

# Contribution of the Role of Health Cadres in the Prevention of Stunting in Toddlers

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## **ABSTRACT**

*Stunting in toddlers is still a serious public health problem in Indonesia. Stunting can cause various adverse effects on children's health, such as growth and development problems, impaired cognitive function, and increases risk of disease in adulthood. This study was to analyze the role of health cadres in preventing stunting in toddlers. The study was cross-sectional with a sample of 200 cadres selected by exhaustive sampling. Data were collected by questionnaire and analyzed using the Chi-square test and logistic regression. The results showed that there was a significant relationship between employment status ( $p=0.001$ ), attitude ( $p=0.001$ ), perception ( $p=0.001$ ), marital status ( $p=0.047$ ), the competence of health cadres and the role of cadres in stunting prevention ( $p=0.001$ ). The variable that contributes the most to the role*

*of cadres in stunting prevention is the competence of cadres with  $Exp. (B)=4.914$ . The study shows that the role of health cadres in preventing stunting is important for improving the nutritional status of toddlers. Therefore, it is necessary to make efforts to improve the competence of health cadres, provide a positive perception of work, and improve the attitude of health cadres towards stunting prevention through training and skills provision for health cadres.*

Keywords: Stunting, Role of health cadres, Toddlers

### **ABSTRAK**

*Stunting pada balita masih menjadi masalah kesehatan masyarakat yang cukup serius di Indonesia. Stunting dapat menyebabkan berbagai dampak buruk pada kesehatan balita, seperti masalah pertumbuhan dan perkembangan, gangguan fungsi kognitif, serta meningkatkan risiko penyakit pada masa dewasa. Penelitian ini bertujuan untuk menganalisis peran kader kesehatan dalam pencegahan stunting pada balita. Penelitian menggunakan cross-sectional study dengan sampel sebanyak 200 kader yang dipilih secara exhaustive sampling. Data dikumpulkan melalui kuesioner dan dianalisis menggunakan uji Chi-square dan regresi logistik. Hasil penelitian menunjukkan bahwa terdapat hubungan yang signifikan antara status pekerjaan ( $p=0,001$ ), sikap ( $p=0,001$ ), persepsi ( $p=0,001$ ), status perkawinan ( $p=0,047$ ), kompetensi kader kesehatan dengan peran kader dalam pencegahan stunting ( $p=0,001$ ). Variabel yang paling berkontribusi dengan peran kader dalam pencegahan stunting adalah kompetensi kader dengan nilai  $Exp (B)=4,914$ . Penelitian ini menunjukkan bahwa peran kader kesehatan dalam pencegahan stunting penting untuk meningkatkan status gizi balita. Oleh karena itu, perlu dilakukan upaya untuk meningkatkan kompetensi kader kesehatan, memberikan persepsi positif tentang pekerjaan, serta meningkatkan sikap kader kesehatan terhadap pencegahan stunting melalui pelatihan dan pembekalan keterampilan kader kesehatan.*

Kata kunci: Stunting, Peran kader kesehatan, Balita

### **INTRODUCTION**

Stunting is a major health problem in the world. Millions of children around the world have been affected by stunting. Around 22% of children under the age of five worldwide are stunted in 2021, and Asia accounts for more than half of all stunted children in the world. Indonesia has the highest prevalence among children in the Asian region (Global Nutrition Report, 2022). Although the number of children affected by stunting decreased from 37.2 to 27.67 in five years, this number is still higher than in other Asian countries (Sufri, Jannah, Dewi, Sirasa, & Bakri, 2023). The prevalence of stunting in toddlers in Indonesia is still quite high, namely 27.67%. Based on data from the Indonesian Nutrition Status Survey in 2021 it will be 24.4% and will decrease by 2022 by 21.6% by. While in 2022 North Sumatra is 21.1% and in South Tapanuli Regency the stunting prevalence rate 2022 is 39.4%, an increase from 2021 of 30.8% (Kemenkes, 2022).

According to the Ministry of Health, more than a third of toddlers suffer from stunted growth, which puts children at risk for various health complications and developmental delays (Dewi, Made, Primadewi, & Handika, 2021). To overcome this problem, various strategies have been implemented such as providing nutrition education and increasing access to nutritious food sources (Sugiyanto, Sumarlan, & Hadi, 2020). The role of health cadres in stunting prevention is very important. This can be done through education, awareness, and financial support. As part of efforts to promote healthy lifestyles and prevent stunting, community members can play an important role in strengthening the importance of education and awareness (Mediani, Hendrawati, Pahria, Mediawati, & Suryani, 2022). This can be achieved through the establishment of effective programs and activities. Apart from that, it can also play an important role in preventing stunting by being active in the community. The cadres appointed in health service organizations must be actively involved in the promotion and protection of health and safety actions which are strongly influenced by work factors, attitudes, perceptions, marital status, and competence of cadres (Mediani, Nurhidayah, & Lukman, 2020). Likewise, health cadres have a very important role in stunting prevention, because they are often at the forefront of providing information and providing support to the community in terms of child nutrition and health. However, there are several problems faced by health cadres in stunting prevention, including lack of knowledge about stunting and how to prevent it, lack of access to resources, lack of support from family and community, challenges in overcoming policy issues (Siswati, Iskandar, Pramestuti, Raharjo, Rialihanto, et al., 2022).

Health cadres have an important role in preventing stunting because they can provide information and education to parents and the public about the importance of balanced and quality nutrition for children (Juarez et al., 2021). In addition, health cadres can also assess children's nutritional status and provide nutritional supplements or additional food to children who need them. Health cadres can also help increase public awareness and understanding of the importance of stunting prevention through outreach and education campaigns (Christanti et al., 2021). They can also act as facilitators in creating an environment that supports stunting prevention, such as promoting exclusive breastfeeding and promoting immunization programs. However, to ensure the success of stunting prevention, health cadres need to be supported by adequate infrastructure and resources, such as nutritional status measurement tools, nutritional supplements, and adequate training and education (Hadi, Antoni, Dongoran, & Ahmad, 2023). Therefore, there is a need for support and investment from the government and international institutions to strengthen the role of health cadres in preventing stunting and achieving sustainable development goals related to child health and nutrition (Siswati, Iskandar, Pramestuti, Raharjo, Rubaya, et al., 2022).

South Tapanuli Regency is one of the districts in North Sumatra province with a stunting prevalence of 30.8% and in East Angkola District the incidence of stunting in toddlers is 13.16%. The prevalence of stunting in South Tapanuli is above the prevalence rate for North Sumatra Province, this number has increased from the previous year. If prevention is not carried out, it will hurt the quality of human resources in the future (Kemenkes, 2022). One of the efforts that can be made to overcome the problem of stunting is to involve the role of health cadres. Health cadres are an important key in providing information and education to the community, especially in terms of toddler health (Vinci, Bachtiar, & Parahita, 2022).

However, there are still not many studies exploring the role of health cadres in stunting prevention. Therefore, this research was conducted to analyze the role of health cadres in preventing stunting in toddlers in the East Angkola District. It is hoped that the results of this study can provide a clearer picture of the role of health cadres in stunting prevention, and can become the basis for increasing the role of health cadres in efforts to prevent stunting in the community.

## METHOD

The study was quantitative with the cross-sectional approach that can be used to identify the relationship between the role of health cadres and stunting prevention in a population at the same time in the east Angkola sub-district, South Tapanuli Regency. The 200 health cadres, involved in this study, were selected by exhaustive sampling. Respondents who can be selected are health cadres who are involved in stunting prevention programs. The data that can be collected is the demographic profile of health cadres, competence of health cadres, the role of health cadres, and factors that influence the role of health cadres in preventing stunting such as attitudes and perceptions of cadres. Data analysis used the chi-square test and logistic regression with a significance level of  $\alpha = 0.05$ .

## RESULTS AND DISCUSSION

**Table 1.**

**Distribution of Respondent Characteristics**

Variable	n	%
Age group (years)		
19 – 23	3	1,5
24 – 27	5	2,5
32 – 35	26	13,0
36 – 39	39	19,5
40 – 43	41	20,5
44 – 47	58	29,5

48 – 51	28	14,0
Total	200	100
Educational level		
Primary school	4	2,0
Junior high school	99	49,5
Senior high school	95	47,5
Collage	2	1,0
Total	200	100
Employment		
Housewife	79	39,5
Farmer	87	43,5
Self employee	29	14,5
Honorary	5	2,5
Total	200	100
Religion		
Muslim	195	97,5
Christian	5	2,5
Total	200	100
Ethnic		
Batak	193	96,5
Java	7	3,5
Total	200	100

Table 1 shows that the majority age group was 44-47 years with 29.5%, the majority of education level was junior high school (49.5%), the majority of employment was a farmer (43.5%), the majority of religion was Muslim (97.5 %) and the majority of ethnic was Batak (96.5%).

**Table 2.**  
**Relationship of Contributing Factors to the Role of Health Cadres in the Prevention of Stunting in Toddlers**

Variable	Role of health cadres				Total	X <sup>2</sup> (p-value)
	Passive		Active			
	n	%	n	%		
Employment status						
Working	83	69,2	37	30,8	120	10,503 (0,001)
Not working	37	46,3	43	53,8	80	
Total	120	60,0	80	40,0	200	
Attitude						
Negative	92	68,7	42	31,3	134	12,679 (0,001)
Positive	28	42,4	38	57,6	66	
Total	120	60,0	80	40,0	200	
Perception						
Poor	74	71,8	29	28,2	103	12,415 (0,001)
Good	46	47,4	51	52,6	97	
Total	120	60,0	80	40,0	200	
Marital status						
Married	92	64,3	51	35,7	143	3,930 (0,047)
Not married	28	49,1	29	50,9	57	
Total	120	60,0	80	40,0	200	
Competence						
Lees	87	78,4	24	21,6	111	35,105 (0,001)
Sufficient	33	37,1	56	62,9	89	
Total	120	60,0	80	40,0	200	

Table 2 shows that of the 120 cadres who stated that they were working, there was a passive cadre role in preventing stunting as much as 69.2%. Meanwhile, of the 80 cadres who said they were not working, there was role of passive cadres in preventing stunting as much as 46.3%. The results of statistical analysis showed that the calculated  $X^2$  value (10.503)  $>$   $X^2$  table (3.841) or the p-value (0.001)  $<$   $\alpha$  (0.05). This means that employment status contributes to the role of cadres in stunting prevention. Of the 134 cadres who stated that they had a negative attitude, there was a role of passive cadres in preventing stunting as much as 68.7%. Meanwhile, of the 66 cadres who stated that they had a positive attitude, there was a role of passive cadres in preventing stunting as much as 42.4%. The results of statistical analysis showed that the calculated  $X^2$  value (12.679)  $>$   $X^2$  table (3.841) or the p-value (0.001)  $<$   $\alpha$  (0.05). This means the attitude of contributing to the role of cadres in stunting prevention. Of the 103 cadres who stated they had a bad perception, there was a role of passive cadres in preventing stunting as much as 71.8%. Meanwhile, of the 97 cadres who stated that they had a good perception, there was a role of passive cadres in preventing stunting as much as 47.4%. The results of statistical analysis showed that the calculated  $X^2$  value (12.415)  $>$   $X^2$  table (3.841) or the p-value (0.001)  $<$   $\alpha$  (0.05). This means that perceptions contribute to the role of cadres in stunting prevention.

Of the 143 cadres who stated that they were married, 64.3% played a passive role in preventing stunting. Meanwhile, of the 57 cadres who stated that they were not married, there was a role of passive cadres in preventing stunting as much as 49.1%. The results of statistical analysis showed that the calculated  $X^2$  value (3.930)  $>$   $X^2$  table (3.841) or the p-value (0.047)  $<$   $\alpha$  (0.05). This means that marital status contributes to the role of cadres in stunting prevention. Of the 111 cadres who stated that they lacked competence, there was a role of passive cadres in preventing stunting as much as 78.4%. Meanwhile, of the 89 cadres who stated sufficient competence, there was role of passive cadres in preventing stunting as much as 37.1%. The results of statistical analysis showed that the calculated  $X^2$  value (35.105)  $>$   $X^2$  table (3.841) or the p-value (0.000)  $<$   $\alpha$  (0.05). This means that competence contributes to the role of cadres in stunting prevention.

**Table 3.**

**Multivariate Analysis of Factor Relationships Contributing to the Role of Health Cadres in the Prevention of Stunting in Toddlers**

Variable	B	S.E	Sig	Exp (B)	95% C for EXP (B)	
					Lower	Upper
Employment status	0,671	0,339	0,047	1,957	1,008	3,800
Attitude	0,619	0,358	0,084	1,858	0,921	3,747
Perception	0,783	0,365	0,032	2,188	1,071	4,471
Marital status	0,117	0,387	0,763	1,124	0,526	2,402
Competence	1,592	0,336	0,000	4,914	2,542	9,499
Constant	-5,902	0,975	0,000	0,003		

Table 3 shows that employment status (p=0.047), attitude (p= 0.084), perception (p=0.032), marital status (p=0.763), and competence (p=0.001) contribute to the role of cadres in stunting prevention. Of the five variables, the variable that contributes the most to the role of cadres in stunting prevention is the competency variable Exp (B) = 4.914. If Exp (B) is worth 4.914, then this indicates that the chance or likelihood of an effective cadre role in preventing stunting will increase by 4.914 times if the cadre's competency increases by one unit. In other words, competency variables have a significant influence on the role of cadres in stunting prevention. The higher the competence of cadres, the more likely they are to be able to provide information and support needed to prevent malnutrition in children, as well as to recognize and respond to signs of stunting at an early stage. Therefore, developing the competency of cadres in stunting prevention needs to be the main focus in efforts to prevent stunting.

The relationship between employment status and the role of health cadres in stunting prevention is very closely related based on research findings. Health cadres are often at the forefront to provide

support in preventing stunting, both through outreach campaigns and direct monitoring of children's nutritional status (Alkaff, Amran, Rosad, & Nurmeilis, 2022). The employment status of health cadres will affect their ability to carry out this role. Health cadres with permanent employment status have certainty and stability in their work (Sewa, Tumurang, & Boky, 2019). This will affect the motivation and performance of health cadres in providing support and assistance in stunting prevention. In carrying out their duties, health cadres with permanent employment status also have easier access to needed resources, such as access to nutritional status measurement tools, educational materials, and training (Mediani et al., 2020).

The findings of this study are in line with Mutingah dan Rokhaidah (2021) in Depok showing that the mother's employment status is related to stunting prevention behavior ( $p=0.003$ ). Likewise, Nurfatimah et al. (2021) in the working area of the Mapane Health Center stated that working mothers are associated with good behavior in preventing stunting ( $p=0.001$ ). Health cadres with non-permanent employment status often face uncertainty in their work and a lack of certainty of income. This can affect the motivation of health cadres in providing support and assistance in preventing stunting (Suwarni, Selviana, Octrisyana, & Vidyastuti, 2020). Health cadres with precarious employment status also often have limited access to needed resources, such as access to nutritional status measurement tools, educational materials, and training (Wulansih, 2021). Health cadres with voluntary work status usually have a high motivation to provide support and assistance in stunting prevention, but a lack of compensation or incentives can affect the sustainability of their work (Simbolon, 2021).

The attitude of health cadres towards the community also influences the stunting prevention efforts undertaken. If health cadres have a negative attitude towards the community or find it difficult to communicate with them, then they tend to be less effective in preventing stunting. Conversely, if health cadres have a positive attitude towards the community and can communicate well, then they tend to be more effective in carrying out stunting prevention tasks. In conclusion, the attitude of health cadres towards stunting, their role in stunting prevention, and the community can influence stunting prevention efforts that are carried out. Therefore, efforts are needed to increase the positive attitude of health cadres towards stunting and the importance of their role in preventing stunting, such as providing training and education, as well as continuous supervision and monitoring to ensure that health cadres continue to carry out stunting prevention tasks well (Ramadhan, 2022; Sutriyawan, Valiani, Munawaroh, Sarbini, & Sutrisno, 2021; Tampake, Arianty, Mangundap, & Ra'bung, 2022).

Perceptions of health cadres also influence their attitude towards stunting prevention. If health cadres have a good perception of stunting prevention, they tend to have a positive attitude towards stunting prevention and feel responsible for carrying out stunting prevention efforts. Health cadres' perceptions of their role in stunting prevention also influence their motivation in carrying out stunting prevention tasks. If health cadres have a positive perception of their role in stunting prevention, they tend to be more motivated and enthusiastic in carrying out stunting prevention tasks. In conclusion, the perceptions of health cadres about stunting and their role in stunting prevention can influence stunting prevention efforts that are carried out. Therefore, efforts are needed to increase the perceptions of health cadres about stunting and the importance of their role in stunting prevention, such as providing training and education, as well as continuous supervision and monitoring to ensure that health cadres continue to carry out stunting prevention tasks properly. Thus, health cadres will be able to provide better and more effective health services in preventing stunting in the community (Anggraini, Ekawati, & Kharisma, 2023; Citrakesumasari, Kurniati, Syam, Salam, & Virani, 2020; Lestari & Hanim, 2020; Ramadhan, 2022).

The marital status of health cadres can also influence family support to carry out their duties as health cadres. A health cadre who is married and has family responsibilities may need support and understanding from their family in carrying out their health duties. Family support can help increase the motivation and performance of health cadres in carrying out stunting prevention tasks. Apart from marital status, many other factors can affect the performance of health cadres in stunting prevention, such as education level, work experience, and motivation. Therefore, although the marital status of

health cadres can influence their role in stunting prevention, other factors must also be considered (Hanifah & Winarsih, 2021; Lestari & Hanim, 2020; Ulfah & Nugroho, 2020).

The competency variable is the variable that contributes the most to the role of cadres in stunting prevention. The competence of cadres in stunting prevention includes knowledge and skills in promoting good nutrition and healthy living practices, such as how to cook and choose healthy food, as well as the ability to monitor and assess children's growth regularly. In the context of stunting prevention, competent cadres will be able to provide information and support needed to prevent malnutrition in children, as well as recognize and respond to signs of stunting at an early stage. In addition, competent cadres can also develop good relationships with families and local communities, thereby facilitating the necessary behavior changes to prevent stunting (Hendrawati, Adistie, & Maryam, 2018). Therefore, the competence variable is an important variable in the role of cadres in stunting prevention and needs to be considered in the development of stunting prevention programs and policies.

## LIMITATIONS

Research on the role of health cadres in stunting prevention has several limitations that need to be considered, including research can only be conducted within a certain period, so it cannot represent changes or dynamics of the role of health cadres in stunting prevention as a whole, and experience difficulties in obtaining data or information needed, especially if related to data that is private or difficult to access, and research can measure the role of health cadres in stunting prevention from a quantitative perspective, but it is difficult to measure qualitative aspects such as motivation, attitudes, and perceptions of health cadres on stunting prevention. Therefore, research on the role of health cadres in stunting prevention needs to consider these limitations and seek ways to overcome or minimize these limitations so that research results are more accurate and can be used as reference material in developing effective stunting prevention programs.

## CONCLUSIONS AND SUGGESTIONS

The findings of this study can be concluded that the role of health cadres in stunting prevention indicates that health cadres have a very important role in efforts to prevent stunting. Therefore, sufficient support and attention are needed for health cadres to be able to optimize their role in creating a healthy and quality generation so that they can help improve existing stunting prevention programs and interventions.

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