

Review Article

THE INFLUENCE OF SOCIO-ECONOMIC FACTORS, BREAST FEEDING, AND BIRTH WEIGHT ON STUNTING INCIDENTS IN UNDER-FIVE CHILDREN (THIS REVIEW JOURNAL PERIOD 2018-2022)

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Abstract

A five year old baby (toddler) is the most important phase in a child's growth. The growth and development of toddlers can be influenced by the nutritional intake obtained. Nutritional intake is influenced by socio-economic factors, family background, breastfeeding, and baby's birth weight. Delay in growth and development in toddlers is called stunting. The purpose of this study was to determine the effect of various descriptions of risk factors on the incidence of stunting in children under five. The research method uses a literature review of 25 international and national scientific articles published in the last 10 years. The data will be analyzed and presented descriptively. The data that has been obtained from various references shows that there is an influence of risk factors caused by socio-economic factors, breastfeeding, and birth weight on the incidence of stunting in toddlers. Factors that affect the socio-economic level of income, education, and participation of working mothers, while exclusive breastfeeding is strongly influenced by mother's milk production, replacement of exclusive breastfeeding with formula, and the ability to suck the baby, and birth weight is influenced by nutritional adequacy of food, giving food and breastfeeding. The conclusion in this study is that there is a relationship between socio-economic, breastfeeding, and low birth weight on the incidence of stunting.

Keywords: Toddler, Stunting, Socio-economic, Breastfeeding, Birth weight

PENGARUH FAKTOR SOSIAL EKONOMI, PEMBERIAN ASI, DAN BERAT BADAN LAHIR TERHADAP KEJADIAN STUNTING ANAK USIA BALITA (MELALUI REVIEW JURNAL PERIODE 2018-2022)

Abstrak

Bayi umur lima tahun (balita) merupakan fase terpenting pada pertumbuhan seorang anak. Pertumbuhan dan perkembangan balita dapat dipengaruhi oleh asupan nutrisi yang diperoleh. Asupan nutrisi dipengaruhi faktor sosial ekonomi latar belakang keluarga, pemberian air susu ibu (ASI), dan berat badan lahir bayi. Keterlambatan pertumbuhan dan perkembangan pada balita disebut stunting. Tujuan

penelitian ini yaitu mengetahui pengaruh berbagai macam gambaran faktor risiko dengan kejadian stunting anak usia balita. Metode penelitian dengan menggunakan literature review 25 artikel ilmiah internasional dan nasional yang terbit pada 10 tahun terakhir. Data akan dianalisis dan disajikan secara deskriptif. Data yang sudah diperoleh dari berbagai referensi menghasilkan bahwa adanya pengaruh faktor risiko yang disebabkan faktor sosial ekonomi, pemberian asi, dan berat badan lahir terhadap kejadian stunting pada usia balita. Faktor yang mempengaruhi sosial ekonomi adalah tingkat pendapatan, pendidikan, dan partisipasi ibu bekerja, sedangkan pemberian ASI eksklusif sangat dipengaruhi produksi ASI ibu, penggantian ASI eksklusif dengan susu formula, dan kemampuan menghisap pada bayi, dan berat badan lahir dipengaruhi oleh kecukupan nutrisi makanan, pemberian makanan, dan pemberian ASI. Kesimpulan pada penelitian ini adalah terdapat hubungan antara sosial ekonomi, pemberian ASI, dan Berat badan lahir rendah terhadap angka kejadian stunting.

Kata Kunci: *Balita, Stunting, Sosial ekonomi, Pemberian asi, Berat badan lahir*

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INTRODUCTION (Calibri 12pt, Bold, Capital letter)

Toddlers are an important growth period for children. Toddler growth is influenced by nutritional intake and nutrients and can be used as an indicator in determining growth and development. Inadequate nutritional intake in children under five causes nutritional problems, including stunting. The lack of energy and protein consumption in toddlers which can be seen from the height that is not suitable for their age. Stunting is a child who is physically smaller than other children of his age. Children aged under five can be given full nutrition in the form of protein, carbohydrates, fats, vitamins and minerals, especially iron and zinc which can be used to support the growth and development of toddlers. Nutritional problems that occur in children are the result of an imbalance between the amount of intake and output of nutrients or it is called a nutritional imbalance. Children with impaired growth during their golden years have an impact on cognitive development, learning patterns, loss of productivity, chronic disease, and death during their lifetime (Ali, et al, 2016).

Stunting is a very serious problem because the threshold set by WHO is 15 percent which refers to an alarming emergency situation. The consequences of this form of malnutrition are

low mental capacity, low productivity levels, increasing the risk of child death, cognitive inhibition and affecting future health (Unicef, 2013). Stunting is associated with birth spacing of less than 2 years (Rusliani, Hidayani, Sulistyoningsih, 2022). The basic causes of stunting are multifactorial, including poverty, maternal health and nutrition, low education level of mothers, inadequate nutritional intake, low birth weight, short birth spacing.

Malnutrition occurs when total nutrient consumption decreases from requirements. Malnutrition causes physiological fluctuations, metabolic anomalies, decreased function of tissues and organs, and damage to body mass. It is necessary to know the magnitude of the types and distribution of malnutrition in order to identify at-risk groups and manage contributing aspects. Currently, the cause of stunting is dominated by the provision of inappropriate nutritional intake due to socio-economic reasons and a lack of understanding of nutritional knowledge, in addition to meeting family needs requires a mother to work outside the home (Jiang et al, 2015). Stunting can have an impact on decreased intelligence, susceptibility to disease, decreased productivity so that this is a serious problem and must be addressed immediately. In addition, the short and long term impacts of stunting are an increase in

mortality, cognitive, motoric, and verbal development that is not optimal in children, an increase in health costs, and body posture that is not optimal as an adult (Sarma et al, 2017) .

MATERIAL AND METHODS

Writing method

Writing the results of the study using the research method of literature review or literature study. In the first stage, the necessary information was collected in compiling the factors that influence the incidence of stunting in children under five. Searching for updated data and information is carried out through articles published in international and national journals with a span of the last 10 years and also through text books. Search for data and information

using keywords: stunting, stunting factors, socio-economic, breastfeeding, and birth weight.

Research Data Sources

Writing literature reviews using journal search websites, namely Mendeley, Google Scholar, and Pubmed. The journal criteria used to select journals are based on the type of journal and journals published in the last 10 years.

The results of the journal criteria amounted to 25 articles that have been fulfilled and continued to carry out analysis and findings that have a quantitative nature. The results of the analysis are arranged in a discussion and get the final result in the form of a literature review, so that conclusions can be drawn based on the formulation of the research problems.

RESULTS (Calibri 12pt, Bold, Capital letter)

The results of the research and discussion show that socioeconomic factors, breastfeeding, and birth weight affect and have an impact on stunting.

Table 1. Previous research results

Name, Year, Tittle	Research Method	Results Research	Conclusion
Shahid, M., Cao, Y., Shahzad, M., Saheed, R., Rauf, U., Qureshi, M.G., Hasnat, A., Bibi, A., Ahmed, F., 2018, Socioeconomic and Environmental Determinants of Malnutrition under Three Children: from PDHS-2018	Multivariate logistic regression	(1) The order of birth of the second child and after has a risk of stunting. (2) Low income families tend to have stunted toddlers. (3) Mother's low level of education increases stunting rates. (4) The high number of family members increases the stunting condition of toddlers.	Malnutrition experienced by children is closely related to economic and environmental conditions.

		(5) An environment with sanitation and clean water reduces the incidence of toddler stunting.	
Saputri, A. Usman, Rusman, A.D., 2022, Socioeconomic Analysis of Stunting in the Highlands of Parepare City	Cross sectional survey	The results of each p-value 0.018; 0.015; 0.005 which means that there is an influence of education, income, and one's place of residence on stunting toddlers.	There is a correlation between income, living conditions, and education level on toddler stunting.
Aini, N., Hera, A.G.M., Anindita, A.I., Malangay, K.S., Amalia, R., 2022, Relationship of Low Economic Level Against Risk of Stunting: A Systematic Review	Systematic review	Education level indirectly affects economic status so that a low economy causes poor food security. The risk of stunting that occurs is 3,182 times higher.	Factors that have a significant impact on stunting include low economic standards and food security.
Harvey C.M., Newell M.L., Padmadas S., 2022, Maternal socioeconomic status and infant feeding practices underlying pathways to child stunting in Cambodia: structural path analysis using cross-sectional population data.	Cross sectional	The results showed that indirect factors were work, mother's education, and direct factors, namely parents' income, were related to dietary diversity ($p < 0.001$).	Overall, children's dietary diversity is related to parents' socioeconomic status.

<p>Akbar, H., Ramli, M., 2022, Socioeconomic Factors with Stunting in Children Aged 6-59 Months in Kotamobagu City.</p>	<p>Case control study</p>	<p>(1) The results of the mother's education test obtained $p=0.030$ so that mothers with low education have a 2.296 times higher risk of children with stunting. (2) The results of the family income test showed $p=0.044$ which means 2.602 times the risk of being stunted.</p>	<p>Mother's educational factors and family income fulfillment have a major influence on the incidence of stunting in children aged 6-59 months.</p>
<p>Mohammed S.H., Muhammad F., Pakzad R., Alizadeh S., 2019, Socioeconomic inequality in stunting among under-5 children in Ethiopia: a decomposition analysis.</p>	<p>Chi square test</p>	<p>(1) Obtained a significant difference on stunting based on the richest socioeconomic group with a magnitude of 26.9% and the poorest with a range of 45.1%. The p value obtained is ($p < 0.001$). (2) There are also differences in stunting prevalence based on place of residence,</p>	<p>Socio-economic factors are one of the factors that trigger stunting, although there are other determining factors that can lead children to experience stunting.</p>

		educational status of caregivers, water quality, toilet facilities, gender, age, and birth size as evidenced by the obtained p value <0.001.	
Faresta, H.A., Himalaya, D., Maryani, D., Novianti, Suriyati., 2022, The Relationship between Stunting Cases and a History of Exclusive Breastfeeding in Kelopak Community Health Center, Kepahiang Regency, Province Bengkulu in 2022	Cross sectional	(1) The age of the mother is mostly between 20-35 years, namely 41 mothers (69%). (2) Mother's occupation with IRT amounted to 52 people (87%). (3) A history of ANC with 4-8x arrivals reached 53 (88%). (4) Age of pregnant women aged 20-35 years as many as 43 people (71%).	A p value of 0.039 was obtained for the correlation between the number of stunting cases and a history of breastfeeding. Therefore, this research has connectedness.
Sambo, M., Madu, Y.G., Tandiboro, A.S., Kabo, A.M., 2022, Pemberian Asi Eksklusif Sebagai Faktor Risiko Kejadian Stunting Pada Anak Usia 3-5 Tahun Di Kecamatan Lau Kabupaten Maros 2022	Case control	(1) Age of under five is dominated by ages between 48-60 months with a total of 89 (67.4%). (2) The average maternal age was 26-35 years, amounting to 86 (65.2%). (3) Exclusive breastfeeding was	There is a correlation between exclusive breastfeeding and the incidence of stunting. In addition, many of the toddlers in Lau District are stunted and do not receive exclusive breastfeeding.

		carried out by 45 mothers (80.4%). (4) 61 respondents (80.3%) were not given exclusive breastfeeding.	
Setyowati, E., Musfiroh, M., Arief, I., Samsuddin, Sari, A.L., 2022, Exclusive Breastfeeding as an Effort to Prevent Stunting in Toddlers	Literature review	(1) Exclusive breastfeeding encourages muscle growth and optimizes IQ in the 6-12th month phase. (2) Exclusive breastfeeding fulfills micro and macronutrient needs thereby reducing the risk of stunting under five. (3) Breast milk contains colostrum which can protect toddlers from infection to cancer.	Efforts to prevent stunting can be done by giving exclusive breastfeeding with the aim of preventing sick babies and optimizing physical and brain development in babies.
Tello, B., Rivadeneira, M.F., Moncayo, A.L., Buitrón, J., Astudillo, F., Estrella, A., and Torres, A.L., 2022, Breastfeeding, feeding practices and stunting in indigenous Ecuadorians under 2 years of age	Cross sectional	(1) As many as 78.2% of children under 6 months of age are exclusively breastfed. (2) Giving food other than breast milk to children aged 6-12 months was	The prevalence of stunting in children is dominated by exclusive breastfeeding and insufficient complementary foods.

			32.5%, from 13-18 months was 55.6%, and aged 19-23 months was 63.3%.	
Mexitalia, M., Ardian, R.Y., Pratiwi, R., and Panunggal, B., 2022, Correlation of maternal dietary intake with breast milk composition and infant growth	Prospective study	(1) Mother's energy needs at the 2nd, 3rd week of the month and 6 months were 74.4%, 76.7% and 65% respectively. For protein by 80.5%, 86.3%, and 69%. As for fat, it was 99.2%, 109.9%, and 83.5%. (2) No significant differences were found in the composition of breast milk. (3) A negative relationship was found between mother's fat requirement and 2 weeks and 3 months old baby.	A correlation was found between the mother's food intake and the composition of breast milk and the growth of the baby, although the results were not consistent with the age group of the baby.	
Neves, P.A.R., Barros, A.J.D, Baker, P., Piwoz, E., Santos, T.M., Domínguez, G.G., Vaz, J.S., Rollins, N., and Victora, C.G., 2022, Consumption of breast	Random sampling design	(1) Breastfeeding in various family economic conditions tends to be low. (2)	It can be concluded that the consumption of milk other than breast milk such as formula is determined by	

<p>milk, formula and other non-human milk by children aged under 2 years: analysis of eighty-six low- and middle-income countries</p>	<p>Consumption of milk other than breast milk in the age group of 0,6,12,24 months in high-income countries is sequentially 69%, 35%, 26% and 17%. In low income countries 94%, 45%, 29%, and 16%. Meanwhile, middle-income countries are 97%, 63%, 44% and 28%.</p>	<p>the income conditions of a country.</p>	
<p>Sampara, N., Saleng, H., 2022, The Effectiveness of the Implementation of Exclusive Breastfeeding on the Measurement of Body Weight and Body Length at 6 months of Age as an Effort to Prevent Stunting.</p>	<p>Observational dengan prospective cohort</p>	<p>The results obtained using the Fisher Exact test were 0.032 <0.05. This means that there is a significant relationship to weight gain based on age and breastfeeding over a period of 6 months.</p>	<p>Breastfeeding is an aspect that is quite important in the nutritional needs of infants, so that all parties must support the fulfillment of nutrition for infants.</p>
<p>Fatmawati N., Handayani S., Zulfiana Y., 2022, Factors of exclusive breast milk on stunting events.</p>	<p>Literature review</p>	<p>Exclusive breastfeeding is very important especially for children aged 0-6 months because the baby's digestive system is still not perfect,</p>	<p>The factor of exclusive breastfeeding has an effect for stunting. Breast milk is the best food for babies given at</p>

		especially the small intestine, making babies much healthier, increasing Immunity, emotional and spiritual intelligence are better than children who are not exclusively breastfed.	the age of 0-6 months without other complementary foods.
Ekholuenetale M., Okonji O.C., Nzopotam C.I., Barrow A., 2022, Inequalities in the prevalence of stunting, anemia and exclusive breastfeeding among African children.	Cross sectional	We found statistically significant differences in the prevalence of stunting, anemia and exclusive breastfeeding ($p < 0.001$). A higher prevalence of stunting and anemia was thought to occur among males, rural residents, mothers with low education, and poor families.	Stunting and anemia reduction can be achieved through sustainable socio-economic improvements divided into equity and equity among the population. Interventions aimed at increasing food availability can also help reduce hunger, particularly in poor communities.
Aboagye, R. G., Ahinkorah, B. O., Seidu, A., Frimpong, J. B., Archer, A. G., Adu, C., Hagan, J. E., Amu, H., Yaya, S., 2022, Birth weight and nutritional status of children under five in sub-Saharan Africa	Multilevel binary logistic regression	The prevalence of low birth weight was 5.4%, with the highest (13.1%) and lowest (0.9%) that there was no	Low birth weight is a major determinant of malnutrition among children under five in sub-Saharan Africa.

		competition reported in South Africa and Chad, respectively. The pooled prevalence of wasting, underweight and stunting was 8.1%, 17.0% and 31.3%, respectively.	
Ode, D., Murti, B., Budihastuti, U.R., 2022, Correlation between Low Birth Weigth and Stunting in Children Under Five: Meta Analysis	Systematic review	There is a relationship between LBW and the prevalence of stunting under five, which has a risk 2.19 times higher as evidenced by the obtained p value <0.001.	LBW affects the occurrence of stunting because it inhibits the fulfillment of nutrition which makes body tissues not develop properly.
Halli, S.S, Biradar, R.A., Prasad, J.B., 2022, Low Birth Weight, the Differentiating Risk Factor for Stunting among Preschool Children in India	Cross sectional	Babies with LBW after being adjusted for age, BMI, ANC, and mother's education have a 19% higher probability of being short. The p calculation obtained is p <0.001.	Stunting is caused by various factors such as mother's education, child's age, to LBW.
Chaveepojnkamjorn, W., Songroop, S., Satitvipawee, P., Pitikultang, S., & Thiengwiboonwong, S., 2022, Effect of Low Birth Weight on Child Stunting	Cross sectional	The results obtained between the relationship between LBW and stunting are babies born	Efforts that can be made to prevent stunting are through programs to share knowledge on

among Adolescent Mothers		weighing < 2500 grams have a 1.8 times higher risk than babies with birth weights 2500-2999 grams and 3000 grams. The p value obtained is p <0.05.	stunting factors, especially for teenage mothers.
Swarjana, I.K.D, Kartika., 2022, Faktor-Faktor Yang Berhubungan Dengan Kejadian Stunting Pada Balita	Literature review	Babies who are born prematurely and have low body weight are at risk of experiencing growth retardation in height as they get older, up to 1.74 times higher.	LBW is one of the factors that influence babies to experience stunting.
Mtongwa, R.H., Festo, C., Elisaria, E., 2021, A comparative analysis of determinants of low birth weight and stunting among under five children of adolescent and nonadolescent mothers using 2015/16 Tanzania Demographic and Health Survey (TDHS)	Cross sectional	Stunting children are not related to the mother's age. High maternal socioeconomic status and obese or overweight mothers are negatively related to stunting. Child birth weight, gender, and age are significantly related to stunting	Maternal age is a predictor of LBW but not stunting. The presence of ANC and not living with a partner increases the risk of LBW babies. Stunting is associated with low maternal body mass index (BMI), low socioeconomic status, child birth weight, gender, and age. A multi-sectoral approach is needed to

address child nutrition issues with youth-specific interventions that offer emotional support, and health education during pregnancy to improve child birth outcomes immediately and later.

DISCUSSION

Several studies have stated that there is no relationship between education level and parents' socioeconomic profile on the incidence of stunting in toddlers. However, this factor plays an important role because there is a correlation between household financial management and food consumption so that it has an impact on the incidence of toddler stunting (Fedriansyah, et al., 2020). The real relationship between socio-economic factors and food self-sufficiency on the problem of toddler stunting requires efforts to deal with these factors in order to minimize the incidence of malnutrition (Wardani, et al., 2020). One of the cases is the lack of family economy and food security which plays a very important role in the risk of stunting babies in Bejiharjo village. The efforts made by the local government to overcome this problem are focused on increasing food security (Raharja, et al., 2019).

The results of the study showed that almost 94% of toddlers who did not get exclusive breastfeeding experienced stunting. As for five-year-old babies who were given exclusive breastfeeding, almost all of them were normal, as many as 30 respondents (79%). 57.1% of toddlers who do not get exclusive breastfeeding experience stunting, whereas toddlers who get

exclusive breastfeeding tend not to experience stunting (Windasari, et al., 2020).

Babies who have a low birth weight of less than 2500 g have the potential to experience stunting if there are no efforts to improve nutritional status. Low birth weight is affected by the mother's low education level, low household income, and low knowledge of nutrition since pregnancy. Birth weight is also affected by inadequate sanitation and hygiene, so that it has a significant effect on the incidence of toddler stunting (Abeway, et al., 2018).

CONCLUSION

Based on the results of research and discussion regarding the influence of socioeconomic factors, breastfeeding, and birth weight on the incidence of stunting in children under five, the following conclusions are obtained:

1. Socio-economic factors and birth weight greatly influence the prevalence of stunting in toddlers, while breastfeeding will influence and have an impact on the incidence of stunting.

2. Several factors that influence socioeconomic factors are parental education, family income, and parental knowledge. The factors of exclusive breastfeeding are working mothers, use of formula milk, and mother's knowledge. Birth weight factor is influenced by age at

delivery, level of education, and weight gain during pregnancy.

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