

Assessment of food price hike on the nutritional wellbeing of residents in Ilorin West local Government, Kwara State, Nigeria

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Abstract

This study assessed food price hikes on the nutritional well-being of residents in Ilorin West local government, Ilorin, Kwara State, Nigeria. The study used stratified and simple random techniques to select one hundred and eighteen (118) respondents in Ilorin West. Descriptive statistical tools such as frequencies, percentages, and mean were used to analyze the data, while Pearson Product Moment Correlation (PPMC) was used to test the hypothesis. Findings revealed that the majority (81.4%) of the respondents were married. The majority (66.9%) had tertiary education and the average family size was 5 persons. The majority of the respondents eat food substances that are rich in the required nutrients such as fiber /roughages (M=4.42), Vitamin A (M=4.30), and starchy food (M=4.27). It was revealed that the nutritional level was low as it was reported that respondents are not free from food insecurity and hunger (M=2.32); and do not have good sleep time due to nutrition (M=2.31). Results showed that food price hikes contribute to an increase in muscular weakness and fatigue as a result of poor diet. The study revealed that there was a significant relationship between socioeconomic characteristics and level of nutritional well-being ($p \leq 0.05$). The study concluded that the overall nutritional well-being of respondents was low, indicating that access to nutritious food doesn't necessarily translate into improved nutritional status. Therefore, it was recommended that the Ministry of Health, in collaboration with local educational institutions and community health organizations should develop and implement nutritional education programs to promote healthy dietary habits.

Keywords: Assessment; Food Price Hike; Nutritional Wellbeing.

1. Introduction

Food intake is essential for all humans for their bodies to receive the nutrients they require for growth and development. According to Maslow's hierarchy of needs, food is the most basic human need. As a result, this has made it necessary for individuals to work in both rural and urban regions to earn income to purchase food. However, the daily rise in commodity costs, which drains consumers' savings, and the


volatility of pricing for both food and non-food items cause middle-class individuals to get tense and look for ways to boost their income. According to Mbegalo and Yu (2016), there have been sporadic fluctuations in global food prices since the Food and Agriculture Organization (FAO) began keeping track of the food price index. According to reports, the rate of increase in global food costs has accelerated and is still rising. The Central Bank of Nigeria (2018) reports that there have been significant fluctuations in the rise in food prices in Nigeria, with a peak of 20.32% recorded in September 2017.

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Received: November 10, 2023; Accepted: November 28, 2023; Published online: December 10, 2023.

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Increases in food prices are a serious economic issue in Nigeria, endangering the impoverished, which make up a sizable section of the population. Nigerians spend 58.9% of their household income on food, according to an analysis by Egwuma, Ojeleye, and Adeola (2019). Many factors influence the rise in food prices. According to Chad (2021) in *Business News Daily*, these factors include conflict, high interest rates, weak fiscal capacity, and rising oil prices. According to Udochukwu et al. (2022), the following factors contribute to rising food prices in Nigeria: COVID-19, the conflict in Russia and Ukraine, insecurity, high energy costs, high transportation costs, and rising income. It was further explained that the 2020 COVID-19 outbreak had an impact on food production, which in turn caused a shortage of food and an increase in the cost of several food items. An economy's population is significantly impacted by rising food prices, with those with lower socio-economic status being most affected. According to Joachim (2018), the impact of rising food costs on economies and nations varies greatly. Additionally, certain micronutrient deficiencies that have been made worse by the high cost of food have an impact on nutritional wellness (FAO, 2014). Food costs have skyrocketed, but household incomes have not kept up with the inflation, which has left households without reserves and badly impacted the income and nutritional well-being of low-income households. As a result, it is challenging for households to meet their fundamental needs for food, nutrition, and quality healthcare. Given the foregoing, it was necessary to start a study looking at the impact of rising food prices on the nutritional wellbeing of people living in Ilorin West, Kwara State. The main objective of the study is to assess food price hike on the nutritional wellbeing of residents in Ilorin West, Kwara State, Nigeria.

The specific objectives were to:

1. ascertain the patterns of food consumption of residents in Ilorin, Kwara State.

2. determine the level of nutritional wellbeing of residents in Ilorin, Kwara State
3. identify the perceived effect of food price hike on the nutritional wellbeing of residents in Ilorin West, Kwara State.

Hypotheses of the Study

Socio-economic characteristics of the respondents do not influence the level of nutritional wellbeing of residents in Ilorin West, Kwara State.

Materials and methods

The study was conducted in Ilorin West, Kwara State, Nigeria. The targeted population of the study is residents of Ilorin metropolis in Kwara State. Stratified sampling technique was used to group the study area according to the wards (Adewole, Ajikobi, Baboko, Badari, Balogun Alanamu, Magaji Ngeri, Oloje and Ogidi). Four wards (Baboko, Magaji Ngeri and Oloje) were selected at random from the strata. Further, simple random sampling technique was used to select 10 households in each of the selected wards to make a total of 40 households. A total of one hundred and eighteen (118) respondents were selected and used for the study. The data for the study was obtained through interviewer administered questionnaire.

Results and Discussion

Table 1 indicates that majority of the residents are between the ages of 31 – 40 years with an average age of 36.6 years. This indicates a young and active demographic resident who have the capacity to work and be productive in various occupations. Similar to this finding is the finding of Birhane et al. (2014) which revealed that a mean and median age of household head were 45 and 44 years respectively

Table 1 revealed that majority (81.4%) of the respondents was married with of the entire sample used in the study. It could be inferred from this finding that residents that participated in this study have more responsibility in terms of catering for the family. The need to cater for

family needs may have an effect on their response on food price hike. Results further indicated that males constitute majority of the residents with 62.7% of the study sample. This demographic composition highlights the need for gender-specific approaches to address the impact of food price hikes on nutritional wellbeing. Understanding the unique dietary preferences and nutritional requirements of men can aid in tailoring interventions to promote healthier eating habits and mitigate the effects of rising food prices on their nutrition. This is dissimilar to the findings of Tesfay (2014) in which 39.6% households were female headed.

On the basis of residents' educational level, Table 1 indicated that more than half (66.9%) of the respondents were in their tertiary level of education. This implies that there is a potential for greater receptivity to nutrition education and awareness campaigns among these educated respondents. This corroborates the study findings of Mkhawani et al. (2016) which also revealed that thirty-seven percent of the participants which represents majority of the sample had a tertiary education. Results in the Table 1 also show that 35.6% of the residents are civil servants. Civil servants typically receive fixed salaries, and any increase in food prices can directly affect their purchasing power and ability to afford nutritious meals. This suggests that addressing the nutritional needs of civil servants is particularly important, as they form a substantial portion of the population. This is in contrast to the findings of Obayelu (2010) whose study revealed that respondents were majorly traders. Results in the Table 1 also show that the respondents have an average family size of 5 persons. This implies that larger family sizes typically mean greater household food needs, making it more challenging to maintain adequate nutrition, especially when faced with rising food prices.

This finding underscores the importance of considering the unique challenges and vulnerabilities of larger households in food security and nutrition interventions. This is similar to the findings of Tesfay (2014) which revealed that average family size was 5, with a range of 1 to 15.

Results in the Table 1 also show residents' income range of which more than half (56.8%) of the respondents earn #51,000 - #100,000 per month. This income bracket suggests a substantial portion of the population might be vulnerable to fluctuations in food prices, as their income levels may be relatively modest. This is in contrast to the findings of Ojogho and Ojo (2017) having examined the impact of food prices on the welfare of rural households and found that majority of the respondents earned below #50,000. The result in Table 2 indicates that the respondents mostly eat food substances that are rich in fiber /roughages like skin of fruits, wheat and grain (corn) (M=4.42); drink up to eight or more glasses of water daily (M=4.33); eat food substances that are rich in Vitamin A like egg yolk, carrot and margarine (M=4.30); eat starchy food that are rich in Energy like rice, yam, potatoes, wheat and amala (M=4.27) and eat food rich in vitamin D like fortified milk, fortified margarine, fish and liver (M=4.24). This pattern of food consumption suggests a positive inclination toward a balanced and nutritious diet. The emphasis on fiber-rich foods is particularly noteworthy as it aligns with healthier eating habits associated with improved digestive health and overall wellbeing. However, it's crucial to ensure that this positive dietary pattern is sustained and promoted within the community. This finding is similar to that of Adekunle et al. (2020) whose findings revealed that the average household food consumption variety was fairly high.

Table 1: Frequency and percentages of respondents demographic data

Variables	Sub-variables	Frequency N=118	Percentage	M ± SD
Age	Less than 30 years	31	26.3	36.6±10.2
	31 – 40 years	52	44.1	
	41 – 50 years	21	17.8	
	51 – 60 years	12	10.2	
	61 years and above	2	1.7	
Marital Status	Single	22	18.6	
	Married	96	81.4	
	Widow	0	0	
	Divorced	0	0	
Sex	Male	74	62.7	
	Female	44	37.3	
Religion	Christianity	37	31.4	
	Islam	81	68.6	
Educational level	No formal education	1	0.8	
	Primary	1	0.8	
	Secondary	37	31.4	
	Tertiary	79	66.9	
Main occupation	Farmer	28	23.7	
	Artisan	9	7.6	
	Trader	39	33.1	
	Civil servant	42	35.6	
	Others	0	0	
Family size	1 – 3	18	15.3	
	4 – 5	35	29.7	
	Above 5	65	55.1	
Income range	Less than #30,000	10	8.5	5.0±1.9
	#30,000 - #50,000	24	20.3	
	#51,000 - #100,000	67	56.8	
	Above #100,000	17	14.4	

Source: Field survey (2023)800

Table 2: Patterns of food consumption of residents

N	Items	Never (%)	Rarely (%)	Sometimes (%)	Often (%)	Always (%)	Mean	Rank
1	I eat starchy food that are rich in Energy like rice, yam, potatoes, wheat and amala	1 (0.8%)	3 (2.5%)	0 (0%)	73 (61.9%)	41 (34.7%)	4.27	4 th
2	I eat protein rich food such as beans, snail, green vegetables	1 (0.8%)	2 (1.7%)	4 (3.4%)	74 (62.7%)	37 (31.4%)	4.22	6 th
3	I eat food substances that are rich in Vitamin A like egg yolk, carrot and margarine	0 (0%)	1 (0.8%)	13 (11.0%)	54 (45.8%)	50 (42.4%)	4.30	3 rd
4	I eat calcium rich foods like milk, milk products and biscuit bones	0 (0%)	4 (3.4%)	10 (8.5%)	66 (55.9%)	38 (32.2%)	4.17	8 th
5	I eat food substances rich in Iron like dried fruits, eggs and beef (cow meat)	0 (0%)	4 (3.4%)	7 (5.9%)	67 (56.8%)	40 (33.9%)	4.21	7 th
6	I eat protective foods, especially those rich in vitamin (B6 - B12) like fish, banana, egg and poultry	0 (0%)	4 (3.4%)	13 (11.0%)	64 (54.2%)	37 (31.4%)	4.14	10 th
7	I eat fruits which are rich in vitamin C like orange, grape, tomatoes, pepper, lettuce, and mango	0 (0%)	6 (5.1%)	15 (12.7%)	51 (43.2%)	46 (39.0%)	4.16	9 th
8	I drink up to eight or more glasses of water daily	0 (0%)	3 (2.5%)	12 (10.2%)	46 (39.0%)	57 (48.3%)	4.33	2 nd
9	I eat food rich in vitamin D like fortified milk, fortified margarine, fish and liver	0 (0%)	6 (5.1%)	14 (11.9%)	44 (37.3%)	54 (45.8%)	4.24	5 th
10	I eat food substances that are rich in fiber /roughages like skin of fruits, wheat and grain (corn)	1 (0.8%)	2 (1.7%)	5 (4.2%)	48 (40.7%)	62 (52.5%)	4.42	1 st
Total		0.7%	2.7%	7.8%	49.7%	39.1%	4.24	

Source: Field survey (2023)

The result in Table 3 revealed residents are not free from food insecurity and hunger (M=2.32); do not have good sleep time due to nutrition (M=2.31); do not feel strong and energetic because of the food they eat (M=2.28); do not feel positive about the kind of food they eat. These findings highlight the urgent need for comprehensive interventions to address the nutritional challenges faced by residents. Addressing these issues is crucial not only for individual health but also for the broader societal well-being and development of Ilorin, ultimately contributing to improved quality of life for its residents. This differs with the findings of Idowu et al. (2018) having taken the anthropometric measurement of the respondents and found that the majority (82.6%) of the respondents had normal weight due to adequate diet.

The result in Table 4 reveals that food price hikes contribute to an increase in muscular weakness and fatigue as a result of poor diet (M=4.36); contribute to the increased prevalence of gestational diabetes amongst pregnant women

(M=4.24); contribute to the increased prevalence of osteoporosis (weakness of bones) amongst children (M=4.24); affects ability to buy nutritious food for children which results in stunted growth (M=4.22); results in increases intake of imbalanced diets resulting (M=4.21); increases reliance on processed foods which leads to weight gain and chronic diseases (M=4.21). These implications underscore the far-reaching consequences of food price inflation on public health and emphasize the urgent need for targeted interventions to mitigate these effects. Addressing food affordability and accessibility, promoting healthier dietary choices, and supporting nutritional education are vital steps in safeguarding the wellbeing of residents in Ilorin and preventing the long-term health consequences associated with food price hikes. This corroborate the findings of Elias et al. (2022) which revealed that emotional distress, anxiety and depression, substance use, and other negative health outcomes are the effects associated with food price hike on health.

Table 3: Level of Nutritional Wellbeing of Residents

N	Items	SD (%)	D (%)	U (%)	A (%)	SA (%)	Mean	Rank
1	I am free from food insecurity and hunger	2 (1.7%)	99 (83.9%)	0 (0%)	11 (9.3%)	6 (5.1%)	2.32	1 st
2	I feel strong and energetic because of the food I eat	6 (5.1%)	94 (79.7%)	1 (0.8%)	13 (11.0%)	4 (3.4%)	2.28	3 rd
3	I am free from diseases related to poor diet	14 (11.9%)	84 (71.2%)	4 (3.4%)	9 (7.6%)	7 (5.9%)	2.25	7 th
4	I can cope well with my daily activities because of the food I eat	17 (14.4%)	87 (73.7%)	1 (0.8%)	7 (5.9%)	6 (5.1%)	2.14	10 th
5.	I feel I am losing weight because of lack of an adequate diet	13 (11.0%)	85 (72.0%)	3 (2.5%)	9 (7.6%)	8 (6.8%)	2.27	5 th
6.	I am satisfied with the quality and variety of food I eat	11 (9.3%)	91 (77.1%)	3 (2.5%)	10 (8.5%)	3 (2.5%)	2.18	8 th
7	I can meet the level of nutritional requirement	9 (7.6%)	94 (79.7%)	3 (2.5%)	9 (7.6%)	3 (2.5%)	2.18	8 th
8	I do not have any physical injury/defect arising from lack of adequate food	8 (6.8%)	92 (78.0%)	2 (1.7%)	10 (8.5%)	6 (5.1%)	2.27	5 th
9	I have good sleep time due to adequate nutrition	9 (7.6%)	86 (72.9%)	7 (5.9%)	10 (8.5%)	6 (5.1%)	2.31	2 nd
10	I feel very positive about the kind of food I eat	7 (5.9%)	89 (75.4%)	7 (5.9%)	12 (10.2%)	3 (2.5%)	2.28	3 rd
	Total	8.3%	76.3%	2.6%	8.4%	4.4%	2.24	

Source: Field survey (2023)

Table 4: Perceived Effects of Food Price Hike on the Nutritional Wellbeing

N	Perceived Effect	SD (%)	D (%)	U (%)	A (%)	SA (%)	Mean	Rank
1	Food price hike Limited access to nutritious food resulting in malnutrition	0 (0%)	5 (4.2%)	1 (0.8%)	89 (75.4%)	23 (19.5%)	4.10	10 th
2	Food price hikes contribute to the increased prevalence of diabetes amongst adults	0 (0%)	4 (3.4%)	3 (2.5%)	76 (64.4%)	35 (29.7%)	4.20	7 th
3	Food price hikes contribute to increase in muscular weakness and fatigue as a result of poor diet	0 (0%)	1 (0%)	0 (0%)	61 (51.7%)	52 (44.1%)	4.36	1 st
4	Food price hike results in increases intake of imbalanced diets resulting to diseases such as kwashiorkor	0 (0%)	5 (4.2%)	4 (59.3%)	70 (59.3%)	39 (33.1%)	4.21	5 th
5	Food price hikes contribute to the increased prevalence of low birth weight for new born children	0 (0%)	4 (3.4%)	7 (5.9%)	67 (56.8%)	40 (33.9%)	4.14	9 th
6	Food price hike reduces intake of fresh produce increasing the risk of diet-related diseases	1 (0.8%)	3 (2.5%)	1 (0.8%)	79 (66.9%)	34 (28.8%)	4.20	7 th
7	Food price hikes contribute to the increased prevalence of gestational diabetes amongst pregnant women	1 (0.8%)	4 (3.4%)	0 (0%)	74 (62.7%)	39 (33.1%)	4.24	2 nd
8	Food price hike increases reliance on processed foods which leads to weight gain and chronic diseases	2 (1.7%)	3 (2.5%)	2 (1.7%)	72 (61.0%)	39 (33.1%)	4.21	5 th
9	Food price hike affects ability to buy nutritious food for children which results in stunted growth	0 (0%)	4 (3.4%)	3 (2.5%)	74 (62.7%)	37 (31.4%)	4.22	4 th
10	Food price hikes contribute to the increased prevalence of osteoporosis (weakness of bones) amongst children	0 (0%)	4 (3.4%)	0 (0%)	78 (66.1%)	36 (30.5%)	4.24	2 nd

Source: Field survey (2023)

Table 5: Socio-economic Characteristics Influence on the level of Nutritional Wellbeing

Independent Variables	Coef. (β)	Std. Error	T	Sig.
Age	.068	.098	.551	.583
Marital status	.107	.304	.708	.481
Sex	-.058	.177	-.526	.600
Religion	-.015	.167	-.149	.882
Educational level	.160	.164	1.402	.164
Main occupation	-.164	.085	-1.304	.195
Family size	-.295	.163	-1.909	.059
Income range	.062	.134	.551	.583
(Constant)		.778	2.183	.031

Source: Field survey (2023)

Hypothesis Testing

HO1: Socio-economic characteristics of the respondents do not influence the level of nutritional wellbeing of respondents Model summary: $R=0.264$, $R\text{ square} = 0.070$, Adjusted $R\text{ square} = 0.002$, Std. Error of the Estimate = 0.783, $F\text{-stat} = 1.024$, Sum of square residual = 71.766. Significant value $p>0.05$.

Table 5 shows that there is relationship between socio-economic characteristics of family size ($p = 0.05 \leq 0.05$) and level of nutritional wellbeing. This implies that the larger the family sizes the higher the nutritional requirements of the household towards their nutritional wellbeing. However, other independent variables which represents the socio-economic characteristics of the respondents (age, marital status, sex, religion, educational level, main occupation and income range) are not significantly related to level of nutritional wellbeing of residents in Ilorin, Kwara State (*Sig. $p>0.05$*).

Conclusion

The study concluded that the nutritional wellbeing of residents was low and the most perceived effects of food price hike on residents' wellbeing were; increased muscular weakness, gestational diabetes among pregnant woman, osteoporosis in children, and hindered growth. The study also concluded that family size was the only socio-economic variable that influences the nutritional wellbeing of the respondents. Some recommendations have emanated from the findings of this study. These recommendations are for the government bodies, policy makers and nutritionist, farmers to implement. The recommendations include the following;

1. The Ministry of Health, in collaboration with local educational institutions and community health organizations should develop and implement nutritional education programs to promote healthy dietary habits and diversification of food sources
2. Local government authorities, non-governmental organizations (NGOs), and

community leaders should establish community-based food security programs to address the low nutritional wellbeing and food insecurity among residents.

3. Government agencies responsible for trade and agriculture, consumer protection agencies, and advocacy groups should advocate for policies and interventions to stabilize food prices and improve access to affordable and nutritious foods.
4. Furthermore, research institutions, government agencies responsible for social services, and community-based organizations should continue research to better understand the relationship between socioeconomic factors and nutritional wellbeing. Implement targeted programs for families with larger sizes

Authors' Contributions

All authors are contributed in this research

Funding

There is no funding for this research.

Institutional Review Board Statement

All Institutional Review Board Statements are confirmed and approved.

Data Availability Statement

Data presented in this study are available on fair request from the respective author.

Ethics Approval and Consent to Participate

Not applicable

Consent for Publication

Not applicable.

Conflicts of Interest

The authors disclosed no conflict of interest.

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