

ORIGINAL ARTICLE

Sustainable nutrition: factors influencing fruits and vegetables consumption among college students of forestry, Ibadan, Nigeria

¹Adebayo, O. A., ¹Akinola, O. O., ²Ademiluyi, I. O., ³Fingesi, U. I.

¹Federal College of Forestry, Forestry Research Institute of Nigeria, Ibadan, Nigeria

²Federal College of Forestry, Forestry Research Institute of Nigeria, Jos, Nigeria

³Federal College of Wildlife Management, Forestry Research Institute of Nigeria, New Bussa, Nigeria

ABSTRACT

Fruits and vegetables are essential components of a balanced diet, providing vital nutrients that support overall health and disease prevention. However, consumption among college students remains below recommended levels due to various socio-economic, environmental, and behavioral factors. This study assessed the factors influencing fruit and vegetable consumption among students at the Federal College of Forestry, Ibadan, Nigeria. A descriptive survey research design was employed, with data collected from 183 students using a structured questionnaire. Descriptive statistics were used to analyze socio-economic characteristics, dietary habits, and perceived factors affecting consumption patterns. Results showed that the average monthly student allowance was ₦16,950, with ₦2,398.59 (14.15%) spent on fruits and vegetables. The most consumed fruits included oranges (90.2%) and bananas (87.4%), while commonly consumed vegetables were tomatoes (84.7%) and onions (83.1%). Key factors influencing consumption included nutritional knowledge, taste preference, financial constraints, and availability. Despite awareness of the health benefits, affordability and accessibility remained major barriers. The study concludes that enhancing students' access to affordable fresh produce and promoting dietary education can improve consumption patterns. Findings provide insights into developing strategies to promote sustainable nutrition among college students, contributing to improved health and food security.

Keywords: Sustainable Nutrition, Consumption, Fruits, Vegetables, Sustainability.

***Corresponding Author**

ADEBAYO, OLAOLUWA AYODEJI, Forestry Research Institute of Nigeria, Federal College of Forestry, Department of Agribusiness Management, PMB 5087, Jericho Hill, Ibadan, Oyo State, Nigeria; oriobatemy@gmail.com

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INTRODUCTION

Nutrition plays a crucial role in maintaining health and well-being, particularly among young adults such as college students, who require a balanced diet for cognitive function, academic performance and overall development. Fruits and vegetables are essential components of a healthy diet, providing vitamins, minerals, dietary fiber and bioactive compounds that support immune function and reduce the risk of chronic diseases, including obesity, diabetes, cardiovascular diseases and certain cancers [1, 27]. Despite these benefits, studies have shown that fruit and vegetable consumption among students is often below the recommended daily intake due to various socio-economic, environmental and behavioral factors [2, 9].

In Nigeria, dietary habits are influenced by cultural practices, income levels, food availability and knowledge of nutrition. While urbanization and globalization have led to an increased preference for processed and convenience foods, the intake of fresh produce remains low among young adults [3, 14]. Forestry college students, in particular, may face unique challenges regarding food accessibility and affordability, given the specialized nature of their academic setting, which often includes fieldwork and long hours of study. Understanding the factors influencing their fruit and vegetable consumption is essential in promoting sustainable nutrition and improving their health outcomes.

Previous studies have examined determinants of dietary behaviors among students, identifying factors such as food preferences, peer influence, nutritional knowledge and financial constraints as significant contributors [4, 27]. However, limited research has been conducted on students in forestry colleges, where environmental awareness and exposure to agricultural and ecological studies may play a role in shaping dietary choices. Given the importance of sustainable nutrition in ensuring food security and environmental conservation, there is a need to assess the level of fruit and vegetable consumption among forestry college students and the key determinants affecting their dietary habits.

Thus, this study evaluated the factors influencing fruit and vegetable consumption among students at a forestry college in Ibadan, Nigeria. It examined the socio-economic characteristics of students and identified the types of fruits and vegetables available and consumed. Furthermore, the study assessed students' knowledge of the benefits of fruit and vegetable consumption, explored the perceived factors influencing their dietary choices and investigated the health

benefits and disease prevention associated with regular intake. The findings provided valuable insights into sustainable nutrition among young adults in academic institutions and informed policy interventions aimed at promoting healthier eating behaviors.

MATERIALS AND METHODS

The study employed a descriptive survey research design, which enables the systematic collection of quantitative data from a specific population to understand patterns and influencing factors. This design was chosen to effectively capture the factors influencing fruit and vegetable consumption among students and to analyze their dietary behaviors, socio-economic characteristics and knowledge levels.

The study population comprised all students enrolled in the National Diploma (ND) and Higher National Diploma (HND) programs at the Federal College of Forestry, Ibadan. The study focused on students because they represent young adults who are at a critical stage of developing lifelong dietary habits, which can have long-term health implications.

A multistage sampling technique was employed to select respondents from the study population. The procedure consisted of the following stages:

1. Stage 1 (Institution Selection): The Federal College of Forestry, Ibadan, was purposively selected because it is the only forestry-based tertiary institution in South-West Nigeria.
2. Stage 2 (Department Selection): Four (4) out of the seven (7) academic departments in the college were purposively selected. The selection was based on student population size to ensure adequate representation.
3. Stage 3 (Student Selection): A disproportionate simple random sampling technique was used to select 183 students from a total of 237 students across the chosen departments. This method was adopted to account for variations in student population across the departments while ensuring a sufficient number of respondents for statistical analysis.

Data for this study were collected using a structured questionnaire designed to obtain relevant information on students' fruit and vegetable consumption patterns and the factors influencing their dietary choices. The questionnaire was divided into sections covering respondents' personal characteristics, the types of fruits and vegetables consumed, the availability and accessibility of fresh produce and students' knowledge and perceptions regarding the benefits of fruit and vegetable consumption. The instrument also included questions on socio-economic constraints, environmental awareness and dietary habits. The questionnaire was administered to students in selected departments through face-to-face interactions, ensuring clarity and completeness of responses. In addition to

primary data collection, secondary data were obtained from academic journals, government reports, textbooks and reputable online sources to provide context and validate findings from the study.

The study examined key variables to understand the factors influencing fruit and vegetable consumption among forestry college students. The study examined the diversity of fruit and vegetable consumption by asking respondents how often they consumed various fruits and vegetables per week. Factors such as age, gender, academic level and department were considered to understand variations in dietary habits. Additionally, economic influences, including students' monthly income and the affordability of fruits and vegetables, were analyzed to assess the impact of financial constraints on their dietary choices. Additionally, nutritional knowledge and awareness were measured by assessing students' understanding of the health benefits of fruit and vegetable consumption and their familiarity with dietary guidelines. Other variables included environmental and institutional factors, such as the availability of fruits and vegetables within the college environment, cultural influences and peer pressure, all of which were assessed using Likert-scale responses and multiple-choice questions. The collected data were analyzed using descriptive statistical methods to summarize the characteristics of respondents and identify key patterns in fruit and vegetable consumption. The percentage distributions were used to present demographic characteristics and the availability of fruits and vegetables in the study area. The mean scores of students' knowledge levels and perceptions were calculated to assess their awareness of sustainable nutrition and the benefits of fruit and vegetable consumption. Additionally, cross-tabulations were performed to explore relationships between variables such as economic constraints, academic discipline and dietary habits. The results from the analysis provided insights into the key determinants influencing students' fruit and vegetable consumption, which can be used to inform policy recommendations and intervention strategies aimed at promoting sustainable nutrition in tertiary institutions.

This study adhered to ethical principles to ensure the rights and well-being of participants were protected throughout the research process. Key ethical considerations included obtaining informed consent, maintaining participant confidentiality and ensuring voluntary participation. Prior to data collection, participants were informed about the study's objectives, procedures, potential risks and benefits.

They were given the option to provide informed consent voluntarily, with the assurance that they could withdraw at any stage without repercussions. To maintain confidentiality, personal identifiers such as names or student identification numbers were not collected. Instead, responses were anonymized and stored securely, ensuring that no individual could be traced from the data. Additionally, data was used strictly for academic purposes and was not shared with unauthorized individuals or institutions. Ethical approval for this study was obtained from the Research Ethics Committee of the Federal College of Forestry, Ibadan, in accordance with the National Code of Health Research Ethics guidelines issued by the Nigerian National Health Research Ethics Committee. Descriptive statistics were used to analyze socio-economic characteristics, dietary habits, and perceived factors affecting consumption patterns. By taking these measures, the study upheld the principles of respect, beneficence and justice, safeguarding the rights and privacy of all participants. By employing this structured methodology, the study effectively examined the factors influencing fruit and vegetable consumption among forestry college students in Ibadan. The findings will contribute to developing strategies that promote sustainable nutrition, healthy eating habits and food security within academic institutions.

RESULTS

Socio-Economic Characteristics of Respondents

The findings of this study provide a detailed analysis of the socio-economic characteristics of forestry college students and their influence on fruit and vegetable consumption. Understanding these characteristics is crucial for assessing students' dietary behaviors and the factors that contribute to sustainable nutrition.

Table 1 presents the socio-economic characteristics of the respondents, highlighting key factors such as age, monthly allowance, food expenditure, amount spent on fruits and vegetables, family size, sex, marital status and class level. The results indicate that the majority of the students (80.3%) were aged 25 years or younger, with an average age of 22.44 years. This suggests that most respondents are in their early adulthood, a critical period for establishing lifelong dietary habits. Previous studies by [5] and [6] have shown that young adults often exhibit erratic dietary behaviors due to financial and environmental constraints, which may impact their fruit and vegetable consumption patterns.

In terms of financial status, the mean monthly allowance was ₦16,950, with 62.4% of the students receiving ₦20,000 or less. This limited financial capacity could influence students' ability to afford nutrient-rich foods, including fruits and vegetables.

Furthermore, the mean amount spent on food per month was ₦10,469.94, with 53.0% of respondents spending ₦10,000 or less on food. This relatively low food expenditure suggests potential financial constraints that may limit students' access to a diverse range of fruits and vegetables, supporting findings from [7] that economic limitations affect dietary choices among students in Nigerian tertiary institutions.

The study also found that the average amount spent on fruits and vegetables was ₦2,398.59, with 42.7% spending ₦2,000 or less, while 57.3% spent above ₦2,000 monthly. This indicates a low prioritization of fruit and vegetable consumption compared to total food expenditure, reinforcing concerns about inadequate dietary intake among students. This finding aligns with studies by [8], which reported that low-income students are less likely to consume sufficient fruits and vegetables due to affordability issues.

Regarding family size, the results showed that 77.9% of the students came from households with more than five members, with a mean family size of six persons. Large family sizes may contribute to financial strain, affecting students' disposable income and dietary choices [9]. The gender distribution was fairly balanced, with 49.2% males and 50.8% females, suggesting that findings on fruit and vegetable consumption are representative of both sexes. Additionally, 98.9% of the respondents were unmarried, which implies that their food choices are largely self-determined rather than influenced by household or spousal decisions.

The distribution of respondents by academic level indicates that 32.2% were in HND1, followed by ND2 (29.0%), HND2 (21.9%) and ND1 (16.9%). These variations in academic levels could influence dietary habits, as senior students (HND1 and HND2) may have better knowledge of nutrition and greater financial independence than their junior counterparts.

Availability and Consumption of Fruits and Vegetables

The availability and consumption of fruits and vegetables play a significant role in shaping students' dietary habits and overall nutrition. Understanding the accessibility of these food items helps assess the extent to which students can maintain a balanced diet rich in essential vitamins and minerals. The findings presented in Table 2 and Table 3 highlight the availability of various fruits and vegetables consumed by forestry college students in Ibadan, Nigeria. The results in Table 2 show that the most commonly available fruits among students include oranges (90.2%),

bananas (87.4%), pawpaw (85.8%), watermelon (79.8%) and pineapple (76.5%). These findings suggest that students have relatively easy access to common tropical fruits, which are widely cultivated and affordable in Nigeria. The high availability of oranges, bananas and pawpaw aligns with findings from [9], who reported that these fruits are among the most frequently consumed by Nigerian students due to their seasonal abundance and affordability.

Other fruits such as mango (75.4%), tangerine (75.4%) and coconut (72.1%) were also widely available, indicating that students have access to a variety of fruits, particularly during their peak seasons. However, the availability of certain fruits was notably lower. For instance, avocado (30.1%), kiwi (26.8%) and grapes (42.1%) had the lowest availability rates, which may be attributed to their higher market prices and limited local production [10]. This is consistent with [11], who found that imported or less commonly grown fruits tend to be consumed less frequently among students due to cost and availability constraints.

Furthermore, fruits such as kola nut (49.7%), guava (48.1%), bitter kola (45.4%), pear (44.8%) and walnut (44.8%) were available to less than half of the students. This suggests that while students may occasionally consume these fruits, they are not staple items in their diets. The findings highlight the need for strategies to enhance the affordability and accessibility of nutrient-rich fruits, particularly those that are rich in fiber, antioxidants and essential vitamins [12].

The availability of vegetables is another key determinant of students' dietary diversity. As shown in Table 3, the most commonly available vegetables include tomato (84.7%), onion (83.1%), *Corchorus olitorius* (Ewedu) (83.1%), carrot (80.3%) and fresh pepper (80.3%). These vegetables are frequently used in traditional Nigerian meals and are relatively affordable, making them accessible to students. The high availability of Ewedu and *Amaranthus spinosus* (Efo Tete) (79.2%) is consistent with findings from [29], who reported that leafy vegetables are widely consumed in Nigerian households due to their nutritional benefits and affordability.

Other vegetables such as waterleaf (77.0%), *Telfairia occidentalis* (Ugu) (77.0%) and okra (73.8%) were also readily available, reflecting their importance in local diets. However, vegetables such as cabbage (68.3%), bitter leaf (67.8%), *Celosia argentea* (Soko) (58.5%) and spinach (56.8%) were slightly less available, which may be due to seasonal variations and pricing. The relatively low availability of *Hibiscus sabdariffa* (Sobo) (41.5%) and *Adansonia digitata* (Baobab leaves) (31.7%) suggests that students may not frequently include these nutrient-rich vegetables in their diets, possibly due

to a lack of awareness or preference.

Knowledge Associated with Fruits and Vegetables Consumption

Knowledge of the nutritional benefits of fruits and vegetables plays a crucial role in influencing consumption patterns among students. As shown in Figure 1, the students demonstrated a high level of awareness regarding the health benefits of consuming fruits and vegetables. The results reveal that the respondents strongly agreed that fruits and vegetables are abundant in minerals (Mean = 4.65) and serve as protective foods (Mean = 4.64). These findings align with the study by [13], which reported that Nigerian students generally recognize the essential role of fruits and vegetables in disease prevention and overall well-being. The high awareness level suggests that students understand the importance of including these food items in their daily diet.

Furthermore, students agreed that fruits and vegetables are rich in fiber (Mean = 4.45), beneficial for weight loss/control (Mean = 4.44) and abundant in vitamins (Mean = 4.43). These results are consistent with the findings of [14], who noted that dietary fiber and vitamins in fruits and vegetables contribute to digestive health, weight management and improved immunity among young adults. However, despite acknowledging the health benefits, previous studies have indicated that knowledge does not always translate into increased consumption, as affordability and accessibility often play significant roles in dietary choices [15].

Additionally, the respondents recognized that fruits and vegetables are an essential part of a balanced diet (Mean = 4.24) and are abundant in antioxidants (Mean = 4.20). Antioxidants help protect the body from oxidative stress and reduce the risk of chronic diseases such as cardiovascular disorders and diabetes. This awareness aligns with research by [16], which emphasized that well-informed students are more likely to adopt healthier eating habits. However, knowledge alone is not always sufficient to drive consumption behaviors, as external factors such as taste preferences, convenience and social influences also determine dietary patterns [17].

These findings indicate that while students possess substantial knowledge about the nutritional benefits of fruits and vegetables, additional efforts are required to translate knowledge into practice. Educational campaigns and institutional interventions could help bridge the gap between awareness and actual consumption by promoting

affordable and accessible fruit and vegetable options within the school environment. Moreover, incorporating nutrition education into college curricula may further reinforce healthy eating behaviors.

Perceived Factors Influencing Fruits and Vegetables Consumption

The perceived factors influencing fruits and vegetables consumption among forestry college students in Ibadan are presented in Table 4. The results reveal that nutritional benefits (Mean = 4.60) and taste (Mean = 4.54) were the most significant factors strongly influencing students' consumption of fruits and vegetables. This aligns with previous studies as demonstrated in [18] that highlight the importance of health consciousness and sensory appeal in shaping dietary habits among young adults. The strong agreement on these factors suggests that students are aware of the health advantages of fruits and vegetables and find them palatable, which is a positive indicator for promoting sustainable nutrition.

Other important factors included likeness (Mean = 4.47), financial cost (Mean = 4.30) and health condition (Mean = 4.23). These findings suggest that personal preference and affordability significantly influence consumption patterns. Similar studies according to [19] and [20] have also identified cost as a limiting factor, as students with limited financial resources may prioritize cheaper, less nutritious food options over fruits and vegetables. This highlights the need for institutional policies that promote access to affordable and fresh produce within campus environments.

Availability also plays a crucial role in determining consumption frequency. The study found that availability at home (Mean = 4.21) and availability in school (Mean = 4.14) were significant factors influencing students' fruit and vegetable intake. These findings align with previous research of [21], which suggests that ease of access to fresh produce positively impacts dietary choices. Institutions can leverage this insight by encouraging on-campus farming initiatives, partnerships with local farmers and the inclusion of fruits and vegetables in cafeteria meals to enhance accessibility.

Other factors, such as appearance (Mean = 4.14), convenience (Mean = 4.10) and seasonality (Mean = 4.08), also played a role in influencing students' consumption. The relatively lower mean scores of texture (Mean = 3.77), information from family (Mean = 3.58) and information from friends (Mean = 3.47) suggest that social influences had a weaker impact on students' fruit and vegetable consumption choices. This contrasts with findings from studies in Western contexts [22], where peer influence and social media play a larger role in shaping food

habits. The undecided response regarding information from friends indicates that peer-driven nutrition awareness campaigns may not yet be widespread among forestry college students.

Perceived Diseases Protected by Fruits and Vegetables Consumption

The findings presented in Figure 2 indicate that forestry college students in Ibadan perceive fruits and vegetables consumption as beneficial in preventing a variety of non-communicable diseases (NCDs). The highest-rated perceived health benefit was diabetes prevention (Mean = 4.30), followed closely by hypertension (Mean = 4.28) and heart diseases (Mean = 4.23). These results suggest that students are aware of the role of dietary habits in managing metabolic and cardiovascular health conditions, which aligns with global health recommendations emphasizing fruits and vegetables as crucial for blood sugar regulation and heart health [23].

The recognition of obesity prevention (Mean = 4.17) as a key benefit aligns with studies such as [24], which reported that high fruit and vegetable intake is associated with lower body mass index (BMI) and reduced obesity risks among university students in Nigeria. Fruits and vegetables are known to be low in calories and high in fiber, which enhances satiety and reduces excessive calorie intake, thereby promoting weight control [25]. This highlights the importance of nutrition education and behavior change interventions in promoting sustainable healthy eating habits among students.

Additionally, cancer prevention (Mean = 4.13) was acknowledged as a significant health benefit, reflecting scientific findings that support the role of antioxidants, vitamins and phytochemicals in reducing the risk of cancer [26]. The slightly lower perception of stroke prevention (Mean = 3.99) suggests that students may have less awareness of the link between diet and stroke risk reduction, despite evidence showing that higher fruit and vegetable consumption is associated with lower blood pressure and improved vascular health [27].

DISCUSSION

The findings of this study highlight important implications for sustainable nutrition among forestry college students. With most respondents in their early adulthood, this stage presents a crucial opportunity to establish lifelong healthy dietary habits. However, financial constraints significantly limit students' access to nutrient-rich foods, including fruits and vegetables, leading to low prioritization of their

consumption [12]. This emphasizes the need for targeted interventions such as subsidized healthy food programs and campus-based nutrition education to encourage balanced diets. Additionally, the prevalence of large family sizes may contribute to financial strain, further influencing students' dietary choices. The balanced gender distribution ensures that interventions remain inclusive, while variations in academic levels suggest the importance of tailored awareness programs, particularly for junior students who may have less nutritional knowledge and financial independence. Addressing these socio-economic barriers through policy support, financial aid and institutional initiatives can promote sustainable nutrition, enhance student well-being and encourage healthier long-term dietary habits [14].

While students generally have access to a variety of fruits and vegetables, consumption patterns are influenced by availability, affordability and cultural preferences. The high availability of common fruits and vegetables suggests that students can maintain a reasonably balanced diet [21]. However, the lower consumption of nutrient-rich options such as avocados, walnuts, baobab leaves and spinach may result in nutritional gaps. This supports the argument by [28] that cost, convenience and early dietary habits determine students' fruit and vegetable consumption. To address this, nutrition education programs should emphasize the health benefits of underutilized fruits and vegetables. Additionally, policymakers and educational institutions should implement strategies to increase market accessibility for diverse fruit and vegetable options, ensuring that students have the opportunity to make healthier dietary choices [30].

The study also revealed a high level of knowledge among students regarding the health benefits of fruits and vegetables, particularly in disease prevention, weight management and overall well-being. However, knowledge alone does not always translate into consistent consumption. The affordability and accessibility of fresh produce remain significant barriers that prevent students from incorporating these essential foods into their daily diets. This emphasizes the need for institutional policies that support affordable food pricing, create an enabling environment for healthy food choices and integrate sustainable nutrition education into the academic curriculum. Promoting campus-wide healthy eating campaigns can further reinforce positive dietary habits and encourage students to make informed food choices [29].

Institutional support in promoting sustainable food systems is crucial for enhancing students' access to nutritious foods. The Federal College of Forestry, Ibadan, can take a proactive role by establishing fruit and vegetable gardens within the

institution, providing students with hands-on experience in food production while ensuring a steady supply of fresh produce. Such initiatives can also foster agro-entrepreneurship, empowering students to cultivate and distribute fresh fruits and vegetables. Beyond improving food accessibility, this approach aligns with broader sustainability goals by promoting self-sufficiency and environmentally responsible agricultural practices within the school community [18].

Sustainable nutrition also involves reducing food waste and encouraging environmentally friendly food choices [19]. Students should be encouraged to buy locally grown and seasonal produce, which not only supports local farmers but also minimizes the carbon footprint associated with food transportation. Additionally, reducing dependence on processed foods and adopting mindful consumption habits can contribute to both personal health and environmental sustainability. Educational campaigns and institutional policies should emphasize these aspects of sustainable nutrition, ensuring that students develop habits that support both their well-being and the planet.

To further encourage sustainable dietary habits, institutions should implement subsidized food programs, enhance food supply chains to reduce costs and create supportive food environments in both households and school cafeterias. Seasonal variations in fruit and vegetable availability highlight the need for sustainable agricultural practices that ensure year-round access to fresh produce. Encouraging students to participate in school-based horticulture, urban farming and agricultural cooperatives can provide practical solutions to seasonal food shortages while promoting long-term food security [10]. Additionally, leveraging digital platforms for nutrition education and awareness campaigns can help reinforce positive dietary behaviors among students.

Finally, the findings emphasize the importance of integrating fruit and vegetable consumption into public health interventions, particularly in preventing chronic diseases. While students recognize the protective role of fruits and vegetables in maintaining good health, actual consumption patterns must align with this knowledge. Institutions should reinforce nutrition education programs, incorporate more fruits and vegetables into school meal plans and encourage lifestyle modifications that support healthy eating. Since stroke prevention was the least recognized benefit among students, targeted awareness campaigns on the relationship between diet and cardiovascular health may be necessary to address this knowledge gap. By implementing these interventions,

educational institutions can create an environment where sustainable nutrition is prioritized, ultimately improving students' health outcomes and fostering long-term well-being.

Conclusion and Recommendation

The findings of this study highlight that the socio-economic characteristics of students at the Federal College of Forestry, Ibadan, significantly influence their ability to access and consume fruits and vegetables. Financial constraints, accessibility issues and food preferences were identified as key factors affecting students' dietary choices. While students demonstrated a high level of knowledge regarding the nutritional benefits of fruits and vegetables, this awareness did not always translate into consistent consumption patterns due to affordability and availability challenges. Addressing these constraints is critical to ensuring that students meet their dietary requirements for optimal health and academic performance.

Furthermore, ensuring the consistent availability of a diverse range of fruits and vegetables is essential for promoting healthy eating habits and preventing nutrition-related deficiencies. Economic and logistical barriers, such as high food costs and limited access to fresh produce, must be tackled to create a sustainable food system that supports higher consumption of nutrient-dense foods. Without targeted interventions, students may continue to struggle with maintaining a balanced diet, which could impact their well-being and academic outcomes.

Additionally, the study emphasizes the need for policy-driven strategies that enhance students' access to affordable and nutritious foods. Despite recognizing the protective role of fruits and vegetables in disease prevention, weight management and overall well-being, students' ability to make healthier dietary choices remains limited by external factors. This highlights the need for institutional and governmental efforts to create an enabling environment that facilitates sustainable nutrition practices among students.

To address these challenges, a multi-faceted approach is required, integrating affordability, accessibility, convenience and education to support sustainable nutrition among students. The following recommendations are proposed:

- 1) **Subsidized Meal Programs:** Educational institutions should implement subsidized meal plans that include a variety of fresh fruits and vegetables. These programs can be designed to specifically support students from low-income backgrounds, ensuring they have access to nutrient-rich foods without financial strain.
- 2) **Campus-Based Agricultural Initiatives:** Establishing fruit and vegetable gardens within colleges can provide

students with direct access to fresh produce while promoting agro-entrepreneurship. This initiative can also serve as a learning platform, equipping students with practical skills in sustainable food production.

- 3) **Market Accessibility Enhancements:** Policies should be developed to improve supply chain logistics for fresh produce within educational institutions. This can be achieved through partnerships with local farmers, cooperatives and food vendors to ensure a steady and affordable supply of diverse fruits and vegetables throughout the academic year.
- 4) **Nutrition Education and Awareness Campaigns:** Institutions should integrate nutrition education into academic curricula and organize campus-wide awareness campaigns on the importance of sustainable nutrition. Digital platforms, workshops and social media can be leveraged to reinforce positive dietary behaviors among students.
- 5) **Institutional Support for Sustainable Food Systems:** Colleges should adopt policies that encourage environmentally friendly food choices, such as promoting local and seasonal produce, reducing food waste and discouraging the over-reliance on processed foods. By embedding sustainability principles into institutional frameworks, students can be encouraged to adopt long-term healthy eating habits.
- 6) **Affordable Pricing Policies:** Policymakers should explore strategies to regulate the cost of fresh produce, either through government subsidies, student food cooperatives, or institutional bulk purchasing agreements with local suppliers. Lowering food costs can significantly enhance students' ability to maintain a balanced and nutritious diet.
- 7) **Research and Policy Development:** Continuous research on student dietary habits and food accessibility should be encouraged to inform policies that enhance sustainable nutrition in tertiary institutions. Collaboration between academic institutions, government agencies and non-governmental organizations can help design effective interventions tailored to the unique needs of students.
- 8) By implementing these recommendations, institutions and policymakers can create an environment where students not only understand the benefits of fruit and vegetable consumption but also have the resources and motivation to incorporate them into their daily diets. This will ultimately contribute to improved health outcomes, academic performance and long-term sustainability in food consumption practices.

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TABLES AND FIGURE

Table 1. Socio-Economic Characteristics of

Respondents

Socio-Economic Characteristics		Percentage
Age (Years) :	≤ 25	80.3
Mean = 22.44 Years	> 25	19.7
Student's Monthly Allowance (₦):	≤ 20,000	62.4
Mean = ₦16,950	> 20,000	37.6
Amount Spent on Food Monthly (₦):	≤ 10,000	53.0
Mean = ₦10,469.94	> 10,000	47.0
Amount Spent on Fruits & Vegetables Monthly (₦):	≤ 2,000	42.7
Mean = ₦2,398.59	> 2,000	57.3
Family Size (Persons):	≤ 5	22.1
Mean = 6 Persons	> 5	77.9
Sex	Male	49.2
	Female	50.8
Marital Status	Not Married	98.9
	Married	1.1
Class Level	ND1	16.9
	ND2	29.0
	HND1	32.2
	HND2	21.9

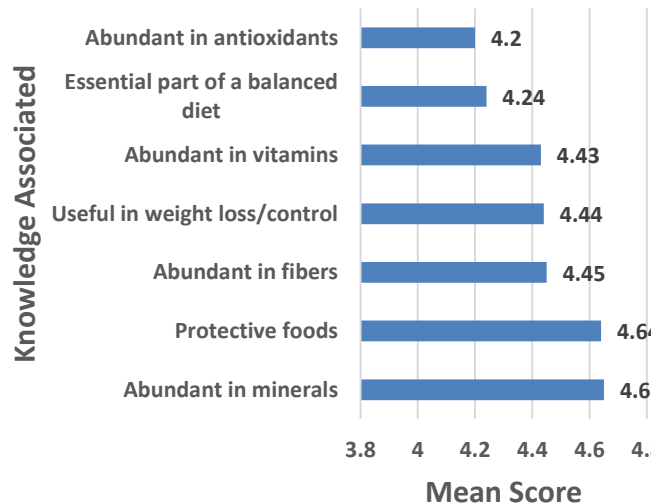
Table 2. Availability of Fruits Consumed

Fruits Available	Scientific Names	%
Orange	<i>Citrus sinensis</i>	90.2
Banana	<i>Musa spp.</i>	87.4
Pawpaw	<i>Carica papaya</i>	85.8
Watermelon	<i>Citrullus lanatus</i>	79.8
Pineapple	<i>Ananas comosus</i>	76.5
Mango	<i>Mangifera indica</i>	75.4
Tangerine	<i>Citrus reticulata</i>	75.4
Coconut	<i>Cocos nucifera</i>	72.1
Apple	<i>Malus domestica</i>	71.0
Cashew	<i>Anacardium occidentale</i>	68.3
Garden Egg	<i>Solanum aethiopicum</i>	66.7

Cherry	<i>Prunus avium</i>	63.9
Kola Nut	<i>Cola nitida</i>	49.7
Guava	<i>Psidium guajava</i>	48.1
Bitter kola	<i>Garcinia kola</i>	45.4
Pear	<i>Pyrus communis</i>	44.8
Walnut	<i>Juglans regia</i>	44.8
Palm Fruit	<i>Elaeis guineensis</i>	43.7
Grape	<i>Vitis vinifera</i>	42.1
Lemon	<i>Citrus limon</i>	41.5
Lime	<i>Citrus aurantiifolia</i>	41.0
Avocado	<i>Persea americana</i>	30.1
Kiwi	<i>Actinidia deliciosa</i>	26.8

Table 3. Availability of Vegetables Consumed

Vegetables Available	Scientific Names	%
Tomato	<i>Solanum lycopersicum</i>	84.7
Onion	<i>Allium cepa</i>	83.1
Ewedu (Jute leaves)	<i>Corchorus olitorius</i>	83.1
Carrot	<i>Daucus carota</i>	80.3
Fresh Pepper (Bell/Chili)	<i>Capsicum spp.</i>	80.3
Efo tete (Amaranth leaves)	<i>Amaranthus spp.</i>	79.2
Cucumber	<i>Cucumis sativus</i>	77.6
Waterleaf	<i>Talinum triangulare</i>	77.0
Ugu (Fluted pumpkin leaves)	<i>Telfairia occidentalis</i>	77.0
Okra	<i>Abelmoschus esculentus</i>	73.8
Cabbage	<i>Brassica oleracea var. capitata</i>	68.3
Melon (egusi seeds)	<i>Citrullus colocynthis</i> or <i>Citrullus lanatus var. colocynthis</i>	68.3
Bitter leaf	<i>Vernonia amygdalina</i>	67.8
Soko (African spinach)	<i>Celosia argentea</i>	58.5
Spinach	<i>Spinacia oleracea</i>	56.8
Sobo (Roselle leaves)	<i>Hibiscus sabdariffa</i>	41.5
Baobab leaves	<i>Adansonia digitata</i>	31.7

Figure 1. Knowledge Associated with Fruits and Vegetables Consumption**Table 4. Perceived Factors Influencing Fruits and Vegetables Consumption**

Perceived Factors	Mean Score	Outcome
Nutritional benefits	4.60	Strongly Agree
Taste	4.54	Strongly Agree
Likeness	4.47	Agree
Financial cost	4.30	Agree
Health condition	4.23	Agree
Availability at home	4.21	Agree
Appearance	4.14	Agree
Availability in school	4.14	Agree
Convenience	4.10	Agree
Seasonality	4.08	Agree
Texture	3.77	Agree
Information from family	3.58	Agree
Information from friends	3.47	Undecided

Figure 2. Perceived Diseases Protected by Fruits and Vegetables Consumption