

DETERMINANTS OF FOOD CONSUMPTION PATTERNS AMONG RURAL AND URBAN HOUSEHOLDS IN EKITI STATE, NIGERIA

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ABSTRACT

The study assessed the determinants of food consumption patterns among rural and urban households in Ekiti State. Data were collected through a well-structured questionnaire administered to 180 respondents selected using a three-stage sampling procedure. This study investigates the socio-economic factors, assessed respondents' knowledge and attitudes toward food consumption, identified key social and cultural influences, and major constraints affecting consumption pattern. Data was analysed using descriptive statistics, while Pearson correlation, regression analysis, and t-tests were employed to test the hypotheses. The findings revealed that most respondents were female (77.1%), married (78.8%), with a mean age of 44 years. Respondents dominant occupations were Civil servants (51.2%) and traders (32.9%), more than half (53.5%) had tertiary education while 6.5% had no formal education. Low income (78.2%) unfavourable policies (72.4%), and seasonal food availability (51.2%) were the major constraints to consumption patterns. Also, it revealed that cereals (97.1%) and roots/tubers (91.2%) were the most frequently, with over 90% of respondents consuming them regularly. Vegetables and fruits were also commonly consumed but less consistently, reflecting seasonal influences. Animal protein intake was moderate, with fish (70.6%) consumed more frequently, indicating affordability as an important factor. Significant differences existed in the consumption patterns between rural and urban households ($t = -4.102$), with urban households showing greater dietary diversity. The results revealed that location ($\beta = 0.321$) and age ($\beta = -0.203$) influenced consumption patterns. The study concludes that household diets are largely dominated by staple foods, with location and age as key determinants of consumption patterns. It recommends strategic food and nutrition awareness programs targeted at rural households and the elderly, as well as interventions to enhance food availability and affordability.

Keywords: Food consumption pattern, location, dietary diversity, food and nutrition awareness.

INTRODUCTION

Food is one of the most essential human needs for survival as it strongly connects to human's physical, mental and social well-being. An adequate and healthy diet is required to define an active and healthy life which provides all essential nutrients required to identify and express the relationship between diet and health (Herforth, et al. 2020). However, adequate access to this diet by individuals has not been achieved because of constraint to affordability (FAO et al. 2020; Bai et al. 2021). Study reveals that household with low income would have to increase spending on food expenditures by 13% to meet the least cost diet requirement, and 43% to adapt to current required healthy foods (Mekonnen et al. 2021). The unaffordability of a healthy diet is higher in rural than urban areas as posited by (Holleman & Latino, 2023). Although there are several determinants and factors influencing the food consumption pattern of individuals, which may include the socio-economic characteristics of individuals.

In Nigeria the importance of food choices is not conspicuously proven among various individuals in the rural and urban areas. Food consumption patterns among rural and urban households are shaped by several factors which influences consumer's demand and intake. Some cultural beliefs prohibit certain foods and also accept certain foods that are of nutritional benefit to the body which influences the food consumption pattern of people who are identified to it. The cultural

background influences the intake by individuals where individuals in the rural area maintain a steady pattern as a result of the culture which is otherwise in the urban area where individual dietary pattern is influenced by taste and emigration of diverse cultural groups (Chukwu & Dogbe, 2023). However, the recent hike in the prices of food as a result of the economy in every part of the country has left many households insecure and malnourished (Sahel and West Africa Club Secretariat, 2020).

Despite efforts to improve food availability and affordability, many individuals still live below the daily dietary requirement, and the determinants of their consumption patterns remain unclear. This study therefore examines the quantity and quality of food consumed at individual and household levels in Ekiti State. Specifically, it identifies the socio-economic characteristics of respondents, assesses their knowledge and attitudes toward food consumption across rural and urban households, evaluates the influence of social and cultural factors, determines the major drivers of consumption patterns, and highlights key constraints affecting food consumption in the study area.

The study hypothesised that here is no significant relationship between the selected variables (socioeconomic characteristics, respondents' knowledge, attitude and challenges faced) and food consumption pattern. Also, there is no significant difference in the food consumption pattern of rural and urban respondents' food consumption pattern.

METHODOLOGY

The study was carried out in Ekiti State, Nigeria, a tropical region created in 1996 and situated between longitudes 4°45'–5°45'E and latitudes 7°15'–8°51'N. The state experiences a bimodal climate consisting of a rainy season (April–October) and a dry season (November–March) and covers 5,887.89 km² across 16 local government areas. Major occupations include farming, civil service, and petty trading. Foods commonly consumed in the state include yam, cassava, maize, rice, and vegetables, which are often processed into forms such as garri, yam flour, pap, and pounded yam, reflecting local dietary preferences. Three stage sampling procedure was employed. First, two LGAs Ado (urban) and Ido-Osi (rural) were purposively selected based on documented variations in hunger and food insecurity from the NLPS 2020–2023 data (Afe Babalola University & Ekiti State Government, 2022). In the second stage, six communities were randomly selected from each LGA. Finally, 15 households were randomly selected from each community, yielding a total sample of 180 households. Data were collected using structured questionnaires.

Socio-economic characteristics (sex, age, marital status, occupation, education, household size, and location) were measured accordingly. Knowledge of food consumption was measured using seven questions scored as correct (1) or incorrect (0) and classified into high or low knowledge. Attitudes were assessed on a 5-point Likert scale Strongly Agree (SA) 5, Agree(A) 4, Undecided (U) 3, Disagree (D) 2 and Strongly

Disagree (SD) and grouped into favourable or unfavourable responses.

Social and cultural influences were measured on a binary scale (Yes = 1, No = 0), while challenges to food consumption were rated as Severe (2), Mild (1), or Not a Challenge (0) and categorised by significance. Food consumption patterns were assessed using the Household Dietary Diversity Score (HDDS), based on consumption of 12 food groups in the past 24 hours (Yes/No) and frequency over the past 7 days (Daily = 3, Biweekly = 2, Weekly = 1). Data was analysed using descriptive statistics (frequency, percentage, and mean), and hypotheses were tested using Pearson correlation, regression analysis, and t-test.

RESULTS AND DISCUSSION

Knowledge of food consumption

The result in Table 1 shows that respondents had high knowledge of basic food consumption, evident in high correct responses for the definition of food security (95.3%) and healthy food (87.6%). Knowledge was weaker for factors such as poverty, climate change, and market access. Low knowledge of availability (20.0%) indicates limited awareness that availability alone does not determine food choices, supporting Olatona et al. (2023). Overall, while respondents understand healthy food, they are less aware of the socio-economic and environmental factors influencing consumption patterns, as noted by Chidiebere-Mark et al. (2022), highlighting the need for improved awareness to enhance dietary decisions.

Table 1: Level of knowledge of food consumption

Items	Correct (%)	Not correct (%)
Food security means having access to enough safe and nutritious food to live a healthy and active life at all times.	95.3	4.7
A healthy food must contain adequate nutrient required for growth and development.	87.6	12.4
Household with limited income could as well attain adequate nutrients in their meals.	78.8	21.2
Climate change could influence consumption pattern.	71.2	28.2
I am aware that poverty, climate change, lack of access to markets has nothing to do with consumption pattern.	48.2	51.8
Lack of access to market has nothing to do with consumption pattern.	41.8	58.2
Availability of food is not the only factor that influences my food choices and consumption pattern.	20.0	80.0

Source: Field survey, 2024

Respondents’ attitude to food consumption pattern in the area

The results in Table 2 show respondents’ attitudes toward food consumption. Favourable responses include recognizing that a food-secure household has better consumption patterns (69.4% SA, 22.9% A), that food security influences

household consumption (55.3% SA, 37.6% A), and that reducing food wastage can improve consumption (46.5% SA, 34.1% A) as asserted by (Mekonnen et al., 2021). Unfavourable responses reflect persistent misconceptions, such as fruits and vegetables being eaten only when sick (8.8% SA, 17.6% A) and dairy being for babies or visitors (10%

SA, 7.6% A). According to (Chiemela et al., 2022) showing that cultural beliefs still affect consumption patterns.

Table 2: Attitude towards food consumption pattern in the area.

Items	SA %	A %	U %	D %	SD %
A food secure household is likely to have better consumption pattern.	69.4	22.9	5.3	2.4	0
Food security could play out has a factor of consumption pattern among household.	55.3	37.6	3.5	3.5	0
Reducing food wastage could improve food security and consumption pattern.	46.5	34.1	7.1	10.0	2.4
I am willing to pay more for nutritious foods.	38.8	38.8	7.6	11.8	2.9
My continuous food consumption pattern does not guaranty food security.	30.0	41.2	10.6	12.9	5.3
Food choices in my locality does not necessarily meet my dietary needs.	18.2	48.2	11.2	14.1	8.2
Sustainable food practices like processing and storage will not possibly influence consumption pattern.	31.2	24.1	7.6	34.7	2.4
Social pressure has a way of influencing my food consumption pattern.	18.2	42.9	7.1	24.1	7.6
I feel that fast food and locally sourced food are affordable and accessible and also influence consumption pattern.	21.2	27.1	8.8	37.6	5.3
Consumption of dairy products are only meant for babies and visitors.	10.0	7.6	12.9	51.8	17.6
I think fruits and vegetables should be consumed only when one is sick.	8.8	17.6	8.2	35.3	30.0

Source: Field survey, 2024

Extent to which social and cultural factors influence food consumption pattern

The result in Table 3 shows that social and cultural factors shape food consumption in the study area, with economic conditions emerging as the dominant influence (92.4%). Energy needs (77.6%), health considerations (75.9%), and the perceived medicinal value of vegetables (74.7%) also contributed, while social interactions had a moderate

effect (67.6%). Cultural and religious factors were comparatively weak, as practices such as consuming fruits or dairy only when sick (58.2%) were not strong determinants. These results align with Paulo et al. (2025), emphasizing economic capacity and social interaction as key drivers of food choice and the need to improve access to diverse, nutritious foods.

Table 3: Extent to which social and cultural factors influence food consumption patterns

Items	Yes (%)	No (%)
My consumption pattern is greatly influenced by the state of the economy.	92.4	7.6
Hospitality and friendship influences food consumption pattern in my area.	67.6	32.4
Food consumption is influenced due to its significance in ceremonies.	46.5	53.5
I eat starchy food because it provides the energy required for work.	77.6	22.4
Cultural activities such as inter-ethnic or intra-ethnic marriage influence my food consumption pattern.	50.6	49.4
I consume fruits and dairy products because of its significance while sick.	41.2	58.2
Cultural belief and pattern influence my food choices.	45.3	54.7
Special ceremonies and feasts do not influence my food consumption pattern.	80.6	19.4
The use of diet to maintain health conditions influences my consumption pattern.	75.9	24.1
I consume vegetables because of its medicinal properties.	74.7	25.3

Source: Field survey, 2024

Challenges to food consumption pattern

The result in Table 4 shows that low income and social status (78.2%) and unfavourable government policies (72.4%) are the most severe challenges to

food consumption, followed by limited access to diverse foods (52.4%) and seasonal availability (51.2%). Less severe constraint includes limited cooking skills (21.2%). Economic constraints and

policy limitations are the main constraints to food consumption as asserted by Mekonnen et al. (2023)

which highlight the need for interventions and policies that improve income and food availability.

Table 4: The challenges faced by food consumers in rural and urban areas of Ekiti state

Items	Severe challenge (%)	Mild Challenge (%)	Not a challenge (%)	Mean
Low income and social status.	78.2	17.1	4.7	1.7
Unfavourable government policies and interventions.	72.4	24.7	2.9	1.7
Limited access to diverse food options.	52.4	33.5	14.1	1.4
Seasonal availability of foods in the area.	51.2	27.6	21.2	1.3
Limited access to local and traditional foods.	29.4	47.6	22.9	1.1
Poor food packaging, marketing and advertising.	36.5	37.1	26.5	1.1
Large household size and living situation.	31.9	46.5	21.8	1.1
Increased emotional challenges like stress, anxiety and depression.	31.2	42.4	26.5	1.1
Declining social norms and cultural practices.	17.6	60.0	22.4	1.0
Limited access to market.	25.3	47.6	27.1	1.0
Intense work schedule.	25.9	44.7	29.4	1.0
Low level of education and awareness on healthy diet.	36.5	29.4	34.1	1.0
Busy schedules or limited time to prepare healthy meal.	27.6	34.7	37.6	0.9
Lack of cooking skills to prepare healthy food.	21.8	31.2	47.1	0.8
Inadequate healthcare professionals or registered dietitians for nutrition guidance.	27.1	28.8	44.1	0.8
Limited access to cooking classes or education.	21.2	24.1	54.7	0.7

Source: Field survey, 2024

Food consumption pattern in Ekiti state.

The results indicate that cereals (97.1%) and roots and tubers (91.2%) are the most commonly consumed food groups, reflecting their central role as household staples. Vegetables (74.1%) and fruits (70.6%) were also widely consumed but less frequently, suggesting seasonal or access-related limitations. Animal protein intake was moderate, with meat and poultry (80.6%) and fish (70.6%) consumed more often than eggs (54.1%). Nuts,

seeds, and dairy showed lower consumption, likely due to cost or availability constraints. Fats and oils (85.9%) were commonly used, while sugar and honey (63.5%) were moderately consumed. Overall, the findings show a diet dominated by staple foods particularly cereals which aligns with Fawole and Aderinoye-Abdulwahab (2021), who reported cereals as one of Nigeria’s most widely consumed staples.

Table 5: Distribution of respondents according to the food consumption pattern.

Food groups	Yes (%)	No (%)	Daily (%)	Biweekly (%)	Weekly (%)	Mean
Cereals	97.1	2.9	61.8	18.8	19.4	1.58
Roots and tubers	91.2	8.8	58.2	25.9	15.9	1.58
Vegetables	74.1	25.9	31.2	28.2	40.6	2.09
Fruits	70.6	29.4	42.4	26.5	31.2	2.11
Meat / Poultry	80.6	19.4	34.7	17.1	48.2	2.14
Fish and seafood	70.6	29.4	31.2	12.9	55.9	2.25
Eggs	54.1	45.9	18.2	21.8	60.0	2.42
Legumes (pulses)	70.6	29.4	15.4	16.6	68.0	2.53
Nuts and seeds	57.6	42.4	9.4	40.0	50.6	2.41
Dairy (milk)	60.6	39.4	12.9	37.1	50.0	2.37
Fats and oils	85.9	14.1	52.9	23.5	23.5	1.71
Sugar/honey	63.5	36.5	24.7	27.6	47.6	2.23

Source: Field survey, 2024

Food consumption pattern among Rural and Urban Households in Ekiti state.

The result in Table 6 revealed differences in food consumption patterns between rural and urban

households. Cereals were consumed by nearly all respondents (97.1%), with urban households showing more frequent intake compared to rural respondents who largely consumed them weekly.

Roots and tubers also recorded high consumption (91.2%), slightly higher among rural households (47.1%) than urban (44.1%), reflecting the prominence of locally cultivated staples in rural diets. Also, Fruit consumption (70.6%) and animal source foods such as meat and poultry (80.6%), eggs (54.1%), and dairy products (60.6%) were generally higher among urban respondents, indicating greater dietary diversity and access to protein-rich foods. However, fish and seafood (70.6%) consumption was marginally higher among rural households, likely due to affordability. Fats and oils stood out as the only food group with higher weekly

consumption in rural households (29.4%) compared to urban (21.8%), reflecting traditional cooking patterns reliant on palm oil.

The study posits rural households predominantly consumed traditional staples such as roots, tubers, and oils, whereas urban households exhibited greater food diversity with more frequent consumption of fruits, animal products, legumes, and dairy. These patterns highlight the influence of urbanization, income, and food accessibility on household consumption pattern as posited by (Holleman & Latino, 2023); Cockx & Boti (2025).

Table 6.: Distribution according to the food consumption pattern among rural and urban households.

Food Group	Total (Yes) %	Rural %	Urban %	None (%)	Weekly (%)	Biweekly (%)	Daily (%)
Cereals	97.1	47.6	49.4	2.9	61.2	18.8	17.1
Roots & Tubers	91.2	47.1	44.1	8.8	57.1	22.4	11.8
Vegetables	74.1	35.9	38.2	26.5	30.0	15.3	28.2
Fruits	70.6	30.0	40.6	28.8	29.4	18.8	22.9
Meat & Poultry	80.6	37.6	42.9	20.0	30.6	16.5	32.9
Fish & Seafood	70.6	30.0	40.6	29.4	28.2	12.9	29.4
Eggs	54.1	22.4	31.8	45.3	16.5	13.5	24.7
Legumes	70.6	32.4	38.2	30.0	14.7	11.2	44.1
Nuts & Seeds (egusi, gbegiri)	57.6	20.0	37.6	41.2	8.2	20.0	30.6
Dairy Products	60.6	25.3	35.3	39.4	11.2	22.4	27.1
Fats and oils	85.9	45.9	40.0	13.5	51.2	18.2	17.1
Sugar/honey	63.5	25.9	37.6	36.5	22.9	14.7	25.9

Source: Field Survey 2024

Differences between food consumption pattern of rural and urban households in the study area.

The results in table 7 shows a statistically significant difference in food consumption patterns between rural and urban populations ($t = -4.102$). Along with earlier results, it further indicated the significant impact of location on consumption

patterns reflecting that urban households tend to have a higher level of food consumption patterns compared to rural households in the study area as posited by (de Brauw & Herskowitz, 2021). Moreover, the results highlight the complexity of food consumption patterns and suggest the need for further research into other potential influences.

Table 7: Differences in Food consumption pattern among rural and urban household

Test	t-value	df	p-value	Mean difference	Std. Error difference	95% confidence interval of the difference
Levene's test for equality of variances	F=2.431	-	0.121	-	-	-
T-test (equal variances not assumed)	-4.102	161.398	0.000	-3.717	0.906	(-5.507, -1.928)

Source: Field survey, 2024

Determinants of food consumption pattern among rural and urban household.

Table 7 shows that the age of respondents had a significant negative relationship ($\beta = -0.203$), indicating that an increase in age resulted in a decrease in consumption pattern, which supports the assertions by Mekonnen et al. (2021). Also, location ($\beta = 0.321$), and socio-cultural factors ($\beta = 0.335$)

significantly influenced food consumption patterns among rural and urban households at $p < 0.05$, while geographic and cultural factors positively shaped patterns, aligning with de Brauw & Herskowitz (2021), and Hormenu (2022). Other variables, including sex, marital status, occupation, education, household size, knowledge, attitude, and challenges, were not significant.

Table 7: Determinants of food consumption pattern among rural and urban household.

Variables	R	p-value	Unstandardized Coefficients (β)	Standardized Coefficients (β)	t-value	R ²	Adjusted R ²	Standardized Error	Decision
Sex	0.113	0.344	-1.037	-0.070	-0.949	0.246	0.193	5.577	NS
Age	-0.058	0.026	-0.116	-0.203	-2.253	-	-	-	S
Marital Status	-0.055	0.747	0.304	0.028	0.324	-	-	-	NS
Occupation	0.063	0.679	-0.267	-0.040	-0.414	-	-	-	NS
Educational Status	-0.230	0.965	-0.031	-0.004	-0.044	-	-	-	NS
Household size	0.065	0.540	-0.464	-0.044	-0.614	-	-	-	NS
Location	0.174	0.000	3.980	0.321	3.878	-	-	-	S
Knowledge	0.129	0.836	0.067	0.016	0.208	-	-	-	NS
Attitude	-0.080	0.195	0.153	0.098	1.300	-	-	-	NS
Socio-cultural Influence	-0.082	0.000	1.279	0.335	4.484	-	-	-	S
Challenges	-0.014	0.233	-0.113	-0.097	-1.196	-	-	-	NS

Source: Field Survey 2024

CONCLUSION AND RECOMMENDATIONS

Rural and urban households show distinct food consumption patterns shaped by socioeconomic and environmental factors. Rural diets remain dominated by traditional staples, while urban households consume more diverse foods, including fruits, animal products, and dairy. These differences reflect the influence of income, urbanization, and food access. To promote balanced nutrition across all groups, strategies should focus on improving rural income, expanding food accessibility, and strengthening nutrition education especially for rural communities and older adults. However, culturally sensitive interventions will further support acceptance and long-term sustainability.

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