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Junk Food Consumtion : A Key Driver of The Obesity Epidemic

Asta Adyani [1]

[1]*Bachelor of Midwifery and Profesional of Education, Faculty of Helath Science, University of Muhammadiyah Surabaya*

INFORMASI

Korespondensi:
asta.bdn@fik.um-surabaya.ac.id

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ABSTRACT

Objective: . Obesity in adolescents is still an epidemic problem for the next 10 years. The Key lifestyle components such as physical activity, dietary habits, sleep patterns, and screen time that contribute to the rising prevalence of obesity. The Purpose of the study was to investigate corelation between behaviour Lyfestyle and Level of Obesity.

Methods: We conducted a cross sectional study involving 185 adolescents male and female (13-19 years) who Particpated the validates self reported about Health behaviour. The Questionare allows the Malaysian Adolescents Health Survey. The inclusion Criteria is adolescents in range of age 13-19 years old there were Leave in Indonesia. Bivariate Analysis used Person Corelation was conducted. Analysis used SPSS 25 aplication.

Results: We identified 185 adolescents. the mean Age are 12.27 years (SD 3.756). Majority respondents are female 122 (65.9%), Overweight and obesity are significant issues: 10.8% (20 adolescents) are overweight (BMI > 25–27). 18.9% (34 adolescents) are classified as obese (BMI > 27). Together, 53.5% of the adolescents (99 individuals) have a BMI above the normal range. There is a strong positive correlation between junk food consumption and BMI, as indicated by the Pearson correlation coefficient of 0.877. This value suggests that higher junk food consumption is strongly associated with higher BMI. The p-value (Sig. 2-tailed) is 0.000, which is highly statistically significant ($p < 0.01$). The findings highlight a significant positive correlation between junk food consumption and obesity among adolescents, supported by a strong Pearson correlation coefficient of 0.877. This relationship underscores the critical role of dietary behaviors in adolescent obesity, a growing public health issue worldwide

Conclusion: The findings emphasize the need for public health

INTRODUCTION

Obesity in adolescents is a condition that increasingly becomes a public health issue, with rapidly increasing rates within a couple of decades. In the United States, about 20 percent of adolescents aged 12-19 are obese, a marked increase from earlier decades. This increase in obesity in teenagers is not merely an additional burden; it brings about risk factors for chronic health conditions that often include type 2 diabetes, hypertension, cardiovascular diseases, and also psychological affects such as depression and low self-esteem. (Ambrosini, 2014) Such health problems tend to extend into adulthood, underscoring the need for early intervention and prevention measures (Tester et al., 2020). Poor Nutritional status in adolescents especially in adolescents girls can impact pain during menstrual syndroms and others reproductive problems. (Hidayah et al., 2023)

Lifestyle factors related to obesity in adolescents are multifactorial problems that are getting much of the research focus as part of public health. The most important lifestyle factors that have been identified through research are physical activity, dietary habits, sleep, and screen time. These components are relevant in understanding the emergence of the epidemic of adolescent obesity as well as the initiation and dissemination of effective strategies and interventions for intervention. (Jenatabadi et al., 2021). Activities of the body are known to prevent obesity. Regular participation in physical activities for adolescents will therefore keep the individual healthy and thus reduce chances of getting an increased body mass index measurement which can later contribute to obesity. Jenatabadi et al. strongly stated that leisure time spent on physical activities is an important component of a healthy life in developed countries where sedentary behavior becomes increasingly common. (Jenatabadi et al., 2021). In addition, Al-Hazzaa and Musaiger, along with their Arab Teens Lifestyle Study, discussed the significance of understanding physical inactivity behaviors among adolescents with suggestions that they are associated with respect to obesity measures (Al-Hazzaa & Musaiger, 2011)

Dietary habits also play a critical role in adolescent obesity. Research indicates that adolescents consuming energy-dense, high-fat, and low-fiber foods are at a greater risk of becoming overweight or obese. (Ambrosini, 2014) The systematic review by Ambrosini reinforces this notion, showing a positive correlation between unhealthy dietary patterns in childhood and later obesity risk. (Ambrosini, 2014)Additionally, López-Gil's study on Ecuadorian adolescents found that insufficient fruit and vegetable consumption, coupled with high intake of unhealthy snacks, significantly increased the likelihood of obesity. (López-Gil et al., 2024). These findings underscore the necessity of promoting healthier dietary choices among adolescents to mitigate obesity risks. Sleep duration and quality are increasingly recognized as significant lifestyle factors influencing adolescent obesity. Insufficient sleep has been linked to increased appetite and cravings for high-calorie foods, which can contribute to weight gain. The COVID-19 pandemic has further complicated this issue, as studies have shown that lockdowns led to increased sleep duration but also heightened screen time, which is associated with sedentary behavior and poor dietary choices. (Farello et al., 2022)

Thus, it is the dietary habits of adolescents, which also contribute critically to adolescent obesity. For instance, studies have shown that adolescents who consume energy-dense, high-fat, and low-fiber foods are more likely to be overweight or obese than the rest of adolescents. Indeed, the systematic review by Ambrosini further holds by showing a significant and positive association between an unhealthy diet pattern in childhood and the increased likelihood of developing obesity in the future. (Tester et al., 2020). Further, the study by López-Gil on Ecuadorian adolescents found that the risk to obesity was increased by insufficient fruit and vegetable consumption, in conjunction with unhealthy snacks intake. (Farello et al., 2022). In doing so, the research strengthens the need to encourage healthier food choices among adolescents to forestall obesity. melalui peran care giver dan Kader Surabaya Hebat di wilayah Puskesmas Gading Surabaya. In the meantime, sleep duration and quality are emerging lifestyle factors responsible for obesity in adolescents. Infection and obesity are often associated with increased appetite and a craving for high-calorie food, which is more likely to cause weight gain. The COVID-19 pandemic adds complexity to this since it was observed that lockdown resulted in increased sleep duration but with an associated rise in screen time, which is sedentary and linked further to poor eating behavior.

According to Farello et al.'s findings, adolescents' screen time increased and their physical activity dropped during the pandemic, both of which are harmful to maintaining a healthy weight. This shift in lifestyle patterns during the epidemic underlines the

need for focused programs that address sleep hygiene and screen time management. Teenage obesity has been found to be significantly influenced by sedentary behavior, especially when it comes to screen usage. Although the American Academy of Pediatrics advises against excessive screen time, many teenagers do so, which raises their risk of obesity. According to Genoni et al., minimizing sedentary behavior through lifestyle interventions is crucial for managing childhood and teenage obesity. (Pérez et al., 2017)

The association between consistently unhealthy behaviors and the presence of obesity symptoms is supported by research that shows lower activity triggers weight gain. The interaction of genetic, environmental, and social factors further complicates the relationship between lifestyle and obesity. Parents' body mass index (BMI) has been shown to have an impact on adolescents' obesity, suggesting that family lifestyle decisions have a significant impact on a child's weight.More fundamentally, the family is the primary influencing unit in obesity and their participation is important in the prevention of obesity. Another reason, which is very obvious, is shown by cross-cultural studies where lower obesity rates are evidenced in one country as compared to another in the consumption of certain diets.

Interventions targeting lifestyle changes have shown promise in reducing obesity rates among adolescents. Programs that promote healthy eating, regular physical activity, and reduced screen time have been effective in improving weight management and overall health outcomes (Genoni et al., 2021) For instance, lifestyle interventions that integrate dietary education and physical activity have been linked to significant improvements in body composition and metabolic health among obese adolescents (Genoni et al., 2021)Additionally, the systematic review by Tester et al. indicates that addressing lifestyle factors through comprehensive programs can lead to substantial improvements in pediatric obesity management (Tester et al., 2020). The correlation between lifestyle factors and obesity among adolescents is well-established, with physical activity, dietary habits, sleep patterns, and sedentary behaviors playing pivotal roles. The rising rates of obesity in this population necessitate a multifaceted approach that includes promoting healthier lifestyle choices, engaging families, and implementing targeted interventions. Future research should continue to explore the complex interactions between these factors to inform effective public health strategies aimed at reducing adolescent obesity.

Treatment that focuses on changing lifestyle habits can reduce the incidence of obesity in adolescents. Healthy diet and exercise programs have been proven to improve weight management and overall health outcomes, for example, lifestyle change programs that integrate health education, healthy diets, and physical activity have reported many changes in health, metabolism, and body composition in obese adolescents.

METHOD

A cross sectional study was conducted using primary data from questionare. The survey adapted from Malaysian Health Survey Questionare 2018. The Survey covered sosiodemographic, Antopometric Information eg Weight, Height, Nutritional status is measured through BMI (Body Mass Index). Weight measurement using a weight scale and height measurement using a stature meter. Researcher only measure about Diatery Habbit especially about Junk Food Consumtion and Level of Obesity according clasifcation of BMI (Body Mass Index). Sample size calculation used simple random sampling

RESULTS

Based on Table 1. Shows that the Range of Adolescenst Age are majority on 17 Years (71%), Majority respondents are female 122 (65.9%), Grade of Schools are at Grade X 65 (35.1%), 98.9% Majority respondents are Muslim.

Table 1. Sosiodemographic of Adolescents

	Adolescents		
Sosiodemographic	n	n	%
Age	15	24	13
	16	57	30
	17	70	37.8
	18	28	15.1
	19	6	3.2
Gender	Male	63	34.1
	Female	122	65.9
Grade	Grade X	65	35.1
	Grade XI	56	27.5
	Grade XII	64	35.5
Religion	Muslim	183	98.9
	Non Muslim	2	1.08

Analisis Based on table 2 From the results, the following conclusions can be drawn about the BMI classification of the adolescents (n = 185): Majority have a normal BMI: 53.5% (99 adolescents) fall within the normal BMI range (18.5–25), indicating

that most adolescents have a healthy weight. It is concerning that 31 teenagers (16.8%) have an underweight BMI of less than 18.5, suggesting that a sizable portion of the population may experience issues connected to undernutrition. Overweight and obesity are major issues: 10.8% of 20 youths are overweight, with a BMI between 25 and 27. 18.9% (BMI > 27) of the 34 teenagers are obese. The prevalence of overweight and obesity in this group is increasing, as evidenced by the fact that 99 of the teenagers, or 53.5% of the total, had a BMI over the normal range

Table 2.Distribution Lefel of BMI

	Adolescent	
Clasification	n = 185	%
BB Kurang (< 18.5)	31	16.8
Normal (18.5-25)	99	53.5
Gemuk (Overweight) (> 25-27)	20	10.8
Obesitas (> 27)	34	18.9

Based on Table 3 shows that corelation significant score between Junk Food and BMI are 0.000 (> p value 0.05) There is a strong positive correlation between junk food consumption and BMI, as indicated by the Pearson correlation coefficient of 0.877. This value suggests that higher junk food consumption is strongly associated with higher BMI. The p-value (Sig. 2-tailed) is 0.000, which is highly statistically significant ($p < 0.01$). This means the observed correlation is unlikely to have occurred by chance. In summary, the data suggests that increased junk food consumption is strongly and significantly associated with higher BMI among the study population.

Table 3. Corelation Between Junk Food Consumtion and BMI

		BMI	Junk Food
BMI	Pearson Correlation	1	.877**
	Sig. (2-tailed)		.000
	N	185	185
Junk Food	Pearson Correlation	.877**	1
	Sig. (2-tailed)	.000	
	N	185	185

DISCUSSION

Informasi Demografis

The results show a strong correlation coefficient of 0.877, indicating a significant positive relationship between junk food consumption and adolescent obesity. This corelation emphasizes how important dietary habits are in contributing to adolescent obesity, a global public health concern that is on the rise. Unhealthy eating patterns can have long-term effects during adolescence, a crucial time for physical growth and development. (Ma et al., 2022) Junk food is a primary contributor to positive energy imbalance, which causes excessive weight gain and obesity. (Stavridou et al., 2021). It is characterized by high levels of calories, carbohydrates, and saturated fats but little nutritious value. Increased junk food consumption is linked to higher BMI and fat mass in teenagers, according to numerous studies. (López-Gil et al., 2024). Adolescent overweightness and obesity is said to occur in 29.7% of the population, as also corroborated by global trends that indicate an increase in the incidence rate of obesity among teenagers. Possible reasons for this increase include an increased consumption of convenience and processed foods, a decrease in leisure-time physical activity, and rigorous advertising of junk foods on television. Obesity in adolescents has been linked to a variety of health complications such as insulin resistance, heart diseases, and even psychological problems that may becomes evident in their adulthood.(Al-Nakeeb et al., 2012). The results show the need for public health programs emphasizing nutrition education, legislation against advertising junk foods to children, and the establishment of healthy food environments in schools.

LIMITATION

While the correlation is strong, it is important to note that correlation does not imply causation. The data does not confirm whether junk food consumption directly causes an increase in BMI or if other factors mediate this relationship. Longitudinal studies are needed to establish causality

IMPLICATION FOR PUBLIC HEALTH

Dietary Influence on Obesity: The linkage emphasizes the strong influence of the feeding habits on the intake of calorie-dense and nutrient-poor foods, even in the situation of obesity. The junk is often sweeter, filled with unhealthy fats, implying more salt added into it than other normal foods. All these lead to excessive intake of calories and weight gain. Target for Intervention: Hence, the need for undertaking active interventions against the consumption of junk foods targeting obesity. Public health campaigns, policy measures such as taxation on junk food, and promotion of healthier alternatives could mitigate the health impacts under the preceding frame. Behavioral and Environmental Factors: Although the evidence shows a very good link, physical activity levels, socioeconomic status, and genes that determine predisposition sex need to provide background for

more detailed explanation of the influence of BMI. Further studies should seek these scenarios to strengthen research for understanding the issue.

CONCLUSION

The majority of adolescents have a normal BMI, nearly one-third of the population faces weight-related issues, with a significant prevalence of both underweight and overweight/obesity. These findings underscore the need for interventions addressing both undernutrition and unhealthy weight gain in adolescents.

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