



Environmental And Family Approach on Stunting: A Literature Review

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ABSTRACT

Stunting is still a hot issue at this time due to the many factors that cause stunting and the many impacts that can occur due to stunting. This literature study aims to find the latest evidence regarding the environment and the family's approach to stunting. A total of 10 journals were obtained in the making of this systematic literature review where in the selection process it was required to use quality journals so that the journals sought in this study were journals that were in English and had clear research results. This study found that countries that are widely used as stunting research sites are countries that have a high incidence of stunting and the environment plays an important role in the incidence of stunting with many research approaches using mixed methods. There is still a lack of research that uses a family approach in researching the causes of stunting, so it is necessary to dig deeper into the family approach to stunting.

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ABSTRAK

Stunting masih merupakan issue hangat yang terjadi pada saat ini dikarenakan banyaknya faktor penyebab terjadinya stunting dan banyaknya dampak yang dapat terjadi akibat stunting. Studi literature ini bertujuan untuk mencari bukti terkini terkait lingkungan dan pendekatan keluarga terhadap kejadian stunting. Sebanyak 10 jurnal didapatkan dalam pembuatan systematic literature review ini dimana dalam proses seleksinya diharuskan untuk menggunakan jurnal yang berkualitas sehingga Jurnal yang dicari pada studi ini adalah jurnal yang berbahasa inggris dan yang mempunyai hasil penelitian yang jelas. Studi ini mendapatkan hasil bahwa negara yang banyak dijadikan tempat penelitian stunting adalah negara yang memiliki angka kejadian stunting yang cukup tinggi dan lingkungan memegang peranan penting terhadap kejadian stunting dengan banyaknya pendekatan penelitian yang menggunakan mix method. Masih kurangnya penelitian yang menggunakan pendekatan keluarga dalam penelitian penyebab terjadinya stunting sehingga perlu digali lebih dalam tentang pendekatan keluarga terhadap kejadian stunting.

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INTRODUCTION

Stunting is a sign of inadequate environment where a child is born and raised, which is related to learning difficulties and barriers to community participation. The negative impact that can be caused by nutritional problems (stunting), in the short term is the disruption of the metabolic program in the body, growth and muscle mass, and development of the brain and intelligence. Meanwhile, in the long term, the negative consequences that can arise are permanent disturbances in the development of children physically, mentally and intellectually, low immunity and work productivity, and the risk of suffering from chronic diseases, namely diabetes mellitus, coronary heart disease, hypertension, cancer, obesity, heart disease and stroke. (Simbolon, 2019).

Stunting is associated with poor child development, lower productivity and income in adulthood, and an increased risk of chronic disease later in life. Children's linear growth is a complex multifactor process, with the highest risk of impaired growth occurring between conception and 2 years of age. The underlying causes of stunted growth include inadequate access to food, inadequate care for women and children, and an unhealthy environment.

Sub-element home environment includes inadequate child stimulation and activity, poor parenting practices, inadequate sanitation and water supply, food insecurity, improper allocation of food in the household, and low caregiver education. (Vaivada, 2020)

Environmental exposure during the early years of life is increasingly being recognized as influencing a child's developmental potential. (Cameron, 2020) Stunting and wasting among adolescents is significantly related to various socioeconomic factors. Stunting and wasting indicate long-term cumulative inadequacy of health care services and lack of access, as well as insufficient food and nutrition intake during the early stages of childhood (Kumar, 2021) Several studies reported a significant relationship between environment, sanitation, and patterns of households with malnutrition

Worldwide, stunting and anemia affect around 22% and 43% of children under five respectively (Jee H. Rah, 2020). WHO says the prevalence of stunting under five is a public health problem if the prevalence is 20% or more divided into categories, namely moderate (20-29%), severe (30-39%) and serious ($\geq 40\%$) categories. From this reference, the stunting prevalence rate in Indonesia are classified as severe and are a health problem that must be addressed (Puspita, 2022). Over the past decade in Indonesia, there has been little change in the national prevalence of child stunting, which is around 37% (Ty Beal1, 2018). the prevalence rate of short and very short toddlers in children under the age of two in Indonesia reaches 29.9%. (Riskesdas, 2018)

The results of a literature search show that there are many studies that have examined the environment (social environment and health environment) but there are few studies on the family environment. Seeing family factors is the goal of this review study and discussing in more depth the environment with stunting. There are several questions that will be tried to be answered in this Systematic Literature Review, namely:

RQ1 howana data characteristics (country and study objectives) which are the focus of research on the

relationship between environment and family on the occurrence of stunting

RQ2 What variables are related to environment and family against stunting

RQ3 The methods used are related to related research about the environment and family on the occurrence of stunting

RESEARCH METHODOLOGY

The method used in this systematic literature review uses content analysis which can be interpreted as collecting qualitatively the research carried out by the analysis so that accurate and systematic results are obtained in accordance with the author's research question categories (Haggarty, 1996)

Search Strategy

The first step taken is to look for journals with the theme of the environment which can cause stunting within the publication period of the journal between 2018 and 2022 by looking for reputable journals. The journals sought in this study are journals that are in English and have clear research results so that they can be used in this Systematic Literature Review.

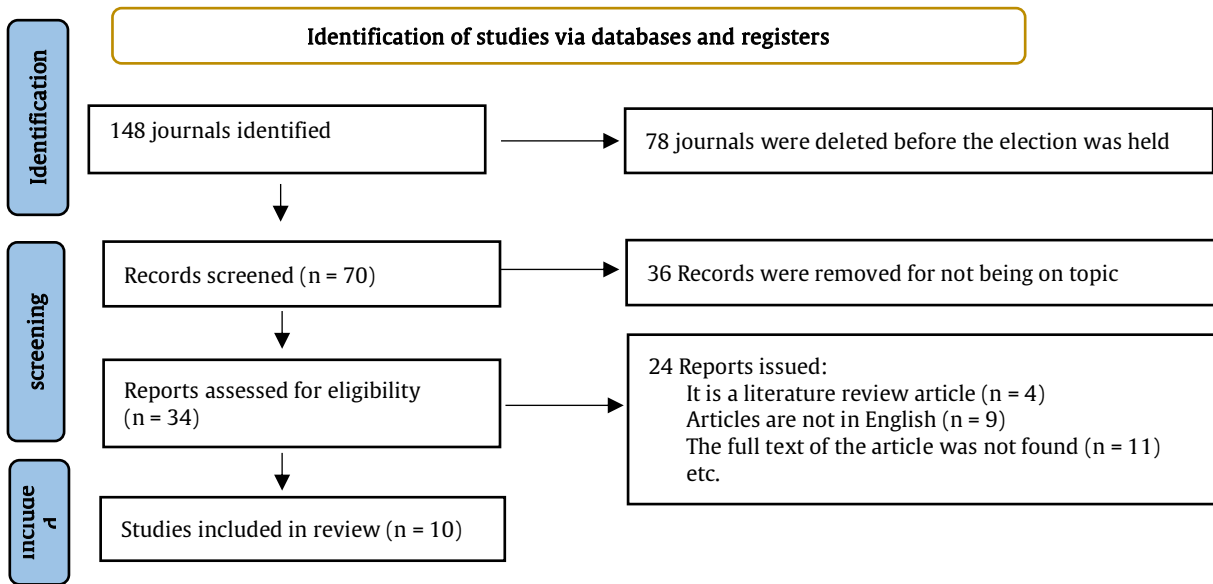
Selection Criteria

Articles to be reviewed must comply and have been checked to meet the following criteria: (a) the article has been published in a reputable journal; (b) research conducted on stunting which in this case discusses the environment and family; (c) this study looks at the relationship between environment and stunting and uses other appropriate variables; and (d) have a downloadable full text version in English. The author will issue articles that are not in accordance with the topic of the review with the following notes: (a) incomplete articles; (b) literature is not a research article; (c) the article does not have data that can answer the author's questions.

The process of selecting articles is done by filtering the abstracts and also looking at the eligibility of the journal. After filtering and selecting, 10 relevant articles were obtained which could be used for this systematic literature review.

Data extraction and synthesis

Data extraction using Microsoft Excel from research articles that have been analyzed is then carried out content analysis in journals that meet the criteria so that the data obtained is the data that the author wants. The authors arrange the following categories: article title, purpose, design, variables, instruments, analysis, research findings. Literature quality must be done in order to obtain accurate information, accurate interpretation of results and conclusions that meet the established rules (Greenhalgh, 2014).



PRISMA Flow Diagram (Page, et al, 2021)

RESULT AND DISCUSSION

RQ1 What are the characteristics of the data (country and study objectives) which are the focus of research on the relationship between the environment and family on the occurrence of stunting

According to table 1, it was found that out of the 10 journals reviewed, there were 6 countries that conducted research on the environment and family on the incidence of stunting, where Indonesia was the country most researched, namely 4 journals followed by India 2 journals. Sub-Saharan African countries, Ethiopia, zimbabwe and Nepal each with 1 research journal.

The main aspect that influences the number of stunting studies in various countries is the high rate of stunting in these countries. It is necessary to examine the main causal factors and accompanying efforts to reduce stunting so that each country can know what must be done and make policies and determine targets for the programs to be carried out. Some of the things that must be prioritized from various countries in reducing the incidence of stunting are by increasing and implementing the latest evidence-based programs and policies, and being sensitive to nutritional problems which in realizing this requires very high costs to develop the economy and human resources (Vaivada, 2020)

Table 1 lists countries based on the results of environmental and family literature studies on stunting

Country	Source	Frequency
Indonesia	Cameron, 2020; Jee H. Rah, 2020; Ty Beal, et al, 2018; Krishna, 2020.	4
India	Kumar, et al, 2021; Augsburg, et al, 2018	2
Sub Saharan Africa	Sinharoy, 2020	1
Ethiopia	Lake, 2020	1
Zimbabwe	Humphrey, et al, 2019	1
Nepal	Conways, 2020	1

Table 2 lists the research objectives based on the results of environmental and family literature studies on the incidence of stunting

Aim	Source	Frequency
Environment Against stunting incidents	Sinharoy, 2020; Cameron, 2020; Jee H. Rah, 2018; Augsburg, et al, 2018; Kumar, et al, 2021; Ty Beal, et al, 2018; Humphrey, et al, 2019	7
Families against stunting incidents	Krishnana, 2020; Lake, 2020; Conways, 2020	3

Based on table 2, it was found that as many as 7 journals discussed research on the environment on stunting and 3 journals discussed family research on stunting. In research on the environment on the incidence of stunting, a significant relationship was found, namely an unhygienic environment if continuously exposed to it during childhood

will cause stunting and in the future can cause a reduction in their cognitive abilities (Cameron, 2020)

It can be concluded that social factors (education) greatly influence the incidence of stunting. Mother's understanding is needed to regulate family nutrition and health where the family plays an important role in fulfilling parenting patterns and establishing nutritional status, therefore good education

can change behavior to get increased maternal and child health nutrition (Krisnana, 2020)

RQ2 What variables are related to the environment and family to the occurrence of stunting

Based on the data in table 3, it was found that there were 6 articles that examined the factors that cause stunting and 4 articles that examined sanitation and stunting. The number of factors that cause stunting causes many researchers to research this matter because the identification of common causes of stunting in children is found in complex literature such as maternal education, exclusive breastfeeding, premature babies and length of babies at birth, as well as family socioeconomic status (Ty Beal, et al, 2018) and according to Conway, 2020 the main factor causing stunting is parental education with a contribution percentage of 20% - 30%, the next factor is maternal nutrition with a contribution percentage of 14% -20%.

As for research on sanitation and stunting, it was found that household sanitation is the main cause of stunting in childhood, and there is a significant relationship between

children's linear growth and sanitation in the child's immediate environment (Jae H. Rah, 2018) and according to Augsburg, et al, 2018 found that sanitation coverage plays an important and significant role in height growth in the first thousand days of life and that this causal relationship holds especially for girls.

RQ3 The methods used are related to research related to the environment and family on the occurrence of stunting

Based on table 4, the analytical methods used in various studies examined in this systematic literature review are obtained. From a total of 10 studies, it was found that 1 study used qualitative methods by conducting observational studies and 4 studies using quantitative methods ranging from case control, cohort, to random sampling approaches. as many as 5 studies conducted research using the mixed method used so that researchers get appropriate results so that contextual factors in relation to targeted policies and programs will work to improve the main and direct causes of child malnutrition.

Table 3 Variables related to stunting

Variable	Source	Correlation	Frequency
Factors that cause stunting	Ty Beal, et al, 2018; Lake, 2020; Conway, 2020; Humphrey, et al, 2019; Kumar, et al, 2021; Krishnana, 2020;	Positive	6
Sanitation and stunting	Sinharoy, 2020; Cameron, 2020; Jee H. Rah, 2020; Augsburg, et al, 2018;	Positive	4

Table 4 of the methods used in research on the causes of stunting

Qualitative	Quantitative	Mix Method
1 (Sinharoy, 2020)	4 (Cameron, 2020; Jee H. Rah, 2020; kumar, et al, 2021; Krisnana, 2020;)	5 (Augsburg, et al, 2018; Ty Beal, et al, 2018; Tasik, 2020; Conway, 2020; Humphrey, et al, 2019)

CONCLUSION AND SUGGESTION

The main objective of this literature study is to obtain evidence related to stunting in which countries that have been used as stunting research sites are countries that have high stunting incidence rates, the environment plays an important role in stunting incidents, this is evidenced by the large number of researchers who research using these variables. The large number of studies using the mixed method approach proves that the incidence of stunting can be influenced by various factors so that stunting has a fairly broad scope. There is still a lack of research that uses a family approach in researching the causes of stunting, so it needs to be explored more deeply about the family approach to stunting.

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