



Social-Cultural Relationship with Stunting Incidence in Children Aged 24-59 Months

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ABSTACK

Stunting is a chronic condition of poor linear growth in children. The prevalence of stunting in Indonesia in 2018 reached 30.8%. With the complexity of the causes of stunting, one of the efforts being campaigned by the government is using local food. This study aimed to determine and analyze the influence of local food culture on preventing and overcoming stunting in toddlers (6-59 months) in Indonesia. The method used in this study is a systematic review based on the PRISMA guidelines. The results of this study show that a review of the seven selected journals shows that local food culture influences improving the nutritional status of toddlers, especially during the stunting prevention phase. Whereas in the prevention phase, local food culture by utilizing processed food forms has not improved the nutritional status of toddlers already suffering from stunting. Local food for toddlers who suffer from stunting must be accompanied by other supplements to have a significant effect. Food and eating in the community have cultural and social values, so the utilization of local food culture for toddler food will be easily accepted, easy to obtain, and affordable, significantly influencing stunting prevention in the regions. This research has implications for the importance of remembering that the results of this research can make a valuable contribution to the health and development of children in Indonesia and inspire concrete action to prevent funds from overcoming stunting.

Keywords: culture, local food, stunting.

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INTRODUCTION

The incidence of stunting in toddlers in Indonesia is still a public health problem that needs to be watched out for. Based on data on the prevalence of stunting under five released by WHO, it is explained that Indonesia is one of the countries with the highest prevalence in the Southeast Asian Region after Timor Leste (50.5%), India (38.4%), and Indonesia (30.8%) (RI, 2018). Adequacy of nutrition is one of the determining factors for optimal child growth and development. Adequate and balanced nutritional conditions are needed as capital in the golden period of child growth and development (Zuhkrina et al., 2020). The golden period begins when the child is still in the womb until the age of two or is often referred to as the "first thousand days of life" (1000 HPK) (Susanti, 2021). Malnutrition that occurs in the 1000 HPK period can cause a variety of growth and development problems, one of which is the problem of failure to thrive so that children become shorter (stunting) than their standard age. Stunting is defined as height for age below -2, the WHO child growth curve median standard (Haile & Headey, 2023).

Toddlers aged 24-59 months are included in the nutritionally vulnerable group of people (a group of people who are most susceptible to nutritional disorders). In contrast, they are experiencing relatively rapid growth at this time. Linear growth retardation, or stunting, occurs mainly in the first 2 to 3 years of life and reflects the interacting effects of energy, nutrient intake, and infection.

Various studies and research explain that poverty, sanitation, health, and the environment are other factors that have consequences for stunting in children under five. In addition, mothers'

educational status and knowledge related to nutrition also significantly influence the incidence of stunting in toddlers (Aridiyah et al., 2015). Therefore, stunting can be a good proxy measure for measuring disparities in child health. This is because the condition of stunting can describe various dimensions of health, development, and the child's living environment. Various experts state that stunting impacts factors such as low birth weight, inappropriate child stimulation and parenting, inadequate nutritional intake, repeated infections, and other environmental factors (Wamani et al., 2007).

Based on Basic Health Research data in 2010, the prevalence of stunting in toddlers in Indonesia is still very high, namely 35.6% in 2013, the prevalence of stunting increased to 37.2%, and the highest prevalence of stunting was at the age of 24-35 months, both in males - both men and women. Compared with the "non public health problem" limit according to WHO for shortness of 20%, all provinces in Indonesia are still in a state of health problems (Ibrahim & Faramita, 2015). The prevalence of stunting is higher than the prevalence rate of underweight, namely 19.6%, 12.1% for underweight children, and 11.9% for obese children (Ibrahim & Faramita, 2015).

To tackle stunting in children under five, the government has a policy foundation for a food and nutrition program that hopes to ensure the availability of food which includes production, processing, distribution, and consumption of food with adequate nutritional content is expected to reduce the prevalence of malnutrition in areas with a prevalence of stunting high in Indonesia. Cooperation involving many stakeholders is certainly needed to prevent and overcome stunting. The involvement of all elements of society collectively is also very much needed to improve the nutrition of Indonesian children (Teja, 2019).

Indonesia's culture is very rich and diverse. Madura is a tribe that is rich in culture. The preliminary study results and data from the Ministry of Health show that several cultures in the Madurese ethnicity are related to the health of mothers and children (Illahi & Muniroh, 2016). This culture includes the socio-culture of maternal nutrition during pregnancy and childbirth, breastfeeding, and toddlerhood. Socio-cultural nutrition during pregnancy, for example, some dietary restrictions for pregnant women. Pregnant women are prohibited from eating squid, mutton, pineapple, jackfruit, durian, and chilies. Abstinence from eating squid is believed to be because the baby will be difficult to birth. After all, it will come in and out like squid. Socio-cultural nutrition during breastfeeding, for example, throwing away colostrum because it is considered dirty, and socio-cultural nutrition during toddlerhood, such as early complementary feeding (before six months).

One of the efforts to prevent and overcome stunting carried out by the government through the Ministry of Health and the Ministry of Agriculture is to initiate a local food consumption and development movement as an effort to diversify food which can become a specific nutrition intervention to reduce the prevalence of stunting rates in various regions in Indonesia. The culture of local food consumption in Indonesia is varied, has many benefits, and is rich in nutrients. This will be a great opportunity for innovation in local food processing as a source of nutritious food for toddlers to prevent and overcome stunting, which is more accepted by the culture of society and available in the region. (Bekele & Turyashemererwa, 2019) .

Many factors affect the nutritional status of children, both direct and indirect (Jiang et al., 2023). Culture is one of the indirect factors that influence the nutritional status of children. Culture is one factor that influences the mother's attitude in carrying out her pregnancy, undergoing the birth process, and caring for toddlers. Culture, traditions, or societal habits, such as food taboos and wrong eating patterns, can lead to nutritional problems, especially for toddlers (Mahmudah & Rohimi, 2022). This can have an impact on the growth and development of toddlers.

This systematic review aims to determine the influence of the consumption culture of local food in various regions in Indonesia in preventing and overcoming stunting.

METHODS

This research is a systematic review based on the PRISMA guidelines. The process undertaken to carry out a systematic review is to search for several research journal articles published through online databases. Several electronic databases used in this research are ProQuest, ScienceDirect, and Google Scholar, with a period of 2016 to 2021 with the keywords "Stunting," "Local Food," and "Culture." The study selection process consisted of 6 steps, shown in Diagram 1. The data extracted included: year, country of origin, population, setting, study design, research objectives, methods, interventions, and results (Table 1). This systematic review uses guidelines to analyze reporting quality among the selected studies. The guidelines used are Critical Appraisal Skill Program Tools (CASP) and Quality Assessment to assess the risk of bias from the selected studies. The research methods used were Randomized Controlled Trial (RCT), Quasi-Experimental, and Mix Method (n = 7). This research article was published between 2016 and 2021.

RESULTS AND DISCUSSION

The seven (7) studies selected above were conducted in Indonesia. The research methods used were Randomized Controlled Trial (RCT), Quasi-Experimental, and Mix Method (n = 7). This research article was published between 2016 and 2021. The influence of local food culture on stunting prevention and control is as follows:

- a. The interventions carried out were supplementation and psychosocial stimulation for mothers and caregivers of toddlers aged 6-12 months in Tanah Datar, West Sumatra Province. Food supplementation is carried out using local ingredients used by the community, with the main ingredients red sweet potato, purple sweet potato, brown rice, red beans, green beans, sometimes soybeans, and dried fish with three composite food supplements iso protein and iso energy. The selection of the local formula is adjusted to local eating habits in West Sumatra so that parents can easily obtain and process it. After six months of intervention, there was a significant increase in linear growth and cognitive and motor development in the group that received local food supplementation with an average length increase of $6.86 + 2.08$ cm (Nirmala & Pramono, 2017). A similar intervention was carried out for toddlers aged 1-5 years in rural areas of South Sulawesi using the basic ingredients of local food, which became the local food culture, namely sago caterpillars obtained from sago tree trunks. This intervention showed that the results of changes in the height of toddlers were the same as the control group. Still, in terms of protein and fat content, processed sago caterpillar food was higher in protein and fat than other local complementary foods (Helmizar et al., 2017).
- b. Interventions using local food culture have shown significant results for the prevention of stunting, as seen in the local food culture of the Rejang tribe, North Bengkulu Regency, which is rich in protein, such as paddy eel and tilapia. Utilization of food made from rice field eel and tilapia as a complementary food to stunting babies by giving it three times a day for 90 days (3 months) shows that there is a significant difference in average height in children under two years old (6-24 months) who have been intervened using local food preparations (Sofais et al., 2019). The use of local food culture as a countermeasure for stunting can also be seen in the Belang District, Southeast Minahasa Regency, which uses supplementation of local food-based snacks, namely malalugis fish bone meal and vermicelli in the form of biscuits targeting children aged 1-2 years. The results of using biscuits made from local food showed that there was an increase in the

average child's height, an increase in the height value of 0.54 cm, but there was no change in the degree of stunting z-score after the intervention (Sineke & Kawulusan, 2020).

- c. The intervention using local food culture showed positive results for stunting prevention using local corn food by developing laboring cooking culture (cooking together) in Glagahwero Village, Panti District, Jember Regency, for four weeks. Utilizing local food with laboring cooking culture shows an increase in toddler weight (1-3 years) from 1,000 grams to 6,000 grams (Rasni et al., 2019). The use of local food culture for stunting prevention was also seen in the Kaya Hilir sub-district, Sintang Regency, West Kalimantan, by giving Jawak Porridge (*Setaria Italica*) for three months showing the result of a significant increase in average body weight (average increase of 1.8 kg) and height (mean increase of 0.45 cm) (Kurniati & Sunarti, 2020).

Based on several syntheses studied, local food culture is more widely used to prevent stunting in processed foods with high protein and fat. Meanwhile, for prevention in terms of interventions for toddlers who have detected local food culture stunting, this is yet to be effective in significantly improving children's nutritional status. Hence, there need to be fortification efforts with other ingredients (Nirmala & Pramono, 2017).

Socio-cultural nutrition during pregnancy includes abstinence from eating squid and stingrays. Abstinence from eating squid Pregnant women has a reason to worry that the baby will be difficult to be born because it will come in and out like squid. The prohibition of eating stingrays has the reason for the unusual shape of stingrays, so it is feared that it will affect the physical shape of the unborn child. Squid and stingrays are animal protein sources. Pregnant women with taboo beliefs about eating squid and stingrays will be at risk of experiencing protein deficiency. The results of the previous longitudinal study showed that the mother's protein intake during pregnancy significantly affected the stunted nutritional status of toddlers (Ernawati et al., 2013).

Nutritional needs during pregnancy increase, so that food taboos can exacerbate malnutrition in pregnant women. Belief in food taboos that are very strict can interfere with fetal growth (Sholihah & Sartika, 2014). Malnutrition during pregnancy can result in premature babies and low birth weight (Slotkowski et al., 2023). Infants with low birth weight are associated with fetal and neonatal morbidity and mortality, impaired growth, impaired cognitive development, and chronic disease in later life. Consumption of traditional herbal medicine by breastfeeding mothers aims to facilitate the release of breast milk. This traditional herbal medicine is consumed after giving birth for up to 40 days, but there is also something more than that. Drunk Jamu is a traditional herbal medicine made from leaves made by roasting, and some are boiled. It has yet to be discovered what type of foliage was used.

The social environment can provide an overview of the differences in people's eating patterns in certain areas. Each community or tribe has different dietary habits according to their customs or traditions. The need to eat is not the only reason for the drive to overcome hunger; there are other needs such as physiological, namely eating as a fulfillment of nutrition also influences individual or community eating patterns. Each social group has a different pattern of obtaining, using, and evaluating food which is a characteristic of the respective social group. In Indonesia, each region has different main staple foods such as corn, sago, sweet potatoes, and cassava. - The various potentials contained in the local food system are potential solutions to overcome food problems at the community level " *community-based food system* " (Fadhilah, 2013).

CONCLUSION

This systematic review focuses on the influence of local food culture, which is used as processed MPASI for toddlers, which has several influences on the prevention and control of stunting:

1). Local food culture influences people's eating behavior so that local food preparations are more acceptable to parents or community groups according to the culture in each region. 2). Local food culture affects preventing stunting; according to nutritional studies, it has shown an increase in the weight and height of toddlers after the intervention. 3). Local food culture influences the prevention and control of stunting because local food sources are affordable and easily processed by parents of toddlers or community groups in the area. 4). The local food culture does not have strong evidence to tackle stunting. Nutrition studies show that in the 30-90 day intervention with local food preparations, the degree of stunting z-score in infants (6-24 months) has not changed.

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