



## Top Foods Among Adolescents

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### ABSTRACT

Adolescence is the period of life during which people develop a craving for different food items. The main objective of this study is to find out the top preferred foods among the adolescents. By examining the carbohydrate and fat content of the top preferred foods, awareness about the health status of adolescents can be created. This is a questionnaire- based study. The questionnaire contains choices for three meals of a day, namely, breakfast, lunch and dinner. The questionnaire is distributed to the adolescents in the city of Chennai. The sample size of this study is 100. The filled questionnaires were collected and statistical analysis was made. The results were tabulated. The results of this study reveal that the adolescents of this region of our study still prefer the native staple food inspite of the intrusion of junk foods and fast foods. The preferences of individuals vary with age. Though adolescents prefer staple food, awareness needs to be created about fruits and vegetables consumption in order to prevent them from falling a prey to junk food habits. This will also prevent the occurrence of chronic diseases in the near future. The results of this study will thus help in creating healthy eating habits for adolescents.

**Keywords:** Adolescents, Eating habits, Fast foods, Junk foods, Preference.

### INTRODUCTION

In adolescence, food is the fuel for lots of growing and developing. Adolescents have bigger nutrition needs compared both to adults and young people who've finished their growth spurts. This is because of the significant changes in body growth and functioning that occurs after puberty. This is also the time when children form lifelong food habits. The changes brought about in dietary patterns at this stage particularly might have an impact on the trends of diet-related risk factors of chronic diseases.<sup>1</sup> The preference of adolescents varies with age which can be attributed to many factors. The factors determining the food habits of adolescents are complex too. According to theoretical models, they can be arranged at different levels of influence: individual, social environmental, physical environmental and macro-system influences.<sup>2</sup> Preferences play an important role in defining children's food patterns, as they are linked to food acceptance. Some researchers have also established the fact that certain genetic factors influence food likes, dislikes and perceptions. However, research shows that children develop their food preferences as they grow and are exposed to a variety of food items, textures, taste and flavours.<sup>2</sup> They also learn from modeling in the family, parents and siblings; what they experience at home, in the school and with their friends. The preference of adolescents isn't constant too. It varies based on the above mentioned factors. Food organizations keep a continuous track of these changes and modify their food production policies and services accordingly. In the present study I've aimed at finding the current trends in food preferences among adolescents. My study group includes particularly those at the age of 18 years as this marks their transition from adolescents to adults. Based

on the results of my study, awareness is to be created among adults whether to continue with the present food habits or to adopt a healthier one.

### MATERIALS AND METHODS

The sample size of this study is 100. The study group consists of adolescents between 17-19 years of age. The study was conducted in the city of Chennai (Tamil Nadu, India). This was a questionnaire based study. The questionnaire had food preference choices for three meals namely, breakfast, lunch and dinner. The choices were created after closely monitoring and examining the food habits in and around the city. The staple food of people in the region was also included.

The choices common in all the three meals of a day were fruits and vegetables, confectionery, fast food, millets and chapathi.

Other options for:

- Breakfast enlisted were sandwiches, oats and cornflakes, idli, dosa and fried food such as pakodas, poori, etc.
- Lunch enlisted were rice, pulses, sandwiches, animal fat (meat, pork, etc.) and sea food.
- Dinner included rice, animal fat, chapathi, dosa or idli and milk.

The survey questionnaire thus created was distributed to adolescents. The results were tabulated.



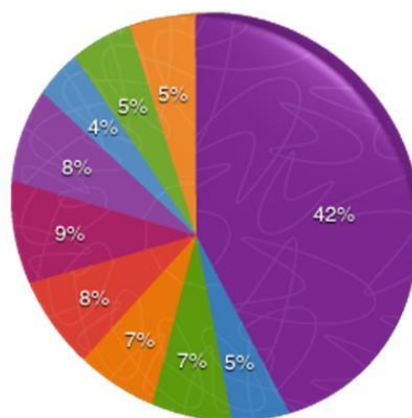
**Statistical Analysis**

The tables included below reveal the number of adolescents who prefer different food items with a pie chart to show the percentage.

**Table 1: Breakfast and lunch**

Breakfast	No. of students	Lunch	No. of students
Fruits and vegetables	9	Rice	42
Sandwiches	10	Pulses	5
Oats, cornflakes	11	Sandwich	7
Confectionery (cakes, chocolates, biscuits, etc.)	7	Chappathi	7
chappathi	7	Milletts	8
Dosa	36	Animal fat (meat, fork)	9
Idli	12	Sea food	8
Milletts	3	Fruits and vegetables	4
Fried food (pakodas, poori, etc.)	4	Confectionery	5
Fast food (pizza, burgers, etc. )	1	Fast food	5

- \* Rice
- \* Pulses
- \* Sandwiches
- \* Chapathi
- \* Milletts
- \* Animal fat (meat, pork, etc.)
- \* Sea food
- \* Fruits and vegetables
- \* Confectionery
- \* Fast food

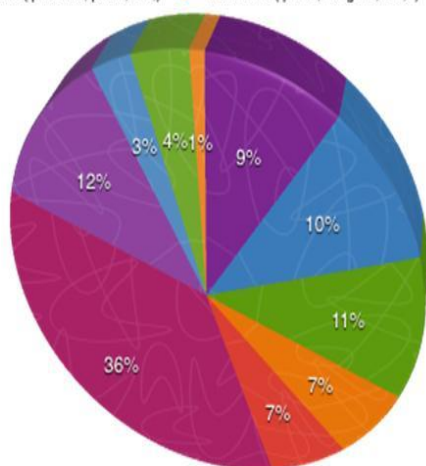


**Figure 2: Lunch**

**Table 2: Dinner**

Food	No. of Students
Rice	15
Animal fat	3
Fruits and vegetables	11
Milletts	4
Confectionery	10
Chapathi, dosas, idlis, etc.	41
Milk	6
Fast foods	10

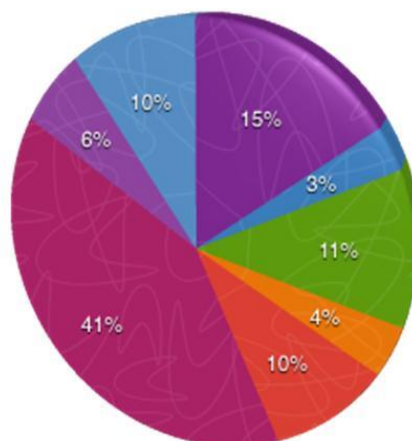
- \* Fruits and vegetables
- \* Sandwiches
- \* Oats, cornflakes
- \* Confectionery (cakes, chocolates, biscuits, etc.)
- \* Chapathi
- \* Dosa
- \* Idli
- \* Milletts
- \* Fried food( pakoras, poori, etc.)
- \* Fast food ( pizza, burgers, etc., )



**Figure 1: Breakfast**

The next chart (figure 4) holds a comparison between the percentage of adolescents consuming a poorly nutritious diet and a highly nutritious diet. The food stuff considered for poor nutrition includes fried food, fast food and confectionery, while those for high nutrition includes rice, dosa, idli, chapathi, sea food, animal fat, fruits and vegetables.

- \* Rice
- \* Animal fat
- \* Milletts
- \* Confectionery
- \* Fruits and vegetables
- \* Milk
- \* Fast foods
- \* Chapathi, dosas, idlis, etc.,



**Figure 3: Dinner**

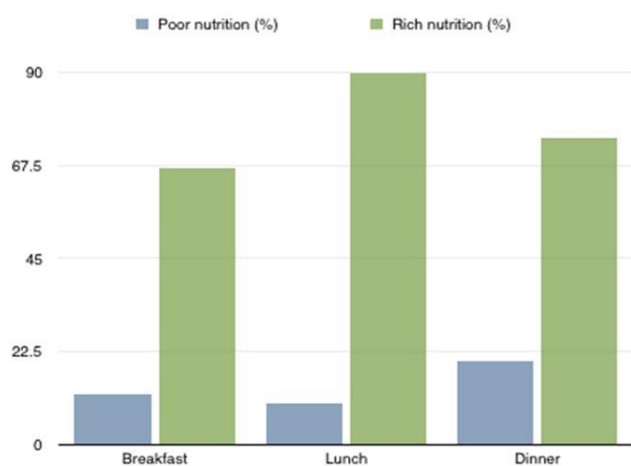
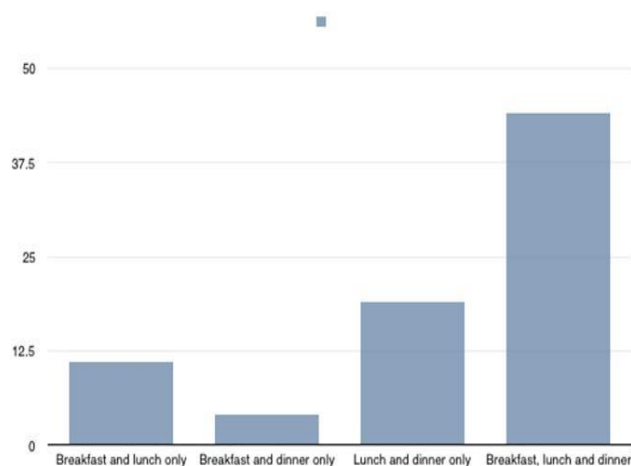
The percentage of adolescents consuming a highly nutritious diet for different meals of a day is revealed in Figure 5.

The nutritional value (per 100 g) of the given choices has also been tabulated in table 2 to assess the preferences on a health aspect.



**Table 3:** The nutritional values (per 100 g)

Food/ Nutritional value	Calories	Fat (in g)	Cholesterol (in mg)	Carbohydrates (in g)	Proteins (in g)
Rice	130	0.3	0	28	2.7
Pulses	81	0.4	0	14	5
Milletts	378	4.2	0	73	11
Fruits	89	0.3	0	23	1.1
Vegetables	65	0.2	0	13	2.9
Chapathi	71	0.4	0	15	3
Idli (per piece)	39	0.11	0	8	2
Dosa	106	1.04	0	21.24	2.51
Confectionery	353	16	3	45	7
Animal fat	897	10	95	0	0
Sea food	354	20.7	99	0	39.5
Sandwiches	233	13	199	18	11
Pizza, burger	266	10	17	33	11
Fried food	107	3	0	17	3
Milk	42	1	5	5	3.4

**Figure 4:** A comparison between the percentage of adolescents consuming a poorly nutritious diet and a highly nutritious diet.**Figure 5:** The percentage of adolescents consuming a highly nutritious diet.

## RESULTS AND DISCUSSION

The final results reveal that about 36% adolescents prefer dosa for breakfast, 42% prefer rice for breakfast and 41% prefer dosa, Chappathi or idli for dinner. Surprisingly, all these are the staple food of this region and they've outwitted food like confectionery, pizza, burger, etc., even among adolescents.

During the growth spurt in puberty, teenagers do enough growing to achieve approximately 15% of their total adult height and 40% of their total adult weight.

So foods that form their preferences need to have a rich supply of nutrients. The results of this study reveal that the adolescents in this region still prefer the native food like dosa, idli, chappathi or rice to other fast food, pizzas, burgers, etc.

### Breakfast

Examining the nutritional value of the most preferred dosa (36%), it has a rich supply of carbohydrates and proteins and a perfect zero cholesterol value among all other choices for breakfast. This proves dosa to be healthier than other options and adolescents giving preference to such healthy stuff is to be lauded. The second highest preference is idli (12%), followed closely by oats and cornflakes (11%) and sandwiches (10%). A person consuming about 3 idlis per meal will be nourished with 24 g carbohydrates and 6g proteins. The least preferred were millets (3%) and fast food like pizza, burger (1%). Though millets prove to be a healthy option for breakfast it doesn't have much takers which can be because of its sparse availability in college canteens apart from outlets.

## Lunch

Nearly half the study group (42%) prefer rice for their lunch which has a high carbohydrate content (28%) and also considerable amount of proteins (2.7%). All the other choices have a class wide range of preference between 5-9%. However, fruits and vegetables are the least preferred lunch foods by adolescents, but they prove to be a healthier choice when compared to animal fat or sea food. This indicates that fruits and vegetables should be given in the form of different dishes with a different taste so that it makes them more palatable.

## Dinner

Dinner forms the last meal of the day in this region, with around 41% of adolescents preferring chappathi, dosa or idli to end the day. The preferences for fast food and confectionery is higher in dinner than in the other two meals of the day. About 10% prefer fast food and confectionery for dinner. This can also be due to availability and moreover as the study group primarily consists of college students, they stand a chance of eating outside for dinner rather than for breakfast or lunch.

Comparing the percentage of students consuming poorly nutritious or richly nutritious food for different meals, the results were as follows. For breakfast, 12% students have a poor diet and 67% consume a rich diet. For dinner, 20% consume a poor diet while 74% opt for a rich diet and regarding lunch, only 10% consume a poor diet while 90% eat a rich nutritious diet.

Taking a glance at the results of other surveys, we find many different preferences of adolescents in different regions.

Among Spanish children the overall food preferences showed a higher like for pasta, followed by rice and meat.<sup>2</sup> A 2007 Australian survey showed that young people ate a wide variety of foods. But it also found that children's intake of saturated fat and sugar is high. Another study, conducted in 2011, found that: only 5% of Australians aged 12-18 years met the daily requirements for fruit and vegetable intake (five servings of vegetables and two servings of fruit)<sup>3</sup>. Adolescents obtained over one-fourth of their intakes of discretionary calories, over one-third of added sugars, and one-fifth of added fats from snacks reveals another study conducted by Rhonda et al., in America.<sup>4</sup>

The idea of conducting this study stemmed from the fact that the prevalence of childhood obesity is increasing, the reason for which is the food habits of adolescents. Already the factors affecting food preferences were discussed in detail previously, and another factor has been found to affect food preferences i.e. TV. In 1987, in a content analysis of food advertisements that were on television during a 12-hour period, it was observed that 80% of advertisements showed foods with low nutritional value, including breakfast cereals high in simple sugars and snack foods high in sugar, fat, and salt.<sup>5</sup> Unhealthy

food habits during adolescence are the causatives of obesity. Particularly, the consumption of sugar-sweetened drinks can also lead to obesity. This is because of the imprecise and incomplete compensation for energy consumed in liquid form.<sup>6</sup> Though majority of adolescents who took up this study don't prefer fast food, there are many chances of them falling a prey to the habit of eating fast food. The consumption of fast food has a significant effect on body mass index in females than in males.<sup>7</sup> Adolescents who ate fast food on a typical day, compared with those who did not, consumed more total and saturated fat, more total carbohydrate and added sugars, less dietary fibre, and more energy per gram of solid food (i.e., higher non-beverage energy density).<sup>8</sup> A study by Natalie et al., reveals an interesting fact that lower fast food preference for girls than boys during adolescence may be explained from the fact that girls avoid foods that may cause weight gain.<sup>9</sup> A study also suggests that the most effective dietary approach for the prevention of type 2 diabetes is appropriate reduction of energy intake along with exercise to increase energy expenditure.<sup>10</sup>

American Heart Association lists the following measures to avoid atherosclerotic heart disease: 1. Advocate consumption of a variety of fruits, vegetables, whole grains, dairy products, fish, legumes, poultry, and lean meat. 2. Limiting intake of salt and sugar. 3. After age 2, limit foods high in saturated fats (10% of calories per day), cholesterol (300 mg per day), and trans-fatty acids.<sup>11</sup> Overweight children are likely to become obese adults and the cause for overweight is their nutritional habits.<sup>12</sup>

The survey results thus reveal that a majority of adolescents still prefer healthy foods to junk food. But a challenge lies ahead in making them prefer the same which can be achieved if healthy food stuffs are given with a twist. This avoids the boredom of taste, which makes adolescents shift to fast foods.

## CONCLUSION

Nutrition during formative years plays an important part in determining the health state of individuals in the forthcoming years. The research reveals that in spite of exposure towards junk food and fast food, adolescents still have a naïve for their native staple food. This is to be appreciated. However, an awareness needs to be created about the intake of fruits and vegetables and their beneficial role in maintaining our health state. This study will thus ensure that steps be taken to create healthy food habits among adolescents.

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