

Research Article

NUTRITION KNOWLEDGE, ATTITUDE AND FOOD HABITS AMONG STUDENTS OF HOTEL MANAGEMENT STUDYING IN KASHMIR VALLEY

***Tahira Sidiq¹, Bilal A. Bhat² and Ishrat Ara³**

¹Department of Dietetics and Clinical Nutrition, Institute of Home Science, University of Kashmir, Srinagar- 190006, Jammu and Kashmir, India

²Department of Social Science, Faculty of Fisheries, Rangil Ganderbal, SKUAST-Kashmir, J&K, India

³Institute of Hotel Management Catering Technology and Institute of Nutrition Rajbagh Srinagar- Kashmir, J&K, India

**Author for Correspondence*

ABSTARCT

Nutrition is an important aspect for maintaining good and healthy health. Proper nutrition plays a key role in preventing any disease. Mothers should acquire healthy food habits and nutritional knowledge among children right from early stage of life. People are not willing to trade convenience for health or other benefits. The present study was cross-sectional study using a well designed questionnaire. The aim of the study is to assess nutrition knowledge, attitudes and food habits among students of Hotel management studying in Kashmir valley. The results revealed that majority of students were in the age group of 21-23 years belonging to high income group. 47.33% students had overweight and only 36% had normal body weight. The lack of exercise in respondents may contribute to various degenerative diseases. The nutritional knowledge among the students was good regarding some aspects of food especially three main nutrients (energy, protein and fat), but it was poor in other fields related to low intake of fibre, fruits and vegetables. (91.33%) of respondents didn't know the source of vitamin B12 and iron. 87.33% didn't know which foods contain more fibers and 54% of them did not know which foods are rich in calcium and 68% are not aware regarding the hazardous effect of junk foods on health. All respondents were not aware regarding Trans fatty acids. The main source of nutritional information was media. The most skipped meal among the students was lunch (48%), only 14% did not skip meals, 50% of the students drank 3 -4 glasses of water daily and only 8% drank 7-8 glasses of water per day. Cigarette smoking and alcohol consumption was present in 36% and 44.66% respectively. The present study concluded that existing health and nutrition education to the students was not sufficient to make their practice healthy. Knowledge, attitude, and food habits of the students on healthy eating should be improved through nutrition education program.

Keywords: *Nutritional Knowledge, Food Habits, BMI, Attitude, Junk Foods*

INTRODUCTION

Human nutrition refers to the provision of essential nutrients important for human health and life. Poor eating habits and lack of nutritional knowledge are major public health issues that have serious health implications. It is well recognized that students have poor eating habits which may become hard to break once acquired. Those individuals who have basic nutrition knowledge and attitude apply these principles when purchasing food items. In recent decades there have been considerable changes in human life all over the world. These changes appeared in diet, types of food, cooking time, etc. In today's world processed foods are rapidly replacing organic food. Proper nutrition is one of the most important aspects of lifestyle (Amamoto and Andoyama, 2004). Epidemiological evidence shows that there is an increased incidence of diseases such as (Cardiovascular diseases, liver diseases, obesity, high blood pressure and cancer), which can be attributed to changes in lifestyle as well as changes in nutritional habits. In order to remain healthy and physically active and enjoy a healthier life style it is necessary to obtain good nutritional knowledge and healthy eating habits. Knowledge about healthy food choices and food safety can be predisposing factors for improving eating habits and adopting a healthy diet (Gates and De Lucia,

Research Article

1998). Some researchers have shown that some students are not familiar with healthy food needed for their body in different conditions (O'De and Jennifer, 2004). Although, the study showed that 85.6% of the students are familiar with the concept of balance of nutrients in food, but only 7% of them use it in their diet, yet 51% of the students showed a tendency towards learning a healthy diet (Robinson *et al.*, 2009). Due to the lack of nutritional knowledge in students tend to practice wrong eating habits such as fast or street foods, this sort of food has no value to their nutrition what so ever but during the past years students seem to have diverted from home cooked healthy meals to college cafeterias or restaurants. Nutritional education is one of the important fields in life as it plays a big role in nutritional knowledge by raising awareness regarding balanced diet and healthy food habits. In order to remain healthy and physically active and enjoy a healthier life style it is necessary to obtain good nutritional knowledge and implement it at an earlier stage. As early stage of life is the base of later life. The knowledge, attitude and practice must be considered in students in order to promote healthy life. Taking this consideration in mind the main goal of colleges is to broaden nutritional knowledge of people of the society, so enhancing the nutrition attitudes, knowledge and practice of students have high importance because this subsequently will lead to more food-conscious society and more healthy people. Also students are more likely to change positively, nutritional education to enhance their knowledge can be helpful for the whole community. Knowledge about healthy food choices and food safety can be predisposing factors for improving eating habits and adopting a healthy diet.

Unfortunately, there are not sufficient researches on nutritional knowledge of hotel management students. So, the objective of this research is to achieve better understanding of nutrition knowledge, attitude, and food habits of students and provide nutritional counseling that enhances their nutritional knowledge and awareness of students to choose healthy and appropriate foods in order to promote better health conditions. Therefore, the purpose of this study was to evaluate nutrition knowledge, attitude and food habits of students of Hotel management studying in Kashmir valley.

MATERIALS AND METHODS

This was cross-sectional descriptive study about nutrition knowledge, attitude, and food habits conducted among 150 students of Hotel Management studying in Kashmir valley. The tool used in the present study was essentially a self made questionnaire. The questionnaire was pre tested on 15 students and the necessary modifications were made and to ensure the validity and feasibility of questionnaire before administering it on the entire sample.

The students were explained about the purpose of the study, and on obtaining their consent; data were collected from the participating students. The questions that were asked were related to the personal information, nutritional knowledge about food groups, students' attitudes toward nutrition and related diseases and some questions related to food habits and choosing foods.

Statistical Analysis

All data were statistically analyzed through statistical package for social science (SPSS) software version 20.00 and Microsoft excel.

RESULTS AND DISCUSSION

Results

The data in Table 1 shows the demographic profile of students it was observed that the age of most students was ranging from 21-23 years. The majority of students were Hindus (63.33%), followed by Muslims (34.66%) and Christians (2%). In the present study 49.33% first year students, 28% second year and 22.66% third year. It was observed that the current place of residence of most students was at college hostel (50.66%) then home (32%) and privately rented apartment (17.33%). Majority of the students were from urban area (86%) and only (14%) were residing in rural area. The family income of the majority of students was more than Rs 10000 (54%), then between Rs 5000 – Rs 1000 (41.33%) and only (4.66%) had family income less than Rs 5000. It was also observed that 82% students had nuclear type of family system and 18% had joint type of family system. The present study observed that 47.33% students had

Research Article

overweight and only 36% had normal body weight. Underweight was observed in 10% students and remaining 6.66% had presence of obesity.

Table 1: Socio Demographic Profile of Students

Variable	Number	%
Age (Years)		
18-20	24	16.00
21-23	103	68.66
24-26	23	15.33
Religion		
Muslim	52	34.66
Hindu	95	63.33
Christian	3	2.00
Academic Level		
First Year	74	49.33
Second Year	42	28.00
Third Year	34	22.66
Current Place of Residence		
At Home	48	32.00
College Hostel	76	50.66
Private Rented Home	26	17.33
Permanent Residence		
Rural Area	21	14.00
Urban Area	129	86.00
Family Income		
<5000	7	4.66
5000-10000	62	41.33
>10000	81	54.00
Type of family		
Nuclear	123	82.00
Joint	27	18.00
Body Mass Index		
< 18.5 Kg/m ² (Underweight)	15	10.00
18.5-22.9 Kg/m ² (Normal)	54	36.00
23-24.9 Kg/m ² (Over Weight)	71	47.33
≥ 25 Kg/m ² (Obese)	10	6.66

Figure 1 reveals that the majority of students in this study 71.4% not practices any sort of exercise. The lack of exercise may be contributed to various degenerative diseases in young generation. Statistically, frequency distribution is not uniform ($p < 0.01$).

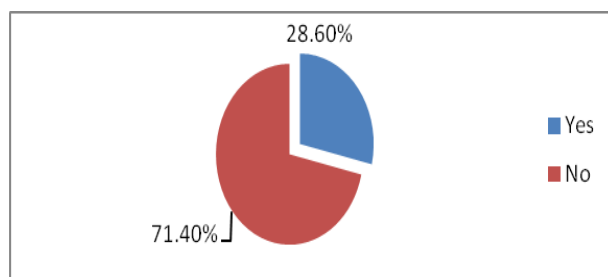


Figure 1: Performing Exercise

Research Article

Table 2 shows that 12% of the students didn't know the food group that should be eaten. It was observed that all respondents were aware about the three main components of food. Majority (87.33 %) of the students didn't know which foods contain more fibers and only 28.66% were not aware regarding its healthy benefits.

Further, it was observed that 54% didn't know which foods contain the most calcium. 15.33% didn't know various sources of food containing protein other than meat. It was also observed that very less respondents (2%) didn't know which foods contain carbohydrates. It was observed that 91.33% didn't know the source of vitamin B12 and iron.

The table also shows that 68 % of students didn't know that street foods and 35.33% students didn't know that soft drinks have health hazards. Majority of the students (64%) weren't aware of the major health problems related to low intake of fruits and vegetables.

Further, it was observed that 85.33% answered incorrectly when asked to choose the best choice to reduce fat from the diet. It was also observed that all of them were not aware regarding Trans fatty acids and changing of oil.

Very less number of students (21.33%) was not aware that cooking method may affect the nutritive value of food. Statistically, there is a significant association in case of nutritional knowledge and opinion of respondents. In case of statements S3, S5, S8, S9, S11, S12, S13 and S14 the respondents do not possess good knowledge.

Table 2: Nutritional Knowledge among Students

Nutritional Knowledge Questions	Yes (%)	No (%)
S1. Knowledge of food groups to be eaten	132 (88.00)	18 (12.00)
S2. Knowledge of the three main components of food	150 (100)	0
S3. Awareness of which foods have more fiber	19 (12.66)	131 (87.33)
S4. Importance of dietary fibre in health	107 (71.33)	43 (28.66)
S5. Awareness of which foods have more calcium	69 (46.00)	81 (54.00)
S6. Knowledge of food containing protein other than meat	127 (84.66)	23 (15.33)
S7. Knowledge of food containing carbohydrates	147 (98.00)	3 (2.00)
S8. Knowledge of the sources of vitamin B12 and iron	13 (8.66)	137 (91.33)
S9. Awareness of hazards related to street fried foods and packed food items	48 (32.00)	102 (68.00)
S10. Awareness of hazards related to soft drinks and alcohol	97 (64.66)	53 (35.33)
S11. Knowledge of problems related to low intake of fruits and vegetables	54 (36.00)	96 (64.00)
S12. Knowledge of the best choice to reduce the amount of fat in diet	22 (14.66)	128(85.33)
S13. Knowledge of trans fatty acids	0	150 (100)
S14. Awareness of changing source of oil monthly	0	150(100)
S15. Awareness of effect of cooking methods on nutritive value of food	118 (78.66)	32 (21.33)
Chi square= 1129.278, p-value<0.01		

Figure 2 shows the source of nutritional information among students. It was observed that majority of the students received nutritional knowledge from internet (28.66%) and (24.66%) from friends. It was observed that T.V and radio was source of information in 16.66% students, 10.66% were received information from family members and 12.66% from reading books, magazines and newspapers. Only 0.66% consult dietitian for nutritional information.

Research Article

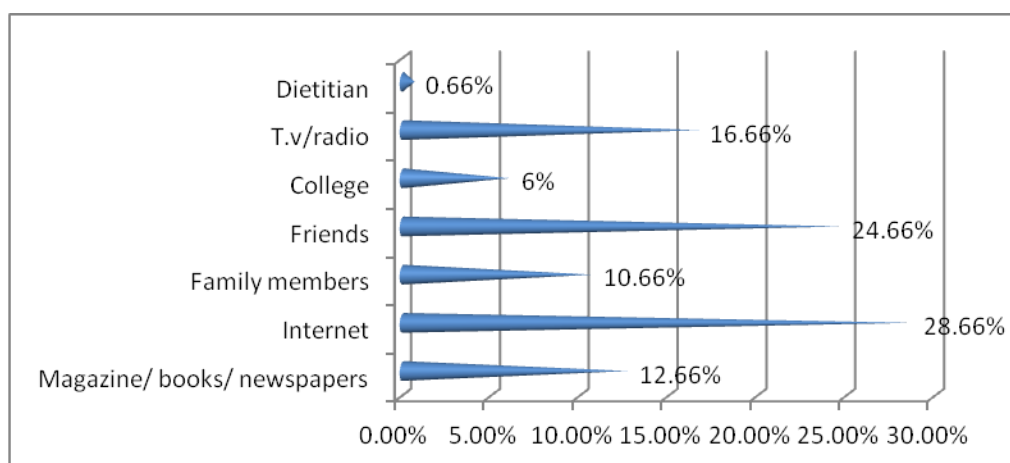


Figure 2: Source of Nutritional Information in Students

Figure 3 showed that most skipped meal among the students was lunch in (48%), 32.6% skip breakfast, 5.33% skip dinner and only 14% of students don't skip their meals. Statistically, frequency distribution is not uniform in case of taking meal at proper time ($p < 0.01$).

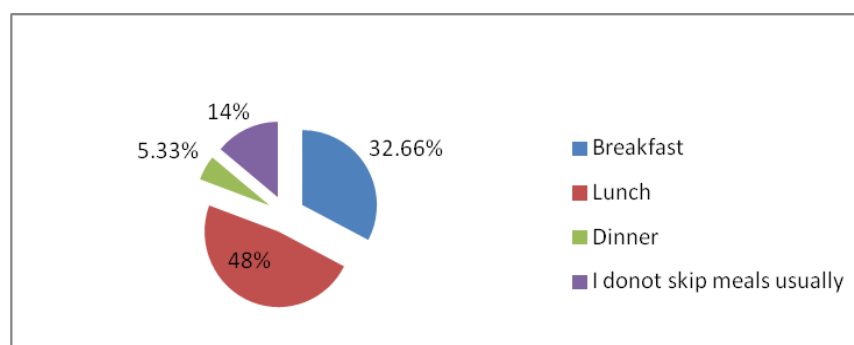


Figure 3: Skipping of Meals

Figure 4 shows the number of water glasses consumed by students per day. It was observed that 50% of the students drank 3-4 glasses of water daily and 28% drank 1-2 glasses of water daily, 14% drank 5-6 glasses of water and only 8% drank 7-8 glasses of water daily.

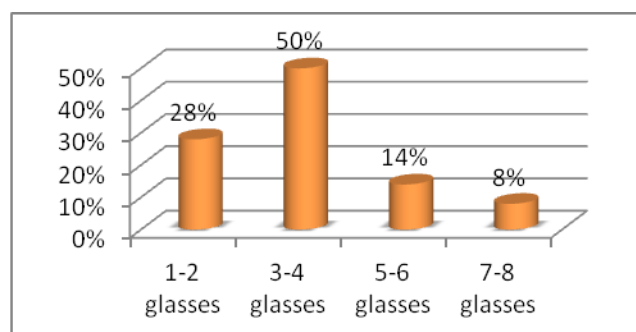


Figure 4: Number of Water Glasses Consumed by Students Per Day

Table 3 shows the Smoking and Alcohol consumption habits of students under study. It was observed that 36% students were smokers and alcohol consumption was also seen in 44.66% students. Statistically, frequency distribution in case of Cigarette smoking is not uniform ($p < 0.01$) but in case of Alcohol

Research Article

consumption it is uniform ($p < 0.05$). Since maximum students selected as sample were from rich families and belonged to other states of India so consumption of Alcohol was seen very high.

Table 3: Smoking Habit of Students

Variables	Yes (%)	No (%)	Chi Square	P-Value
Cigarette Smoking	54 (36)	96 (64)	11.76	< 0.01
Alcohol Consumption	67 (44.66)	83 (55.33)	1.707	> 0.05

Figure 5 reveals that 46.3% of students attempt to eat a healthy diet, 39.7% of students sometimes attempt to eat healthy diet while 14% of students don't attempt to eat a healthy diet. Statistically, frequency distribution is not uniform ($p < 0.01$).

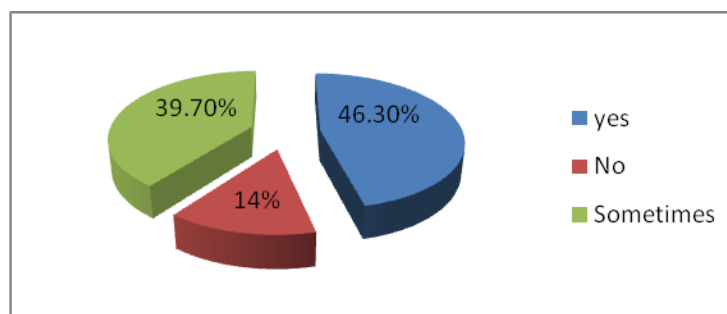


Figure 5: Distribution of Students as per Attempting to Eat a Healthy Diet

Table 4 shows the factors that are responsible for low nutritional information. The table reveals that the 28.66 % of the subjects have noted the lack of information as the main causes for low nutritional awareness followed by carelessness of students towards nutrition.

Table 4: Main Cause of Low Nutrition Awareness

Factors	Frequency	Percent
Carelessness to Nutrition	21	14
Lack of Interest	15	10
Lack of Information	43	28.66
Family	12	8
Finance	3	2
Culture	2	1.33
Lack of Nutrition Course	5	3.33
Education	6	4
Fast Food	24	16
Lack of Time	19	12.66

Discussion

Nutrition is one of the important aspects for better health. Poor eating habits and lack of nutritional knowledge are important public health problems that have serious health implications. The present study was conducted on the nutritional knowledge, attitude and eating habits of students of Hotel management studying in Kashmir valley. From the study it was observed that age of most students was ranging from 21-23 years. The present study included males only as majority of the students were males in this institute. It was observed that majority (63.33%) of them were Hindus residing in urban area and had high income group with nuclear type of family system. It was observed that the current place of residence of most students was at college hostel (50.66%) then home (32%) and privately rented apartment (17.33%). Majority of them were from urban area (86%) and belonged from high income group with more than Rs

Research Article

10000. It reveals that food intake is associated with socio economic status of an individual. The present study observed that 47.33% students had overweight and only 36% had normal body weight and 82% had nuclear type of family system. These findings are correlated with the findings of research conducted by Beydoun *et al.*, (2008) and Razan Elhassan *et al.*, (2013).

It was observed that practice of exercise was lacking among students which aggravates their health conditions. The reason behind this was lack of time. The nutritional knowledge among the students was good regarding some aspects of the food contain the three macronutrients (carbohydrate fat and protein), but it was poor in other others aspects such as the problems related to low intake of fruits and vegetables, source of calcium, fibre, iron and vitamin B₁₂. The present study observed that majority (64%) did not aware of the major health problems related to low intake of fruits and vegetables. The present study also observed that 85.33% answered incorrectly when asked to choose the best choice to reduce fat from the diet. It was also observed that all of them were not aware regarding Trans fatty acids and changing of oil. Very less number of students (21.33%) was not aware that cooking method may affect the nutritive value of food. These findings replicates with previous research (Sakamaki *et al.*, 2005; Chang *et al.*, 1987).

The present study observed that main source of nutritional knowledge was internet (28.66%) and (24.66%) from friends. T.V and radio was source of information in 16.66% students, 10.66% were received information from family members and 12.66% from reading books, magazines and newspapers. Only 0.66% consult dietitian for nutritional information. These findings are in line with Razan Elhassan *et al.*, (2013) and Okeyo, (2009) where the majority of students also acquired their knowledge from the media.

Surprisingly in the present study majority of the studied students skip their lunch followed by breakfast. The present study is not in agreement with several researches reporting breakfast to be the most frequently skipped meal. Another study among university students by Okey, (2009) revealed that, breakfast was the most meal frequently skipped. The finding in the present study may be attributed to the fact that students usually have time between morning classes to eat breakfast. Only (14%) of students reported that they don't usually skip meals. Demonstrating that, students are unaware of the impact and important long-term consequences of skipping meals on their health.

Regarding drinking water, 50% of the students drank 3 or 4 glasses of water daily and 28% drank 1-2 glasses of water daily, 14% drank 5-6 glasses of water and only 8% drank 7-8 glasses of water daily. Drinking adequate amount of water daily is an important for overall health because water aids digestion, circulation, absorption and even excretion.

The present study also observed that smoking habit and alcohol consumption was present in students as they feel it acts as a stress relaxant and the main cause of this addiction is also peer group influence. It was also observed that 46.3% of students attempt to eat a healthy diet while only 14% of students don't attempt to eat a healthy diet. These finding correlates with the findings of (Medical news today.com, 2009) where most behavioral changes including health related ones are influenced by an individual's readiness to change.

Conclusion and Recommendations

Study concluded that students under study are not well equipped with the nutritional knowledge and skills to meet their responsibilities of nutrition counseling and care in health and illness. They accept the sedentary life style and had faulty dietary habits. Consumption of junk foods, cigarette smoking and alcohol are seen in students. The main source of nutritional information among students was media, friends and family members. The students eating practices raised serious concerns about inadequate intake of vitamins, minerals and fibre by students, emphasizing the need for a practical, relevant and tailored nutrition education programmes. Results from the present study showed that a high percentage of the students have unhealthy eating practices with less than or more than recommended dietary guide lines for main food groups therefore major changes in eating habits of students are required.

The recommendation is to develop nutritional education and designing more nutritional intervention programs from the secondary level, specially focusing on the nutrients and their benefits to the body, the consequences of skipping meals, the way they prepare their food. Also the study revealed an urgent need

Research Article

to educate not only the students but their families as well. Due to the importance of nutrition and its impact on health the study suggests that nutrition courses should be part of the curriculum.

Financial Disclosure: This work was carried out without any grant.

Conflicts of Interest: All authors declare that we have no conflicts of interest.

REFERENCES

Amamoto Dozono R and Andoyama K (2004). The relationship between dietary life and indefinite complaint in female Nutrition department students. *Seinan Jo Gakuin Bulletin* 75-85.

Beydoun MA and Wang Y (2008). Do nutrition knowledge and beliefs modify the association of socio-economic factors and diet quality among US adults? *Preventive Medicine* 46(2) 145-53.

Chang SL (1987). Survey on health knowledge of college student in the middle area of Taiwan. *Journal of Public Health* 14 250-273.

Gates GE and De Lucia BA (1998). Influences of lifestyle patterns on diet. *Journal American Association of Nutrition* 989(9) 82-87.

Medicalnewstoday.com (homepage on the internet). *Medical News Today* (Article Date: 2009. Aug.16.cited 2012.feb17]. Available: www.medicalnewstoday.com/articles/160774.php.

O'Dea and Jennifer A (2004). School-based health education strategies for the improvement of body image and prevention of eating problems. An overview of safe and successful interventions. *Journal of Health Education* 1 11-33.

Okeyo AP (2009). Eating practices, nutritional knowledge and body weight in nursing science students at the University of Fort Hare (Dissertation).

Razan Elhassan M, Gamal HE and Mohammed GSS (2013). Nutrition knowledge, Attitude and practices among students of Ahfad University for Women. *Journal of Scientific Research* 4(1) 25-34.

Robinson O'Brien R, Larson N, Neumark S and Hannan M (2009). Characteristics and dietary patterns of adolescents who value eating locally grown, organic, non genetically engineered and no processed food. *Journal of Nutrition Education and Behavior* 1 11-8.

Sakamaki R, Toyama K, Amamoto R, Liu CH and Shinfuku N (2005). Nutritional knowledge, food habits and health attitude of Chinese university students -a cross sectional study. *Nutrition Journal* 4(4) 1-5.