Family Roles and Support in Preventing Stunting: A Systematic Review

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ABSTRACT

Background: Stunting is inadequacy in physical growth. Stunting can be detrimental to children under five as it causes low intelligence, decreased endurance, and inhibited growth and development. This will increase risk of infections and non-communicable diseases in adulthood. The optimal implementation of family roles supports the improvement of nutritional status in toddlers so it can reduce the incidence of stunting.

Method: This systematic review is written in accordance to the PRISMA guidelines. The process includes analysis on online articles from databases of ScienceDirect, PubMed, and Google Scholar for the past five years the period from 2019 with the keywords "stunting and parents or family".

Results: There are researches from eight articles related to the role and support of families in preventing stunting. Based on several syntheses reviewed, it was determined that culture can be an inhibiting factor in preventing stunting. Still, with local wisdom, it can also be a catalyst in reducing stunting itself. Culture is one of the specific nutrition interventions that can reduce the prevalence of stunting by emphasizing aspects of a mother as the "center of life", family roles and support, and the role of fathers in preventing stunting. Families have an important role to play in preventing and managing the problem of stunting. Families play an important role in preventing stunting at every stage of life from fetus in the womb, to newborn, toddler, teenager, married, pregnant, and so on. Therefore, efforts to empower families are necessary. Correspondence kiki.sulaningsi@gmail.com ac.id

Article History

Received 12 October 2023 Revised 19 October 2023 Accepted 31 October 2023 Available Online 14 November 2023

Keywords

Stunting Parents Family

DOI

10.14710/jpki.19.1.50-57

INTRODUCTION

Stunting is inadequacy in physical growth which conventionally defined by height that is more than two deviation standard below the age- and sex-appropriate standard median.^{1,2} The prevalence of stunting is widely used as an indicator of children health. Stunting is currently seen as a serious public health issue as the prevalence of stunted children is more than 40%. The global prevalence of stunting in children under five is 141.3 million, and by 2025 the WHO predicts that the incidence of stunting in children under five will be 128.3 million, and by 2030 it will decrease to 116.5 million. The rate of malnutrition and stunting in Indonesia ranks 108 out of 132 countries. ^{2,3} In previous report, Indonesia was among 17 countries facing the double nutritional burden of

both overnutrition and undernutrition. In Southeast Asia, Indonesia has the second highest incidence rate, after Cambodia.⁴ Based on average prevalence rate of 33% across most Asian countries, Japan's rate was estimated to be 36% in 2019, the Indonesian Ministry of Health estimated 37% for Indonesia, the National Health and Morbidity Survey in Malaysia estimated 20.7% for Malaysia, the Chinese National Survey to be the lowest at 3.7% for China, and the National Health Survey in India to be the highest at 48% for India in 2007.⁵

This prevalence rate is primarily determined by the interaction of genetic elements, environmental factors, dietary status, psychosocial factors, and the rate of secular changes in children's growth.⁶ Stunting can be detrimental to children under five as it causes low intelligence, decreased endurance, and inhibited growth and development.⁷ This will result in an increased risk of infections and non-communicable diseases in adulthood, as well as reduced productivity and economy. Reducing stunting is the first goal of the 2025 global nutrition targets and a key indicator of the sustainable development goals.⁸

The optimal implementation of family roles supports the improvement of nutritional status in toddlers so it can reduce the incidence of stunting.⁶ If the role of the family can be carried out well, the family can fulfill their responsibilities, especially in providing nutrition to children under five years of age⁹. Fulfillment of nutrition in toddlers cannot be separated from the role of their family, especially in child-rearing families. Therefore, the

fulfillment of nutrition can be done by teaching families about the nutritional needs of toddlers. Family's nutritional needs can be met by providing high-quality, balanced and nutritious food.¹⁰

METHOD

This systematic review is in accordance to the PRISMA guidelines¹¹, where it was carried out by researching online articles from databases of ScienceDirect, PubMed, and Google Scholar. The articles are published in 2019 to 2023 with the keywords "stunting and parents or family". This review process consists of five steps as stated in the flow diagram (Figure 1).

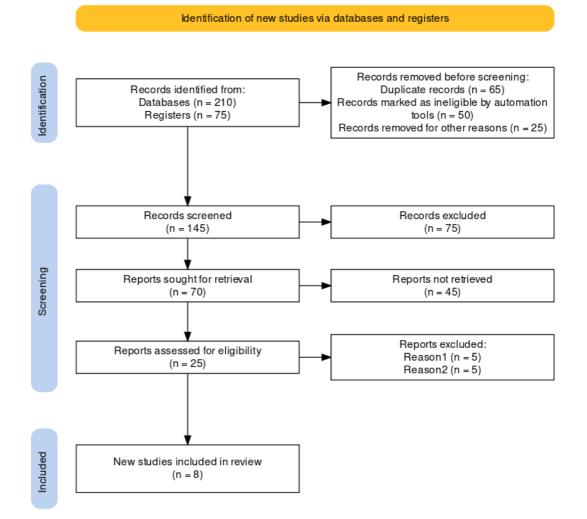


Figure 1. The flow diagram

RESULTS AND DISCUSSION

Identification and selection of literature by PRISMA flowchart, all the results in 285 articles. the titles were excluded because they were duplicates (70), and ineligible (55) irrelevant to the title (22). Screening process by abstract and full paper analysis (excluded for several of reasons, including incomplete text, is not research with strong validation, and is not original research). The eligible articles were analyzed in eight articles.

Family support to prevent stunting relates to cultural, empowering, and increasing knowledge through health education and health promotion (breastfeeding, nutritional status, and so on). Important support from the father, grandmother, and grandfather such as supporting exclusive breastfeeding and child growth monitoring. The results are obtained from various sources and narrowed down into eight main articles which are summarized in table 1.

Table 1. Results of the search on the role and support in preventing stunting

No	Title & Author	Methodology	Result
1	Behavior change communication model enhancing parental practices for improved early childhood growth and development outcomes in rural Armenia – A quasi- experimental study ¹²	Quasi experimental intervention control design	a. The interventions enhance parental practices in children's health and growth, protection from neglect, abuse, and injury.b. The latest evidence demonstrates the importance of nurture from pregnancy period to lay a strong foundation for children's cognitive, socio-emotional and physical wellbeing.
2	Association of maternal characteristics with child feeding indicators and nutritional status of children under-two years in Rural Ghana ¹³	Cross- sectional	a. Mothers' high decision-making power and average financial independence are good predictors of whether children will benefit from Minimum Acceptable Diet (MAD).b. Family planning, empowering women in decision-making, creating job opportunities, creating opportunities for mothers, and promoting education for girls.
3	BUGIS Stunting Based on Eating Culture of Makassar, Toraja and Bugis Tribes ¹⁴	Cross- sectional	 a. The cultural practices of eating in Makassar, Bugis, and Toraja tribes have various characteristics influenced by their respective religions. b. In Bugis tribe, families with pregnant mothers have certain habit or tradition in terms of eating practices such as abstaining from eating squid during pregnancy because they believe the baby will be born with dark skin, most mothers abstain from eating fish during pregnancy because they believe that the baby will be born smelling fishy and abstain from eating shrimp during pregnancy because they believe that the baby will be born hunchbacked like a shrimp.
4	Maternal autonomy but not social support is a predictor of child feeding indicators in the Northern Region Ghana ¹⁵	Cross- sectional	a. Child-rearing practices as a potential pathway linking mothers' social activities with supporting indicators or autonomy and child's growthb. Highly autonomous women would be able to feed their children according to global recommendations and find evidence to support
5	Father's Support and Mother's Behavior in Stunting Prevention Efforts ¹⁶	Cross- sectional	a. There was a significant association between mothers with good family support and exclusive breastfeeding for infants/toddlers (p <0.05).

No	Title & Author	Methodology	Result
			b. Father's support in preventing and improving children's knowledge is al important, depending on the child's age, family income and father's involveme in parenting, has a significant positive impact on children's cognitive abilities.
6	Determinants of Stunting Prevention among Mothers with Children Aged 6–24 Months ¹⁷	Cross- sectional	a. There was a significant relationship between mother's child-rearing pattern at the incidence of stunting. Parent's method in feeding their children greatly affect the nutritional status of the child.
			 b. There was a significant relationship between cultural values and the prevention stunting. Parent's cultural values that are not supported by maternal care becau they are following the recommendations from senior family members such grandmothers, or grandfathers.
7	Socio-Family Culture Against Stunting	Cross-	a. There is a relationship between the socio-cultural determinants of the family
	Risk: A Cross-Sectional Population-Based	sectional	the determinants of stunting in children.
	Study ¹⁸		b. The role and support of families in improving and maintaining children's health very important in preventing and overcoming stunting.
8	Parenting Culture on The Role of Father in Prevention of Stunting in Toddler ¹⁹	Cross- sectional	a. The study found that the father's involvement plays a significant role in prevent stunting in toddlers, with a statistical significance of 0.001 (alpha level of 0.05).
			b. Additionally, parental culture has a significant influence on preventing stunting toddlers, with a statistical significance of 0.019 (alpha level of 0.05).
			c. The study suggests that fathers can enhance the prevention of stunting in toddl and the parenting culture can further enhance the father's role. Moreover,
			culture of parenting can also contribute to the prevention of stunting in child who have recently learned to walk

There is research from these eight articles related to the role and support of families in preventing stunting, based on several syntheses reviewed, it can be seen that culture can be an inhibiting factor in preventing stunting. However, with local wisdom, it can also be a catalyst in reducing stunting itself. Culture is one of the specific nutrition interventions that can reduce the prevalence of stunting by emphasizing aspects of mother as the "center of life", family roles and support, and role of fathers towards prevention of toddler stunting.

First, Mother as "the Center of Life"

Mothers always play an important role in every aspect of life. There is no exception when it comes to health situation at home.²⁰ In a family, mothers are the ones who tend to have more concern about health and wellbeing of her family. Various efforts have been made by mothers, such as implementing a healthy lifestyle, preparing healthy and fresh food, cooking nutritious dishes, keeping clothes and houses clean, and many other things that mothers do as a form of love and affection so that all family members are healthy.²¹

In general, mothers spend more time at home than fathers, and mothers play an important role in family life, especially for their children. Children receive more education from the mother from birth until they grow up and receiving formal education.²² Mother's knowledge and education level are the main factors that determine maternal characteristics.²³ Mother's education level is a risk factor for stunting, and poor maternal education is associated with stunting in Indonesia. To illustrate, a healthy mother will be willing to carry a fetus that can grow and develop healthily in the womb, then the fetus will be born as a healthy child with ideal body weight.²⁴ In addition, a healthy mother will breastfeed her baby in accordance to the World Health Organization's recommendations of months exclusive 6 breastfeeding and continuing to breastfeed until 24 months after the baby was born.²⁵

Second, the Role and Support of the Family

This support system focuses not only on the main family itself but also on other members of the community. Findings show that many decisions made by pregnant and breastfeeding women with regard to nutrition are influenced by their mothers, in-laws, husbands, close relatives, and other support systems. The role of the support system is important because it can provide comfort for the new mothers ²⁶

In addition to good parenting, psychosocial stimulation is also necessary, including simulation by parents of infants and young children. Good hygiene and sanitation are also important factors in promoting children's optimal growth and development.²⁷ For example, a study concluded that the physical absence of fathers in childcare contributes negatively to children's emotional, social, psychological and physical development. Mothers will be stressed and depressed if they take on many responsibilities without the help of their husbands.²⁸ We believe that the support system of pregnant or breastfeeding mothers can be a key target when providing health information.²⁹ This support group can influence mothers' decisions, including those related to beliefs about stunting. Providing health education will be more effective if they are involved.²²

Food consumption habit in some communities does not only depend on existing cultures such as social status, physical conditions, social roles, customs and habits, but also the role and support of families in improving and maintaining children's health, which are very important in preventing and overcoming stunting.³⁰ One way is to increase the role of the family, especially the family's ability to manage nutritional intake and feeding patterns of stunting and wasting children. The family should provide food in accordance with balanced nutrition guidelines.²⁸

Third, Role of Fathers towards Prevention of Toddler Stunting

The father's role is to encourage healthy behaviors. Fathers also have to protect the family from health threats/risks³¹. A good father's role will also encourage fathers to have good behaviors in preventing stunting in young children, because physical contact between father and child is very important to enhance interaction and build the father's confidence in his ability to care for his child.^{16,19} Successful exclusive breastfeeding for teenage mothers requires the continued support of their husbands from pregnancy to postpartum.³²

Specific cognitive and behavioral effects, specifically the putative father's role, are directly related to health-promoting actions, including positive perceptions of desired and expected outcomes, minimal barriers to action, feelings of effectiveness and competence, positive feelings toward healthy behavior, existence of family social support and friends, positive role models and the availability of appropriate, safe and fun environments.^{21,33} Most fathers play an active role in the family, including being a decision maker, protecting from danger or risk, and providing supportive support to their wives, while some fathers take a passive role in the family and not fulfilling their protective role dangerous or risky, except that the father plays a passive role and does not participate in taking care of the child when the child is sick.³⁴

Fourth, Culture and Nutrition

Some studies describe beliefs or cultures in regions do not follow nutritional certain recommendations for pregnant women.35 In the Ethiopian region, pregnant women are advised to avoid animal-sourced foods such as milk (including cheese, milk/buttermilk, yoghurt, and whey), liver, meat, fish, and plant foods such as bananas, avocados, kale, sweet potatoes, and yams.³⁶ In Mount Sindoro, Wonosobo Regency, Central Java, Indonesia, they have a taboo or prohibition of eating certain foods by pregnant and or breastfeeding women.37 This condition is certainly contrary to nutritional principles for pregnant women related to fetus growth and development and the practice of providing nutrition to children which is also unique.³⁸ People make their choices based on their beliefs or habits. There are also different types of foods eaten based on age.

New mothers were more convinced by the advice of their own mothers, in-laws or husbands than health workers regarding breastfeeding practices.³⁹ Mothers perceptions are that exclusive breastfeeding will make the baby sick, but green vegetables, fish and eggs will make the child active and immune to disease. Some people believe that colostrum is harmful to the baby.⁴⁰ Barriers to exclusive breastfeeding are heavily influenced by certain societal beliefs.

Breast milk is the origin of primary nutrition development.^{21,41} growth & The for child development of breastfed infants will be different than formula-fed infants or other foods/drinks that are considered optimal growth patterns. Breastfed infants experience bigger increase in weight, length, and BMI during the first 2-3 months of their life. Social environment can provide illustrations of dietary disparities within certain region.⁴² Certain ethnic groups have dietary norms that are not in sync with their beliefs because they are formed by the ethos of the community itself, so their eating pattern is a habit formed by socio-cultural elements in the community group.43

CONCLUSION

Families have an important role to play in preventing and managing the problem of stunting in children. Therefore, efforts to empower families are necessary. Families play an important role in preventing stunting at every stage of life from fetus in the womb to newborn, toddler, teenager, married adult, pregnant adult, and so on. Parenting plays an important role in preventing children from growing poorly or being stunted due to malnutrition. Parents should ensure that their children eat a nutritionally balanced diet and maintain their environmental hygiene.

Acknowledgments

Acknowledgments delivered to the Institute for research in South Sumatera and the Faculty of Public Health, Universitas Sriwijaya.

Conflict of Interest

The authors declared that they have no conflict of interest.

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