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STRATEGIES FOR IMPROVING CHILD WELFARE THROUGH MULTIFACTOR INTERVENTIONS TO ADDRESS STUNTING IN MAKASSAR CITY, SOUTH SULAWESI

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ABSTRACT
Stunting in children is a chronic nutritional issue that affects physical growth and cognitive development, particularly in South Sulawesi. This study aims to identify effective strategies for reducing stunting rates among children in the region, taking into account factors such as food access, nutritional intake, social factors, and economic conditions. The research employs a quantitative approach, collecting data through household surveys using structured questionnaires. The sample was randomly selected from various areas in South Sulawesi to ensure good representation of the under-five population. Data analysis was conducted using SmartPLS 4 regression, and multivariate techniques to explore the interactions between these variables. The results indicate significant relationships between food access, nutritional intake, social factors, and economic conditions with the prevalence of stunting. These findings underscore the importance of improving adequate food access, enhancing nutritional intake, promoting health education programs, empowering families, and improving economic conditions in efforts to prevent stunting. The implications of this research emphasize the need for targeted and sustainable interventions to address stunting and improve the health and welfare of children in South Sulawesi. This study provides valuable insights into the factors contributing to stunting and offers a foundation for the development of more effective intervention strategies.

Keywords: Economic Conditions; Food Access; Intervention; Nutritional Intake; Stunting.

INTRODUCTION

The significant changes in the prevalence of stunting among children in Asian countries have had profound impacts. Stunting, a condition where a child's growth is impaired due to chronic malnutrition, leads to adverse outcomes in health, education, and productivity across various Asian nations (Wali et al., 2020). The effects extend from the individual to the national level, with stunted children experiencing reduced physical and cognitive health, affecting their ability to learn and contribute to society (Li et al., 2020). These widespread changes also impact national economies, as stunting leads to substantial economic losses due to diminished productivity and rising healthcare costs. Contributing factors to stunting include limited access to adequate nutrition, poor sanitation, low nutritional awareness, and poverty, which prevents families from meeting basic needs (Mertens et al., 2023).

Research has emphasized the importance of preventing stunting and identified the support of various organizations in tackling the issue. Stunting prevention is not merely a health concern; it is closely tied to social, economic, and environmental factors (Prasetyo et al., 2023).Government roles in improving access to nutritious food, quality healthcare, and proper sanitation are critical. Additionally, families play a pivotal role in ensuring children receive adequate nutrition and care.

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Non-governmental organizations (NGOs) also play a crucial role by providing healthcare and educational services to communities vulnerable to stunting (Bhutta et al., 2020). Moreover, the private sector can contribute by offering technological innovations and solutions to enhance access to quality food and healthcare services. Collaboration among all sectors is vital for the effective and sustainable prevention of stunting (Mediani et al., 2022).

Recent studies on stunting have highlighted its significant impact on child development and health. Stunting, a key indicator of chronic malnutrition in children, has been shown to adversely affect physical growth, cognitive development, and overall health. Stunted children are more likely to face developmental delays, including challenges in cognition, learning abilities, and health. Baye (2019) noted that stunting also increases susceptibility to infectious and chronic diseases due to weakened immune systems and the body's limited ability to fight illness (Baye, 2019). Reducing stunting is therefore crucial to improving children's health and ensuring they have equal opportunities to grow and develop optimally.

In addressing stunting, organizations have adopted multidimensional and integrated approaches. These involve interventions at multiple levels, including food and non-food nutrition interventions, sanitation and hygiene improvements, as well as education and behavior change initiatives. Nutritional interventions include supplementary feeding, nutrient supplementation, and promoting healthy feeding practices. Conway et al. (2020) provides evidence that education and behavior change are also necessary to raise awareness and knowledge about good nutrition practices and the importance of proper sanitation. A comprehensive and integrated approach is expected to significantly reduce the prevalence of stunting and improve child health and development (Conway et al., 2020).

Preventing stunting is crucial in ensuring children's optimal health and development. Stunting is not only an individual health issue but also has broad implications at the social, economic, and national development levels. Children affected by stunting are at higher risk for physical and cognitive developmental delays, which in turn can hinder their ability to learn, contribute to society, and achieve their full potential in adulthood (Zaidi et al., 2020). Additionally, stunting is associated with an increased risk of chronic diseases and health problems throughout life. Preventing stunting is thus an investment not only in children's current health but also in building a strong foundation for a better future for future generations. Holistic and integrated stunting prevention efforts can help create healthier, more productive, and sustainable communities.

Healthcare professionals, such as doctors, nurses, and public health workers, play a critical role in providing quality healthcare services to children and families in the fight against stunting. These professionals are responsible for educating about balanced nutrition, providing nutritional supplements, and detecting and addressing health issues that may lead to stunting. Nutritionists also play a role in developing effective nutritional programs and advising on healthy diets (Akseer et al., 2020). Sanitation and environmental health experts are involved in stunting prevention by improving sanitation and hygiene to reduce the risk of infections that can cause stunting. Additionally, education and behavior change specialists work to raise awareness and knowledge in communities about the importance of nutrition and good health practices. Collaboration among these professionals is key to creating a comprehensive and sustainable approach to reducing stunting (Adeyemi et al., 2022).

Managing stunting reduction in children requires a holistic and coordinated approach to addressing the various challenges associated with stunting. The first step is to understand the factors that contribute to stunting, such as lack of access to quality nutrition, poor sanitation, and limited knowledge of good health practices. With this understanding, interventions can be designed and implemented, including supplementary feeding programs, promoting healthy feeding practices, improving sanitation and hygiene, and educating communities. The importance of collaboration among stakeholders, including government, healthcare institutions, NGOs, and civil society, cannot be overstated. With strong cooperation and shared commitment, an

environment that supports optimal child growth and development can be created, reducing the risk of stunting.

This study aims to investigate the relationship between stunting prevalence in South Sulawesi and several key variables, including food access, nutritional intake, social factors, and economic conditions. By conducting a comprehensive analysis of these interrelated factors, the study seeks to identify effective strategies for reducing stunting rates among children in the region. A deeper understanding of the factors influencing stunting is expected to make a significant contribution to the development of targeted and sustainable interventions to combat this chronic nutritional issue in South Sulawesi.

METHOD

This study employs a quantitative method to investigate the impact of stunting prevalence in South Sulawesi on various factors such as food access, nutritional intake, social factors, and economic conditions (Adeyemi et al., 2022). It aims to identify effective strategies for reducing stunting among children in South Sulawesi by examining how these interrelated factors influence stunting.

The research involves data collection through household surveys using structured questionnaires. A random sample will be drawn from different areas in South Sulawesi to ensure broad representation of children under five (Fantay Gebru et al., 2019). The data collected will include information on food access, such as household food sufficiency and access to nutritious foods, and nutritional intake, including the consumption of nutrient-rich foods. Social factors like parental education, family socioeconomic status, and child-rearing practices, as well as economic conditions like household income, asset ownership, and access to healthcare services, will also be included (Castro-Bedriñana et al., 2021).

Data analysis will begin with descriptive statistics to provide an overall picture of the variables studied. Regression analysis will be conducted to assess the influence of food access, nutritional intake, social factors, and economic conditions on stunting prevalence, controlling for other relevant factors (Nshimyiryo et al., 2019). Multivariate analysis will also be performed to explore interactions between these variables. The findings are expected to offer insights into the contributors to stunting in South Sulawesi and provide a foundation for developing more effective intervention strategies to reduce stunting and improve child welfare (Fenta et al., 2020).

Data Collection and Participant

The distribution of questionnaires through the dare form, especially using devices such as smartphones and platforms such as Google Forms, begins with creating a questionnaire that is in accordance with the research objectives or information collection needs. This study was conducted for three months from April to May 2024. With Google Forms, researchers can easily create questionnaires and adjust form settings as needed, such as adjusting privacy settings, determining who can fill out the form, and limiting the number of responses per individual. In addition, the link can be distributed through various communication channels, so that respondents can easily access it via mobile devices and allow real-time tracking of incoming responses during the distribution process. After the data collection period is complete, the results can be analyzed using various built-in tools in Google Forms or exported to a spreadsheet application for further analysis. The use of Google Forms and other dare survey tools offers many advantages, including ease and speed of creation, accessibility across devices, and the ability to collect and analyze data efficiently, which ultimately saves time and costs compared to conventional methods (Mengesha et al., 2020).

This research will employ structural path analysis using SmartPLS4 to investigate the impact of stunting prevalence in South Sulawesi on the variables of food access, nutritional intake, social

factors, and economic conditions. By understanding the interactions among these interrelated factors, this study aims to identify effective strategies for reducing stunting in children in South Sulawesi.

After uploading the household survey data into SmartPLS4, a model will be constructed by identifying latent variables (constructs) and determining the influence among these variables based on relevant theories. The variables of stunting prevalence, food access, nutritional intake, social factors, and economic conditions will be incorporated into the model. Using the Partial Least Squares (PLS) method in SmartPLS4, the model will be estimated to test the significance of path coefficients and the strength of influence among the variables. Bootstrapping analysis will be utilized to validate the estimation results and test the significance of parameters (Muche & Dewau, 2021).

The analysis results will be interpreted to identify which variables have a significant impact on stunting prevalence in South Sulawesi. From this, the direction and magnitude of the influence of each independent variable on the dependent variable can be analyzed (Bharti et al., 2019). The research findings will be presented to aid in the development of effective strategies for reducing stunting among children in South Sulawesi. Variables such as food access, nutritional intake, social factors, and economic conditions will be incorporated into the model. Using the Partial Least Squares (PLS) method in SmartPLS4, the model will be estimated to test the significance of path coefficients and the strength of influence among the variables. Bootstrapping analysis will be utilized to validate the estimation results and assess the significance of the parameters. (Weatherspoon et al., 2019).

The research population consists of children under five years old in South Sulawesi. The number of stunted children in South Sulawesi in 2023 reached 47,246 toddlers (Stunting & Acceleration Reduction Organizing Team South Sulawesi, 2023). However, in this study, we limit the research population to Makassar City, which has a stunting prevalence rate of 3.8%, translating to 1,795 toddlers (Stunting & Acceleration Reduction Organizing Team South Sulawesi, 2023).

Data Analysis

Data will be analyzed using statistical techniques to identify trends, patterns, and relationships. Inferential statistics, including correlation and regression modeling, will be used to evaluate potential connections between variables (Barbarossa, 2020).

Correlation Analysis

Correlation analysis is conducted to evaluate the influence of stunting prevalence in South Sulawesi on the variables of food access, nutritional intake, social factors, and economic conditions. This correlation analysis provides a comprehensive overview of the impact of these variables and highlights their importance in efforts to reduce stunting among children in South Sulawesi. Correlation analysis offers insights into the strength and direction of the relationships and influences among the variables. The results of the correlation analysis are measured using correlation coefficients, which range from -1 to +1. A positive correlation coefficient indicates a positive relationship, while a negative correlation coefficient indicates a negative relationship. The closer the value of the correlation coefficient is to -1 or +1, the stronger the relationship among the variables (Nshimyiryo et al., 2019).

Regression Analysis

Regression analysis is conducted to evaluate the influence of independent variables, such as food access, nutritional intake, social factors, and economic conditions, on the dependent variable, which is the prevalence of stunting in South Sulawesi. The results of the regression analysis will provide information regarding the strength of the relationship between the independent and dependent variables (Mengesha et al., 2020). Additionally, regression analysis can also offer insights into the direction of this relationship, whether positive or negative. This regression

analysis provides a deep understanding of the factors influencing stunting in South Sulawesi and establishes a foundation for developing more effective intervention strategies to reduce the prevalence of stunting and improve the well-being of children in the region.

RESULTS AND DISCUSSION

Demographic Information

The characteristics of all participants are shown in Table 1. The majority of participants are female children, totaling 116 (65%). Most of the mothers are under 30 years old, with 130 participants (71%). In terms of child weight, 109 children (60%) weighed between 4000-5000 grams at birth. Regarding maternal education, the highest representation is from mothers with a high school education, totaling 85 (46%). As for participant occupation, 155 (93%) are working mothers. Additionally, the dominant age group of children is over 23 months, comprising 81 children (45%).

Table 1 Respondents' demographics.

		N=180	%
Gender of Child	Boy	64	35%
	Girl	116	65%
Mother's age	< 30 years	130	71.65%
	> 30 years	50	26.25%
Child Weight	>4000 - 5000 gram	109	60.37%
	>3500 - 4000 gram	34	18.11%
	< 4500 - 6000 gram	27	15.22%
	> 3500 - 4500 gram	10	6.30%
Mother's Education	Junior High School	12	7.87%
	High School	85	46.72%
	Bachelor's Degree	83	45.40%
Mother's Profession	Working	155	85.70%
	Not working	25	14.30%
Toddler Age (Months)	23 Months above	81	44.88%
	7-12 Months	69	38.85%
	1319 Months	12	6.04%
	20- 22 Months	4	2.62%
	0-6 Months	14	7.61%

Source: Primary data.

Table 2 Reliability, convergent validity and multicollinearity.

Factor & Variables	Estimates	α	(CR)	(AVE)	(VIF)
Prevalence of stunting (PS)		0.678	0.790	0.566	
PreStu_1	0.612				1.430
PreStu_2	0.796				1.420
PreStu_3	0.889				1.209
Food Access (AP)		0.455	0.707	0.473	
AP_1	0.308				1.029
AP_2	0.698				1.175
AP_3	0.915				1.190
Nutritional Intake (AG)		0.166	0.119	0.530	
AG_1	0.663				1.004
AG_2	0.788				1.004
Social Conditions (KS)		0.102	0.022	0.334	
KS_1	0.114				1.019
KS_2	0.205				1.018
KS_3	0.974				1.002
Economic Conditions (KE)		0.417	0.724	0.545	

KE_1	0.886	1.697
KE_2	0.904	1.704
KE_3	-0.185	1.008

Source: Primary data.

Table 2 presents the reliability and internal consistency figures, constructed using Composite Reliability (CR) and Cronbach's Alpha (CA) values. The loading values, which range between 0.707 and 0.790, indicate that the indicators exhibit good reliability. A value between 0.70 and 0.95 ensures strong reliability and validity. The results in Table 2 confirm that the necessary threshold has been met. Furthermore, the Average Variance Extracted (AVE) test, used to assess convergent validity, also shows values above 0.50, indicating that it meets the recommended threshold. However, for social conditions, the AVE value is only 0.334, meaning it does not reach the required threshold. Additionally, the Variance Inflation Factor (VIF) test was conducted to measure the correlation between exogenous variables.

In this table, the estimation of factors and variables related to the prevalence of stunting, food access, nutritional intake, social conditions, and economic conditions are presented through their CR values. The highest CR is observed for stunting prevalence at 0.790, while food access and economic conditions score 0.707 and 0.724, respectively. The lowest CR values are for nutritional intake and social conditions, at 0.119 and 0.022. The AVE values are highest for stunting prevalence, nutritional intake, and economic conditions, with values of 0.566, 0.530, and 0.545, respectively, while food access shows 0.473, and the lowest AVE is for social conditions at 0.334. Finally, VIF values are provided to assess potential multicollinearity among the independent variables. Composite Reliability (CR) measures how well the latent variables (factors) explain the variability of their related observed variables. Higher CR values indicate that the factor is better at explaining the variability of the observed variables. Meanwhile, AVE measures the proportion of variance in the observed variables explained by the associated latent factor. A high AVE indicates that the factor explains a substantial amount of the variance in the observed variables. Lastly, VIF is used to identify multicollinearity among independent variables in regression analysis, where higher VIF values suggest multicollinearity that could affect the interpretation of the results.

Table 3 Factor loadings of observables-Varimax Rotation.

Observable Variables	Factorial Loads	Communality	Mean	Standard Deviation
Prevalence of stunting (PS)				
PreStu_1	0.699	0.972	4.089	0.933
PreStu_2	0.793	0.693	4.239	0.832
PreStu_3	0.853	0.685	4.028	0.909
Food Access (AP)				
AP_1	0.646	0.782	4.233	0.803
AP_2	0.699	0.642	3.806	0.989
AP_3	0.739	0.739	4.028	0.909
Nutritional Intake (AG)				
AG_1	0.617	0.799	4.300	0.829
AG_2	0.750	0.750	3.644	0.998
Social Conditions (KS)				
KS_1	0.534	0.657	3.794	1.047
KS_2	0.552	0.936	4.433	0.731
KS_3	0.551	0.976	4.194	0.803
Economic Conditions (KE)				
KE_1	0.629	0.735	4.044	0.936
KE_2	0.771	0.753	4.100	0.949
KE_3	0.976	0.653	4.278	0.972

Source: Primary data.

Table 3 presents the factor loadings of the observed variables after Varimax rotation. Factor loadings measure the strength of the relationship between the observed variables and the latent factors that emerge after factor analysis. The higher the factor loadings, the greater the contribution of the observed variable to the corresponding latent factor. In addition to factor loadings, the table also lists communality values, which indicate how much of the variance in the observed variables can be explained by the identified latent factors. Higher communality values suggest that the latent factors explain more variation in the observed variables. The table also provides the mean and standard deviation for the observed variables. The mean represents the central value of the data distribution, while the standard deviation measures how spread out the data is around the mean. This information is essential for understanding the characteristics of the observed data. With the details in the table, researchers can evaluate the contribution of each observed variable to the latent factors, assess how well the latent factors explain the variation in the data, and examine the distribution characteristics of the observed variables.

Hypothesis testing

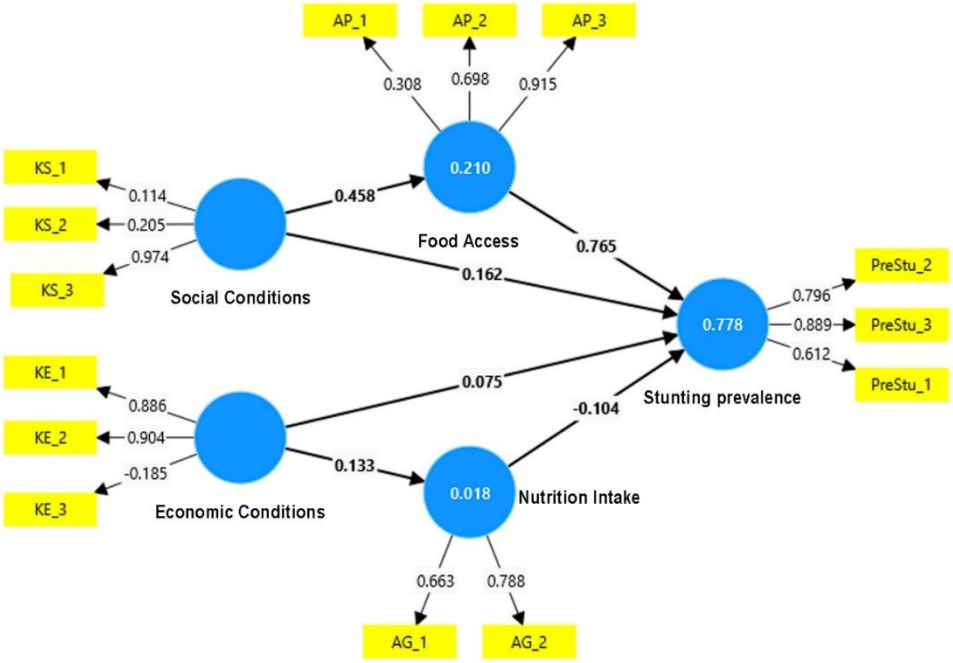
Hypothesis testing will help the researchers investigate and provide empirical evidence regarding the influence of social conditions, economic conditions, nutritional intake, and food access on the prevalence of stunting in South Sulawesi and Indonesia. The analysis will aim to determine whether these factors have a significant impact on stunting levels, providing insights into strategies for addressing stunting in these regions.

Table 4 Hypothesis testing.

	Association	Coefficient (β)	t-value	p-value	Decision	R2	F2
H1	AP→PreStu	0.765	14.978	0.000	Accepted	AP= 0.210	1.555
H2	AG→PreStu	-0.104	1.841	0.066	Rejected	AG= 0.018	0.046
H3	KE→PreStu	0.061	1.073	0.283	Rejected	PreStu=0.778	0.015
H4	KS→PreStu	0.513	7.689	0.000	Accepted		0.086
H5	KS→AP	0.458	6.449	0.000	Accepted		0.266
H6	KE→AG	0.133	1.415	0.157	Rejected		0.018
Specific Indirect							
H7	KE→AG→PreStu	-0.014	1.175	0.240	No mediation		
H8	KS→AP→PreStu	0.351	6.548	0.000	Mediation		

Source: Primary data.

Figure 1 Smart Pls Model.



Source: Primary data.

This indicates that any improvement in economic conditions, social conditions, food access, and nutritional intake will lead to a reduction in the prevalence of stunting. Additionally, it suggests that every enhancement in welfare will positively influence economic conditions, social conditions, food access, and nutritional intake. The results of the PLS forecasting test indicate that the majority (65%) have a negative forecast value, as nearly all error models in PLS are greater than those in the LM model. In this regard, the model examining the impact of economic conditions, social conditions, food access, and nutritional intake on the prevalence of stunting has moderate predictive power. Overall, this highlights the interconnectedness of these variables and their significant role in addressing the issue of stunting in South Sulawesi. By focusing on improving these areas, it is likely to achieve a meaningful reduction in stunting prevalence.

Table 5 Heterotrait-monotrait ratio (HTMT).

	PreStu	AP	AG	KS	KE
PreStu					
AP	1.201				
AG	1.369	1.206			
KS	0.989	1.397	0.683		
KE	1.027	1.102	3.266	1.283	

Source: Primary data.

Table 6 Cross loadings.

	PreStu	AP	AG	KS	KE
PreStu_1	0.612	0.354	0.031	0.293	0.364
PreStu_2	0.796	0.572	0.117	0.485	0.471
PreStu_3	0.889	0.915	0.088	0.442	0.529
AP_1	0.154	0.308	0.172	0.129	0.102
AP_2	0.456	0.698	0.337	0.283	0.479
AP_3	0.889	0.915	0.088	0.442	0.529
AG_1	0.031	0.052	0.663	0.155	0.118

AG_2	0.117	0.258	0.788	0.107	0.080
KS_1	0.015	0.120	0.557	0.114	-0.051
KS_2	0.076	0.096	0.229	0.205	-0.050
KS_3	0.528	0.437	0.067	0.974	0.497
KE_1	0.496	0.556	0.210	0.403	0.886
KE_2	0.555	0.515	0.035	0.412	0.904
KE_3	-0.151	-0.103	-0.010	-0.179	-0.185

Source: Primary data.

Table 6 demonstrates that food access has a significant relationship with the prevalence of stunting, with a correlation value of (r = 0.915), indicating a very strong association. Conversely, the relationships between nutritional intake, social conditions, and economic conditions with the prevalence of stunting show lower correlation values of (r = 0.117), (r = 0.485), and (r = 0.529), respectively. These findings indicate that food access plays a crucial role in reducing stunting in South Sulawesi. Adequate access to nutritious food can help improve the nutritional status of children, thereby reducing the risk of stunting. Although nutritional intake, social conditions, and economic conditions also contribute to the prevalence of stunting, their relationships are not as robust as that of food access. This underscores the importance of interventions focused on improving food access as a key strategy in addressing the issue of stunting in the region.

DISCUSSION

Based on research regarding the prevalence of stunting in Indonesia and other Asian countries, a significant influence on the stunting rates in children was found (Krishna et al., 2018). The study indicates that limited access to nutritious food and inadequate nutritional intake can increase the risk of stunting in children. Additionally, social conditions such as parental education, family socioeconomic status, and parenting styles also play a crucial role in determining stunting levels (Blankenship et al., 2020). Conversely, poor economic conditions, including low family income and limited access to healthcare services, can also be contributing risk factors to the high prevalence of stunting. A comprehensive understanding of the interaction between these factors provides valuable insights for developing effective strategies to reduce stunting among children in Indonesia and other Asian countries (Nelly SD Situmeang et al., 2020).

Preventing the prevalence of stunting in children can be achieved through focused efforts to enhance access to quality food and ensure adequate nutritional intake for child development (Nurhayati et al., 2020). Furthermore, supportive social conditions, such as high parental education and healthy parenting practices, are also important in preventing (Chowdhury et al., 2022). Improving family economic conditions by enhancing access to quality healthcare services is also a crucial step in reducing the risk of stunting in children. Through a comprehensive and integrated approach, an environment can be created that supports optimal growth for children and prevents stunting in the community (Wu & Guo, 2020).

Research findings indicate that reducing the prevalence of stunting can be achieved through various strategies focused on improving access to quality and nutritious food for children. Raising awareness about the importance of a balanced diet can help reduce the risk of stunting (Karuniawaty et al., 2020). The study also shows that efforts to improve nutritional intake, whether through education about nutritious foods or nutrition supplementation programs, as well as enhancing social conditions through family empowerment programs regarding healthy parenting practices, have proven effective in reducing the prevalence of stunting. Improving community economic conditions through social protection system strengthening programs is also a crucial factor in stunting prevention. By applying the findings of this research holistically, an environment that supports optimal child growth can be created (Rao et al., 2020).

Based on research conducted in Makassar City, South Sulawesi, it has been demonstrated that the reduction of stunting prevalence can be successfully achieved through the implementation of strategies focused on improving access to quality and nutritious food for children. Increasing

awareness of the importance of a balanced diet can help reduce the risk of stunting in Makassar City. The research findings also indicate that efforts to enhance sufficient nutritional intake, whether through education or nutrition supplementation programs, have a positive impact. Improvements in social conditions through health education and family empowerment programs have also proven effective in reducing stunting prevalence in Makassar City. Enhancing community economic conditions through programs that improve access to decent employment is a crucial factor in stunting prevention.

The hypothesis suggests that the prevalence of stunting can be prevented through improvements in food access, nutritional intake, social conditions, and economic conditions (Rao et al., 2020). By increasing the availability of quality and nutritious food, as well as improving awareness of the importance of a balanced diet, the risk of stunting in children can be reduced. Research findings indicate that stunting rarely occurs if social conditions can be improved through health education initiatives and families are empowered to practice good parenting (Schiariti et al., 2021) Preventive measures against stunting can have a significant impact by improving community economic conditions through economic empowerment initiatives, expanding access to quality jobs, and strengthening social safety nets (Kusumajaya et al., 2023).

The prevalence of stunting has serious implications if not addressed. High stunting rates can negatively affect children's growth and development, leading to long-term health issues and a decline in quality of life (Has et al., 2022). Lack of access to quality and nutritious food can exacerbate stunting conditions, while insufficient nutritional intake can increase the risk of nutrition-related health issues in children. Additionally, unsupportive social conditions, such as low health education levels and inadequate family empowerment in healthy parenting practices, can further worsen stunting prevalence (Zhang et al., 2021). Poor economic factors, such as low family income and limited access to healthcare services, can also aggravate stunting. Therefore, a holistic and integrated approach through efforts to enhance food access, nutritional intake, social conditions, and economic conditions is crucial for mitigating the negative impacts of stunting prevalence and improving children's overall well-being (Goudet et al., 2019).

Stunting occurs when the availability of healthy food is limited. A child's ability to grow and develop significantly depends on their nutritional intake. Therefore, to reduce the risk of stunting, it is essential to provide nutritious food and knowledge about proper eating habits. Resources that support child development can also be limited by unsupportive social conditions (Adriany & Tesar, 2023). Economic conditions are also vital as they can increase the risk of stunting by hindering access to nutritious food and healthcare services for low-income families. Developing effective interventions to reduce the prevalence of stunting and improve child well-being requires a comprehensive understanding of the relationships between food access, nutritional intake, social factors, and economic conditions (Pradana Putri & Rong, 2021) .

The results indicate that the majority of respondents in the study are individuals who married before the age of 30. This shows a dominance of the young age group in the study sample. The reasons for this dominance may vary; however, several factors that may influence the inclusion of a majority of respondents marrying at a young age include trends toward younger marriage in the region, socioeconomic factors influencing decisions to marry young, and the demographic characteristics of the studied population (Saleh et al., 2021). Additionally, factors such as education levels, access to healthcare services, and cultural norms may also play a role in the dominance of respondents marrying under the age of 30 in this study. Thus, a deeper understanding of the social and cultural context in the region can provide insights into the prevalence of early marriage and its implications for health and family well-being (Wulandari et al., 2022).

CONCLUSION

Based on the analysis of stunting prevalence in South Sulawesi, it was found that factors such as food access, nutritional intake, social factors, and economic conditions have significant relationships with the stunting rates in children in the region. Regression analysis provides a deeper understanding of the factors influencing stunting and lays the groundwork for developing more effective intervention strategies to reduce stunting prevalence and enhance child welfare. The implications of this research underscore the importance of developing targeted and sustainable interventions to combat chronic nutritional issues such as stunting. The government and relevant stakeholders must pay attention to adequate food access, proper nutritional intake, social factors, and economic conditions in their efforts to prevent stunting. This study makes a significant contribution to improving the health and well-being of children in South Sulawesi by offering a better understanding of the factors that influence stunting and developing appropriate interventions to address this issue.

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