

# Factors affecting food choice and attitude of choosing food items among adolescents in South India

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**Abstract- BACKGROUND:** The teenage is a period of acceptance for much negative health behaviour including choice of food, vegetable and fruit consumption, etc. Several dietary behaviour have been linked with childhood obesity, including increased number of meals eaten outside the home, larger portion sizes of meals at restaurants and fast-food takeaways, and increased consumption of snacks and soft drinks. The ideations formed during the mid-adolescence lead to adoption of either favorable or unfavorable dietary pattern. **METHODS:** A purposive and convenient sampling using a validated food-choice questionnaire was administered to assess and examine the various food choices, food fads among school going adolescents (n=564) in Pondicherry and Trichy, South India. **RESULTS:** Almost all of them have 3 divided meals in a given day, with an option for snack once. Three fourth (74%) of the children were already deciding on what food they consume with two third of them not consuming any fruits in the previous one week of the study. **CONCLUSION:** Adolescents prefer to take their own decisions regarding choice of food items, which is a major factor in utilizing the theory of planned behaviour is formulating various health promotion events regarding healthy eating and livelihood. The society should utilize the socializing events to evolve interest in healthy food habits among adolescents. This study further demonstrates the importance to study the existing pattern of dietary intake to determine the food preferences, beliefs and food fads of adolescent school children, so as to plan an appropriate nutrition education package for schools in India.

**Index Terms-** Adolescence, attitudes, dietary restraint, food choice, gender differences

## I. INTRODUCTION

Adolescence is commonly regarded as a relatively healthy period of the life cycle. Indeed, adolescents are possibly less vulnerable to infection than they were at a younger age. Adolescents are in the process of establishing responsibility for their own health-related behaviours, including diet. During this period there are various physical, psychological and behavioral transitions. (1,2) Determinants of dietary inadequacies are many, and they have been grouped under psycho-social and socioeconomic factors, while recognizing that they are intertwined. These transitions affect their life style which influences their eating patterns also.(3, 4, 5, 6, 7)

Recent studies confirm that adolescents' diets are nutritionally far from ideal. Despite the importance of healthy eating during adolescence, many adolescents' diets do not meet guidelines such as the Food Guide Pyramid.(8). Eating patterns

and behaviors of adolescents are influenced by many factors, including peer influences, parental modeling, food availability, food preferences, cost, convenience, personal and cultural beliefs, mass media, and body image. (8, 9)

Personal factors that influence eating behavior include attitudes, beliefs, food preferences, self-efficacy and also biological changes. Environmental factors include the immediate social environment such as family, friends and peer networks, and other factors such as school, fast food outlets, street vendors and social and cultural norms. (2, 10) Erratic dietary patterns appear common in them; snacking, skipping meal, irregular meal timings, wide use of fast food and low consumption of healthy foods etc.(11, 12). However, a majority of adolescents tend to have little motivation to protect their health capital for the future. (1) Increased nutritional needs but improper consumption in adolescence results in increased proportion of wasting, stunting, anemia and micronutrient deficiencies. (5, 8, 11) Adolescents are tomorrow's adults and improving adolescents' nutrition behaviour is an investment in adult health.

The eating behaviour of adolescents had become increasingly under spotlight in recent years in India, amid claims that many adolescents have a poor diet. Irregular meal pattern and skipping meals are common among adolescents in school going age group. Their food preference and the food fads are mainly formed by the environmental stimuli such as siblings, television advertisements, classmates, social gatherings, etc. (1, 10, 12)

The study of attitudes of food preference and the predictors and influencing factors of their eating practices need to be known to formulate targeted approach in healthy eating. Further, students in grades 11 and 12 in India experience a great deal of stress due to the education system which hinges on their performance in 12 standards as a direct entry into bachelors programs in prestigious fields such as dentistry, medicine, law and other professions.

Therefore, to study the nutrient awareness of the students and their choices are paramount to assess at this juncture when the childhood obesity is expanding in urban communities in India. Hence, late adolescents are vulnerable and deserve special attention. Hence this study was undertaken in two towns in South India – namely, Pondicherry and Trichy, both known for the eminent educational institutions in their respective states of Puducherry and Tamilnadu.

## II. METHODOLOGY

The study was multi-centric in two towns one each in Puducherry Union Territory and another Trichy, Tamilnadu state.

All students from the two schools - 11<sup>th</sup> standard and 12<sup>th</sup> Standard (Higher secondary students) between the ages of 15 to 17 were invited to participate. Teachers distributed the parental consent forms to parents via students asking permission for their child to participate in the study. After obtaining parental consent for 546 students, the researchers in the presence of the teachers administered the survey questionnaire during class hours.

Prior to the conduct of the survey among the adolescents from the two selected schools, as a part of its development, the questionnaire was pretested among students from a different higher secondary school (n=50) and modified for clarity and language based on the feedback of the students.

In the self-administered questionnaire, involved the use of a quantitative based questionnaire for the purpose of assessing food intake, food choice and their ideations regarding healthy foods of adolescents actual practice of food intake, barriers perceived by them for healthy food intake, food preferences, health beliefs and misconceptions.

The data were analysed using SPSS version 13.0 for frequencies and proportions.

### III. RESULTS AND DISCUSSION

#### Characteristics of the sample

A total of 564 students were surveyed, with equal representation from both the genders. Almost equal number of students in both the standards and grades were interviewed. (Table 1)

**Table 1: Demographic characteristics**

		n (%)
Sex	Male	282(50.0)
	Female	282(50.0)
Year level	11 <sup>th</sup> standard	281 (50.2)
	12 <sup>th</sup> standard	283 (49.8)
Town	Pondicherry	235 (41.7)
	Trichy	326 (57.8)

#### Concept of 'healthy food intake'

Almost all of them have 3 divided meals in a given day, with an option for snack once. Only two third (65%) ate breakfast regularly. 'Healthy food intake' was believed to be consumption of fruits and vegetables regularly. However, two third of the adolescents did not consume any fruits in the last week before the survey and only 10 percent had consumed on more than 3 days in the last week. One point to be further noted that only 5% felt that is fairly difficult to consume fruits or vegetables in their regular diet and 70% felt that it is easier for them to consume fruits or vegetables regularly. More than 60 percent of adolescent school children feel that all healthy foods should be tasteful. So it is possible to intervene at this age group to improve the nutrition among them.

It was surprising to note that 45% of students irrespective of gender difference felt that it is healthy to eat outside food. On the

contrary, 60 % agree with the fact that consumption of outside food has higher risk of food poisoning.

This provides a direct measure of sense of indecisiveness among the adolescents between 'taste' and 'healthy food'. Another variable to consider is that more than sixty percent of the adolescents do decide to order only "half portion" of what they usually eat at home, while they have to eat out. Hence there is a clear 'perception' and 'practice' difference regarding eating healthy foods or snacks among adolescents. Among adolescents food decisions are often based on emotion rather than rational thought (2). Significant difference was observed between their perception and actual consumption and consumed healthy foods being imposed by their parents. (4). Dodson et al from the Minnesota Study among adolescents has observed that 'food appearance' and 'taste' govern the choice among adolescents rather than healthy nature of the food item. (2, 4)

#### Food preferences and attitudes

One –fourth of the students (23.8%) were snacking four times or more in a given day. Only two third (65%) ate breakfast regularly while selecting a snack most adolescents (82%) choose tastiness over nutritiousness. They consume or prefer or often choose salty, crunchy foods as snacks over healthier alternatives. More frequent snacking reported among boys than girls in this study and the reason quoted being because of hunger of having missed important meals. The most important factor they consider while buying any snacks is tastiness. Only 15% felt that the healthy nature of the snacks matters for them. Studies among Minnesota adolescents also showed that snacks were eaten despite the awareness of their health consequences. (2)

The points that 18% snack or take a meal or snack every 3 hours points the direction of predisposition to the risk of overweight or obesity which could be compounded by the stress of higher secondary syllabus. Three fourth (74%) of the children were already deciding on what food they consume, a major factor to consider in theory of planned behavior model to bring about any change in the food choice behaviour among adolescents. (Figure 1)

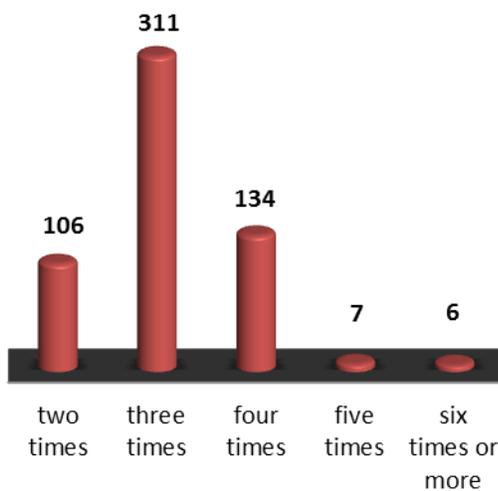
#### Influences of peer, parents, parties and functions

Fifty percent of the adolescents agreed to the fact they often eat too much on socializing events or functions. Only 18 percent of children were able to control themselves from consuming too much of chocolates, sweets, savories or snacks. More than 55 percent of adolescents could often decide on what food they consume in the weekends, however most of them are not able to decide at home. While these adolescents often experience a higher level of autonomy compared to younger children, their parents continue to play a key role in setting boundaries and supporting healthy lifestyle choices. Only 18 percent of children were able to control themselves from consuming too much of chocolates, sweets, savories or snacks. Fifty percent of the adolescents agreed to the fact they often eat too much on socializing events or functions. Only around 20 percent of them feel that the food preference is dependent of the family members or people whom they live with currently.

#### IV. CONCLUSION

It can be well affirmed that the behavioral changes in adolescence affect their food intake and they should be counseled and sustained motivation is required. It is appropriate to intervene at this age because the food habits once learnt persist into adulthood and the harmful effects are insurmountable. An opportunity exists in adolescence through nutritional intervention, which may if implemented can extend beyond the adolescent growth spurt. Public health nutrition is to be given more emphasis since promotion and prevention are deemed more critical to adolescent nutritional health in India as it has one of the youngest generations among the world countries. Adolescents can and should take responsibility for their nutrition and the long-term repercussions on health.

**Figure 1. Snacks timing among adolescents**



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