

A cross sectional study on food preferences among adolescents in schools of Aligarh city

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ABSTRACT

Background: The development of food preferences begins at conception and continues across the life. Although much of food preference development occurs during childhood, food preferences continue to change during adolescence and adulthood. However the healthy food habits of adolescents needs to be developed at an early age to ensure they lead a healthy lifestyle in the future.

Objective: To compare the food preferences of fast food and different food groups among adolescents aged 11-15 years

Methodology: In this observational cross-sectional study 200 adolescents (100 boys 100 girls) were included by random sampling technique, aged 11-15 years studying Vth to IXth standards from schools of Aligarh city. Details were collected through a self prepared questionnaire and food frequency questionnaire was used to get information on food preferences. Statistical analyses was done by SPSS 23.

Result: A significant difference was found in the food preferences regarding fast food between boys and girls while boys preferring more fast food than girls, with regard to preference in different food groups, only grains and pulses food group showed a significant difference in comparison to other food groups.

Conclusion: Information obtained about food preference reported by adolescent is a valuable information that may help to improve the eating pattern of this population. The significant differences among food choices calls for an urgent need to educate the adolescents to make healthy food preferences.

Key Words : Adolescents, Food preferences, Food habits

INTRODUCTION

According to (UNICEF 2016) United Nation define adolescents as “Adolescents are between the age of 10-19 years”, they are 1.2 billion in the world today, making up 16% of the world’s population (UNICEF, 2016). According to the WHO (2005), adolescents are those who’s requirement for nutrients is at its highest due to the rapid growth that is taking place; thus improper nutrition at this time may lead to present and future consequences on health and growth (WHO, 2005). Good nutritional status in adolescents and adults is decided by proper nutritional knowledge, eating habits, and food behavior, which plays an important role not only in the improvement of physical development but also in the maintenance of mental and emotional stabilization (Omidvar and Begum, 2014).

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The development of food preferences begins at conception and continues across the life course. This development involves a complex interplay of biological tendencies and environmental influences. Although much of food preference development occurs during childhood, food preferences continue to change during adolescence and adulthood (Ventura and Worobey, 2013). Sweet, savory, and salty substances are innately preferred, whereas bitter and many sour substances are innately rejected. However, these innate tendencies can be adapted by pre- and postnatal experiences. These early experiences set the stage for later food choices and are important in establishing lifelong food habits (Hale, 2011).

As the adolescence is the age of independency their quest for independence and acceptance by peers, increased mobility, and greater time spent at school/college and/or work activities and preoccupation with self-image may affect adolescent's food choices and preferences. All these factors contribute to the irregular and unhealthy eating behaviors that are common among adolescents. At the same time busy schedules may lead to meal skipping, snacking throughout the day and more eating away from home, peer pressure is very high during adolescence that leads to adolescents eating non-nutritious foods like pizzas, burgers coffees, soft drinks, chocolates and also other roadside junk foods. Awareness about one's body and its appearance becomes the top priority (Barooah, 2012). Adolescents believed that following a healthy diet was difficult for them because the taste was very important to them, with 'junk' food tasting better than more healthy foods, such as vegetables (French *et al.*, 1999). A study of South Indian school children and youth suggested that eating behaviors may be affected by social changes and higher socioeconomic status (SES). Families may adopt a Western-style in food consumption that may convert into the consumption of non traditional foods. Additionally, researchers found that Indian youth who eat away from home had significant increases in caloric consumption. These factors may recommend that changing social norms and the adoption of new food cultures may have a significant impact on adolescents' caloric intake; though these behaviors may be hard to undo (Swaminathan and Thomas, 2009 and Swaminathan *et al.*, 2007).

Objectives :

The general objective of the present study is to compare the food preferences among adolescent boys and girls in A.M.U. Schools of Aligarh City.

Specific objectives of the present study are :

1. To compare the fast food preferences among adolescent boys and girls.
2. To compare food preferences in different food groups among adolescent boys and girls.

METHODOLOGY

Keeping in mind the criteria of age, two schools was selected randomly after getting the concerned from the school authority. The sample size of 200 adolescent boys and girls (11-15) years were selected through stratified random sampling from Girls High School and Syedna Tahir Saifuddin High School of Aligarh Muslim University Aligarh. A self prepared questionnaire was used to collect the general and specific information. In specific information questions related to type of diet, preferences of fast food and different food groups were obtained using food frequency questionnaire.

Statistical analysis

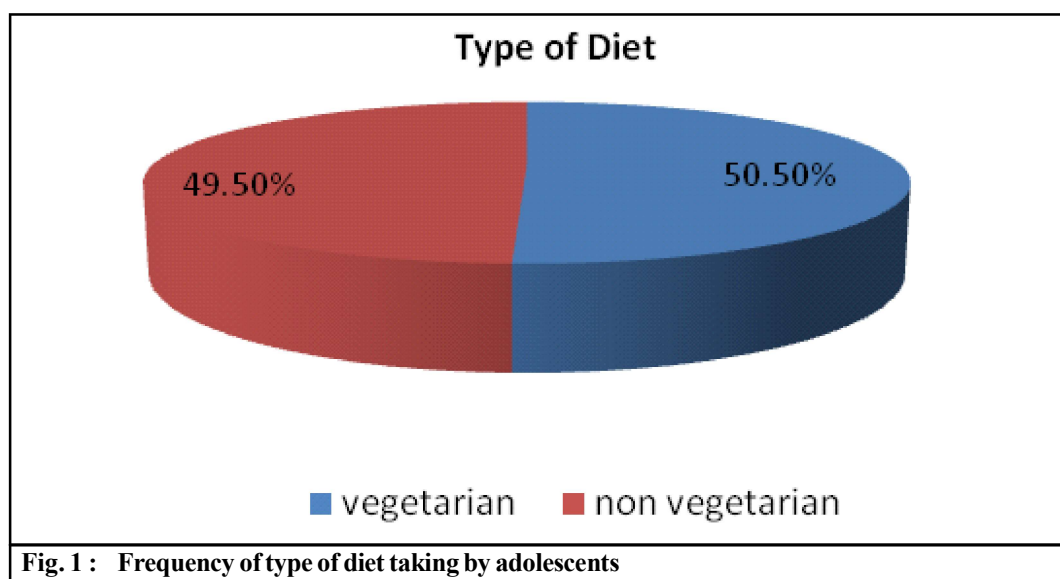
Statistical analysis of the data was performed using the statistical package for social sciences

for windows SPSS (Version 23). The data obtained were tested statistically by percentages and T-test to find out the significant difference in food preferences between adolescent boys and girls and diagrammatically represented by pie chart and line graph.

RESULTS AND DISCUSSION

In the present study out of total respondents, 50% were girls and 50% were boys, 20% were selected from (11 to 15) years of age from each class (V-IX) as shown in Table 1.

Table 1 : Composition of the population sample			
	Composition	Numbers	Percentage
Total population		200	100
Sex	Male	100	50
	Female	100	50
Age(years)	11	40	20
	12	40	20
	13	40	20
	14	40	20
	15	40	20
School	S.T.S High School A.M.U.	100	50
	Girls High School	100	50
Religion	Muslim	145	72.5
	Hindu	55	27.5
Type of Diet	Vegetarian	101	50.5
	Non vegetarian	99	49.5



As depicted in Fig. 1, 50.5% adolescents were vegetarian and 49.5% were non-vegetarian. Food preference scoring for different food groups are shown in Table 2.

Table 2 : Food preferences scoring			
Food items	Boys	Girls	P-value
Cereals	15.55	15.63	0.743
Pulses	17.47	16.89	0.011
Vegetables	30.86	31.37	0.475
Fruits	27.12	27.41	0.233
Meat and meat products	12.40	12.11	0.601
Milk and milk products	19.50	18.51	0.064
Sugar	7.40	7.22	0.76
Nuts	15.74	15.80	0.380
Fast food	31.47	30.16	0.044

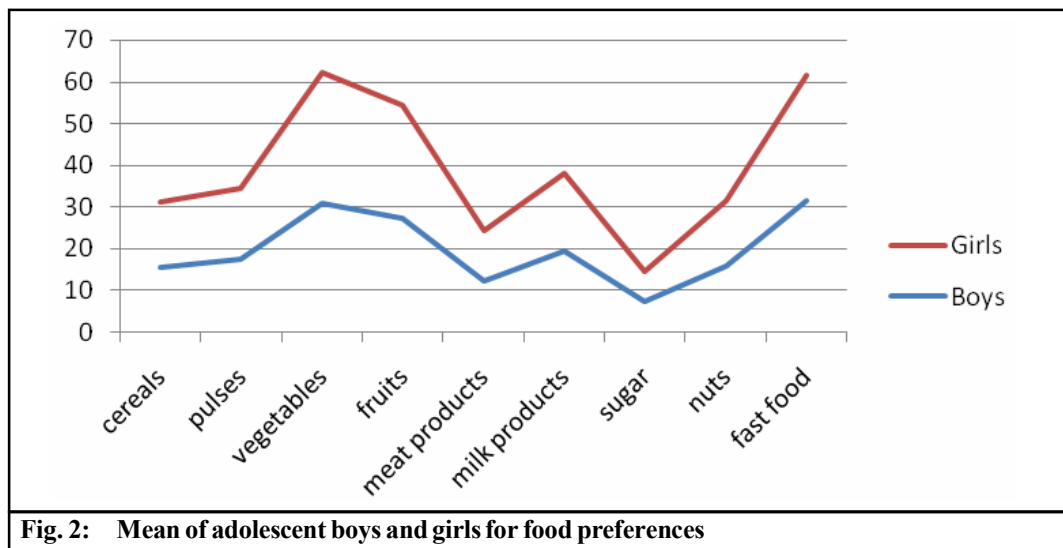


Fig. 2: Mean of adolescent boys and girls for food preferences

The result revealed a significant difference in fast food preferences between boys and girls.

Dietary intake with respect to different food groups preferences (P value > 0.05) revealed a significant difference in terms of whole grams and pulses intake, girls preferring more whole grams and pulses than girls. While food intake with regard to other food groups like (cereals, vegetables, fruits, milk and milk products, meat and meat products, sugars, nuts) were same. and no significant difference were observed in between boys and girls. On comparison sugar preference was found to be less among both groups.

The finding of the mean value showed that both boys and girl preferred fast food, vegetables and milk products more as compared to cereals, nuts, sugar, and meat products. A significant gender difference was observed in boys preferring more junk and fast foods than girls.

Discussion :

Diet plays a very important role in growth and development of adolescents and development of healthy eating habits is of utmost importance during this period. Due to unhealthy food preference both under-nutrition and over-nutrition were found in this age-group. The result concluded that though large number of boys and girls prefer fast food more than the different food groups, the

preference was found to be more in boys than girls, the same observation were also observed by Nur *et al.* (2010) they further attributed these differences may be due to the reason as adolescents spend their major time in school and with peers which affect the preferences of fast food. The mean values of the present study also revealed that boys preferred meat whereas girls preferred vegetables, which is similar to Dhaka study (Nur *et al.*, 2010).

Magbuhat *et al.* (2011) in their study among Filipino Adolescents in Metro Manila observed the mean preference scores given by the participants to different food, They concluded that the male respondents gave higher preference scores with respect to all the food groups than the female (Magbuhat *et al.*, 2011). This study supports the present study. The finding of present study that there is no significant differences in food groups preferences between gender is comparatively similar to a study conducted in West London (Cooke, 2005).

Conclusion :

Now a day there are a number of choices for selecting the food for children as well as for adolescents. Food intake and food preferences of adolescents are important determinants of adolescent health. Due to more preferences for energy giving foods which are high in fat content and low in other nutrient content large number of populations suffer from incidence of obesity and chronic diseases. Major contributory factors that affect food preferences are dieting habits among girls, lack of money, cultural taboos, peer groups, and family eating habits etc. The result of the present study revealed that both adolescent boys and girls prefer fast food as compared to different food groups that affect their nutritional and health status. There are continuous efforts to promote healthy food habits among adolescents, the influence of advertising, social media and concern about the status among the peer are forcing these adolescent population to choose fast foods high in fat and calories. For improving their food choice efforts should be made at family, school and national levels. School authority should organize specific health education programs, dietary guidelines and effective public awareness campaigns to address the unhealthy lifestyle of students and improve their health by promoting healthy eating choices.

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