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Analysis of Supporting Factors to Prevent Stunting in Toddlers to Support Sustainable Development Goals

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Abstract: Stunting is a target of the Sustainable Development Goals (SDGs), specifically within the second goal of eliminating hunger and all forms of malnutrition by 2030. This study aims to assess the influence of midwives, cadres, and family support on mothers' behavior in preventing stunting in toddlers in the UPT Puskesmas Jiput area. Using a quantitative analytical approach with a cross-sectional design, the study examines the relationships between these variables. The results show that the role of cadres significantly affects stunting prevention behavior in toddlers, with a p-value of 0.049. Family support also plays a crucial role, as indicated by a p-value of 0.021. Additionally, maternal motivation is significantly linked to stunting prevention behavior, with a p-value of 0.033. The study concludes that the roles of midwives, cadres, and family support significantly influence mothers' efforts to prevent stunting in toddlers. These findings highlight the importance of collaboration between healthcare workers, families, and the community in stunting prevention.

Keywords: Behavior; Stunting; Sustainable development goals; Toddlers

Introduction

Stunting describes chronic malnutrition status during growth and development since early life. This situation is presented with a height-for-age (TB/U) z-score value of less than -2 standard deviations (SD) based on WHO growth standards. Height growth, unlike body weight, is relatively less sensitive to the problem of malnutrition in a relatively short period of time, the effect of malnutrition on height will appear over a relatively long period of time so that the TB/U index can be used to describe past nutritional status (Bhutta et al., 2020; Conway et al., 2020).

Stunting cases are a global problem and do not only occur in Indonesia. Stunting is a form of growth failure (growth faltering) due to the accumulation of inadequate nutrition that lasts for a long time starting from pregnancy until the age of 24 months (Cliffer et al., 2020; Dimitrova & Muttarak, 2020). More than half of the world's stunted toddlers come from Asia (55%) while more than a third (39%) live in Africa. Of the 83.6 million stunted children under five in Asia, the largest proportion comes from South Asia (58.7%) and the lowest proportion from Central Asia (0.9%) (Huicho et al., 2020; Keats et al., 2022).

On January 25 2023, the Ministry of Health announced that the prevalence of stunting in 2022 would be 21.6 percent. This figure is lower than the figure in 2021, which was 24.4 percent. The government targets the prevalence of stunted children under five in Indonesia to reach 14 percent by 2024. President Joko Widodo conveyed that the 14 percent target is not a difficult target to achieve if all parties can work together. The results of the Ministry of Health's Indonesian Nutritional Status Study (SSGI) survey recorded the achievement of reducing the prevalence of stunting in Banten Province in 2022, namely 20 percent, down 4.5 percent from 2021 (Akseer et al., 2020; Lopez de Romaña et al., 2021).

The average prevalence of stunting in districts/cities in Banten Province has decreased. In

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Pandeglang Regency there was a decrease of 8.4 percent from 37.80 percent in 2021 to 29.40 percent in 2022. Despite the decline, the incidence of stunting in Pandeglang Regency is still the highest in Banten Province.

Method

This research is quantitative analytical with a cross-sectional approach. This approach was chosen because it allows researchers to observe and analyze data at a certain point in time, so that it can provide a comprehensive picture of the relationship between the various variables studied. Analytical research aims to find relationships between one variable and other variables, as well as understanding how these variables influence each other. In the context of this research, the variables analyzed include the role of midwives, the role of cadres, family support, and maternal behavior in preventing stunting in toddlers.

A quantitative approach was chosen because it allows the use of statistics to test the proposed hypotheses. Data was collected through a survey using a structured questionnaire which had been tested for validity and reliability. The research respondents were mothers who had toddlers in the working area of the UPT Puskesmas Jiput. The sampling technique used was purposive sampling, where respondents were selected based on certain criteria that were relevant to the research objectives.

Result and Discussion

Result

Univariate Analysis

Based on the table 1, it shows that the role of midwives mostly has a good role as many as 17 people (56.7%), a fairly good role for 11 people (36.7%) and a poor role for 2 people (6.7%).

Table 1. Frequency Distribution of Midwife Roles

The role of the midwife	Frequency	Percentage
Not enough	2	6.70
Enough	11	36.70
Good	17	56.70
Total	30	100

Source: Primary Data, 2024

Table 2. Frequency Distribution of Cadre Roles

The role of cadres	Frequency	Percentage
Not enough	7	23.30
Enough	12	40.00
Good	11	36.70
Total	30	100

Source: Primary Data, 2024

Based on the table 2 above, it shows that the role of cadres is mostly quite good, as many as 12 people (40%), good for 11 people (36.7%), and poor for 7 people (23.3%).

Table 3. Frequency Distribution of Family Support

Family support	Frequency	Percentage
Not enough	12	40.00
Enough	8	26.70
Good	10	33.30
Total	30	100

Source: Primary Data, 2024

Based on the table 3, it shows that family support was poor for 12 people (40%), good for 10 people (33.3%) and poor for 8 people (26.7%).

Table 4. Frequency Distribution of Stunting Prevention Behavior

Behavior	Frequency	Percentage
Not so good	12	40.00
Good	18	60.00
Total	30	100

Source: Primary Data, 2024

Based on the table 4, it shows that as many as 18 people (60.0%) of mothers' behavior in preventing stunting was good, while 12 people (40.0%) of mothers' behavior in preventing stunting was poor.

Multivariate Analysis

From the results of presenting the table 5, it can be seen that the results of the analysis obtained a p value of 0.049. This value is smaller than the significance level of 0.05. The conclusion is that Ho is rejected and Ha is accepted, which means there is a relationship between the role of the midwife and the mother's behavior in preventing stunting.

From the results of presenting the table 6, it can be seen that the results of the analysis obtained a p value of 0.021. This value is smaller than the significance level of 0.05. The conclusion is that Ho is rejected and Ha is accepted, which means there is a relationship between the role of cadres and mother's behavior in preventing stunting.

From the results of presenting the table 7, it can be seen that the results of the analysis obtained a p value of 0.033. This value is smaller than the significance level of 0.05. The conclusion is that Ho is rejected and Ha is accepted, which means there is a relationship between family support and maternal behavior in preventing stunting.

Table 5. The Relationship between the Role of Midwives and Stunting Prevention Behavior

Variable	Stunting Prevention Behavior				Total		p-value
	Not so good		Good				
	n	%	n	%	n	%	
The role of the midwife							
Not enough	0	0	2	6.70	2	6.70	0.049
Enough	2	6.70	9	0	11	36.70	
Good	10	33.30	7	23.30	17	56.60	
Total	12	40.00	18	60.00	30	100	

Source: Primary Data, 2024

Table 6. Relationship between Cadre Roles and Stunting Prevention Behavior

Variable	Stunting Prevention Behavior				Total		P-value
	Not so good		Good				
	n	%	n	%	n	%	
The role of cadres							
Not enough	5	16.6	2	6.7	7	23.3	0.021
Enough	6	20.0	6	20.0	12	40.0	
Good	1	3.4	10	33.3	11	36.7	
Total	12	40.0	18	60.0	30	100	

Source: Primary Data, 2024

Table 7. Relationship between Family Support and Stunting Prevention Behavior

Variable	Stunting Prevention Behavior				Total		p-value
	Not so good		Good				
	n	%	n	%	n	%	
Family support							
Not enough	2	6.70	10	33.30	12	40.00	0.033
Enough	6	20.00	2	6.70	8	26.70	
Good	4	13.30	6	20.00	10	33.30	
Total	12	40.00	18	60.00	30	100	

Source: Primary Data, 2024

Discussion

The Role of the Midwife

Based on the table above, it shows that the role of midwives mostly has a good role as many as 17 people (56.7%), a fairly good role for 11 people (36.7%) and a poor role for 2 people (6.7%). The results of this research are in line with research (Fufa, 2022; Shapiro et al., 2019), according to the results of multivariate analysis, the variable exposure to prevention programs is the dominant factor that influences disease prevention behavior with an Odds Ratio of 11.237 and a p value of 0.023. The role of health workers in exposing the community to disease prevention programs is very important to change community behavior in preventing disease in the research area. Strategies and efforts are needed to reduce the prevalence of disease by involving the community through empowerment programs (Brar et al., 2020; Wigle et al., 2020).

Midwives play a role in reminding and sensitizing parents to provide information, educate pregnant mothers and parents of toddlers, monitor the baby's growth every month at the posyandu. Monitoring toddlers' height according to age is an effort to detect stunting early so that it can be treated immediately to support optimal height (Nounkeu & Dharod, 2021; Vaivada et al., 2020). Midwives' abilities which include knowledge, skills and behavior are aspects that must be fulfilled in their competence as a midwife (Johnston et al., 2014; Rukiko et al., 2023). Midwives have an important and significant influence on the medical outcomes and experiences of women giving birth. The midwifery profession requires knowledge, competence, self-confidence and skills. Midwives must incorporate theoretical knowledge, practical skills, then midwives must interact with women personally and professionally (Akerele et al., 2024; Blesh et al., 2019).

Cadre Role

Based on the table above, it shows that the role of cadres is mostly quite good, as many as 12 people (40%), good for 11 people (36.7%), and poor for 7 people (23.3%). This research is in line with research conducted by Adrizain et al. (2024) who said that efforts to prevent and handle stunting can be carried out if the knowledge of posyandu cadres regarding stunting conditions is good, so it can be concluded that a person's level of education will determine the ease with which that person can understand and implement information

related to the knowledge about nutrition that they have acquired.

Good cadre knowledge will create motivation to support a mother in providing balanced nutrition to her toddler. So it can be concluded that motivation is closely related to a person's behavior, with motivation to eat, the person's behavior will automatically shape and direct behavior to fulfill its goals (Sadler et al., 2022). Cadres play an important role in fulfilling health in the community. With cadres playing an active role, they will be able to support community participation in actively participating in activities held at the posyandu (Rahut et al., 2024). With high cadre motivation, the role of cadres in the community can run smoothly, for example in the form of providing information related to stunting, regularly making visits to the homes of mothers in the community who have toddlers and also taking measurements correctly.

Family Support

Based on the table above, it shows that family support was poor for 12 people (40%), good for 10 people (33.3%) and poor for 8 people (26.7%). The results of this research are supported by research conducted by (Van Zadelhoff & Haisma, 2022) that family form influences the occurrence of stunting, where stunting often occurs in divorced families, while the family form where stunting is rare is in the form of large families. The form of a large family can influence the low incidence of stunting because in the family that cares for children, apart from parents, there are also grandmothers and grandfathers who help fulfill daily needs, including food intake. The form of the family can have an influence on the incidence of stunting which is in line with the characteristics of the number of children in the family, because whether a family is classified as large or small is determined by the number of children. In this study, the majority of families had more than two children, which could affect the fulfillment of nutritional needs in the family. This is because children in families with many family members tend to receive less individual attention and care. The number of children in the family will also increasingly affect the incidence of stunting when viewed from the family's economic status based on the family's income. If family income can meet family needs, low income levels tend to fulfill nutritional needs by considering cheaper prices and less varied menus. Family income can influence children's nutritional status in line with the results of previous research (Johri et al., 2016; Nahalomo et al., 2022) that the characteristics of family income in rural or urban areas that have economic problems experience growth disorders, so stunting occurs more often in families with low average income/month. However, family opinion does not directly influence nutritional status because family opinion is a medium for fulfilling nutritional needs.

Stunting Prevention Behavior

Based on table 5.2.4, it shows that as many as 18 people (60.0%) of mothers' behavior in preventing stunting was good, while 12 people (40.0%) of mothers' behavior in preventing stunting was poor. In line with research conducted by Amelia, 2022, the Chi-square test results obtained a p-value = 0.000 which is smaller than the sig (α) = 0.05 (0.000 < 0.05). This means that there is a relationship between maternal behavior and the incidence of stunting among toddlers in Babul Makmur Village, West Simeulue District, Simeulue Regency.

In accordance with the explanation (Gabain et al., 2023; Ruel et al., 2018) good behavior in providing nutritional intake to children under five is determined by the level of knowledge of parents regarding the nutrition needed by children for their growth. Apart from that, the time given by parents, if parents are too busy with work, will have little time and there will be less time available for their children so that children will receive less attention. Dewey et al., (2022), Gillespie et al. (2017) also has the same opinion that mothers' behavior regarding children's nutritional intake is not well driven due to lack of knowledge, low education, and the mother's attitude of not caring enough about children's intake patterns. As a result, it will have a negative effect on the child's growth and development, making it one of the factors in the occurrence of stunting. The level of education of parents is also a very important influence on the incidence of stunting.

Parents' knowledge, which is based on good knowledge about children's nutrition and parenting patterns, will pay attention to their children's behavior in meeting nutritional needs and providing parenting patterns for children in their daily lives. The high level of knowledge of parents will have a positive influence on child rearing behavior.

Multivariate Analysis

The Relationship between the Role of Midwives and Stunting Prevention Behavior. The results of the chi square statistical test of the relationship between the role of midwives and the incidence of stunting obtained a value of p = 0.049, meaning p-value < 0.05, so it can be concluded that there is a relationship between the role of midwives and maternal behavior in preventing stunting in toddlers.

The results of this research are in line with research conducted by Chichaibelu et al. (2021). Based on the table, it was found that of the 55 respondents, 54 people (98.2%) played a good role in providing services for pregnant women (Antenatal Care).

The role and position of midwives in society is highly valued and respected because of their noble duties, encouraging, encouraging, assisting, especially regarding mothers' behavior in preventing stunting.

According to researchers' assumptions, the role and position of midwives in the community is very much needed by mothers in preventing stunting in toddlers. The role of the midwife is a form of assistance or support that the mother receives from the midwife in encouraging behavior in preventing stunting. It is hoped that with support from the midwife the mother will feel more motivated. By providing meaningful support, mothers can maintain and monitor their children's growth and development well. The basic role of midwives in preventing stunting is in line with the following theory, the role of midwives as educators must be shared by all midwives, midwives must be able to provide information, educate and teach individuals, families and communities in accordance with their duties and responsibilities (Panjwani & Heidkamp, 2017).

The Relationship between the Role of Cadres and Stunting Prevention Behavior

The results of the chi square statistical test of the relationship between the role of cadres and the incidence of stunting obtained a value of p = 0.021, meaning p-value < 0.05, so it can be concluded that there is a relationship between the role of cadres and the incidence of stunting in toddlers.

Posyandu cadres are the main access for mothers in Sakambang Village to obtain health which is motivated by low self-awareness and limited ability to access knowledge related to fulfilling balanced nutrition and all efforts to improve maternal and child health. Cadres have a role in passing back information and knowledge gained during training and socialization to mothers (Black et al., 2015). The knowledge and activity of cadres can influence changes in mothers' behavior and knowledge regarding children's growth and development, especially regarding stunting, for the better. Carrying out the role as a posyandu cadre in reducing stunting requires knowledge and skills both when providing services, carrying out weighing and counseling. The existence of posyandu cadres is important, services provided well and attracting public sympathy can produce a positive response, create a sense of concern, and encourage community participation.

In research conducted by Sudfeld et al. (2015), this research is in line with the role of posyandu cadres in preventing and dealing with stunting problems, namely by providing outreach to disseminate information about stunting in the community. Apart from that, posyandu cadres also provide nutritional health counseling with the aim of increasing public awareness, especially knowledge of mothers with toddlers and mothers-to-be so that there can be changes for the better.

The Relationship between Family Support and Stunting Prevention Behavior

The results of the chi square statistical test of the relationship between family support and the incidence of stunting obtained a value of p = 0.033, meaning p-value < 0.05, so it can be concluded that there is a relationship between family support and the incidence of stunting in toddlers. This means that the good family support that the mother gets will increase the mother's chances of making efforts to prevent stunting. This research is in line with Smith et al. (2015) which shows that the results of family support are significantly related to stunting prevention variables. Research Jackson et al. (2022) also shows the results that there is a relationship between family support variables and the nutritional condition/status of toddlers.

Forms of family support play a very important role in fulfilling the nutrition of children and mothers during pregnancy and breastfeeding. Apart from that, good family support can increase family harmony and an active role in the household which is beneficial for maintaining joint health.

Social support is the ability of the family and community to provide time, attention, support in the form of physical, mental and social support. Social support includes family attention or support for the mother in providing food, psychosocial stimulation and practices for baby health (Smith & Haddad, 2015).

Information support regarding stunting prevention, such as explaining the importance of taking blood-boosting tablets, calcium supplements and folic acid, can encourage pregnant women to prevent stunting because consuming these drugs is one way to prevent stunting from the time of pregnancy (Gabain et al., 2023).

Conclusion

From the results of this research, it was found that the role of midwives was mostly good, with 17 people (56.7%) performing well, and the role of health cadres was mostly quite good, with 12 people (40%) performing adequately. Family support was mostly inadequate, with 12 people (20%) providing poor support, while stunting prevention behavior was mostly good, with 18 people (60%) demonstrating positive practices. The results of the chi-square statistical test showed that there is a significant relationship between the role of midwives and stunting prevention behavior in toddlers (p = 0.049), the role of health cadres and stunting prevention behavior in toddlers (p = 0.021), and family support and

stunting prevention behavior in toddlers (p = 0.033), all with p-values < 0.05. Therefore, it can be concluded that the role of midwives, the role of health cadres, and family support have a significant relationship with stunting prevention behavior in toddlers.

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NY, I, ERP, RAU, OY assists in the data collection process, data processing and analysis, as well as writing the article.

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