A Study on Nutrition Knowledge on Diet Practices Among Nutrition Students

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ABSTRACT

Diet and physical activity play important role in maintaining health. A better understanding of the relationships and healthy behaviour's among people are considered as effective prevention and management techniques of lifestyle related risk factors. A present study is a cross sectional study done to assess the nutritional knowledge, frequency of consumption of various food groups, and nutrient intake among 50 nutritional students. The subjects were selected from University college for women, Koti Hyderabad who were pursuing their Postgraduate Nutrition course. The pretested tool used for the data collection had components to elicit data on anthropometry, questions on frequency of consumption of various food groups. A pretested24-hr dietary recall method was used on 3 consecutive days to elicit their dietary intake. The sample comprised of subjects between the age group of 21-23 years. From the BMI it is observed that 38students found to be normal. About 14 students were found to have good nutrition knowledge. Results proved the knowledge of nutrition has no significant impact on the intake of eggs, red meat, vegetable oils and rice and pulses. And the consumption pattern was mostly dependent on the economic status of the family. But the daily requirement milk was found to be satisfactory. The mean intake of daily energy of nutritional students is 1068K.cal/ day which is lower than the RDA; the average intake of carbohydrate, protein, fat, fibre, iron and calcium were also lower than the daily requirement, i.e,169.78gm/day, 39.24gm/day, s22.41gm/day, 18.41gm/day, 8.46mg/day and 413.67mg/day respectively. Hence it is concluded that knowledge perception about consumption of healthy and nutritious foods was found be low among students pursuing Nutrition in spite of their curriculum design and objective of the course to have proper nutritional knowledge. This states that mere theoretical knowledge among students do not have profound impact on their health status unless it is practised.

KEY WORDS: Nutrition students, nutrition knowledge, food frequency questionnaire and 24- hour dietary recall.

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INTRODUCTION

Life cannot be sustained without adequate nourishment. The word "Nutrition" is often paid with the word "food". Nutrition is a science that encompasses all the interactions that occur between living organisms and food. The biological importance of food is dictated by the nutrients it contains. Acquiring nutritional knowledge is essential for improved diet practices. Nutritional knowledge can be gained by means of nutrition education. Nutrition education can be defined as the process of helping individuals to develop the knowledge, skills and motivation needed to make appropriate food choices throughout the life. The health habits established affects the quality of life. By practicing wellness, healthy life can be achieved. Good habits for proper life management includes,

- Choosing and eating nutritious food.
- Exercising regularly.
- Having adequate sleep.
- Learning to handle stress.
- Avoiding harmful substances.

Adolescents are future parents. Particularly women play a significant role in the development of their offspring. So if they have better nutritional knowledge and awareness on nutrition they improve the nutritional status of family members and good health can be maintained.

Nutrition is an important component in the treatment of acute and chronic diseases and is cornerstone in strategies for disease prevention and health promotion. Nutrition also plays an important role in the etiology of many diseases.

In human life, adolescence and early adulthood together constitute a vulnerable and crucial period where major social, psychological, and biological changes occur resulting in the highest nutrient requirement. The academic performance during higher education influences the career resulting in shaping an individual's socioeconomic status, health, and health-related behaviours. Nutrition is one of the most important and modifiable environmental factor that may affect the neurocognitive development, which in turn has an impact on academic performance.

In light of this a study has been planned to assess the nutritional knowledge from their academics on maintaining good health.

The objectives of the study is to assess the anthropometric measurements, dietary pattern through food frequency questionnaire and 24 hours dietary recall, nutritional knowledge and dietary practices among students.

MATERIALS AND METHODS

Selection of Area

The present study was conducted at Osmania university college for women,Koti, Hyderabad.

Sample Size

A sample size of 50 girl students in the age group of 21-23 years were selected randomly.

Data Collection

Questionnaire

A pretested and welldefined questionnaire was developed to assess their nutritional knowledge, eating habits and overall perception regarding importance of healthy eating habits. The questionnaire contained 2 sections. In the first section there were questions about the socio demographic characteristics, the history of education and anthropometric measurements. Body Mass Index(BMI) was calculated using the formula BMI=weight in (kgs) /height in (metre)^2. The subjects were classified as underweight($<$18.5), normal(18.5 – 24.9), overweight(25 – 29.9), obese($>$30). The WHO classification of BMI was used. In the second section, 24 multiple choice questions were asked to assess their attitude and knowledge of students. The questions were about the type of diet, type of cooking, healthy diet, frequency of fast food consumption, physical activity and sleep patterns. This questionnaire was applied individually, in order to better understand the eating habits of the students. The replies were categorized as "good nutritional knowledgeable" when score was maximum, "medium nutritional knowledgeable" when the score was minimum and "poor nutritional knowledgeable" when the score was low.

Food Frequency Questionnaire

The second part was related to food consumption pattern; it composed of 137 food items from all the food groups were included like cereals and millets, pulses and legumes, green leafy vegetables, other vegetables, fruits, milk and milk products, fats and fat products, meat and meat products, nuts and sugars and miscellaneous foods. The frequency of consumption was represented by 5 categories, namely: daily, alternatively, 1 to 2 times per week, fortnightly, occasionally and never.

The questionnaire further modified based onpretest with 10 students from the subjects.

24- Hour Dietary Recall

Information regarding daily food intake was obtained through 24-hr dietary recall. The students were interviewed for three consecutive days. The nutritive values was calculated for energy, carbohydrate, protein, fat, fiber, iron and calcium using Indian food composition table by NIN. The mean intake of the nutrients calculated was compared with RDA.

RESULTS AND DISCUSSION

The main demographic characteristics of the 50 postgraduates are present in table 1. All the respondents were reported to be in the age group of 21 – 23 years.

The educational qualification of most of the students their parents was found to have completed graduation , while their mothers were mostly completed school education only which is nothing specific in relation to nutrition. While they were curious in educating their children in pursuing nutrition and fetch a carrier in giving better nutritional inputs to the needy.

The income status of the students revealed that 29 of students were among low economic group while 13 among 50 were in the middle economic group as presented in table -1
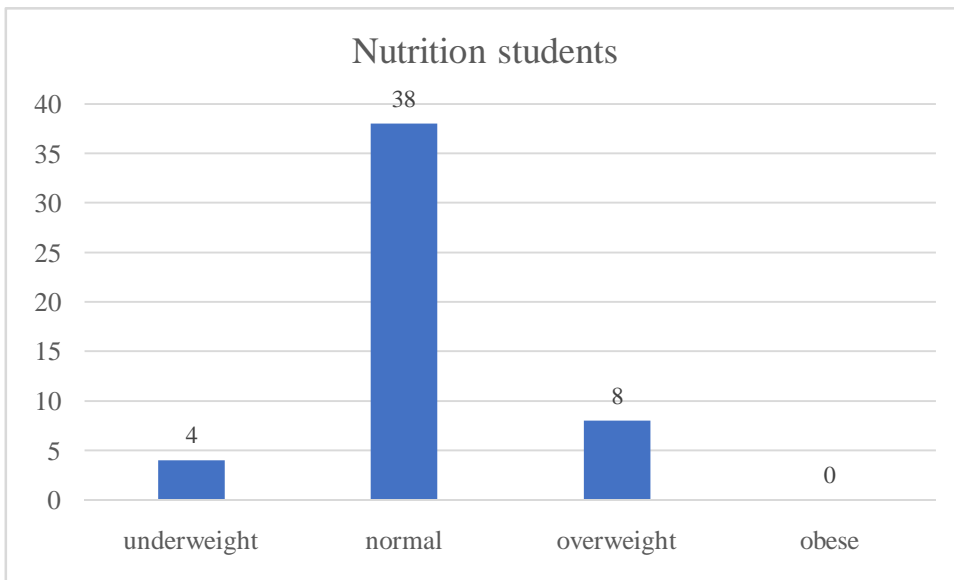
Table: 1Socio Demographic Profile

Characteristics	Nutritional students (n=50)
Gender	
Female	50
Age	
21-23 years	50
Father's education	
Secondary education	21
College education	29
Mother's education	
Secondary education	38
College education	12
Father's occupation	
Farmer	11
Employee	35
Labourer	4
Mother's occupation	
House wife	45
Employee	5
Family income	
< = 3 lakhs	29
3 - 6 lakhs	13
6 – 8 lakhs	6
≥ 8 lakhs	2

According to the analysis of BMI has shown that the health status of 38 students was found to be normal, 8 were reported as overweight and no obese were found. A study done by Fernanda Freitas among nutrition students to analyse the dietary patterns at public university in

Bahia state who found 14 were found to be underweight, 70 were found to be normal, 10 were found to be overweight and 5 were found to be obese.

Table: 2 Anthropometry Measurements

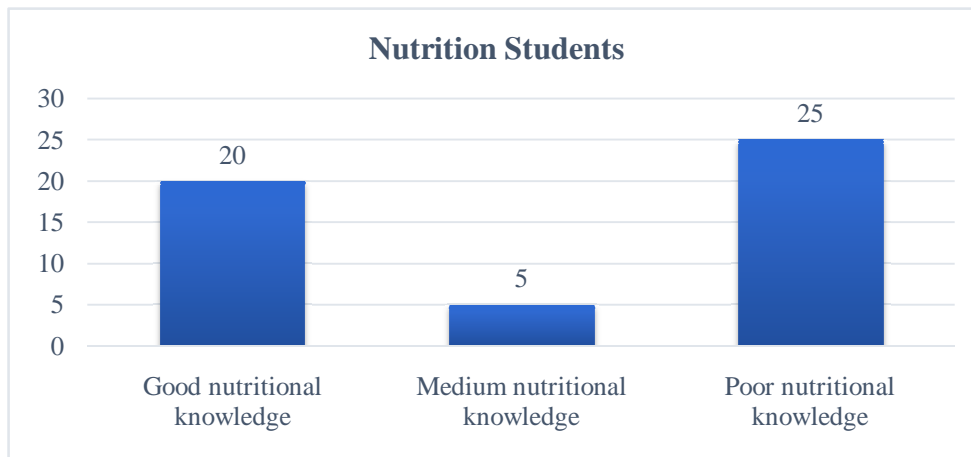| Characteristics	Range	Nutrition students
Under weight	<18.5	4
Normal	18.5 – 24.9	38
Over weight	25 – 29.9	8
Obese	>30	0

Graph.1: Anthropometric Measurements of Nutrition Students

About 14 nutritional students were found to have good nutrition knowledge, while 9 were found to have medium nutrition knowledge and 25 were found to have poor nutrition knowledge.

Hence it is difficult in perusing nutrition education did not enable them to make healthy choices despite of their knowledge which shows that 50% of the students though had Nutrition as academic subject were having poor knowledge on good nutrition.

Table: 3 Nutritional Knowledge

Characteristics	Nutritional students
Good nutritional knowledge	20
Medium nutritional knowledge	5
poor nutritional knowledge	25

Graph.2: Nutrition Knowledge of the Students

The daily rice consumption among 50 students showed the same trend. On the other hand consumption of wheat 18 students were reported as 1-2 times per week while 9 among 50 were reported to consume daily.

Daily consumption of pulses among 50 students 5 were found to consume daily while 29 were reported to consume 1-2 times per week.

Consumption of legumes showed higher number 30 of students reported as occasionally.

Consumption of green leafy vegetables 27 students reported to consume 1-2 times per week. Students of 18 respondents used to eat sweets 1-2/week while 18 among 50 students were reported to consume chicken 1-2/week. The daily consumption of milk tea was reported same by samples.

Table: 4 Consumption Pattern of Various Foods Among NutritionStudents

Food groups	Daily	Alternate	1-2/week	Fortnightly	Occasionally
Rice	50	0	0	0	0
Wheat	9	10	18	1	12
Pulses	5	4	37	4	0
Legumes	0	2	7	11	30
GLF	2	4	36	8	0
Roots and tubers	5	10	28	6	1
Other vegetables	13	6	27	4	0
Nuts	18	20	10	2	0
Oils	50	0	0	0	0
Spices and condiments	2	1	26	10	11
Fruits	21	14	11	1	3
Sweets	4	2	18	11	15
Tea/coffee	29	11	3	1	6

Table 5 represents result of t- test applied on food consumed and the RDA.

It was found that after applying t- test on the collected data of energy consumed (t= -21.7) there was a significant difference between the energy consumed and the RDA. The energy consumption was significantly lower between the samples when compared to RDA.

It was found that after applying t- test on the collected data of carbohydrate consumed (t= 1.05) there was significant difference between the samples and the consumption was low when compared to RDA.

It was found that after applying t- test on the collected data of protein consumed (t= 2.05) there was significant difference between Hence it is concluded that knowledge perception about consumption of healthy and nutritious foods was found be low among students pursuing Nutrition in spite of their curriculum design and objective of the course to have proper nutritional knowledge . This states that mere theoretical knowledge among students do not have profound impact on their health status unless it is practised. the samples and the consumption was low when compared to RDA.

It was found that after applying t- test on the collected data of fat consumed (t= 4.35) there was a significant difference between the fat consumed and the RDA. The fat consumption was significantly lower between the samples when compared to RDA.

It was found that after applying t- test on the collected data of fiber consumed (t= 1.2) there was no significant difference between the samples and the consumption was found meeting the RDA

It was found that after applying t- test on the collected data of iron consumed (t= 5.5) there was a significant difference among students and consumption was low when compared to RDA.

It was found that after applying t- test on the collected data of calcium consumed (t= -0.05) there was significant difference between the samples and the consumption was low when compared to RDA.

Table: 5 Nutrient Calculations of Nutrition Students

NUTRIENTS	NUTRITION STUDENTS	RDA	CALCULATED t- value	t- Table value
ENERGY(k.cal)	1068	1900	-21.79	2.776
CARBOHYDRATE(gm)	169.78	308	1.05	2.776
PROTEIN(gm)	39.24	55	2.05	2.776
FAT(gm)	22.14	20	4.35	2.776
FIBER(gm)	18.41	20	1.2	2.776
IRON(mg)	8.46	21	5.5	2.776
CALCIUM(mg)	412.67	600	-0.05	2.776

Hence it is concluded that knowledge perception about consumption of healthy and nutritious foods was found be low among students pursuing Nutrition in spite of their curriculum design and objective of the course to have proper nutritional knowledge. This states that mere theoretical knowledge among students do not have profound impact on their health status unless it is practised. The study opines that the limiting factors such as percapita income of the family plays a vital role in raising the Nutritional index of the country there by the Health Index.

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