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Maternal knowledge and family support for child food insecurity among households with stunting in young children

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Abstract

Bakcground: Stunting is a common health issue. In poor nations, particularly Indonesia, stunting is a long-term problem with chronic malnutrition that results in growth abnormalities in children, where the child's height is lower or shorter (stunted) than the average for their age.
Purpose: To determine the relationship between maternal knowledge and family support for child food insecurity among households with stunting in young children at the Bojongnangka Tangerang Community Health Center service area.
Method: Cross sectional research methodology is being used in this quantitative investigation. 110 toddlers from the Bojongnangka Tangerang Community Health Center's service region served as the study's population of interest. Simple random sampling is the sampling method employed. The measurements taken include the toddler's height and the answers to a questionnaire that the toddler's parents completed. SPSS 20 was used for data analysis. The Mann Whitney test was used to do univariate and bivariate analysis after the data had been gathered.
Results: With a p value of 0.041, there is a significant correlation between the occurrence of staining and knowledge. Parental education (P=0.267), family skills (P=0.438), family attitudes (P=0.838), family emotional support (P=0.521), family informational support (P=0.707), and family appreciation support (P=0.872) do not significantly correlate with the prevalence of stunting.
Conclusion: The prevalence of stunting in the Bojongnangka Tangerang Community Health Center is significantly correlated with knowledge.

Keywords: Children's Diet; Family Support; Knowledge; Stunting; Young Children.

INTRODUCTION

The prevalence of stunting in young children is Indonesia's nutritional issue, which also happens to be the 2030 SDGs' attainment aim. The goal is to reduce the prevalence of stunting in toddlers to 10.0% by 2030. According to Indonesia's SDG Roadmap, children who live in poverty have a twofold increased risk of stunting compared to similarly aged children who do not live in poverty. In underdeveloped nations, like as Indonesia, stunting is a common health issue (World Health Organization, 2021; Anggryni, Mardiah, Hermayanti, Rakhmawati, Ramdhanie, & Mediani, 2021). Stunting is an issue of chronic malnutrition brought on by a lack of nutritional intake over an extended period of time, which results in growth abnormalities in children, namely the child's height being lower or shorter (stunted) than the standard age (Reinhardt, & Fanzo, 2014; Haskas, 2020; Raiten, & Bremer, 2020).

A significant health issue now affecting Indonesia is the prevalence of stunting in young children (Ministry of Health of the Republic of Indonesia,

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2018). In Indonesia, the rate of stunting or shortness is often stable. It dropped to 35.6% in 2010. However, in 2013 the prevalence of stunted toddlers rose once more to 37.2%, and in 2016 it further decreased to 27.5%. Stunting prevalence increased once more in 2017 and 2018, reaching 29.6% and 30.8% (Trihono, Atmarita, Tjandrarini, Irawati, Utami, Tejayanti, & Nurliwati, 2015; Haskas, 2020).

Based on measuring data from the community-based nutrition recording and reporting application or *ePPGBM*, the number of stabbing instances in Tangerang Regency decreased by 9,000 cases in 2023 and are now at 6,000 cases. Since 2021, there has been a drop in the rate of stunting in children. In 2021, there were approximately 16,100 instances; in 2022, there were 9,000 cases; and in 2023, there were 6,000 cases (2.7%). High rates of child stunting can result from a variety of circumstances. Toddlers' inadequate dietary intake is the primary contributing cause (Haskas, 2020).

Parental knowledge is one of the key issues with stunting or short stature. One factor that affects a mother's knowledge of health issues is education. Parents who have received a solid education are better able to understand and use knowledge regarding maintaining the health of toddlers, particularly when it comes to giving enough nutrition.

Family support is another contributing element. The family's support plays a crucial role in the mother's decision-making process because the family must provide its consent before she can take any action. Husband and parents provide significant family support for mothers of young children.

Lack of family support for providing toddlers with a healthy diet can be indicated by a lack of family awareness. Families of toddlers who have a good level of understanding about stunting require family expertise in avoiding stunting. Because the family is well informed, they will encourage and support the toddler's mother so that she can provide the child an acceptable diet (Maulia & Farapati, 2019).

RESEARCH METHOD

This research has a cross-sectional design and is quantitative in nature. The research design known as a cross sectional design simultaneously investigates the dependent variable and independent factors. The target population for this research is families with toddlers who live in the area supported at the Bojongnangka Community Health Center, namely Curug Sangereng Village, Tangerang. The sampling technique was random sampling and 110 samples were obtained. Maternal education, maternal knowledge, family attitudes, family skills, family emotional support, family instrumental support, family information support, and family appreciation support are several independent variables. Toddler stunting is the dependent variable.

The measurements taken included the toddler's height and answers to a questionnaire filled in by the toddler's parents. In the mother's knowledge level questionnaire, correct statements were given the number 1, and incorrect answers were 0. Attitude variables, positive statements were given the number 4 = strongly agree, 3= agree, 2 disagree, 1= strongly disagree. Negative attitudes were given a value of 1 = strongly agree, 2 = agree, 3 = disagree and 4 = strongly disagree. Psychomotor or skill variables, for questions and positive statements, are given the numbers 4 = always, 3 = often, 2 = rarely and 1 = never. Negative psychomotor is given the numbers 1 = always, 2 = often, 3 = rarely, and 4 = never.

Height is categorized as: 1) Very short: <-3 SD, 2) Short: - 3 SD to <- 2 SD, 3) Normal: -2 SD to +3 SD, and 4) Tall: > +3 SD. Family Appreciation Support: 1: Good if the mean value as a cut-off point is >7.77, 0: Poor if the mean value as a cut-off point is <7.77). Family Information Support: 1: Good if the mean value as a cut point is >10.94), 0: Poor if <10.94). Family Instrumental Support: 1. Good: if the mean as cut off point is >14.28), 2. Poor if <14.28. Family Emotional Support: 1. Good: if the mean as cut off point is >10, 2. Poor if <10). Attitude: 1. Good: if the mean as cut off point is >20), 2. Poor if <20). Skills: 1. Good: if the mean as cut off point is >29.55, 2. Poor if <29.55. Knowledge: 1. Good: if the mean as cut off point is >14.00), 2. Poor if <=14.00).

SPSS 20 was used for data analysis. The Mann Whitney test was used to carry out univariate and bivariate analysis after the data was collected with a significance of 95% (α = 0.05).

This research has been declared to have passed the ethics committee of the Bojong Nangka Kelapa Dua Tangerang Public Health Center with number: 440/158.3/PKMBJN/2023.

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RESEARCH RESULT

Table 1. Characteristic of Respondents (N=110)

Variable	Results
Characteristic of Parental	
Age (Mean±SD)(Range)(Year)	(31.62±7.473) (21-49)
Ethnic Community (n/%)	
Sundanese	109/99.1
Others	1/0.9
Employment (n/%)	
Employee	38/34.5
Unemployee	72/65.5
Education (n/%)	
Low Education	105/95.5
High Education	5/4.5
Knowledge (n/%)	
Poor	23/20.9
Good	87/79.1
Income (n/%)	
Low (< minimum wage)	88/80.0
High (≥ minimum wage)	22/20.0
Number of children (n/%)	
Children ≥ 3	108/98.2
Children < 3	2/1.8
Characteristic of Child	
Age (Mean±SD)(Range)(Month)	(29.86±5.795) (12-59)
Weight (Mean±Median)(Range)	(12.59±10.45) (3-80)
Height (n/%)	
(Mean±Median) (Range)	(80.29±85) (9-117)
Very Short	13/11.8
Short	15/13.6
Normal	77/70.0
Tall	5/4.6
Gender (n/%)	
Male	45/40.9
Female	65/59.1
Birth Order (n/%)	
First Birth	47/42.7
Second Birth	43/39.1
Third Birth and Above	20/18.2

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The distribution of characteristics in the table above shows; The average age of parents is 31.63, the majority are Sundanese at 99.1%. 65.5% do not work, 95.5% have low education, 79.1% have good knowledge, 80% have low income, and 98.2% have ≥3 children.

Age characteristics of children with mean and standard deviation (29.86 ± 5.795) with an age range between 12 to 59 months, the majority of children are female, 59.1%, the average weight of children is 12.59; The average height of children is 80.29, the majority have a normal height of 70% and the birth order of the first child is 42.7%.

Table2. Maternal Knowledge and Family Support for Child Food Insecurity Among Households with Stunting in Young Children

Variable	Height				p-value
	Very Short (n=13)	Short (n=15)	Normal (n=77)	Tall (n=5)	
Education (n/%)					
Low	11/84.6	15/100	74/96.1	5	0.267
High	2/15.4	0/0	3/3.9	0/0	
Knowledge (n/%)					
Poor	5/38.5	5/33.3	12/15.6	1/20.0	0.041
Good	8/61.5	10/66.7	65/84.4	4/80.0	
Family Skills (n/%)					
Poor	13/100	14/93.3	69/89.6	5/100	0.438
Good	0/0	1/6.7	8/10.4	0/0	
Family Attitude (n/%)					
Poor	6/46.2	6/40.0	41/53.2	3/60.0	0.838
Good	7/53.8	9/60.0	36/46.8	2/40.0	
Family Emotional Support (n/%)					
Poor	7/53.8	11/73.3	46/59.7	2/40.0	0.521
Good	6/46.2	4/26.7	31/40.3	3/60.0	
Instrumental Support (n/%)					
Poor	1/7.7	1/6.7	4/5.2	0/0	0.547
Good	12/92.3	14/93.3	73/94.8	5/100	
Family Informational Support (n/%)					
Poor	7/53.8	9/60.0	43/55.8	2/40.0	0.707
Good	6/46.2	6/40.0	34/44.2	3/60.0	
Family Appreciation Support (n/%)					
Poor	215.4	3/20.0	19/24.7	0/0	0.872
Good	11/84.6	12/80.0	58/75.3	5/100	

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From table 2 it is known that for the education variable the p value is 0.267 > 0.05, indicating that there is no significant relationship between children's height and parents' education. In the knowledge variable, the p value is 0.041 <0.05, indicating a large correlation between children's height and family knowledge. No significant relationship was found between family skills and children's height, this was indicated by a p value of 0.438 > 0.05 which was calculated based on previous results. Based on the attitude variable, a p value of 0.838 > 0.05 was obtained, which means there is no significant relationship between family attitudes and children's height based on the results above. Based on the family emotional support variable, the p value is 0.521 > 0.05, meaning there is no significant relationship between a child's height and emotional support from the family. The data above shows that there is no significant relationship between a child's height and family instrumental support with a p value of 0.547 > 0.05. Based on information support, there is no significant relationship between family information support and children's height, as indicated by a p value of 0.707 > 0.05. Based on the family appreciation variable, the p value is 0.872 > 0.05, indicating that there is no significant relationship between a child's height and the level of family appreciation. A prolonged state of starvation at the most important time for early life growth and development is reflected in stunting or short stature. Stunting is not only caused by poor nutrition in toddlers and pregnant women, but is also caused by various variables.

DISCUSSION

Basic, direct, and indirect causes have an impact on the severity of nutritional issues (Dewi, Ariski, & Kumalasari, 2019). The most fundamental causes are issues with economic structures based on potential or resources as well as issues with political and ideological frameworks. Health status and insufficient nourishment are the direct factors. The four indirect reasons are as follows: 1) Food security for the family; 2) Mother and child care; 3) Health service utilization; and 4) Environmental sanitation. These elements will affect how much nourishment kids get. A child's growth and development will be optimal if their nutritional intake is balanced and satisfies their demands; on the other hand, if their nutritional intake is inadequate for an extended length of time, it will have an impact on their height (Supariasa, & Purwaningsih, 2019).

The study carried out in Negeria discovered a noteworthy correlation between male gender, low income, breastfeeding status, history of infection, residing in a rural location, and low father and mother education levels (Akombi, Agho, Hall, Wali, Renzaho, & Merom, 2017).

Research conducted in Thanzani regarding the factors that influence the incidence of stunting. Toddlers are more likely to experience stunting, namely ages 0-59 months. The mother's age at birth, younger than 20 years, had a significant effect (o=0.060; OR=1.15), low socio-economic status and father's education also had a significant effect (p<0.001; OR=2.48 and p< 0.001; OR=2.02), apart from that, low maternal knowledge also influences the incidence of stunting (p=0.003; OR=0.82), babies born to mothers who have a BMI of less than 18.5 kg/m2 (p<0.001; OR=1.46) (Chirande, Charwe, Mbwana, Victor, Kimboka, Issaka, Baines, Dibley, & Agho, 2015).

A p value of 0.267 was found in the bivariate analysis of the relationship between parental education and child height in this study. This demonstrates that there is no discernible link between parental education and kids' height. This contradicts research in Indonesia and Bangladesh, which demonstrates a significant relationship between parental education and the incidence of stunting with a p value of 0.0001 and OR-0.97. This implies that toddlers who have low parental education are at a 0.97 times higher risk of experiencing stunting (Semba, de Pee, Sun, Sari, Akhter, & Bloem, 2008).

The mother's educational attainment directly affects the child's nutritional intake, while the father's education has no direct impact on the latter. This is connected to the regular trips to the Integrated health care center for advice regarding the growth and development of children as well as the amount of nourishment they require, which will raise the mother's nutritional literacy. Well-informed mothers will provide age-appropriate diets that meet their kids' nutritional needs. In addition, parental education directly affects how children behave as parents, which in turn affects how much food they eat

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(Senudin, 2021; Scaglioni, De Cosmi, Ciappolino, Parazzini, Brambilla, & Agostoni, 2018).

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The respondent's experience or information can be used to achieve this. It is known that the majority of respondents in this survey have little education and are unemployed. These findings are based on their characteristics. This demonstrates how easier it will be to better grasp how to instruct children in learning and to provide them with a balanced, nutritious diet that will promote their growth and development if one has a higher level of education.

Finding out about nutritional knowledge can come from both direct and indirect experience as well as purposeful information sharing, like in counseling. Enhancing one's knowledge is encouraged; out of 110 respondents, 87 parents demonstrated strong knowledge in this survey.

Age plays a significant role in knowledge development; the older an individual, the better their mental development process becomes; intelligence, or the capacity to learn and think abstractly in order to adapt to new situations; the environment in which an individual can learn both good and bad things depending on the makeup of the group; education is essential for knowledge development; and experience is the best teacher when it comes to honing knowledge (Ikhtiarti, Rahfiludin, & Nugraheni, 2020; McLeod, 2018; Ott, & Michailova, 2018; Chan, & Yung, 2018).

Children's height is not significantly correlated with bivariate results between family skills, family attitudes, family emotional support, family informational support, and family esteem support. Family support is the attitude or behavior of family acceptance toward family members, including emotional, instrumental, informational, and evaluation support. Since the family is the smallest social unit and the one that receives nursing care, he believes that family support is crucial. As a result, the kind of care required for a sick family member is mostly determined by the family. A family member's health issues will have an impact on the family system as a whole. Family support, then, is a type of interpersonal interaction that consists of behaviors, attitudes, and acceptance of family members in order to give the impression that someone is considering them (Wulandari & Kusumastuti, 2020).

According to research, of the 53 mothers, 21 mothers (91%), or nearly all of the group with good family support, had strong motivation; 13 mothers (93%), or nearly all of the group with sufficient family support, had moderate motivation; and 15 mothers (94%), or nearly all of the group with less family support, had weak motivation. Based on the statistical test results, which had a p value < α (0.000 < 0.05) and a 95% confidence level, it can be said that, in West Nyabakan village, there is a significant link between maternal motivation to get the full complement of basic immunizations and family support (Ho denied). The R Square value of 0.892 indicates a very strong correlation, indicating that the association between the variables is highly significant. The study's results indicate a positive (+) direction of correlation, indicating that mothers are more motivated to receive all recommended basic vaccinations when they have greater family support (Retnani, 2016) .

CONCLUSION

Based on the findings of a study including 110 respondents, it was discovered that 5 respondents were tall, 77 respondents were normal, and 13 respondents were extremely short. A child's height is unaffected by the educational attainment of its parents. Parental education, family skills, family attitudes, family emotional support, family instrumental support, and family appreciation support did not significantly affect children's height, according to the research results, but parental knowledge (p=0.041) did.

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