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Fast Food Consumption Habits and Nutritional Status: A Descriptive Study Among Grade X Students at Senior High School 22 Surabaya

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ABSTRACT

Excessive fast food consumption and imbalanced eating habits in adolescents can negatively impact nutritional status and increase the risk of overweight and obesity. This study aimed to describe fast food consumption patterns and their relationship with nutritional status among 79 tenth-grade students at SMA Negeri 22 Surabaya, using a descriptive cross-sectional design and simple random sampling. Nutritional status was assessed using BMI-for-age (WHO 2007), and fast food consumption was measured using a validated Food Frequency Questionnaire (FFQ) through interviews. Data were analyzed using SPSS. Most respondents were male (63.3%) and aged 16 years (64.6%). A total of 58.2% had normal nutritional status, while 24.1% were overweight, 11.4% obese, and 6.3% underweight. Regarding fast food habits, 50.6% seldom consumed it, and 49.4% consumed it often. Cross-tabulation showed higher rates of overweight (14.1%) and obesity (10%) among those who often consumed fast food. These findings suggest a potential link between frequent fast food intake and overnutrition. Schools are encouraged to implement regular nutrition education to promote healthier eating habits among students.

INTRODUCTION

Adolescent eating habits play a crucial role in shaping their overall health and nutritional status. An imbalanced diet such as the frequent consumption of fast food—can lead to malnutrition, encompassing both undernutrition and overnutrition[1]. Fast food typically contains 400–1500 kcal per serving and consists of 40–60% saturated fat along with high cholesterol, but it lacks dietary fiber. When consumed excessively, it leads to fat accumulation in adipose tissue and long-term energy imbalance[2,3]. The widespread appeal of fast food among adolescents is driven by factors such as affordability, easy accessibility, quick service, appealing taste, and influence from peers or lifestyle trends[4,5]. Additionally, adolescents with higher pocket money tend to skip breakfast and purchase food elsewhere, often choosing taste over nutrition due to limited nutritional literacy[6,7].

This consumption pattern contributes significantly to nutritional problems among adolescents, as supported by national data. The Basic Health Research (2018) reported a high prevalence of both undernutrition and overnutrition among Indonesian adolescents. WHO (2021) also indicated that hundreds of millions of adolescents globally were affected by obesity. In East Java, the prevalence of

overweight and obesity among adolescents continues to rise, highlighting a growing regional public health concern[8].

Excessive fast food consumption negatively impacts nutritional status by contributing to excess body fat and increasing the risk of overweight and obesity. Furthermore, diets heavily based on fast food are often deficient in key micronutrients such as iron, calcium, and vitamins, potentially leading to anemia, impaired growth, and developmental issues. Prolonged poor dietary habits during adolescence can disrupt physical and cognitive development and elevate the risk of non-communicable diseases in adulthood[9–12].

According to a preliminary study conducted among 17 students at SMA Negeri 22, six female students (16.6%) experienced malnutrition, one student (2.7%) was classified as obese, and ten students (27.7%) had normal nutritional status[13]. These findings reflect the presence of early nutritional issues that may be associated with unhealthy eating habits, particularly fast food consumption. This study aims to describe the pattern of fast food consumption among adolescents and assess its relationship with their nutritional status. While previous research has explored adolescent nutrition at the national level, there remains a lack of localized data, particularly within urban school environments such as Surabaya. This research seeks to fill that gap and provide evidence that can guide future school-based nutrition education and intervention efforts.

MATERIALS AND METHODS

This study employed a descriptive design with a cross-sectional design. Nutritional status was assessed using anthropometric measurements, specifically body weight and height, which were then used to calculate Body Mass Index for Age (BMI/A) based on the WHO 2007 reference standards. Dietary patterns, particularly fast food consumption, were assessed using a Food Frequency Questionnaire (FFQ), that had previously been validated. The FFQ was administered through structured interviews to obtain accurate information regarding the frequency, quantity, and types of food consumed on both a daily and monthly basis.

The study was conducted from October 2023 to May 2024 at SMA Negeri 22 Surabaya. The study population consisted of all 79 tenth-grade students (classes X-1 through X-4). The sample was selected using simple random sampling technique. Inclusion criteria included students who were present during data collection and agreed to participate by signing an informed consent form. Exclusion criteria included students who were sick or unable to complete the interview. The collected data were processed and analyzed using SPSS software.

RESULT

The results obtained from collecting data regarding eating patterns and nutritional status of class 10 students at SMA Negeri 22 Surabaya are as follows.

Table 1 Frequency Distribution of Respondent Characteristics according to Gender in 2024

Gender	n	%
Man	50	63.3
Woman	29	36.7
Total	79	100

Source: Primary Data 2024

Table 1 shows the frequency distribution of respondents based on gender in 2024. Out of a total of 79 respondents, the majority were male, comprising 50 individuals (63.3%), while the remaining 29 respondents (36.7%) were female. This indicates that male students were more dominant in the study sample, which may influence the overall dietary pattern and nutritional status findings, considering that gender can affect food choices and nutritional needs.

Table 2 Frequency Distribution of Respondent Characteristics according to Age in 2024

Age	n	%
15 year	10	12.7
16 year	51	64.6
17 year	18	22.8
Total	79	100

Source: Primary Data 2024

Table 2 presents the frequency distribution of respondents based on age in 2024. The majority of respondents were 16 years old, totaling 51 individuals (64.6%). This was followed by 18 respondents aged 17 years (22.8%) and 10 respondents aged 15 years (12.7%). These results indicate that most participants in the study were in the middle of adolescence, which is a critical period for growth and development, potentially affecting their nutritional status and dietary habits.

Table 3 Frequency Distribution of Respondent Characteristics according to Nutritional Status in 2024

Nutritional status	n	%
Thinness	5	6.3
Normal	46	58.2
Overweight	19	24.1
Obese	9	11.4
Total	79	100

Source: Primary Data 2024

Table 3 shows the frequency distribution of respondents based on their nutritional status in 2024. The majority of respondents were classified as having normal nutritional status, with 46 individuals (58.2%). This was followed by 19 respondents (24.1%) who were overweight, 9 respondents (11.4%) categorized as obese, and 5 respondents (6.3%) who were underweight (thinness). These results suggest that while more than half of the students had a normal nutritional

status, a notable proportion exhibited signs of overnutrition (overweight and obese), which may warrant attention in relation to their dietary habits and lifestyle.

Table 4. Frequency Distribution of Respondents according to Frequency of Fast Food ConsumptionHabits in 2024

Frequency of Fast Food Consumption Habits	n	%
Seldom	40	50.6
Often	39	49.4
Total	79	100

Source: Primary Data 2024

Table 4 presents the frequency distribution of respondents based on their fast food consumption habits in 2024. The data show that 40 respondents (50.6%) reported seldom consuming fast food, while 39 respondents (49.4%) reported consuming fast food often. This relatively balanced distribution indicates that fast food consumption is a common habit among the students, with nearly half of them frequently consuming such foods. These habits may have implications for their nutritional status, especially considering the high energy and low nutrient density typically associated with fast food.

Table 5. Frequency Distribution of Respondents according to Frequency of Fast Food ConsumptionHabits and Nutritional Status in 2024

Fast Food Consumption Habits	Nutritional status									
	Malnutrition		Normal nutrition		Normal nutrition		Obesity		Total	
	n	%	n	%	n	%	n	%	n	%
Seldom	4	5.1	24	30.4	9	10	3	1.4	40	50.6
Often	1	1.3	22	27.8	10	14.1	6	10	39	49.4
TOTAL	5	6.3	46	58.2	19	24.1	9	11.4	79	100

Source: Primary Data 2024

Table 5 displays the cross-tabulation between fast food consumption habits and nutritional status of respondents in 2024. Among those who seldom consumed fast food, the majority had normal nutritional status (24 respondents or 30.4%), followed by overweight (9 respondents or 10%), malnutrition (4 respondents or 5.1%), and obesity (3 respondents or 1.4%). In contrast, among respondents who often consumed fast food, most also had normal nutritional status (22 respondents or 27.8%), but a higher proportion were overweight (10 respondents or 14.1%) and obese (6 respondents or 10%), while only 1 respondent (1.3%) was underweight. These findings suggest a possible association between frequent fast food consumption and a higher tendency toward overnutrition (overweight and obesity), although normal nutritional status was still the most common across both groups. Further statistical analysis would be required to determine whether this association is significant.

DISCUSSION

Fast Food Consumption Habits

The results of the study on students at SMA Negeri 22 Surabaya, the majority of respondents were in the category of "frequent" fast food consumption with a total of 63.6%. Meanwhile, 36.4% of respondents were categorized as consuming fast food "rarely". In line with Nilsenetal's (2008) study where 69% of Indonesians consume fast food[14]. Then it is in line with the study of Astuti & Maggiolo (2014), where teenagers consume the most fast food[15]. The research is in line with the Misbahussurur study where the majority often/always consume fast food, 73 people (51%) and the minority, not often, 70 people (49%). Fast food is food that is prepared briefly[16]. Research in line with T. Syarifah Latifah Hanum et al's study stated that the majority often/always consume fast food (55.4%) and the minority sometimes, 37 people (46.6%)[16].

Fast food is popular with teenagers because of the ease of obtaining food. This is in line with Daulay & Purwati's (2020) study where fast food is preferred because of its practicality and affordability related to changes in lifestyle, life term and needs[17]. Then a study by Kristiantietal., (2016) stated that because mothers are busy, they don't have time to prepare food, so teenagers will eat fast food. Socioeconomic conditions and the practicalities of providing food and time[18]. According to (Lubis, 2019) fast food refers to food that is easy to obtain, such as fried chicken, French fries, hamburgers and others[19].

Nutritional Status of Class X Students of SMA Negeri 22 Surabaya

Nutritional status is a measure of meeting a teenager's nutritional needs as seen from their weight and height. The high nutritional needs of teenagers are due to rapid development. Every teenager hopes to have a healthy body condition to fulfill physical activities. Absorption of food energy to meet the energy intake released by the body[20].

The results of the study stated that there were 21 students with over nutritional status with a percentage of 26.6%. And there are 11 students with obesity nutritional status with a percentage of 13.9%. This is in line with the 2018 Riskesdas where the nutritional problem dominated by the group of teenagers aged 13-17 years is excess nutrition and generally occurs in urban areas.

According to the results of data analysis of class This is due to many factors, one of which is the eating habits of class X students. This figure is higher than the 2018 Riskesdas results where the normal prevalence was 14.46%[21]. According to (Sediaoetama in Mahpolah, 2008) that food that tastes delicious and has high social value will be chosen more often than food that is unattractive and is considered not to have satisfactory social value, they consume fast food because they don't want to or don't. had time to have breakfast, was lazy to eat at home but was looking for food that could fulfill his appetite[22]. According to researchers' assumptions, there is a relationship between eating patterns

and food consumption habits because eating patterns show how to fulfill a person's nutritional needs which are manifested in the form of consuming types of food, eating times and eating frequency[23–25].

In addition, it is important to acknowledge the methodological limitations of this study. As a descriptive cross-sectional study, causality cannot be established. The use of a Food Frequency Questionnaire (FFQ), although validated, depends on the accuracy of self-reported data and is subject to recall bias. Social desirability bias may also influence responses, especially on sensitive topics such as dietary behaviors. The sample size, limited to a single school in an urban setting, may restrict the generalizability of the results to other populations or settings.

Future research should consider a longitudinal approach to better understand the causal relationships between fast food consumption and nutritional outcomes. Including variables such as physical activity levels, parental influence, socioeconomic status, and screen time would provide a more comprehensive view of the determinants of adolescent nutrition. Additionally, using more objective measures of dietary intake (e.g., 24-hour recalls or food diaries) and combining them with biochemical assessments could enhance the accuracy of dietary evaluations.

In summary, the findings of this study provide important evidence on the prevalence of fast food consumption among adolescents and its potential association with nutritional status. The results emphasize the importance of promoting healthier food choices among youth and suggest that frequent consumption of fast food may contribute to overnutrition, particularly overweight and obesity. Addressing this issue requires a multisectoral approach involving schools, families, communities, and policymakers to create supportive environments for healthy eating habits among adolescents.

CONCLUSION

This study found that nearly half of the tenth-grade students at SMA Negeri 22 Surabaya frequently consumed fast food, and a notable proportion of these students exhibited signs of overnutrition, including overweight and obesity. These findings suggest a potential link between fast food consumption habits and nutritional status among adolescents. Considering the high prevalence of fast food intake and its implications on adolescent health, it is recommended that schools implement routine nutrition education programs, promote balanced eating habits, and collaborate with parents to foster a healthier food environment both at school and at home. Future studies are encouraged to use a larger and more diverse sample and incorporate longitudinal designs to better assess causal relationships.

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