European Journal of Biology and Medical Science Research
Vol.11, No.2, pp.,1-8, 2023
Print ISSN: ISSN 2053-406X,
Online ISSN: ISSN 2053-4078
Website: https://www.eajournals.org/
Publication of the European Centre for Research Training and Development -UK

The Phenomenon of Stunting in North Sumatra and Its Prevention Efforts

Nadia Chairunnisa*
Grade of XII MIPA 1, Sekolah Menengah Atas Negeri 1 Medan, Indonesia
*Email : nadiaachairunnisa@gmail.com

DOI: https://doi.org/10.37745/ejbmsr.2013/vol11n218 Published Feburaray 12, 2023

Citation: Chairunnisa N. (2023) The Phenomenon of Stunting in North Sumatra and Its Prevention Efforts, *European Journal of Biology and Medical Science Research,* Vol.11, No.2, pp.,1-8

ABSTRACT: *The purpose of this paper is to look at the phenomenon of stunting in North Sumatra Province, Indonesia and the efforts made in the form of promotive, preventive, curative and rehabilitative which are carried out in an integrated, comprehensive and sustainable manner by the government. This type of paper is a type of descriptive research that explains and describes the phenomenon of stunting in North Sumatra by searching news related to activities and prevention programs carried out by the local government. Actions to prevent stunting are certainly wiser to implement by everyone in their environment, especially meeting nutritional needs since pregnancy, giving exclusive breast milk (ASI) until the baby is 6 months old, accompanying exclusive breastfeeding with healthy complementary food for breast milk (MPASI), continuing to monitor growth and development of children and always keep the environment clean*

KEYWORDS: Stunting, integrated, comprehensive and sustainable manner

INTRODUCTION

Child nutrition is important. If nutrition is not fulfilled, stunting will occur (Fufa, 2022). The main causes of stunting include nutritional and nutritional intake that is not sufficient for children's needs, wrong parenting due to lack of knowledge and education for pregnant women and breastfeeding mothers, poor environmental sanitation such as lack of clean water facilities and unavailability of adequate toilet facilities and limitations access to health facilities needed for pregnant women, nursing mothers and toddlers. Stunting, if quoted from the Presidential Regulation of the Republic of Indonesia Number 72 of 2021, is a disorder of growth and development of children due to chronic malnutrition and recurrent infections, which are characterized by their length or height below the standard set by the minister administering government affairs in the health sector. Meanwhile, the definition of stunting according to the Ministry of Health (Kemenkes) is a child under five with a z-score value less than -2.00 SD/standard deviation (stunted) and less than -3.00 SD (severely stunted). So it can be concluded that stunting is a growth disorder experienced by toddlers which results in delays in children's growth that are not in accordance with the standards, resulting in both short-term and long-term impacts (Marume et al., 2023). The President of the Republic of Indonesia has made efforts to accelerate the reduction of stunting in Indonesia as stated in Presidential Regulation Number 72 of 2021 concerning the Acceleration of Stunting Reduction (Handayani & Rahayu, 2023). This is the main focus of the President, because there are more and more cases of stunting occurring in Indonesia. The cause of stunting is the lack of nutritional intake that is obtained by toddlers from the

beginning of the first golden period of life, starting from the womb (9 months 10 days) up to the age of two (WHO, 2014). Stunting will be seen in children when they turn two years old, where the average height of children is less than children of their age. In North Sumatra Province, areas that also have red status related to stunting are Pakpak Bharat, Nias, South Nias, North Nias, Dairi, North Padang Lawas, Langkat, Batubara, North Labuhanbatu, South Tapanuli, and Padangsidempuan City. Whereas those with yellow status or those with a prevalence of stunting in the range of 20-30 percent, include Samosir, Simalungun, West Nias, Labuhanbatu, South Labuhanbatu, North Tapanuli, Central Tapanuli, Humbang Hasundutan, Karo, Toba, Gunungsitoli City, Tanjungbalai City, Sibolga City, as well as the City of Binjai.

When viewed from the causes and characteristics of stunting, this is related to fundamental problems that can occur in communities or developing countries. It is related to the adequacy of nutrition or nutrition in the community, especially for pregnant women and toddlers, and is related to a healthy lifestyle, such as the availability of proper sanitation (bathing, washing, toilet or toilet facilities) and availability of clean water. Cases of stunting are not only in the outermost, frontier and lagging areas, but are also found in urban areas with relatively high levels of education and income. There are other problems that cause the high number of stunting cases in Indonesia. Education or knowledge about how to live a healthy life, good sanitation, or about nutritious food has been taught at the elementary level, starting from elementary school. However, it has become commonplace in society that there is a distance between the knowledge that a person already has and the application of that knowledge, not necessarily in line. According to the author, Posyandu activities in villages or sub-districts carried out by Family Welfare Empowerment/*Pemberdayaan Kesejahteraan Keluarga* (PKK) cadres have actually fulfilled most of the efforts needed to prevent stunting. Under the guidance of health workers from the Puskesmas, PKK cadre mothers have collected data and toddler development, recorded the toddler's weight, provided additional food and so on. So if this Posyandu activity routinely runs in every village or sub-district, stunting prevention might run faster. But whether Posyandu activities have been running effectively or not this needs to be studied again. Some people may even underestimate Posyandu activities.

People who know how to live a healthy life or know the types of nutritious food that are good for the body will not necessarily adopt a healthy way of life or will consume healthy food. Most people know the dangers or bad of smoking, but they still consume cigarettes. Building awareness and changing healthy behavior is not easy. So a kind of movement or campaign is needed for the community to change the attitude and behavior of the community related to healthy living, fulfilling adequate nutrition for pregnant women and children, good sanitation systems and availability of clean water.

The obstacles in accelerating stunting prevention according to the National Strategy for the Acceleration of Stunting Prevention issued by the National Team for the Acceleration of Poverty Reduction are (1). The stunting prevention programs are not yet effective. (2). Coordination of implementation of specific and sensitive nutrition interventions at all levels related to planning and budgeting, implementation, and monitoring and evaluation is not yet optimal. (3). Not yet effective and efficient allocation and utilization of resources and sources of funds. (4). Limited capacity and quality of program implementation. (5). There is still a lack of advocacy, campaigning and dissemination regarding stunting, and various efforts to prevent it.

Activities or efforts to change people's behavior from an unhealthy lifestyle to a healthy lifestyle is a big job. It is not enough just to be given lectures or outreach, but one must also reach a level of self-awareness to accept and carry out healthy living behaviors. There needs to be an example or example from community leaders, and there needs to be someone closest to them who can remind them if it is not implemented. Of course this cannot be done in a short time. So it is only natural that efforts to accelerate stunting prevention become a national program driven by national leaders from the President, Regional Leaders to village or sub-district head level leaders. According to the author himself, considering that this activity uses a lot of funds, it is necessary to supervise each stage of its implementation, so that it can be carried out in an accountable and efficient manner. There should be no misappropriation or corruption of the stunting prevention budget. In accordance with the mandate of the President of the Republic of Indonesia regarding accelerating the reduction of stunting in order to realize Golden Indonesia 2045, the Ministry of Finance has prepared a budget to deal with stunting consisting of budgets for Ministries/Institutions in the central government, Physical Special Allocation Funds (DAK) and Special Allocation Funds (DAK) Non physical. With the available budget to deal with stunting, it is hoped that cases of stunting in Indonesia will decrease, with a target of 14% in 2024.

LITERATURE REVIEW

Stunting

Stunting is a form of growth failure (growth faltering) due to the accumulation of insufficient nutrition that lasts a long time from pregnancy to 24 months of age (Abdulla et al., 2023). This situation is exacerbated by inadequate catch-up growth. Stunting is one of the malnutrition conditions related to past nutritional insufficiency so that it is included in chronic nutritional problems. Stunting is measured as nutritional status by taking into account the height or length, age and sex of the toddler. The habit of not measuring the height or length of toddlers in the community makes stunting difficult to recognize. Malnutrition is an impact of nutritional status both in the short and long term. The cause of stunting can be attributed to malnutrition. Malnutrition and stunting are two interrelated problems. Stunting in children is the impact of nutrient deficiency during the first thousand days of life. This causes an irreversible disturbance of the child's physical development, thus causing a decrease in work performance (Artanti & Garzia, 2022). Stunted children have an average Intelligence Quotient (IQ) score eleven points lower than the average IQ score of normal children. Disorders of growth and development in children due to malnutrition if intervention is not received early on will continue into adulthood.

METHODS

This research uses a type of descriptive qualitative research method. by analyzing library sources, scientific articles, and documents that can be scientifically accounted for. The main objective of qualitative research is to understand phenomena or social phenomena by focusing more on a complete picture of the phenomenon being studied rather than breaking it down into interrelated variables. The data used is stunting data in several urban districts in North Sumatra, Indonesia.

RESULT AND DISCUSSION

Result

North Sumatra Provincial Health Office and District Health Office. South Nias held a mass prevention drug administration (POPM) for worms in the working area of the Tello Island Health Center, Kab. Nias Selatan on Friday, 30 August 2019 (Dinkes Sumut, 2019). POPM for worms is one of the activities carried out in order to break the chain of transmission of worm infections. Worms can damage the nutrition of infected children, causing anemia and even death. Decreased nutrition in children can cause impaired physical growth and even stunting, damage cognitive development (learning ability) so that children's education progresses.

Based on the Regulation of the Minister of Health No. 15 of 2017 concerning Deworming Control, the central government has set a target for the deworming program in the form of reducing worms in 2019. The indicator for achieving the target of the deworming program is reducing the prevalence of worms to below 10% in each district/city. To achieve this target, POPM is carried out in an integrated manner to isolated areas including Tello Island, Kab. South Nias.

Efforts to reduce stunting rates in Asahan District, North Sumatra in 2022 will decrease by 10%. The previous year, the stunting rate in Asahan District was 28.6%, now it has fallen to 18.9% (Portal Asahan, 2022). This effort is inseparable from Pillar 3 program convergence activities in the regions carried out through 8 stunting prevention convergence actions, one of which is Stunting Program Situation Mapping and Analysis. To increase understanding and capacity in implementing stunting reduction acceleration through convergence action, it is necessary to strengthen regional capacity through the Stunting Program Situation Mapping and Analysis event,

Efforts to prevent stunting in Tanjungbalai are carried out by socializing the importance of eating fish. Because fish is rich in protein and nutrition, and can prevent stunting. Eating fish has many health benefits and can prevent stunting. Because fish contains a lot of protein and nutrients, which children really need for their growth. The prevalence of stunting in Tanjungbalai City is already at 17%. this can still be maximized through the Gemarikan campaign and strengthening coordination with the local Forkopimda. Apart from the healthy diet, stunting can also be prevented by paying attention to good sanitation and clean and healthy living habits (PHBS). For this reason, Nawal invited all parties to educate the public about sanitation and PHBS.

According to data from the 2021 Indonesian Nutritional Status Study (SSGI), the stunting rate in Taput is currently 26.7 percent. the Family Assistance Team (TPK) team must be the spearhead of accelerating the reduction of stunting because TPK's task is a very noble task because it prepares a healthy, stunting-free and quality young generation starting from accompanying prospective brides, pregnant women, nursing mothers and postpartum who have toddler. Another effort made by the North Tapanuli Regional Government is to provide duck seed assistance from the Taput Regency Government (Pemkab) to maintain children's health. Duck meat and eggs contain protein which is very good for the growth and development of children, both physically and mentally (Kompas, 2022).

The stunting rate in Medan City continues to decline, from 550 children, now it has decreased to 364 children, and the latest data obtained is 359 children. In suppressing the stunting rate, all regional

apparatuses carry out a comprehensive handling (DPPKH Lubuk Linggau, 2022). the handling is not only for stunted children, but also must be followed by prevention efforts so that the stunting rate that has fallen continues to fall. Efforts to deal with stunting carried out by the Medan City Government are not only based on samples but also must be completed based on the entire population of Medan City who are affected by stunting. It looks small above, but below it looks big. Other indicators must be considered in overcoming the problem of stunting, including its prevention. For example, starting when the child is still in the womb, paying attention to the nutrition and condition of the parents and so on

The trend of decline in children under five years who experience stunting in North Sumatra is as follows in The Figure 1:

Figure 1. Stunting Rate in North Sumatra

Based on the data in Figure 1 for SSGI 2021, the prevalence of stunting in Medan City in 2021 is 19.9 percent, far below the average for North Sumatra Province which is still at 25.8 percent. Medan City is one of the five regencies/cities that have the lowest prevalence of stunting in North Sumatra Province after Deli Serdang Regency, Pematang Siantar City, Tebing Tinggi City and Asahan Regency.

North Sumatra Province is one of the 12 priority provinces in the stunting reduction acceleration program, because it has the highest number of stunting cases with 348,889 toddlers, after West Java (968,148 toddlers), East Java (656,449 toddlers), and Central Java (510,646 toddlers). After North Sumatra, Banten Province has the fifth most cases of stunting, namely 268,226 toddlers (SSGI 2021). The other seven provinces designated as priority provinces are NTT (37.8%), West Sulawesi (33.8%), Aceh (33.2%), NTB (31.4%), Southeast Sulawesi (30.2%), South Kalimantan (30%), and West Kalimantan (29.8%). These seven provinces have the highest prevalence of stunting in Indonesia.

European Journal of Biology and Medical Science Research
Vol.11, No.2, pp.,1-8, 2023
Print ISSN: ISSN 2053-406X,
Online ISSN: ISSN 2053-4078
Website: https://www.eajournals.org/
Publication of the European Centre for Research Training and Development -UK

DISCUSSION

There are two causes of stunting, namely environmental and genetic factors. The environment is an important aspect that can still be intervened so that short stature or stunting can be overcome. Environmental factors that play a role in causing short stature include the nutritional status of the mother, feeding patterns for children, environmental hygiene, and the incidence of infection in children. Besides being caused by the environment, stunting can be caused by genetic and hormonal factors. However, most stunting is caused by malnutrition. The age of children under five years is the golden age for children's growth. At that time children will absorb information from their surroundings and will be recorded for a long time in their memory. This will determine the mindset and behavior in the future. So that during this period it is very important to be given adequate nutritional intake as well as communication stimulus or stimulation, and correct behavior from the environment, especially parents and family.

If the provision of nutrition and communication and character stimuli is insufficient, then the child may experience slowed growth or stunting, weight, height, and lower motor and sensory abilities than other children of his age. The short term stunting is the disruption of brain development, physical growth, intelligence, and metabolic disorders in the body. As for the long term, namely easy illness, the emergence of diabetes, heart and blood vessel disease, obesity, cancer, stroke, disability in old age, and poor quality of work which causes low productivity. The article also cites a report released by UNICEF (Gizaw et al., 2022), conveying several facts related to stunting and its effects, namely:

1. Children who experience stunting earlier, namely before the age of six months, will experience more severe stunting before the age of two.
2. Severe stunting in children, there will be long-term deficits in physical and mental development so they are unable to learn optimally at school compared to children with normal height.
3. Children with stunting tend to take longer to attend school and are more often absent from school than children with good nutritional status. This has consequences for success in life in the future.
4. Stunting will greatly affect the health and development of children. The basic factors that cause stunting can interfere with intellectual growth and development.
5. The effect of nutrition at an early age who is stunted can interfere with growth and cognitive development that is lacking.
6. Stunting at the age of five tends to persist throughout life, early childhood growth failure continues in adolescence and then grows into stunted adult women and directly affects health and productivity, thereby increasing the chances of giving birth to low birth weight babies.
7. Other consequences of malnutrition/stunting on development are very detrimental to children's performance. If bad conditions occur during the golden period of brain development (0-2 years) then it cannot develop and this condition is difficult to recover from.
8. Decreased cognitive development, impaired concentration and inhibited learning achievement and decreased productivity by 20-30 percent, which will result in loss generation, meaning that the child is alive but cannot do much good in education, economics and others.

Stunting Prevention

Actions to prevent stunting are certainly wiser to implement by everyone in their environment, especially those who have children under five and young couples for the possibility of stunting

occurring, rather than having to make efforts to deal with it after stunting has occurred (Dearden et al., 2023). The cost of preventing stunting is of course cheaper and the impact will certainly be more controllable, than if stunting has already occurred. Here are some steps you can take to prevent stunting:

The action that is relatively effective to prevent stunting in children is to always fulfill nutrition from the time of pregnancy. The Millennium Challenge Account Indonesia health institute recommends that mothers who are pregnant always consume healthy, nutritious food and supplements on the advice of a doctor. In addition, women who are undergoing the process of pregnancy should also routinely have their health checked by a doctor or midwife.

Veronika Scherbaum, a nutritionist from the University of Hohenheim, Germany, stated that breast milk has the potential to reduce the chances of stunting in children because of its micro and macro nutrients. Therefore, mothers are advised to continue to provide exclusive breastfeeding for six months to their baby. Whey and colostrum proteins found in mother's milk are also considered capable of boosting the baby's immune system which is fairly vulnerable.

When the baby reaches the age of 6 months and over, the mother can already provide complementary foods. In this case, make sure the selected foods can fulfill the micro and macro nutrients which previously always came from breast milk to prevent stunting. WHO also recommends fortification or adding nutrients to food. On the other hand, mothers should be careful when determining these additional products. Consult a doctor first.

Parents need to continue to monitor their child's growth and development, especially from the child's height and weight (Skantze et al., 2023). Take your little one regularly to Posyandu or special children's clinics. That way, it will be easier for mothers to know the early symptoms of the disorder and how to treat it. As is known, children are very vulnerable to disease, especially if the environment around them is dirty. This factor also indirectly increases the chance of stunting. A study conducted at Harvard Chan School stated that diarrhea is the third factor that causes these health problems. Meanwhile, one of the triggers for diarrhea comes from exposure to dirt that enters the human body.

CONCLUSION

Factors causing stunting in North Sumatra, Indonesia are caused by problems with nutritional intake consumed during pregnancy and toddlerhood. Lack of maternal knowledge about health and nutrition before pregnancy and the postpartum period, limited health services such as antenatal care, postnatal services and low access to nutritious food, low access to sanitation and clean water are also causes of stunting. Prevention of stunting is the first agenda and target of the Sustainable Development Goals (SDGs), namely eradicating poverty and the second target, namely eradicating hunger and malnutrition. Efforts are being made to pursue a stunting prevalence target of 14 percent in 2024.

Reference

Abdulla, F., Rahman, A., & Hossain, M. M. (2023). Prevalence and risk predictors of childhood stunting in Bangladesh. *Plos one*, *18*(1), e0279901.

Artanti, G. D., & Garzia, M. (2022). Stunting and Factors Affecting Toddlers in Indonesia. *Jurnal Pendidikan Usia Dini*, *16*(1), 172-185.

Dearden, K., Mulokozi, G., Linehan, M., Cherian, D., Torres, S., West, J., ... & Hall, C. (2023). The Impact of a Large-Scale Social and Behavior Change Communication Intervention in the Lake Zone Region of Tanzania on Knowledge, Attitudes, and Practices Related to Stunting Prevention. *International Journal of Environmental Research and Public Health*, *20*(2), 1214.

Dinkes Sumut (2019). Cegah Stunting Dengan Popm Cacingan Di Pulau Tello, Nias Selatan. http://dinkes.sumutprov.go.id/artikel/cegah-stunting-dengan-popm-cacingan-di-pulau-tello-nias-selatan (Acceses on 20 December 2022)

DPPKH Lubuk Linggau (2022). Percepat Atasi Stunting pejabat Pemkot Medan Sedekah. Available on https://dppkb.lubuklinggaukota.go.id/2022/11/01/percepat-atasi-stunting-pejabat-pemkot-medan-sedekah-rp500-ribu-setiap-bulan/ (Acceses on 20 December 2022)

Fufa, D. A. (2022). Determinants of stunting in children under five years in dibate district of Ethiopia: A case-control study. *Human Nutrition & Metabolism*, *30*, 200162.

Gizaw, Z., Yalew, A. W., Bitew, B. D., Lee, J., & Bisesi, M. (2022). Stunting among children aged 24–59 months and associations with sanitation, enteric infections, and environmental enteric dysfunction in rural northwest Ethiopia. *Scientific Reports*, *12*(1), 19293.

Handayani, R., & Rahayu, S. (2023). Analysis of Stunting Management Policy: Case of Pandeglang, Banten-Indonesia. *East Asian Journal of Multidisciplinary Research*, *2*(1), 291-300.

Kompas (2022). Salurkan Bibit Itik untuk Cegah Stunting. Available on https://kilasdaerah.kompas.com/tapanuli-utara/read/2022/10/18/19132611/salurkan-bibit-itik-untuk-cegah-stunting-bupati-tapanuli-utara-tidak-untuk (Acceses on 20 December 2022)

Marume, A., Archary, M., & Mahomed, S. (2023). Predictors of stunting among children aged 6-59 months, Zimbabwe. *Public Health Nutrition*, 1-27.

Portal Asahan (2022). *Wakil Bupati Asahan buka Acara Pengukuran dan Publikasi Stunting*. https://portal.asahankab.go.id/2022/12/14/wakil-bupati-asahan-buka-acara-pengukuran-dan-publikasi-stunting/ (Acceses on 20 December 2022)

Skantze, C., Almqvist-Tangen, G., & Karlsson, S. (2023). School nurses' experience of communicating growth data and weight development to parents of children 8 and 10 years of age. *BMC Public Health*, *23*(1), 1-11.

WHO (2014). Global Nutrition Targets 2025: Policy Brief Series. World Heal Organ. 2014. Available: https://apps.who.int/iris/rest/bitstreams/665585/retrieve.