

Assessment of Knowledge, Attitude and Practices towards Diet and Health among College Students in Chitradurga

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ABSTRACT

Introduction: Good health requires a positive attitude of complete physical, mental and social wellbeing and not merely the absence disease or infirmity. Healthy eating means eating a variety of food that give a nutrition to maintain health, feel good and provides energy. The nutrition includes proteins, carbohydrates, fat, water, vitamins and minerals. Nutrition is important to everyone.

Objectives: To assess the knowledge, attitudes and the eating practice among college students.

Materials and Methods: A prospective interventional study was carried out on college students who were pursuing Pharmacy, Nursing, Engineering and Dental degree at Chitradurga. The study was carried out for period of 6 months. A pre-structured questionnaire was used to assess knowledge, attitude and practice towards Diet and Health.

Results: A total of 201 students were enrolled in the study. Among them most students were between the age group of 18-24 years and female student's enrollment was more in study. Pharmacy college student's participation was more when compared to other colleges. Knowledge and awareness about diet was more among pharmacy students than other students. Consumption of fast food and soft drinks was more among the dental and pharmacy students when compared to other colleges. **Conclusion:** The study concludes that the participant's should utilize their knowledge needs to build a good attitude and practice in order to boost the healthy diet. **Key Words:** KAP (Knowledge, Attitude, Practice) College students, Diet and Health, Food habits, Consumption.

I. INTRODUCTION

Healthy eating means eating a variety of food that gives you nutrition and you need to maintain health, feel good and have energy. This nutrition includes proteins, carbohydrates, fat, water, vitamins and minerals. Nutrition is important to everyone. Good health requires a positive attitude to complete physical, mental and social

wellbeing and not merely the absence disease or infirmity?

A healthy diet provides body with essential nutrition, fluids, macro-nutrition, micro-nutrition and adequate food energy. The diet may contain fruits, vegetables and whole grains and may include little to no processed food or sweetened beverages.

The concept of a healthy diet has been studied extensively and several methods of dietary assessment and healthy dietary patterns have been well developed, such as Mediterranean diet (MeDi), Healthy Diet Indicator (HDI), Healthy Eating Index (HEI) and so on¹. Furthermore, adolescent dietary guidelines also varied slightly among different regions. For instance, the World Health Organization (WHO) encouraged adolescents and young adults to consume five main food groups (i.e., grains, fruits and vegetables, milk and dairy food, meats, and fishes).²

The family and community play an important role in the acquisition of nutrition knowledge and nutrition related practices. Evidences indicate that dietary habits acquired in childhood persist through to adulthood.³

The college is one of the main social contexts in which lifestyles are developed. There has been an evolution in food habits with the replacement of healthy nutritious foods with things that are tasty, convenient, in vogue-junk food. These are foods that are rich in salt, sugar and fat or calories, but low nutrient content. The changing lifestyles and the easy availability of junk food near colleges or even within college canteens have led students to prefer and become addicted to junk foods.⁴

Eating a balanced diet is vital for good health and wellbeing. Food provides our bodies with the energy, protein, essential fats, vitamins and minerals to line, grow and function properly. We need a wide variety of different food to provide the right amount of nutrients for good health. In

adequate nutrition effects student's health and academic success.

Knowledge, Attitude and Practices (KAP) survey is an effective method that records the declarative opinions or statements of participants using predefined questions formatted in standardized questionnaires to provide access to quantitative and qualitative information, and it is also an effective method of investigation in nutrition and diet research⁵.

Knowledge can influence health related behaviors when informing attitudes and beliefs. Whilst it is acknowledged that nutrition forms an important part of management. It is often assumed that the medical students have a greater knowledge about healthy lifestyle and dietary habits when compared with non-medical students. However, there is no evidence to indicate that knowledge translate into maintaining good health practice.⁶

Healthy dietary habits are simple and low risk methods to promote and improve well-being and life expectancy Excessive consumption of saturated fats was shown to be associated with an increase in cholesterol level and risk of cardiovascular disease. Therefore, an increase in consumption of fruits and vegetables, whole grains and seeds and a decrease in the consumption of foods rich in saturated fat, sugar and salt are recommended to maintain a balance between calorie intake and energy expenditure, in order to prevent excessive weight gain.

Healthy dietary habits among university students were reported to be poor because they are going to experience independence after entry to a higher education level and to make food by themselves. So, the habits acquired during the academic path would tend to be continued throughout the life. Several studies reported unhealthy diets among university students including high consumption of fast food and foods high in fat and sugar and low consumption of fruits and vegetables.⁷

In this study we would like to analysis the KAP survey to assess the Knowledge and diet among college students and to determine the junk food consumption of college students. It is also an effective method of investigation in nutrition and diet research.

II. MATERIALS AND METHODS

Study Design:

A prospective interventional study.

Study Site:

Study was carried out at S J M College of Pharmacy, S J M Institute of Nursing Science, S J M College of Dental and S J M Institute of Technology, Chitradurga.

Study Period:

The study was conducted for a period of six months (JAN-2021 to JUN-2021).

Study Subject:

Students pursuing their degree at S J M College of Pharmacy, S J M Institute of Nursing Science, S J M College of Dental and S J M Institute of Technology, Chitradurga.

Study Criteria:

Inclusion Criteria:

- Participants who were age group of greater than 17.
- Both male and female.
- College students who were willing to participate in the study.

Exclusion Criteria:

- Participant who provides incomplete information.
- Participant who follows fasting and particular diet.

Ethical Approval:

The study was approved by the "Institutional Ethical Committee" of Sri JagadguruMallikarjunaMurugharajendra of College of Pharmacy, Chitradurga.

Source of Data: Online based questionnaire distributed among Pharmacy, Nursing, Engineering and Dental College students.

Study Procedure:

- The study was started after obtaining the consent from Institutional Ethical Committee (IEC).After obtaining informed consent, the questionnaire is distributed to the college students in Chitradurga.
- A self-administered questionnaire on knowledge, attitude and practice towards Diet and Health was given to the college students. It consisted of three parts:

Part 1. Socio-demographic data

Part 2. Knowledge based question (8 questions with options).

Part 3. Attitude based question (9 questions with options such as yes, no and never were given).

Part 4. Practice based question (6 question with option such as yes, no, sometimes and never were given).

- Data were collected by the investigators and confidentiality was maintained during the data collection process.

Statistical Analysis:

The data was entered in Microsoft Excel 2010 version and the results are analyzed using Statistical Package for Social Service (SPSS 16.0) Descriptive method was applied to obtain the frequency and percentage, one sample T test.

A total of 201 students randomly collected from 4 Colleges in Chitradurga. The data was collected from Predesigned Google Data Collection Form.

DISTRIBUTIONS OF STUDENTS ACCORDING TO AGE GROUP

In table number 01, out of 201 study participants, 38.8% [N=78] of them were males while 61.2% [N=123] were females, majority of the respondents 76.6% belongs to the age group of 18-24 years and according to the course 62.2% [N=125] pharmacy, 15.9% [N=32] engineering, 11.9% [N=24] nursing, 10% [N= 20] were dental students.

III. RESULTS

Table:01: Distribution of study population according to socio-demographic characteristics

Variables	N (%)
Age (Years)	
18-24	154(76.6)
25-31	47(23.4)
Gender	
Males	78(38.8)
Females	123(61.2)
Course	
Dental	20(10)
Engineering	32(15.9)
Nursing	24(11.9)
Pharmacy	125(62.2)

Assessment of Diet Knowledge:

Knowledge based questions were assessed by using following questionnaires in Table No 02.

Table No 02: Knowledge based questionnaire

Serial No	Questions
K1	What is a balanced diet? A) A diet with lots of fruit B) A diet with lots of milk C) A diet that contains a variety of food in adequate amounts. D) No eating takeaways
K2	Food that contains good amounts of iron include? A) Beef and lamp B) Potatoes C) Walnuts D) Both A & B
K3	Fruit and vegetables are important because: A) They give you energy B) They are colorful C) They are easily available D) They provide you with a wide variety of vitamins, minerals and nutrients.

K4	What is the most important meal of the day? A) Breakfast B) Tea C) Lunch D) Supper
K5	Lack of sufficient nutrients in the body called as: A) Hypotension B) Malnutrition C) Hypocalcaemia D) Both A&B
K6	Protein deficiency is called as; A) Kwashiorkor B) Marasmus C) Rickettsia D) Scurvy
K7	Which one of these is more likely to raise people’s blood glucose level? A) Antioxidants B) Polysaturated fats C) Cholesterols in the diet D) Not sure

The scores of the test were analyzed using mean, standard deviation, one sample T test. In this study the research shows that the mean values of knowledge are higher in 5.57 for pharmacy than compare to other colleges 4.65 for dental, 4.55 for nursing and 4.41 for engineering,. Standard deviation values are ± 1.428 for dental, ± 1.585 for engineering, ± 1.637 for nursing and ± 0.994 for

pharmacy. One sample T test values are 62.715 for pharmacy, 18.445 for dental, 13.645 for engineering and 12.426 for nursing. P value was 0.000 for all. The results indicate that pharmacy students are having comparatively high knowledge (5.57) than dental (4.65), engineering (4.41) and nursing (4.55). The results are tabulated in Table no. 03.

Table 3: Distribution of mean sores of knowledge assessment

Course	Scores Mean ± SD	T Value
Dental N=19	4.65 ± 1.428***	18.445***
Engineering N=31	4.41 ± 1.585***	13.645***
Nursing N=23	4.55 ± 1.637***	12.426***
Pharmacy N=124	5.57 ± 0.994***	62.715***

• *** p<0.0001

Assessment of Diet Attitude:

The student’s attitude was assessed on diet by considering the response to nine questions from the questionnaire as YES OR NOOR I DON’T

KNOW. The assessment revealed that there is a need to know about good nutrition is important was more among 97.6% pharmacy student’s followed by 93.8% engineering, 91.7% nursing and

80% dental. 82.4% in pharmacy, 81.3% in engineering, 66.7% in nursing and 45% in dental felt that they did not need to worry about their food intake as they were too young. 46% in pharmacy, 93.8% in engineering, 70.8% in nursing and 70% in dental felt that having breakfast is more important. 88% in pharmacy, 80% in dental, 75% in engineering and 62.5% in nursing felt that eating healthy food is essential not only when sick. Aware of any major health problems or disease that are related to the amount of fat people eat, majority (87.2%) in pharmacy compared to dental (85%), nursing (79.2%) and engineering (62.5%). When preferred to buy a product that carries a nutritional label, majority 81.6% in pharmacy compared to

engineering (75%), nursing (75%) and dental (65%). In nursing 66.7% students felt fast food habit is not increasing day by day whereas in pharmacy 50.4%, engineering 46.9% and dental 30%. Majority of the students felt that fast food is not a good alternative than healthy food, engineering (84.4%), pharmacy (83.2%), nursing (62.5%) and dental (55%). In pharmacy 91.2% students felt that we should take less oily food for healthy lifestyle compared to nursing 83.3%, engineering 71.9% and dental 60%. Participant's responses regarding attitude-based questions showed that most of the students followed good attitude towards diet. Figure No. 01.

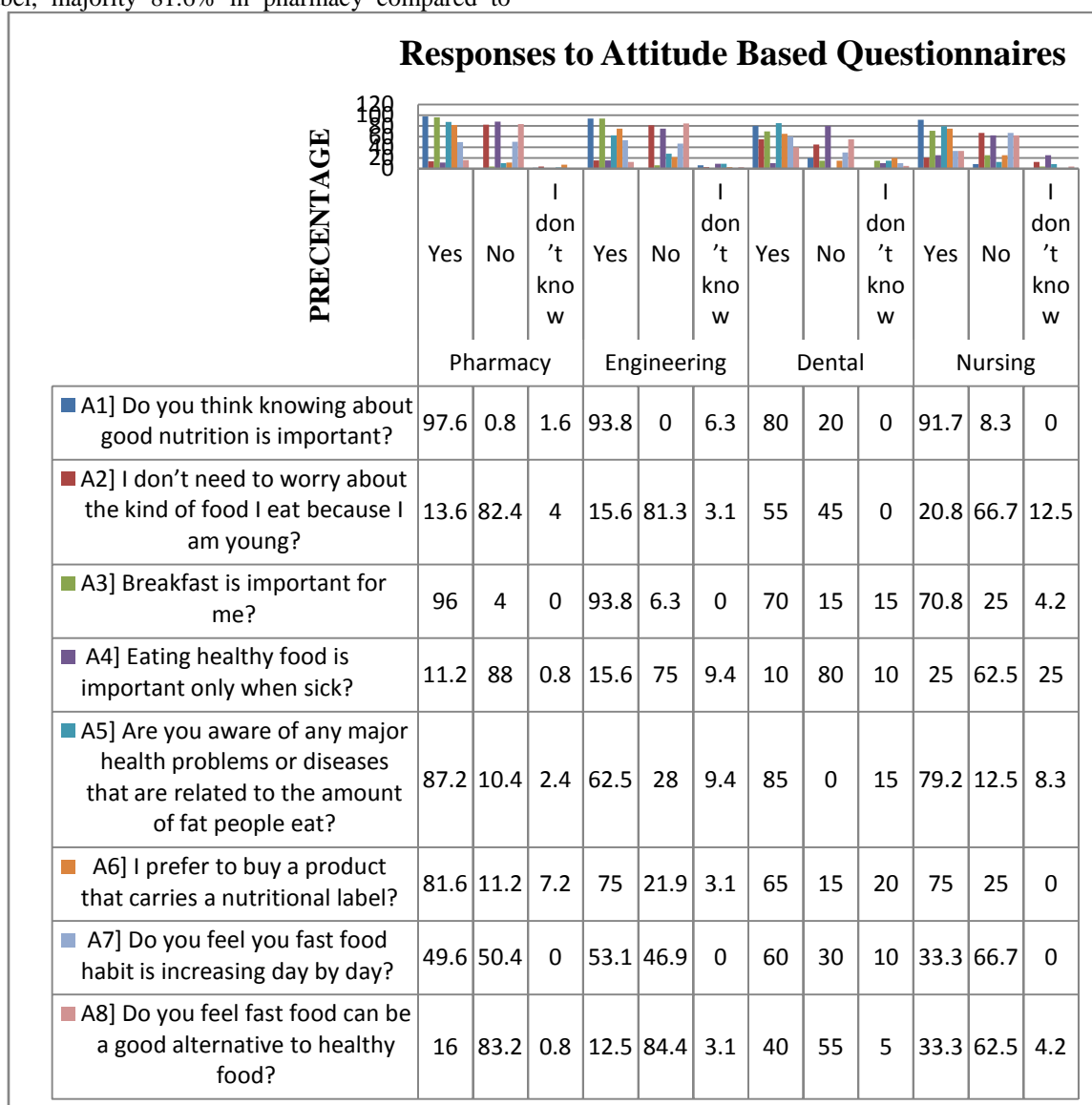


Figure No 01: Assessment to Attitude towards Diet

Assessment of Diet Practice:

Among students, dental 55% take healthy and balanced diet compared to pharmacy 53.6%, nursing 41.7% and engineering 40.6%. Fast food is taken sometimes most often in engineering 53.1% compared to pharmacy 45.6%, nursing 41.7% and dental 20%. In pharmacy 40.8% students take snacks in between meals compared to engineering 31.3%, nursing 25% and dental 25%. Majority of the engineering (78.1%) students felt that eating tasty food is more important compared to dental

(75%), pharmacy (74.4%) and nursing (54.2%). In engineering (59.4%) students don't eat junk food more than once a day compared to pharmacy (57.6%), dental (45%) and nursing (37.5%). The majority of 62.4% pharmacy, 65.6% engineering, 45% dental and 41.7% nursing students didn't drunk soft drinks more than two times a day. Participant's responses regarding practice-based questions showed that most of the students followed good practices for diet. Figure No. 02

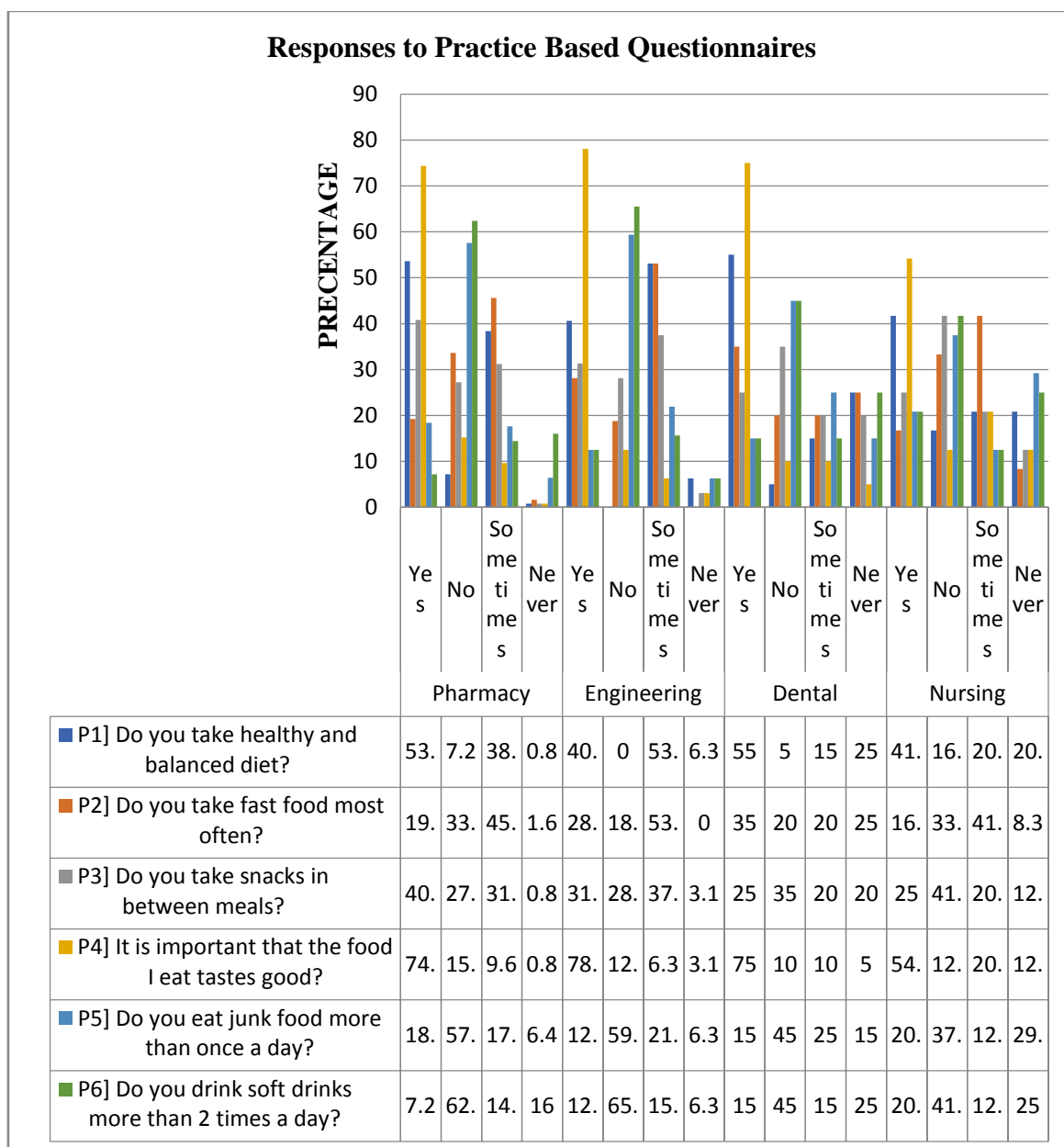


Figure No 02: Assessment to Practice towards Diet

IV. DISCUSSION

Healthy diet means eating a variety of foods that give you the nutrients you need to maintain your health, feel good and have energy. These nutrients include protein, carbohydrates, fat, water, vitamins and minerals. Nutrition is important for everyone. When combined with being physically active and maintaining a healthy weight, eating well is an excellent way to help your body stay strong and healthy.

Healthy dietary habits are simple and low risk methods to promote and improve well-being and life expectancy. Excessive consumption of saturated fats was shown to be associated with an increase in cholesterol level and risk of cardiovascular disease. To have a healthy, balanced diet, need to eat a wide variety of foods that are rich in nutrients.

Therefore, an increase in consumption of fruits and vegetables, whole grains and seeds and a decrease in the consumption of foods rich in saturated fat, sugar and salt are recommended to maintain a balance between calorie intake and energy expenditure, in order to prevent excessive weight gain.⁷

In our study we found that 76.6% students were belongs to age group of 18-24 Years and 23.4% students were belonged to age group of 25-31 years. This matches with the result of study conducted by Pooabalan A et al; which conducted that 75% of young people belonged to the age group 18-25 years. During the adolescence/adulthood transitions are vulnerable to weight gain.⁸

In our study 80% Dental, 93.8% Engineering, 91.7% Nursing, and 97.6% pharmacy students were worry about what they ate. This finding is similar to a case study conducted by Lozano HB et al; which observed that 23.5% of women interviewed perceived that they were eating healthy food and 41.2% of men they were eating healthy food. They aware of "what they ate".⁹

In our study 83.2% Pharmacy, 62.5% Nursing, 84.4% Engineering and 55% Dental students were felt healthy food good other than fast-food. This finding is similar to a study conducted by Skerrett PJ et al; which is observed that 79% of students were focus on healthy food other than fast-food.²¹This also matches with the results of study conducted by Andonova A et al; this study found out that 46% of students know the level of healthy nutrition and 26% partially.¹⁰

In our study 49.6% of pharmacy, 53.1% engineering and 66% dental college students were

increased the consumption of fast-food compare to 33.3% nursing students. This finding is similar to a case study conducted that fast food eating behavior among the masses has been increasing at an increasing rate in the recent years. It is seen that P value i.e., $0.033 > 0.05$ which indicate that food consumption behavior increased in college students.¹¹

In our study 6.4% pharmacy, 45% dental, 65.6% engineering and 41.7% nursing college students didn't drink soft drink more than two time. This finding is similar to a cross sectional study conducted by Clarys P et al; which observed. This study assessed that student showing stringer behavioral control having stricter family rules about soft drinks intake and reporting lower energy drink availability were less likely to consume energy drinks $P < 0.005$ were considered as statistically significant.¹²

In our study the sequence of knowledge assessment as follows Pharmacy > Dental > Nursing > Engineering. 5.58% pharmacy students are having high knowledge on diet. This finding is similar to a cross sectional study conducted by Sherweitet al; which observed that the students positive and significant correlation existed between health-related performance and nutrition literacy ($r = 0.32$) in pharmacy students.¹³

In our study both male (4.7%) and female (5.4%) students are having high knowledge about diet and lifestyle. This finding is similar to cross sectional study conducted by Ahamed F et al; which observed that male and female students are having high knowledge on diet but male students engage exercise compare to female students.¹⁴

V. CONCLUSION

The study concludes that all the participants are having the knowledge about junk and fast food are not healthy for their life. There is a need to build good attitude and practice in order to boost nutritious diet pattern.

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