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# Impact Of Junk Food On Human Health

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**Abstract**

Quick and simple to make and consume, fast food is the quintessential example of junk food. They are detrimental to the health of customers due to the fact that they do not include any nutritious value and just contain fat that is basically sitting about. The consumption of junk food is a handy and unplanned snack choice for persons who do not have the time to prepare meals or even when they do not have much time to prepare meals. In addition to giving them a delightful flavour, the components that are used in junk food are what make them so addictive. The combination of sugar and fat may cause a surge of intense pleasure to be produced by dopamine, which can be experienced by those who are prone to engaging in addictive behaviours. On the other hand, it is essential to keep in mind that they are detrimental to your health. Consuming foods that are rich in fat, such as those that are high in cholesterol, sugar, and salt, may have adverse effects on one's health. Consuming an excessive amount of sugar is linked to an increased likelihood of becoming overweight or obese. In addition to providing the growing brain with the building blocks it needs, eating during the formative period has long-term repercussions. For the purpose of promoting the physical and mental well-being of students, it is of the utmost importance that the government, health professionals, and educators collaborate in order to increase students' awareness of the need of feeding themselves a diet that is well-balanced.

***Keywords:*** *Junk; Food; Human Health*

## 1. Introduction

Quick and simple to make and consume, fast food is the quintessential example of junk food. They are detrimental to the health of customers due to the fact that they do not include any nutritious value and just contain fat that is basically sitting about. Michael Jacobson, who was the director of the Centre for Science at the time, coined the term "junk food" in 1972 with the intention of drawing the attention of the general public to the issue of meals that are rich in calories but possess a low nutritious value. Monosodium glutamate (MSG) and tartrazine are two examples of food additives that are often found in junk food. This kind of food is devoid of protein, fibre, and vitamins, and it also has a high concentration of refined sugar, white flour, trans fat, polyunsaturated fat, salt, and a variety of other components.

### 1.1 Problems associated with junk food:

- **High fat content:** Common examples of junk food are burgers, pizza, fried chicken, and chips, all of which are often rich in saturated fat. Another example is fried chicken. Consuming an excessive amount of

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saturated fat may result in weight gain, which in turn raises the risk of cardiovascular disease as well as other health issues.

- **High salt content:** A typical kind of junk food is overly salted. Bread, breakfast cereals, and biscuits are examples of foods that already contain a significant amount of salt. It is for this reason that junk food is a typical source of excessive salt, which is detrimental to the health of individuals.
- **High sugar content:** Sugar is used to improve the flavour of a wide variety of foods, including soft drinks, cordials, biscuits, cakes, and candies, among, among others. Consuming an excessive quantity of sugar, on the other hand, has been linked to a variety of health issues, including obesity, dental decay, blood difficulties, and other issues. 5. There is a specific amount of salt, fat, and sugar that the body needs to burn for energy when we are working and playing. As a result, junk food does include some of these nutrients; however, when consumed in excessive amounts, they are detrimental to one's health. When individuals are trying to save time, they will occasionally choose to eat their meals at fast food restaurants.

The consumption of junk food is a handy and unplanned snack choice for persons who do not have the time to prepare meals or even when they do not have much time to prepare meals. In addition to giving them a delightful flavour, the components that are used in junk food are what make them so addictive. The combination of sugar and fat may cause a surge of intense pleasure to be produced by dopamine, which can be experienced by those who are prone to engaging in addictive behaviours. On the other hand, it is essential to keep in mind that they are detrimental to your health. Consuming foods that are rich in fat, such as those that are high in cholesterol, sugar, and salt, may have adverse effects on one's health. A higher consumption of sugar is linked to an increased likelihood of becoming overweight or obese.

### 1.2 Appealing nature of junk food

The term "junk food" refers to any substance that is not only fast and delicious but also handy and trendy. People are drawn to get addicted to junk food by the clever advertising of junk food as well as the allure of convenience in addition to the taste of junk food. Generally speaking, it is attractive due to the following factors:

1. **Time factor:** The ease of junk food contributes to the high prevalence of addiction to it. They are also simple to make and may be consumed in a very short amount of time.
2. **Taste factor:** A further significant factor that contributes to the decision to consume junk food is the fact that it has a delicious flavour. This flavour is accomplished by abundantly using oils, salts, and/or sugar in the preparation process.
3. **Attractiveness:** By adding food additives and colours to the packaging of these meals, in addition to enhancing the flavour, the packaging of these foods has a highly appealing look.
4. **Ad factor:** There is a significant impact that advertising plays in luring members of the general public, especially children and teenagers, to establishments that offer junk food.

### 1.3 Metabolic consequences of junk food

The oxidation of calorically rich foods results in the massive production of "Acetyl CoA" in the body. When there is too much acetyl coenzyme A in the mitochondria, it is redirected to other parts of the cell for use in other metabolic processes. Overproduction of fatty acids and cholesterol results from these pathways, which include biosynthesis of cholesterol and denovo fatty acid synthesis. Junk food's high sugar content strains the metabolism; the pancreas releases a flood of insulin in response to refined sugar consumption, preventing a potentially fatal rise in blood sugar levels. Due to the lack of protein and healthy carbs in fast food and junk food, blood sugar levels drop rapidly after eating, leaving you feeling irritable, exhausted, and seeking sweets. Aside from oxycholesterol, fried and processed

foods are heavy in saturated fats and trans fats. One kind of cholesterol that has received very little attention is oxycholesterol, which has the potential to be fatal to cardiovascular health.

### 1.4 Junk foods Effects on children's health

In today's world, children are living in a society that is not just complicated but also experiencing profound transformations. In a dramatic turn of events, wafers, chips, colas, pizzas, and burgers have emerged as the most appealing food products among youngsters. It would seem that children have swiftly entered a world of fast food and vending machines, completely oblivious to the damage they are wreaking on themselves and the effect they are having on their health. At the period of steady growth, which occurs between the ages of six and twelve years, it is of the highest importance that children get enough nourishment. An study that was carried out in Beijing, China, and published in the year 2008 found that the consumption of junk food is a common activity among children and adolescents between the ages of 8 and 16 years old. The eating habits of children of this age group not only have an effect on their development, but also on their ability to concentrate, how they feel, and how they behave. As a result of the fact that the great majority of women who have children in school are members of the working class, parents are increasingly providing their children with fast food rather than the traditional meals that they would normally eat at home.

## 2. OBJECTIVES OF THE STUDY

2.1 Investigating Reasons to Steer Clear of Junk Food
2.2 To research the effects of junk food on metabolism

## 3. RESEARCH METHOD

### 3.1 Selection of Subjects

This work was organised in the spirit of liberty, and a total of one hundred topics were chosen from AhilyaBai Holkar University in Indore, which is located in the state of Madhya Pradesh in India. The age range of the participants that were chosen was between 18 and 20 years old. Students were placed into age groups that corresponded to adolescents. The total number of students chosen was eighty. To pick the students who will participate in this study, a lottery was used as the selection procedure.

### 3.2 Study design

For the purpose of gaining answers to the topics that are being investigated and for the purpose of addressing some of the challenges that were encountered throughout the research, the study design comprises an analytical cross-sectional survey. Evaluation of the efficacy of a planned teaching module on the health risks associated with junk food consumption among college students is accomplished via the use of study design.

### 3.3 Sample size

The size of the samples, which consists of eighty college students that are willing to take part in this study.

### 3.4 Sampling method

The term "sampling method" refers to the procedures that are used to choose a subset of the population in order to represent the whole population. The process of selecting a subset of the population to serve as a representative

sample of the full population is referred to by this term. Probability of occurrence In order to pick the youngsters, a straightforward random sampling procedure that included the use of a lottery was used.

### 3.5 Tools used for the study

For the purpose of data collection, both quantitative and qualitative information was gathered via the interview phase.

### 3.6 Data collection

The collection of data is comprised of a structured questionnaire with the purpose of evaluating the level of knowledge on the health risks associated with junk foods. It focusses on a questionnaire with the purpose of evaluating the level of knowledge on the health risks associated with junk eating. The time span for the collecting of data was one month. Having first obtained permission from the principal of Freedom Concept College to carry out the research project of interest. The investigator went to the college and provided an explanation about the nature and goal of the research. Additionally, the investigator personally delivered the planned educational module to college students between the ages of 18 and 20. The module focused on the students' understanding of the health risks associated with junk food. Prior to the execution of the sample collection process, authorisation was obtained from the specific individual. When the specifics of the research were taken into consideration, the samples that were collected were obtained with informed consent. They were confident in the data, and they kept the information they provided confidential. A correction was made to the data that was obtained from the pupils, and it was tallied and entered into an excel document. The data were analysed, and both graphic and predictive methods were used manually. It was determined that a probability of less than 0.05 was considered to be significant. The objective of data analysis is to reduce the data to a form that is comprehensible and interpretable, with the goal of enabling the relationship between each problem to be investigated and evaluated. Descriptive statistical approaches, such as frequency and percentage distribution, as well as inferential statistical methods, such as determining the correlation between the chosen demographic variable and degree of awareness about health dangers, were used in order to complete the analysis of the data. It is possible to determine the percentage, the mean, the standard deviation, and the t test with their help.

## 4. Data Analysis

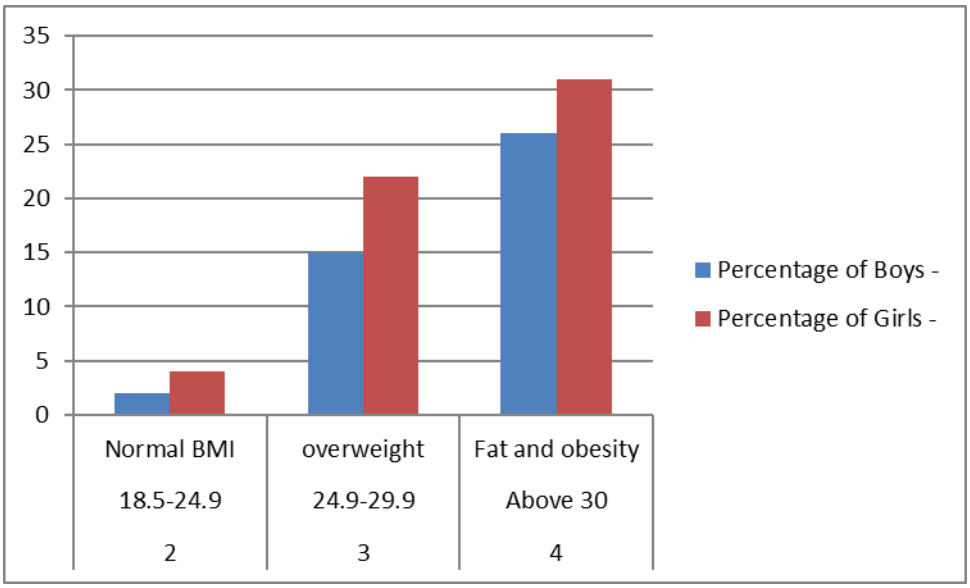
This research and explanation of the acquired data after the computer serving belonging influence of fast meals on healthier adult students at chosen college was Ahilya Bai Holkar University in the Indore district of Madhya Pradesh, India. The findings were distributed with this investigation. Following the correction, tabulation, and examination and interpretation of the data that was obtained, the following sections were constructed to produce the findings that were discovered. The majority of the students in each class were males, accounting for 54 percent of the total, while the majority of the females, accounting for 46 percent, were between the ages of 18 and 20.

### 4.1 Anthropometric Measurements

There is no one who is undernourished, 2% of boys and 4% of girls have a normal body mass index (BMI), 15% of boys and 22% of girls are overweight, and 27% of boys and 41% of girls make up the obese population. Therefore, the majority of the participants who were chosen were classified as being overweight or obese (Table-1).

**Table-1: Anthropometric Measurements of selected students**

| S. No | BMI Distribution | Status | Percentage of Boys | Percentage of Girls |
|---|---|---|---|---|
| 1 | <18.5 | underfed | - | - |
| 2 | 18.5-24.9 | Normal BMI | 2 | 4 |
| 4 | 24.9-29.9 | overweight | 15 | 22 |
| 4 | Above 40 | Fat and obesity | 27 | 41 |




**4.2 Analysis of Bio Chemical parameters**

There were 24% of boys and 22% of girls who had a haemoglobin quantity of 8-10 mg/dl, 9% of boys and 15% of girls had a haemoglobin quantity of 10-12 mg/dl, and 10% of boys and 20% of girls had a haemoglobin quantity of 12-14 mg/dl. The majority of the kids who were selected had a haemoglobin count in their blood that was very low (Table-2).

**Table-2: Analysis of Bio Chemical parameters and dietary assessment**

| S. No | Hemoglobin(Mg/Dl) | Percentage of Boys | Percentage of Girls |
|---|---|---|---|
| 1 | 8-10 | 24 | 22 |
| | 10-12 | 9 | 15 |
| | 12-14 | 10 | 20 |
| **Dietary Pattern** | | | |
| 2 | vegans | 4 | 5 |
| | Non vegans | 40 | 50 |
| | Ova vegans | 0 | 2 |

### 4.3 Assessments of Clinical parameters

It was determined that all of the students who were chosen for the study had completed the clinical parameter tests; nonetheless, all of the students exhibited typical clinical signs of health. The fact that numerous forms of fast food and junk food can be purchased at extremely cheap prices seems to be the primary element in picking junk food, according to the discussion that took place among the participants about their preference for fast food and junk food.

#### 4.3.1 Dietary Assessments

Based on the findings of these studies, it was found that 4% of boys and 5% of girls were vegans, 40% of boys and 50% of girls were not vegans, and 2% of girls were just vegans (Table-2).

#### 4.3.2 Intake of Nutrients

For both boys and girls, the amount of calories, protein, fat, and vitamin C that they consumed was higher than the recommended daily allowance. Both boys and girls are receiving less calcium and iron in their diets than the recommended daily allowance (Table 4).

**Table-4: Nutrient Intake of the Selected Students**

| Nutrients | RDA | | Actual Intake | | Excess | | Deficit | |
|---|---|---|---|---|---|---|---|---|
| | Boys | Girls | Boys | Girls | Boys | Girls | Boys | Girls |
| Energy (kcal) | 4000 | 2450 | 4570 | 2769 | 400 | 510 | 0 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Protein(g) | 50.2 | 60.5 | 70.4 | 67.8 | 10.9 | 11.4 | 0 | 0 |
| Fat(g) | 49 | 47 | 62 | 59 | 10 | 20 | 0 | 0 |
| Calcium(mg) | 750 | 751 | 700 | 670 | 0 | 0 | 78 | 144 |
| Vitamin C (mg) | 48 | 48 | 45 | 54 | 22 | 17 | 0 | 0 |
| Iron(mg) | 27 | 25 | 22 | 16 | 0 | 0 | 8 | 7 |

**4.4 Frequency of utilization of Junk Food**

Twenty-seven percent of students say that they eat pizza once a week, forty-two percent of subjects say that they eat pizza twice a week, forty-eight percent of students say that they eat pizza three times a week, and four percent of subjects smile sometimes. A total of 45 percent of students had a burger once per week, 28 percent of students consumed a burger twice per week, and 27 percent of subjects consumed a burger multiple times each week. A total of 24 percent of students consumed puffs on a weekly basis, 29 percent of students had puffs twice a week, and 49 percent of students consumed puffs three times a week. In the course of a week, twenty-five percent of students consume pastries, forty-five percent of subjects consume food twice, and twenty-seven percent of students consume food three times. All of the students consumed junk food on a weekly basis, with the majority of them doing so once, twice, or three times a week. Tables 4 and 5 show that only a very small fraction of students consume junk food on a relatively infrequent basis.

**Table-4: Frequency of utilization of Junk Food-Bakery items**

| **Food items** | **Daily** | **Once in a week** | **Twice in A week** | **Thrice in A week** | **Occasionally** | **Rarely** | **Percent N=80** |
|---|---|---|---|---|---|---|---|
| Pizza | _ | 27 | 42 | 48 | 4 | 1 | 80 |
| Burger | _ | 45 | 28 | 27 | 6 | 4 | 80 |
| Puffs | 9 | 24 | 29 | 49 | _ | _ | 80 |
| Pastry | _ | 25 | 45 | 27 | 9 | 5 | 80 |
| Cake | 15 | 14 | 45 | 47 | _ | _ | 80 |
| Biscuits | 57 | 8 | 24 | 11 | _ | _ | 80 |
| French fry | 10 | 28 | 29 | 24 | 7 | 4 | 80 |
| Noodles | 6 | 42 | 46 | 24 | 2 | _ | 80 |
| Doughnut | _ | 24 | 27 | 44 | 6 | 2 | 80 |

**Table-5:Frequency of utilization of Junk Food-Soft Drinks**

| Food items | Daily | Once in a week | Twice in A week | Thrice in A week | Occasionally | Rarely | Percent N=80 |
|---|---|---|---|---|---|---|---|
| Pepsi | 9 | 28 | 24 | 45 | 4 | 2 | 80 |
| Coca cola | 12 | 15 | 24 | 44 | 5 | _ | 80 |
| Slice | 4 | 20 | 25 | 46 | 12 | 4 | 80 |
| 7up | 5 | 17 | 28 | 41 | 7 | 2 | 80 |
| Bovonto | 16 | 14 | 29 | 46 | 4 | 1 | 80 |
| Sprite | 11 | 19 | 24 | 47 | 7 | 4 | 80 |

**4.5 Comparison between Mean and Standard Deviation of level of Knowledge**

Based on the results of the post-test, the overall mean level of awareness of the health risks associated with junk food is 20.6, and the standard deviation is 1.418. At a significance level of $p<0.05$, the mean value is 12.41, the standard deviation is 4.21, the t-test value is 44.25, and the confidence level of the interval extends from 11.60 to 12.97. The statistical significance of the interval was determined to be statistically significant. The results of this demonstrate that the educational module that was prepared was successful and demonstrated an increase in the degree of information that schoolchildren have about the health risks associated with junk food (Tables 6 and 7).

**Table: 6 & 7 Mean and Standard Deviation of Knowledge before and after Planned Instructional Module on Junk Food Health Hazards**

| Paired sample t test | | | | |
|---|---|---|---|---|
| | Mean | N | Standard deviation | Standard error mean |
| Posttest | 34.6 | 80 | 1.418 | 0.145 |
| Pretest | 8.29 | 80 | 2.412 | 0.244 |

| | Paired sample t test | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Standard deviation | Standard error mean | 95%confidence level | | T value | D.f | P value |
| Pretest-posttest | 13.41 | 2.23 | 0.56 | 11.9 | 12.97 | 34.25 | 79 | .000 |

## 5. Discussion

The findings of this study demonstrated that college students were chosen for the task, which was an experimental research project aimed at determining the impact that teaching college students about junk foods had on their health. As a tool for the current investigation, the researcher devised a structured opinion survey to collect responses. It was determined that the research could be carried out. Hand examination and clarification were performed on the data that was gathered. The study conducted by Krolner et al. (2011) focusses on the factors that are connected with the consumption of fast food by adolescents between the ages of 8 and 16 years old in the Haitian District of Beijing. According to Green (2019), a questionnaire study was conducted in order to investigate the utilisation of ten different kinds of fast food implementation in a total of 1019 children and adults ranging in age from 8 to 16 years. An additional study conducted by Sahasporn Paeratakul and colleagues (2004) found that a small percentage of college students in each year level had poor eating habits (Marquis, 2015). This was shown to be the case for one out of every three students.

The same findings were found in the research conducted by Thornton et al. (2018) on the college students attending Bangladeshi University (Bauer et al., 2019). He conducted an analysis that determined the factors that contributed to the popularity of junk food, including its ease of consumption, availability, flavour, cost, and quantity of servings. According to Syafiqahe et al. (2018), this is what leads to the findings that were acquired from the research that was conducted among the students of Sultan Zainal Abeddin University in Malaysia. According to the findings of Sonoo Ranjana and colleagues (2018), some of the most significant barriers to healthy eating are the use of processed meals, the abundance of high-calorie items, and the ease with which junk food may be consumed. According to Abraham et al. (2018), the students were aware of the dangers associated with poor diets; yet, their eating habits did not align with their level of knowledge when it came to nutrition. According to Allomet al. (2014), the primary factors that may have unfavourable impacts on the obesity of students in early adulthood and, thus, on the future health of adults are a lack of physical exercise and unhealthy food habits. The use of junk food has been linked to an increased risk of obesity, as stated by Alphonsus et al. (2014). The assertion that "obesity is linked to high levels of fast-food consumption" was the one that the majority of participants agreed with.

## 6. Conclusion

A lack of information and awareness of the health risks associated with junk foods was found to exist among college students prior to the implementation of the intended teaching module, as shown by the findings of the research. However, after the implementation of the intended educational module, there was an increase in the degree of information that they had about the dangers that are associated with junk food. The children of today will be the children of tomorrow. A significant long-term influence is produced by nutrition throughout the formative era, which provides the building blocks necessary for the construction of the developing brain. As a result, it is necessary for the government, as well as the health personnel and educators, to raise awareness among the students about the need of developing good eating habits and consuming nutritious meals in order to improve their physical and mental well-being. It is marked by rapid bodily exchanges, which lead to maturity in sexual, mental, emotional, and psychological domains as well as behavioural domains. During this time period, both males and females experience stress.

## 7. Conflict of Interest

The authors declare that they have no conflict of interest.

## 8. Funding Declaration

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## 9. References

Asha Kiran, & Deepthi, R. (2012, December). Fast foods and their impact on health. *Journal of Krishna Institute of Medical Sciences University, 1*(2).

Bhoge, N. (2015, June). Junk food and human health: A synoptic review. *International Journal of Theoretical & Applied Sciences*. https://gradcoach.com/what-is-research-methodology/

Hassan, S., Bhateja, S., Arora, G., & Prathyusha, F. (2020, April–June). Impact of junk food on health. *Journal of Management Research and Analysis*. https://doi.org/10.18241/j.jmra.2020.012

Hossain, M., & Islam, M. (2020, January). Fast food consumption and its impact on health. *International Journal on Recent Trends in Business and Tourism*. https://www.researchgate.net/publication/446220090

Kosheleff, R., et al. (2018). Junk food exposure disrupts selection of food-seeking actions in rats. *Frontiers in Psychiatry*.

Lesser, E. N., Arroyo-Ramirez, A., Mi, S. J., & Robinson, M. J. F. (2017). The impact of a junk-food diet during development on 'wanting' and 'liking.' *Behavioural Brain Research*.

Park, S., Lee, Y., & Lee, J. H. (2016). Association between energy drink intake, sleep, stress, and suicidality in Korean adolescents: Energy drink use in isolation or in combination with junk food consumption. *Nutrition Journal*.

Payab, M., et al. (2015). Association of junk food consumption with high blood pressure and obesity in Iranian children and adolescents: The CASPIAN-IV Study. *Jornal de Pediatria (Rio J)*.

Reddy, A., Mohanraj, K., & Nivethiga, B. (2020). Impact of fast food on depression in the adolescent population. *European Journal of Molecular & Clinical Medicine, 7*.

Sapkota, S. D., & Neupane, S. (2017). Junk food consumption among secondary level students, Chitwan. *Journal of Nepal Paediatric Society*.

Subhalakshmi, K., & Dhanasekar, M. (2018). A study on fast food culture among teenagers in urban India. *International Journal of Pure and Applied Mathematics, 12*. http://www.acadpubl.eu/hub/

Wani, P. (2020, April). Impact of fast food consumption on health. *International Journal on Recent Trends in Business and Tourism*. https://www.researchgate.net/publication/441042504