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Perception of Benefits and Barriers to Feeding in Relation to Stunting Incidence in Benua Community Health Center Area

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ABSTRACT

Introduction: Stunting remains a significant global public health problem, particularly impacting the physical growth and cognitive development of children under five. Indonesia, including Southeast Sulawesi Province, continues to face a high prevalence of stunting. In the Benua Community Health Center work area, more than 30% of children experience stunting, necessitating a behavioral-focused study. This is what drew researchers to investigate the Perception of Benefits and Barriers to Feeding in relation to Stunting in the Benua Community Health Center area.

Method: This study uses a quantitative approach with a correlative analytical design and a cross-sectional model. The sampling technique uses cluster random sampling. The HBM constructs analyzed include perceived vulnerability, perceived seriousness, perceived benefits, and perceived barriers. Data were analyzed using the Chi-square test.

Result: The analysis showed that there was no significant relationship between the incidence of stunting and the perception of obstacles (p = 0.367), but there was a significant relationship between the perception of seriousness and the incidence of stunting (p = 0.036).

Conclusion: Perceived benefits and barriers to feeding are not associated with stunting. However, both factors have the potential to be protective, so education should focus on increasing maternal motivation by reinforcing the benefits of appropriate feeding practices and addressing the barriers encountered.

Introduction

Stunting is a global health problem that has a serious impact on development children, both in terms of physical, cognitive and motor skills.[1] World Health Organization (WHO) data shows that stunting is a significant problem in many developing countries, including Indonesia.[2] Based on the 2021 Indonesian Toddler Nutritional Status Survey, the prevalence of stunting in Indonesia remains quite high and is a major issue in efforts to improve child nutrition.[3] One of the main factors that plays a role in stunting is improper feeding of

children, which is often influenced by the mother's knowledge, attitude, and behavior in providing adequate nutritional intake.[4]

Stunting is a global nutritional problem that affects children's physical and cognitive development. According to data from the World Health Organization, in 2020, around 22% of children under five worldwide experienced stunting, meaning 1 in 5 children in the world experience growth disorders due to chronic malnutrition.[5] Stunting not only affects a child's physical growth, but also affects cognitive abilities, which are associated with low productivity in the future. Therefore, combating stunting is a global priority in achieving the Sustainable Development Goals (SDGs), especially health goals related to child nutrition.[6]

In Asia, the prevalence of stunting also shows significant figures. Data from UNICEF reveals that in South Asia, more than 35% of children suffer from stunting. This is closely related to economic conditions, diet, and limited access to healthcare in some countries. Meanwhile, in Southeast Asia, the prevalence of stunting is recorded at around 30% in children under five, despite significant efforts to reduce this figure through health and nutrition programs.[7] Countries in Southeast Asia, including Indonesia, face significant challenges in reducing stunting, despite progress in reducing stunting prevalence in several countries.[8]

Indonesia, as the most populous country in Southeast Asia, also faces a serious stunting problem. According to the 2020 Indonesian Toddler Nutritional Status Survey, the prevalence of stunting in Indonesia reached 24.4%, indicating that nearly one in four children in Indonesia is stunted.[9] This figure shows that there are major challenges in efforts to overcome stunting, even though the Indonesian government has implemented various policies to address this problem, such as providing additional food, improving sanitation, and providing nutrition education to the community.[10]

One of the Indonesian provinces with a high prevalence is Southeast Sulawesi. According to data from the Southeast Sulawesi Health Office, the prevalence of stunting in this province is around 28%, which is higher than the national average.[11] This shows that despite efforts by the government and non-governmental organizations to reduce stunting rates, there are still major challenges in terms of nutritional knowledge, access to health services, and socio-economic factors that influence child rearing patterns.

Specifically in South Konawe Regency, Southeast Sulawesi Province, the prevalence of stunting also reflects a similar picture. Based on a report from the South Konawe Regency Health Office, the prevalence of stunting in South Konawe Regency is 28%. However, in 2023, this figure increased to 36.6%, up 8.6% compared to 2022.[12] Data on visits to Benua Health Center in 2022 was 12% of visits for stunted toddlers. Then the data in 2023 decreased by 10% of visits. Then in 2024, the number of visits for stunted toddlers decreased to 7% of cases.[13]

One of the causes of stunting is the mother's behavior in feeding is an important aspect in preventing stunting. Proper feeding, including exclusive breastfeeding for the first six months and nutritious complementary foods thereafter, plays an important role in ensuring that children's nutritional needs are met.[14] On the other hand, family socio-economic factors, maternal nutritional knowledge, and social support from the community and health workers also influence the quality of feeding.[15] Therefore, it is important to understand the factors that influence maternal behavior in feeding stunted children.

The Health Belief Model (HBM) can be used as a theoretical framework to analyze maternal behavior regarding child feeding. This theory explains that individuals will undertake certain health actions if they perceive a health condition as being threatened, believe the action will reduce the threat, and believe the benefits outweigh the potential risks.[16] In this context, mothers who understand the dangers of stunting and believe that proper feeding can reduce the risk of stunting are more likely to adopt healthy eating behaviors for their children.

Mothers' feeding behavior is also influenced by their perception of their vulnerability to stunting. Previous research shows that mothers who are concerned about their child's health and understand the risks posed by stunting are more likely to provide nutritious food.[17] The role of health education provided by health workers at the Community Health Center is also very important in increasing mothers' understanding of the importance of proper feeding.[18] Therefore, a

Health Belief Model theory-based approach can help in designing effective interventions to change maternal feeding behavior.

In the Benua Community Health Center area, the prevalence of stunting is quite high and a major concern for local public health officials. Data from the center shows that more than 30% of children under five are stunted, indicating serious problems with feeding and child care practices in the area. This suggests that more targeted public health interventions are needed to change maternal behavior regarding nutritious feeding and sensory-motor stimulation in children.

Therefore, it is important to conduct research to specifically analyze the factors related to stunting incidence from the perspective of the Health Belief Model in the Benua Health Center work area. This study will assess four main aspects in the HBM, namely: perception of child vulnerability to stunting, perception of the seriousness of stunting, perception of the benefits of feeding, and perception of barriers to feeding, and how each of these aspects relate to stunting incidence. By understanding this relationship, the results of the study are expected to be the basis for designing more contextual, effective, and sustainable behavior-based interventions to overcome stunting in the area.

Method

This study used a quantitative approach with a correlative analytical design and a cross-sectional study model. The population in this study was all stunted toddlers registered at the Benua Community Health Center within a month, totaling 77 people, and a sample of 48 people. The samples were taken using a cluster random sampling technique, which allows for representation of various groups in the population. Data were analyzed using the Chi-square test.

The research sample was taken using a cluster sampling method, where all members of the selected clusters became part of the research sample. Inclusion criteria included toddlers aged 24–59 months with a TB/U z-score index < -2 SD, living in the Benua District and registered at the Benua Community Health Center, having a Maternal and Child Health book, and mothers of toddlers willing to be respondents. Exclusion criteria included respondents who were unwilling to participate in the study, did not complete the questionnaire completely, or toddlers with a history of congenital abnormalities.

Result

Table 1 showed that of the 17 respondents who perceived the benefits of feeding as "risky", there were 14 children (41.2%) who experienced stunting and 3 children (21.4%) did not experience stunting. Meanwhile, of the 31 respondents who perceived "no risk", as many as 20 children (58.8%) experienced stunting and 11 children (78.6%) did not experience stunting. The results of the Chi-square test showed a calculated X^2count = 1.691 with a p-value = 0.194. Because the p-value > 0.05, it can be concluded that there is no statistically significant relationship between the perception of the benefits of feeding and the incidence of stunting in the work area of the Benua Community Health Center. The phi value = 0.188 indicates that the strength of the relationship is in the very weak category. Thus, although there is a difference in proportion, statistically the relationship is not strong enough to be considered significant.

Table 2 showed that of the 22 respondents who perceived feeding barriers as "risky" 17 children (50%) experienced stunting and 5 children (35.7%) did not. Meanwhile, of the 26 respondents who perceived "no risk," 17 children (50%) also experienced stunting, and 9 children (64.3%) did not experience stunting. The Chi-square test results show a calculated X^2count of 0.815 with a p-value of 0.367. Since p > 0.05, it can be concluded that there is no statistically significant relationship between the perception of barriers to feeding and the incidence of stunting in the Benua Community Health Center work area. A phi value of 0.130 indicates that the strength of the relationship is very weak. This means that the difference in the proportion of stunting incidence between at-risk and non-risk groups based on perceived barriers to feeding is relatively small and not statistically significant.

Table 1.
The relationship between the perception of the benefits of providing food and the incidence of stunting in the Benua Community Health Center area

Perception of Benefits of Giving Food	Nutritional status				Total		Chi-square test
	Stunting		No Stunting				
	n	%	n	%	n	%	
Risky	14	41.2	3	21.4	17	35.4	X^2count = 1.691
No Risk	20	58.8	11	78.6	31	64.6	*p-value* = 0.194
Total	34	100.0	14	100.0	48	100.0	phi = 0.188

Table 2.
The Relationship Between Perception of Barriers to Feeding and the Incidence of Stunting in the Benua Community Health Center Area.

Perception of Barriers to Feeding	Nutritional status				Total		Chi-square test
	Stunting		No Stunting				
	n	%	n	%	n	%	
Risky	17	50	5	35.7	22	45.8	X^2count = 0.815
No Risk	17	50	9	64.3	26	54.2	*p-value* = 0.367
Total	34	100.0	14	100.0	48	100.0	phi = 0.130

Discussion

The relationship between the perception of the benefits of providing food and the incidence of stunting in the Benua Community Health Center area

The results of the study showed that the perception of the benefits of feeding was not significantly related to the incidence of stunting in the Benua Health Center work area. This means that although some mothers have a good perception of the importance of providing nutritious food for child growth, this is not directly reflected in preventing stunting. This finding indicates that understanding the benefits of feeding has not been a dominant factor in changing real behavior or preventing stunting.

Within the Health Belief Model (HBM), perceived benefits or advantages are a key component that can drive healthy behavior. Someone who recognizes the benefits of a health action should be more motivated to perform it.[19]However, the effectiveness of this perception depends heavily on its relationship with other components, such as perceived vulnerability, perceived seriousness, self-efficacy, and perceived barriers. If any of these components are not supportive, the perceived benefits will not be strong enough to influence health outcomes such as stunting prevention.

Research by Aiswaria shows that although mothers have a good understanding of the benefits of healthy eating, these practices are not necessarily implemented due to various technical and environmental barriers. These barriers include the availability of nutritious food ingredients, limited time to prepare meals, and a lack of technical knowledge regarding balanced diets for toddlers. This suggests that perceptions of benefits, without the ability or support to act, have not yet had a significant impact on children's nutritional status.[20]

The importance of self-efficacy in strengthening the influence of perceived benefits. Mothers who have high confidence in their abilities to care for and feed their children tend to be more consistent in implementing healthy eating patterns. Conversely, if a mother only knows the benefits of nutritious food but feels unable to provide it due to socioeconomic constraints, the impact on stunting is weak or insignificant.[21]

Research by Simatupang also suggested that the perception of benefits would be more effective if delivered through practical and applicable educational methods. Approaches such as menu preparation demonstrations, feeding simulations, and direct feedback are more able to influence behavior than simply delivering general information. In other words, knowledge about the benefits of nutritious feeding needs to be packaged contextually so that it can be internalized and implemented by mothers in their daily lives. Therefore, public health interventions should not only emphasize the importance of providing nutritious food as theoretical knowledge, but also equip mothers with practical skills, increase self-confidence, and reduce barriers in parenting. Increasing the perception of benefits needs to be supported by empowerment strategies that touch on the daily aspects of the family. Thus, mothers' understanding of the benefits of feeding children can be truly reflected in concrete behavior and have a direct impact on preventing stunting at the household level.[22]

The Relationship between Perception of Barriers to Feeding and the Incident of Stunting in the Benua Health Center Work Area

The results of this study indicate that the perception of barriers to feeding does not have a significant relationship with the incidence of stunting in the Benua Health Center work area. Although in the Health Belief Model (HBM) theory, the perception of barriers is one of the strongest determinants that can prevent individuals from taking health actions, this finding indicates that the barriers felt by mothers such as economic limitations, lack of time, or access to food have not had a direct impact on children's nutritional status. This suggests that other factors may have a protective role that neutralizes the influence of these barriers on the incidence of stunting.

The insignificance of this relationship can be explained by the existence of compensatory mechanisms, such as family support, the active role of health workers, and maternal involvement in community activities such as integrated health posts or mother-to-toddler classes. A study by Putri have shown that strong social support and ongoing nutrition education can mitigate the negative effects of perceived barriers to maternal feeding practices. In other words, even when mothers face various challenges, having a support system around them can help maintain good parenting practices.[23]

In addition, the existence of high self-efficacy in most respondent mothers can also explain why the perception of obstacles does not have a significant effect. Mothers who have high confidence in their ability to care for and feed their children can still carry out healthy behaviors even though they are faced with limitations. This finding is consistent with the study, which states that self-efficacy can be a buffer in facing obstacles, especially in the context of feeding and fulfilling children's basic needs.[23]

This situation also reflects the potential effectiveness of intervention programs in the region, such as nutrition education, counseling on feeding practices, and mentoring of mothers of toddlers by cadres.[24] If the information provided is applicable and delivered repeatedly, mothers can develop the skills necessary to overcome obstacles independently.[25]This responsive and participatory approach has proven more effective than simply providing general information about the importance of child nutrition.[26]

However, it is important not to overlook the potential influence of deeper structural barriers, such as poverty, limited access to health services, or volatile local food prices.[27] These barriers may not be directly detected in analytical models, but they remain factors that can undermine stunting prevention efforts in the long term.[28] Therefore, health promotion programs need to continue to identify and address the real barriers faced by communities through empowerment strategies and improvements to basic service systems. [29]

Thus, although perceived barriers did not demonstrate a statistically significant relationship in this study, promotive and preventive approaches to stunting management still need to comprehensively consider barriers.[30]Interventions developed should address aspects of increasing self-efficacy, strengthening social support, and creating an environment that supports optimal child feeding behaviors.

Conclusion

The results showed that perceived benefits and perceived barriers to feeding were not

associated with stunting incidence in the Benua Community Health Center work area. However, the finding that both variables have the potential to be protective factors indicates the importance of strengthening mothers' internal motivation in stunting prevention efforts. Therefore, outreach programs should focus on increasing understanding of the benefits of appropriate feeding practices and helping mothers overcome barriers through practical solutions tailored to everyday situations.

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