



Body Image Determinants for Teenagers Aged 12-16 Years

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<p>Track Record Article</p> <p>Accepted: 19 April 2023 Revised: 09 November 2023 Published: 15 December 2023</p> <p>How to cite: Nasution, Saputra, A., Warini, W., Nuraida, I., & Gunawan, W. (2023). Body Image Determinants for Teenagers Aged 12-16 Years. <i>Contagion: Scientific Periodical of Public Health and Coastal Health</i>, 5(4), 1217-1225..</p>	<p style="text-align: center;">Abstract</p> <p><i>The problem that arises in teenagers today is body image or body image, where body image is a very important and important thing for teenagers because the appearance of the shape and size of a teenager's body can increase self-confidence if they have a positive body image or are satisfied, but on the contrary, teenagers who have Negative or dissatisfied body image will have a negative impact on self-confidence and teenagers health such as bulimia, anorexia, malnutrition and obesity. Teenagers who have a body shape that is not ideal (thin or obese) are more likely to feel negative perceptions, this will have an impact on the mental health and development of teenagers. The aim of this study is to analyze the determinants (nutritional status, food availability, and sleep duration) of body image of teenagers aged 12-16 years. The method used in this study was cross-sectional with a sample of 57 teenagers aged 12-16 years taken by random sampling and data obtained using a questionnaire and then analyzed using the chi-square test to see the relationship between the independent variable (nutritional status, food availability, and sleep duration) and the dependent variable (body image). The nutritional status variable (0.004) describes a relationship with body image, food availability (1,000) illustrates that there is no relationship with teenagers body image, while sleep duration(1,000) illustrates that there is no relationship with teenagers body image. It is necessary to suggest a promotional or educational effort for teenagers to increase nutritional knowledge so that it can improve nutritional status in teenagers and will be able to increase positive perceptions of body image in teenagers.</i></p> <p>Keyword: Body Image, Food Availability, Nutritional Status, Sleep Duration, Teenagers</p>
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INTRODUCTION

Indonesia is facing nutrition problems in teenager years, especially in the middle and upper socioeconomic groups in urban areas, which are experiencing an increase in obesity and malnutrition problems, which have not yet been resolved. Therefore, Indonesia is currently facing a double nutrition problem in teenager. This is very worrying because it threatens the quality of human resources, especially teenager, which is very important for the future. Changes in body shape and size are very high in adolescence due to increased nutritional needs. In addition, hormonal changes also occur which can accelerate the growth process in teenagers, so that physiology, body shape, psychology will experience very rapid changes (Ammar & Nurmala, 2020). If this condition is not balanced with balanced nutritional needs, it can lead to a negative (dissatisfied) body image. Body image is a person's perception of body shape and weight (Anindiba et al., 2022).

Positive body image (satisfaction) is a perception that each individual feels satisfied with their body shape, while negative body image is the perception of each individual who feels dissatisfaction with their body shape (Ramanda et al., 2019). Teenagers are very concerned about appearance so that they compare the body image of teenagers resulting in feelings of shame, anxiety, pessimism and sensitivity to criticism, responsive to praise, difficult to accept themselves, and wrong in dieting or overdoing it to obtain the ideal body shape that teenagers want (Pratiwi et al., 2021).

Teenagers who have a negative body image or feel dissatisfied with their body shape, can make efforts to achieve the ideal or desired body weight, such as going on a diet, fasting, taking diet pills, physical exercise. In addition, negative body image also results in behavioral changes such as regurgitating food that has been eaten, ignoring food timing, prioritizing side dishes over main meals, going on a strict diet, smoking, especially these problems occur in teenagers who think that teenagers are overweight or not ideal (Fitra et al., 2021). This deviant behavior can lead to health problems such as bulimia, anorexia, anemia, more or less nutrition, this is due to restricting food due to fear of obesity and vice versa (Nisa & Rakhma, 2019). Teenagers with negative body image will tend to have bad eating behavior which can cause health problems such as malnutrition. These problems are like lack of protein and energy, obesity, thin, or short (Aritonang & Refaniel, 2022).

Teenagers who have a negative or positive body image can be influenced by an incident that is experienced both now and in childhood, parents, the environment can also affect the body image of teenagers (Afriani et al., 2019). Negative behavior and patterns from parents can have a major impact on body image. Consumption patterns provided by parents at home or the availability of food in the household also have an impact on body shape and will affect teenagers body image (Margiyanti, 2021).

One of the causes of malnutrition in the family, especially in teenagers, is due to the unavailability of quality food, both in terms of quantity and quality. Food is also said to be the most basic need for humans both individually and in groups because it is very necessary in the process of growth (Nur et al., 2019). Food and nutrition have an important role in determining its relation to improving the quality of human life. Therefore, food must be available every day with sufficient quality and quantity in the household (Insani, 2019). Adequate food availability in households is also said to be the main capital in improving the nutritional status of families, especially for improving the nutritional status of teenagers in order to direct positive body image perceptions. Besides that, activity, sleep duration, and eating habits of teenagers are also

factors that can influence body image in a positive or negative direction (Asnuddin & Sanjaya, 2018).

Based on these problems, the authors conducted a research study related to the determinants of teenagers body image, which analyzed the factors that can influence teenagers body image.

METHODS

This study uses a cross-sectional design that analyzes the relationship between the independent variables and the dependent variable. The independent variables measured were nutritional status, food availability and sleep duration, while the dependent variable measured was teenagers body image. The data sources used in this study were primary data which were measured directly by researchers such as characteristics, nutritional status, food availability, sleep duration and body image of teenagers, where each data collected came from the instruments used in the study. This research was conducted in January 2023 in one of the schools in the city of Bogor.

The population or target of this study were students aged 12-16 years with the criteria of not being sick, not on a diet, not currently undergoing therapy and willing to be respondents in the study, as well as the random sampling technique used to determine the research sample of 57 students. The instruments used to measure the independent and dependent variables in this study used a questionnaire to measure body mass index (BMI) using anthropometry with the criteria Normal -2 SD to 1 SD and abnormal if <-2 SD and > 1 SD, a sleep duration questionnaire with the criteria of short sleep time <7 hours and sufficient sleep time if 7-8 hours, a food availability questionnaire, and an teenagers body image questionnaire.

Analysis of the data obtained in this study using the chi-square test to see the relationship between the independent variables (nutritional status, food availability, and sleep duration) and the dependent variable (teenagers body image). each variable is coded and entered in the data analysis application used (SPSS) to facilitate data analysis using chi-square. to see the extent to which the independent variable is associated with the dependent variable by looking at the OR value in the data analysis. This research previously received approval from the Hang Tuah Surabaya STIKes Research Ethics Commission Number: PE/094/VIII/2022/KEP/SHT.

RESULTS

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Contains an explanation of the results of the analysis of the determinants of teenagers body image related to nutritional status, sleep duration and food availability.

Table 1. Body Image Determinants for Teenagers Aged 12-16 Years

Determinants	Body Image						P-Value	OR (95% CI)
	Not satisfied		Satisfied		Total			
	n	%	n	%	n	%		
Nutrition Status								
Abnormal	29	50,9	0	0	29	100	0,004	1,048 (0,212-5,177)
Normal	21	36,8	7	12,3	28	100		
Sleep Duration								
Not enough	22	38,6	3	5,3	25	100	1,000	1,048 (0,212-5,177)
Enough	28	49,1	4	7,0	32	100		
Food availability								
Not enough	2	3,5	0	0	2	100	1,000	1,789 (0,467-7,633)
Enough	48	84,5	7	12,3	55	100		

Table 1 illustrates that the variable nutritional status of teenagers has a value of 0.004 which means there is a relationship with teenagers body image, sleep duration with a value of 1.000 means there is no relationship with teenagers body image and food availability has a value of 1.000 meaning there is no relationship with teenagers body image.

DISCUSSION

Nutritional status

Based on the analysis, it illustrates that teenagers with abnormal nutritional status have an unsatisfied body image of 50.9% and there is a relationship between nutritional status and teenagers body image ($0.004 < 0.05$). Teenagers who have abnormal nutritional status feel dissatisfied with high body image, especially in women. Respondents with abnormal nutritional status had more negative or dissatisfied body images than those with positive or satisfied body images.

Dissatisfaction with body image is also found in teenagers who have normal nutritional status. This shows that even though teenagers already have normal nutritional status, teenagers tend to judge their body shape and size much larger than their actual body shape (Astutik & Wardani, 2020). Today's teenagers are very easily influenced by current trends and media

which are the cause of dissatisfaction with their body image. Most teenagers, especially women at this time, are depicted as having long legs, tall, young stature, big breasts, big eyes, white skin, and what stands out the most is a very thin body shape (Aryati et al., 2018).

Teenagers with a satisfied body image have a perception of their ideal body shape or appear slim and beautiful to look at, when they see their actual body shape they tend to have feelings about their body shape and feel comfortable with their body shape (Maryam & Ifdil, 2019). Conversely, teenagers with dissatisfied body images often compare other people's body shapes to their own. As a result, teenagers feel isolated, depressed, insecure and have an impact on the emergence of health problems such as bulimia, anorexia due to eating disorders they experience (Andina Rachmayani et al., 2018).

Dissatisfaction with body image can also result in female teenagers making an effort to achieve normal weight according to teenagers perceptions. If this condition is not matched by adequate knowledge, then the efforts made will affect nutritional status. Teenagers are a group that is very sensitive to body image and is vulnerable to discrimination such as body shaming and bullying. Seeing the large impact caused by dissatisfaction with body image, it is necessary to do an effort to increase teenagers confidence in their nutritional status or body shape.

Sleep Duration

Based on the analysis of the results of the study, it illustrates that there is no relationship between sleep duration and teenagers body image. Teenagers with less sleep duration had a negative body image as much as 38.6%, but teenagers with adequate sleep duration also had more dissatisfied body image than those with satisfied body image.

Sleep duration is generally associated with obesogenic eating habits which have a high-energy but low-fiber diet. The relationship between eating preferences and sleep duration has a two-way nature. There is strong evidence that sleep duration can affect the hormone leptin which can regulate appetite which will affect eating preferences. This will have an impact on the nutritional status and body image of teenagers. Sleep deprivation can disrupt hormone balance, including appetite-regulating hormones such as leptin and ghrelin. When sleep deprived, leptin levels decrease while ghrelin increases, so teens tend to feel hungrier and are more likely to eat more, especially foods high in calories and carbohydrates (Nabawiyah et al., 2021b).

Sleep disorders can affect food selection and intake in teenagers through non-homeostatic and homeostatic mechanisms. The energy homeostatic mechanism is related to changes in the hormones ghrelin and leptin (Nabawiyah et al., 2021a). The leptin hormone functions to send signals of fullness as an appetite controller in the midbrain, while the ghrelin

hormone functions to send signals from the stomach area to the brain to stimulate an increase in hunger (Afriani et al., 2019). Based on this mechanism, it is possible for teenagers who have insufficient sleep duration to have a tendency to choose foods that are low in fiber and energy density. This condition will have an impact on the body shape and size of teenagers so that they have an unsatisfied body image (Anindiba et al., 2022).

However, the results of this study did not have a relationship between sleep duration and teenagers body image, this is because teenagers who have insufficient sleep duration but have a normal body shape so that they perceive that their body shape is still in the ideal category.

Food Availability

The results of this study indicate that there is no relationship between food availability and teenagers body image. Where teenagers who have sufficient food availability with dissatisfied body image are more than teenagers who are satisfied with body image but have sufficient food availability.

Food is categorized as a basic need for every human individual or group because it is needed in the process of development and growth. Nutrition and food have a role that can determine the increase in the quality of life of each individual (Agustiniingsih, 2019). Therefore, household food must always be available at all times with high quality and sufficient quantity (Ridwan et al., 2018). The availability of food in the household is quite good, which is the most important thing in improving family nutrition, especially teenagers nutrition and dissatisfied body image. Unequal food availability or unequal access to food can also affect teenagers' body image. Teenagers living in environments with limited food access or expensive food may feel that they do not have healthy food choices, which may affect their body image as they feel they do not have control over their food intake (Merita et al., 2020).

One of the problems that arise due to the unavailability of food is malnutrition or lack of nutrition which has a very bad impact on the health of the teenagers body (Intantiyana et al., 2018). The nutritional status of teenagers is influenced by multiple factors such as nutritional knowledge and parents' income level, which can result in teenagers growth and will disrupt metabolism which will have an impact on the shape and size of the teenagers's body and affect body perception or image (Hariati, 2021). The value of food availability in the household in order to improve the nutritional status of family members, especially teenagers, is not only the responsibility of each individual, but also the commitment of health workers in particular (Hartina et al., 2020).

However, the results of this study illustrate that there is no relationship between food availability and teenagers body image, this is because teenagers who have sufficient food availability with dissatisfied body image prefer fast food, high in calories, low in fiber and high in cholesterol which has an impact on body shape and size which in turn has excess nutritional status and has an unsatisfied body image.

CONCLUSIONS

Nutritional status has a significant influence on teenagers' body image, while food availability and sleep duration do not have an influence on the body image of teenagers aged 12-16 years. It is recommended that teenager boys and especially girls should be able to pay attention to consumption patterns, activities, and sleep time because this will have an impact on nutritional status or body shape, teenagers who have an ideal body shape will have an ideal body image as well and vice versa teenagers who have a body shape that is not ideal will have an impact on body image and self-confidence.

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