

TRENDS OF NUTRITIONAL PATTERN AMONG COLLEGE STUDENTS OF PALAKKAD DISTRICT

C. Sreekala* & K.A. Rasheed**

ABSTRACT

Nutrition is a vital part of people's life style and can affect our health. Nutrition is the selection, preparation and ingestion of foods to be assimilated by the body. In order to make body works as efficiently as possible, it is important that busy and stressed students are should properly fuelled. The present study was conducted to evaluate the nutritional status in relation with health awareness of 7 different colleges of Palakkad district to formulate the nutritional behaviour of students. Nutritional status assessment was analyzed with a diet and health habit questionnaire for the selected students. About 31.2% of surveyed students were males and 68.7% were females. Only 14.3% students were taking vegetables everyday. About 43.2% have been taking fruits 4-6 times per week. Only 31% students take breakfast daily in the morning. Male students skip breakfast more compared with females. From all students, 80.1% female students were not with the habit of drinking carbonated drinks like Pepsi, cola etc. About more than half of students were taking oil fried food items 3 or more times per week. Nutritional status of the college students of Palakkad district was not satisfactory as revealed from the survey.

* Post Graduate Student, University of Calicut

** Assistant Professor, Post Graduate and Research Department of Zoology, Govt Victoria College, Palakkad, Kerala, Email: rasheedgvc@gmail.com



INTRODUCTION

Nutrition is the selection, preparation and ingestion of foods to be assimilated by the body. The selection of nutrition is dedicated to learning about foods that the human body requires at different stages of life in order to meet the nutritional needs for proper growth, as well as to maintain health and prevent disease. By practicing a healthy diet, many of the known health issues can be avoided. The diet of an organism is what it eats, which is largely determined by the perceived palatability of foods.

Food security means that all people at all times have physical and economic access to adequate amounts of nutritious, safe and culturally appropriate foods, which are produced in an environmentally sustainable and socially just manner, and that people are able to make informed decisions about their food choices. The food system includes the production, processing, distribution, marketing, acquisition and consumption of food.

Palakkad district is one of the main granaries of Kerala and its economy is primarily based on agriculture. The under nutrition is more common in the reproductive age. There is a need of additional supply of food grains to promote the nutritional status of the adolescent girls belonging to below poverty line (BPL). More than one under nourished girl is present in the same family of Palakkad district. Majority of people of the region suffers from malnutrition disorder. Anaemia was the most important clinical symptom observed among children which was reflected in the biochemical examination of blood for haemoglobin, RBC count and packed cell volume. High maternal under nutrition of adult women leading to chronic energy deficiency, resulted in the death of a large number of infants. Due to high under nutrition, many pregnant women were suffering from complicated pregnancies like pregnancy - induced hypertension, diabetes and infection leading to high abortion rate, still birth and premature birth. Dietary intake, compared to the suggested level of balanced diet, was in generally poor.

Present study was conducted to evaluate the nutritional preferences of college students in relation to the healthy life style pattern. This study focused to compare the nutritional aspects of different categories of colleges together with their gender specificity. By evaluating the nutritional choices proper guidelines can be provided to the students.



METHODOLOGY

The survey was aimed to find the nutritional characteristics among college students of Palakkad district. Various nutritional attributes of teenagers were incorporated in this survey. The study was conducted in 7 different colleges of Palakkad district. Arts and science, technical, nursing and teacher educating institutes were selected for the study. The selected colleges includes Government Victoria college - Palakkad, Government polytechnique college -Palakkad, NSS Engineering college - Akethethara, SIMET college of nursing -Malampuzha, B.Ed. training colleges of Koduvayur, Kuzhalmannam, and Ottappalam. For this a model questionnaire was prepared.

A pilot survey was conducted at Government Victoria College Palakkad on a randomly selected 50 students with the prepared questionnaire. Their responses were recorded and scrutinized. Then the questions were critically analyzed and the ambiguous questions were discarded. The questionnaire was modified according to the opinion from experts. A final format of questionnaire was constructed.

The modified questionnaire was given to the class/branches of various colleges. $\frac{1}{4}$ th of the students of the classes/branches were randomly selected for the data collection. The randomly selected 1078 students were given the prepared questionnaire and the data were collected with appropriate markings. The collected data were consolidated, tabulated and computed in figurative form. The nutritional behavior of the college students were realized by analyzing the data.

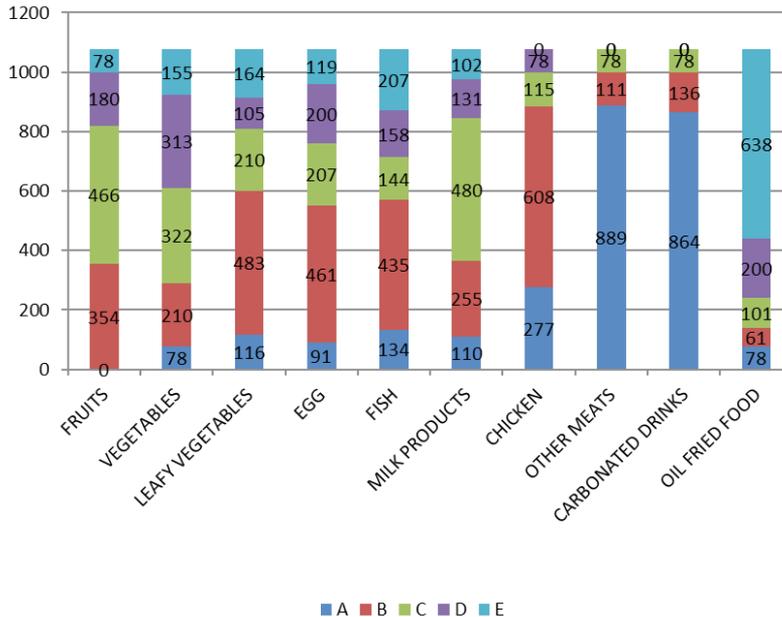
OBSERVATION AND RESULTS

Out of the 1078 students participated in the survey, 337 were males (31.2%) and 741 were females (68.7%). Approximately 80% of all students surveyed were between 18 and 23 years of age. From the collected data, it was observed that the college students weren't taking enough fruits and vegetables. It was found that students skipped meals fairly frequently, which could account for some of the lack of fruits and veggies. Out of the 7 colleges, the Nursing College students have some sort of awareness about their health and diet.



PREFERENCE OF FOOD GROUPS

Fig1. Preference of food groups among college students of Palakkad District



A – I did not **B** – 1-3 times per week **C** - 4 – 6 times per week **D** – 1-2 times per day in a week **E** - 3 or more times per day in a week

Fruits:

Out of the total students from different colleges, it was observed that about half of the students (43.2%) have been taking fruits 4-6 times per week. About 43.9% males and 56.1% female students were taking fruits 4-6 times per week (Fig. 1).

Vegetables:

Only 14.3% of total students were taking vegetables every day and 7.2% students were not take vegetables in their diet. Females take more vegetables compare to males (Fig. 1).

Leafy vegetables:

About 10.7% students were not taking leafy vegetables in their diet. Only 14.3% students were taking leafy vegetables like Muringa leaves and Spinach 3 or more times during the past 7 days (Fig. 1).

Egg:

From the total students about 47.3% students were taking eggs at 1-3 times per week (Fig. 1). Males take more eggs compared to females.



Fish:

About 40.3% students were fish eaters for 1-3 times per week (Fig. 1). About half of the male students were taking fish more than female. 12.4% students were not taking fish.

Milk products:

Out of the surveyed students about 44.5% were taking milk products 4-6 times per week (Fig. 1). Females show less frequency compare to males.

Chicken:

From all college students, no ones were taking chicken every day. About half of male students were taking chicken 1-3 times per week (Fig. 1). Other meats: From the collected data about 82.4% students were not taking other meats like beef, mutton and pork. Only 7.2% males were taking other meats 4-6 times per week and no females were taking other meats every day (Fig. 1).

Carbonated drinks

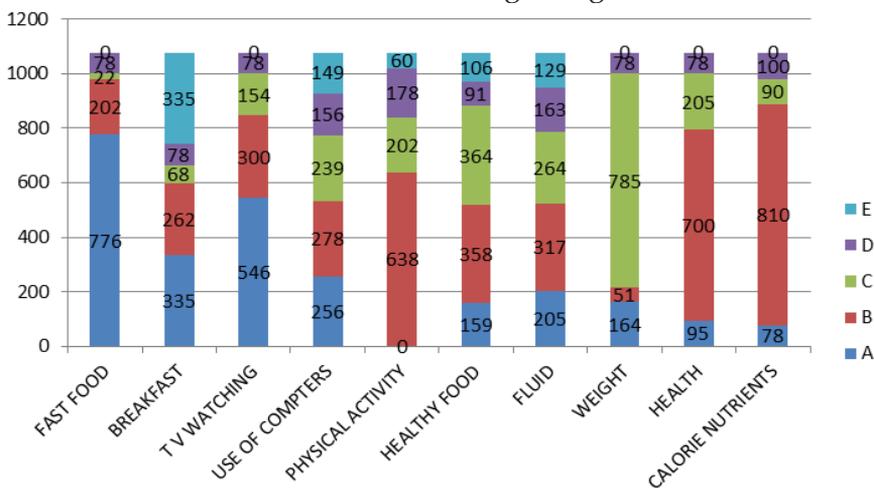
From all students, 80.1% female students were not with the habit of drinking carbonated drinks like Pepsi, Coco-Cola, etc. But 12.6% males take carbonated drinks at 1-3 times per week (Fig. 1).

Oil fried food items:

From all students about more than half of students was taking oil fried food items 3 or more times per day during the past 7 days. Females and males were equally taking oil fried food items (Fig. 1).

Nutritional health variable

Figure 2. Nutritional health variable among college students





- 1-A: I never eat. B: 1-3 times during the past month. C: 2 times. D: 3-5 times a week. E: I eat every day.
2-A: I did not eat. B: 1day. C: 2 day D: 3-4 days. E: 5 or more days.
3-A: I did not watch T V. B: Less than one hour per day. C: 1 hour per day. D:2-3hours per day. E: 4 or more hours per day.
4-A: Less than 1hour per day. B: Hour per day. C: 2-3 hours. D: 4or more hours per day.
5-A: 0 days. B: 1day. C: 2-3 days. D: 4-5 days. E: 6 or more days.
6-A: I never pay attention to making healthy food choices. B: I sometimes pay attention. C: I frequently pay attention. D: I always pay attention.
7-A: Less than. 2 cups. B: About 2 cups. C: 3-4 cups. D: 5-7 cups. E: 8 or more cups.
8-A: Very underweight. B: Slightly underweight. C: About the right weight. D: Very overweight.
9-A: Poor B: Fair C: Good. D: Very good E: Excellent.
10-A: Always B: Often C: Rarely D: Never.

Fast food:

About 3/4th of the students surveyed never eat at fast food places. This 3/4 of the students was females. But 18.7 % male students eat at fast food places 1-3 times during the past month and 2% of female students were eating 2 times at fast food places. About 7.2% male students were eating at fast food places 3-5 times a week. From the collected data not all students were eating at fast food places every day. It was greatly observed that mainly male students eat at fast food places than females (Fig. 2)

Break fast:

From all college students, only 31% students were eating breakfast daily in the morning (Fig. 2). Male students skip breakfast more compared with females. Due to busy life of college students, about half of the students skip breakfast in the morning.

Television watching:

Half of the total students did not watch T V on college days. Only 7.2% students watch T V an hour per day. No students watch T V on 2-3 hours per day (Fig. 2).

Computer usage:

Out of the total students, 1/4th of the students use computer one hour per day for something that is not related to college work. About 13.8% students were using computer for 4 or more hours per day (Fig. 2).

**Physical activity:**

Out of the total students, about 51% students physically active at one day. Only 5.5% students were physically active for 4 or more hours per day. About 70 % of male students were physically active for 4 or more hours per day than females (Fig. 2).

Healthy food:

Among the total college students, about 14.7% students never pay attention to making healthy food choices. Only 9.8% students were always pay attention to making healthy food choices. Only 40 % of males and 60% of females pay attention to making healthy food choices (Fig. 2).

Fluid (water):

Out of the total students, 1/4th of the students drink fluid in about 2 cups in a day. Only 11.9 % students never drink fluid 8 or more cups in a day and 19 % students take fluid in less than 2 cups (Fig. 2).

Weight:

Most of the (72.8%) students were at the right weight and 15.2% were under weight, from females. About 17.2% students were overweight taking more fatty and oily foods in their life (Fig. 2).

Health:

About 64.7% students think that their health is fair and 17.2% are feeling that very good. 8.8% think that their health is very poor (Fig. 2).

Calorie intake:

From the 7 colleges, it was seen that about 75.1% think that their diet consists of required calorie nutrients was often, 17.2% always and 9.2% feels that never (Fig. 2) .

DISCUSSION

The results indicates that, a total of 1078 students participated in the survey, 337 were males (31.2%) and 741 were females (68.7%). Approximately 80% of all students surveyed were between 18 and 23 years of age. About 43.9% males and 56.1% female students were taking fruits 4-6 times per week. Only 14.3% of total students were taking vegetables every day. More than half of nursing students were taking vegetables more than 1-3 times per day in a week. 3/4th of Technical and Nursing students take leafy vegetables in a week. Large proportions of



students were not taking chicken in their diet. About 80.1% female students were not with the habit of drinking carbonated drinks like Pepsi, Coco-Cola, etc. About 86.3% nursing students were not drinking carbonated drinks. Orza et al (2006) reported the nutritional knowledge and exercise habits of community college students. Only 49% of all students surveyed were able to correctly identify the current food guide pyramid. Just 2 % of all students surveyed could identify all of the current food group servings and also said they get enough of the five groups every day. Of the 453 students surveyed 40% were either overweight or obese based on their Body Mass Index (BMI). From our result, it was clear that nursing students exhibits maximum awareness about their diet. They have the knowledge about nutrition and so they include vegetables and fruits in their diet and they do not drink carbonated drinks at all. Most of the Nursing students were vegetarians compared to other colleges. But Arts & Science College and Technical students were non vegetarians compared to other colleges. Males were non vegetarians compared to females. Tara et al (2006) examined that college students have poor nutrition habits and often exhibit at risk weight control behaviours; get health promotion efforts on campus, often target other risk behaviours such as tobacco and alcohol use.

Of the 1078 students surveyed, most of the (72.8%) students were at the right weight. About 60% of Arts and Science and Technical students feel under weight. Only 17.2% students surveyed feels that their health is very good. About 70 % of male students were physically active for 4 or more hours per day than females. Abdallah (2010) determined the prevalence of over weight and obesity in a sample of male college students in Kingdom of Saudi Arabia and Correlated the relationship between the student body weight status and composition towards their eating habits.

From the present study out of the total students from different colleges, it was observed that about 43.2% have been taking foods 4-6 times per week. Only 14.3 % of total students were taking vegetables every day and 7.2% students were not taking vegetables in their diet. Females take more vegetables compared to males. Worsley et al (1997) measured the prevalence of teenage vegetarianism and associated food habits and beliefs. The findings show that teenage vegetarianisms are primarily a female phenomenon, ranging in prevalence, according to definition, from 8 to 37% of women and 1 to 12% of men.

Out of the total students, about 51% students were physically active at one day. About 70 % of male students were physically active for 4 or more hours per day than females. There was a variation in physical activity of male and female students. Tan et al, (2008) conducted a survey among Sanfrancisco college students.



BMI calculated from the students showed no significant difference between male (23.32%) and female (22.98%), but the pattern of distribution remains normal and show variations between male and female students. The survey instrument found college students know how to improve nutrition and physical activity considerably.

Daniel et al (2014) examined the prevalence of food insecurity among students attending a rural university in Oregon. Over half of students were food insecure at some point during the year. In turn, good academic performance was inversely associated with food insecurity. The results of our study is indicative of the trends in diet pattern of the college students of Palakkad district which emphasis on a proper nutritional awareness among the college students for a better health concern.

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