutrition in early childhood can interfere with the growth and development of children, cause low intellectual abilities, increase infant and child mortality, and increases the potential for metabolic disorders to occur during adulthood, increasing the urgency that this growth disorder is treated appropriately.^{16,17} Currently, the factors influencing nutritional problems, especially stunting, are knowledge, economic, social, and environmental factors. Family economic status, such as family income, parental education, and the mother's nutrition knowledge, can indirectly affect stunting.¹⁸

According to Potter and Perry, the various roles of health workers (doctors, midwives, nurses, etc.) include an essential role as communicators, motivators, and facilitators.¹⁹ A communicator is a person who provides information to people who receive it. The other role of health workers is as a motivator; a motivator is a person who stimulate other interest in or enthusiasm for doing something. The last role is a facilitator; a facilitator is a person that makes it easy to provide facilities for other people in need. When conducted properly, these roles will affect a person's knowledge and attitudes. As stunting are highly dependent of a family's education level and understanding regarding the condition, health worker's role as educators plays an essential part in the prevention and reduction of stunting – as proven by countless of cross-sectional research across Indonesia.²⁰⁻²²

Table 1. Healthcare workers based on their roles in reducing stunting.

Prevention	Diagnosis and Treatment	Monitoring
- Health cadre	- Doctor and specialist	- Health cadre
- Health promotion personnel	- Nutritionist and dietitian	- Doctor and specialist
- Public health officer	- Nurses	- Nutritionist and dietitian
- Environmental health personnel (sanitation worker, entomologist, microbiologist)	- Lab technician	- Epidemiologist
- Nutritionist and dietitian		- Health administration
- Midwives		

Another part of prevention is through screening and early diagnosis. Posyandu for toddlers plays a significant role in stimulation, early detection and early intervention on the growth and development of children under five through weighing and measuring of children; Posyandu (and Puskesmas) therefore acts as the front line in finding cases of stunting. In many areas, health cadres have direct lines of communication with the community. Many cadres play roles as midwives' partners in monitoring child growth and development through Posyandu. Even the cadres also act as enumerators in collecting data on the length/height examination of toddlers. Although cadres have an essential role in the early identification of stunting, there is still doubt whether cadres have the proper understanding of diagnosing stunting.²³ Reflecting upon the previous statement regarding knowledge, it is also essential to equip cadres, midwives, and other front-line health workers with proper knowledge of stunting.

Doctors made proper diagnoses of stunting through history taking and physical examination, including weight and height measurements. Further examinations are also needed to confirm the presence of infection or other disease conditions that can cause stunting. Diagnosing stunting poses small challenges due to its simplicity; however, complexity arises in diagnosing complications and possible causes for stunting. Specialistic diagnosis and care by paediatricians are not readily available in rural areas around Indonesia (which arguably had a higher risk of stunting), thus resulting in neglected complications which may worsen a child's condition.²⁴ Looping back to the previous discussion, this point further emphasizes the need to give front-line healthcare workers knowledge of stunting.

Stunting is intervened with specific nutrition and sensitive nutrition. Specific nutrition interventions are aimed at children in the First 1000 Days of Life (HPK) and contribute to a 30% reduction in stunting.²⁵ The framework of specific nutrition intervention activities is generally carried out in the health sector, starting from the mother's pregnancy to giving birth to a toddler. Specific nutritional intervention includes providing food to pregnant women, pregnant women taking blood-added tablets, early Initiation of Breastfeeding (IMD), exclusive breastfeeding, breastfeeding accompanied by complementary feeding at the age of 6-24 months and providing complete immunizations to children.²⁶

A significant part of the specific nutrition interventions includes the provision of nutritional

supplementations (oral nutritional supplementations - ONS, high calorie/high protein supplementation, etc.) to enhance nutritional intake and catch up with the growth of children with stunting. Numerous studies have stated the benefits of prescribing stunted children with ONS, including improving physical growth in stunted children at risk of wasting and the potential to reduce stunting, underweight, and wasting status in stunted children.^{27,28} It should be noted that in Indonesia, oral nutritional supplementations are considered "medicine" and thus need to be prescribed by a medical doctor, further emphasizing the importance that medical doctors are equipped with good knowledge on identifying and treating stunting.

Sensitive nutrition interventions are carried out through various development activities outside the health sector and contribute to 70% of stunting interventions.²⁹ Activities related to sensitive nutrition interventions can be carried out through macro activities across ministries and institutions, which includes providing and ensuring access to clean water and sanitation, providing access to health and family planning (KB) services, providing parenting education to parents, and providing sexual and reproductive health and nutrition education to adolescents.

In addition to these two things, supporting factors (enabling factors) that helps in stunting reduction are needed; this includes political and policy commitment, government and cross-sector involvement, and capacity to implement existing interventions (see Figure 1). With that being said, most healthcare workers would play a large role in Specific Nutrition Program (Table 2).

Although the incidence of stunting is generally identified in the community through the Posyandu and Puskesmas health programs, hospitals still have a role in the success of the stunting reduction program. One of the roles of hospitals in reducing stunting is stated in the Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/MENKES/1128/2022 concerning Hospital Accreditation Standards. In the regulation, one of the accreditation standards assessed is the National Program for reducing stunting and wasting prevalence.³⁰ With the issuance of these standards, dietitians, and nutritionists, as well as those in charge of child health (doctors and specialists) in hospitals, must develop and implement nutrition programs in accordance with existing conditions. Moreover, as a curative and rehabilitative health service facility, stunting cases referred to hospitals are

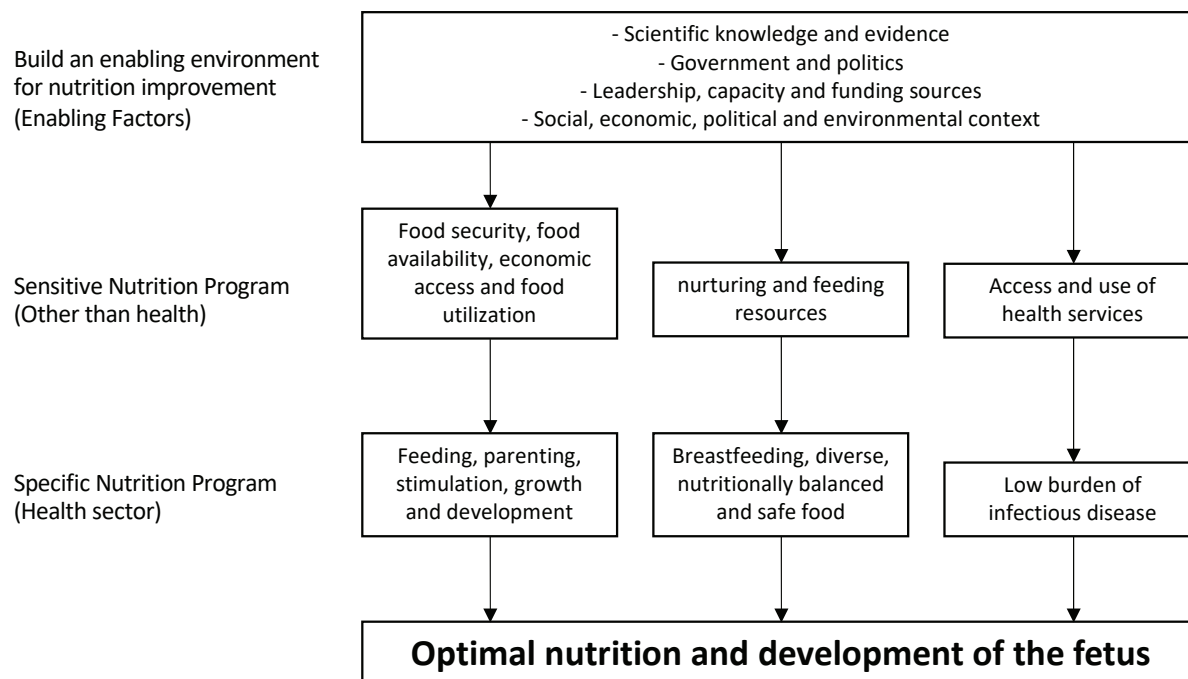


Figure 1. Multi-sectorial approach on nutritional improvement.

Table 2. Programs surrounding the health sector involved in directly reducing stunting.

Stunting Related Program in Health Sector
- Guidance in improving the nutritional status of the community
- Guidance in increasing community nutrition knowledge
- Development of stunting prevention
- Implementation of health promotion strategies
- Improved Nutrition Surveillance
- Strengthening nutritional supplementation interventions for pregnant women and toddlers
- Provision of Supplementary Food for Pregnant Women with Chronic Energy Deficiency
- Provision of Supplementary Food for Undernourished Toddlers
- Micronutrient supplementation
- Guidance in increasing deliveries in Health Service Facilities
- Filariasis and helminthiasis control services

generally complex, with complications needing advance intervention. Previous point emphasizes the point that stunting care needed multi-level health facilities involving numerous healthcare personnel with variety of background and skills.

While monitoring and follow-up programs for stunting continues in all levels of healthcare facilities, another important aspect in the fight against stunting is in data management, gathering, and analysis which help identifies key areas and effectiveness of interventions

or programs that is being implemented. According to the Ministry of Internal Affairs (Kemendagri), the stunting prevention and reduction data management system is a data management system at the district/city level down to the village level that is used to support the implementation and management of stunting prevention and reduction programs/or activities.

The data management system is part of managing information sources that include all activities, from identifying needed data, collecting data, and utilizing data to ensure accurate and up-to-date information. Data management system activities intersect with policy aspects, use and support existing programs in districts/cities.

Data gathered to implement integrated nutrition interventions is adjusted to the activities at each level of government. At the village level, the data is used for village-level situation analysis, planning process, program targeting, monitoring the implementation of intervention activities, and performance assessment (scorecard). At the sub-district level, data is used for socialization and advocacy to the Village Head, determining village targets, and monitoring the progress of activities. At the district/city level, each Regional Apparatus Organization in charge of the sector requires data to carry out activity planning such as Situation Analysis, Stunting Consultations, see and review their program service achievements/program performance, and make decisions for improvement and improvement of the implementation program.

It is vital also to realize that the role of healthcare personnel in monitoring involves correctly gathering the data and maintaining a well-kept database. When done correctly, these data provide valuable indicators that could help identify the program's weaknesses and provide feedback for evaluations. In the grand scheme of things, proper monitoring and data will help the overall effectiveness of the fight against stunting.

Conclusion

Healthcare personnel plays an important role in the prevention, diagnosis and treatment, and monitoring of stunting. It should be noted that sufficient knowledge of stunting for both for the public (parents, policy makers, government officials) and healthcare workers is an essential foundation in the fight against stunting.

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