
THE IMPACT OF JUNK FOOD EATING HABITS ON BODY WEIGHT

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Abstract: *Fast food is food that can be prepared and served very quickly. Junk food refers to fast food that contains refined sugar, white flour, trans fat, salt, high unsaturated fat and many food additives such as monosodium glutamate (MSG) and tartrazine, as well as less protein, vitamins and fiber. This study used qualitative research methods. Data collection techniques are carried out by literature study. The data that has been collected is then analyzed through three stages, namely data reduction, data presentation and conclusions. The results showed that junk food such as burgers, French fries, pizza, grilled or fried chicken and chips generally contain a lot of saturated fat. Consumption of junk food has several impacts on health, one of which can lead to increased body weight or obesity. Since the 21st century, obesity has been referred to as a global pandemic because its spread from teenagers to adults due to junk food has been proven. The affordability, taste, accessibility, and variety of junk food on the market are key factors contributing to the impact it has on health.*

Keywords: *Fast Food, Junk Food, Body Weight, Obesity*

INTRODUCTION

Food is any material we eat or take into the body that makes up or replaces body tissues, provides energy, or regulates all the processes in the body (Badan Pengembangan dan Pembinaan Bahasa, 2016). Nutrients are chemicals that the body needs to maintain basic functions and are optimally obtained by eating a balanced diet. There are six main classes of nutrients essential for human health: carbohydrates, lipids, proteins, vitamins, minerals and water. Carbohydrates, lipids and proteins are considered macronutrients and serve as energy sources (Morris & Mohiuddin, 2023). Nutrients function to provide energy, build and repair structures and tissues and regulate the body's metabolism to maintain homeostatic balance (Ann, 2015).

When excessive energy intake is accompanied by low physical activity, it will lead to weight gain and can increase the risk of health problems, such as obesity (Ann, 2015). Obesity, sometimes also called overweight, is an abnormal accumulation of body fat-usually 20% or more above a person's ideal body weight. One is considered overweight if one's body mass index (BMI) is between 25 and 29 (Santosh et al, 2020) and one is considered obese if the BMI is more than 30. Obesity can severely impair one's daily functioning, and it is associated with an increased risk of disease, disability and even death (Carson & Davidson, 2020). Since the 21st century, obesity has been referred to as a global pandemic as its spread from adolescents to adults due to fast food has been proven (Begum et al, 2023).

The term fast food was introduced by Merriam Webster in 1951. According to Merriam Webster, fast food is the term given to food that can be prepared and served very quickly. Typically, this means any food that is sold in restaurants with a short preparation time and can be given to customers to take away (Meena et al, 2023). Fast food is also known to the public as junk food (Kementerian Kesehatan, 2023).

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Junk food refers to fast food, which is easy to make and easy to consume. It is low in nutritional value and contains only fats that cause adverse effects on one's health (Kaur, 2019). The term junk food was coined by Michael Jacobson, director of the science center in 1972 for the public interest who wanted to bring public attention to the problem of foods with high caloric value and low nutritional value (Santosh et al, 2020).

According to the National Institute of Nutrition (NIN), junk food is classified as food products that are high in salt, sugar, fat and energy (calories) and contain little or no protein, vitamins or minerals (Amer et al, 2022). 10 Examples of junk food are fried fast food, salty snacks, sweet desserts, chewing gum and bread. Many foods such as hamburgers, pizza and tacos can be considered healthy or junk food depending on their ingredients and preparation methods (Santosh et al, 2020).

MATERIALS AND METHODS

This type of research is qualitative research. According to (Sugiyono, 2018) qualitative research methods are research methods based on philosophies used to research on scientific conditions (experiments) where researchers are instruments, data collection techniques and qualitative analysis emphasize more on meaning.

Data Collection Methods

The data collection technique in this research was carried out by literature study. Literature study is a technique for collecting data and information through reading literature or written sources such as books, previous research, papers, journals, articles, report results and magazines related to research (Sari & Asmendri, 2020).

Data Analysis Method

The data that has been collected is then analyzed in three stages, namely data reduction, data presentation and conclusion drawing. Regarding these three flows in more detail are as follows (Huberman & Milles, 2002):

1. Data Reduction

Data reduction is defined as the process of selecting, focusing on simplifying, abstracting, and transforming rough data that emerges from written notes in the field.

2. Data Presentation

Miles & Huberman limit a presentation as a set of organized information that gives the possibility of drawing conclusions and taking action. They believe that better presentations are a primary means of valid qualitative analysis, which include: various types of matrices, graphs, networks and charts.

3. Conclusion Drawing

Drawing conclusions according to Miles & Huberman is only part of an activity of a whole configuration. Conclusions are also verified throughout the research. Verification may be as brief as a thought that passes through the analyzer's (researcher's) mind as she writes, a review of field notes, or it may be as thorough and labor-intensive as revisiting and brainstorming among peers to develop intersubjective agreement or as extensive as efforts to place a copy of a finding within another set of data. In short, the meanings that emerge from other data must be tested for truth, robustness, and fit, which is validity.

RESULTS AND DISCUSSION

Junk food is defined as food that is readily available, usually cheap and lacking in nutritional value. It contains more calories, more salt, has a high saturated fat content and contains less iron, calcium and fiber (Bohara et al, 2021). Junk food is known to have adverse health effects if consumed continuously and in large quantities (Gupta et al, 2019). It is called junk food because of its high content of refined sugar, white flour, trans and unsaturated fats, salt, and many food additives such as

monosodium glutamate and tartazine; at the same time, it lacks protein, vitamins, essential minerals, fiber, among other healthy nutrients. These foods have few vitamin and mineral-producing enzymes and but contain high levels of calories. Foods that are high in fat, sodium and/or sugar and provide high calories but no useful value are commonly known as junk food. On the other hand, junk food is easy to carry, buy and consume. Generally, junk food is given a very attractive appearance by adding food additives and colorings to enhance flavor, texture and to prolong shelf life (Naseer, 2019).

1. The problem of eating junk food

Increased fat

Junk food such as burgers, fries, pizza, grilled or fried chicken and chips generally contain a lot of saturated fat. Excess saturated fat in the diet will make a person gain fat and overweight which is harmful to heart health and causes other infections (Hassan et al, 2020; Yarimoglu et al, 2019).

Increased salt content

Junk food usually has more salt content. Nowadays, many foods contain excess salt such as bread and oats. So individuals get more salt than they need when they eat junk food. Excess salt content is not good for health (Hassan et al, 2020).

Increased sugar content

Sodas, cereals, rolls, chocolates, cakes, biscuits and lollipops also contain a lot of sugar which makes them taste good to consume, but excess sugar can make a person fat, damage teeth, is not good for the blood, and can cause other diseases. Junk food has some beneficial things that the body needs for good health because the body needs salt, fat, and sugar which can be consumed as a source of energy while we play and work. However, excess consumption of fat, salt and sugar is not good for health. Scientists have shown that junk food can cause dyslexia, ADHD (Attention Deficit/Hyperactivity Disorder), moreover, possibly chemical imbalance (Hassan et al, 2020; Yarimoglu et al, 2019).

2. Reasons for choosing to eat junk food

Time factor

Some people do not have the time to cook, so junk food is a quick and easy alternative that is ready for consumption in a short time. Junk food such as wafers, potatoes and chips do not need to be cooked or heated. People like to eat them while watching television, saving time and energy (Mini & Malik, 2022).

Taste factor

If the time factor is one of the reasons why people choose to eat junk food, so is the flavor factor because junk food has a good taste. This flavor comes from the excessive use of oil, salt and/or sugar (Bedi et al, 2021).

Attractiveness

The packaging of junk food has a very attractive appearance by adding additives and food coloring in addition to enhancing the taste.

Shelf life

Junk food has a long shelf life and most items such as chips and wafers do not need to be refrigerated (Mini & Malik, 2022).

Advertising factor

Advertising plays a big role in attracting people, especially children and teenagers, to junk food stores (Monir & Islam, 2020).

3. The impact of eating junk food

Eating junk food has an impact or danger to the body.

- a. Most junk food has poor nutritional quality due to its high carbohydrate and fat content. Most junk food is high in sugar or salt as well. On the other hand, junk food is low in protein, vitamins, minerals and other micronutrients. This nutritionally unbalanced diet often leads to rapid weight gain and obesity. As the intake continues over a longer duration, it can affect the body's lipid profile predisposing it to more severe diseases such as diabetes, heart disease and high blood pressure.
- b. Several additives are used in ultra-processed foods that may also increase the risk of cancer.
- c. Microbial contamination due to poor hygiene can lead to gastrointestinal infections such as diarrhea, typhoid and hepatitis.
- d. High sugar content of junk food and beverages can cause dental caries.
- e. Food additives and colorings can cause allergies.
- f. Caffeinated beverages cause increased heart rate and sometimes abnormal heartbeat rhythms.
- g. Excessive consumption of caffeinated beverages can cause psychiatric disorders and sleep disturbances (Bedi et al, 2021).

The following is a list of junk food and related components that demonstrate their impact on health (Singh et al, 2021).

Table 1. List of Junk Food and Related Components

Types of Junk Food	Component	Impact on health
Fish sauce, soy sauce	Monosodium glutamate	Overweight, Brain lesions, obesity, diabetes, neurotoxic effects, endocrine disorders
Sugary sodas, canned drinks	High Fructose Corn Syrup	Weight and Diabetes, Hypertension, atherosclerosis, coronary heart disease, vascular resistance in the kidney
Margarine, French fries, donuts, cakes, ice cream	Trans fat	Increased Inflammatory markers (Cardiac Risk), T2DM, cancer and diabetes, cardiovascular disease
Bread, Bagels, flour bleaching agents and dough conditioners.	Azodicarbonamide	Asthma, carcinogenicit
Burgers and sandwiches, Bread	Fluoroalkyl per/poly substances	Breast cancer, fertility, weak immune system,
Soda, flavored water, processed cheese, chicken nuggets	Phosphate additives	Kidney disease, Bone problems
Mayonnaise, roast pork	Propyl gallate	Reproductive toxicity, testicular toxicity, abnormal implantation and placental development.
Instant burger	Phthalates	Induces reproductive toxicity to gonadal development and reproductive ability of environmental organisms.
Processed red meat	Sodium nitrite	Stomach cancer, T1DM, kidney inflammation and oxidative stress
Canned foods, polycarbonate tableware, food storage containers, water bottles and baby bottles.	Bisphenols	Reproductive toxicity, cardiotoxicity and endocrine disrupting toxicity, Delayed bone development, Hepatotoxicity.

Impact of excess junk food consumption on body weight

Excess consumption of junk food has been associated with various health problems including obesity (Thompson et al, 2018). Consumption of junk food has a significant contribution to the occurrence of obesity in a person (Singh et al, 2021).

Large amounts of junk food consumption have an impact on metabolism. All the chemical processes that happen within our bodies are referred to as the metabolism. It is closely related to the number of calories expended each day. Junk food slows down the body's metabolism and reduces the amount of calories it burns, which makes it challenging to maintain a healthy weight. The energy required to metabolize food is termed the thermic effect of food. Due to the high content of refined carbohydrates and partially hydrogenated oils in junk food, it needs less energy

from the body to digest. As a result, eating a high amount of junk food with high glucose-salt fat content causes the body to deposit more fat. Insulin resistance is closely correlated with extra fat accumulation around abdominal organs. According to a long-term prospective study, there is a clear correlation between junk food consumption, body weight, and insulin resistance, which also enhances the likelihood of developing type 2 diabetes (Begum et al., 2023).

Increased intake of foods containing saturated fat leads to reduced use of fat as metabolic fuel. With the consumption of more energy sources than energy expended, fat storage increases and leads to obesity. Insulin is a hormone produced in the beta cells of the pancreas and secreted according to the level of adiposity. Similar to leptin, insulin levels correlate with the amount of abdominal fat. The hormone insulin will be transported to the brain where it acts to reduce food intake and body weight. High insulin resistance is characteristic of obesity, hypertension, and diabetes mellitus. With fat consumption, insulin secretion increases. Insulin stimulates fatty acid synthesis, by catalyzing enzymes involved in lipogenesis (Acetyl CoA Carboxylase and Lipoprotein Lipase) leading to retention of triglycerides in adipose tissue and weight gain (Kuang, 2008).

Based on an experimental investigation, junk food may cause obesity in women by interfering with the hormonal processes that control hunger and appetite. Junk food includes free fatty acids, which are produced from adipocytes and are associated with lipotoxicity, and the enhancement of IR. Adiponectin, a hormone generated from adipose tissue, improves insulin sensitivity. In comparison to individuals with normal BMI, obese people secrete less adiponectin. Adipocytes, generally alluded to as lipocytes or fat cells, produce a number of cytokines that trigger insulin resistance (Begum et al., 2023).

The frequency of overweight and obesity in younger generations is growing as the variety of junk food increases. This contributes to increased complications and public health risks. The affordability, taste, accessibility and variety of junk food in the market are key factors contributing to this rise. However, these are not the only causes of obesity; there are other lifestyle choices that also have an impact. A study conducted by medical and science students reported that 67.4% of women, 21% of whom were obese, consumed fast food daily (Begum et al., 2023).

High consumption of junk food contributed to overweight in school-aged children in India from 9.7% to 13.9% over a decade. Potential adverse effects on weight status in younger populations include physical inactivity and unhealthy eating habits and consequently future adult health. High intake of fried foods and artificially sweetened beverages were found to be directly associated with high body mass index and obesity in children (Singh et al., 2021).

CONCLUSION

Consuming junk food in excess can lead to various health problems, due to its unbalanced nutritional content. The habit of consuming junk food continues to increase, especially in the younger generation. Junk food is also an option in this modern era because there are several factors that can attract people's attention, especially in children and adolescents. The problem that is often found in consuming excessive junk food is that overweight or obesity can occur in children and adolescents, which can result in health problems in the future.

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