

The role of knowledge in improving attitudes and behaviors of stunting prevention in pregnant women

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ABSTRACT

Introduction: Knowledge about stunting prevention in pregnant women plays an important role in shaping attitudes and behaviors that support stunting prevention efforts. This study analyzes the relationship between knowledge, attitudes, and behaviors related to stunting prevention in pregnant women.

Research Methodology: The design of this study is quantitative, using a descriptive design and a cross-sectional approach. The research design used is correlational, using the Cross-Sectional approach and sampling techniques using Probability Sampling with a simple random sampling type.

Result: The results of the study showed that the relationship between pregnant women's knowledge about balanced nutrition and attitudes and behaviors (efforts) to prevent stunting in toddlers at the Bojo Baru Health Center obtained a significant value of $p = 0.008$ ($0.008 < 0.05$), that the majority of pregnant women's knowledge levels about balanced nutrition with efforts to prevent stunting in the good category were 45 people (75%).

Conclusion: Pregnant women's knowledge has a significant role in shaping attitudes and behaviors that support stunting prevention. Pregnant women with a higher knowledge level tend to show a more positive attitude and better behavior in stunting prevention. Therefore, increasing knowledge through education and counseling is very important to encourage pregnant women to take appropriate preventive measures to reduce the risk of stunting in children. More intensive and structured education programs must be strengthened as a preventive effort to overcome the community's stunting problem.

Keywords: attitudes, knowledge, stunting prevention.



INTRODUCTION

Stunting is a condition characterized by a lack of height in children compared to their age. Put, stunting is a term for growth disorders in children. The main causes of stunting are malnutrition in pregnant women and lack of nutritional intake during the child's growth period. Many do not realize that a child's height can be a sign of chronic nutritional problems. However, keep in mind that short children do not necessarily experience stunting (Sudigyo *et al.*, [2023](#)). However, children who suffer from this condition must be short in stature. Children with limited nutritional intake since childhood and going on for a long time are at risk of stunted growth. Stunting is a global public health problem that has a long-term impact on children's development, with adverse consequences for children's physical, cognitive, and social development. In Indonesia, stunting is still the main challenge in improving the quality of human resources (Juliansen *et al.*, [2024](#)). The prevalence of stunting in children under five in Indonesia reaches 30.8%, with the main causes including poor diet, recurrent infections, and lack of maternal knowledge about the importance of nutrition during pregnancy. Stunting, defined as a growth disorder in children that results in height below the age standard, is one of the most serious global public health problems. Stunting is a chronic nutritional problem due to lack of nutritional intake in the long term, resulting in impaired growth in children. Stunting is also one of the causes of stunted children's height, so it is lower than children their age (Nurwahyuni *et al.*, [2023](#)).

Pregnant women's knowledge about balanced nutrition and stunting prevention is very important in shaping attitudes and behaviors that can support stunting prevention in their children (Wiafe, Apprey, and Annan, [2023](#)). Good knowledge can encourage mothers to take preventive measures, such as consuming nutritious foods, providing exclusive breastfeeding, and regularly monitoring children's growth and development. Knowledge about stunting is closely related to mothers' decisions to provide appropriate care to their children (Sari *et al.*, [2024](#)). Therefore, increasing the knowledge of pregnant women about the importance of stunting prevention through structured and evidence-based health education programs is very important. The role of pregnant women in stunting prevention is very important because the pregnancy period is critical in forming children's nutritional status (Malibiche *et al.*, [2023](#)). A mother's knowledge of balanced nutrition, fulfillment of nutritional needs during pregnancy, and other preventive measures can affect maternal health and fetal development. Various studies show that mothers' knowledge of nutrition has a significant relationship with their attitudes and behaviors in caring for pregnancy and preventing health problems in babies, including stunting. Parenting is a method used to help children grow and develop by caring for, educating, and guiding them so that children achieve their independence. Stunting is a chronic malnutrition problem caused by insufficient nutritional intake for a long time due to feeding that does not meet nutritional needs (Nita *et al.*, [2023](#)).

Good knowledge about the importance of balanced nutritional intake, exclusive breastfeeding, and other preventive measures can form positive attitudes and behaviors that support stunting prevention (Girma *et al.*, [2023](#)). This is supported by research that found that mothers with a high level of knowledge about stunting tend to be more responsive in implementing effective prevention strategies. On the other hand, a lack of knowledge about stunting prevention can cause mothers to be unaware of the importance of fulfilling nutrition during pregnancy, thereby increasing the risk of stunting in children. However, even though the knowledge of pregnant women is crucial, many mothers still do not have access to accurate information about stunting prevention and balanced nutrition (Vas Nunes *et al.*, [2024](#)). The lack of effective counseling, the lack of involvement of health workers in providing education, and limited access to information in some regions are the main obstacles in efforts to prevent stunting in Indonesia. Therefore, increasing the knowledge of pregnant women through health education programs and balanced nutrition counseling is a strategic step to improve their attitudes and behaviors in stunting prevention (Suprpto *et al.*, [2024](#)). Stunting is when a child's physical growth and brain development are hampered due to chronic malnutrition, especially protein, energy, and other essential nutrients (Ode Novi Angreni *et al.*, [2024](#)).

Despite various efforts to tackle stunting, the level of maternal knowledge about stunting prevention in Indonesia is still low, which contributes to the high prevalence of stunting in children. Various studies show that providing the right information about stunting and balanced nutrition to pregnant women can affect their attitudes and behaviors in efforts to prevent stunting. Thus, it is important to examine further how pregnant women's knowledge can contribute to forming better attitudes and behaviors in preventing stunting. This study aims to analyze the role of knowledge in improving attitudes and behaviors in stunting prevention in pregnant women and to provide recommendations for developing more effective educational programs to overcome stunting. This study is expected to contribute to efforts to reduce the prevalence of stunting through increasing maternal knowledge about stunting prevention since pregnancy.

RESEARCH METHODOLOGY

The design of this study is quantitative, using a descriptive design and a cross-sectional approach. Descriptive research is a research design that describes the phenomenon it is researching and also describes the magnitude of the problem being studied. This research was conducted at the Bojo Baru Health Center UPT, whose working areas are Kupa Village, Bojo Village, Bojo Baru Village, Mallusetasi District, Barru Regency, South Sulawesi Province. The research was conducted from August to September 2024. The population in this study is all pregnant women in Kupa Village, Bojo Village, Bojo Baru Village, Mallusetasi District, Barru Regency, with a total of 139 people and a sample size of 60 respondents. The research samples that are eligible as samples in this study have inclusion criteria, namely: Pregnant women who are natives of Kupa Village, Bojo Village, and Bojo Baru Village, pregnant women who are married to indigenous residents of Kupa Village, Bojo Village, and Bojo Baru Village, pregnant women who have a pregnancy examination in the 1st trimester of multigravida, and pregnant women who are between 19 – 45 years old.

The data collection method used in this study is using a questionnaire. The questionnaire of knowledge variables uses the Guttman scale, while the attitudes and behaviors of mothers in efforts to prevent stunting are measured using the Likert scale. The researcher conducts a validity test to test a questionnaire that is considered valid, so it is necessary to conduct trials and analyses. The analysis used in this study is bivariate analysis and uses descriptive statistics. Research ethics is very important in research. Research ethics must be considered because research is directly related to humans.

RESULT

Research on pregnant women's knowledge, attitudes, and behaviors in efforts to prevent stunting at the Bojo Baru Health Center has been conducted since November 2024. The population in this study is pregnant women patients who undergo pregnancy checks in the 1st trimester of multigravida at the Bojo Baru Health Center with a sample of 60 people. The research design used is correlational, using the Cross-Sectional approach and sampling techniques using Probability Sampling with a simple random sampling type. The instrument used in this study is a questionnaire sheet. The variables in this study are pregnant women's knowledge, attitudes, and behaviors in efforts to prevent stunting. The questionnaire of knowledge variables use the Guttman scale, while the attitude and behavior of mothers in efforts to prevent stunting use the Likert scale.

Table 2 Frequency distribution of respondent characteristics by age, education, work, income, knowledge, attitude, and behavior

Variable	Frequency	Presented (%)
Age		
9 – 25	21	47
26 – 45	39	53
> 45	-	0
Education		
Did not finish elementary school	-	0

Finished elementary school	6	10
Finished junior high school	15	25
Finished high school/vocational high school	39	65
Work		
Working	12	20
Not Working	48	80
Earnings		
Rp 500.000 – 1.000.000	12	20
Rp 1.000.001 – 2.000.000	12	20
Rp 2.000.001 – 3.000.000	12	20
> Rp 3.000.000	9	15
Lainnya	18	25
Knowledge		
Good	45	75
Enough	12	20
Less	3	5
Attitude		
Good	42	70
Enough	15	25
Less	3	5
Behaviour		
Good	42	70
Enough	15	25
Less	3	5

Based on Table 1, the frequency distribution shows that of the 60 respondents, the majority of respondents are 26-45 years old, as many as 39 people (53%), the majority of education is high school/MA graduation, as many as 39 people (65%), the majority of respondents do not work (only husbands work) are as many as 48 people (80%), the majority of respondents choose other incomes, namely 18 people (25%). The respondents who chose other options in the questionnaire were respondents whose monthly income was uncertain, the majority of respondents had good knowledge related to the prevention of stunted children during pregnancy, namely 45 people (75%), the majority of respondents had a good attitude related to the prevention of stunted children during pregnancy, namely 42 people (70%), The majority of respondents had good behavior related to the prevention of stunting children during pregnancy, which was 42 people (70%).

Table 2 Distribution of respondents' frequencies regarding the relationship between attitudes and behaviors towards pregnant women's knowledge of stunting prevention in toddlers

Stunting Prevention Attitude	Mother's Knowledge						<i>p</i>
	Good		Enough		Less		
	f	%	f	%	f	%	
Good	42	70	0	0	0	0	0,008
Enough	0	0	15	25	0	0	
Less	0	0	0	0	3	5	
Stunting Prevention Behavior							
Good	42	70	0	0	0	0	0,008
Enough	0	0	15	25	0	0	
Less	0	0	0	0	3	5	

Based on Table 2 of the chi-square statistical test, a significant value of $p = 0.008$ ($0.008 < 0.05$) was obtained; it was said that there was a significant relationship between the knowledge of pregnant women and attitudes and behaviors of stunting prevention. This means that the higher the knowledge of pregnant women about stunting prevention, the more positive their attitude and behavior in implementing preventive measures. These findings support the importance of increasing knowledge among pregnant women, especially about balanced nutrition and other

ways to prevent stunting, as one of the effective strategies to reduce the prevalence of stunting in Indonesia. Thus, targeted health counseling and education are very important in influencing the attitudes and behaviors of pregnant women in preventing stunting.

DISCUSSION

The researcher's findings are that there is a significant relationship between the knowledge of pregnant women and attitudes and behaviors in stunting prevention. Knowledge is closely related to education; it can be assumed that a person has higher education, the wider the knowledge he has. Understanding pregnant women is the main thing in household management; this will affect a mother's attitude when choosing the ingredients her family wants to eat. A mother with insight into good nutrition better understands how essential a good nutritional status is for family health and welfare. Mothers with abilities in themselves will increase their knowledge well enough to overcome stunting prevention efforts. A mother who has received information about stunting certainly understands, interprets, and remembers the messages conveyed from the information obtained so that it forms good knowledge. Meanwhile, mothers who have never received insight information about stunting tend to have less knowledge than mothers who gain insight about stunting both through social media and counseling by posyandu cadres. Their level of education influences mothers' knowledge level; mothers with a high level of education will be more likely to receive information about stunting than mothers with a low level of education (Nigatu *et al.*, 2024).

When the level of knowledge of pregnant women is good about health, especially nutrition in children under five, it can provide prevention from an early age by seeking information about a good lifestyle, diet, and balanced nutrition for children under five so that nutritional problems do not occur in children under five (Tsega *et al.*, 2024). In addition, with a good level of knowledge, mothers can also check their children at the Community Health Center and consult about the development of the nutritional status of toddlers regularly so that mothers can know the development of the growth and development of toddlers, especially balanced nutritional needs. Nutritional fulfillment in children is the role of parents or families, especially mothers, who play a very important role because a child needs attention, affection, and full support during rapid growth and development (Galvin *et al.*, 2023). Optimal growth also requires a balanced nutritional intake. The need for good nutrition in children is very high due to training, growth, and development in physical health and cognitive abilities. On the other hand, inadequate or poor nutrition at the beginning of the first year of growth can have irreversible consequences, a condition in which toddlers experience stunting or slow growth (Yazew *et al.*, 2024).

The higher the knowledge of pregnant women about the importance of balanced nutrition and ways to prevent stunting, the more positive their attitudes and behaviors in preventing stunting in children (Akmatova *et al.*, 2024). Therefore, increasing the knowledge of pregnant women through intensive education and counseling programs is very important to support stunting prevention efforts. More structured and comprehensive education can help pregnant women become more aware of the importance of preventive measures, reduce the prevalence of stunting, and improve maternal and child health in Indonesia. Mothers' knowledge level will also affect the nutritional status of children (Sichalwe *et al.*, 2023). Mother's knowledge includes providing information and practices for choosing nutritious food, preparing, and delivering good food, hygiene practices, and using health facilities to monitor children's growth and development to prevent stunting. Efforts to prevent stunting include improving diet, parenting patterns, sanitation, and access to clean water. Pregnant women with higher knowledge about balanced nutrition and stunting prevention measures tend to show a more positive attitude and better behavior in maintaining the health of the mother and baby (Kobilke and Markiewitz, 2024). Therefore, increasing knowledge through structured and effective health education and counseling programs is urgently needed to encourage pregnant women to take appropriate preventive measures. This will contribute to reducing the stunting rate in Indonesia and support the achievement of a healthy and quality generation (Nyarko, ten Ham-Baloyi and van Rooyen, 2024).

Stunting prevention efforts start from pregnancy by intervening in the first 1000 days of life, generally carried out in the health sector (Md Nawawi *et al.*, [2024](#)). The activities carried out include the supplementary feeding program (PMT), checks to health services, childbirth with the help of health workers, early detection of infectious and non-communicable diseases, exclusive IMD and breastfeeding, and eradication of worms (Adesola, Ajibade and Agaie, [2024](#)). It can be done by monitoring the growth of toddlers, providing additional food, early stimulation of children's growth, and carrying out optimal health services (Soofi *et al.*, [2024](#)). Another prevention effort is paying attention to environmental cleanliness and increasing the coverage of clean water and sanitation. Mothers and babies need adequate nutrition to ensure nutritional and health status, motor, social, cognitive abilities, learning ability, and future productivity (Abbas and Karim, [2023](#)). Children who experience malnutrition during the 1000 HPK period will experience neurological problems, decreased learning ability, increased risk of dropping out of school, decreased productivity and workability, decreased income, decreased ability to provide nutritious food, and decreased parenting ability. Furthermore, it will result in the transmission of malnutrition and poverty in the next generation. Considering the importance of nutrition for 1000 HPK, nutritional intervention in 1000 HPK is a top priority to improve the quality of life of future generations (Supadmi *et al.*, [2024](#)).

The higher the level of knowledge of pregnant women about balanced nutrition and stunting prevention measures, the better their attitude and behavior in implementing stunting prevention. Therefore, increasing knowledge through effective counseling and health education is very important to encourage pregnant women to take appropriate preventive measures to reduce the risk of stunting in children. More intensive and structured education programs must be strengthened to support stunting prevention in the community. The author believes that the risk of children being categorized as stunting can be prevented by making good stunting prevention efforts where pregnant women have attitudes and behaviors to try to increase knowledge by visiting health services, paying attention to nutritional issues, doing IMD, providing exclusive breastfeeding, and additional food to children, especially if a pregnant woman is in the multigravida category.

CONCLUSION

It can be concluded that the knowledge of pregnant women has a significant influence on their attitudes and behaviors in stunting prevention. There is a significant relationship between the level of knowledge of pregnant women about stunting prevention and attitudes and behaviors that support these prevention efforts. Pregnant women who have better knowledge about the importance of balanced nutrition and ways to prevent stunting tend to have a more positive attitude and are more active in implementing preventive measures. Therefore, increasing knowledge through education and counseling programs is very important to support pregnant women in taking the right steps to prevent stunting in children. This study emphasizes the need for more intensive and structured education programs to reduce the prevalence of stunting in the community.

Conflict of Interest

The authors declare that they have no competing interests.

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