

The Relationship Between Female Adolescent's Perception of Stunting and Their Dietary Habits

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Abstract:

Stunting is a chronic nutritional problem caused by a lack of nutritional intake over a long period of time. Dietary habits are healthy and balanced eating patterns that help control blood glucose and balance body weight. The cause of the increase in stunting rates is due to the lack of knowledge in adolescents who will become future mothers about good nutritional intake, due to a poor economy that makes it difficult for people to get nutritious food to fulfil children's nutrition during their growth and development. For this reason, stunting prevention can be done since adolescence. This study aims to determine the relationship between perceptions of stunting and dietary habits of adolescent girls at SMA Nurul Falah North Jakarta. This study used a quantitative research design with a cross-sectional approach. The sample in this study were 76 female students. Samples were taken with simple random sampling technique. The instrument used was a stunting perception questionnaire and dietary habits and validity and reliability tests were carried out, obtained the results of the stunting perception questionnaire (0.847) and the dietary habits questionnaire (0.645). The results of this study indicate that there is a relationship between perceptions of stunting and dietary habits of adolescent girls with a p-value of 0.001 and a value of $r=0.376$. There is a relationship between perceptions of stunting and dietary habits of adolescent girls at SMA Nurul Falah Jakarta. It is hoped that the school can provide education about stunting and prevention methods that adolescents can do to break the chain of stunting in the future and provide education on how to carry out a good and healthy dietary habits programme.

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INTRODUCTION

Currently, Indonesia still has a high stunting rate, according to the World Health Organization (WHO), stunting is short or very short stature based on length and height for age less than 2 standard deviations (SD) on the growth curve, which occurs due to irreversible conditions due to inadequate nutritional intake and experiencing repeated or chronic infections that occur in the first 1000 days of birth (HPK) (Susanti, 2022).

According to WHO (2021), the prevalence of stunting in the world is 22% or 149.2 million children. According to WHO (2020), the prevalence of stunting in Indonesia is ranked 2nd in Southeast Asia, with a stunting rate in Indonesia of 31.8%. Meanwhile, according to Rikesdas (2018), adolescents with a short nutritional status are 25.7% at the age of 13-15 years and 26.9% at the age of 16-18 years. Meanwhile, according to SSGI (2022), stunting in Indonesia has decreased from 24.4% to 21.6% (Kemenkes, 2022).

The cause of the increase in stunting rates is due to the lack of knowledge in adolescents who will become future mothers about good nutritional intake and due to a poor economy, so it is difficult for people to meet the nutritional needs of children during their growth and development. The prevention of stunting can be done since adolescence because adolescents will enter the preconception period. The nutritional status of adolescents is very influential in determining health and pregnancy safety until the birth process.

Stunting can also be prevented at every phase of the life cycle. This starts when the fetus is in the womb, including newborns, toddlers, children, adolescents, married, pregnant, and adults. This life cycle is related to the process of growth and development in human life. Families have a very crucial role in handling stunting, namely in fulfilling children's nutritional needs (Asrori, 2022).

Adolescence is a transitional phase of growth and development between childhood and adulthood. WHO defines adolescence as everyone between the ages of 10 and 19 years. Adolescents are the forerunners of future families and future mothers. Intervention in adolescent girls is one of the most important steps in preventing stunting. Adolescent girls must be prevented from experiencing anemia by providing supplementation of blood supplement tablets to adolescent girls, and they can consume foods with balanced nutrition (Jerome, 2020).

Nutritional problems among adolescents can arise due to the wrong diet that causes malnutrition. According to WHO dietary recommendations for individuals should provide an adequate energy balance for a healthy body weight. Such a diet should include a fat-restricted intake, while shifting fat consumption from saturated to unsaturated fats and eliminating trans fatty acids. Poor eating habits are all dietary behaviors that negate these foods (Otuneye et al., 2017).

Stunting can also be influenced by unhealthy dietary habits, especially during adolescence. Diet regulates the amount of food and drink that enters the body to achieve an ideal body weight. In carrying out dietary patterns or diets, many people have different views on dietary patterns because they have goals to achieve when doing a diet program. when the wrong diet program is repeatedly carried out, it will cause a lack of nutritional intake it can trigger stunting in the future (Syam, 2019).

Based on previous research conducted at SMA Kota Medan on female students, 110 respondents showed that 70% of respondents had unfavorable perceptions of stunting, and 30.9% had good perceptions of stunting. The results on dietary patterns obtained 69.1% who have poor dietary patterns and 30.9% who have good dietary patterns (Yolanda, 2023).

This research aims at adolescents because adolescents have an important role in reducing stunting rates in Indonesia. Breaking the chain of stunting early on by improving adolescent knowledge about stunting and good dietary habits.

METHOD

This study uses quantitative methods with a cross-sectional approach. This research took place from November to December 2023. The population of this study amounted to 314 female students, all of whom were adolescents aged 15-19 years. In this study, the sampling was carried out with a simple random sampling technique with the number of respondents obtained as many as 76 respondents. This sampling technique was used because the population used was more than 100 people, so simple random sampling was chosen. With inclusion criteria, namely, students at SMA Nurul Falah North Jakarta who are female and female students who are willing to become respondents. While the exclusion criteria are students who are not present at school. This research was conducted at Nurul Falah High School, North Jakarta. The instrument in this study has 17 questions on the stunting perception questionnaire with the assessment used according to

Guttman, namely a score < 11 which is not good and a score of 11-20 which is good. The dietary habits questionnaire has 10 questions with a scoring system on the type of food, drinks, and sweeteners that are scored according to the number chosen. In the assessment of time duration if the answer is correct (score 2) and if the answer is wrong (score 0). With the category of results obtained a score of 10-30% is less good, a score of 31-69% is quite good and a score of 70-100% is good. Both questionnaires have been tested for validity and reliability with the results obtained in the stunting perception questionnaire of 0.740 which means it is declared reliable. In the dietary habits questionnaire, the results obtained in the validity test are the Pearson correlation value greater than R tabel, which is 0.361, which means it is declared valid.

This study's univariate analysis includes demographic data, namely age, class or level, and a description of each variable, namely the perception of stunting (independent) and the dietary habits questionnaire (dependent). In the bivariate analysis of this study, the statistical analysis test used was the associative hypothesis test, where the two variables were ordinal with the Spearman Rank test and to see the strength of the relationship between the two variables, with a p-value < 0.005 or 0.001 . In this study, the ethics that were emphasized were filling informed consent, the principle of beneficence, the principle of respecting the rights of respondents, and the principle of justice. Before the actual data gathering, ethics clearance was obtained from the Research Ethics Committee of the Faculty of Health Science, Universitas Nasional, with No. 646/D/SP/FIKES/XI/2023. The researcher has obtained permission from the research site.

RESULT

A total of 76 respondents involved in this study have been willing to participate in the research until the end. The respondents who are willing to participate are female students. This research was conducted at Nurul Falah High School, North Jakarta. which used a questionnaire as an instrument in data collection.

Table 1. Respondents' Characteristics

Charateristics	Frequency	Percentage
Grade on school		
X	25	32.9
XI	28	36.8
XII	23	30.3
Age (years)		
15	4	5.3
16	22	28.9
17	32	42.1
18	17	22.4
19	1	1.3
Stunting Perception		
Less Good	49	64.5
Good	27	35.5
Dietary Habits		
Less good	66	86.9
Good enough	3	3.9
Good	7	9.2

Table 1. shows that of the 76 samples of SMA Nurul Falah Jakarta are divided into three classes with the number in each class, namely, class X, which is 32.9% (25 students), Class XI, which is 36.8% (28 students) and the least class is XII which is 30.3% (23 students). Respondents

were dominated at the age of 17 years, namely 42.1% (32 female students). The majority of respondents had a less good perception of stunting, namely 64.5% (49 female students), and those with a good perception of stunting were 35.5% (27 female students). There were 86.9% (66 female students) who had less good dietary habits, 9.2% (7 female students) had good dietary habits, and 3.9% (3 female students) had good enough dietary habits.

Table 2. The Relationship Between Variables

Spearman' rho	Stunting perception	Stunting Perception		Dietary habits	
		Correlations Coefficient	1.000	0.376	
		Sig.(2-tailed)		0.001	
		N	76	76	
	Dietary habits	Correlations Coefficient	0.376	1.000	
		Sig.(2-tailed)	0.001		
		N	76	76	

Table 2 states a relationship between the perception of stunting and the dietary habits of adolescent girls at SMA Nurul Falah. From the results of the Spearman's Rank test, the p-value is 0.001 (<0.005 or 0.001) with a relationship strength of 1,000 (perfect relationship). So, H_a is accepted, and H_o is rejected, which means there is a relationship between the perception of stunting and the dietary habits of adolescent girls at SMA Nurul Falah Jakarta.

DISCUSSION

Based on research conducted by researchers at SMA Nurul Falah Jakarta regarding the perception of stunting in adolescent girls, the results showed that of the 76 respondents who had unfavorable perceptions, 64.5% (49) respondents and 35.5% (27) respondents had good perceptions of stunting. based on preliminary studies that have been conducted, some female students only know the general definition of stunting, namely children with short bodies.

This research is in line with research conducted by Thasim, which found that the perception of stunting in adolescent girls have a negative or poor perception of stunting, namely 62.5% (5 respondents) of 88 respondents, which means that the results in the study are many adolescents who do not fully understand stunting. And 37.5% (33 respondents) had positive or good perceptions (Thasim et al 2023).

This research is also in line with research conducted by Widaryanti, who obtained an overview of stunting perceptions that some respondents already understood but did not know the role that adolescents could play in preventing stunting in the future so it can be concluded that many adolescents still have a poor perception of the impact, causes and prevention of stunting. Suppose the poor understanding of stunting is left unchecked. In that case, it will cause many adolescents to become pregnant in anemic or malnourished conditions so that they will give birth to a stunted generation (Widaryanti et al., 2022).

Stunting is poor linear growth during critical periods and is diagnosed as having height-for-age less than 2 SD. The consequences of childhood stunting can be both immediate and long-term. Child stunting can occur due to determinants such as premature birth, low birth weight, non-exclusive breastfeeding in the first 6 months of life, short maternal height, low education, and socioeconomic status (Beal et al., 2018). Someone who has a good perception has a positive attitude or behavior towards something can change someone's behavior from negative to positive behavior (Muchtar et al., 2023).

Based on the explanation above, the researcher assumes that the perception of stunting in adolescent girls at SMA Nurul Falah Jakarta experience more perceptions of stunting in the poor category as much as 64.5%, because young women only know in general about stunting but do not fully understand the impact, causes of stunting itself, how to prevent stunting for the future so as not to give birth to future generations who are stunted and many of the respondents at their age do not know the importance of maintaining nutritional status as a form of prevention from an early age.

Research conducted by researchers on dietary habits of adolescent girls, showed the results that out of 76 respondents, 66 respondents (86.8%) had poor dietary habits, 7 respondents (9.2%) had good dietary habits and only 3 respondents (3.9%) had fairly good dietary habits. Based on the results obtained through a questionnaire given by researchers at SMA Nurul Falah Jakarta, it was found that the type of food consumed first was 46 respondents who chose to eat vegetables or salad first with an average meal duration of 10 to 29 minutes. In this study, the average respondent chose to chew food 20 to 29 times, namely 27 respondents, besides that 50 respondents chose to skip breakfast in a week. 47 respondents chose > 2 hours before bedtime to have their last meal of the day and 42 respondents chose to stop eating when they were 80% full. Regarding the selection of drinks, it was dominated by green tea drinks, namely 38 respondents and most respondents who snacked after eating, namely 3 times / more in a week with 48 respondents.

This research is in line with research conducted by Maria found that out of a total of 150 students selected 30 students aged 15-17 years. The analysis obtained explained that 84% of students consider a balanced diet as an aid in meeting nutritional needs. 32% of students preferred fruits and vegetables, 16% preferred meat groups and only 12% preferred milk (Maria, 2020).

This research is also in line with research conducted by Wong found that of the 305 respondents who chose to start their meal with vegetables or salad, 58%, with the average duration of eating time lasting between 10 to 29 minutes, 74%. 58% of respondents chose to chew food 10 to 19 times before swallowing. In the survey some respondents chose to skip breakfast more than 3 times a week at 19%. Only 28% had their last meal of the day less than 2 hours before bedtime, and 51% of respondents finished eating after 80% were full (Wong et al., 2017).

Diet is a way of regulating the intake of nutrients into the body, diet does not function to reduce weight but has a preventive and curative function, namely, to balance the intake of nutrients that come out and enter. Dietary habits must be balanced between eating and exercising so that the weight remains ideal (Theo, 2023).

Adolescent eating habits are basic for optimal or balanced physical and mental health and development. With an unhealthy diet, there is a risk of nutritional deficiencies in adolescents (Ferreira et al., 2021).

Based on the explanation above, the researcher assumes that dietary habits in adolescent girls at SMA Nurul Falah Jakarta experience more dietary habits with poor categories as many as 66 respondents (86.8%), 7 respondents (9.2%) who have good dietary habits and only 3 respondents (3.9%) who have fairly good dietary habits. Which means that most respondents need better dietary habits. Based on the questionnaire results, most respondents needed help understanding how to do proper dietary habits in terms of the duration of the right mealtime and chewing good food. Most respondents answered chewing food less than 10 times and 20 to 29 times. According to the researcher's assumption, a poor perception of stunting can affect the poor understanding of dietary habits patterns.

The results of this study based on the Spearman rho test show the results that there is a relationship between perceptions of stunting and dietary habits of adolescent girls. Spearman rho results show significant value results with a p-value = 0.001 ($p < 0.005$ or 0.001), which means H_a is accepted and H_o is rejected in the above results, indicating that H_a is accepted. So it can be concluded that there is a significant relationship between perceptions of stunting and dietary habits of adolescent girls at SMA Nurul Falah.

This study is in line with research conducted by Yolanda that found that the value of stunting perceptions in the unfavourable category was more than good perceptions, namely 77 respondents (70%) and had unfavourable dietary patterns as well, namely 76 respondents (69.1%). Yolanda's research found a relationship between perceptions of stunting and dietary patterns of adolescent girls with a p-value = 0.031 (Yolanda, 2023).

This research is also in line with research conducted by Natanael that there is a significant relationship between knowledge and adolescents' perceptions of stunting with a p value = 0.000. So from these results, it can be concluded that the better the respondent's knowledge about stunting, the more perception formed will be positive (Natanael et al., 2022).

This research is also in line with research conducted by Patricia that there is a relationship between body image and dietary habits in adolescent girls who underestimate their weight do unhealthy dietary habits and respondents who estimate their weight accurately tend towards a healthy diet. And adolescents who gain weight also have unhealthy dietary habits (Bodega et al, 2024).

This study is not in line with that conducted by Jumiatur through his research on nutritious food consumption in the prevention of stunting on hemoglobin levels and arm circumference in adolescents, saying that there is no significant relationship regarding the relationship between eating behavior of nutritious foods with hemoglobin levels and arm circumference in adolescent girls with the spearman test obtained p-value 0.226 and 0.906 (Jumiatur, 2023).

This study is also not in line with that conducted by Basri regarding the relationship between socioeconomics, parenting, diet with stunting in elementary school students who said that there was no significant relationship between gender and nutritional status with the results obtained p value 0.39, there was no significant relationship between age group and the incidence of SEZ with the results of p value 0.58. Therefore, from this study, Aramico concluded that the dominant factors affecting stunting, namely parenting, diet, orangutan income, access, and health services, did not have a significant relationship with stunting (Aramico et al., 2020).

Adolescence is a period of nutritional vulnerability where rapid physical growth increases nutritional needs. Dietary behaviors formed during adolescence can contribute to nutritional problems that have long-term health consequences and can increase stunting rates due to lack of nutritious and balanced nutritional intake, lack of education, low economic and time constraints that make it difficult for adolescents to prepare healthy food so that adolescents choose to buy fast food. Healthy habits must be familiarized since adolescence such as a healthy diet and good physical activity, to help break the cycle of malnutrition between generations (Setiawan et al, 2023). Based on the results of the above study, the researcher assumes that the two variables are in the same direction, which means that the less good the perception of stunting owned by adolescents, the less good the dietary habits of adolescent girls. In relation to the results obtained from respondents that the perception of stunting owned by respondents is in the poor category because respondents only understand in general about stunting and have poor dietary habits patterns in terms of duration of time and amount of food consumed. Therefore, the research at SMA Nurul Falah found a relationship between perceptions of stunting and dietary habits in adolescent girls. Due to the lack of education about stunting and good dietary habits patterns,

adolescents will unconsciously make a poor diet that can trigger an increase in stunting rates and the birth of stunted generations in the future.

CONCLUSION

In this study, there is a significant relationship between perceptions of stunting and dietary habits of adolescent girls with a value of $p = 0.001$ ($p < 0.01$), which means that in this study there is a relationship between perceptions of stunting and dietary habits in adolescent girls at SMA Nurul Falah. Suggestions in this study are that it is hoped that adolescents can increase their understanding of stunting and can carry out dietary habits and patterns properly to prevent an increase in stunting and the birth of future stunted generations, it is hoped that teachers can provide education about stunting to adolescents who will become prospective mothers and facilitate good dietary habits programs so as not to cause malnutrition or excess nutrition in adolescents and for further researchers to conduct research using qualitative methods and can provide interventions in the form of providing education in order to increase adolescents' understanding of stunting and can implement good dietary habits programs.

CONFLICT OF INTEREST

There is no conflict of interest in conducting this study.

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