

Factors that Cause Unhealthy Eating Behavior in Generation (Gen) Z of Indonesia: a Case Study

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ABSTRACT

Students from Gen Z of Health major should already understand the impact of consuming unhealthy food. In reality, they still choose type of food that lack of nutrition. To determine the factors that cause students to consume unhealthy food. The data were collected using in-depth interviews, documentation of alumni research results, and conducting focus group discussion (FGD) with key informants and experts. Data were validated using triangulation credibility testing of sources and methods. The factors causing unhealthy eating behavior of students are the taste, aroma, price of friends' invitations and the main thing is the availability of food. The results of the research show that the factors causing unhealthy eating behavior of students are the taste, aroma, price of friends' invitations and the main thing is the availability of food. Stakeholders should continuously educate students to reduce consumption of unhealthy food by preparing campus canteens and offering healthier food.

INTRODUCTION

The increasingly rapid development of culinary businesses has an impact on students' eating habits, they tend to like trying new foods such as contemporary foods that are currently popular among them. The trend of eating together is a habit of Gen Z, they prefer junk food or fast food because it is served quickly and tastier than slow food. According to the statement, it is strongly suspected that fast food is mostly consumed by teenagers. Some of these risky eating patterns can support the increase in obesity in students. The data report in 2018 conducted by Basic Health Research by the Indonesian Ministry of Health Research and Development Agency shows that the prevalence of obesity among Indonesians were young ages aged >18 years is 21.8%. It was higher than in 2013, namely 14.3%. on the other hand, number of obesity in Gresik, Indonesia in the age group of >15 years is 34.35%, with a ratio of men 27.70% and women 36.49%. This data is exceeding the lowest standard of health in Indonesia, namely men 19.70% and women 32.90%. Students who are registered and studying at certain universities are called students, if they refer to the age classification issued by the Ministry of Health, students fall into the category of late adolescence, aged 17-25 years, and when viewed from the age group of generational theory, including Generation (Gen) Z are those born in 1997–2012.

Adolescents are an age group that is vulnerable to changes, one of which is changes in eating behavior, which can lead to healthy eating behavior or unhealthy eating behavior. Unhealthy food is often called junk food, because it contains a lot of fat, is low in fiber, contains lots of salt, sugar, additives and is high in calories but low in nutrients, vitamins and minerals. The characteristics of unhealthy food, quoted from The American Heart Association, are:

1. Foods that are processed too much can make food deficient in vitamins and minerals;
2. Thigh in calories but low in nutrients;
3. High in salt and sugar;
4. High in saturated fat and trans fat, usually due to frying.

Changes in eating behavior, according to is caused by a lack of time to eat due to busy lecture schedules, limited healthy food available, expensive prices resulting in high levels of fast food consumption, insufficient intake of vegetables and fruit, missed breakfast time. Suharjo in family income, peers and nutritional knowledge. Starting from conditions like the description above, this study has a purpose to explore the factors that cause students who should be role models for healthy eating behavior, but fast food and junk food are the main choices. The results of the research are expected to provide information for students who still have unhealthy eating behavior to switch and support and campaign for healthy eating behavior to the campus and off-campus community.

LITERATURE REVIEW

The increasingly rapid development of culinary businesses has an impact on students' eating habits, they tend to like trying new foods such as contemporary foods that are currently popular among them. The trend of eating together is a habit of Gen Z, they prefer junk food or fast food because it is served quickly and tastier than slow food. Adolescents are an age group that is vulnerable to changes, one of which is changes in eating behavior, which can lead to healthy eating behavior or unhealthy eating behavior. Unhealthy food is often called junk food, because it contains a lot of fat, is low in fiber, contains lots of salt, sugar, additives and is high in calories but low in nutrients, vitamins and minerals.

METHODOLOGY

This study used method of case studies, strategies appropriately uses how or why questions, requires little time to control the event being studied, focuses on contemporary phenomena. Referring to the health research perspective, The focus of this research is Retrospective Case Study, that is regarding deviations from reasonable curative nature that allow for follow-up or improvement of the case. A preliminary interview is conducted to students of the Nutrition Science, Pharmacy and Public Health Study Program of 3rd and 5th semesters. Total of students who were being given preliminary interview were 184 students. The questions given were related to how to choose food and why to choose fast food.

In this study, the informants as sources of data were nutrition practitioners (experts) as key informants, 6 students of faculty of health in administrators of the student Association as the main informants, lecturers in the Nutrition study program and 2 alumni are supporting informants. This study was carried out in September – October 2023. Primary data was obtained from two activities, first, which was initial research, namely observation and interviews as described in the previous chapter, second, in-depth interviews or In Depth Interviews (IDIs) were conducted with students who were recruited as informants. participate voluntarily, showing a proactive interest in sharing experiences, opinions, practices and time. In Depth Interviews (IDIs) are semi-structured interviews, it takes around 45–60 minutes for each informant, and 90–120 minutes to conduct an FGD. Archiving of IDIs results verbatim is carried out for all IDIs and FGDs, in order to obtain valid data. To obtain data in accordance with the problem solving needs in this research, IDIs were carried out to the Main Informant, by compiling a list of questions based on appropriate groups of variables. main aspects relevant to the research objectives. Based on the description above, the grouping of factors that cause F.Kes students' eating behavior can be described as follows:

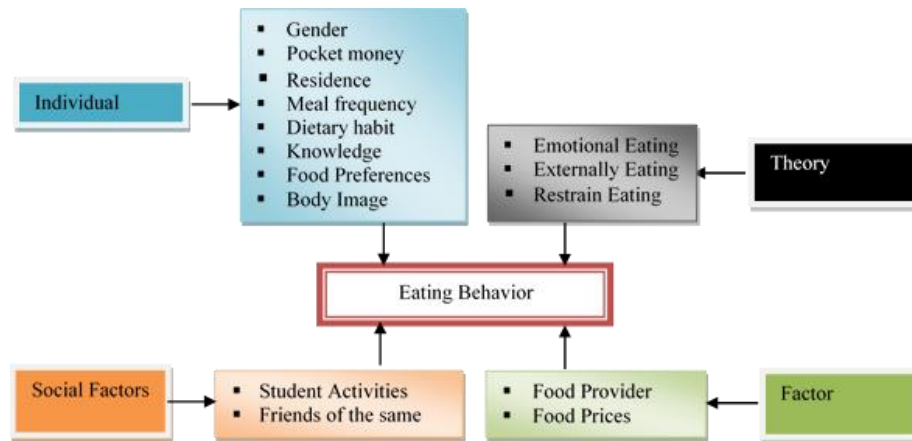


Figure 1. Grouping of Data on Factors Related to Gen Z's Eating Behavior

Source: Previous study conducted by

RESEARCH RESULT

Individual Factors

Table.1 Socio-demographic characteristics of participants (IDI: n = 6, FGD: n = 6)

Characteristics	Method	
	IDI (n = 6)	FGDs (n = 6)
Informant:		
Key		1
Main	6	
Supporter		5
Study program		
Science of nutrition	1	
Nursing Science	1	
Public Health Science	1	
Midwifery Science	1	
Medical Laboratory Technology	1	
Diploma in Pharmacy	1	
Academic year		
Second year	1	
Third year	5	
Residence		
With parents	3	

Boarding house	2	
With relatives	1	
Gender		
Woman	5	5
Man	1	1
Pocket money		
≥ Rp. 1,000,000.00	3	
< Rp. 1,000,000.00	3	

From socio-demographic characteristics, the data shows that pocket money received from parents varies in amount, those who live with their parents < Rp. 1,000,000.00; those who board and live far from their parents ≥ Rp. 1,000,000.00.

Table.2 Eating Frequency and Pattern of Students

Type of meals	Subject	Sources	Common items	Availability (time)	Reason for food choices
Breakfast	Informants 1 and 2	At home	Rice with side dishes, vegetables, mineral water	6.30 – 8.30	prepared by parents
	Informant 4				Cook it yourself according to your taste
	Informant 3	On campus	Batagor, Fried		Available on campus and at low prices
	Informant 6	On Line Food	Bread with jam and milk,		Easy to fill and easy to order
	Informant 5	Didn't eat breakfast			There was no food available because

					we left too early
Have lunch	Informant 4	Provisions from home	Rice, side dishes, varied vegetables, sometimes fruit, according to needs,	11.00-14.00	Cook it yourself according to your taste
	Informants 1 and 2	On campus	Rice, side dishes, varied vegetables		Choose healthy food that is near campus
	Informants 3 and 5		pentol/ chicken noodles/ Gado-gado/ chicken penyetan/ sempol/ meatballs/ batagor/ korean pentol		Available around campus, no long wait, cheap price
	Informant 6	Online food	Seblak / modern noodles / fried chicken / dumplings Bread and snacks		Easy to order, came quickly
	Informants 1-6	On campus	Sugarcane ice/orange juice/poci iced tea/ice cream/mineral water		Available around campus, easy to get
Dinner	Informants 1, 2, 5, 6	At home	Rice, side dishes, varied vegetables	17.00-19.00	Prepared by parents, eat with family

	Informant 4		Rice, side dishes, varied vegetables		Cook it yourself according to your taste
	Informant 3	Outside the house	Contemporary noodles / fried chicken / Korean food		It's trendy and you can hang out with friends
Snacks	Informants 1 to 6	At home/boarding house	Snacks made by mother/tasty snacks/a variety of chips and instant noodles	Until 3 hours before bed	Snacks as a companion for doing college assignments

The majority of students consume food 3 times a day, breakfast, lunch and evening. Those who live with their families, and are boarders but can cook for themselves. Students live in boarding eat breakfast from a shop around campus. The food menu is according to their wishes, scheduled at 6.30–8.30. on the other hand, there were also students who don't eat breakfast for the reason of maintaining their body shape so they don't get fat, there are also those who say they are not used to it. One of the informants brought lunch from home. Meanwhile, others eat at food stalls around campus, the reasons are practical, save time, served quickly, and not be late following the lecture schedule after midday prayers. From the six informants, only 1 person did not provide snacks for the funeral, namely an informant from the Nutrition Science Study Program. Most of them kept snacks or instant noodles at home to accompany their studies, however, all informants stated that they would stop eating ≥ 3 hours before bed. Most of the students have not fully implemented the recommendation of 3 main meals a day.

Table.3 Appropriate Eating Times According to Nutritionists

Eat	Morning	Intermezzo	Afternoon	Intermezzo	Evening
Portion of Calorie Requirements	20%	10-15%	30%	10-15%	20%
Time	06.00-07.00	10.00	13.00-14.00	16.00	19.00

Table 3 showed that some of the students eat on the evening for the reason of encouraging them while doing their tasks. To ensure that the data from the Main Informant and Key Informant interviews are compatible, it is necessary to compare the results of the two interviews, through source triangulation. The description of the triangulation of sources in this research is as shown in the following chart:

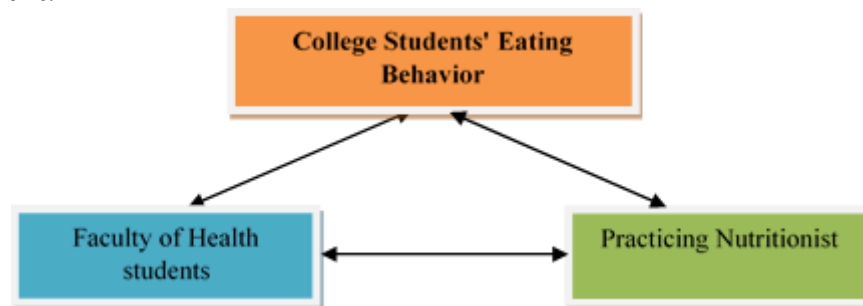


Figure.2 Source Triangulation

Source: Arranged by authors

The majority of Key Informants do not consider nutritional value when consuming unhealthy food, the reason is that the food is available on campus, so there is no other choice, considering the busy lecture schedule. One of the main informants said at the IDIs: *"Yes, I like fast food because it's easy to get, it tastes delicious, it makes me addicted, I don't need to take into account the nutritional value, however, I really understand when there is a choice offered, then I will choose white rice, fried chicken, vegetable soup and mineral water"* (A 3rd year female student).

There was also 1 informant who had a different opinion during IDIs: *"I like fast food, because of the taste, price and uniqueness, but if there is a choice of grilled chicken, fried chicken or chicken seasoned with soy sauce and rawon, I will choose rawon, because rawon is a traditional dish and the color is very beautiful"* (A 3rd year female student). Relating to body image, which is the final part of the individual factors. All main informants have a good assessment of their bodies because they perceive that they already have an ideal body weight so there is nothing to worry about. One of the informants even stated during the IDIs: *"I'm not worried about the shape of my body which is good and ideal, to maintain it I exercise up and down the stairs"* (3rd year students).

Social Factors

"When I'm with friends, I often eat fast food while chatting about anything and doing activities together." (3rd year female students). The main informant's statement was corroborated by the key informant's statement during the FGDs: *"There are several factors that influence this, including purchasing power, environmental factors (access, friendship groups), mass media (promotions, curiosity because it goes viral, etc.)"* (Key Informant)

Environmental factor

Food availability and affordability are sub-factors of environmental factors, which are factors that cause students' eating behavior. All Key Informants stated that fast food is affordable and widely available so it is easier to get and choose. This trend is often found among students, especially while on campus food stalls mostly provide fast food. So while on campus there is no other choice except cheap fast food, this is the cause of students' unhealthy eating behavior. Apart from that, a busy lecture schedule seems difficult if you have to leave the campus environment. Considering the unavailability of healthy food on campus. One of the participants told a story at IDIs: *"We prefer fast food because the prices are cheap and affordable, according to students' pockets, because it tastes delicious, it's not available at home, so we have to buy it outside, only that type of food is available around campus."* (3rd year female students)

According to the key informant's opinion during the discussion, almost all of the key informant's statements were justified: *"Students may consume this food for practical reasons, it is easy to get in the campus area, it can be easily accessed via delivery orders which are ready to be delivered at any time, and the price is cheaper or it can also just follow the trend."* (Key Informant in FGDs)

Factors Related to Eating Behavior Theory

In this section, researchers compare the results of IDIs with the perspective of relevant eating behavior theory, namely Van Strein's Theory, consisting of external eating, emotional eating and restraint [10]. The activity in question is theoretical triangulation which is carried out to avoid bias in the findings produced. Triangulation Theory is described as follows:

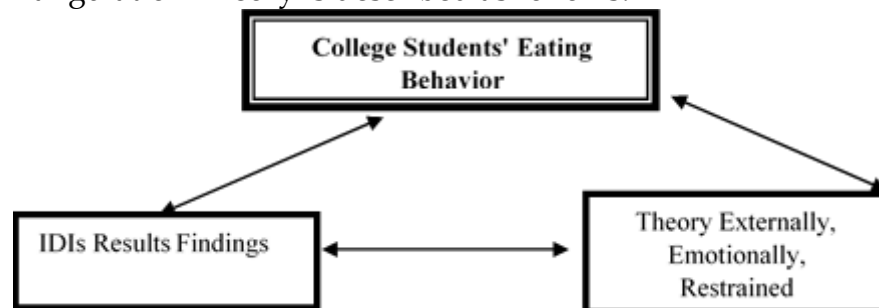


Figure 3. Triangulation Theory

Source: Arranged by authors

External Eating

Almost all informants stated that they want to eat and even eat immediately if there is delicious food, and find it difficult to refuse if delicious food is offered, as well as the aroma of food making them want to eat, even before hunger comes. In IDIs all Main Informants stated: *"I immediately want to eat when I see food that we think is delicious, and if I have that food I will definitely eat it immediately, even though I don't feel hungry yet."* Externally eating explains that individuals want to eat because they respond to stimulation from the food itself which includes the appearance, aroma and taste of the food, regardless of the state of hunger or fullness.

Emotional Eating

A small percentage of informants want to eat when they are busy doing assignments and are in an upset mood. "*I usually consume more food when I feel stressed because there are a lot of lecture assignments and I feel difficult.*" Every individual has certainly felt that he wants to eat, not because of hunger but for emotional or social reasons (Woolfolk, S. et al, 2017).

Restrained Eating

Almost all informants stated that: "*My body shape is ideal, I maintain it by doing activities and also exercising*". Restrained theory explained eating behavior in individuals with obesity, to otherwise healthy individuals who are restraining their food intake.

DISCUSSION

Based on the result above, it can be said that students need to manage their finances because apart from studying for college and also for food needs, food needs must be adjusted to purchasing power. Their purchasing power was one of reason of their eating habit. The result also showed that a small number of students skipped breakfast for the reason of maintaining their weight and there was no food available because they left too early, almost all of them consumed snacks in the morning. Students rarely consume complete foods (carbohydrates, protein, fat, vitamins and minerals) that are balanced. They choose to consume unhealthy foods made from wheat flour. According to, excessive use of wheat flour will cause health problems, namely damage to the small intestine, resulting in impaired absorption of nutrients in the body. The glycemic load contained in wheat flour is 70, which if consumed continuously will increase blood sugar levels. Because it has an adverse impact on health, the use of wheat flour must be reduced.

The analysis shows that students who prepare their own lunch from home bring healthy food, namely rice, side dishes, vegetables and fruit. Meanwhile for students who eat lunch on campus, the food they consume is what is available around campus. most of the traders around campus tend to provide food that is classified as unhealthy food, fatty food, fried using a lot of oil and used many times. The food consumed by students is inversely proportional to the characteristics of healthy food. The results above also showed that most students tend to consume fried food, because what is available around campus is mostly fried food, even with oil that is used repeatedly. A study conducted by states that consumption of fried foods is associated with a high risk of Coronary Heart Disease. Moreover, another aspect that is considered the people consumed by students unhealthy was those food use plastic and put food in hot condition. The higher the heat level when food is placed in plastic, the faster chemical, biochemical and microbiological decomposition will occur. Plastic should be used for cold materials.

Apart from taste and aroma being the reason why students choose to consume unhealthy food, the availability of food around campus is also a factor causing unhealthy eating behavior, because only the types of food provided by stalls around campus are classified as unhealthy food, so there are limitations for students in choose healthier foods. In line with research (Berliandila & Hakim, 2021) stated that most students understand the importance of nutritional knowledge and eating behavior, but many people still do not implement healthy eating behavior by consuming nutritious food to meet daily calorie needs. Furthermore, the findings showed that peers have an influence on food choices caused by students' busy schedules during the day when they are on campus often resulting in students having meal times. which is not regular, especially if the individual is not good at managing time for themselves, most of them prefer practical and fast food. According to, a teenager's activities outside the home are often influenced by their peers. Food selection is no longer based on nutritional content, but more on socializing for fun and so as not to lose status. In adolescents, the influence of groups or peers is more prominent than family

The result also showed that there was a tendency to eat immediately from students if they see food that they think is delicious or smell good, especially fast food types. External aspects of eating behavior, related to factors arising from the food itself, for example aroma, taste and appearan. Increased food intake due to food stimulation, namely the sight, smell and taste of food regardless of hunger and fullness. Some students will also eat more than usual if they are stressed about facing lecture assignments that they think are a lot or difficult. There is an individual's desire to eat which is not caused by hunger but is triggered by internal emotional conditions such as depression or worry. Meanwhile, none of the students have restrained eating behavior because all students perceive that their body size is proportional and ideal.

CONCLUSIONS AND RECOMMENDATIONS

From the research results, it was found that these factors were divided into four groups, namely individual, social, environmental factors. Moreover, results above indicated that there were problems with the eating behavior of health faculty students who prefer fast food. However, this problem is considered normal, because it has become a trend for Generation Z. Because it is something that is normal, this problem is not a focus in everyday life and is often a neglected problem. Overall, the factor consists of fifteen sub-factors, from the data findings of the sub-factor, frequency of eating, it has not been fully implemented according to the advice of nutritionists. It was proven that snack food consumption is done at night for the reason of accompanying study time, the knowledge sub-factor has not been fully implemented, it is proven that students still choose food unhealthy even though you already understand the impact of consuming unhealthy food continuously. The eating behavior of students prefers fast food or junk food over healthy food because the healthy food offer is only offered once a month by the Students Association of Nutrition Entrepreneurship Division.

This study suggested that stakeholders should continuously educate students to reduce consumption of junk food or unhealthy food by preparing campus canteens and offering healthier food. Thus, the Entrepreneurship Division of the Nutrition Student Association, which offers healthy food once a month, should develop its business so that it can contribute by preparing healthy types of food every day. At least it is prepared for student lunch while on campus. while also supporting the campaign for healthy food to campus and off-campus communities

ADVANCED RESEARCH

Still conducting further research to find out more about the factors that cause unhealthy eating behavior in Indonesia's Generation (Gen) Z: Case Study

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REFERENCES

- Arjadi F, Kurniawan DW, Wibowo Y, et al. No acute toxicity tests of *Purwoceng* (*Pimpinella pruatjan* Molk.) ethanolic extract on male albino rat by determined hepatorenal function test and histopathology. *Molekul* 2019; 14: 117-125.
- Bumbac R, Bobe M, Procopie R, et al. How zoomers' eating habits should be considered in shaping the food system for 2030 – A case study on the young generation from Romania. *Sustainability* 2020; 12: 7390.
- Chang Y-C, Chiang J-H, Lay I-S, et al. Increased Risk of Coronary Artery Disease in People with a Previous Diagnosis of Carpal Tunnel Syndrome: A Nationwide Retrospective Population-Based Case-Control Study. *Biomed Res Int*; 2019.
- Fatikhani DA, Setiawan A. The relationship between the level of knowledge regarding fast food and the dietary habits among adolescents in Jakarta, Indonesia. *Enfermería Clínica*.

- Jackson P, Romo MM, Castillo MA, et al. Junk food consumption and child nutrition. Nutritional anthropological analysis. *Rev Med Chil* 2004; 132: 1235-1242.
- Jung E. Campaigning for all Indonesians: The politics of healthcare in Indonesia. *Contemp Southeast Asia* 2016; 476-494.
- Kusmiyati F, Lukiwati DR, Kristanto BA, et al. Glycemic index of ten commercially Indonesian rice cultivars. In: *IOP Conference Series: Earth and Environmental Science*. IOP Publishing, 2019, p. 12028.
- Kymäläinen T, Seisto A, Malila R. Generation Z food waste, diet and consumption habits: A Finnish social design study with future consumers. *Sustainability* 2021; 13: 2124.
- Mafruchati M, Ismail WIW, Wardhana AK, et al. Bibliometric analysis of veterinary medicine on embryo of animals in textbook in conceptualizing disease and health. *Heliyon*.
- Ono E, Inoue J, Hashidume T, et al. Anti-obesity and anti-hyperglycemic effects of the dietary citrus limonoid nomilin in mice fed a high-fat diet. *Biochem Biophys Res Commun* 2011; 410: 677-681.
- Phanprasit W, Songpek K, Boonyayothin V, et al. Inhalation and dermal exposure to toluene among printing workers in a plastic bag factory. *J Heal Res* 2019; 33: 68-79.
- Pratiwi AC, Wardhana AK, Rusgianto S. Application of Vector Error Correction Model on Macroeconomic Variables toward Changes in the Composite Stock Price Index. *Daengku J Humanit Soc Sci Innov* 2022; 2: 219-229.
- Ryandono MNH, Mawardi I, Rani LN, et al. Trends of research topics related to Halal meat as a commodity between Scopus and Web of Science: A systematic review. *F1000Research* 2022; 11: 1562.

- Pudjo H, Lestari SB, Ayun PQ. The Meaning of Digital Media Content for Teenagers and the Role of Parents Assistance. In: 3rd International Conference on Indonesian Social & Political Enquiries (ICISPE 2018). Atlantis Press, 2019.
- Silberman M, Moreno-Altamirano L, Hernández-Montoya D, et al. Dietary patterns, overweight and obesity from 1961 to 2011 in the socioeconomic and political context of Argentina. *Int J Food Sci Nutr* 2017; 68: 104–116.
- Sitoayu L, Purwara Dewanti L, Melani V, et al. Differences in Eating Habits, Stress, and Weight Changes Among Indonesian Generations Y and Z Students During the COVID-19 Pandemic. *J Res Heal* 2023; 13: 79–86.
- Wardhana AK. JANJI (WA'AD) SEBAGAI JARING PENGAMAN PADA TRANSAKSI KEUANGAN DAN BISNIS SYARIAH. *J Keislam* 2022; 5: 124–132.
- Xing Q, Xing X, Zhang Z, et al. A comparative study of the nutritional values, volatiles compounds, and sensory qualities of pea pastes cooked in iron pot and clay pot. *J Food Process Preserv* 2018; 42: e13328.