

Analysis of Factors Causing Obesity and Its Relation to the Level of Self-Care Independence in Students of SD Budi Murni 2 Medan Tuntungan District

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Article Info	ABSTRACT
<p>Keywords: Causes of Obesity, Self-Care, Children</p>	<p>Obesity is a disorder characterized by excessive accumulation of body fat tissue. Childhood obesity can continue into adulthood. According to Pi-Sunver in modern Nutrition in Health and Disease, in obese infants and children, about (26.5%) will remain obese in the next 20 years. Meanwhile, (80%) obese adolescents become obese adults. Adorable small, big obese. The phenomenon of increasing the prevalence of childhood obesity or obesity in Indonesia is very worrying. The phenomenon that is widely found in children, especially in big cities, in the middle and upper class communities occurs due to low public awareness in educating their children to live healthier lives by meeting their daily fiber intake needs, doing a lot of activity and exercising enough, and avoiding eating foods that are high in calories, such as: fast food and so on. In addition to the lack of efforts by the government and health institutions in communicating, disseminating information, and intensifying public education about the importance of a healthy lifestyle, the dangers of childhood obesity and obesity and the steps taken to prevent and treat overnutrition so that it can reduce the prevalence of childhood obesity and obesity in Indonesia. Indonesia is one of the developing countries that has experienced progress in the economic field due to the global market. Economic progress has a wide impact on people's social lives, including the tendency of people's lifestyles. Traditional lifestyles are considered no longer relevant to current conditions so that people's lifestyles tend to shift to a sedentary lifestyle. Unfortunately, in today's sedentary lifestyle, the proportion of physical activity is greatly reduced while food intake tends to be high in energy (fat, protein, and carbohydrates) and low in fiber. Conditions like this have a high chance of increasing the likelihood of diseases due to dietary deviations such as overnutrition and obesity. Based on the results of measuring the weight and height of students aged 7-9 years at SD Budi Murni 2 in 2025, there are 38 students who experience obesity in children aged 7-9 years, consisting of 12 students aged 7-8 years, 26 students aged 9 years. In 2025, there will be 47 students with an average weight of >35 kg and a height of ± 120 cm, consisting of 2 students who are 7 years old, 26 students who are 8 years old, 19 students who are 9 years old. Meanwhile, based on the source of Indonesian knowledge institutions, the ideal weight and ideal height for children aged 7-9 years is 24 kg and the ideal height is 120 cm, it can be concluded that the number of students who experience obesity every year has increased.</p>
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INTRODUCTION

Obesity is a disorder characterized by excessive accumulation of body fat tissue. Obesity in children can continue into adulthood. According to Pi-Sunver in modern Nutrition in

Health and Disease, in obese infants and children, about 26.5% will remain obese in the next 20 years. While 80% of obese adolescents will become obese adults. In short: small adorable, big obesity. From the WHO report in the 2022 Technical Report Series in Geneva, Switzerland, a study in Japan showed that 1/3 of children with body obesity become obese in adulthood. Another negative impact is that children have the potential to experience degenerative diseases in the future.

The phenomenon of increasing the prevalence of obesity and obesity in children in Indonesia is very worrying. This phenomenon that is widely found in children, especially in big cities, in the middle and upper class communities occurs due to low public awareness in educating their children to live healthier lives by meeting their daily fiber intake needs, doing a lot of activity and exercising enough, and avoiding consuming foods that are high in calories, such as fast food and so on. In addition, there is a lack of efforts by the government and health institutions in communicating, disseminating information, and intensively educating the public about the importance of a healthy lifestyle, as well as the dangers of obesity and obesity in children as well as steps that can be taken to prevent and treat this excess nutrition so that it can reduce the prevalence of obesity and obesity in children in Indonesia. (Genis Ginanjar Wahyu, 2021).

Indonesia is one of the developing countries that has experienced progress in the economic field due to the global market. This economic progress has a wide impact on the social life of the community, including in the context of changing the tendency of people's lifestyles. Traditional lifestyles are considered no longer relevant to current conditions so that people's lifestyles tend to shift to a sedentary lifestyle. Unfortunately, in today's sedentary lifestyle, the proportion of physical activity is greatly reduced while food intake tends to be high in energy (fat, protein, and carbohydrates) and low in fiber. Conditions like this have a great chance of increasing the likelihood of diseases due to dietary deviations such as overnutrition and obesity (Hadi, 2023).

Obesity also affects children's psychological factors, namely creating a sense of lack of confidence, depression, and passivity because they are often not involved in activities carried out by their peers. This psychiatric disorder can aggravate childhood obesity if children vent the stress they experience on food (Manuaba 2021).

The face shape of an obese child is disproportionate, the nose and mouth are relatively small, the chin is double. There is a buildup of fat in the breast area, where boys often feel embarrassed because their breasts seem to be growing. The abdomen is hanging and is often accompanied by stria. The genitals in boys seem to be small, due to the presence of fat deposits in the groin area. Thighs and upper arms are large, the fingers of the hands are relatively small and pointed. Psychological disorders often occur, either as a cause or as a result of obesity. (Soetjningsih, 2021).

A person's body is fat or thin actually depends on DNA factors. The meaning of DNA here is that it is a component of the basic molecular material of genetic material, which is composed of neoctides that are held together in such a way as to make very long strands. The cells that cause obesity have been present in humans since the beginning of the birth of babies. Thus it is common for us to see a person who is in his teens having a thin and pale body, but at some point at a certain age, that person looks so fat that we don't recognize him anymore. A number of cells that cause obesity will increase in levels with age, which continue to react until old age. Children who have obese parents will inherit a low metabolic rate and have a tendency to be obese, when compared to children who have normal parents (Ronald. H. Sitorus 2021).

If your child comes from a family where the average member is obese, he or she may be genetically overweight, especially if he or she is in an environment where high-calorie foods are always available and physical activity is rare. Obesity and obesity in children are a consequence of calorie intake (energy) that exceeds the number of calories burned in metabolic processes in the body. The involvement of genetic factors in increasing the risk

factors for obesity and obesity is known based on the fact that there is a difference in the body's metabolic rate between one individual and another. Individuals who have a slower metabolic rate have a greater risk of suffering from obesity and obesity. Various studies reveal the fact that several genes are involved in this. However, not a few health experts consider that genetic factors are not the main thing in increasing the risk of obesity and obesity in children. This refers to the fact that there have been no significant genetic changes in humans over the past three decades. while the increasing prevalence of obesity and obesity around the world shows the opposite phenomenon (Wahyu, 2023).

From the results of interviews with students with obesity, genetic factors are one of the dominant factors causing obesity, where students say that the average family member is overweight or overweight. Meanwhile, from the activity pattern factor, students said that they almost never do physical activities or sports every day. This is important that must be considered by teachers and parents must be careful in choosing children's daily activities according to gender and age. In fact, most of the students said that they played more often in front of the computer, internet, cellphone, and watched television. From the diet factor, students said they prefer fast food and their diet is more than normal which is only 3 meals a day.

Based on the results of measuring the weight and height of students aged 7-9 years at SD Budi Murni 2 in 2025 in October 2025, there are 38 students who experience obesity in children aged 7-9 years, consisting of 12 students aged 7-8 years and 26 students aged 9 years. Meanwhile, in 2025 in December 2025 there are 47 students with an average weight of >35 kg and a height of ± 120 cm consisting of 2 students who are 7 years old, 26 students who are 8 years old, and 19 students who are 9 years old. Meanwhile, based on Indonesian knowledge institutions, the ideal weight and ideal height for children aged 7-9 years are 24 kg and the ideal height is 120 cm, so it can be concluded that the number of students who experience obesity every year has increased (Attached source).

METHODS

This study is an analytical survey with a cross sectional aim to find out the factors that cause obesity and its relationship with the level of self-care independence in students aged 7-9 years at SD Budi Murni 2 Simalingkar in 2025. The research was conducted at SD Budi Murni 2 Simalingkar from September 2025 to January 2026. The population in this study is all obese students aged 7-9 years at SD Budi Murni 2 Simalingkar in 2025 A total of 47 students were all used as samples (Total Sampling). Data collection was carried out using primary data obtained by giving a closed questionnaire/questionnaire to the students of SD Budi Murni 2 Simalingkar. Before the interview and data collection were carried out, an explanation of the contents of the list of questions was first given to the respondents. After conducting a study on 47 respondents at SD Budi Murni 2 Simalingkar regarding the factors that cause obesity and its relationship with the level of self-care independence in students aged 7-9 years.

RESULTS AND DISCUSSION

Frequency Distribution of Respondents of SD Budi Murni 2 Simalingkar in 2025

No	Category	Frequency	(%)
1.	Age		
-	7 Year	2	4,3
-	8 Year	24	51,1
-	9 Year	21	44,7
	Total	47	100
2.	Gender		
-	Male	32	68,1
-	Women	15	31,9
	Total	47	100

3.	Height		
-	110-120 cm	20	42,6
-	121-130 cm	27	57,4
	Total	47	100
4.	Weight		
-	20-40 kg	13	27,7
-	41-60 kg	33	70,2
-	61-80 kg	1	2,1
	Total	47	100

Based on the table above, it can be seen that the age of the majority of respondents is 8 years old, which is 24 people (51.1%), the gender of the majority of respondents is male as many as 32 people (68.1%), the height of the majority respondents is 121-130 cm as many as 27 people (57.4%), and based on the weight of the majority respondents is 41-60 kg as many as 33 people (70.2%).

Dominant Factors Causing Obesity in Children Aged 7-9 Years SD Budi Murni 2

1. Genetics as a factor

Frequency Distribution of Genetic Factors Causing Obesity in Children of SD Budi Murni 2

No	Category	Frequency	(%)
1.	Risk	15	31,9
2.	No risk	32	68,1
	Total	47	100

Based on the table above, it can be seen that the majority of genetic factors are at risk for 15 people (31.9%).

2. Activity Pattern Factors

Frequency Distribution of Activity Patterns Factors Causing Obesity in Children of SD Budi Murni 2

No	Category	Frequency	(%)
1.	Risk	33	70,2
2.	No risk	14	29,8
	Total	47	100

Based on the table above, it can be seen that the majority of people (70.2%) are at risk of activity patterns.

3. Dietary Factors

Frequency Distribution of Dietary Factors Causing Obesity in Children of SD Budi Murni 2

No	Category	Frequency	(%)
1.	Risk	32	68,8
2.	No risk	15	32,2
	Total	47	100

From the table above, it can be seen that the majority of Dietary Factors are at risk as many as 32 people (68.8%).

CONCLUSION

1. Genetics as a factor

Based on the results of the study, it can be seen that the majority of genetic factors are

not the dominant factor causing obesity, namely 15 people (31.9%), the dominant factor causing the absence of obesity is 32 people (68.1%). This can be known based on the respondents' answers, where out of 47 respondents, 33 respondents said that one of the parents was obese out of 47 respondents, there were 18 respondents who said both parents were obese. From the results of the study, it can be seen that genetic factors are not a factor that causes obesity. Respondents said that they came from one of the parents who were obese so there was a gap with the theory. According to Misnadiarly 2023, genetic factors are one of the factors that play a role in the onset of obesity. It has long been observed that obese children generally come from families with obese parents. If one parent is obese, approximately (40-50%) of their children will become obese, while if both parents are obese (80%) their children will become obesity.

2. Factors of Activity Patterns

Based on the results of the study, it can be seen that the factor of the pattern of effectiveness is the dominant factor of obesity as many as 33 people (70.2%), the dominant factor of non-obesity as many as 14 people (29.7%). This can be found based on a questionnaire of 10 questions, the answers of the respondents from 47 respondents, 44 respondents who said that respondents liked to watch television, 38 respondents said that school respondents shuttle by vehicle, 34 respondents said respondents liked to play indoors rather than outdoors, 31 respondents said respondents liked video games, 28 respondents said respondents napped more than 3 hours, 26 respondents said respondents often play the internet, spend time every day with private lessons, finish eating and go to bed, spend their free time by reading storybooks, 24 respondents said respondents play more often, do activities in the air conditioning room. From the results of the study, it can be known the factors of activity patterns, the dominant factor of obesity. Respondents said that they have a habit of rarely moving and sweating a little. Influenced by technological advances and daily habits that do a lot of activities in the air conditioning room so that they sweat a little.

3. Dietary Factors

Based on the results of the study, it can be seen that dietary factors are the dominant factor in the occurrence of obesity in 32 people (68.8%), the dominant factor in the absence of obesity in 15 people (32.2%). This can be found based on the respondents' answers from 14 questionnaires, the answers of the respondents from 47 respondents, 39 respondents who said the respondents were satisfied with a lot of food, 37 respondents said the respondents often ate chocolate, ice cream, liked snacks outside, 35 respondents said the respondents liked fried foods, 34 respondents said the respondents often snacked while watching television, 31 respondents said the respondents liked to eat sweets, 29 respondents said respondents liked fast food, 26 respondents said respondents ate more than 3x a day in large portions, 24 respondents said respondents often consumed ciki-ciki while playing games, 23 respondents said respondents often drank soft drinks, 22 respondents said respondents often ate late at night, 21 respondents said respondents often buy fast food, 18 respondents said that respondents ate more snacks outside than eating at home. From the results of the study, it can be seen that dietary factors are the factors that cause obesity. Respondents said they had a habit of eating a lot of frequent meals and liked fast food.

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Based on the discussion, it can be concluded that there is an influence of genetic factors, activity pattern factors, dietary factors, factors that cause obesity and their relationship with the level of self-care independence in students aged 7-9 years at SD Budi Murni 2 Simalingkar in 2025.

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