



ISSN (E): 2277-7695  
ISSN (P): 2349-8242  
NAAS Rating: 5.23  
TPI 2023; 12(6): 4236-4240  
© 2023 TPI

[www.thepharmajournal.com](http://www.thepharmajournal.com)

Received: 07-04-2023

Accepted: 09-05-2023

**Dr. Smita Gautam**

Assistant Professor, Department  
of Home Science, NSPS Govt.  
PG College, Magaraha, Mirzapur,  
Uttar Pradesh, India

## Hazardous effect of fast food on the health status of children: A review

**Dr. Smita Gautam**

### Abstract

Food is very necessary constituent for normal growth, maintenance and development of the body and protects from various type of infectious diseases. Nutritious diets are required for complete physical, mental and social wellbeing of an individual. Good eating habits learned in childhood affect the life of child for a long time but recently the food habits of children have changed completely. Nowadays Children prefer to have fast foods to healthy foods and they are fond of eating pizza, burger, pasta, maggi, packed foods and all kinds of fast foods which are not good for their health and cause different types of physical and mental health problems. In India the intake of fast food among school going children is increasing day by day that is a matter of concern. One study was conducted in Lucknow (India) showed that 98% children were fond of fast food while only 2% children did not like to consume fast food. Data of the study further revealed that pizza, burger, chowmine, chocolate, ice-cream, pasta and maggi were most frequently consumed fast foods by the children. Several studies indicated that excessive salt, sugar and fat contents are used in the preparation of fast foods and its excess consumption results in various types of serious health problems such as obesity, type-II diabetes, increased cholesterol levels, heart related problems, depression, ADHD, asthma, stroke, cancer, liver disease etc. Children who consume fast food frequently in excessive amount had decrease concentration, attention and memory, which affects their academic achievements, career and future. Thus many studies revealed that frequent intake of fast food has hazardous influence on the physical and mental development of the children. The present review describes the deleterious effect of fast food intake on the health status of the children.

**Keywords:** Fast food, eating habits, nutrition, health, disease

### Introduction

Childhood is a very crucial period for physical, mental, emotional, cognitive and social development of the children. In childhood adequate and sufficient nutrition is an important factor in the brain development and cognitive performance (Bellisle F., 2004 and Isaacs E *et al.* 2008) [3, 13]. Childhood is a learning stage and children start learning good habits during this period. Good eating habits taught at this time influence the life of the child for a long time (Ashokan V *et al.*, 2020) [2].

Habits have a special role in the formation of health, which starts from childhood. Food choices are greatly influenced by food habits and availability of the food products. The attractive taste and easy availability of fast food makes children a habitual of fast food, which is deleterious for the health. School going children are unaware of the hazardous effects of fast food due to immaturity and lack of knowledge therefore they consume fast foods most frequently. The palatability of the fast foods forced them to eat all kind of junk foods which are non-nutritious and injurious to health. Junk Foods are classified as food products which consist of high amount of salt, sugar, fats and energy and contain less or no proteins, vitamins or minerals, (Keshari P *et al.* 2016) [16].

The eating habits of children have become very strange in the present time, the place of balance and quality diet in their life has been replaced by snacks and combined food items like pizza, burger etc., which is gradually adding to their habits and making them malnourished (Ashakiran *et al.*, 2012) [1].

High intake of sugar and saturated fat, less consumption of fruits and vegetables and irregularity in eating breakfast have been reported among school aged children. (Øverby, N *et al.*, 2002 and Samdal O *et al.*, 2009) [22, 25].

Fast foods have become very popular among school going children due to its tempting taste, ready to eat, convenient and attractive appearance.

**Corresponding Author:**

**Dr. Smita Gautam**

Assistant Professor, Department  
of Home Science, NSPS Govt.  
PG College, Magaraha, Mirzapur,  
Uttar Pradesh, India

A study carried out on adolescent (13-17 years) boys and girls showed that boys who were habitual to Junk Foods had significantly lower scores in Jumping (M = 109.66) as compared to non-habitual adolescent boys (M = 133.40). Data further revealed that excessive intake of junk food affects the physical as well as mental performance of children. Addiction of junk-food in early age causes health related problems in later age. This study reported the hazardous effect of junk-food as overweight, low physical stamina and other health related diseases among adolescents (Kashyap *et al.*, 2014) [15].

There are many research evidences in India to effectuate that fast foods have become an intrinsic constituents of diet in all the community of the society. Data are evidenced that consumption of fast foods is high not only in school going children but also in college and university students. Most of the people are aware of the deleterious consequences of fast foods consumption even though they eat fast foods. (Keshari P *et al.* 2016) [16].

Another study showed that Due to excessive use of junk food and soft drinks, low intake of fruits, vegetables and dairy products and use of snacks in place of healthy food is a signal of rapid consumption of high-fat and high-calorie foods which is not good for health. (Harikrishnan U *et al.*, 2019) [10].

The present study was carried out to assess the harmful impact of fast food /junk food on the health status of school going children.

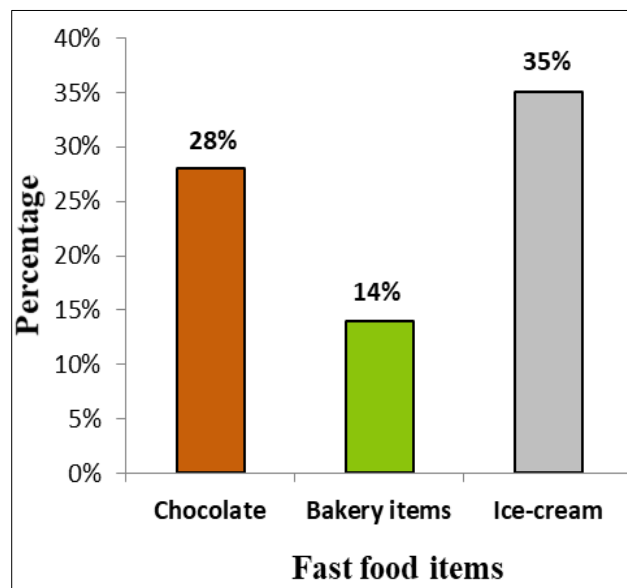
**Consumption pattern of fast food**

The easy availability of fast food in the school cafeteria increases the lunch box ignorance of children. Due to the relatively cheap and taste of fast food, children use it more. Due to globalization and urbanization, the lifestyle of human has changed completely. Today fast food is a major part of their daily routine.

A survey conducted at Morning Star Hostel in Angamaly has found that majority of the students prefers soft drinks, fast food, preserved foods and bakery products in their life due to taste, enjoyment and easy availability (Majabadi H A *et al.*, 2016) [18].

Another study conducted in Lucknow district reported that fast food consumption pattern among school going children on weekly basis and it was found that 40% of children used to eat pizza and 31% of children prefer to eat pasta once per week, 39%, 31% and 29% of children prefer to have burger, chowmine and chocolate respectively 2-4 time in a week, 33% of children were fond of cookies/ cake and 42% school going children love to eat maggi 5-6 time in a week, while

35% of children were addicted to have ice cream,28% chocolate and 14% bakery products daily (Singh M *et al.* 2014) [27-28].



Source: Singh M *et al.* 2014

Fig 1: Daily consumption of fast food items among school going children

According to a survey by the Institute of Technology, 75% of Americans who eat at home, half of their meals are fast food. Fast food industry in India is growing at 40% per annum. Children give priority to soft drinks, fast food, preserved foods and bakery products in their life due to taste, enjoyment and easy availability but fast food has a negative impact on the health status of the people. The attractive nature of fast food compels children to come more than hunger and the use of high calorie ingredients such as fat, sugar, salt found in fast food can result in diabetes, heart disease and obesity (Bhaskar *et al.* 2012) [4].

A research study was conducted in Himachal Pradesh revealed that the most popular Junk Food item among school children of age group 12-18 was chips (71%) followed by chocolate (14%), bakery products (13%), soft drinks (7%), and sugar sweetened beverages (5%). Data further showed that majority (78%) of the children used to consume one junk food item in the last 24 h. However, 22% (N = 33) children were consuming 2 or more junk food items in the last 24 h of the survey. (Gupta *et al.* 2018) [9].

Table 1: Distribution of consumption pattern of junk foods by children on basis of gender

Type of junk food item	Male (N = 68)	Female (N = 85)	Total (N = 153), N (%)
Chips	40	68	108 (71)
Chocolate	4	17	21 (14)
Bakery products (pastries, cream rolls, patties)	12	8	20 (13)
Soft drinks	7	4	11 (7)
Sweetened beverages (squashes, sweet juices)	3	5	8 (5)
Sweets (ladoo, jalebi, barfi)	4	4	8 (5)
Ice cream	5	3	8 (5)
Samosa	2	1	3 (2)

Source: Gupta A *et al.*, 2018 [9]

A study conducted in Baroda reported higher consumption of Junk Foods items (56%) such as chocolates, pastries, sweets

and soft drinks (39%) by school going children in the last 24 h (Kotecha PV *et al.* 2013) [17]. Soft drink consumption was

reported daily among 30% school going children and once in 2 days among 70% of school age children residing in a study conducted in New Delhi (Harrell M *et al.* 2016) <sup>[11]</sup>.

### **Hazardous effect of fast foods on mental health**

Children and adolescents had worse mental health due to intake of low level dietary patterns. High-quality diets such as fruits, vegetables, salads, fish and other food groups promote mental health, and low-quality diets such as increased saturated fat, refined carbohydrates and processed foods lead to stress, anxiety, trepidation and poor mental health. Due to hasty eating habits since childhood, children are able to take incomplete nutrition, as a result of which they have to suffer in the form of mood disorder / psychosomatic disorder, anxiety, depression, so healthy and good eating habits should be created in children from childhood. Food group strategy should be used in diet and policy action should be taken when necessary because "healthy childhood is the cornerstone of healthy life" (Hong S A *et al.*, 2017) <sup>[12]</sup>.

There are many scientific studies that focused on the poor mental health due to consumption of fast foods. O' Neil *et al.* (2014) <sup>[20]</sup> conducted a systematic review study which emphasized that there is a strong relationship between diet and mental health in children. Frequent consumption of processed foods is associated with risk of depression and anxiety.

Foods have a direct impact on the body as well as mind. Irritability and sad behavior were noticed in the population who were eating irregular and unhealthy meals. When, What, How much eating affects children's attention, memory and ability (Chauhan *et al.* 2018) <sup>[5]</sup>.

Another cross sectional study of diet was conducted on 12-13 years old Norwegian school children ( $n = 1095$ ) and the finding revealed that children who were consuming a lot of junk food, convenience food such as preserved foods, ready-to-eat food, snacks etc. were more prone to mental disorders. Data indicated that Children who were regularly having an unhealthy diet (high-sugar, high-fat) had poor mental health while children who were regularly using nutrient- rich foods such as fruits, vegetables, unrefined grains had better mental health. Children who were consuming convenient foods showed signs of Attention Deficit Hyperactivity Disorder (ADHD). Behavior problems were also found among children, who adopted unhealthy food patterns (Oellingrath M Inger *et al.*, 2013) <sup>[21]</sup>.

Due to the excessive use of fast food and soft drinks in urban areas, lack of concentration was found in the school going students, as a result their academic achievements were getting low, due to which both their academic career and future were being darkened (Harikrishnan U *et al.*, 2019) <sup>[10]</sup>.

### **Hypertension**

Fast foods such as chips, kurkure, finger chips, pizza, burger etc. contains high content of salt which increase the blood pressure and children who were using fast foods regularly will lead to hypertension.

### **Behavioural problems**

Behavioral problems (hyperactivity, aggressiveness etc.) were observed among early childhood children who were consuming fast foods. (Wiles NJ *et al.* 2009) <sup>[31]</sup>.

### **Hazardous effect of fast foods on physical health**

Food is very essential for human health and is well known to contribute an important role in the prevention of many diseases. Inferences drawn from many studies revealed that fast foods have high salt content, excessive amount of saturated fats and Trans fatty acids while the nutritive value of fast foods is very low. Consumption of fast foods in excess amount is associated with obesity, hypertension, hypercholesterolemia, type II diabetes mellitus, and cardiovascular diseases in Western countries (Jahan *et al.* 2020) <sup>[14]</sup>.

According to I.C.M.R. nutrients Proposed by R. D. A. table, India's school going children (5-10 yrs) have 50% less nutrients of protein, iron, zinc, fiber, vitamin 'A' and vitamin 'C' and have moderate iron deficiency anemia. The main reason for which is excessive use of fast food, irregular dietary habits, poor dietary quality, nutritional deficiencies and lack of iron availability (Rana N *et al.* 2020) <sup>[24]</sup>.

### **Obesity**

The prevalence of fast food consumption and obesity has been increased. Obesity is a condition of positive energy balance. In which the calories intake is more than the expenditure of calories. It leads to various diseases like atherosclerosis, high blood pressure, diabetes, gall bladder diseases, stroke, osteoarthritis of weight bearing joints and varicose veins (B Srilakshmi, 2002) <sup>[29]</sup>.

Currently, obesity in children is seen as a serious health problem. According to WHO the main cause of obesity in children is consumption of unhealthy foods, packed food, processed food. The use of fast food, lack of physical activity is the main reason of obesity among children. Fast food consumption is one of the major causes of obesity among children. (Tuhina V, 2021) <sup>[30]</sup>.

One study was conducted in Iran and it was found that the prevalence of fast food consumption and obesity in Iranian students was high. Data further indicated that there was a significant association between fast food consumption and abdominal obesity based on Waist-Hip Ratio (Mohammad Beigi A. *et al.* 2018) <sup>[19]</sup>.

The regular consumption of fast food leads to excess energy intake and thus causing increased risk of overweight and obesity (French S A *et al.* 2000, French S A *et al.* 2001 and Paeratakul S *et al.* 2003) <sup>[7, 8, 23]</sup>. Fast food consumption has significant impact on physical health. (Keshari P *et al.*, 2016) <sup>[16]</sup>.

### **Diabetes mellitus**

Studies showed that more than 90 percent cases of Type- II diabetes occurs due to consumption of fast food. Diabetes is a chronic metabolic disorder which includes complications like glycosuria, hyperglycemia, negative nitrogen balance and sometimes ketonemia.

### **Heart diseases**

Junk foods contain high amount of fatty acids and cholesterol which cause coronary heart disease and stroke. Excess fat and cholesterol lead to narrowing of coronary arteries of heart and brain. Consumption of junk foods is a major cause of heart related diseases, myocardial infarction and severe heart failure due to plaque formation in arteries.

**Dental Caries**

High sugar content of candy, chocolates, pastry, and cake etc. lead to dental caries in children. Excessive intake of junk foods causes dental cavity because food particles get accumulated in teeth spaces and formed plaque which eventually results in dental cavity.

**Kidney disease**

High amount of sodium chloride is present in junk foods. Excessive sodium load is dangerous for kidney because sodium excretion takes place through kidney. Sodium overload effects kidney function and leads to kidney impairment such as polyuria, hyperuricemia, renal failure etc.

**Skin rashes**

Junk food consists high amount of additives, coloring agents and chemicals which cause's skin rashes. Therefore excessive use of junk foods causes hypersensitivity disorder.

**Cancer**

Junk foods rich in salt, sugar and calories. Consumption of junk foods is major cause of obesity. Obese people are more prone to have prostate, breast, gallbladder, colon, ovarian, uterine cancer and skin cancer.

**Hypoxia**

Hypoxia is a condition which occurs due to insufficient supply of oxygen in the body. Excessive fat causes blockage of arteries that is why oxygen is not available in sufficient amount to the tissue to maintain adequate homeostasis.

**Asthma**

Artificial flavouring and colouring agents are used in junk foods that cause asthma. Asthma is a condition in which person feel difficulty to breathe.

**Conclusion**

This study concluded that fast foods have hazardous effect on physical as well as mental health status of children. It causes serious health problem such as obesity, diabetes, heart problem, liver disorder, kidney disorder, asthma, depression, hypertension, behavioral problem and some neurological disorder in children. Good food habits should be developed in children from the very beginning. There is a need to evolve some healthy food based strategies to reduce the consumption of fast foods. Children must be educated regarding the harmful impact of fast foods so that they can reduce the intake of fast foods. Children must be told about traditional Indian foods which are very nutritious for health.

**Reference**

1. Ashakiran, Deepathi R. Fast food and their impact on health. *Journal of Krishna institute of medical Science University*. 2012;1(2):7-15.
2. Ashokan Varun, Singh Monu Gurjar. Transnational perspective and practices in early childhood education. *Study in Indian place names*. ISSN 2394-3114. 2020;40:4992-5007.
3. Bellisle F. Effects of diet on behavior and cognition in children. *British Journal of Nutrition*. 2004;92(2):S227-S232.
4. Bhaskar R, Monika O. Junk Food; Impact on Health. *Journal of Drug Delivery & Therapeutics*. 2012;2(3):67-732.
5. Chauhan V, Chauhan OP. Relationship between diet and mental health in adolescents. *International Journal of Home Science*. 2018;4(3):28-30.
6. Datar A, Nicosia N. Junk Food in Schools and Childhood Obesity. *Journal of Policy Analysis and Management*. 2012;31(2):312-337.
7. French SA, Harnack L, Jeffery RW. Fast food restaurants use among women in the pound of prevention study: Dietary, Behavioural and demographic correlates. *International Journal of Obesity*. 2000;24:1353-9.
8. French SA, Story M, Neumark-Sztainer D, Fulkerson JA, Hannan P. Fast food restaurants use among adolescents: Association with nutrient intake, food choices and behavioural and psychological variables. *International Journal of Obesity*. 2001;25:1823-33.
9. Gupta A, Kapil U, Singh G. Consumption of junk foods by school-aged children in rural Himachal Pradesh, India. *Indian Journal of Public Health*. 2018;62:65-67.
10. Hari Krishnan U, Grace Lalhlupuil Sailo. A literature review on health among school going adolescent in India. *Research Journal of family, Community and Consumer Science*, ISSN: 2320-902X; c2019. p. 13-15.
11. Harrell M, Medina J, Greene-Cramer B, Sharma SV, Arora M, Nazar G. Understanding eating behaviours of New Dehli's youth. *Journal of Applied Research on Children*. 2016;6:8
12. Hong SA, Peltzer K. Dietary behaviour, psychological well-being and mental distress among adolescents in Korea. *Child and Adolescent Psychiatry and Mental Health*. 2017;11:56. DOI: 10.1186/s13034-017-0194-z
13. Isaacs E, Oates J. Nutrition and cognition: assessing cognitive abilities in children and young people. *European Journal of Nutrition*. 2008;47:4-24.
14. Jahan I, Karmakar P, Hossain MM, Jahan N, Islam MZ. Fast Food Consumption and its Impact on Health. *Eastern Medical College Journal*. 2020;5(1):28-36.
15. Kashyap R, Joglekar A, Verma S. Effect of junk food on physical performance of school children. *Indian Journal of Scientific Research and Technology*. 2014;2(4):21-25.
16. Keshari P, Mishra CP. Growing menace of fast food consumption in India: time to act. *International Journal of Community Medicine and Public Health*. 2016;3(6): 1355-1362.
17. Kotecha PV, Patel SV, Baxi RK, Mazumdar VS, Shobha M, Mehta KG, *et al*. Dietary pattern of schoolgoing adolescents in Urban Baroda, India. *Journal of Health Population and Nutrition*. 2013;31:490- 496.
18. Majabadi HA, Solhi M, Montazeri A, Shojaeizadeh D, Nejat S, Farahani FK, *et al*. Factors Influencing Fast-Food Consumption Among Adolescents in Tehran: A Qualitative Study. *Iran Red Crescent Medical Journal*. 2016;18(3):e23890. Published online 2016 Mar 6. DOI: 10.5812/ircmj.23890
19. Mohammadbeigi A, Asgarian A, Moshir E, Heidari H, Afrashteh S, Khazaei S, Ansari H. Fast food consumption and overweight/obesity prevalence in students and its association with general and abdominal obesity. *Journal of Preventive medicine and Hygiene*. 2018;59(3):E236-E240.
20. Neil O. Relationship between diet and mental health in children and adolescents: A systematic review. *American Journal of Public Health*. 2014;104(10):31-42.

21. Oellingrath M Inger, Sevendsen V Martin, Hestetun Ingebjorg. Eating patterns and mental health problems in early adolescence: A cross-sectional study of 12-13-year-old Norwegian schoolchildren. *Public Health Nutrition*. 2013;17(11):2554-2562.
22. Øverby N, Andersen LF. Ungkost 2000 (National Dietary Study among Students in 4<sup>th</sup> and 8<sup>th</sup> Grade). Oslo: Directorate of Health and Social Affairs (in Norwegian); c2002.
23. Paeratakul S, Ferdinand DP, Champagne CM, Ryan DH, Bray GA. Fast Food consumption among US adults and children: Dietary and nutrient intake profile. *J Am Diet Assoc*. 2003;103:1332-1338.
24. Rana N, khetapaul N. Iron deficiency prevalence and dietary patterns of school going children (5-10 y.). *International Journal of Home Science*. 2020;6(2):172-175.
25. Samdal O, Leversen I, Torsheim T, *et al*. The Health Behaviour in School-Aged Children: WHO Collaborative Cross-National Study (HBSC). Bergen: Research Centre for Health Promotion, University of Bergen (in Norwegian); c2009.
26. Simeon D, Grantham-McGregor S. Nutritional deficiencies and children's behavior and mental development. *Nutrition Research Review*. 1990;3:1-24.
27. Singh M, Mishra S. Fast food consumption pattern and obesity among school going (9-13 year) in Lucknow district. *International Journal of Science and Research*. 2014;3:1672-674.
28. Singh M, Mishra S. Effect of fast food consumption on the health of school going children (9-13year) in Lucknow District. *Indian Streams Research Journal*. 2014;4:6. Online <https://www.researchgate.net/publication/265209364>
29. Srilakshmi B. *Dietetics*. Fourth Edition; New Age International Publishers; c2002. p. 179.
30. Tuhina V. Obesity and related factor factors among school going girls in Purnea district (With special reference to Muslim girls). *International Journal of Home Science*. 2021;7(1):108-111.
31. Wiles NJ, Northstone K, Emmett P, Lewis G. Junk food diet and childhood Behavioural problems: results from the ALSPAC cohort. 2009;63(1):491-498.