Consumption of Junk foods among College Going Girls

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ABSTRACT: *Junk food is a pejorative term for food containing a large number of calories from sugar or fat with little fibre, protein, vitamins or minerals along with harmful preservatives/chemicals. In recent decades junk food consumption has drastically increased among adolescents with a concurrent rise in epidemics like obesity, cardiovascular disease, and many other chronic health conditions. Adolescence is a crucial life stage wherein the caloric demand of the body is the highest. .This being one of the many reasons contributing to unhealthy food choices, eating outside the home (at restaurants), and sedentary behaviors are seen. Thus there is a growing concern for the morbid consumption of junk foods by adolescence.*

The present study was undertaken in the year 2015-16 which assesses the knowledge and practice of Junk Food consumption among the students of St.Anns College of Age groups 18-21.

A Self-framed pretested questionnaire was used so to collect the data. The main findings conclude that about 23% of the students consume burgers while the majority of the students, 39% consume carbonated drinks and under that it was found out that 30% of them chose thumbs up. Consumption levels gradually rise throughout the day and peak at evening after 6pm i.e. tea time. It was also found that 39% were consuming fast foods 3-4 times a week.

The majority 72% of the respondents reported that they consume junk food based on emotions and also that the taste of the food being delicious (37%).

The results show the need for nutrition counseling regarding a balanced diet and the harmful effects of junk food which might not only reduce but also would help curb the fast food addiction.

Key words: Junk food; Adolescents; young adults; St.Anns College;

I.   INTRODUCTION

Adolescence is a period of tremendous physiologic, psycho logic, and cognitive transformation during which a child becomes an adult. This is the age where adolescents are highly impulsive, with their decisions being based on emotional rather than rational contexts. Psychosocial development, increased caloric needs and financial independence is what often leads adolescence to make bad food choices.

Thus, adolescents are at risk for nutritional problem both from a physiological and a psychological standpoint. Junk Foods loaded with empty calories and harmful preservative provide adolescents a convenience of satisfying hunger and taste, thereby making it their first choice to food/snack on a daily basis leading to its morbid consumption.

1.1 ADOLESCENCE CAN BE DIVIDED INTO 3 STAGES

Early adolescence (11-14years of age) is characterized by the onset of puberty and increased cognitive development.
Middle adolescence (15-17years of age years) is characterized by the increased independence and experimentation.
Late adolescence (18-21years of age) is the time for making important personal and occupational decisions.

1.2 DEFINITON OF JUNK FOOD

Andrew F. Smith, in his book, *Encyclopedia of Junk Food and Fast Food*, defines junk food as "those commercial products, including candy, bakery goods, ice cream, salty snacks, and soft drinks, which have little or no nutritional value but do have plenty of calories, salt, and fats. While not all fast foods are junk foods, most are. Fast foods are ready-to-eat

foods served promptly after ordering. Some fast foods are high in calories and low in nutritional value, while other fast foods, such as salads, may be low in calories and high in nutritional value.

Junk food is a term for food that is of little nutritional value and often high in fat, sugar, salt, and calories. Junk foods typically contain high levels of calories from sugar or fat with little protein, vitamins or minerals. Most of the junk foods are rich in fats and poor in mineral nutrients. It is a bad combination of sugar, fat and chemical preservatives.

Common junk food among adolescents these days include burger, fries, biscuits, Fast food, chips, candy, gum, sweet desserts, sugary carbonated beverages. What is and is not junk food can also depend on the person's class and social status, with wealthier people tending to have a broader definition while lower-income consumers may see fewer foods as junk food, especially certain ethnic junk foods. Ethnic junk foods like fried murkuls, chidwa and fried sweets etc, are often not perceived as unhealthy options for daily consumption due to their traditional preparations and cultural relevance. It is this clouding of perception and lack in understanding the long term consequences of junk food consumption that the adolescent makes these bad food habits.

Evidence from an exploratory study in India suggests that the young Indian consumer has passion for visiting fast food outlets for fun and change [2]. This shows that apart from taste other factors also contribute to junk food consumption, each adding to the number of issues to tackle. One such issue is that of the media advertisements that bombard the young with a variety of junk food options and introduce them to attractive food items for them to try. A study on fast food consumption pattern among high school bys in Mangalore India reveals that Majority of the participants were introduced to fasts foods through television commercials[3]

Other reasons for selecting junk food by teens include faster to consume, faster to prepare, peer influences, and lack of other healthy options of convenience foods in the market. It is also seen that girls consume more junk food than boys. [4].

Schools and colleges that have shops surrounding them provide students with various junk food choice to chose from which otherwise wouldn't be available in the canteens or at home, thereby increasing the frequency of junk food consumption[5]. Globalization of fast food has provided the flexibility of having many consumption alternatives at reasonable prices. The fast food chains have been, innovative and forceful at inviting customers out of their kitchens up to fast food centers. Balanced diet has been replaced by junk or fast foods not only by young generation but also people from all age group, not only changing their everyday food habits but bringing about change in culture and taste perception.

Awareness of the ill effects of junk foods lacks in the society. The fascination with western food culture and with various popular western food outlets promoting fast foods has increased the consumption of junk foods by Indian society now more than ever. India participated in a multi-country study on 72,900 children (6-7 years) from 17 countries and 199,135 adolescents (13-14 years) from 36 countries consumption status was considered as frequently (once/twice a week) a very frequently (three or more per week). This cross sectional study has found that 22.6% and 4.2% children consume fast food frequently or very frequently, respectively. In total 38.7% of adolescents reported frequent fast food consumption and 12.6% replied very frequent consumption [6].

Habits start young and depend on the environment (home and school/college) to cultivate healthy habits in adolescents. It is thus imperative that good food habits be taught both at school and home.

1.3 HARMFUL INGREDIENTS JUNK FOODS

1. PALM OIL: These are evil anti-nutrients in the form of Trans fats which help packaged foods to stay "fresh," meaning that the food can sit on the supermarket shelf for years without ever getting stale or rotting.

2. ARTIFICIAL SWEETENERS: Aspartame (NutraSweet, Equal), saccharin (Sweet'N Low, SugarTwin), and sucralose (Splenda) are some examples of artificial sweeteners added to our foods which may be even harder on our metabolic systems than plain old sugar.

3. SODIUM BENZOATE AND POTASSIUM BENZOATE: These are preservatives which sometimes are added to soda to prevent mold from growing, but benzene is also linked with its serious thyroid damage.

4. BUTYLATED HYDROXYANISOLE (BHA): BHA is another potentially cancer-causing preservative, but it has been deemed safe by the FDA [7].

5TRANS FATS: Trans-Fats are partially hydrogenized vegetable oils. They increase the shelf life of food and add crisp, texture to food. These trans-fats are worst substances which we consume in name of food. Consumption of trans-fats has shown to increase the risk of coronary heart disease.

6. NITRITE SALTS: Nitrite Salts are added to foods such as preservatives to keep taste, smell and texture for longer time, but these preservatives are carcinogenic and have many more harmful effects. These are added in processed meat, smoked fish, ham and sausages.

7. BUTTER FLAVOURING: Buttered-flavored chemical called diacetyl is used in microwave popcorn, margarine, snack foods, baked goods and candies, giving them an appetizing smell and buttery taste. These chemicals increase the risk for Alzheimer's disease.

8. HFCS: High Fructose Corn Syrup (HFCS) increases triglycerides, boosts fat storing hormones and leads to obesity.[8]

9. FOOD COLOURING: Food Coloring agents are certain chemicals which give color and tasty look to food. These chemicals are byproducts of coal tar and other chemicals that can increase the risk of certain cancers [9].

1.4 ILL EFFECTS OF JUNK FOODS

impact of fast food consumption on physical health [10, 11, 12]:

Consequences	Underlying mechanism
Obesity	Being high in fat content, high in sugar in liquid form and low in fibre junk food induces gorging that leads to obesity. With the high consumption of food ,the brain gets "hit" with the fatty acids, and the fat molecules cause the brain to send messages to the body cells, warning them to ignore the appetite-suppressing signals from leptin and insulin, hormones that are involved in weight regulation. Since the body does not get the signals that it is satiated it leads to over eating. Energy dense foods after oxidation in the body produces Acetyl Co A enzyme whose excess amount channelized out of mitochondria and participates in other metabolic pathways leading to fatty acid synthesis and biosynthesis of cholesterol Eating too much junk food is one of the factors that have contributed to the children hidden obesity epidemic
Hypertension	High saturated fat causes atherosclerosis which is responsible for clogging of arteries as early age of 30 years and responsible for hypertension at early age. Sodium is known to affect rennin angiotensin systems in kidney which produces vasoconstrictive effects on arterioles, leading to development of high blood pressure.
High incidence of non communicable diseases	High fatty acids and cholesterolemia cause narrowing of coronary arteries of heart and brain leading to CHD and stroke. Trans fats clog up human arteries and cause plaque to build up contributing to heart disease and stroke symptoms.
Gastritis	Excess fats and oils and spices are irritant to gastric mucosa and leads to excess production of Hcl.
Effect on Kidney	Since sodium excretion takes place through kidney high sodium load may be dangerous
Effect on liver	High cholesterol also effects liver on the long run when it is metabolised it puts strain on the liver thus damaging it eventually
Allergy manifestations (viz. Asthma, rashes and hyperactivity)	These conditions are due to flavouring and colouring present in fast foods.
Fatigued feeling and craving for sugar	High refined sugar puts pancreas under stress and it create high amount of insulin to prevent dangerous spike in blood sugar level because fast and junk food do not content adequate amount of good carbohydrate and protein, the blood sugar level suddenly drops after eating resulting with grumping fatigued felling craving for sugar.
Type 2 diabetes mellitus	Dense sugar content of fast foods can cause type 2 diabetes mellitus[13]
Cancers	Inedible, harmful and carcinogenic substances are present in fast foods when children eat from puberty affects their risk of prostate and breast cancer

II.   SUBJECTS AND METHODS

The present survey was conducted in ST ANNS COLLEGE FOR WOMEN, MEHDIPATNAM, HYDERABAD, TELANGANA STATE. The sample population was chosen for the students in the college. All the participants were in the age group of 18-21 years and questionnaires were distributed and data was collected (from 200) students between2015-2016. A questionnaire comprising of questions pertaining to the frequency of consumption of junk food, the type of junk food consumed and the factors influencing the consumption of such food were prepared and counted manually based on the options specified for each question framed.

III.   RESULT AND DISCUSSION:

1.   Results showed that amongst the list of junk foods to be chosen according their priority, the majority of the College goings girls chose Burger (23%), followed by 15% chose pizza, 22% to French fries, 20% chose noodles, and 20% chose other junk foods. So from the study, the consumption of junk food is common among the third stage of adolescence.

2.   Interestingly, the carbonated soft drinks (39%) were the main beverages usually consumed with fast food meals by both adolescent and young adult girls and among other beverages 10% of students chose lemonade, 16% of students chose water, 13% of students chose fruit juice.

3.   As most of the students prefer carbonated drinks, the beverage that is most commonly selected was checked. Of which ,a significantly higher rate of 20% consume coca cola, 16% consume Pepsi, 17% consume sprite, 30% consume thumbs up and remaining 16% consume whatever they like.

4.   On the other hand, the students were questioned about their preference about the type of chocolate, where 23% of people prefer dairy milk, 25% prefer Kit kat, 25% prefer Bourneville and 25% prefer ferrero rocher.

5.   It was seen that the consumption levels gradually rise throughout the day and peak is at evening after 6pm i.e. tea time.

6.   Finally, junk food was found to be consumed by 29% of the adolescent girls 5 times or more per week. More over 39% were consuming 3-4 times a week. And in total 32% of the respondents eat at least 1-2 times in a week.

7.   A higher rate of adolescents (72%) agrees that they consume junk food based on emotions; around 36% disagree to the question.

8.   The chief reason for consumption of junk food is seen that 37% students consume junk food as they found it tasty. However, 26% students were influenced by the advertisements, 24% of consumption was as a result of to lack of cooking skills and 13 % were constrained due to limited time.
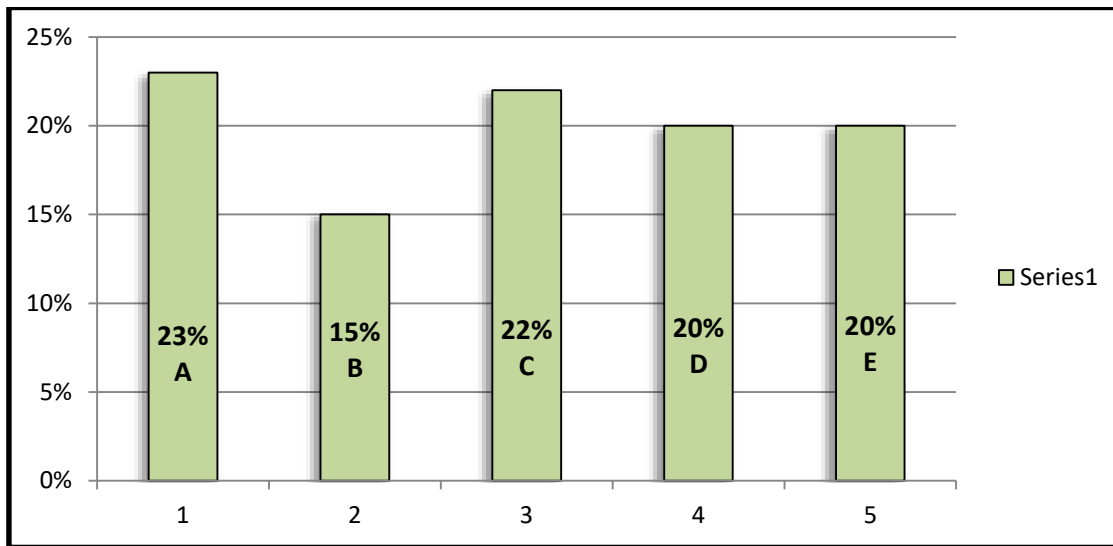

A.   BURGER
B.   PIZZA
C.   NOODLES
D.   FRENCH FRIES
E.   OTHERS

Figure1 list of junk foods

ANSWER:

The priority of consumption of junk foods is checked by giving different options for choosing the junk food. From the results, it found that 23% consume burger, 15% consume pizza, 22% consume French fries, 20% consume noodles, and 20% consume other junk foods. So from the study, the consumption of junk food is common among the third stage of adolescence.
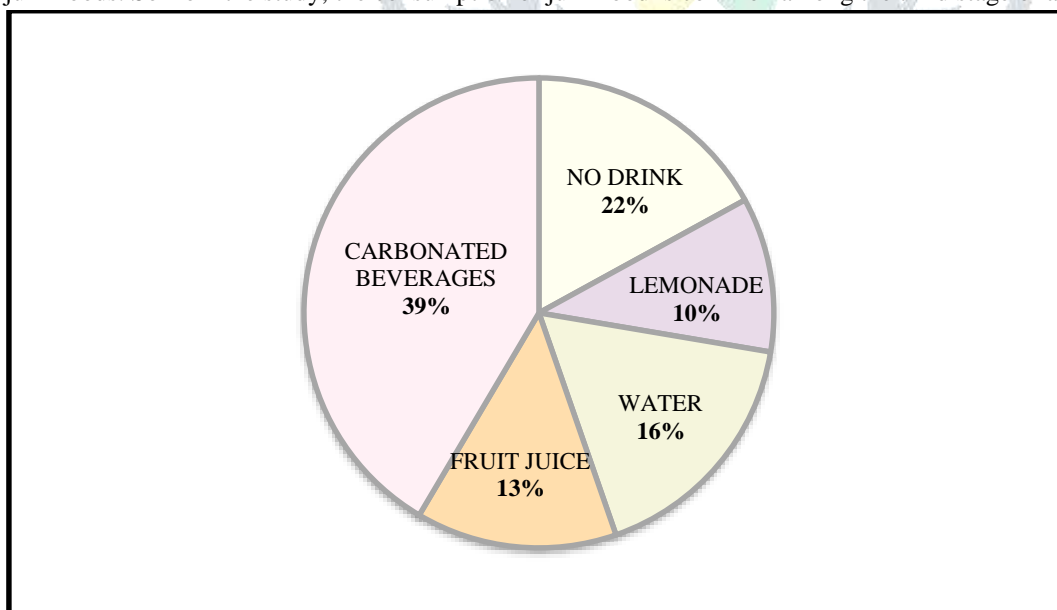
A.   LEMONADE
B.   WATER
C.   FRUIT JUICE
D.   CARBONATED DRINK
E.   OTHERS

Figure 2 what beverages do you usually order with junk foods?

ANSWER:

The survey found that, 10% of students consume lemonade, 16% of students consume water, 13% of students consume fruit juice and 39% consume carbonated drinks.
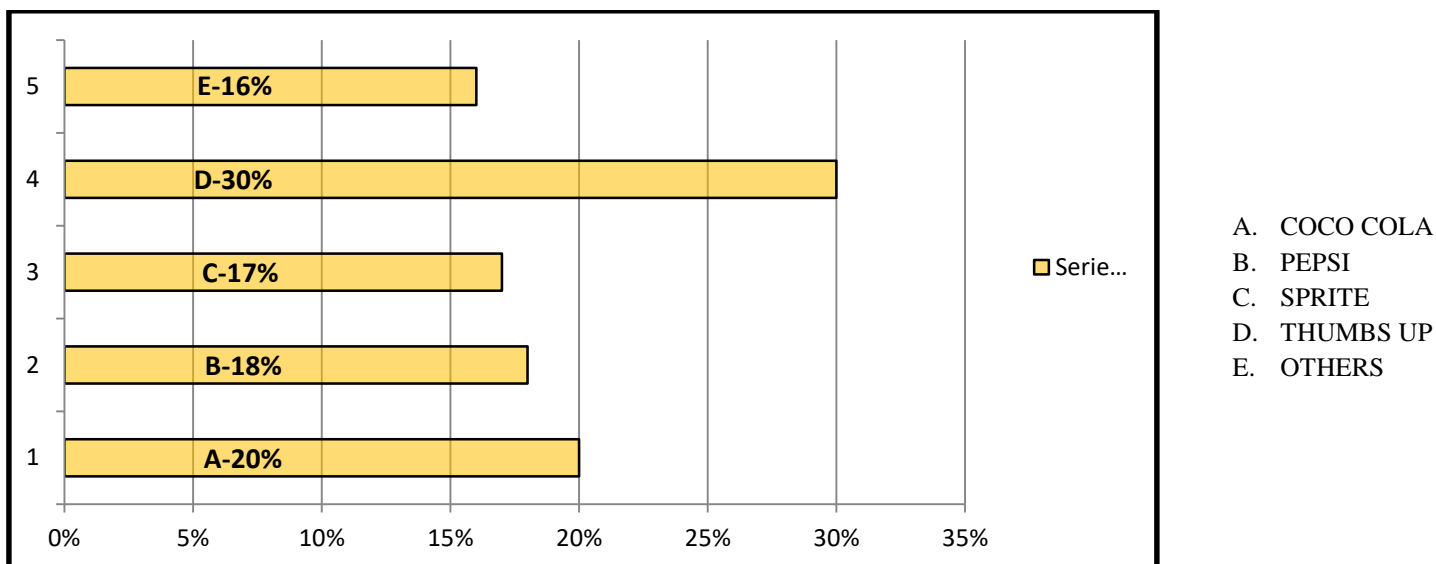

Figure 3 list of carbonated drinks

ANSWER:

Then as the most of the students prefer the carbonated drinks has been checked. From the survey, it is found that 20% consume coca cola, 16% consume Pepsi, 17% consume sprite, 30% consume thumbs up and remaining 16% consume whatever they like.
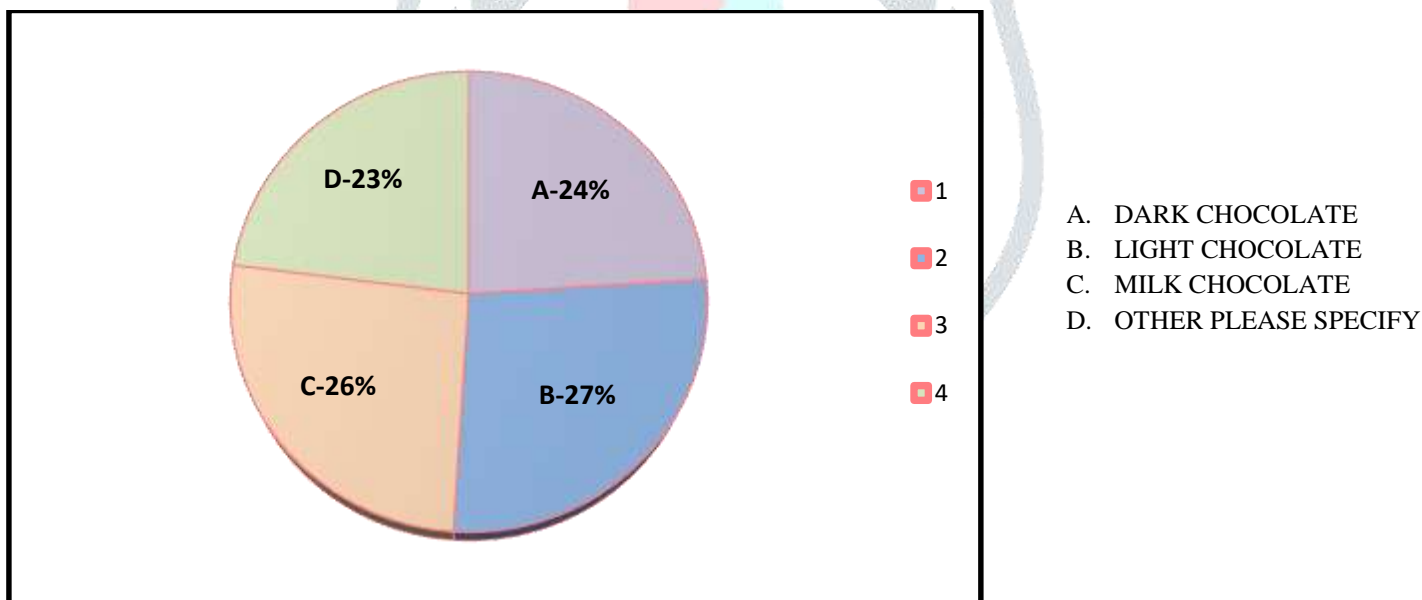

Figure 4 what kind of chocolate do you consume?

ANSWER:

The students were again questioned about their preference about the type of chocolate 23% of people consume dairy milk, 25% consume Kit kat, 25% consume Bourneville and 25% consume ferrero rocher. It's the socio economic status that often dictates the choice of the food item. . According to a qualitative assessment of nutrition knowledge levels and dietary intake of school children in Hyderabad children from high socio economic status preferred fast foods like dairy milk, kitkat etc to traditional foods despite their better nutrition knowledge [16].
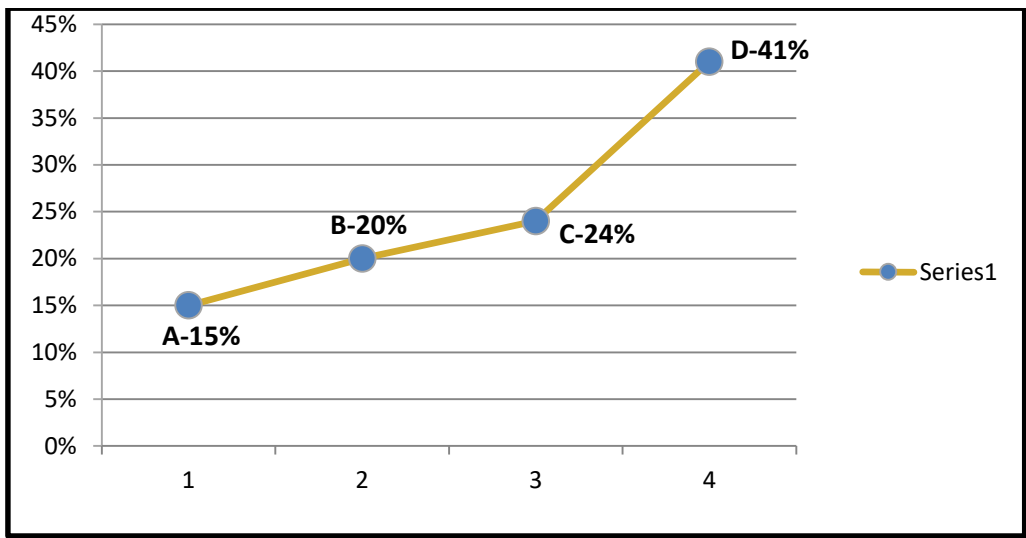
A. BEFORE 11 AM
B. BETWEEN
   11 AM TO 2 PM
C. BETWEEN 2PM TO
   6PM
D. AFTER 6PM

Figure 5 what time do you eat junk food?

ANSWER:

Consumption levels gradually rise throughout the day and peak is at evening after 6pm i.e. tea time. Finding from a study conducted on college students (20- 27 years) from NCR region revealed that going for snacks has been most preferred time for visiting fast food outlets followed by dinner and lunch[17].This is due to the decrease in energy levels and fatigue due to lack of eating a wholesome balanced diet.
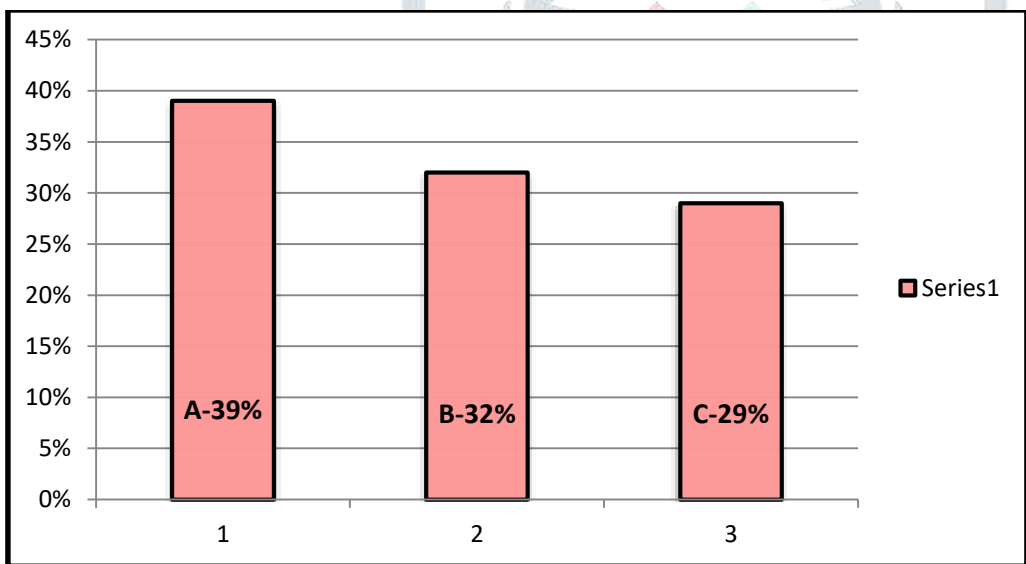
A- 3-4 TIMES A WEEK
B- 1-2 TIMES A WEEK
C- 5 TIMES A WEEK OR
   MORE

Figure 6 frequency of consumption of junk foods

ANSWER:

Around 29% were found to be consuming junk food 5 times or more per week, 39% were consuming 3-4 times a week and 32% for 1-2 times a week.
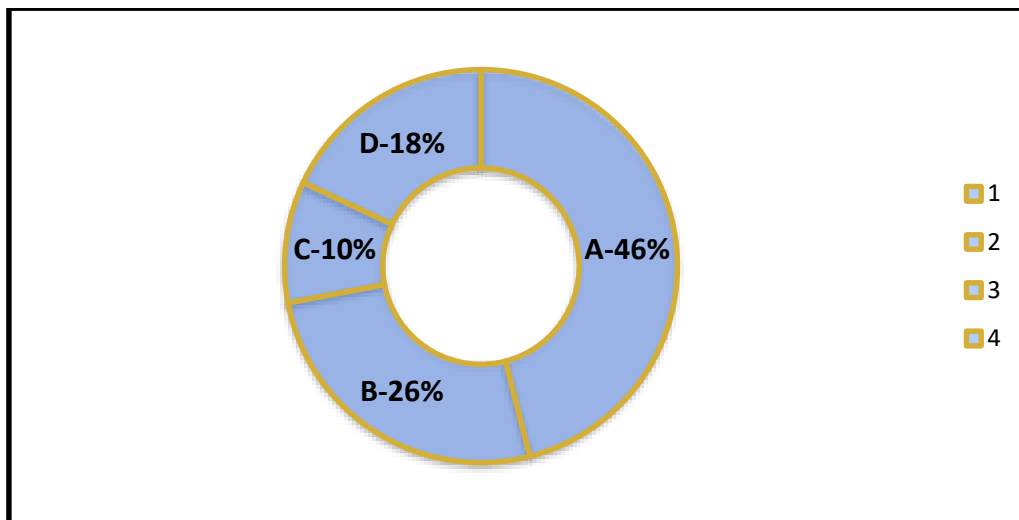
A. AGREE
B. STRONGLY AGREE
C. DISAGREE
D. STRONGLY DISAGREE

Figure 7 does intake of junk food depends on emotional factors like happiness/sadness?

ANSWER:

While 72% agree that they consume junk food based on emotions, around 36% disagree to the question. The reason that junk fod effects the mood of these adolescents is that junk food has an addictive phenomenon. A research [10, 20] gives the following mechanism of the addictive phenomenon: "Ingredients of junk foods give great taste and make consumer addictive. Fats and sugar in combination are capable of producing a dopamine driven sugar of intense pleasure in people with propensity for addictive behavior. There is considerable similarity between dopamine production levels between drug addicts and junk food addicts. Addition to either one causes brain receptors receiving dopamine signals to lose their responsiveness. Thus in order to receive the same level of satisfaction there is need of increasing amount of addictive substance. Prolonged consumption of junk foods results in reduced activity in striatum of forebrain which register reward. Those on prolonged use of junk foods require ever increasing amounts of it to get the same high. Too much of junk food alters the chemistry of the brain and are addictive like cocaine. High fructose crone syrup (HFCS), monosodium glutamate (MSG), hydrogenated oils, refined salt and other chemical preservatives in processed junk food do the same thing to a person's brain just as cocaine does".
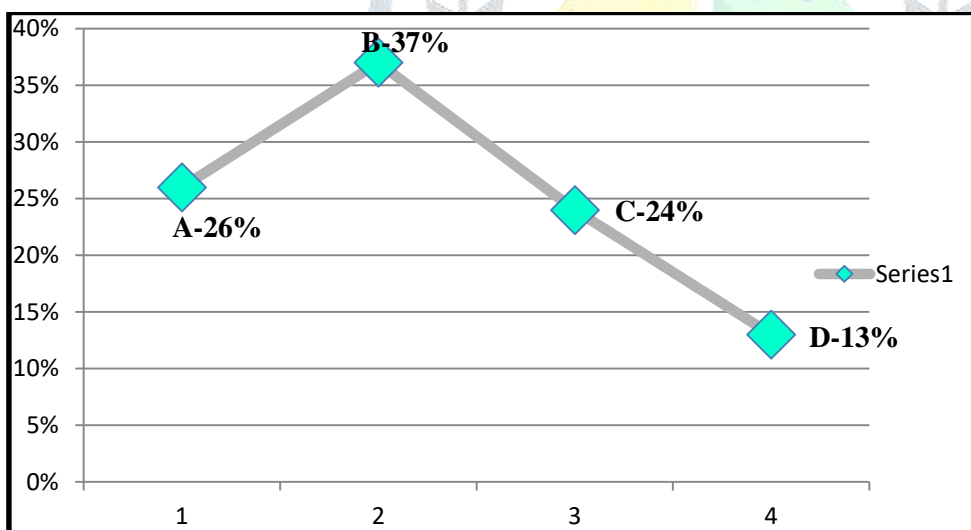

A- ADVERTISMENT
B- TATSTY
C- LACK OF COOKING SKILLS
D- LIMITED TIME

Figure 8 reason to choose particular junk food

ANSWER:

The chief reason for consumption of junk foods is 37% students found it tasty, while 26% students were influenced by the advertisements, 24% of consumption was as a result of to lack of cooking skills and 13 % were constrained due to limited time. Moreover the fast food joints use innovative techniques and attractive marketing tricks to lure the consumer to their outlets as a better option than the burdensome task of cooking food at home [18]. The fast food industry in India was estimated to be between Rs 6750- Rs 8000 cores [19] these industries rope in big celebrities to promote their junk foods, often with healthy gimmicks which rarely fall under the healthy tag, thus fooling the people in buying them. Studies show that eating food high sugar or fat results in neurochemical changes in the brain similar to those that develop in drug addiction. Increased stress levels cause the body to expend more energy, stimulating hunger for calorie dense substances.

IV.   SUMMARY

• Consumption of junk foods is on the rise, with its morbid consumption comes an array of health consequences that affect the one consuming it

• These consequences both short term and long term can be deleterious.

• With adolescents being the major consumer, the health of the future citizens of the country is moving towards the peril of not one but several maladies and disorder.

• This paper studies the consumption and the frequency of junk food of college going girls

• A questionnaire was used to assess the students junk food eating pattern

• The results broadly suggested, that the consumption levels gradually rise throughout the day and peak is at evening after 6pm i.e. tea time. Thus ensuring the availability of healthy food items could overcome the need for junk food

• Junk food was found to be consumed by 29% of the adolescent girls 5 times or more per week, more over 39% were consuming 3-4 times a week and in total 32% of the respondents eat at least 1-2 times in a week. With this frequency identified an intervention of daily healthy meal prepping for the entire week could decrease the junk food consumption frequency

• A higher rate of adolescents (72%) agrees that they consume junk food based on emotions; around 36% disagree to the question. Educating adolescents about emotional effects on over eating and debunking the association of junk food and emotional well being   might help with moody junk food binging.

• The chief reasons found from this study, for consumption of junk food are that 37% students consume junk food as they find it tasty. However, 26% students were influenced by the advertisements, 24% of consumption was as a result of to lack of cooking skills and 13 % were constrained due to limited time. Creating awareness by introducing healthy and tasty food options and teaching the importance of home cooked food is essential in decreasing the junk food consumption among students.

• Family and friends plays an important role in shaping the food choices adolescents makes [21]. Parent's reactions toward food often condition the child in forming a perception about certain foods [22]. Thus parents can help educate about the ill effects of junk food better to adolescents

V.   CONCLUSION

A nutritious well balanced wholesome diet is a basic need of every human being for growth, development and maintaining good health. Many adolescents and young women during their meal time eat junk foods and are getting addicted to the taste of junk food. Junk foods are tasty but they have a low nutrient value and high calories. Junk foods are laced with colors which are often inedible, carcinogenic and harmful to the body. These foods can affect digestive system, its effect can emerge after many years. Adolescent drive for individualization means more opportunity to assert food of their choice and expand narrow healthy options.

The radical changes in economy, urbanization, media advertising, western influences, and dietary changes have all led to the increased consumption of junk food which has bought unparallel rise in lifestyle diseases, thus affecting the long term health of a large chunk of the population. This requires immediate action as unhealthy adolescents mean a unhealthy society.

 Comprehensive nutrition interventions, awareness programmes, increase in more healthy options in the market   coupled with reforms from the government can help to curtail the menace of fast food consumption. Advertising healthy snack options with reasonable price has been shown to have effect on buying healthy snack options [23]. Price reduction on low fat snacks and placement of low fat label enhance their consumption among adolescent population [24].

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