NUTRITIONAL PRACTICES AND HEALTH SECURITY OF UNDERGRADUATE STUDENTS IN DELTA STATE

BY

Dr. (Mrs.) Okoh, Patricia Ayaegbunem
Department of Home Economics Education
Federal College of Education (Technical), Asaba, Delta State, Nigeria

Abstract

The study was conducted to determine the nutritional practices and health security of undergraduate students in Delta State. The study was conducted in public universities in Delta States, Nigeria. It adopted the ex-post-facto design. Two research questions guided the study. The population for the study was made up of all the students in public universities in Delta State. The choice of state universities was necessitated by the industrial action taken by academic staff in public federal universities. the population of the study comprised all students of the four state owned universities in Delta State. The sample for the study comprised 300 undergraduate students selected from three universities out of the four state universities. The instrument used for data collection was a structured questionnaire consisting of 32-items rated on a four-point scale of strongly agree (SA)= 4, agree (A) =3, disagree (D) =2 and strongly disagree (SD)= 1 and titled; "Nutritional Practices and Health Security Related Questionnaire "(NPHSRQ. The instrument was validated by three experts and reliability established through a trial test which involved 30 students selected from Federal College of Education (Technical) Asaba. The split half method was used and a coefficient of 0.81 consistency value was obtained. 300 copies of the instrument were administered by the researcher. Research questions were answered using descriptive statistical tools of mean ($\overline{x}$) and standard deviation. t-test was used to test the hypotheses at a critical alpha level of 0.05. Findings in the study revealed that; university undergraduate students have basic knowledge of what they eat as food but do not have adequate knowledge of the nutritional values of the food they eat but not have basic understanding of the nutritional implications for health security in later life. It was recommended that; students should be subjected to regular to health screening and dietary recommendations by experts based on regular health reports as this will guide them to make right choices on what to eat and also eat right.

Keywords: undergraduate students, nutritional practices and health security

Introduction

Naturally, man needs food to survive as food remains the source of growth, strength and other body development required for man to live and function well in his social environment. However, the choice of what to eat depends on the individual's knowledge of what to eat, availability of the food element, and the availability of the resources needed to make the food available. Any of these

could affect the choice of food one eats at a particular time in the day. While some people eat whatever they see that is available which they can afford, others eat what they want to eat based on their body needs, taste and place they find themselves. This becomes obvious with undergraduate students in tertiary institutions.

University students seem to have homogeneous nutritional characteristics as fast foods seemingly dominate what they eat in campuses. It is a common practice to see students converge at eating centres (food vendors stands) in campuses irrespective oft their peculiar body structures and chemistry, social statuses and prestige. What counts most for them is association. In doing this, they eat what is available irrespective of nutritional values and health implications to their body system. This calls for concern as some of them end up having health issues that manifest in obesity, cancer, respiratory problems and sight related issues which are linked to what we take in as food (Afolabi, Oyawoye, Sanni & Onabanjo, 2013). This is not deliberate but due to, sometimes, poor knowledge of the implications of what they eat for their health.

Majority of the students appear not to be conversant with the healthy foods required for improving their health process and thus security. They lack the basic information and training concerning body fitness, nutrition needs and diets. Nutrition and health instruction in public universities tend to focus their priority on students pursuing nutrition or health related courses to the near neglect of the knowledge of nutrition for health security. Those with better nutrition knowledge (from family members, friends, schools, government health campaign and cooking programs on television/radio) are known to possess normal nutritional status and positive approach to Nutrition (Walsh & Nelson, 2010). Nonetheless, in university campuses, they tend to jettison the knowledge gained overtime due to relative ignorance of the implications of what they eat for health security.

Understanding health security demands first understanding the concept of security. According to Bodunde, Ola and Afolabi (2014), security has to do with the process connected with assuaging any kind of threat to people and their precious values. It is about freedom from threat and ability of states to maintain independent identity and their functional integrity against forces of change, which they see as hostile while its bottom line is survival. This is a timely definition as foreign matters in human body can either sustain survival or destroy the body system. When it is destructive it becomes a threat and when it is protective it is for survival; yet all depends on what man takes in as food.

According to the World Health Organisation (WHO, 2020), health security encompasses the "activities required to minimize the danger and impact of acute public health events that endanger the collective health of populations living across geographical regions and international boundaries".

In the view of Muyiwa (2015), health security tends to guarantee a minimum protection from diseases and unhealthy daily life. According to the author, in less - developed countries, the major causes of death traditionally were infections and diseases, inadequate health care, new and recurrent diseases including epidemics and pandemics, poor nutrition and unsafe environment and unsafe lifestyles. Most of these deadly diseases are generated from what man eats and what he ought to eat but do not eat. In all, the knowledge of what one eats counts so much in health security.

Dependence on chemicals has increased, as has awareness of the potential hazards for health and the environment, like highbred food and other chemical drinks (Masys, 2020). As the globalization of food production increases, so does the risk of tainted ingredients and risk of foodborne diseases. As the world's population becomes more mobile and increases its economic interdependence, these global health threats increase even as food shortage occasioned by natural disasters as well

human induced threat surges. The schools are not left out as enrolment rate increases every session (Niu & Xu, (2019).

Generally, university undergraduates are always in the habit of trading their times of other activities for reading. This practice is further compounded as they do not have the precise nutritional education and knowledge to make healthy food selections. Porto-Arias et al., (2017); El Ansari, Suominen, and Samara (2015); Gropper, Simmons, Connell and Ulrich (2012), though in different studies aligned that student are deficient in meal preparation skills alongside their irregular and challenging class schedule, which have critical effects in the reorientation of their eating habits. They added that, due to student's life stages, they may not consider the risk of developing chronic diseases with long-term health impacts when making food choices. Students hardly realize the ripple effect of their food choices as the results may not be immediate. However, some like obesity, diabetes, eye defect, cancer of the lungs, arthritis and the like manifest even while some are still in school while some experience the accumulative effect overtime as it tells on them and plunges victims into consistent hospital visits. Such could be avoided if students are well guided by the knowledge of what they eat, choice of what to eat, when to eat and when to avoid such. It is against this background that the researcher was set to determine undergraduates' nutritional practices and health security.

Statement of the Problem

Traditionally, there are diseases and sicknesses associated with old age and not common among young people. In recent years, the story is no longer the same as children who are in their teens and young adults are also caught in the web of such diseases as arthritis, diabetes, cancer of the lungs, high blood pressure, and the like. As a result, some parents spend so much money on children as they combine training the children to school and routine medication. Some of such

diseases are hereditary while some are self-inflicted due to nutritional habits, especially among university students who situationally become independent in feeding habit for the number of years they stay in school. Some engage in eating junk food without care about the aftermath effect in their system. Some settle for snacks and carbonated drinks with high concentration of sugar. Other go for fried and canned food as they make the eateries their regular kitchen. Some of these food types expose their body systems to attacks from diseases and bacteria that result from failed body mechanism due to excessive storage of unused food substances. This could be as a result of inadequate information and knowledge of the relationship between nutrition and health security. Some students may have knowledge of the nutritional values of food to the body but do not have any idea about the possible negative of effect of some food types on their health in later years. This could be very dangerous as such a person could be exposed to avoidable terminal disease. Considering the fact that the youth are the economic and social hope of the future, adequate and proper information about their health becomes imminent as they grow into adulthood. It is against this background that this study was embarked on.

Purpose of the Study

The main purpose of the study was to assess the knowledge of nutrition and health security of undergraduate students in Delta State. Specifically, the study was carried out to;

1. Determine undergraduate students' knowledge of the nutritional values of the food they eat in campuses.
2. Find out if undergraduate students have knowledge of the implications of what they eat for their health security.

Research Questions

The following research questions guided the study;

1. What knowledge do undergraduate students in Delta State possess about the nutritional values of the food they eat in campuses?
2. What knowledge about the implications of food type on health security do undergraduate students possess?

Method

The study was conducted in public universities in Delta State, Nigeria. It aimed to establish undergraduate students' knowledge of nutritional practices and health security. The study adopted the quasi-experimental research design. The population for the study was made up of all the students in public universities in Delta State. The choice of State universities was necessitated by the industrial action taken by academic staff in public federal universities. A specific number of students population was avoided because of the conventional state-owned universities were newly established. Getting an authentic data base could be difficult hence the avoidance. The researcher purposively selected Deltan State University of Technology, Ozoro, Denis Osadebe University of Agriculture, Awai and University of Delta, Agbor for the study. From each university, 100 students from the already established departments were selected through the accidental sampling technique. Thus, 300 undergraduate students made up of 150 male and 150 female students in their early adulthood from different age brackets and educational levels constituted the sample. The instrument used for data collection was a structured questionnaire developed by the researcher. A 32-item instrument of a four-point rating scale type titled "Nutritional Practices and Health Security Related Questionnaire "(NPHSRQ). The options were tagged and weighted; Strongly Agree (SA) 4, Agree (A) 3, Disagree (D) 2 and Strongly Disagree (SD) 1. The instrument was validated by three experts. The reliability of the instrument was established through a trial test

which involved 30 students selected from Federal College of Education (Technical) Asaba. The split half method was used and a coefficient of 0.81 consistency was obtained. 300 copies of the instrument were administered by the researcher with the support of two guided research assistants. With the use "collect on the spot", all the copies were retrieved. Research questions were answered using descriptive statistical tools of mean ($\bar{x}$) and standard deviation. t-test was used to test the hypotheses at a critical alpha level of 0.05. Based on the 4- point scale, the criterion mean ($\bar{x}$) was 2.50. Any item that had mean ($\bar{x}$) of 2.50 – 4.00 was treated as agreement to the variable. Any item with a mean ($\bar{x}$) below 2.50 was regarded as disagreement to the variable. For each of the hypotheses, if the p-value is less than 0.05, the null hypothesis was rejected but if reverse is the case (p-value is greater than 0.05), the null hypothesis was retained.

Results

Research Question One: What knowledge do undergraduate students in Delta State possess about the nutritional values of the food they eat in campuses?

Table 1: Mean and Standard Deviation of Response on Knowledge Undergraduate Students Possess about Nutritional Values of The Food they eat.

S/N	Item	SA	A	D	SD	x	SD	Decision
1	I know that what I eat have high sugar content	97	92	51	60	2.75	1.11	Agree
2	I understand that sugar is not too good for the health	49	57	100	94	2.20	1.06	Disagree
3	I love to eat fried food regularly	81	102	69	48	2.72	1.03	Agree
4	I understand that fried food is not the best for health	73	48	98	81	2.38	1.13	Disagree
5	I cannot do without soft drinks	115	77	53	55	2.84	1.13	Agree
6	I understand that soft drinks have side effect to the body	54	54	110	82	2.27	1.05	Disagree
7	My best food is processed (canned) food	78	69	92	61	2.55	1.09	Agree
8	I understand that canned food triggers cancer	59	63	98	80	2.34	1.07	Disagree
9	I eat more of snacks than normal food	125	74	41	60	2.88	1.16	Agree
10	I understand that snacks are not the best for human health	47	66	89	98	2.21	1.07	Disagree
11	I smoke daily	36	43	93	128	1.96	1.03	Disagree
12	I understand that smoking is dangerous to human health	129	98	31	42	3.05	1.05	Agree

13	I eat vegetable regularly	56	49	95	100	2.20	1.10	Disagree
14	I understand that vegetable is rich for the health	109	78	46	67	2.76	1.17	Agree
15	I eat highly spiced food a lot	88	121	54	37	2.87	0.98	Agree
16	I understand that highly spiced food could be dangerous	57	51	93	99	2.22	1.10	Disagree
	Aggregate Mean/Standard deviation					**2.68**	**1.15**	**Agree**

Table 1 reveals that respondents agree with the items alternately. They agree with item 1,3,5,7, 9, 12, 14, and 15. The mean values for these items ranged between 2.55 and 3.05 and were all significantly higher than 2.50 criterion mean score. On the other hand, item2, 4, 6, 8, 10, 11, 13, and 16 were disagreed to by the respondents. The mean values for the disagreed items range between 1.96 and 2.38 and were significantly less than 2.50 criterion mean. The grand mean for the table was 2.68 and significantly higher than 2.50 criterion mean score while the grand standard deviation was 1.15. This therefore implies that undergraduate students know what they eat but do not have adequate knowledge of the nutritional values of the food they eat except item 11 and 12 that bothered on smoking and item 14 and 15 which were on eating vegetables.

Research Question 2: What knowledge about the implications of food type on health security do undergraduate students possess?

Table 2: Mean and Standard Deviation of Responses on what Knowledge about the Implications of the Food Type on health Security among undergraduate Students.

S/N	Item	SA	A	D	SD	x	SD	Decision
	As an undergraduate student, I understand that,							
17	Excess sugar in the body could place the body at risk	60	62	81	97	2.28	1.12	Disagree
18	Sugary food result in excess sugar in the body and also leads to sicknesses like diabetes	57	69	80	94	2.30	1.10	Disagree
19	Fried food leads to respiratory problems	70	50	80	100	2.30	1.16	Disagree
20	Excessive eating of fried foods can lead to heart problems	98	38	73	91	2.48	1.23	Disagree
21	Soft drinks contain high quantity of artificial sugar	125	67	52	56	2.87	1.15	Agree
22	Regular intake of soft drink could lead to obesity and high gain in weight	58	50	105	87	2.26	1.08	Disagree
23	Canned food could contain deadly bacteria	78	69	92	61	2.55	1.09	Agree
24	Canned food could have metal poison	51	61	100	88	2.25	1.06	Disagree
25	Snacks are junks	105	70	61	64	2.72	1.15	Agree

26	Too much snacks could lead to too much calories and weight gain	77	36	89	98	2.31	1.18	Disagree
27	Smoking is risk taking	93	73	36	98	2.54	1.24	Agree
28	Smoking leads to heart diseases, stroke and cancer of the lungs	31	78	109	82	2.19	0.96	Disagree
29	Vegetable nourishes the body	156	49	54	41	3.07	1.12	Agree
30	Excess vegetable could only lead to over bloated stomach and excess gas	73	65	66	96	2.38	1.17	Disagree
31	Highly spiced food has burning sensation in the body	81	36	87	96	2.34	1.19	Disagree
32	Highly spiced food could lead to heart burns etc	57	54	90	99	2.23	1.11	Disagree
	Aggregate Mean/Standard deviation					**2.44**	**1.13**	**Disagree**

Table 2 reveals that respondents agree with item 21, 23, 25, 27 and 27. The mean scores for the agreed items were 2.87, 2.55, 2.54, and 3.07 respectively. The mean scores were significantly higher than 2.50 criterion mean score. However, respondents disagree with all the other items with mean scores that range between 2.23 and 2.48 and are significantly less than 2.50 criterion mean score. The grand mean for the table was 2.44 and significantly less than 2.50 criterion mean while the grand standard deviation was 1.13. This implies that undergraduate students have no basic understanding of the nutritional/health implications of the food types they eat for their health later in life even though they seem to show basic knowledge of what they eat. This was evident as majority of the respondents demonstrated ignorance of the accumulative effect of sugary, highly spiced, canned and fried food to the body. Nonetheless, majority showed basic understanding of smoking as risk to the health.

Discussion of Findings

Finding from the study revealed that university undergraduate students have basic knowledge of what they eat as food but do not have adequate knowledge of the nutritional values of the food they eat. This finding aligns with the finding of Walsh and Nelson (2010) who stated that students in campuses, even though would have had some forms of nutritional knowledge prior to their entry into the university, tend to jettison the knowledge gained overtime due to relative ignorance

of the implications of what they eat for health security. It also revealed that majority of the students do not engage in smoking not because they have knowledge of the dangers of smoking but because they do not see it as food and they do not eat much of vegetable not because they sense danger in it but because they do not see as part of the regular daily meal requirement. It also shows that those who engage in smoking do that with joy due to their poor understanding of the danger it poses of their health security. This finding agrees with that of Masys (2020) who explained that youths (students in this context) dependence on chemically processed food has increased due to poor awareness of the potential hazards such food gives to health and the environment through such chemically infested foods elements like highbred food and other chemical drinks.

Furthermore, findings in the study revealed that undergraduate students have no basic understanding of the nutritional/health implications of the food types they eat for their health later in life even though they seem to show basic knowledge of what they eat. The finding also revealed that majority of the respondents demonstrated ignorance of the accumulative effect of sugary, highly spiced, canned and fried food in the body as potential health hazard and health security threat hence they continue in their habit of eating what ever that feel like eating. This finding agrees with the finding of Porto-Arias et al., (2017) who stated in clear terms that university undergraduates are always in the habit of trading their times of other activities for reading thereby compounding their future health as they do not have precise nutritional education and knowledge to make healthy food selections which exposes them (students) to health security risk. It also aligns with the position of WHO (2020) position that health security encompasses the activities required (food intake and choices inclusive) to minimize the danger and impact of acute

health threat that could endanger the collective health of populations living in communities and the world at large.

Conclusion

Healthy is wealth is an age-long adage which is apt in all generation. This is because only healthy people make living a worthwhile activity. The fact remains that man is what he eats. Man needs food for all-round biological development. Any mistake in the choice of what to eat could be disastrous. This could account for the manifestation of diverse strange diseases of which their origins are still uncertain.

In recent years, young children that are supposed to be very healthy due to their youthful age, are ironically, regularly diagnosed with diseases that should be associated with the elderly. Food types and choices cannot be outrightly be detached from such. University undergraduates seem to be more at risk as they eat whatever comes their way in schools not minding the aftermath effect in their body system. The risk ahead, if nothing is urgently done, will be calamitous. Now is the time to act.

Recommendations

Based on the findings of the study, the following recommendations were made;

1. Students should be subjected to regular to health screening and dietary recommendations by health and nutrition experts attached to the institutions and provide regular health reports on the students. This will guide them to make right choices on what to eat and also eat right.
2. University authorities should sensitize students on knowledge about food and health security to prevent foodborne illnesses. This can be achieved by displaying in strategic places complimentary food and health condition types as guide to students in campuses.

3. Understanding of food labels to allow more conversant food choices should be made by lecturers in nutrition/health related fields for students on campuses to promote active ageing.

References

Afolabi, W., Oyawoye, O.O., Sanni, S.A. & Onabanjo, O.O., (2013). Proximate and cholesterol composition of selected fast foods sold in Nigeria. *Nigerian Food Journal*, 31 (1), 70 – 76.

Bodunde, D. O., Ola, A. A. & Afolabi, M. B. (2014), "Internal insecurity in Nigeria: The irony of multiplicity of security outfits and security challenges" in Impact: *International Journal of Research in Humanities Arts and Literature*, *2*(5); 213 – 220

El Ansari, W., Suominen, S., & Samara, A., (2015). Eating habits and dietary intake: Is adherence to dietary guidelines associated with importance of healthy eating among undergraduate students in Finland. *Central Europe Journal of Public Health, 23*(4); 306-313. Retrieved from:https://pubmed.ncbi.nih.gov>…

Gropper, S.S., Simmons, K.P., Connell, L.J., & Ulrich, P.V., (2012). Changes in body weight, composition, and shape: a 4-year study of college students. *Applied Physiology Nutrition Metab*olism, 37, 1118–23.

Masys, A. J. (2020). *Global health security: Recognising vulnerabilities, creating opportunities.* Basel Springer. Springer. ISBN 9783030234911.

Muyiwa A. (2015). "Concept of security". In A. Kunle (Ed.*) Readings in intelligence and security studies* (pp.1 - 11). Intelligence and Security Studies Programme, ABUAD

Niu, S. and Xu, M. (2019). "Impact of hajj on global health security". *Journal of Religion & Health 58*: 289–302

Porto-Arias, J.J., Lorenzo, T., Lamas, A., Regal, P., Cardelle-Cobas, A., & Cepeda, A. (2017). Food patterns and nutritional assessment in Galician university students. *Journal of Physiological Biochemistry*; 27 (2); 1–8.

Walch, A. & Nelson, R. (2010). The link between diet and health: *An exploratory study of adolescents Journal of consumer studies, (33). 190-19*5.

World Health organization (WHO, 2020). *Health security https://*www.who.int/health-topics/health-security/#tab=tab_1