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CONSUMPTION PATTERN OF FAST FOODS AND ITS EFFECT ON HEALTH STATUS OF ADOLESCENTS (17-20 YEARS)

Healthcare

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ABSTRACT

The adolescent age is the most crucial period of transition in the overall human development, so the nutritional requirements in proper proportions particularly in this period assume pivotal role for overall growth process. The present study aims to assess the relationship between the consumption of Fast food and ill health of adolescents (17-20 years) with the objectives to assess health status and the consumption pattern of fast food by adolescents, various factors that lead to the consumption of fast food by adolescents and the use of mode of ordering food. The present study was conducted in Delhi NCR . Fast food consumption is high among adolescents due to easy accessibility. Its consumption has a negative impact on their health. Use of fast food among adolescents is of concern due to high fat and energy intake, which may cause obesity and obesity related chronic disease. They should definitely limit their intake for a healthy living. It was observed that the intake of fat was high among both girls and boys.

KEYWORDS

Adolescents, Fast food, Consumption pattern, 24 hour dietary recall, dietcal.

INTRODUCTION

India is in the middle of a demographic, epidemiological and nutrition transition. The factors such as growing population, increasing urbanization and changes in life style are responsible for the existence of nutrition transition. A drastic change in the dietary pattern i.e. shifting away from a less varied and indigenous traditional form of diet to a varied diet is nutrition transition. Processed foods, animal foods, more fats and sugary products are included in this form of diet. [1]

The Indian nutrition transition has been associated with a significant change triggered by a complex mix of marketing, social, and economic policies, in the lifestyles and the dietary habits of urban Indians. The influence of western culture and multinational fast food companies in the Indian food market have replaced traditional home cooked food with ready-to-eat, processed foods in urban Indian households due to rapid proliferation. [2]

Fast food denotes food which is prepared and served quickly at outlets called fast food restaurants. Fast food involves most of the finger food which can be eaten without cutlery. Fast foods include chips, sandwiches, hamburgers, fried chicken, French fries, chicken nuggets, fish, pizza or ice-cream, although many fast food restaurants offer convenient foods like chilly mashed potatoes and salads. [3]

The consumption of different types of fast food is increasingly growing both in developed and developing countries. Due to the changes in the lifestyle and dietary habits of people, an increasing number of people from different age groups, specially adolescents are inclined toward consuming fast food. [4]

As there is no control over how fast foods are cooked so maintaining nutritional balance is not easy. Some are cooked with a lot of oil and butter and there may be no option left if they want it with reduced fat. The large portions also encourage overeating. [5]

According to the Massachusetts Medical Society Committee on Nutrition, fast food is especially high in fat content, and studies have found associations between fast food intake and increased body mass index (BMI) and weight gain. Fast food comprises a growing portion of food eaten outside the home. In 1953, fast food accounted for 4% of total sales of food outside the home; by 1997, it accounted for 34%. As a percentage of discretionary food expenditure, fast food doubled from 20% in the 1970s to 40% by 1995. Finally, as a percentage of total energy intake, fast food quintupled from 2% in the 1970s to 10% in 1995.One-third of US adults report having eaten at a fast food outlet on any given day; 7% of Americans eat at a Fast food restaurant daily[5].

Fast food is especially popular among adolescents, who on an average visit a fast food outlet twice per week. Many people have raised concerns about the nutritional quality of fast food, not only for children and adolescents but also for adults. Various factors such as greater number of working women, dual-career families, more diverse schedule of family members, an aging population and an increasing number of one and two person households have contributed to the sudden increase in the use of fast foods. Fast foods meet the needs of many people because they are quick, reasonably priced and readily available. Food industry analysis even predict a future of increasing home delivery services, high-quality vending machine foods and ready to eat packages for microwave equipped homes.[3]

As the adolescent age is the most crucial period of transition in human development, so the nutritional requirements in proper proportions particularly in this period is required for overall growth process. Clinically it has been proved that the nutrient value of fast foods is well below the required levels and its intake leads to many disorders. Also the fast foods are main agents responsible for many diseases and disorders like obesity which is likely to cause cardiovascular diseases later on. Moreover fast food related concerns have alarmed people all over the globe [5].

The objectives of the study include: to assess health status and the consumption pattern of fast food by adolescents, to assess various factors that lead to the consumption of fast food by adolescents, to assess the mode of ordering food i.e. college canteens, online delivery, fast food restaurants, food trucks and the type of fast food they consume , to access the impact of fast food consumption on the health status of the adolescents.

METHODOLOGY

MATERIALS AND METHODS

The study was conducted in the colleges of Delhi NCR. The study focuses on the fast food intake by adolescents.

Selection of subjects

Random sampling technique was used in this study. College going adolescents between the age of 17-20 years were selected. The sample size consisted of 100 participants out of which 77 were girls and 23 were boys.

Development of Tool

A structured questionnaire was developed to collect information of the subjects and it was simple and reliable. It contains the following information:

(a) Socio-demographic profile of the subjects- it includes name, age, gender, food habit, family income, mother's occupation, father's occupation and college.
(b) Anthropometric measurements- it includes weight, height, waist

circumference and hip circumference.

(c) Dietary intake- it includes the 24 hour dietary recall of 2 days which was calculated through the software DIETCAL to know the consumption pattern of fast foods by adolescents.

(d) Statistical analysis- IBM Statistics SPSS Software was used to analyse the collected data.

RESULTS AND DISCUSSIONS

The socio-demographic profile of subjects. Out of 100 subjects 23 were boys and 77 were girls. All 100 subjects were urban. The food habitat shows that 53 subjects were vegetarian, 33 subjects were non-vegetarian and 14 subjects were eggetarian. The average height, weight, waist circumference and hip circumference of boys were 1.59m, 64.73kg, 35cm and 41.6cm. the average height, weight, waist circumference and hip circumference was 1.54m,56.31kg,40cm and 48.19cm respectively.

The mean energy intake of girls was 1248±424.97kcal , average carbohydrate intake was 170.94±55.35g, average protein intake was 43.34±16.99g and average fat intake was 61.66±40.12g respectively. On the other hand the mean energy intake of boys was 1328±347.01kcal, average carbohydrate intake was 179.27±36.82g, average protein intake was 51.23±20.92g and average fat intake was 44.75±21.74g respectively.

Table 1. Correlation between family income and the amount of money that adolescents pay for fast food

		Family Income	Average amount for fast food meal
Family Income	**Pearson Correlation**	1	-.081
	Sig. (2- tailed)		.423
	N	100	100
Amount of money that adolescents pay for fast foods	**Pearson Correlation**	-.081	1
	Sig. (2-tailed)	.423	
	N	100	100

- Correlation is significant at the 0.05 level (2-tailed)
- Correlation is significant at the 0.01 level (2-tailed)

Table 1 shows correlation which shows that the family income and the average money spend by adolescents doesn't correlate (0.0423) concluding that they don't spend much on fast foods

Table 2 Correlation between the fast food that adolescents consume the most and whether they had any side effects by regular consumption of fast foods.

					Side effects by regular consumption of fast foods
Most consumed fast food (Maggie)	Pearson correlation	.119	.258	.093	-.073
	Sig. (2-tailed)	.238	.009	.359	.471
	N	100	100	100	100

- Correlation is significant at the 0.05 level (2-tailed)
- Correlation is significant at the 0.01 level (2-tailed)

Table 2 shows that Maggie is the most consumed fast food and many of the adolescents didn't experienced any side effects by regular consumption of fast foods. Also there is no significance correlation between these two parameters (0.20).

Table 3 Distribution of respondents on the basis of Nutrient Adequacy Ratio

	SEDENTARY LIFESTYLE				
	BOYS (n=27)		GIRLS (n=73)		
	RDA	NAR	RDA	NAR	INFERENCE
ENERGY (Kcal)	2320	0.5	1900	0.6	Needs are not met
CARBOHYDARTE (g)	348	0.5	285	0.5	Needs are not met
PROTEIN (g)	60	0.8	55	0.7	Needs are not met
FAT (g)	25	1.7	20	2.8	Requirements are met but they exceed the required NAR.

Table 3 shows that the nutrient adequacy ratio of energy, carbohydrates, protein and fat of sedentary lifestyle boys was founded to be 0.5 ,0.5 ,0.8,1.7 respectively. The nutrient adequacy ratio of energy, carbohydrates, protein and fat of sedentary girls were founded to be 0.6,0.5 ,0.7,2.8 respectively. The nutrient adequacy ratio of energy, carbohydrates and protein of both boys and girls did not met but the nutrient adequacy ratio of fat of both girls and boys was met. But the NAR of fat of sedentary adolescens girls was quite high.

CONCLUSION

In the study conducted on adolescent regarding consumption of fast food and its impact on their health status, it was observed that fast food consumption is on rise among adolescents. It is necessary for them to limit their intake for a healthy living.

The study adopted random sampling technique in which 23 boys and 77 girls out of total 100 were randomly selected. A structured questionnaire was used to collect data which includes demographic profile of subjects, questions regarding fast foods and 2 days dietary recall (24 Hour dietary recall method) of subjects.

It was observed that many adolescents use Zomato app i.e. online method of ordering food but this is not significantly high as still the adolescents don't spend much on fast foods because of its high price. Focusing on health status of adolescents, some (43%) of them frequently suffers from diarrhoea, food poisoning, obesity and hypertension. The factors that leads to the consumption of fast food were satiety, appearance, taste, convenience, variety, quick and others but the most preferred factor was taste.

It was also observed that the mean energy intake of girls was 1248.40kcal, average carbohydrate intake was 170.94g, average protein intake was 43.34g and average fat intake was 61.66g respectively. On the other hand the mean energy intake of boys was 1328.44kcal, average carbohydrate intake was 179.27g, average protein intake was 51.23g and average fat intake was 44.75g respectively.

It was observed that correlation was applied which shows that the family income and the average money spend by adolescents doesn't correlate (0.0423) concluding that they don't spend much on fast foods. There was no correlation found between how often adolescents consume fast food and their knowledge regarding whether fast foods have bad effect on health or not (0.309) but it was found out of 100 subjects 83 subjects have a bad effect on their health due to fast food consumption and around 35 subjects consumse fast food once a week. The reason of consumption of fast food was due to its taste and Zomato was the most used fast food app to order food online but this parameter doesn't correlate either (0.481) and Maggie is the most consumed fast food and many of the adolescents didn't experienced any side effects by regular consumption of fast foods. Also there is no significance correlation between these two parameters (0.20).

So it can be concluded that adolescents have knowledge about the bad effects of fast food consumption but still they consume it for a change also it was observed that those who consume more fast foods have high BMI and WHR. Also both adolescents girls and boys should limit their fat intake and NAR shows that the energy , carbohydrates and protein needs of both girls and boys are not met which means that their RDA is not met. So they should eat more of healthy food to at least to meet the basic nutrients required by their body.

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