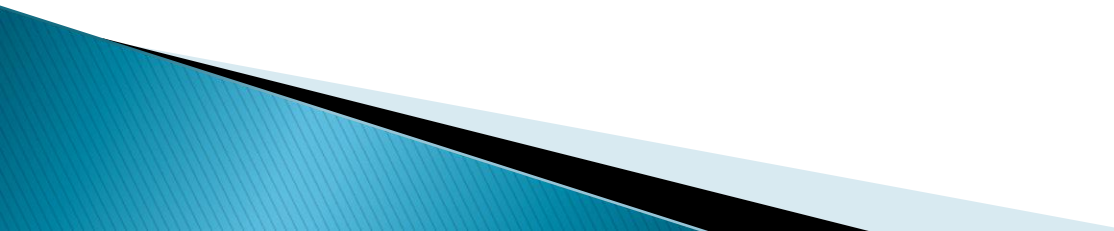


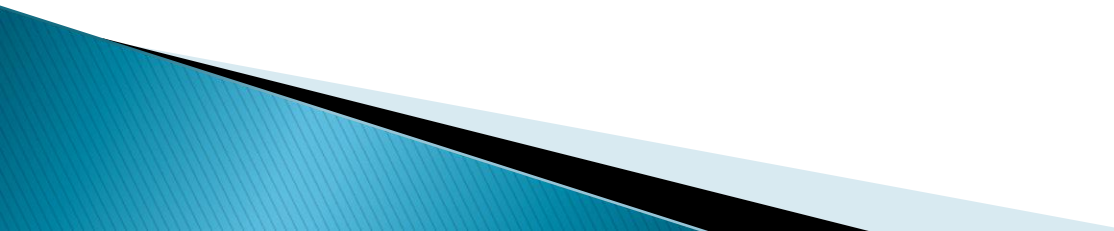
Study of Consumption, Behavior and Awareness of Fast Food among urban students of late adolescent age group with reference to BMI, Activity Profile and Socio-economic status

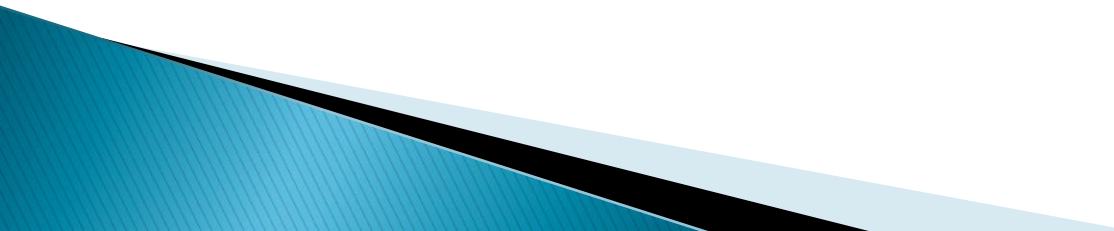
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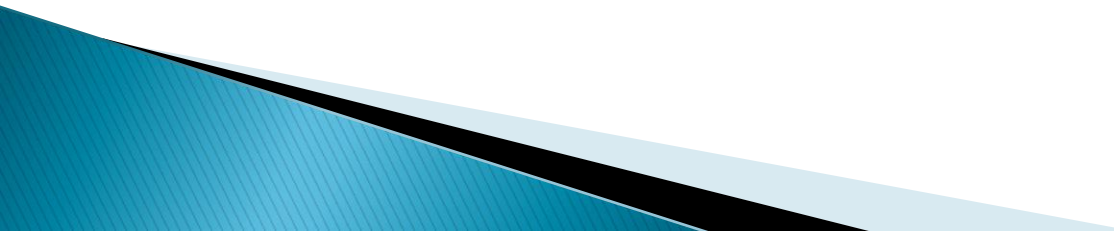
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Introduction

- Globalization and free trade have brought fast-food eating establishments to most countries, especially to developing nations like India.
 - In recent years, there has been a marked increase in the rates of non communicable diseases in India that has been attributed to unhealthy lifestyle practices associated with the introduction of Western-style fast foods that are higher in fat and refined carbohydrates.
 - Adolescents faces a dilemma in a society that values youthfulness and thinness but encourages a lifestyle of sedentary convenience that includes decrease in physical activity, as well as increase in consumption of fast foods rich in fat and calories content
- 

- ▶ Although adolescents' diets are strongly governed by their family food environment (Patrick & Nicklas, 2005), about half of their consumption of low-nutrient, energy-dense fast foods occurs out of home (Briefel, Wilson, & Gleason, 2009)
 - ▶ Foods eaten out-of-home by adolescents is typically consumed in school and peer contexts, and adolescent reports confirm that lunches and snacks are often eaten with friends (Feunekes, de Graaf, Meyboom, & van Staveren, 1998)
 - ▶ Food manufacturers and franchisers take advantage of this profit-making opportunity to produce foods, snacks, and beverages; more convenient and rich in fat and calories content.
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- ▶ Such eating pattern is linked to chronic diseases, like obesity, coronary heart disease, osteoporosis, arthritis, liver dysfunction, type 2 diabetes, kidney disease, high blood pressure or hypertension, and diet-related cancers later in life
 - ▶ It is therefore important to encourage the young people to adopt a physically active lifestyle and provide healthful eating habits, and to try to motivate them to become healthier individuals
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Review of Literature

- ❑ Behavioural factors related to overweight and obesity among adolescents in Kolkata, India:

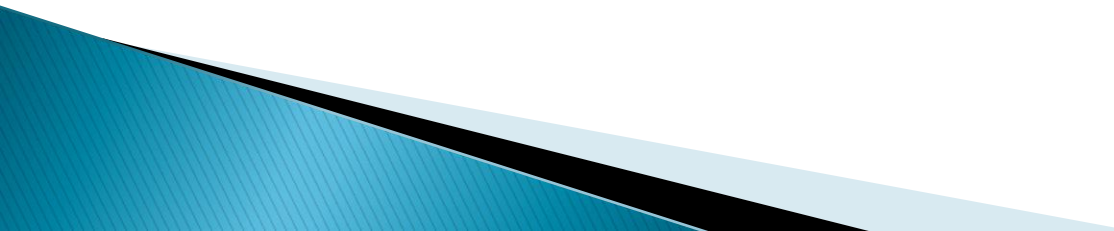
A cross-sectional study conducted in an urban area of West Bengal, India that showed that prevalence of overweight/obesity among the study subjects was 20.5% and consumption of fast food, sedentary life style, higher socio economic status, consumption of alcohol and residing in a nuclear family were identified as risk factors of adolescent overweight and obesity.

❑ Fast food restaurant use among adolescents in Jaipur, India:

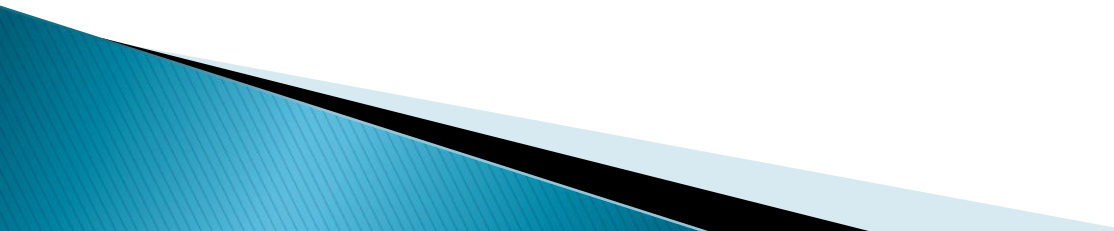
Associations with nutrient intake, food choices and behavioral and psychosocial variables: associated with higher energy and fat intake among adolescents: Interventions to reduce reliance on fast food restaurants may need to address perceived importance of healthy eating as well as time and convenience barriers.

- ❑ A report was prepared to describe School health guidelines to promote healthy eating and physical activity in Punjab:

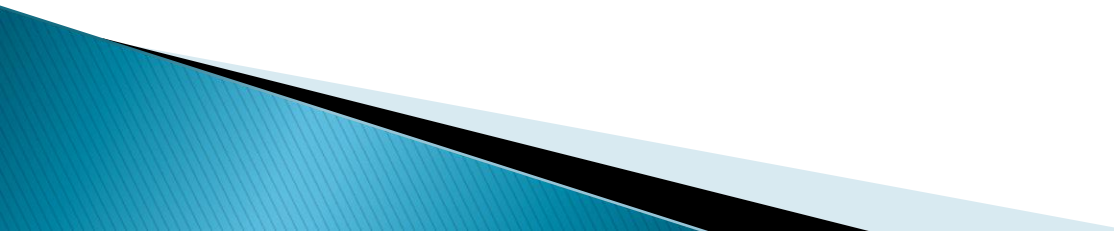
This report describes school health guidelines for promoting healthy eating and physical activity, including coordination of school policies and practices; supportive environments; school nutrition services; physical education and physical activity programs; health education; health, mental health, and social services; family and community involvement; school employee wellness; and professional development for school staff members.



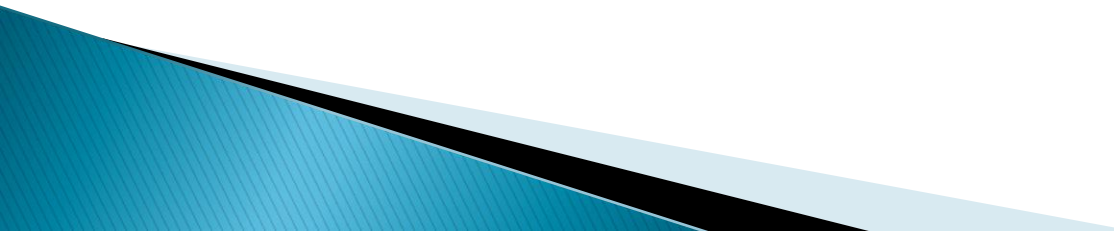
Problem Statement

- ▶ Adolescence is a unique period between 10-19 years as it is a time of intense physical, psychological and cognitive development.
 - ▶ During this period, when independence is established, dietary and activity pattern may be adopted that are followed for many years since fast foods are easy to make and quick to consume.
 - ▶ Adolescents are the most important and vulnerable segment of population which has been largely ignored and badly neglected in our developmental, educational and research programmes
- 

Rationale of the Study

- ▶ This study will be carried out in Surat, Gujarat. Cultural background of Gujarat make the food habits predominantly enriched in high calories content including fats, carbohydrates and proteins leading to pre-exposure of the individuals/ populations to lifestyle diseases.
 - ▶ Since such study has not been carried out in Surat, Gujarat; so the target population is urban students of late adolescents' age group (15-19 years).
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Specific Objectives

- ▶ The study aims at focusing on behavior and awareness of fast food consumption. The specific objectives of the study are:
 1. To determine the effect of fast food consumption upon BMI of adolescents
 2. To establish relationship between the consumption and behavior of fast food with the lifestyle of urban students
 3. To know the awareness level of fast food among urban students affects the behavior towards their consumption
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Methodology

Study Design: This was a descriptive cross sectional study.

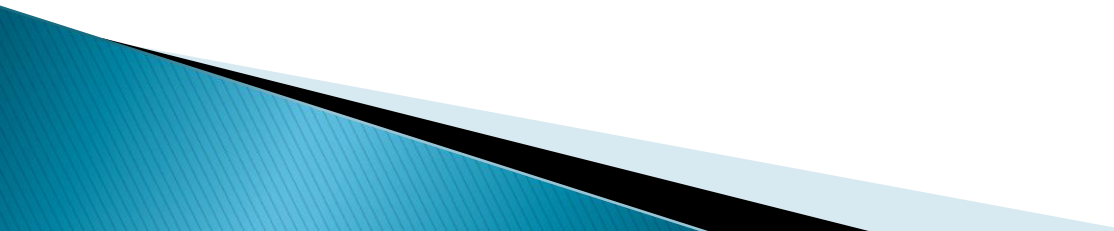
Study Area: Surat city of Gujarat.

Study population: The study participants consisted of school and college going students who are studying in 10th to 12th standards and first and second year students in Surat city in Gujarat.

Sampling method: Purposive random sampling was done within the various academic institutions to generate sample size

Sample Size: 350 students

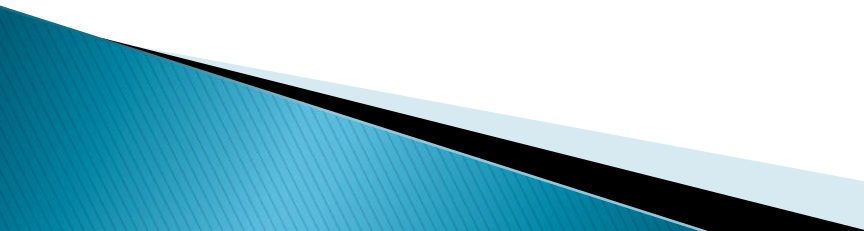
Study tool: Qualitative questionnaire was used to collect data from the school and college going students of 15-19 years age group. Questionnaire consists of closed-ended items.

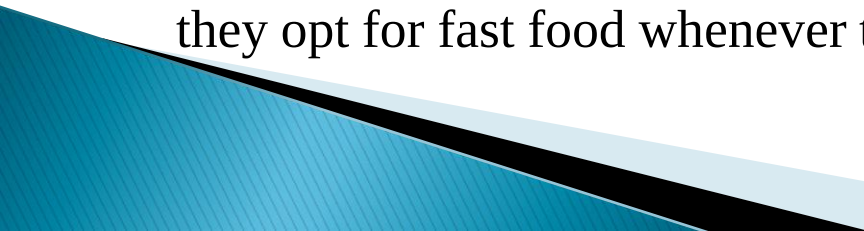


Findings and Discussion

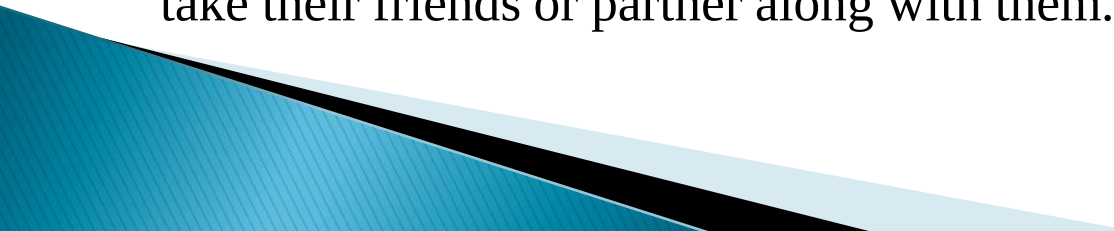
- ▶ The total respondents (n) in the study were 350 that includes
 1. boys (n= 220) = 63percent
 2. girls (n= 130) = 37percent

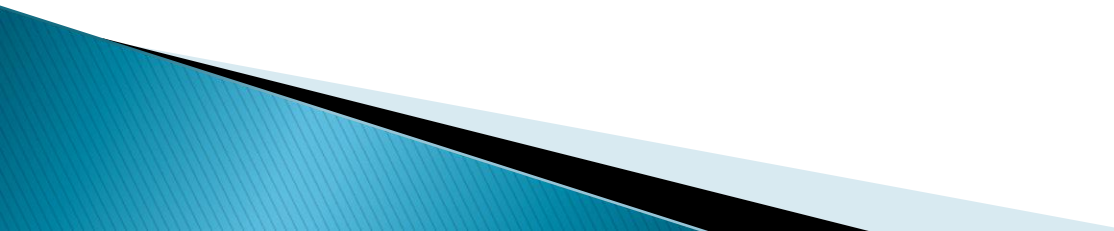
 - ▶ The late adolescent age group i.e. 15-19 years were classified into
 1. school going respondents of 15-17 years age group (n=203)= 58percent
 2. college going respondents of 18-19 years age group (n=147)= 42percent

 - Calculation of BMI
 1. 26.79percent respondents are underweight
 2. 34.7percent exhibits normal weight.
 3. 28.9percent respondents overweight
 4. 7.79percent exhibits obesity
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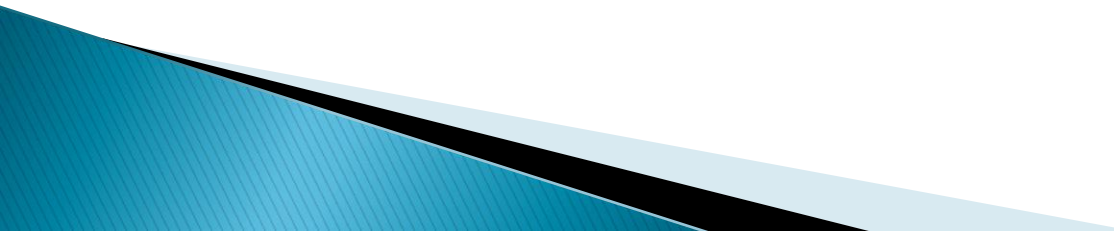
- ▶ 34percent girls are underweight and 25percent boys are overweight.
 - ▶ Among males, 53percent were unhealthy
 - ▶ Among females, 63percent were unhealthy
 - ▶ With increase in the socio-economic status, the percentages of underweight respondents are decreasing i.e. from 32.88percent to 8.63 percent
 - ▶ The percentages of overweight and obese respondents are increasing i.e. 19.18percent to 34.48percent and 3.42 to 12.02 percent respectively whereas no such trend was seen with respondents with normal weight i.e. 40.1percent to 43.4percent
 - ▶ 57percent respondents were not eating healthy food even after staying with parents that of 68percent respondents among those, staying in hostel
 - ▶ 30.9percent of respondents preferred to eat street food and fast food offered in school or college mess/food court
 - ▶ The frequency of having fast food cooked at outside was 52.2percent as compared to the fast food cooked at home i.e. 44.8percent proved that the respondents want variations in their food on daily basis, they want taste so they opt for fast food whenever they get the chance to eat the fast food
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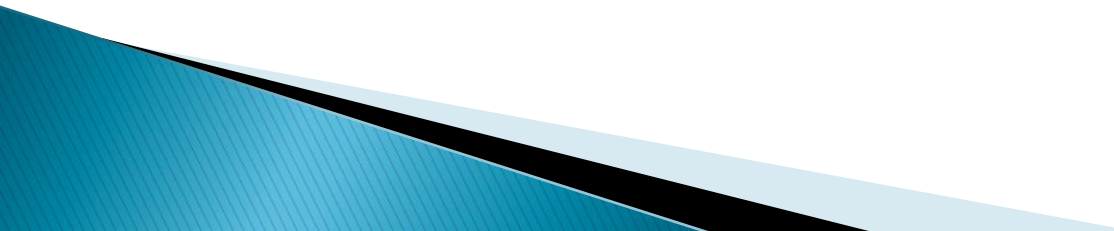
- 15-17years age group consumed the fast food very rare i.e. 34.3percent during breakfast because of the pressure build from school and parents
- The college going respondents i.e. 18-19years of age group consumed the fast food everyday during breakfast due to less observation and pressure from college and parents during the college period.
- The frequency of consumption of fast food during in between meal snacks was 42.1percent that was more than the consumption during other meals i.e. 46.7percent.
- Maximum respondents preferred to eat the fast food during evening snacks i.e. 50percent as compared to during breakfast time i.e. 25percent
- 53.4percent respondents eat fast food 3-4 times in a week
- 62.86percent of respondents found fast food very tasty and 21.14percent respondents found variations in the menu of the fast food
- Around 35percent respondents eat fast food when they wanted to have some change

- ▶ Around 39.72percent respondents said that consuming fast food depends on their mood.
 - ▶ They eat either when they were happy or sad or in stress or they were angry.
 - ▶ Around 71 % respondents wanted to go to restaurants but choice of their food was dependent on more on their taste and mood
 - ▶ They ordered different items time to time. 50.57percent preferred carbonated soda/diet soda along with their fast food meal.
 - ▶ The essence or flavour added products were being consumed more than natural beverages or water. The combo meal including snack and beverage attracts the customer more and are in trend in fast food chains.
 - ▶ 65.71 percent of respondents preferred to accompany with their friends to eat fast food. The school going students preferred to eat fast food both with parents and friends i.e. 50percent and 43percent respectively
 - ▶ 74percent respondents chose friends and among them around 50percent of college-going respondents stayed in hostel so it supported the fact that they take their friends or partner along with them.
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- ▶ Parents of near to half of the respondents i.e. 43.1% had no objection to their consumption
 - ▶ Parents of school going respondents showed objection on the consumption habits i.e. 42.99percent as compared to the parents of college going respondents didn't have objection on the consumption frequency i.e. 45.31percent.
 - ▶ 40percent respondents spent approximate 100-500Rs from their pocket to consume the fast food in one week.
 - ▶ Even after belonging to a middle income class family, the expenditure on fast food was very high.
 - ▶ Respondents were attracted to fast food in such a manner that price of fast food didn't matter much to them i.e. more than 50percent respondents eat street food, fast food in food courts and other places with no issues of their prices.
 - ▶ The objection of parents, the middle income salary of parents, thus having middle socio-economic status didn't matter to the fast food lover consumer.
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- ▶ The advertisements were covered under television and newspapers i.e. 60.57percent and 59.71percent respectively
- ▶ These advertisements were shown everywhere and almost at all places, respondents were attracted towards new snacks and they go to restaurants to consume them
- ▶ 44.6percent respondents said that they want to eat fast food snack whenever they see advertisement, even if not hungry
- ▶ They had least or zero time for performing physical activity i.e. 54.57percent in their daily routine
- ▶ During studying, watching television, surfing internet and maximum consumption of fast food during this time at home or tuitions was observed
- ▶ Less physical activity corresponded to more gain in weight i.e. overweight and obesity. 36% respondents have BMI above 25
- ▶ Students preferred to eat the most during school/college hours i.e. 22percent and when they were sitting in front of internet i.e. 28.86%. The scenario showed that whenever people get time and they have mood to consume, they consumed fast food

- ▶ Nutritional information given behind most of the fast food snacks didn't affect their choice much. 57.4percent respondents were aware of the effects of fast food.
 - ▶ Around 60percent respondents said that they check the nutritional information also but still their consumption was not affected much.
 - ▶ 38percent respondents said that fast food is harmful and it makes person fatty.
 - ▶ 33 percent respondents said that fast food slower the rate of metabolism of the body.
 - ▶ Even after knowing the harmful effects, the consumption was more and their behavior confirmed that they are more prone to fast food
 - ▶ 51.43percent respondents said that health problems were majorly caused due to lack of physical activity
 - ▶ Nearly half of the adolescents correctly perceived their own faulty behaviors pertaining to healthy weight, physical activity as well as excessive time spent in front of the TV/computer
 - ▶ According to 37.14 percent and 44.57percent respectively shown in Table 26, the frequent consumption of fast food meals and beverages cause health problems.
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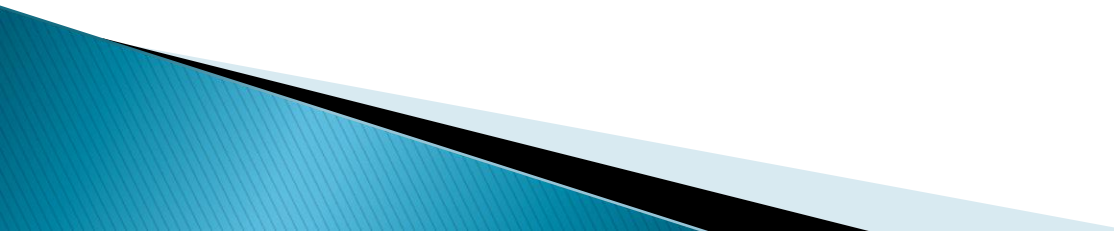
- ▶ 40percent respondents favoured that healthy food product should be offered in markets and their advertisements should be more than that of fast food
 - ▶ 34.29percent respondents favoured that seminars and education should be given in schools educating the students about harmful effects of fast food.
 - ▶ Poor nutritional status and unhealthy behaviors of adolescents under this study seemed to be the result of combination of inadequate nutrition and health policies at administrative level, lack of proper knowledge and incorrect perceptions of teachers about it and easy access of unhealthy fast food to adolescents.
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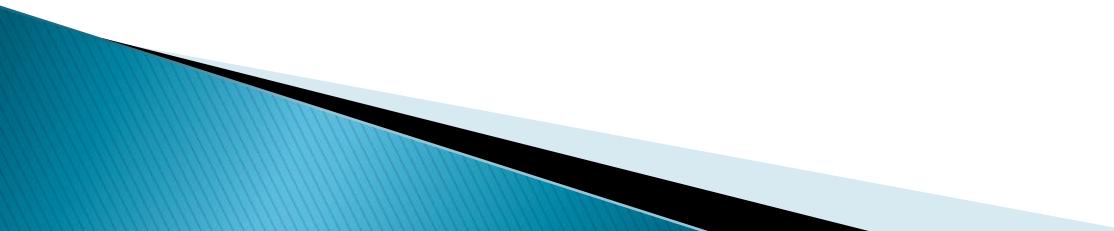
Conclusion

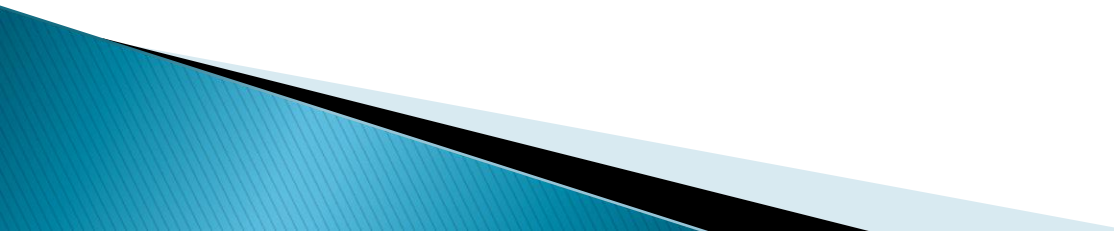
- ▶ Adolescents consume fast food on an average thrice per week.
- ▶ Fast food is tasty, includes varieties, reasonably priced and readily available.
- ▶ Independence and less involvement of parents upon their consumption.
- ▶ There are three major factors behind the probable chances of health diseases caused in later stages among adolescents due to heavy consumption of fast food:
 1. Insufficient Physical Activity
 2. Unhealthy diet
 3. Overweight and Obesity
- ▶ If they eat fast food only occasionally, this would not be problematic. But almost every day, consumption among adolescents is harmful.

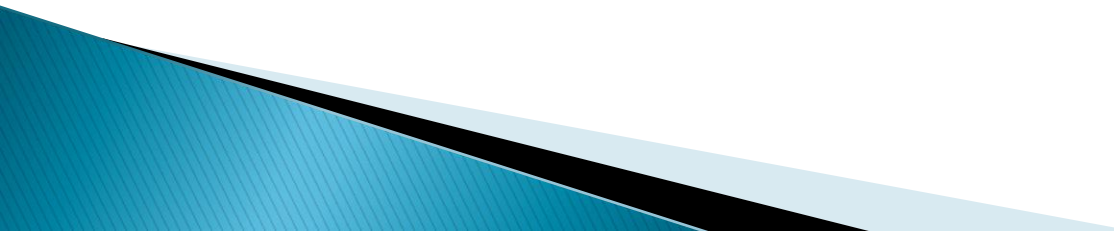
Recommendations

Adolescence, being the last window of opportunity to achieve optimum height and weight, is the best time to carry out nutrition health intervention.

- Educational campaign regarding healthier food choices, lifestyle, and weight management could make a positive impact on the health of these adolescents.
 - Health related articles in daily newspapers, and health shows on television:
 1. There are special health related magazines that are now very popular.
 2. Health related articles do mention to consume more fruits, vegetables, water and to consume less or nil of fast food being high on fat and calories.
 3. They must consume less of the calorie-dense, nutrient-poor foods served at fast food restaurants. Parents and schools can do more to teach them how to make healthy choices.
- 

- ▶ Restaurants have an important role to play in creating a food marketing environment that supports, rather than undermines, the efforts of parents and other caregivers to encourage healthy eating among adolescents and prevent obesity.
 - ▶ The best way to improve health and wellbeing of adolescents is to introduce strong school nutrition health policies and programs addressing the underlying causes of malnutrition – all of which are modifiable lifestyle factors.
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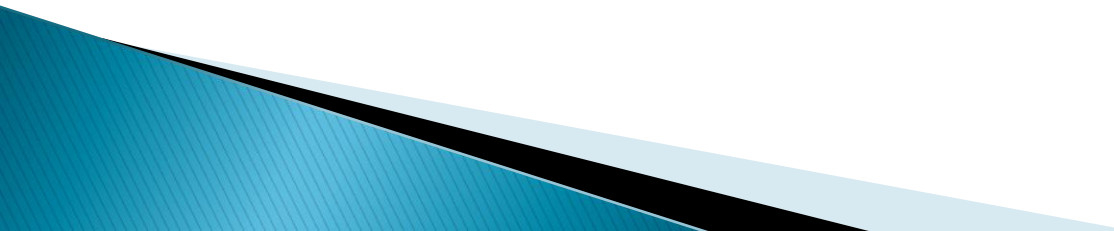
- ▶ Interventions to reduce consumption of soft drinks should target availability in both the home and school/college environment by removing soft drinks and replacing them with more nutritive beverages.
 - ▶ Changing the food environment to limit the availability of soft drink in the home and at school, and increasing the cost of nutrient poor foods relative to nutrient rich food items.
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- ▶ Awareness among adolescents in schools, colleges on topic of non communicable diseases, health implications of under
 1. nutrition,
 2. obesity and diabetes among adolescents,
 3. importance of increased physical activity and
 4. reduced TV viewing,
 5. importance of weight reduction,
 6. importance of following a traditional diet pattern and healthy eating,
 7. understanding the fast food culture and
 8. how to reduce consumption of fast foods,
 9. increasing fruits and vegetables consumption,
 10. need for cutting down on calorie, fat and sugar intake wherever appropriate,
 11. spotting the hidden messages in junk food advertisements
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Ethical Consideration

- ▶ Informed consent was taken from the subjects.
- ▶ Confidentiality of the subjects was maintained.
- ▶ Names and personal information was not taken.

Limitations of the Study

- ▶ The self-administered questionnaire was used, so there was a possibility of reporting false information. However, every effort was made to motivate respondents to provide true information.
 - ▶ This study is done in just 3 schools and 2 colleges of a Surat city so it might not represent the situation of adolescent students of the entire city or the country as a whole.
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Thank You