integrity Research Journals

Research Journal of Food Science and Nutrition
Volume 5(2), pages 53-57, April 2020
Article Number: 69F50D974
ISSN: 2536-7080
https://doi.org/10.31248/RJFSN2019.089
https://integrityresjournals.org/journal/RJFSN

Full Length Research

An assessment on the level of nutritional knowledge among undergraduate students in Edo state

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Received 13th December, 2019; Accepted 8th February, 2020

ABSTRACT: This study investigated the level of nutritional knowledge among undergraduate students in Edo state. Ignorance of the nutritional value of food is widespread especially in the rapidly growing urban populations, undergraduate students are not left out. Ignorance of nutritional value lead to faulty food selection which can result to obesity, diabetes mellitus, hypertension and stroke latter of life. The sample size comprised of three hundred and ninety-seven (397) undergraduate students in Edo state. Random sampling technique was used in selecting the respondents for the study. Structured questionnaire was used for data collection. Data was analyzed using mean and standard deviation, while t-test was used to analyze the two (2) research questions of the study. Findings revealed that more than half of the respondents have medium level of nutritional knowledge while less than half of the respondents have high level of nutritional knowledge. Further results revealed that both male and female students had equal level of nutritional knowledge. Based on the findings, the researchers concluded that both male and female undergraduate student do not have equal level of nutritional knowledge. Also, most undergraduate students do not have adequate nutritional knowledge. The researchers recommended amongst others that the Government should enlighten the public regularly on good nutrition through media. Students should eat more of natural foods and avoid processed foods. In general, students should consume balanced diet to enable them achieve their academic goal.

Keywords: Knowledge, nutrition, students, undergraduates.

INTRODUCTION

Nutritional knowledge is imperative for a healthy eating and healthy eating means eating nutritious diets. Nutrition knowledge is very important for every person to live and maintain a good health status at all time (WHO, 2000). Maynard et al. (2002) also reported that food which consists of liquid, solid, and semi-solid, substance consumed by human beings to maintain life is made up of different chemical substances, and if these items are properly combined, it will help to maintain good health status throughout life. Many people today consume food for motives that are not in line with the proper eating habits due to ignorance.

According to the WHO (2005), ignorance of the nutritional value of food is widespread especially in the rapidly growing urban populations. The students are not left out in this. Ignorance leads to faulty food selection, preparation and consumption. This situation certainly contributes to the onset of obesity, diabetes mellitus, hypertension and stroke. Argote and Ingram (2000) opined that transfer of knowledge can be observed through changes in the academic performance, improvement in health status using the required knowledge gained through observation in determining the required food intake required by the body for the prevention of diseases.

Greenhalgh et al. (2004) described the process as bringing new ideas on food intake into consistent and appropriate use to enhance effective eating habits. Nutritional knowledge among students promote good eating habit, eradicate health related diseases specially where an imbalance in food intake culture or food exists

resulting to eating patterns that enhance healthy living.

Ferguson-Hessler and de Jong (1990) distinguished four major types of knowledge for the content of an adequate knowledge base with regard to its problem solving i.e. situational knowledge, declarative and procedural knowledge and strategic knowledge. Taras (2002) have limited knowledge types into two, such as declarative and procedural knowledge. Both are indeed useful in this study. Declarative knowledge can be helpful for the student in knowing the facts about a particular food such as the presence of vitamins in lemon and other fruits. The processed knowledge can be helpful for the student in deciding how food should be rationed, such as when the vitamin in the food is mostly needed at the expense of other nutrients, while procedural knowledge can be helpful and relates to how to choose a red wine for a meal, how to choose a low salt packet of soup, how to layout the cutlery for a dinner party, etc.

Yahia et al. (2016) examined the level of nutrition knowledge and its association with consumption among 231 randomly selected college students in university of Minnesota. The questionnaire was used to gather data for the study. Data were analyzed using one-way ANOVA, Chi-square and students t – test. Results indicated that female students have greater nutrition knowledge than male students.

Sobal (2015) noted that unwholesome eating behavior among students are considered temporary, as part of university life and unhealthy habits picked up at this age generally persists in old adult life. Some students are aware of “healthy eating guidelines” they often show skepticism and resistance to nutrition education messages, and frequently perceive healthy eating as monotonous and unsatisfying. Milosavljević et al. (2015) found that amongst the 200 sampled physical education students, female consumed large amount of fat, fiber, iron, and vitamin than the boys do, but consumption of iron and calcium in both groups was less than the required daily amounts.

Fung et al. (2001) who investigated the association between nutritional knowledge and dietary patterns of 200 Mi/wall’s College students found that poor eating behaviour is related to poor knowledge of nutrition, that consequently led to many chronic diseases and preventable causes of death, such as cardiovascular disease, obesity, type 2 diabetes, stroke and osteoporosis in elderly and post-menopausal women.

Jessri et al. (2010) who noted that most females have also noted their nutrition and health issues as of primary concern than males who do not see this as a major concern to their health and this can be the reason for female greater nutritional knowledge and attitude than male.

Most professionals, apart from health personnel and nutritionist, lack even basic knowledge about human nutrition. To participate effectively in nutrition education activities, such professionals require some basic training in nutrition. It is important that the training also incorporate training in participatory problem assessment as well as participation in multidisciplinary activities. Enabling project staff to involve community members in a genuine dialogue about their food and nutrition concerns and to coordinate nutrition programme activities among different sectors and levels is crucial for programme success (Moy et al., 2009).

Inadequate nutritional intake during adolescence can have serious consequences throughout the reproductive stages of adolescent which is at the risk of developing complications especially for girls during pregnancy and the increased chances of their giving birth to a low birth weight babies, thus perpetuating a vicious cycle of malnutrition and ill-health. Adolescent that consume right proportion of food, both in quality and quantity, can be healthy persons by having balanced diets (Varinil, 2005).

Allotecalbo and Cardenas (2015) examined the nutritional knowledge and dietary habits of Philippine collegiate athletes allowing comparison for age and gender. The findings revealed that more female athletes (4%) showed poor level of nutritional knowledge compared to no one of the male athletes.

Statement of the problem

Many people today consume food for motives that are not in line with the proper eating habits due to ignorance of the nutritional value of food. It is widespread especially in the rapidly growing urban populations. Ignorance leads to faulty food selection, preparation and consumption. This situation certainly contributes to the unset of obesity, diabetes mellitus, hypertension and stroke (WHO, 2005). Undergraduate students that consume right proportion of food both in quality and quantity can be a healthy person. Inadequate nutritional intake can have serious health consequences. Therefore, this study intends to investigate the level of nutritional knowledge of undergraduate students in Edo State.

Purpose of the study

The purpose of this study is to:

1. Examine the level of nutritional knowledge among undergraduate students.
2. Examine the difference between the level of nutritional knowledge among male and female undergraduate students.

Research question

1. What is the level of nutrition knowledge among undergraduate students?
2. Is there any difference between nutritional knowledge of male and female undergraduate students?

Table 1. Mean distribution of the level of nutritional knowledge among undergraduate students.

S/n	Item	Mean	Std	Remark
1	How well you rate the following source of protein foods, poultry, fish, eggs etc.?	2.76	0.487	High
2	What is the level of calories in processed foods?	2.36	0.638	Medium
3	What is the level of fiber in corn?	2.38	0.674	Medium
4	How well you rate the following sources of carbohydrate foods? Plantain, Yam, Cassava?	2.73	0.558	High
5	How well you rate animal fat as an example of saturated food?	2.29	0.694	Medium
6	What is the level of protein in soya bean?	2.48	0.633	Medium
7	What is the level of calories in pounded yam	2.30	0.766	Medium
8	Is carbohydrate giving food?	2.73	0.523	High
9	What is the level of vitamin in papaw, oranges, mangoes and pineapple?	2.71	0.586	High
10	How well will you rate the following sources of fat & oil, butter, groundnut, palm oil, sunflower and coconut oil?	2.62	0.567	High
11	How will you rate the level of water needed in the body for healthy living?	2.62	0.588	High
12	What level of fibre in oat meal?	2.39	0.639	Medium
13	What is the level of cholesterol in egg yolk?	2.30	0.710	Medium
14	A diet rich in different nutrient is healthy?	2.66	0.604	High
15	The content of preservation of foods such as canned foods, bottled foods are not good for healthy living?	2.42	0.692	Medium

METHODOLOGY

This study adopted the descriptive survey design. The population of the study comprised of undergraduate students in Ambrose Alli University, Ekpoma and University of Benin, Edo State. A multi-stage random sampling technique was used. Faculties were randomly selected from each of the universities mentioned above. Students were randomly selected from each of the faculties selected. Two hundred (200) students each were randomly selected from Ambrose Alli University and University of Benin respectively, making a total of four hundred (400) students used for the study. The structured questionnaire used for the study comprised of fifteen question items used in the assessment of the level of nutritional knowledge among undergraduate students. This questionnaire was designated to answer two research questions. It drew up a four-point rating scale of strongly agree (SA) 4 points, agree (A) 3 points, disagree (D) 2 points, strongly disagree (DS) 1 point. The instrument's validity was determined by expert judgment. Two experts in Home Economics in the Department of Vocational and Technical Education, Ambrose Alli University, Ekpoma. The correction made by the experts were incorporated into the final work. Test-retest method was used to establish the reliability of the instrument. The instruments were administered to twenty students and the data obtained from the administration was analyzed using Pearson's product moment correlation coefficient to obtain a coefficient of 0.75. The instrument was administered by the researcher and two research assistants. The completed instruments were retrieved immediately after the exercise. The instruments retrieved from the respondents were 379 which is (99.3%). The data were analyzed using mean and standard deviation including T-test statistics was used to test the non-hypothesis at 0.05 level of significance, the cut of point for mean was 2.50, any item with mean rating of 2.50 and above was considered high and 2.0 to 2.49 as medium and below 2.0 as low.

RESULTS

Research question one

What is the level of nutritional knowledge among undergraduate students? From Table 1, the mean score of 2.50 and above was considered high, 2.00 to 2.49 was considered medium while below 2.00 was low. From the analysis, it is shown that there was a high mean score for only 7 question items. While 8 question items recorded medium level of nutritional knowledge.

Research question two

What is the level of nutrition knowledge among undergraduate students? The Table 2 shows the t-test analysis of difference in the level of nutritional knowledge of male and female undergraduate students. The results show that t–calculated is 1.387 while the p-value is 0.166 at 0.05 level of significance is less than t-critical value of 1.96. Therefore, the null hypothesis was rejected. This

Table 2. T-test of difference in level of nutrition knowledge of male and female undergraduates.

Nutritional knowledge level	N	Mean	Std Dev	t-Statistic	Df	P-Value	Sig
Male	261	0.08	0.724	1.387	395	0.166	Not significant
Female	136	1.97	0.719				

means that there is a significant difference between the level of nutritional knowledge of male and female undergraduate students.

DISCUSSION OF FINDINGS

The mean and standard deviation of the level of nutritional knowledge revealed that more than half of the respondents have medium knowledge on nutrition. The findings of this study are in line with that of Oke (2016) which indicated that Nigerian undergraduates are not well informed on the importance of nutrition in the prevention of cancer. Folasire et al. (2016) also in consonance with these findings stated that quite a high number of students (75.0%) frequently consumed processed cereals which are not too good. This shows that such students do not have adequate nutritional knowledge of the food around them.

Undergraduate students need adequate nutritional knowledge to enable them eat balance diets. Balanced diets will prevent them from nutritional diseases, they will enjoy good health as well as enjoy better functioning of their brain which can lead to excellent academic performance.

Table 2 revealed that there is a significant difference between male and female undergraduate students in regards to level of nutritional knowledge. Yahia et al. (2016) agreed with this finding. They found that female students have greater nutritional knowledge than male students. This finding is not in line with Oke (2016) who stated that socio-personal characteristics such as gender did not influence eating habits of undergraduate students in terms of making adequate food choices. On the other hand, Jessri et al. (2010) also agreed with this finding who noted that most females have noted their nutrition and health issues as of primary concern than males who do not see this as a major concern to their health and this can be the reason for female greater nutritional knowledge and attitude than male.

Moy et al. (2009) noted that inadequate nutritional intake during adolescence can have serious consequences throughout the reproductive life of adolescent. Adolescents are at the risk of developing complications especially for girls during pregnancy. Fung et al. (2001) who investigated association between nutritional knowledge and dietary patterns of 200 Mi/Wall's College students found that poor eating behavior is related to poor knowledge of nutrition that consequently lead to many chronic diseases, such as cardiovascular disease, type 2 diabetes, stroke and osteoporosis, in elderly and post-menopausal women.

Conclusion

The conclusion drawn from this study based on the findings is that there is a significant difference between nutritional knowledge of male and female undergraduate students, meaning that undergraduate students, both male and female students do not have equal nutritional knowledge. The finding proven that most students have moderate knowledge on nutritional knowledge, meaning that though undergraduate student have nutritional knowledge but they do not have it adequately. Hence, public health education should be intensified to promote student's nutritional knowledge.

Recommendation

Based on the findings of this study, the following recommendations have been proffered: There is need for nutrition education by media regularly, this will equip the public with nutritional knowledge in order to reduce the high rate of nutritional diseases in our community, state and nation at large. Nutrition subjects should be made compulsory for senior secondary school students (SSS class) before these students proceed to university level, this will assist them to consume healthy foods. Healthy foods do not only prevent them from chronic diseases, but also help their brain to function properly and improve their immune system to resist them from frequent sickness. Parents also have a role to play in encouraging their children who are undergraduate students to avoid junk foods but eat more of balance diet. Parents can only do this successfully if he or she has nutritional knowledge adequately. Therefore, Government should create a program on media to impact nutrition knowledge regularly to the public. Undergraduate students should endeavor to consume balanced diet in right proportion.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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