Food Culture and Tertiary Education Students' Feeding Habits: Implications for Nutrition Education

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ABSTRACT

The study assessed food culture and tertiary education students' feeding habits and their implications for nutrition education. The study was prompted by the manner students eat fast food and other local delicacies on campus. Four research questions guided the study. The study adopted a descriptive design. The population of the study comprised all students in tertiary institutions in Delta State. The multistage sampling technique was involved in the study; thus, purposive, quota and random sampling techniques were used. There are five universities, three colleges of education, and two polytechnics in Delta State. From these institutions, one university (Delta State University, Agbor), one polytechnic (Delta State Polytechnique, Ogwashi-Uku), and one college of education (Federal College of Education {T}, Asaba) were purposively selected for the study. From each of the institutions, 100 students were selected through the accidental sampling technique. The instrument for data collection was a researcher's developed questionnaire titled; Food Culture, Students Feeding Habit and Nutrition Education Questionnaire (FCSFHNEQ). The instrument was a 34-item with a four-point rating. The instrument was validated by two experts while the reliability was established through a trial test and a consistency value of 0.81 was attained. 300 copies of the instrument were administered and all were returned. Descriptive statistics of mean and standard deviation were used for data analysis. The findings in the study revealed among others that; campus food culture affects the day-to-day meal intake of students and the general feeding habits of students as it determines what they eat, conditions the social situation of eateries in the campuses, and influences them to eat what they wish to eat without regards to health conditions. The study recommended among things that nutrition education should be integrated in education curricula at all levels and be made compulsory for all learners, since everyone, the young and the old eat food to survive.

INTRODUCTION

Every living creature depends on food for survival; whether solid or liquid food. However, the availability of food types varies from one human settlement to another due to several factors such as geography (weather conditions) and sometimes the human knowledge of the utilization of the land. These factors result in some food types and items associated with particular places of human settlements. The association of food types and items with particular human settlements is referred to as food culture. It is called food culture because the eating habits of such people are conditioned by the food types available (Lange, 2018).

The term food culture can better be explained than defined due to its complex nature. According to Jackson (2022), food culture involves ways and means to make, eat, and serve food. It also contains rituals and philosophies related to eating and its effects on the body. Religious beliefs are often also included in food culture as it defines some restrictions to certain group of people on what to eat. Food culture goes beyond its primary function of physical satisfaction and types available to include defining sociocultural class divisions, changing tastes in line with social statuses, and regional differences occasioned by food types and preparation (Jackson, 2022),

Food culture and eating habits are important elements of the way people interact with their environment and with others. They vary significantly among different cultures and are constantly changing over time, in

response to a variety of factors such as technology, economics, politics, and cultural mores (Saltzman & Zimmerman, 2017). Food culture and eating habits give a people a sense of identity as certain food types speaks a lotabout the lifestyle of the people with regards to spiritual beliefs and practices.

Some food cultures manifest through what is eaten when it is eaten, and how it is prepared and consumed. Eating patterns and customs often have a strong influence on the types of foods people select, how much they consume, and any other they may include when it comes to meals. For example, Murray (2010) stated that universally, religious groups such as the Christians, Jews, Hindus and Muslims abstain from eating such food items as pig, strangle meat of bird, beef, as the case may be, and other designated "unclean" foods. The abstinence and avoidance of such food items have cultural and religious undertones which could transcend their immediate environment as man is often times mobile.

Fasting is also an incredibly common practice in many religions that centres on specific meals, or times when food is not to be consumed for a short period. For instance, Muslims observe the holy month of Ramadan, during which individuals fast between sunrise and sunset, while Jews employ fasting on days of mourning, such as Yom Kippur (Murray, 2010). Such events, rituals, and activities determine the feeding habits of the people involved.

The influence of culture on feeding habits may be seen in the way certain foods are prepared or presented. For example, in some cultures, food is "plated" in a particular way or served in a particular way to promote respect. In other cultures, certain types of dishes or utensils are only used during special occasions, while in yet other cultures, the same dish may be served on a single platter for the entire family. Finally, cultural norms may affect the way people think about nutrition and health. In some cultures, nutrition and healthy eating may be viewed as essential components of well-being, while in other cultures, diet may be viewed more as a matter of personal choice and individual expression (Lange, 2018).

Food culture is also connected to the use of ingredients, recipes, preparation methods, and styles of eating. In Mexico, for example, meals often include freshly prepared ingredients, such as tortillas, cilantro, and chili peppers, while German cuisine is known for its use of potatoes, cabbage, and pork. (Malek, 2016). Food culture goes hand in hand with socializing and celebrating. Many countries have iconic dishes that find their way to the table during major holidays or special occasions, such as a Greek souvlaki feast during Easter or a traditional Thanksgiving dinner in the United States (Malek, 2016). However, the school environment is one place that brings different people from different cultural and religious backgrounds together for socialization and academic activities. The school environment seems to project a different cultural outlook as it accommodates multiple cultures. The cultural makeup of the school can, therefore, be called school culture. The school culture could also have an influence on the feeding habits of the members.

The physical and social environment in the school setting has a tremendous impact on the health behaviors of children and adolescents. School policies and practices influence the type of food offered in vending machines and the school cafeteria, the food served during the school day, and the methods used to educate children about nutrition (Golley et al., 2018). School nutrition programmas should be based on dietary recommendations, which provide guidance for balanced meals. To ensure the maximal effect of a school's efforts to foster healthy eating habits, there needs to be an increasing focus on children's motivations for making food decisions. Moreover, where possible, it is beneficial to involve parents in the process, so that healthy eating can be further promoted in students' home environments, beyond the school walls.

To promote healthy eating habits in a school environment, it is important to reduce access to unhealthy snacks and increase access to healthy snacks. An additional approach is to promote nutrition-focused activities and education within the classroom (Golley et al., 2018). This could include teaching nutrition and food preparation skills or offering tastings of new, healthier snacks. For example, students could be given the opportunity to sample fruit and vegetables and be provided with recipes for healthy meals. The way an individual gets and eats food is referred to as a feeding habit.

Feeding habits are the patterns in which human eats food. These patterns can be modified depending on the habitat and environmental variation. Just as different species of animals feed in distinct ways, so do people feed in different ways and food items. Some animals are herbivores, which typically only eat plants and grasses, carnivores or omnivores, which consume a variety of different foods ranging from other animals and plants, and scavengers, which feed on dead animals (National Geographic, 2019). Nonetheless, the type of food people eat, sometimes depends on the type of food available at the time and the environment in which he/she finds him/herself (Grigione, et al., 2017). As people leave their comfort zones to other places in search of better living conditions, their feeding habits can be altered. This is more common with students in tertiary institutions. Many students have the habit of skipping breakfast due to their intense timetables, which can have a major impact on student performance. Studies have found that students who eat breakfast are more attentive and perform better in class and on tests than those who do not eat breakfast (Anderson et al., 2002). Additionally, students that eat breakfast typically eat healthier during the rest of the day as they are less likely to snack on unhealthy foods throughout the day (Meyer & Pieczenik, 2003). Whether students eat breakfast or not the concern is on feeding habits; that is, what they eat and how they eat it. What students eat or do not eat cannot be outrightly detached from the availability of funds that account for the purchasing power as everyone in the school environment lives away from their parents. Thus, the financial strength or socioeconomic status of parents could determine the purchasing power of the

Socioeconomic status (SES) refers to the economic and social position of an individual or group within a society. It is typically measured by income, occupation, and educational attainment (Hay & Grant, 2017). SES also reflects access to social determinants such as housing, healthcare, transportation, and nutrition (United States Census Bureau, 2017). The highest SES is typically associated with higher levels of social mobility, educational attainment, and physical and mental health (Kerr, 2015). Low SES, in contrast, is associated with a wide range of negative outcomes in health, well-being, and educational achievement. These variables can affect the eating habit of children, particularly students.

Socioeconomic status has been found to have a significant impact on feeding habits. Studies have shown that individuals of lower socioeconomic status have poorer diets and are more likely to consume high-fat, high-calorie, and nutritionally incomplete diets than those of higher socioeconomic status (SES). Lower SES individuals tend to have access to fewer resources, which can make it more difficult to purchase healthier food options, or to have access to educational resources on nutrition (Pollitt et al., 1988; Gribble et al., 2008; Campbell et al., 2010). Additionally, lower SES individuals have been found to have lower intakes of essential vitamins and minerals compared to those of higher SES (Barefoot et al., 1993; Wai et al., 2005). Therefore, it is important for individuals of lower SES to have access to resources and education to help them access healthier food options. This could be largely dependent on the individual knowledge of the nutritional values of food.

Students and knowledge of nutrition can vary greatly. It is beneficial for young people to receive nutrition education to help them develop a healthy attitude towards food and sound nutrition habits. Nutrition education can provide young people with knowledge of the fundamental principles of nutrition, as well as the possible effects of poor choices on their health and overall well-being (Li, 2008). Nutrition education in schools can provide students with the tools to make healthier decisions when it comes to eating and to develop a well-rounded understanding of dietary needs. Nutrition education can help students achieve a balanced and varied diet that meets their nutritional needs, as well as sufficient levels of physical activity. Furthermore, students can learn how to read labels, evaluate portion sizes, and manage budgetary considerations when it comes to planning healthy meals and snacks (Groves, Hardey & Griffin, 2007). Nutrition education can also help to foster an overall healthier lifestyle, as students learn about the importance of proper nutrition for overall health and wellbeing. By providing students with sound nutrition knowledge, schools can help equip them with the skills and knowledge they can use for the rest of their lives.

Nutrition is an important topic for students to be aware of as it impacts the health and well-being of people throughout their lives. Good nutrition can help students have enough energy to be successful in their daily

activities, including studying (Nutrition Basics, 2020). Students should seek to learn about the principles of nutrition and the impact of dietary choices on overall health. Additionally, they should strive to develop the skills needed to make informed food choices and develop adequate dietary patterns. Knowing about nutrition can help students understand how the foods they eat affect their physical and mental well-being, helping them form the habits necessary to maintain healthy body weight and a balanced diet (Hodges, Krebs & Leip, 2018). In order to gain knowledge about nutrition, students should begin by understanding the basics of nutrition. These include learning about the food groups and understanding the importance of a balanced diet, which should include carbohydrates, proteins, fats, and vitamins and minerals. This, perhaps, is missing between students and what they eat; the purchasing power and choice of what they eat.

STATEMENT OF THE PROBLEM

Food is necessary for human survival and maintaining life and human activities. It is an activity shared by everyone all around the world. Due to its necessity, people go all out for it. However, while some people, in the process of searching and eating suffer from hunger, others suffer from lifestyle-related illnesses due to overnutrition; all depending on the choice of what to eat. Some of the problems that contribute to an individual's food choices include individual factors, such as knowledge, personal taste preference, mood, hunger level, health status, special diet requirements, ethnicity, and personal income. Poor nutrition can be caused by several factors, such as students' food (diet), infectious diseases, family food security, childcare patterns, health services, and environmental health. Nutrition problems of school students affect their physical and mental development, thereby affecting their education. Nutrition problems can arise from various factors that can range from malnutrition to irregular and excessive feeding. Various factors such as social-economic, genetic, cultural, environmental, level of education about nutrition, and family type affect students' nutrition quality and their habits. The outcome of feeding or eating habit can result in problems including multiple medications, social isolation/eating alone most of the time, oral/dental problems, difficulty in the preparation of meals, and being overweight or obese. Such experiences can affect students' academic activities as attendance, reading habit, and class participation can be affected; hence this study aimed to determine the influence of nutrition education on the feeding habit of students in tertiary education in Delta State.

Purpose of the Study

The study aimed to assess the influences of food culture on tertiary education students' feeding habits and the implications for nutrition education. Specifically, the study sought to determine;

1. The extent campus food culture influences the feeding habit of students in tertiary institutions.
2. Students' knowledge of food nutrition and their eating habits;
3. The implications of nutrition education for tertiary institutions students' feeding habits.

Research Questions

The following research questions guided the study;

1. To what extent do campus food culture influence students' feeding habits?
2. To what extent does the socioeconomic status of students influence their feeding habits?
3. What knowledge of food nutrition do students in tertiary institutions possess that influences their feeding habits?
4. What are the implications of nutrition education for tertiary institutions students' feeding habits?

METHOD

This study examined the influences of food culture on tertiary education students' feeding habits and the implications for nutrition education. The study adopted a descriptive survey design. The population for this

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study comprised all students in tertiary institutions in Delta State. The multistage sampling technique was involved in the study; thus, purposive, quota and random sampling techniques were used. One university (Delta State University, Agbor), one polytechnic (Delta State Polytechnique, Ogwashi-Uku), and one college of education (Federal College of Education {T}, Asaba) were purposively selected for the study. From each of the institutions, 100 students were selected through the accidental sampling technique. The selection was done basically at the restaurants within the institutions. Thus, 300 students were selected and used in the study. The instrument used for data collection was a researcher's developed questionnaire titled; Food Culture, Students Feeding Habit and Nutrition Education Questionnaire (FCSFHNEQ). It was a 19-item instrument with a four-point rating scale. The instrument was validated by two experts while the reliability was established through a trial test and a consistency value of 0.81 was attained. 300 copies of the instrument were administered and all were returned. Descriptive statistics of mean and standard deviation were used for data analysis. A t-test statistical tool was used for test of the hypotheses.

RESULTS

Research Question 1: To what extent does campus food culture influence students' feeding habits?

Table 1: Frequency Distribution, Mean Scores, and Standard Deviation of Respondents Responses on the extent campus food culture influence Students' Feeding Habits

S/N	Questionnaire Item	VHE	HE	LE	VLE	X	SD	Decision
	Campus food culture:							
1	affect your day-to-day meals	101	93	51	55	2.80	1.10	HE
2	Makes students eat the same items regularly	54	65	87	95	2.26	1.09	LE
3	Makes it difficult to make healthy meals accessible	53	72	103	84	2.32	1.06	LE
4	Conditions the social situations at campus eateries and what to eat	96	81	73	21	2.74	1.08	HE
5	Conditions the prices of campus food and what to eat	99	87	69	61	2.75	1.12	HE
6	Determines the marketing of food types available to eat	104	75	90	36	2.82	1.04	HE
7	Limits one's choice of what to eat	97	80	73	27	2.76	1.07	HE
8	Makes students eat freely without regard to health conditions	100	79	59	61	2.73	1.13	HE
	Grand Mean/Standard Deviation					2.64	1.08	HE

Key: For Objective Discussion, all VHE- Very high extent and HE – High extent were Treated as High Extent While all LE – Low extent and VLE – Very low extent were treated as Low Extent. Thus, range of the mean scores of 2.50 and above were grouped as HE-High extent While all mean scores less than 2.50 were grouped as LE-Low extent

Table 1 reveals that respondents agree to a high extent with items 1 (2.80); 4(2.74); 5 (2.75); 6 (2.82); 7 (2.76) and 8 (2.73). The mean values are significantly higher than 2.50 the criterion mean. However, respondents agreed with items 2 (2.26) and 3 (2.32) to a low extent as the mean values for both items are significantly less than 2.50 the criterion mean. The table reveals a grand mean of 2.64 and a Standard deviation of 1.08. The result reveals that campus food culture affects the day-to-day meal intake of students, determines what they eat, conditions the social situation of eateries in the campuses, conditions the prices of

food, determine the food marketed in campuses, limits what they eat and eat what they wish to eat without regards to health conditions. It also reveals that campus food culture does not make students eat the same food items regularly and make it difficult to access healthy meals.

Research Question 2: To what extent does the socioeconomic status of students influence their feeding habits?

Table 2: Frequency Distribution, Mean Scores, and Standard Deviation of Respondents' Responses on the Extent Socioeconomic Status of Students Influence Students' Feeding Habits

S/N	Questionnaire Item	VHE	HE	LE	VLE	X	SD	Decision
	Students on campuses;							
9	Eat food according to their socioeconomic status	101	93	51	55	2.79	1.07	HE
10	Feel limited in the types of foods they access	54	65	87	95	2.26	1.09	LE
11	from low socioeconomic status have less nutritious diets than those with higher socioeconomic status	53	72	103	84	2.35	1.15	LE
12	from higher socioeconomic backgrounds are more likely to eat healthier than those in lower socioeconomic	96	81	73	21	2.29	1.07	LE
13	eating habits are shaped by your socioeconomic status	99	87	69	61	2.60	1.14	HE
14	feel that there are particular food items or meal choices that are not meant for those from low SEB	104	75	90	36	1.98	0.99	LE
15	from higher SEB have more regular meals than those from low SEB	97	80	73	27	3.00	1.00	HE
16	Access and purchase a variety of nutritious food items regardless of your socioeconomic status	100	79	59	61	2.28	1.13	LE
17	food choices or the types are determined by their SEB	104	73	76	30	2.83	1.02	HE
	Grand Mean/Standard Deviation					2.48	1.07	LE

Key: VHE- Very high extent; HE – High extent; LE – Low extent and VLE – Very low extent

Table 2 reveals that respondents agreed to a high extent with items 9 (2.76); 13 (2.60); 15 (3.00) and 17 (2.83) as the values are significantly higher than the 2.50 criterion mean. Items 10 (2.26); 11 (2.35); 12 (2.29); 14 (1.98) and 16 (2.28) are agreed with to a low extent with mean values less than 2.50 criterion mean. The grand mean score for the items is 2.48 with a standard deviation of 1.07. The result from the table reveals that students on campuses eat food according to SEB, that students' SEB shape their feeding habits; students from high SEB eat meals regularly than those from low SEB and that student; food choices and types are determined by their SEB.

Research Question 3: What level of knowledge of food nutrition do students in tertiary institutions possess that influences their feeding habits?

Table 3: Frequency Distribution, Mean Scores and Standard Deviation of Respondents' Responses on the Level Knowledge of Food Nutrition Students in Tertiary Institutions Possess That Influences Their Feeding Habits

S/N	Questionnaire Item	VHL	HL	LL	VLL	X	SD	Decision
	Students on campuses;							
18	Have adequate information regarding the nutritional content of the food you eat	56	51	96	100	2.21	1.09	L L
19	Change their eating habits based on nutritional knowledge	44	65	97	95	2.19	1.04	LL
20	Are aware of the calorie content in the food they eat	53	62	91	84	2.29	1.02	LL
21	prioritize health in the food they choose to eat	21	61	93	96	2.08	0.95	LL
22	actively look for food items with beneficial nutrients	61	65	69	94	2.32	1.13	LL
23	Have knowledge of the sugar, sodium, and fat content of the meals they eat	104	75	90	36	2.15	1.03	LL
24	Are knowledgeable about the consequences of what they eat	97	80	73	27	2.38	1.14	LL
25	Choose what they eat based on fibre, protein, and carbohydrates	43	69	82	89	2.24	1.05	LL
26	Are familiar with the current dietary recommendations for a balanced diet	52	67	79	94	2.29	1.12	LL
	Grand Mean/Standard Deviation					**2.23**	**1.06**	

Key: VHE- Very high extent; HE – High extent; LE – Low extent and VLE – Very low extent

Table 3 reveals that respondents express in all the items that students in campuses have low level of nutrition knowledge and that their feeding habits are not influenced by the level of nutrition knowledge they have. This is revealed by the mean scores of the items as all are significantly less than 2.50 criterion mean. The result reveals that students in campuses have low level of information on nutritional content of food they eat, do not change their eating habit because of nutritional knowledge of what they eat, have low level of awareness of the calorie content of what they eat, do not prioritize health in what they eat and do not have high level of knowledge of dietary recommendation of balanced diet.

Research Question 4: What are the implications of nutrition education for tertiary institutions students' feeding habits?

Table 2: Frequency Distribution, Mean Scores, and Standard Deviation of Respondents' Responses on the Implications of Nutrition Education for Tertiary Institutions Students' Feeding Habits

S/N	Questionnaire Item	SA	A	D	SD	X	SD	Decision
	Nutrition education will help students;							
27	make healthier choices when ordering meals irrespective of their socioeconomic background	52	69	110	92	2.26	1.08	Disagree
28	Make them purchase food based on nutritional impact	41	73	91	99	2.20	1.03	Disagree

29	Make students make changes in their diet	84	97	57	71	2.64	1.13	Agree
30	Make students feel more knowledgeable and confident about making healthy eating choices irrespective of their socioeconomic background	41	71	93	98	2.19	1.03	Disagree
31	Gives students the ability to recognize and select healthy meals on campus	102	78	66	57	2.76	1.11	Agree
32	Helps students understand the importance of balanced nutrition	114	90	75	36	2.89	1.04	Agree
33	Helps students moderate their food intake	27	67	99	75	2.23	1.00	Disagree
	Grand Mean/Standard Deviation					**2.45**	**1.06**	**Disagree**

Key: VHE- Very high extent; HE – High extent; LE – Low extent and VLE – Very low extent

Table 4 reveals that the respondents disagree with all the items except items 31 (2.76) and 32 (2.89) with mean score significantly less 20.50 criterion mean. the result reveals that knowledge in nutrition education could help students make healthier choices of what to eat, make purchase based on nutritional impact, change diet, understand the importance of balance diet and help students moderate their food intake among others.

DISCUSSION OF FINDINGS

Finding from the study revealed that, like other social groups, tertiary institutions have food culture. The findings also revealed that campus food culture affects the day-to-day meal intake of students and the general feeding habits of students as it determines what they eat, conditions the social situation of eateries in the campuses, and influences them to eat what they wish to eat without regards to health conditions. This finding aligns with the position of Murray (2010) who stated that culture and religious affinities and other social communities including the school culture, influence feeding habit of people.

CONCLUSION

Man, in most cases, is a product of what he eats or fails to eat in terms of health and total well-being. This becomes obvious during the developing stages of the individuals as all the nutrients needed for the building of the body is food in food. However, while some food types are good for some people, the same food type could be dangerous to someone else. This is largely due to the body chemistry. But sometimes, people are forced to eat what they see or available in particular environment. This makes food culture very important.

The school environment is a community of its own with relatively redefined lifestyle. Students tend to live in line with the school culture and adjust to the reality on ground including what they eat and how they feed. The food types and feeding habits have become of great concern to stakeholders of the education sector due to health complications associated with food types and feeding habits. The concerns, perhaps resulted in the introduction of nutrition education. There is the need to equip students with nutritional knowledge so that they become well informed about what they eat, when to eat and how to eat irrespective of the socioeconomic background of those involved. This is because, the quality of food nutrients is not in the cost of the food item, the quantity nor the cultural environment but in the knowledge of what, when and how to eat the food element. There is no better way to achieve this knowledge than teaching of nutrition education.

RECOMMENDATIONS

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

1. Nutrition education should be integrated in education curricula at all levels and be made compulsory for all learners, since everyone, the young and the old eat food to survive.

2. Food vendors in tertiary institutions should be regularly engaged in seminars on food nutrition, preparation and preservation as these play a lot in the meals of students and their health.
3. Management of tertiary institutions should adopt strategies for food price control to enable those from low socioeconomic background have access to quality food types and feeding habits.
4. Students should make effort to have ideas about their health conditions and sensitivities so that they will not stumble into food types that could be harmful to themselves.

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