



Stunting Prevention: A Literature Review

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Abstract. Stunting is defined as chronic malnutrition or failure that occurs during the growth period and can be used as an indicator for nutritional fulfilment in children. Children who have insufficient or poor nutritional intake and have a short body size or very short growth status can put their intelligence or IQ (intellectual quotient) at risk. This study aims to obtain conclusions from searching journals regarding stunting prevention. Journal search and discoveries via Google Scholar and Science Direct databases. From 10 journals, it was found that preventing stunting can be done by providing health education for mothers, empowering cadres and health workers, providing balanced nutrition, monitoring the first 1000 days of life for children.

Keywords: Stunting, Mother, Nutrition, First 1000 Days.

1. Introduction

One of the nutritional problems in toddlers is stunting [1]. Stunting cases have become a chronic problem in the world. Stunting cases in the world in 2017 were recorded at 22.2% or 150.8 million stunting cases. And 55% come from Asian countries. Indonesia itself is recorded as the country with the highest prevalence in Southeast Asia. In 2017-2019, Indonesia had an average of 36.4% stunting cases, data from the Ministry of Health of the Republic of Indonesia. Stunting itself is defined as a nutritional problem caused by a lack of nutritional intake over a long period of time, which results in stunted growth in children's height that is not appropriate to their age [2]. So their height is relatively shorter compared to children their age.

Stunting is defined as chronic malnutrition or failure that occurs during the growth period and can be used as an indicator for nutritional fulfilment in children [3]. children who have insufficient or poor nutritional intake and have short body size or very short growth status so that it can put their intelligence or IQ (intellectual quotient) at risk [4]. According to the Ministry of Bappenas (2018), children who experience stunting at the age of less than six months will have an impact on health, which will disrupt the development and growth of the child in the future as well as affect the child's cognitive abilities and the child will have difficulty socializing and will tend to become victims of bullying because they are different from children their age.[5]. Stunted children at the age of six tend to be sustainable and permanent throughout their lives, and affect adolescence and adulthood. So there will be a

chance of giving birth with a low birth weight baby. This stunting is more dangerous and poses a risk to girls because it will affect the reproductive system and hinder the growth process and there is a greater risk of giving birth to babies so it can put their intelligence or IQ (intellectual quotient) at risk. According to the Ministry of Bappenas (2018), children who experience stunting at the age of less than six months will have an impact on health, which will disrupt the development and growth of the child in the future as well as affect the child's cognitive abilities and the child will have difficulty socializing and will tend to become victims of bullying because they are different from children their age [6]. Stunted children at the age of six tend to be sustainable and permanent throughout their lives, and affect adolescence and adulthood. So there will be a chance of giving birth with a low birth weight baby. This stunting is more dangerous and risky for girls because it will affect the reproductive system and hinder the growth process and there is a greater risk of giving birth to stillborn babies [7].

The cause of stunting is due to a lack of nutrition during the first 1000 days of their life[8]. Other factors that influence the occurrence of stunting in children are the parenting style of parents, the practice of exclusive breastfeeding. There are many factors that can influence malnutrition in children, including retardation, LBW or low birth weight, insufficient exclusive breastfeeding, growth of the baby in the womb, food or MPASI that is not nutritionally adequate and unhealthy and inappropriate, low knowledge of parents regarding with the child's nutritional status, the birth distance of the child being too close to his older sibling, insufficient intake of energy and macronutrients, low economic background so that there is not enough money for the availability of food or adequate housing, thus affecting comfort in eating and the lack of water. clean, lack of water sanitation and health services and there are congenital diseases and other infectious diseases[9].

Adequate, good and healthy nutritional intake during pregnancy, breastfeeding and complementary foods for breast milk in children are important factors in the incidence of stunting in children.[10]. because stunting has an impact on education, growth, development, as well as adolescence and adulthood, as well as an impact on the social life of children[11]. So it is necessary to prevent stunting from an early age so that stunting cases do not increase. This prevention can start from the prospective bride and groom before marriage, health education is needed so that later they can give birth to a healthy baby, health education can include nutritional needs before pregnancy, during pregnancy and after birth or breastfeeding to food consumed to accompany breast milk. And counselling can also be provided by posyandu cadres in their respective areas[2].

Nutritional problems related to stunting are a problem that must be addressed immediately, because they will have an impact on children's health and lives in the future[3]. Therefore, early prevention is needed to reduce stunting cases so that the prevalence of stunting cases in Indonesia does not increase.

2. Method

This research employs a literature review as its primary methodology. The search for relevant scholarly articles was conducted using the Google Scholar and Science Direct databases, encompassing both international and national journals published in Indonesian and English. The citation process utilized the Mendeley Desktop reference manager. Through an exhaustive search on Google Scholar, a total of 2,576 journals were identified, while Science Direct yielded 1,932 journals. Subsequent to this comprehensive search, a meticulous selection process was undertaken to identify 10 journals that aligned with the inclusion criteria established for this research. The criteria considered for journal selection included adherence to international and national standards, publication within the past 5 years (2018-2023), and thematic relevance to the prevention of stunting. This rigorous selection process ensures the validity and relevance of the chosen literature to the research objectives.

3. Results

The outcomes of the search for scholarly articles pertaining to stunting prevention revealed 8 journal articles sourced from Google Scholar and 2 research articles obtained from Science Direct. These identified journals are intricately linked to the subject of stunting prevention, encompassing discussions on the utilized samples, research methodologies, and the resultant findings and conclusions. To provide a comprehensive overview of the data, a detailed presentation is included in Table 1, offering a structured synthesis of the pertinent information. This tabulated format facilitates a systematic examination of the various aspects, contributing to a more thorough understanding of the content extracted from the selected journals.:

Table 1. Stunting prevention articles

No	Title, Author, Year	Sample	Method	Prevention Results
1	The Stunting Tool for Early Prevention: development and external validation of a novel tool to predict risk of stunting in children at 3 years of age,[12]	1168 new-borns	Cohort study	Stunting prevention can use early detection tools by looking at maternal factors (height and weight gain during pregnancy), baby factors (gender, gestational age, weight, baby length) and father's height to make a quick assessment to estimate the risk of occurrence. stunting in children aged 3 years

No	Title, Author, Year	Sample	Method	Prevention Results
2	The Empowerment Of Cadres And Medicasters In The Early Detection And Prevention Of Stunting,[13]	10-11 Posyandu Cadres	Experiment with pre and post	A religious motivation approach can be used to encourage cadres to socialize early detection of stunting to people who are at risk of stunting
3	Factors Affecting the Knowledge and Motivation of Health Cadres in Stunting Prevention Among Children in Indonesia,[14]	363 cadres in 8 cities in West Java	Cross sectional correlation study	Stunting prevention is influenced by cadre knowledge and cadre motivation in providing education to the community
4	The Effects of Lecture, Brainstorming, Demonstration (CBD) to Mother's Knowledge, Attitude, and Behaviour About Stunting Prevention on Toddlers,[15]	35 Mothers who have children aged 0-24 months	Quasi-experiment with Pre-post-test control group design	Stunting prevention by providing health education using lecture, brainstorming and demonstration methods can increase knowledge, attitudes and actions for mothers to prevent stunting. This action can be carried out regularly and on a schedule so that its implementation is effective.
5	Stunting Prevention Policy as a Form of Child Health Rights Legal Protection,[16]	Children Aged 1-3 Years	Normative by reviewing data secondarily	Stunting prevention can be used with policies and programs for providing food assistance or PMT by collecting data on residents who belong to disadvantaged families in meeting children's nutritional needs.
6	Determinants of Stunting Prevention among Mothers with Children Aged 6-24 Months Esti,[17]	109 respondents	Cross-sectional	Stunting prevention is influenced by a person's economic level, if the income is sufficient then it can meet the needs of children so that stunting can be prevented. Apart from that, the cultural values adhered to also have a significant influence on

No	Title, Author, Year	Sample	Method	Prevention Results
7	Applied nutritional investigation spatial variation and determinants of stunting among children aged less than 5 years in Ethiopia: A spatial and multilevel analysis of Ethiopian Demographic and Health Survey 2019,[18]	5753 weighted children aged <5	Geospatial and multilevel analysis of	preventing stunting in children. Policymakers must design better educational, economic, and financial strategies to improve food security and access to critical nutritional interventions for children from uneducated families, poor households,
8	Use of technology for monitoring the development of nutritional status 1000 hpk in stunting prevention in Indonesia,[19]	14 children	Experiment	Monitoring the first 1000 days of a baby's birth is very important to prevent stunting, this monitoring includes nutrition, baby's weight, baby's height, and baby's development.
9	Determinants of stunting in children under five years in dibate district of Ethiopia: A case-control study,[20]	566 study participants (188 cases and 378 controls)	Case control study	Stunting prevention is done by providing health information to families about the importance of good household food diversity, providing health information to families about the importance of limiting the number of family members, and providing nutritional education about the benefits of animal source food.
10	Identifying the sociocultural barriers and facilitating factors to nutrition-related behavior change: Formative research for a	6-23 months	Ethnography with interviews	Stunting prevention by looking at food quality is less important than food quantity. Household food allocation occurs in predictable patterns and varies by type of

No	Title, Author, Year	Sample	Method	Prevention Results
	stunting prevention program in Ntchisi, Malawi,[21]			household member and season. Regarded as energy-giving foods

4. Discussion

From journal searches it was found that there are 4 ways to prevent stunting, namely by providing health education for mothers, empowerment by cadres and health workers, providing balanced nutrition, monitoring 1000 days of life for children for explanations related to prevention, explained as follows:

4.1. Maternal health education

A mother's knowledge is very influential in preventing stunting in children. This health education can be given to prospective brides and grooms who are getting married so that they will give birth to healthy and intelligent babies. This health education or counselling can start from knowledge about stunting, the impact of stunting on the child in the future, then how to treat it during pregnancy by providing adequate nutrition for the womb, checking the womb regularly to see any abnormalities in the fetus, and explaining what foods meet the needs. Nutrition during pregnancy. Fulfilment of this nutrition does not have to be expensive, but the most important thing is that the nutrition of the pregnant mother and fetus is fulfilled [22,23]

4.2. Cadre Empowerment

Cadres or people who play a role in carrying out health duties in the community or posyandu, these cadres play an important role in preventing stunting because the cadres monitor the growth and development of children regularly every month by measuring the child's weight and height. cadre empowerment here is meant by providing education to parents such as research[20]who stated that stunting prevention provides education about the importance of good household food diversity, provides health information to families about the importance of limiting the number of family members, and provides nutritional education about the benefits of animal source food.

4.3. Providing Balanced Nutrition

Children need nutrition from the time they are in the womb until birth until complementary foods for breast milk must be met with balanced nutrition. This balanced nutrition includes the needs of carbohydrates, proteins, fats, minerals, vitamins to fulfil children's nutritional requirements. Fulfilment of nutrition is adjusted to the child's age, weight and age are calculated to determine the amount of nutrition needed in one day. Exclusive breastfeeding

is also an important factor in preventing stunting. This breastfeeding is carried out regularly for 6 months after which the child needs complementary foods to fulfill the child's nutrition.[24]In PTM, it is an important factor because in children aged 6 months to 1 year, children are in a period of growth and development so they require adequate nutritional needs to form new cells for growth in children.

4.4. Monitoring the First 1000 Days of Life

Life after the baby is born up to 1000 days is the golden period for children. because at this time the child is in a phase of growth and development which is important in the formation of the child's height and weight. This monitoring looks at the child's physical and psychological condition [19]. The first 1000 days of a child's life are very important for preventing stunting because during this period children need to be monitored for development and growth [25]. Monitoring of children's weight, height, nutritional requirements must be carried out regularly. This examination can be carried out at the posyandu or related health services so that later the child does not experience delays in height [26].

5. Conclusion

Searching 10 journals, it can be concluded that preventing stunting can be done in four ways, namely providing health education for mothers, empowering cadres and health workers, providing balanced nutrition, monitoring the first 1000 days of life.

Authors' Contributions

First author contributed to design, concept, literature search. The second author contributed to literature search, data analysis, the third author contributed to manuscript preparation and the fourth author's contribution was literature search, data analysis and manuscript editing.

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