

PREFERENCE FOR FRESH AND SMOKED FISH AMONG FISH CONSUMERS IN KARAYE LOCAL GOVERNMENT AREA, KANO STATE, NIGERIA

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ABSTRACT

This study evaluated the preference for fresh and smoked fish among fish consumers in Karaye Local Government Area (LGA) of Kano State. Two hundred (200) fish consumers, randomly selected from the Karaye market, were interviewed using a structured questionnaire. Data obtained were analysed using descriptive and inferential statistics. The majority of the respondents were male (60.5%), and youthful (69.5%) with at least secondary school education (86.0%). The predominant household size (42.0%) was 1-5 while the respondents' majority (61.0%) earn a monthly income which is not more than ₦50,000. The majority of the respondents (58.5%) preferred to consume fish in fresh form, with taste being the major reason (58.5%) for their preference. Among those who preferred smoked fish, taste (86.8%) was also the major basis for their choice. Only 44.0% of the total respondents' population agreed that household, income, and educational levels affect their choice of fish form. Regression result reveals that level of education and household size significantly influenced the choice of the forms of fish consumed by the respondents at 5% and 1% respectively while chi-square analysis indicated that price and taste are significant on the consumers' choice of fresh or smoked forms of fish at 5% confidence interval. Hence, the preference of fish consumers in the study area is higher for fresh fish than smoked fish while educational level, income, taste, and fish price play important roles in the consumers' choice.

Keywords: Fish Consumption, Preference, Fish form, Karaye Kano State.

INTRODUCTION

The contribution of cultured and captured fisheries to fish supply for human and non-human uses has been documented globally. Nigeria, as a maritime country, is benefitting from fish supply from aquaculture, artisanal and industrial fisheries. However, the country still suffers a deficit in meeting the domestic demand for fish and relies on importation to augment the shortfall in fish production (Obasi and Adeoye, 2022). Myriads of problems may have limited local self-sufficiency in fish production (Digun-Aweto et al., 2016), importation of frozen fish and minimization of postharvest loss through smoking and other preservative methods has enhanced the availability of fish in different forms in most Nigerian markets. While fish preservation and processing play critical roles in sustaining and improving fish quality (Dauda et al., 2016), fish consumption is dependent on factors such as demographic dynamics, consumers' income, taste, the market price of fish, available fish forms among others (Balogun et al., 2018; Onyeneke et al., 2020). Therefore, the preference for fresh and smoked fish among fish consumers in Karaye Local Government Area of Kano State was investigated.

MATERIALS AND METHOD

This study was conducted in Karaye Local Government Area, Kano State, North-western Nigeria. The Local Government Area (LGA), which lies on latitude 11.7833 and longitude 8.01667, has a land size of about 420 square kilometre and an estimated human population of 141,407 (2006 Census) with a projective population of 236,900 in 2022 (NPC, 2022). The LGA comprises many communities, with Karaye as its headquarters. Challawa Gorje reservoir, which is about 90km Southwest of Kano city as well as the Orientation Camp of the National Youth Service Corp (NYSC) in Kano State are located in this LGA. For this study, a questionnaire survey was employed for data collection, and fish consumers used as respondents, were selected from the Karaye market, the only major market in the LGA, using simple random techniques. A total of 200 fish consumers were interviewed using a structured

questionnaire. Frequency distribution and percentages were used to present the descriptive data obtained while regression and chi-square analyses were used to identify and test the socio-economic variables which influence the respondents' choice.

The regression model employed is $Y = f(X_1, X_2, X_3, X_4, X_5, e)$; where Y = Choice of fish form, X_1 =Age, X_2 =Educational level, X_3 =Household size, X_4 =Position in the household, X_5 =Monthly income, e =error term

RESULTS AND DISCUSSION

The socio-economic characteristics of the respondents, presented in Table 1, show that the majority of the respondents (69.5%) were youthful between the age of 20 – 39 years. A dominant male population (60.5%) who have of married status (66.5%) was observed among the respondents. Also, 86% of respondents' majority have at least a secondary school education with their major occupations being trading (35.5%) and civil service (17.0%) while 24.5% of them were students. The prevalent household sizes among the respondents were 1 – 5 (42.0%) and 6 – 10 (39.0%); 43.0% respondents' majority are fathers in the household while 61.0% of the respondents' population earn a monthly income which is not more than ₦50,000. This result agrees with the findings of Dauda *et al.* (2016) and Balogun *et al.*, (2018) which reported a youthful, male population, with secondary school certificates, among fish consumers in their studies conducted in Katsina and Kaduna States respectively.

Furthermore, Table 2 reveals that the majority of the respondents (58.5%) preferred to consume fish in fresh form, with the taste being the major reason (53.0%) for their preference. This aligns with the findings of Alhassan *et al.* (2012) and Onyeneke *et al.* (2020) which reported a greater preference for fresh fish over smoked fish in the Tamale metropolis (Ghana) and Abakaliki metropolis (Nigeria). Also, the respondents' majority (88.0%) affirmed that price does not affect their demand for fresh fish while 59.5% majority disagreed that fresh fish is more expensive. However, 61.4% of respondents' majority spends not more than ₦5,000 on monthly purchase of fresh fish. Open market (43.5%) and fish farmers (28.2%) were the 2 sources from where the majority of the respondents obtained their fresh fish. The preference for fresh fish may have resulted from its cheapness and low monthly income of the respondents. This aligns with the submission of Abdulaziz (2011) that income level influences the consumers' choice of fish form among other animal protein sources.

Among the respondents who preferred smoked fish, taste was the major reason (86.8%) attributed to their choice; 91.6% asserted that price does not affect their demand for smoked fish, although 67.5% majority spends not more than ₦5,000 monthly for smoked fish purchase. From the total respondents' population, only 44.0% agreed that their level of income, education, and household size affect their choice of fresh or smoked fish. The findings of Onyeneke *et al.* (2020) affirmed that prices of dried (smoked) fish negatively affect the consumer choice and demand for this fish form.

Table 4.1: Socio-Economic Characteristics of Respondents (n =200)

Characteristics	Frequency	Percentage
Age		
Below 20	21	10.5
20-29	61	30.5
30-39	78	39.0
40-49	37	18.5
Above 50	03	1.5
Sex		
Male	121	60.5
Female	79	39.5
Marital status		
Single	59	29.5
Married	133	66.5
Divorce	03	1.5
Widow	05	2.5
Educational Level		

No formal education	16	8.0
Primary	12	6.0
Secondary School	45	22.5
NCE/OND	69	34.5
B.Sc./HND	48	24.0
Postgraduate	10	5.0
Occupation		
Student	49	24.5
Trader	71	35.5
Civil servant	34	17.0
Farmer	21	10.5
Housewife	20	10.0
Others	05	2.5
Household Size		
1 – 5	84	42.0
6 – 10	78	39.0
11 – 15	23	11.5
16 – 20	12	6.0
20 and above	03	1.5
Position in the Household		
Father	86	43.0
Mother	71	35.5
Child	41	20.5
Relative	02	1.0
Monthly Income		
Below 10,000	71	35.5
10,001 - 50,000	51	25.5
50,001 - 150,000	49	24.5
150,001 - 250,000	25	12.5
250,001 - 500,000	03	1.5
Above 500,000	01	0.5

Table 4.2: Respondents' Preference for Fish Consumption.

Characteristics	Frequency	Percentage
Preferred form of fish to be consumed		
Fresh form	117	58.5
Smoked form	83	41.5
Reason for the preference for fresh fish		
Price	50	42.7
Taste	62	53.0
Other reasons	05	4.3
Does the price of fish affect your demand		
Yes	24	12.0
No	176	88.0
Do you agree that fresh fish is more expensive		
Strongly agree	36	18.0
Agree	30	15.0
Partially agree	15	7.5
Partially disagree	16	8.0
Disagree	54	27.0
Strongly disagree	49	24.5
Monthly spending on fresh fish		
Below 1000	27	23.0

1,000 - 5,000	45	38.4
5,001 - 10,000	20	17.1
10,001 - 20,000	18	15.4
20,001 - 30,000	02	1.7
30,001 - 40,000	01	0.9
40,001 - 50,000	03	2.6
Above 50,000	01	0.9
Source of fresh fish		
Fisherman	32	27.4
Fish farmers	33	28.2
Open market	51	43.5
Others	01	0.9
Reason for preference for smoked fish (n=83)		
Price	05	6.0
Taste	72	86.8
Nutritional value	05	6.0
Other reasons	01	1.2
Does price affect your demand for smoked fish (n=83)		
Yes	7	8.4
No	76	91.6
Monthly spending on smoked fish (n=83)		
Below 1,000	33	39.8
1001 - 5,000	23	27.7
5,001 - 10,000	15	18.1
10,001 - 20,000	06	7.2
20,001 - 30,000	02	2.4
30,001 - 40,000	01	1.2
40,001 - 50,000	02	2.4
Above 50,000	01	1.2
Your level of income, education, and household size affect your choice of fresh or smoked fish (n=200)		
Strongly agree	26	13.0
Agree	43	21.5
Partial agree	19	9.5
Partial disagree	54	27.0
Disagree	58	29.0
Strongly disagree	00	0.0

Factors Influencing the Choice of Fish Form among the Respondents

The regression result of socio-economic factors influencing the choice of fish form, presented in Table 3, shows the coefficient of determination of the model is 59% which implies that almost 60% of the variation in choices of the form of fish consumed was explained by the independent variables included in the model, while 40% of the variation can be attributed to factors outside the control of these variables. This affirms that the variables included in the regression model are appropriate and capable of influencing the consumers' choice. Furthermore, the table shows that the level of education and household size significantly influenced the choice of the forms of fish consumed by the respondents at 5% and 1% respectively. Level of education is expected to influence fish choice based on nutritional viewpoints, while household size will influence the choice of form since the fish forms vary with the price.

Table 3: Factors Influencing the Choice of Fish Forms among the Respondents

Adjusted R Square	0.5952779
Standard Error	0.4847347
Observations	200

<i>Significance F</i>	2.21552E-39			
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>
Regression	3	70.71136096	23.57045	100.3136
Residual	197	46.28863904	0.234968	
Total	200	117		
	<i>Coefficients</i>	<i>Stand.Error</i>	<i>t Stat</i>	<i>P-value</i>
Age	0.0534155	0.033612607	1.589152	0.11363
EDU-LV	0.069857	0.021558703	3.240314	0.001402
HHS	0.0214864	0.007083534	3.033295	0.002745

Larger households will tend to go for a fish form that is cheaper (even when the other form is better in taste and nutrition) while smaller households will tend to prefer a fish form that satisfies their taste irrespective of the cost.

CONCLUSION

The preference of fish consumers in the study area is higher for fresh fish than smoked fish. Also, the study reveals that educational level and household size significantly influenced the choice of fish forms among the respondents while price and taste played critical roles in the choice of fish form consumed by the respondents.

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