FUDMA Journal of Agriculture and Agricultural Technology
ISSN: 2504-9496
Vol. 10 No. 4, December 2024: Pp.113-124

https://doi.org/10.33003/jaat.2024.1004.16.394

ASSESSMENT OF CONSUMPTION PATTERN OF SWEET POTATO IN ABEOKUTA SOUTH LOCAL GOVERNMENT AREA OF OGUN STATE, NIGERIA

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ABSTRACT

Sweet potatoes contribute significantly to the nation's economic growth, food and nutrition security. Despite the nutritional significance of sweet potatoes, consumption of sweet potato is still underutilized. Hence, the study assessed the consumption pattern of sweet potato in Abeokuta South Local Government Area, Ogun State. Purposive and proportionate sampling techniques were used to select 136 households from three communities. Data were analyzed using descriptive and inferential statistics (multiple linear regression). Result showed that mean age of 41 years, majority **(**63.2%**)** were male and 86.8% were married. About 90% practiced monogamy, household size averaged of 5 persons per household, and 51.5% were civil servants. Furthermore, the result shows that 90.4% of the respondents consumed boiled and 86.8% consumed fried sweet potatoes. Furthermore, finding revealed that consumption of sweet potato was low (51.5%). Also, result in reveal that price of sweet potato ($\overline{X}$ = 2.43), nutrient and health content ($\overline{X}$ =2.32), availability ($\overline{X}$ =2.29), seasonality ($\overline{X}$ =2.11) were among the essential factors that influence consumption pattern of sweet potatoes. Multiple linear regression revealed that age (β=0.381), sex (β=0.229) and household size (β=0.207) significantly influenced the consumption pattern of sweet potato ($p<0.05$), while significant relationship existed between agricultural support programs (β=0.226), price (β=0.243), consumer preference (β=0.199), nutrient and health content (β=0.214) and seasonality (β=0.320) and consumption pattern of sweet potatoes ($p<0.05$). It is concluded that boiled and fried potatoes were consumed and influenced by support programs and nutritional benefits, therefore efforts should be intensified towards sensitization of nutritional benefits of sweet potatoes.

Key words: Consumption pattern, Nutrition security, Support program, Sweet potato,

INTRODUCTION

Agriculture is one of the backbones of the global economy's growth, generating revenue and improving farmers' livelihood outcomes (Pawlak and Kołodziejczak, 2020; Feng *et al*., 2023). Agriculture accounts for more than 20% of Nigeria's Gross Domestic Product (GDP) and employs more than 60% of the workforce (Romanus and Ngozi, 2020). The interaction between agriculture and other sectors impacts trade and industrial uses (Praburaj, 2018). Agriculture comes in a wide variety of forms, which are aquaculture, livestock farming, and crop farming (Monteiro *et al.*, 2021). Literatures affirmed that major crops that can be produced in Ogun State are root and tuber crops, such as potatoes, sweet potatoes, cassava, and yams.(Adewale, and Nnamani, 2022; Zeng *et al*., 2024).

Sweet potato (*Ipomoea batatas*) is a tropical and subtropical tuber that is easily grown by small and large-scale farmers due to its adaptability, resistance, and low production cost (Dereje *et al.*, 2020; George *et al*., 2024). Sweet potato is a crucial economic crop in both developed and developing nations, ranking among the 15 largest agricultural products globally (Afzal *et al*., 2021 and Sapakhova *et al.*, 2023). Sweet potatoes can be used for a variety of purposes, especially as raw materials and animal feed. According to Lyu e*t a*l. (2021) and Rezvanian *et al.* (2023), sweet potato starch is used as a raw material in Taiwan, China, Korea, and Japan for a variety of industrialized goods, including beverages, ethanol, industrial alcohol, and sweeteners. It is a significant source of income as well, particularly in rural areas. Sweet potatoes are a great source of iron, potassium, and varieties of vitamins A, C, B6, and therapeutic qualities potentially useful for medical purposes. Sweet potatoes come in an abundance of varieties, with hues varying from white, red, yellow, purple, to orange. As a common food and cash crop, it provides energy to more than 100 million people globally. However, Neela *et al.* (2019) and Dereje *et al.* (2020) stated that the consumption of sweet potatoes has always been allied with good health and boosted human nutrition as it contributes to calories, protein, vitamins, and minerals. It is normally eaten raw, boiled,

fried, steamed, or further processed into various foods such as snacks, frozen, and canned food.

Nigeria's sweet potato consumption is increasing due to health benefits like cancer prevention and atherosclerosis prevention, yet the production yield is lesser compared to some African countries such as Rwanda, Kenya, Ethiopia and Tunisia (Udemezue, 2019 and João *et al*., 2023). One of the major challenges of sweet potatoes consumption is the increasing prices due to high cost of transportation, bad road, poor infrastructural facilities and low marketing strategies. Amagloh *et al.* (2021) and Sapakhova *et al*. (2023) suggested that dwellers struggle to understand the health-promoting properties and nutritional value of sweet potato, thus leads to lower consumption of the quantity of sweet potato compare to other root crops like yam, cassava, cocoyam. Furthermore, sweet potato is a nutritious crop, but underutilized in Nigeria due to limited awareness on nutritional benefits of sweet potato, inadequate access to processing and storage facilities increase the spoilage rate and food insecurity. Sweet potatoes are vulnerable to climatic, physiological, pathological, and physical deterioration after harvest pose significant hurdles for consumption of sweet potatoes. Omondi *et al.* (2023) and Munyaka *et al*. (2024) indicated that education, age, household size, price, availability and accessibility of sweet potato, nutritional information, culture and taste influence consumer preference for sweet potato. However, sweet potatoes are frequently underutilized as raw materials for value-added products failing to maximize the full benefits. Consumers have low access to essential information, innovative ideas and technological advancement that could assist them to fully maximize the utilization of sweet potatoes. Also, sweet potatoes farmer have low marketing skills to promote the effective values in the products, thus leading to nutrition and food insecurity. Therefore, the focus of the study was to evaluate the assessment of consumption pattern of sweet potato in Abeokuta South Local Government Area, Ogun State finding answers to the following questions; describe the socio-economic characteristics of the respondents, identify the forms of sweet potato consumed, determine consumption pattern for sweet potato and examine the factors that influences consumption pattern for sweet potato. The study also postulates two hypotheses that there is no significant relationship between socio-economic characteristics and preference of sweet potato**,** and also that there is no significant relationship between the factors that influence sweet potato consumption.

Soroka *et al.* (2019) and Eyinade *et al.* (2021**)** emphasized the essential importance of the processing and packaging of sweet potatoes to promote acceptance among the consumers. The packaging methodologies range from traditional practices to advanced technological innovations; these are:

Modifies Atmosphere Packaging (MAP): A revolutionary approach in packaging, MAP effectively moderates the respiration rate and postpones the natural aging process of sweet potatoes by adjusting the air's mixture within the packaging environment. Adebayo *et al.* (2019) show that MAP is an instrument in preserving the structural integrity and firmness of sweet potatoes while simultaneously thwarting microbial growth. This method significantly prolongs the produce's shelf life by creating a tailored atmospheric condition that meticulously balances gases such as oxygen, carbon dioxide, and nitrogen to slow down spoilage mechanisms.

Vacuum Packaging: This technique involves the extraction of air from packaging, thereby substantially reducing the oxygen level in immediate contact with the sweet potatoes. Kimi *et al.* (2020) shed light on the efficiency of vacuum packaging in enhancing the longevity of sweet potatoes by minimizing the exposure to oxygen. This method effectively curtails the rate of moisture evaporation and the occurrence of oxidative reactions, two primary contributors to the deterioration of sweet potatoes. As a result, vacuum packaging emerges as a pivotal solution for extending the shelf life, maintaining the quality, and ensuring the freshness of sweet potatoes over extended periods.

Modifies Atmosphere Packaging (MAP): Adebayo *et al.* (2019) and Kimi *et al.* (2020) shed light on the efficiency of MAP and vacuum packaging as innovative methods for preserving sweet potatoes' structural integrity and firmness. MAP moderates respiration rate and postpones aging by adjusting air mixture, while vacuum packaging extracts air from packaging, reducing oxygen levels. Both methods help prolong the shelf life, maintain quality, and ensure the freshness of sweet potatoes over extended periods. Both methods are effective in preserving sweet potatoes' quality and freshness.

Traditional Packaging Methods: Jones *et al.* (2017) Jute bags and wooden crates are commonly used for storing and transporting sweet potatoes, but they lack proper moisture regulation and gas exchange, which are crucial for extending storage life. This can lead to issues like drying out or retaining too much moisture,

fostering mold or bacteria growth, and premature spoilage.

Advanced Packaging Innovations: Singh *et al.* (2018) described that advancements in packaging technology improved shelf life, nutritional value preservation, and post-harvest losses for sweet potatoes. Breathable plastic films, modified atmosphere packaging, and ethylene absorbers are the most common packaging innovations, and these innovations control moisture, gas exchange, and ethylene impact, ensuring optimal freshness and consumer satisfaction.

Innovative Approaches to Packaging Sweet Potatoes: Edible coatings like chitosan or aloe vera gel are being used to preserve sweet potatoes, enhancing their shelf life and quality. These coatings create a protective layer, facilitating moisture retention and reducing respiration rates, thus preventing dehydration and prolonging the preservation process.

Active packaging: According to *Lopez* et al. (2021*)*, a modern technique uses ingredients to extend the shelf life of products, such as sweet potatoes. This includes antibacterial agents and ethylene absorbers, which combat microbial growth and improve the product's quality.

Advancements in Packaging Technologies: Wang *et al.* (2022) reveal that intelligent packaging technologies are revolutionizing sweet potato preservation and transportation. These packages use sensors to monitor and communicate the quality of sweet potatoes, detecting environmental deviations and potential spoilage. Real-time tracking ensures optimal conditions, delivering fresh, high-quality produce to consumers. This promotes consumer satisfaction but also minimizes waste and optimizes supply chain efficiency.

Value-added Theory

Value-added theory is a social system analysis that identifies determinants of collective actions, such as social movements and religious cults, within societies. It posits that each determinant must be present for a collective action to occur, and each determinant increases the likelihood of an action being effective. Value-added theory suggests collective actions that are triggered by system strain rather than the source. Myers (2020) argues that understanding social behavior from participants' perspectives is crucial for collective action analysis, but strain alone doesn't lead to action. Value-added theory explains social behavior through four components: situational facilities, roles, norms, and values. Situational facilities impact social behaviors, while roles are expected behaviour and social structures influence behavior. Social systems operate due to individuals fulfilling roles.

Methodology

The study was carried out in Abeokuta South Local Government Area, Ogun State, Southwestern Nigeria. Abeokuta South Local Government is part of the Ogun Central senatorial district; it is located at a longitude of 3º'17E, and a latitude of 7º15'N. The area covers an area of approximately 61 square kilometers. This area is characterized by an urban landscape. The geography of Abeokuta south is primarily lowlands, with some hilly areas. The population of the study consisted of all sweet potato respondents in the study area. The data were obtained through the use of interview guide. Purposive sampling technique was used to select 4 communities due to the high number of households that reside closer to the major markets (Kuto market) due to easy accessibility to sweet potato consumers and avoidance of time and resources constraints A proportionate sampling technique was used to select the 136 households from the selected communities.

Table 1: Sampling Technique and sample size

Selected Communities	Sampling frame	Sample size (10%)
Ijaye	462	46
Idi-Aba	320	32
Kenta	322	32
Oke -mosan	258	26
Total	**1362**	**136**

The respondents' age and household size were measured at the interval level, while sex, religion, marital status, livelihood activities, and level of education of the respondents were measured at the nominal level. The forms of sweet potato consumed were measured at the nominal level, where the respondents were asked to

indicate the forms of sweet potato they consumed. Consumption patterns were measured at the interval level using the Food Frequency Scale (FFS). The respondents were asked to indicate the consumption pattern of forms of sweet potatoes consumed as once per week (1), twice per week (2), thrice per week (3), four times per week (4), five times per week (5), six times per week (6), once daily (7), twice daily (8), and thrice daily (9). Also, the consumption pattern of sweet potatoes was categorized through a cutoff score (76) that was determined; therefore, scores below the cutoff score were referred to as low consumption, and scores above the cutoff score were referred to as high consumption. Factors influencing the consumption pattern of sweet potato were measured at intervals using a 3-point rating response as a major factor (2), minor factor (1), and not a factor (0); the items means were ranked in ascending order. Primary data were collected through a structured questionnaire and processed using Statistical Package of Social Science (SPSS) versions 18 for descriptive statistics (mean, percentage, frequency distribution) and inferential statistics (multiple linear regression).

RESULTS AND DISCUSSION

Table 2 reveals that below average (41.3%) of the respondents' ages fell between 41 and 50 years old with the mean age of 41 years. This implies that there was a relatively high proportion of people that consumed sweet potatoes; the respondents were active youth and economically productive. This could indicate the tendency of respondents to decide the rate of sweet potato consumption. This result is supported by the assertion of Okeke *et a*l. (2021) and Egwuonwu (2024) that youth are in their prime years for economic activity and productivity; they are always adaptable enough to pursue other forms of livelihood and tend to decide on the consumption of sweet potatoes. Furthermore, most (63.2%) of the respondents were male, and more than three-quarters (86.8%) of the respondents were married. This implies that the household's heads in the study area are male, providers, decision-makers, and have a higher tendency to dictate consumption habits when it comes to sweet potato intake; also, the respondents have a high sense of responsibility, which could increase the preference and consumption pattern of sweet potato. This result corroborate with Neela and Fanta (2019); Burgos *et al*. (2020); and Mulwa *et al*. (2021) findings that sweet potato consumption is greatly influenced by the head of the family of different households in Nigeria. In addition, almost all (90.4%) of the respondents practiced monogamy, and 88.2% had tertiary education. This shows the reflection of their belief in Christianity that a man is allowed to marry only one wife, and the respondents are literate to understand the knowledge and nutritional benefits of sweet potato. This is in line with Laveriano-Santos *et al*. (2022) and Wangithi *et al*. (2023) findings affirm that the respondents were literate and had the ability to comprehend and understand better the nutritional benefits of sweet potatoes. This result is in line with Kategile (2020) & Okoli and Okwuosa (2020) findings that affirm the reflective role of the Christian belief on marriage. Most **(**61.7%) fell between 5 and 9 persons per household, with the mean of 5 persons, and 51.5% were civil servants. This implies that the respondents had a relatively high number of households, which significantly contributes to the consumption pattern of sweet potato, and also, respondents indicate that they work in different governmental sectors, which could influence the consumption of sweet potato through their income and knowledge of nutritional benefits of sweet potato. Babatunde (2018), Egwuonwu and Ozor (2020), and Mugumaarhahama *et al*. (2021) posited that consumers with stable income have higher tendency to promote sweet potatoes consumption and contribute positively to nations economy.

Table 2: Socio-economic characteristics of the respondents (n=136).

Variables	Frequency	Percentage	Mean ($\overline{X}$)
Age			
20-30	20	14.5	
31-40	41	30.2	41 years
41-50	56	41.3	
51-60	19	14	
Sex			
Male	50	36.8	
Female	86	63.2	
Religion			
Christianity	103	75.7	
Islam	33	24.3	
Traditional	0	0.0	
Marital Status			
Single	10	7.4	
Married	118	86.8	
Divorced	7	5.1	
Separated	0	0.0	
Widowed	1	0.7	
Cohabitation	0	0.0	
Educational Level			
No formal Education	2	1.5	
Informal Education	1	0.7	
Primary Education	2	1.5	
Secondary Education	11	8.1	
Tertiary education	120	88.2	
Household structure			
Monogamy	123	90.4	
Polygamy	13	9.6	
Household size			
1-4	52	38.2	
5-9	82	61.7	5 person
10-14	2	1.4	
Livelihood activities			
Trading	27	19.9	
Paid Employee	1	0.7	
Self-Employee	7	5.1	
Civil Servant	70	51.5	
Artisan	19	14.0	
No Job	7	5.1	
Clergy	2	1.5	
Student	3	2.2	

Source: Field Survey, 2024

Table 3 reveal the different forms of sweet potato in the study area. The result from Table 2 shows that almost all (90.4%) of the respondents consumed boiled or steamed, and 86.8% consumed fried sweet potatoes. This implies that boiled sweet potatoes are easier, accessible, affordable, sensory appealing, and retain the nutrients in sweet potatoes. This could positively influence their consumption pattern of sweet potatoes, while fried sweet potatoes are known as tasty and satisfying snacks that are widely available, accessible, and quick to prepare for consumption. This contributed to the high consumption frequency of boiled or steamed and fried sweet potatoes among the respondents. This finding is also in consonance with that of Amagloh *et al*. (2021) and Noreen *et al*. (2024), which found that boiled and fried forms of sweet potatoes influence the consumption patterns of fried sweet potatoes and enhance dietary diversity.

Table 3: Forms of sweet potato consumed among the respondents (n=136).

Forms	Frequency*
Boiled or steamed	123(90.4)
Fried	118(86.8)
Mashed	56(41.2)
Roasted	42(30.9)
Swallow food	16(11.8)
Baked	12(8.8)
Ingredients	10(7.4)
Puree and soups	5(3.7)
Pancake and waffles	5(3.7)
Sweet potato drinks	4(2.9)
Sweet potato noodles	2(1.5)
Sweet potato smoothies	1(0.7)
Sweet potato tea	1(0.7)
Sweet potato ice cream	1(0.7)

Source: Field Survey, 2024. *Percentages in parenthesis

Table 4 reveals consumption pattern of sweet potato among the respondents. Less than half (45.7%) of the respondents consumed boiled or streamed sweet potato and 25.7% consumed fried sweet potatoes once per week. Two (2) out of sixteen (16) identified forms of sweet potato were more consumed among the respondents in the study area. This implies that most of the respondents in the study area prefer this form because the most popular preparation techniques could be attributed to convenience, cultural considerations, or personal taste preferences and its variation of its consumption pinpoint the various preferences by the respondents. In addition, boiled and fried sweet potatoes are widely known, fast, easy cooking methods, and ease to consume. The cooking methods are affordable, accessible, and more acceptable by the consumers. Boiled sweet potatoes are soft, moist, and retain sweet potato nutrients, while fried sweet potatoes have a crispy texture and enhance taste. This result buttressed the findings of Fredrick *et al*. (2022); Hendebo *et al*. (2022) assertions that boiled and fried sweet potatoes create intervention in promoting sweet potatoes consumption.

Figure 1 show the categorization of consumption pattern of sweet potatoes. The result in Figure 1 indicate that less than half (48.5%) of the respondents highly consumed sweet potato, while 51.5% consumed sweet potato less. This suggest that the respondents relatively consumed sweet potato at a lower rate, this could be as a result of scarcity of sweet potatoes compare to other stable foods, unaware of the nutritional benefits of sweet potatoes and higher preference to consume other staple foods that are more available and accessible. Inadequate knowledge of preparation techniques of sweet potatoes could contribute to the low consumption of sweet potatoes. Sweet potatoes are not be easily accessible in residential areas except at the market.

Table 4: Consumption Pattern of Sweet Potato (n=136).
Source: Field Survey, 2024.

FORMS	Once per week F (%)	Twice per week F (%)	Thrice per week F (%)	Four times per week F (%)	Five times per week F (%)	Six times per week F (%)	One per day F (%)	Twice per day F (%)	Thrice per day F (%)	Never F (%)
Fried	35(25.7)	13(9.6)	19(14.0)	15(11.0)	4(2.9)	6(4.4)	9(6.6)	5(3.7)	3(2.2)	27(19.9)
Boiled or steamed	62(45.6)	22(16.2)	11(8.1)	2(1.5)	4(2.9)	7(5.1)	7(5.1)	4(2.9)	8(5.9)	9(6.6)
Mashed	22(16.2)	12(8.8)	10(7.4)	4(2.9)	4(2.9)	4(2.9)	2(1.5)	4(2.9)	5(3.7)	69(50.7)
Roasted	18(13.2)	11(8.1)	12(8.8)	3(2.2)	4(2.9)	3(2.2)	3(2.2)	0(0.0)	8(5.9)	74(54.4)
Baked	5(3.7)	5(3.7)	3(2.2)	5(3.7)	3(2.2)	2(1.5)	3(2.2)	1(0.7)	7(5.1)	102(75.0)
Pies	5(5.1)	1(0.7)	1(0.7)	3(2.2)	2(1.5)	2(1.5)	1(0.7)	1(0.7)	4(2.9)	114(83.8)
Swallow food	10(7.4)	8(5.9)	1(0.7)	3(2.2)	5(3.7)	3(2.2)	1(0.7)	0(0.0)	0(0.0)	105(77.2)
Puree and soups	1(0.7)	6(4.4)	3(2.2)	1(0.7)	2(1.5)	2(1.5)	1(0.7)	1(0.7)	3(2.2)	116(85.3)
Pancake	3(2.2)	2(1.5)	2(1.5)	3(2.2)	2(1.5)	4(2.9)	1(0.7)	1(0.7)	0(0.0)	118(86.8)
Sweet potato ice cream	0(0.0)	3(2.2)	1(0.7)	4(2.9)	1(0.7)	4(2.9)	1(0.7)	1(0.7)	0(0.0)	121(89.0)
Sweet potato smoothies	2(1.5)	2(1.5)	1(0.7)	0(0.0)	1(0.7)	3(2.2)	1(0.7)	1(0.7)	2(1.5)	123(90.4)
Sweet potato noodles	2(1.5)	2(1.5)	1(0.7)	0(0.0)	2(1.5)	2(1.5)	1(0.7)	1(0.7)	2(1.5)	123(90.4)
Sweet potato tea	1(0.7)	1(0.7)	1(0.7)	0(0.0)	0(0.0)	6(4.4)	2(1.5)	1(0.7)	0(0.0)	124(91.2)
Sweet potato drinks	1(0.7)	1(0.7)	3(2.2)	2(1.5)	2(1.5)	2(1.5)	1(0.7)	1(0.7)	0(0.0)	123(90.4)

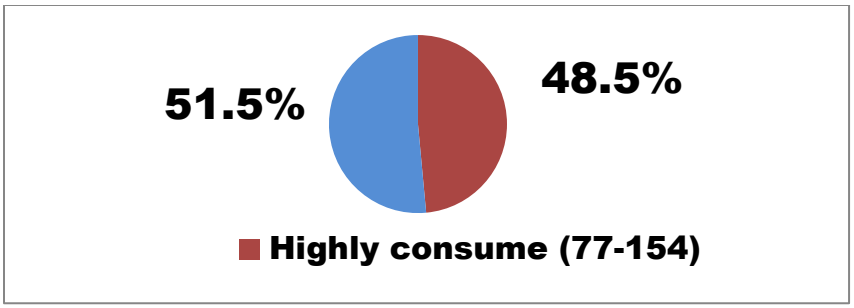

Figure 1: Categorization of consumption pattern of sweet potatoes (n=136)
Source: Field survey, 2024

Table 5 indicate the factors influencing the consumption pattern of sweet potato. Result in Table 4 reveal that price of sweet potato ($\overline{X}$ = 2.43), nutrient and health content ($\overline{X}$ =2.32), availability ($\overline{X}$ =2.29), seasonality ($\overline{X}$ =2.11), consumer preference ($\overline{X}$ =2.04), marketing and promotion ($\overline{X}$ = 2.00) were the essential factors that influence consumption pattern of sweet potatoes. This implies that consumers' are price-sensitive, with price fluctuations impacting sweet potato consumption. Respondents are health conscious, acknowledging the high nutritional value of sweet potatoes. Affordability plays a crucial role in consumer choices and there is potential for increasing awareness campaigns highlighting the health benefits of sweet potatoes. Moreover, availability of sweet potatoes have huge influence in value chain management, price stability, and consumer access. Consistent availability ensures timely delivery. Czeczotko *et al*. (2022) and Kassali *et a*l. (2024) confirm that consumer consumption of sweet potatoes are heavily influenced by prices, nutritional benefits, availability and affordability.

Table 5: Factors that influence consumption pattern of sweet potato (n=136).

Factors	Mean ($\overline{X}$)	Rank
Price of sweet potato	2.43	1st
Nutrient and health content	2.32	2nd
Availability	2.29	3rd
Seasonality	2.11	4th
Consumer preference	2.04	5th
Marketing and promotion	2.00	6th
Complementary products	1.90	7th
Consumer's age	1.89	8th
Shelf life	1.87	9th
Culinary benefit	1.79	10th
Climate change	1.61	11th
Cultural practices	1.60	12th
Agricultural support program	1.58	13th
Government policies	1.51	14th
Consumer's Income	1.47	15th
Odour	1.42	16th
Peer influence	1.36	17th
Administrative	1.18	18th

Source: Field Survey, 2024.

The result of hypothesis 1, "there is no significant relationship between socio-economic characteristics of the respondents and the consumption pattern of sweet potato," was tested using multiple linear regression. Table 6 shows that relationship exist between age (β=0.381), sex (β=0.229), household size (β=0.207), and consumption pattern of sweet potato ($p<0.05$); therefore, the null hypothesis is rejected. This implies that the age and sex of the respondent play important roles, and it indicates that consumers portray distinct preferences, habits, or access levels to the consumption of sweet potatoes. This is an indication that middle-aged (youth) consumers prioritize consumption of sweet potatoes due to their nutritional benefits, convenience, and taste. Younger individuals may consume sweet potatoes less frequently due to changing food habits, while older individuals may incorporate sweet potato with other food to meet the nutritional needs of the household. Moreover,

women play crucial roles in supporting their households to consume sweet potato. Nutritional priorities and preferences vary with women prioritizing benefits during pregnancy or lactation. This result affirms Dereje *et al*. (2020) and Kassali *et al*. (2024) findings, who opined that the consumers age and sex strongly influence the consumption patterns of sweet potatoes in Nigeria.

Table 6: Significant relationship between the socio-economic characteristics and consumption pattern of sweet potato (*Multiple Linear Regression)*

Variables	B	Std. Error	β	T	p-value	Decision
Constant	43.265	15.000		2.884	0.005	S
Age	0.741	0.166	0.381	4.467	0.000	S
Sex	8.080	2.903	0.229	2.783	0.006	S
Religion	4.380	3.321	0.111	1.319	0.190	NS
Marital Status	1.695	3.271	0.043	0.518	0.605	NS
Level of Education	3.801	2.128	0.143	1.786	0.076	NS
Household structure	0.016	4.977	0.000	0.003	0.997	NS
Household size	5.150	2.889	0.207	2.294	0.002	S
Livelihood activities	0.150	0.888	0.014	0.169	0.866	NS

Source: Field Survey, 2024.

The result of hypothesis 2, "there is no significant relationship of factors that influence the consumption pattern of sweet potatoes, was tested using multiple linear regression. The result in the Table 7 shows that significant relationship existed between agricultural support programs (β=0.226), price (β=0.243), consumer preference (β=0.199), nutrient and health content (β=0.214) and seasonality (β=0.320) and the consumption pattern of sweet potatoes ($p<0.05$); therefore, the null hypothesis is rejected. This implies that agricultural support programs, potato price, consumers' preference, nutrient and health content, and seasonality influenced the consumption pattern of sweet potatoes. Agricultural support programs improve sweet potato availability, quality, and food security. Popular for nutritional benefits, seasonal variations influence consumption patterns, with peak seasons being more accessible, price is relatively affordable for the consumers and affordable, leading to a preference for fresher, better-quality sweet potatoes. This result agrees with Egwuonwu (2024) findings that agricultural support programs and nutritional benefits of sweet potatoes are essential determinants of sweet potato consumption in Imo State, Nigeria.

Table 7: Test of significant relationship of factors that influences consumption pattern of sweet potato. (Multiple Linear Regression).

Variables	B	Std. Error	B	t	p-value	Decision
(Constant)	4.554	6.656		0.684	0.495	NS
Government policies	1.835	2.097	0.081	0.875	0.383	NS
Agricultural support program	5.020	2.173	0.226	2.310	0.023	S
Marketing and promotion	1.111	1.839	0.059	0.604	0.547	NS
Cultural practices	3.396	2.456	0.150	1.383	0.169	NS
Price of sweet potato	4.933	2.883	0.243	2.496	0.021	S
Consumer's Income	1.643	1.681	0.084	0.978	0.330	NS
Consumer's age	3.503	2.328	0.173	1.505	0.135	NS
Availability or seasonality	0.119	2.060	0.005	0.058	0.954	NS
Consumer preference	5.258	2.052	0.199	2.388	0.015	S
Complementary products	1.998	1.970	0.093	1.014	0.313	NS
Nutrient and health content	5.041	2.105	0.214	2.395	0.018	S
Culinary benefit	0.713	1.796	0.036	0.397	0.692	NS
Shelf life	2.911	2.481	0.123	1.173	0.243	NS
Odour	2.962	1.890	0.139	1.567	0.120	NS
Climate change	1.326	2.082	0.067	0.637	0.526	NS
Seasonality	7.465	2.513	0.320	2.971	0.004	S
Administrative	6.484	3.349	0.188	1.936	0.055	NS

Source: Field Survey, 2024.

CONCLUSION AND RECOMMENDATIONS

The study concluded that the following sweet potato forms were highly consumed by the respondents; fried, boiled or steam, mashed, roasted, and baked in Abeokuta South Local Government area, Ogun State which are been influenced by some factors that affect it consumption; price of sweet potato, nutrient and health content, availability, seasonality, consumer preference, marketing and promotion, complementary products, consumer's age, Shelf life. Furthermore, the results of the analysis concluded that the socio-economic variables; sex, religion, marital status, educational level, household structure and livelihood activities, had influence on the consumption of sweet potato. However, age and gender has significant relationship with consumption pattern of sweet potato; likewise, there is a significant relationship of the factors that influences consumption pattern of sweet potato. The study recommends that there should be an invention programme on awareness of nutritional and health benefits of sweet potato consumption and training should be done on the nutritional benefits of different forms of sweet-potatoes for wider acceptance and consumption of sweet potato.

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