

Eating Habits of Adolescents as a Risk Factor for Non Communicable Diseases During The Covid-19 Pandemic

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Abstract

Morbidity and mortality rates of non-communicable diseases are increasing and the leading cause of death in the world, including Indonesia. It is related to lifestyle changes due to modernization, urbanization, globalization, and population growth. Reduced physical activity and lockdowns required during Covid-19 Pandemic, are a complex problems that have the potential for the improper eating behaviour of adolescents and potentially resulting in increased risk of overweight obesity and also their consequences is non communicable diseases. The aim of the study was to describe the risk behaviour of non communicable diseases of adolescents during the Covid-19 pandemic. The present study was conducted using descriptive metode with a cross-sectional approach. Data collection was carried out using a online questionnaire to 390 teenagers who attended high school in the Semarang Regency. Analyses were conducted using descriptive analysis. The result showed that as many as 45,9% of adolescents had the habit of consuming sweet, 43,8% had the habit of consuming salty, 44,9% had the habit of consuming fatty foods, 30,3% had the habit of not consuming vegetables, 59% had the habit of not consuming fruit and 22,3% had the habit of consuming fast food. The Covid-19 pandemic affected the eating habits of adolescents, they are consuming unhealthy food that doesn't contain enough nutrients. This perspective The article provides a detailed description of the effects of The COVID-19 pandemic in teenagers' eating habits.

Introduction

Adolescence is a period of transition from childhood to adulthood that begins at the age of 9-10 years and ends at the age of 18 years (Arisman, 2014). Adolescence is a time when a child becomes an adult which will have an impact on the child's future. Adolescence is a period of transition from childhood to adulthood marked by puberty. Teenagers must be prepared to become quality human beings, for that it is important for teenagers to be given good nutrition. The

critical phase in the human life cycle is the adolescent age group, in this group the growth process occurs very quickly, therefore adequate nutrition is needed. Someone who had growth disorders in infancy or childhood can correct the stunted growth when they were in their teen. Monitoring nutritional problems in adolescents is important to do. Adolescents who come from low socio-economic families are very vulnerable to the risk of nutritional problems (Larson, 2021). The role of parents is very

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important in the growth of a child, Parents who successfully carry out their roles in the family are parents who have the ability to provide welfare to their children and protect them from the risk of disease, because socio-economic conditions affect the behavior patterns of parents in child care. Consequence from disadvantaged family conditions causing children not to get good nutrition (Gunarsa,2003) . Unhealthy eating habits will cause various kinds of nutritional problems in adolescents, for example, a body that is too thin or fat (Stevenson, 2007)

Changes in food consumption patterns also occur in Indonesian adolescents which can have an impact on nutritional status problems in adolescents. Based on data from Riskesdas in 2013, the prevalence of adolescents with obese nutritional status was 11.9%. According to Riskesdas data in 2013, the prevalence of central obesity in the age group over 15 years was 26.6% and in Riskesdas 2018 it increased to 31%. The prevalence of obesity also increases with age (Riskesdas,2018). The state of adolescent nutritional status is generally influenced by eating habits (Thamrin,2008). Adolescents who experience malnutrition often occur due to restrictions on food consumption or diet by not paying attention to nutritional and health needs. the consequence is that

nutritional intake in quantity and quality is not in accordance with the recommended nutritional adequacy rate.

Method

This study uses a descriptive method with a cross-sectional approach. This research was conducted in several areas of Semarang Regency. Population is a large number of subjects who have certain characteristics. The population taken is all teenagers in Semarang Regency in 2020, which amount to 5,003. The sample in this study were teenagers who attended high school in the district of Semarang. the sample is determined by quota sampling, as many as 390 respondents. Data were collected primarily by using a questionnaire distributed via google form covering gender, consumption of sweet foods, consumption of salty foods, consumption of fatty foods, consumption of vegetables, consumption of fruit, and consumption of fast food. Data analysis was carried out univariately by using a frequency distribution to describe the eating habits of adolescents during the Covid-19 pandemic.

Results and Discussion

Hypertension risk factors were measured using a google form and distributed to teenagers who attend high school in the Semarang Regency area, and here is the result:

Table 1. Frequency Distribution of Teen Eating Habits

Eating Habits	Overall N = 390		Adolescent boy (n = 116)		Adolescent girl (n = 274)	
	n	f	n	f	n	f
	1. Sweet consumption habits					
Yes*	179	45,9	65	56,0	114	41,6
No	211	54,1	51	44,0	160	58,4
2. Salty consumption habits						
Yes*	171	43,8	62	53,4	109	39,8
No	219	56,2	54	46,6	165	60,2
3. Fatty consumption habits						
Yes*	175	44,9	68	58,6	107	39,1



Eating Habits	Overall		Adolescent boy		Adolescent girl	
	N = 390		(n = 116)		(n = 274)	
	n	f	n	f	n	f
No	215	55,1	48	41,4	167	60,9
4. Fast food consumption habits						
Yes*	87	22,3	14	12,1	73	26,1
No	303	77,7	102	87,9	201	73,1
5. Veggy consumption habits						
Yes	118	30,3	34	29,3	84	30,7
No**	272	69,7	82	70,7	190	69,3
7. Fruits consumption habits						
Yes	230	59,0	80	69,0	150	54,7
No**	160	41,0	36	31,0	124	45,3

*don't regulate

**insufficient

The result showed that there are 70.3% more female respondents than male respondents. From the results of the study, it was found that as many as 45.9% of adolescents had sweet consumption habits, as many as 43.8% of adolescents have a habit of consuming salty, as many as 44.9% of adolescents have a habit of consuming fatty foods, as many as 30.3% of adolescents have a habit of not consuming vegetables, as many as 59.0% of adolescents have a habit of not consuming fruit, and as many as 22,3% of teenagers have the habit of consuming fast food. The prevalence of sweet consumption habits, salty consumption habits, fat consumption habits, fast food consumption habits, and insufficient vegetable and fruit consumption habits are 56.0%, 53.4%, 58.6%, 12.1%, 70.7%, and 31.0%, among adolescent boys, respectively: and 41.6%, 39.8%, 39.1%, 26.6%, 69.3%, and 45.3%, respectively, among adolescent girls.

During the pandemic, the general public seeking medical care were at a higher risk of infection(WHO,2020). They have encountered many stressors, including limited access to healthcare services, delayed treatments, fear of contracting COVID-19, and health concerns(WHO,

2020)(Barach,2020). A diverse and healthy diet could help to mitigate the risk of chronic diseases(ML McCllough, 2002) (WHO,2003) and improve health outcomes (Schwingshack,2018). Healthy eating and staying physically active could mitigate the susceptibility to pathogens that helps to decrease the chance of infectious respiratory diseases, including COVID-19.(Nguyen, 2021). Lifestyle changes are a factor The risk of NCD can also be described in adolescent behavior today. Adolescence who have hypertension can continue to adulthood and have a risk of morbidity and high mortality (Yuliaji 2020).

The incidence of non-communicable diseases arises from a combination of non-modifiable and modifiable risk factors. Modifiable risk factors are smoking, lack of physical activity, unhealthy diet and alcohol consumption (Khandalwal,2013). Based on previous research the nutritional status of obesity is more likely to have hypertension than those with more, normal and less nutritional status and there is a significant relationship between nutritional status and the incidence of hypertension (Yuliaji 2020). These risk factors will cause physiological changes in the



human body, so that they become risk factors, including increased blood pressure, increased blood sugar, increased blood cholesterol, and obesity (Khuwaja,2011) (Adikari,2012) (Nunes,2016). Furthermore, in a relatively long time, non-communicable diseases occur. , non-communicable diseases occurs due to unhealthy diet, lack of physical activity, active and passive smoking, and alcohol consumption. Attention to adolescents is one of the keys to the success of a successful health program. Strategies that put youth at the center will benefit adolescents and their health in adulthood. Many teenagers who consume sugar tend not to know its impact on health, they only consume the food they like, one of which is sweet food. Adolescence is a period where adolescents are at risk of gaining weight, which is characterized by changes in body, eating habits, activities, and psychological adjustments. Adolescents who are overweight or obese will have an impact on their health, emotional and social development. teenagers spend a lot of time at school, teenagers will consume more snacks that are high in sugar, because they are cheap and easy to get.

Based on result, almost half of the respondents consume salty food every day, this will certainly be a risk to their health, the consequences that quickly happens is that they are at risk of developing hypertension. Teenagers have a variety of activities and sometimes they experience a lack of fluids because they don't drink enough water. When the body is dehydrated, there is usually a tendency to want to eat salty or salty foods. Amount of salt consumed is an important determinant of the level of blood pressure and whole risk of cardiovascular (Fadilah.2019)

Based on the results of the study, there are also teenagers who consume fatty foods. Fatty foods tend to have a better taste, this is certainly very liked by teenagers. a lot of fatty foods that are very

easy for them to buy. In addition, the rapid growth of adolescents makes calorie needs also increase. That's why, they become more fond of eating. Consumption of high-calorie foods such as processed foods high in fat and sugar tends to cause obesity so it is at risk coronary heart disease and diabetes mellitus type 2 (Sri Lestari,2021) .A high prevalence of NCD risk factors among adolescents in Bangladesh, and all identified risk factors, were more common among adolescent girls than boys. Age, place of residence, paternal education, and depression were associated with having multiple risk factors among both boys and girls. Additionally, maternal education and wealth status were significantly associated with the coexistence of multiple risk factors among girls(NJ Urmy,2020).

Dietary habits that includes fruits and vegetables can lower blood pressure, reduce the risk of heart disease and cancer, and improve digestive health. When the body lacks vegetable intake, it will lose a source of fiber and complex carbohydrates. So that the body so quickly feel hungry. This condition is often experienced by teenagers, because they often feel hungry so they will eat food that is easy for them to get. The prevalence of insufficient fruit and vegetable intake identified among adolescents living in the slums was high compared with rural or non-slum urban adolescents, which is supported by the findings . Low socioeconomic conditions of the people who live in slums may prevent them from buying fruit and vegetables which may be too costly forcing them to consume readily available, inexpensive, unhealthy food (LB Rawal,2017) . It was observed in this current study that the number of adolescent girls with reportedly inadequate physical activity was almost twice the number observed among boys. This finding is consistent with the previous findings of studies conducted (MM Khan ,2108)



Children who are teenagers usually start to like junk food or fast food. The desire to eat junk food also increases when exposed to the surrounding environment. Especially if they see the advertisement on social media or television, they will be even more tempted. Fast food is food that can be served quickly, conveniently, easily accessible, and requires very little preparation. In addition, the price is relatively easy to reach for almost everyone. Usually, these foods are part of a chain of fast food restaurants. Fast food usually contains flavoring that makes it taste better on the tongue compared to healthy food. Therefore, children tend to prefer fast food to healthy foods, such as vegetables and fruit.

Conclusion and Suggestions

Adolescents eating habits that are very diverse will affect the quality of their health. The nutritional content of the food they consume also affects the risk of non-communicable diseases. Unhealthy eating habits push teens more at risk of developing non-communicable diseases. They need to control their diet starting from sweet, salty, fatty foods, and reduce fast food and also consume more vegetables and fruit every day so that their nutritional needs are maintained.

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Conflict Of Interest

The authors declare no potential conflict of interest

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