

Effect of Rising Food Prices on Food Security among Agricultural Education Students in the University of Benin, Nigeria

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ABSTRACT

Background and Objective: Rising food prices have been a serious challenge in Nigeria recently, and this has negatively affected food security in almost every household, including university students. This study investigated the effect of rising food prices on food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria. **Materials and Methods:** The instrument for data collection was a structured questionnaire titled Food Security Among Agricultural Education Students Questionnaire (FSAAESQ). The instrument was validated by three experts, and a reliability test was carried out using Cronbach's Alpha, which yielded a coefficient of 0.81. The instruments were administered to the respondents who were randomly selected and used for the study, and the data collected were analyzed using weighted Mean and Standard deviation at a 0.05 significance level. **Results:** The findings of the study revealed the level of food security among the students, which includes not having sufficient food, skipping food, not having access to sufficient food, and buying cheaper food. Changes in food prices caused the students to change shopping habits and frequency, seeking aid and borrowing foodstuffs while coping strategies adopted by them include bulk buying of food, reduction in quantity of food consumed, doing multiple jobs for extra income, and reducing spending on other necessities. The study also found that some interventions, such as subsidizing food, cultivating food, budgeting, giving financial support, and establishing cooperatives for students to buy food at a lower rate can help to mitigate the challenges. **Conclusion:** The Government and the management of universities should implement some of the interventions in this study such as subsidizing food for students, giving financial supports to students for food purpose, teaching students production skills in crop and animal production and engaging them in cultivation of school gardens to boost food security on campus amongst others.

KEYWORDS

Rising food prices, food, sufficient food, food security, Agricultural Education Students

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INTRODUCTION

Food security simply put is a situation where every individual in a country or a geographical location has physical and economic access to enough food to meet the dietary needs of that individual for a healthy life at every point in time^{1,2}. Food security according to Gibson¹ and Bassey and Ndu² comprises four distinct aspects which are availability of a reliable source of quality food which is constantly, having constant access to sufficient food and money to purchase it, knowledge of how to utilize the food and stable access to the food. It is when these four areas have been achieved that a nation can be considered to have food security.

These four dimensions or aspects of food security are the parameters used in judging whether there is food security or not. Firstly, it is food availability of quality food sources. The availability of quality food sources refers to having sufficient food or having a large quantity of food in supply for consumption. The food that is available must be of good quality, which can be obtained from farmers through local production or through importation. Food access, which is the second dimension of food security, consists of people having sufficient access to both physical and economic food³. This is achieved by cultivating crops for food, through outright purchase of food, and receiving food items as gifts from friends, relations, or others. Food can also be obtained through trade by barter, which is a kind of exchanging what one has for what he or she does not have from another person.

The third dimension of food security is the stability of food, which ensures that food is constantly available and in adequate quantity³. The food must be available to all people from time to time. In ensuring food stability, some factors have been reported⁴ to influence it, such as climate change, problems of the economy, and political instability. Changes in the climate and extreme weather conditions have recently affected the food production system, a situation that has made food stability unattainable. Droughts, floods, hurricanes, and extreme temperatures had destroyed crops, leading to a decrease in food availability. Problems of the economy to a larger extent have affected food stability as rising food prices, unemployment, underemployment, and loss of sources of livelihoods had negatively impacted the rate of food production, leading to reduction in production which causes hunger and malnutrition, political instability such as conflicts and challenges being faced by Government of the day have serious setback in ensuring food security⁴.

In Nigeria, for instance, terrorists' attacks on farmers and clashes between herders and farmers have denied lots of farmers access to their farms. The corresponding author of this article had suffered this attack up to three times, and he shared his experience with us while preparing this paper. The fourth and last aspect of food security is food utilization, which has to do with the appropriate biological use of food substances. Optimum biological utilization of food brings about the need for proper health and child care, clean water and sanitation services, adequate knowledge of nutritional and physiological needs, as well as the proper application of the knowledge about the utilization. It therefore means that every household needs to have the knowledge of food utilization to enable one to plan for and make use of a balanced diet¹.

Food prices can simply be defined as the monetary value that is attached to foodstuffs or food substances. The monetary value is the amount consumers of food pay to obtain them, either from the producers or from food dealers who may be a wholesaler or a retailer. Food prices are being influenced by some factors such as the cost of production of the particular food, cost of distribution from the producer to the final consumer, the demand for the food in the market, conditions of the climate of the place where the food is being produced and distributed as well as agricultural and economic policies of the nation⁵. Recently, prices of food have skyrocketed in Nigeria, and this is being attested to by researchers. In some cases, the prices of food have doubled when compared to the previous year. This inflation in food prices has also affected university students; therefore, the researchers decided to evaluate the impact it has on the

students with a particular reference to Agricultural Education Students at the University of Benin, Benin City, Nigeria. Hence, the researchers investigated the effect of rising food prices on food security among Agricultural Education Students in the University of Benin, Benin City, Edo State, Nigeria. Specifically, the study sought to: Assess the level of food security among Agricultural Education Students at the University of Benin, Benin City Nigeria; to ascertain the nature of changes in food prices and its impact on food accessibility by students; to identify coping strategies adopted by the students in response to increase in food prices and to recommend interventions to improve food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria.

MATERIALS AND METHODS

Study area: The design of the study was a descriptive research design. The study was carried out in Benin City Nigeria, Edo State, Nigeria. The study was carried out between February and March 2025.

Study design and methodology: A simple random sampling technique was used to obtain a sample size of 100 respondents, consisting of 40 two-hundred-level students, 30 three-hundred-level students, and 30 four-hundred-level students of the Agricultural Education Department of the University of Benin, Benin City. The instrument for the collection of data was a structured questionnaire titled "Food Security Among Agricultural Education Students Questionnaire (FSAAESQ)". The questionnaire had four sections, which are A, B, C, and D, with four-point scales of Strongly Disagree (SD) as 1, Disagree (D) as 2, Agree (A) as 3, and Strongly Agree (SA) as 4. The instrument was validated by three experts from Agricultural Education. The reliability index of 0.81 was obtained using the Cronbach's Alpha method to determine the internal consistency of the questionnaire. One hundred copies of the instrument were printed and administered to the respondents by one of the researchers with the assistance of two research assistants. The questionnaires were retrieved immediately after the administration.

Statistical analysis: Data collected through the questionnaire were analyzed using weighted Mean and Standard deviation to answer the research questions at the 0.05 level of significance. In taking a decision, items with a mean value of 2.50 or above were considered as Agreed, while any item whose mean value was below 2.50 was considered as disagreed. Statistical Package for the Social Sciences (SPSS) version 23 was used by the researchers for the analysis.

Ethical consideration: This study strictly adhered to ethical research principles. The students who participated in the study were duly informed about the purpose of the study. Their anonymity, confidentiality, and voluntary participation were all adhered to.

RESULTS

The results of the descriptive analysis are presented in Tables 1-4 below as follows:

Research question 1: What is the level of food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria?

Data in Table 1 showed the mean values of respondents on the level of food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria. The respondents agreed that the six items with mean values ranging between 1.44 to 1.73 are the level of food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria. This is so because all the means fall below the 2.50 benchmark for the study. It can be inferred from the analyzed data and mean values that all the items in Table 1 are levels of food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria, showing that there is food insecurity among the students.

Table 1: Mean ratings of respondents on the level of food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria (n = 100)

Assessment of food security items	X	SD	Decision
I often have enough food to eat at home of recent	1.73	0.78	Disagreed
I do skip meals due to lack of enough food at home	1.73	0.66	Disagreed
I do worry about inadequate food due to lack or insufficient money	1.61	0.63	Disagreed
I always have access to affordable and nutritious food	1.66	0.74	Disagreed
I do buy cheaper and less nutritious food due to lack of money	1.55	0.61	Disagreed
I often receive foodstuffs as assistance given to students on campus	1.44	0.56	Disagreed

X: Mean, SD: Standard deviation and N: Number of respondents

Table 2: Mean ratings on changes in food prices and their impact on food accessibility among Agricultural Education Students, University of Benin (n = 100)

Nature of changes in food prices items	X	SD	Decision
There has been a drastic increase in food prices of recent	3.55	0.73	Agreed
There have been challenges buying foodstuffs due to hike in prices	3.16	1.07	Agreed
I changed my shopping habits and frequency due to hike in food prices	3.16	0.69	Agreed
Food is scarcely affordable by many students due to hike in prices	2.98	1.08	Agreed
Some students do seek for aid since the hike in prices of food	3.35	0.83	Agreed
Some students do borrow food stuffs from their fellow students	3.28	0.85	Agreed

X: Mean, SD: Standard deviation and N: Number of respondents

Research question 2: What is the nature of changes in food prices and their impact on food accessibility by Agricultural Education Students at the University of Benin, Benin City, Nigeria?

Data presented in Table 2 revealed the mean values of respondents on the nature of changes in food prices and their impact on food accessibility by Agricultural Education Students at the University of Benin, Benin City, Nigeria. The respondents agreed that the six items with mean values ranging between 2.98 to 3.55 are the changes in food prices and its impact on food accessibility by Agricultural Education Students at the University of Benin, Benin City, Nigeria. This is so because all the means are above the 2.50 benchmark for the study. It can be deduced from the analyzed data and mean values that all the items in Table 2 are the changes in food prices and its impact on food accessibility by Agricultural Education Students at the University of Benin, Benin City, Nigeria.

Research question 3: What are the coping strategies adopted by Agricultural Education Students at the University of Benin, Benin City, Nigeria, in response to an increase in food prices?

Data presented in Table 3 showed the mean values of respondents on the coping strategies adopted by Agricultural Education Students at the University of Benin, Benin City, Nigeria in response to an increase in food prices. The respondents agreed that the six items with mean values ranging between 3.18 to 3.45 are the coping strategies adopted by Agricultural Education Students at the University of Benin, Benin City, Nigeria in response to the increase in food prices. This is so because all the mean values are above the 2.50 benchmark for the study. It can be deduced from the analyzed data and mean values that all the items in Table 3 are the coping strategies adopted by Agricultural Education Students at the University of Benin, Benin City, Nigeria, in response to an increase in food prices.

Research question 4: What are the interventions to improve food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria?

Data in Table 4 revealed the mean values of respondents on the interventions to improve food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria. The respondents agreed that the six items with mean values ranging from 3.22 to 4.21 are interventions to improve food

Table 3: Mean ratings on coping strategies adopted by Agricultural Education Students, University of Benin, in response to rising food prices (n = 100)

Coping strategies Items	X	SD	Decision
Buying food stuffs in bulk has been helpful since hike in prices of food	3.32	0.86	Agreed
Shopping at discount stores and markets can help students mitigate hike in prices of food	3.45	0.50	Agreed
Reducing quantity of food consumed daily has been helpful since hike in food prices	3.19	0.58	Agreed
Doing multiple jobs to earn extra income is helpful in combating hike in prices of food	3.26	0.44	Agreed
Reducing food waste is an essential practice in combating food insecurity	3.38	0.49	Agreed
Reducing spending on other necessities in order to afford good food is helpful	3.18	0.70	Agreed

X: Mean, SD: Standard deviation and N: Number of respondents

Table 4: Mean ratings on interventions to enhance food security among Agricultural Education Students, University of Benin (n = 100)

Interventions items	X	SD	Decision
Subsidizing meals for students on campus will help them cope with hike in food prices	4.21	5.31	Agreed
Students should be encouraged to cultivate gardens to provide more food on campus	3.22	4.47	Agreed
Budgeting and meal planning by students will help to combat hike in prices of food	3.32	0.47	Agreed
Financial supports should be given to students regularly for food purchase	3.82	0.39	Agreed
Cooperatives where students can collectively buy food stuffs in bulk at lower prices should be established on campus	3.68	0.47	Agreed
Students should be taught production skills in both crop and animal production to enable them produce more food	3.39	0.49	Agreed

X: Mean, SD: Standard deviation and N: Number of respondents

security among Agricultural Education Students at the University of Benin, Benin City, Nigeria. This is so because all the means are above the 2.50 benchmark for the study. It can be inferred from the analyzed data and mean values that all the items in Table 4 are interventions to improve food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria.

DISCUSSION

The findings of this study in Table 1 showed that six items on the Table are the level of food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria. They include students not having enough food to eat at home often, skipping meals due to lack of enough food at home, students worrying about inadequate food due to lack or insufficient money, students not always having access to affordable and nutritious food, students buying cheaper and less nutritious food due to lack of money and students not receiving food stuffs as assistance given to them on campus. The findings aligned with the reports of BioMed Central Medicine⁶ where it was reported that a lack of constant access to sufficient food existed in most countries of the world. The findings are also in alignment with those of Nisbett *et al.*⁷ where it was reported that Bangladesh as a country faces nutritional problems, a situation that made some households to either skip meals or go for food with low nutrients.

The findings of the study in Table 2 revealed the nature of changes in food prices and its impact on food accessibility by Agricultural Education Students at the University of Benin, Benin City, Nigeria. The changes in food prices and its impact on food accessibility among the students are drastic increase in food prices of recent, students having challenges in buying food stuffs due to hike in prices, students changing their shopping habits and frequency due to hike in food prices, food being scarcely affordable by many students due to hike in prices, students seeking for aid since the hike in prices of food and some students borrowing food stuffs from their fellow students. These findings agreed with Andreyeva *et al.*⁸, which showed that an increase in the prices of food led to a reduction in the consumption of those food items by some individuals. The findings also aligned with the report of Afshin⁹, where it was reported that an increase in food prices led to a decrease in the consumption of healthy food by some people.

The findings of this study in Table 3 revealed that six items on the Table are the coping strategies adopted by Agricultural Education Students at the University of Benin, Benin City, Nigeria, in response to an increase in food prices. These strategies include: Buying food stuffs in bulk, shopping at discount stores

and markets to help mitigate hike in prices of food, reducing quantity of food consumed daily, doing multiple jobs to earn extra income to combat hike in prices of food, reducing food wastage and reducing spending on other necessities to afford good food. The findings corroborated that of Sewe and Lokuruka¹⁰ where it was stated that some students in Kenya adopted some coping strategies against food insecurity. The strategies include buying simple and affordable food, reducing expenses on other necessities such as airtime, and seeking aid, such as borrowing foodstuffs. The findings also corroborated that of Michael *et al.*¹¹ where it was reported that some students adopted strategies such as buying cheaper food, eating fewer meals, which amounts to skipping meals, and avoiding expensive fast-food.

The findings of this study in Table 4 revealed the interventions to improve food security among Agricultural Education Students at the University of Benin, Benin City, Nigeria. The interventions include subsidizing meals for students on campus, students cultivating gardens to provide more food on campus, budgeting and meal planning by students, financial supports should be given to students regularly for food purchase by government, establishment of cooperatives where students can collectively buy food stuffs in bulk at lower prices and students being taught production skills in both crop and animal production to enable them produce more food. The findings align with Hume *et al.*¹² where it was discovered that interventions such as encouraging community garden cultivation were carried out in mitigating food insecurity. The findings are also in conformity with Tiwari *et al.*¹³ where it was reported that cash transfer programs were carried out to combat food security problems in sub-Saharan Africa.

The study had the following limitations: Limited scope of population as the study was only directed to Agricultural Education Students at the University of Benin, Benin City Nigeria, and limited access to data as some students were not willing to respond to the question items. Time and resources also constrained the study.

The study recommended that food should be subsidized for students by the government, students should be engaged in food production by cultivating gardens, giving financial support to students, and ensuring that students acquire production skills in crop and animal production, among others.

CONCLUSION

This study showed the challenges being faced by Agricultural Education Students at the University of Benin, Benin City, Nigeria in accessing sufficient and nutritious foods that are affordable. The findings revealed that rising food prices have led to lots of problems such as a reduction in meal quantity, skipping meals, and buying cheaper and less nutritious foods, amongst others. To solve these problems, Government and the management of universities should implement some of the interventions in this study such as subsidizing food for students, giving financial supports to students for food purpose, teaching students production skills in crop and animal production and engaging them in cultivation of school gardens to boost food security on campus.

SIGNIFICANCE STATEMENT

This study has great significance as it enumerates the impact of rising food prices on food security among Agricultural Education Students at the University of Benin, Benin City Nigeria. The hike in food prices affected their accessibility to nutritious and affordable food. The findings are important to government agencies and university management as they will help them to develop policies and strategies to enhance food security among students.

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