



FISH CONSUMPTION PREFERENCE AMONG RESIDENTS OF HADEJIA METROPOLIS, JIGAWA STATE, NIGERIA



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ABSTRACT

This study was conducted to examine the consumption preference of six different fish types in Hadejia metropolis using a total of one hundred and twenty (120) structured questionnaires. The questionnaires covered information on demographic data of the respondents, rate of fish consumption and type of fish consumed between August and November 2015. The data were analyzed using descriptive statistics. The result showed that respondents whose ages fall between (26 – 35years) had the highest representation 36 respondents (30%), majority of the consumers are married 78 respondents (65%) and 38 respondents (31.67%) had tertiary education, the respondents responded positively to fish consumption. 111 respondents (92%) consume fish while 56 respondents (46.7%) mode of consumption were weekly. However 60 respondents (50%) preferred to consume *Tilapia monadi* and *Clarias sp.*, while 35 respondents (29.17%) consume *Tilapia sp* only. 6 respondents (5%), preferred *Distichodus brevipinnus* and *Bagrus bayad*. In addition 4 respondents (3.33%) favored *Bagrus bayad* only while 3 respondents (2.5%) *Hydrocynus brevis*. Few respondents choose two species, *Bagrus bayad* and *Gymnarchus niloticus*, *Tilapia monadi* and *Labeo coubie* with 2 (1.67%) and 2 (1.67%) respectively. Respondents with single fish species preferences at 1(0.83%) rate respectively include *Clarias gariepinus*, *Labeo coubie*, *Mormyrus rume*, *Hydrocynus brevis* and *Bagrus bayad*. The study revealed the availability of different fish species. Cost of the fish, freshness, method of processing and taste of the fish affects consumer preference, inclusive constrains to fish demands and low level of consumer income, inadequate fish markets and poor availability of fish farmers.

Keywords: Consumption Preference, Fish, Households,

INTRODUCTION

Fish is a nutritious animal protein and is comparatively cheaper and available source of animal protein in most countries around the world Martins (2015), providing essential fatty acids and micronutrients. The interventions of food-based strategies which promote production and consumption of locally available nutritious foods have utilized fish instead of supplement distribution as a sustainable way of tackling micronutrient deficiencies (Gibson and Hotz, 2001; Tontisirin *et al.*, 2002; Global fish consumption has increased from an average of 10.1 kg per capita per year in 1965 to 16.4 kg in 2005 reflecting the general increase in fish consumption in most of the world's regions except in Latin America and the Caribbean, and sub-Sahara Africa where fish consumption had stagnated over the last four decades (FAO, 2009ab). Fish consumption in sub-Sahara Africa is currently the lowest in the world. Nevertheless, fish is still nutritionally important in many African countries as well as in Asia and Oceania Countries where fish contributes more than 1/3 of the total animal protein supply, calculated from the FAO food balance sheets (FAO, 2009a). There are 30 countries who meet this criterion, including 22 countries which were officially referred to as low-income food deficit countries (LIFDC) in 2009 (FAO, 2009 b). In other words, a large majority (73%) of the countries where fish is an important source of animal protein are poor and food deficient countries. In the LIFDC, in particular, the majority of protein in fact comes from plant-source foods and the amount of fish contributed to protein intake is very little, although fish is a major source of animal protein (Kawarazuka, 2010). A study in Nigeria found that male heads of households consumed 59% more fish by weight than the wife and children. The consumption gap calculated per unit body weight shows that the average fish consumption

is 0.27 kg/kg body weight/year for the male head of households and 0.17 kg/kg body weight/year for the wife and children. When a single fish was shared within the household, there was a tendency to distribute the body of fish to the man, the tail to his wife, and the head to the children on 7-8 out of 10 occasions (Gomna and Rana, 2007).

Fish consumption patterns of the poor depend more on affordability than other factors such as preference which is determined by availability of staple foods, seasonality, and the market value of fish (Kawarazuka, 2010). Fish and other aquatic animals, supplied by common-pool resources and rice fields in particular seasons, play very important roles in the diet of the poor. These fish species are processed, extending the period of consumption for the poor to the lean season. However, data on fish consumption patterns of the poor are scarce and are not necessarily reflected in national statistics. (Kawarazuka, 2010).

METHODOLOGY

Study area: A survey was conducted in Hadejia metropolis of Jigawa state on Latitude: 12° 28' 37" N, Longitude: 10° 03' 10" E with a Population range between 20,000 and 50,000. Hadejia has a tropical climate. The average annual temperature in Hadejia is 27.2°C. The average annual rainfall is 595 mm (TGAOE, 2013). The study was carried out using a total of 120 structural questionnaires administered to respondents. Six wards were randomly selected in the metropolis and 20 questionnaires were administered to each by random selection of respondents.

Data collection and analysis: the analytical techniques used to analyze the data collected from fish consuming households in the study area was descriptive analysis using SPSS 2.0 package. The techniques are described as follows: The descriptive statistics that were used for this study include tabular presentation, frequency distribution and

percentages. They were used to illustrate and show the occurrence of sample characteristics grouped into classes and consuming preferences of the respondents.

RESULTS

Table 1 revealed that 36 respondents (30%) are within the age range of 16-25 which is the highest followed by 26-35 with 30 respondents (25%) while 35-45 had 26 respondents (21.7%), above 46 with 28 respondents (23.3%) in addition most of the respondent are male 75 respondents (62.5%), 45 respondents (37.5%) are females, as indicated in the same table majority of respondents were married 78 respondents (65%) while 42 respondents (35%) are single more over the highest number of respondent have attended tertiary institution 38 respondents (31.66%) while 32 respondents (26.66%) are secondary, due to traditional and Islamic teaching 30 respondents (25%) attended Qurans school, 20 respondents (16.66%) are those who became terminal in the primary education.

Table 2 indicated the rate of fish consumption in which 111 respondents (92.5%) responded positively while only 9 respondents (7.5%) are not consuming fish, it also revealed that 56 respondents (46.7%) are consuming fish weekly while those who reported daily are 41 respondents (34.2%) much more 12 respondents (10%) are consuming twice weekly, however 7 respondents (5.8%) fort nightly the least numbers 4 respondents (3.3%) are taking monthly.

Table 3 showed that 60 respondents (50%) preferred and consumed *Tilapia* and *Clarias* while 35 respondents (29.17%) actually consume only *Tilapia* moreover 6 respondents (5%) prepared *Distichodus brevipinnis* and *Bagrus bayad*, due to tasty nature of *Bagrus bayad*. 4 respondents (3.33%) prepare it as their choice. 3 respondent (2.5%) consider *Hydrocynus brevis* as their favorite fish. Few of the respondent desired on *Tilapia monadi* and *Labeo coubie*, *Bagrus bayad* and *Gymnarchus niloticus*, some consumed all with 2 (1.67%) 2 (1.67%) 2 (1.67%), respectively. Moreover a number of other respondents prepared particular specie alone, which include *labeo coubie*, *Mormyrus rume*, and *Clarias gariepinus* 1 (0.83%), 1 (0.83%), 1 (0.83%), respectively. 1 respondent (0.83%) preferred *Hydrocynus brevis* and *Bagrus byad* to be preferred best fishes.

Table 1. Bio data of the respondents

Parameter	Respondents	Percentage (%)
Age		
16-25	36	30
26-35	30	25
36-45	26	21.7
46 and above	28	23.3
Sex		
Male	75	62.5
Female	45	37.5
Marital Status		
Married	78	65
Single	42	35
Educational Status		
Quran school	30	25
Primary school	20	16.66
Secondary school	32	26.66
Tertiary Institution	38	31.66

Table 2. Rate of fish consumption in the study area

Parameter	Respondents	Percentage (%)
Do you consume fish		
Yes	111	92.5
No	9	7.5
How frequency do you consume fish		
Daily	41	34.2
Twice weekly	12	10
Weekly	56	46.7
Fort nightly	7	5.8
Monthly	4	3.3

Table 3: Type of fish consumed in the study area

Parameter	Respondent	Percentage (%)
<i>Tilapia monadi</i> and <i>Clarias</i>	60	50.0
<i>Tilapia monadi</i>	35	29.17
<i>Bagrus bayad</i>	4	3.33
<i>Hydrocynus brevis</i>	3	2.5
<i>Clarias gariepinus</i>	1	0.83
<i>Distichodus</i> and <i>Bagrus</i>	6	5
<i>Labeo coubie</i>	1	0.83
<i>Mormyrus rum</i>	1	0.83
<i>Hydrocynus brevis</i> and <i>Bagrus</i>	1	0.83
<i>Bagrus</i>	2	1.67
<i>Tilapia monadi</i> and <i>labeo</i>	2	1.67
<i>Bagrus</i> and <i>Gymnarchus</i>	2	1.67
Consuming all the species		

DISCUSSION

Availability of different species of fish can affect the rate at which they are consumed. If the fish is available definitely they will be consumed. Fish are highly diversified, there are many species of edible fish and each species differ significantly in terms of taste, price, production volume and location Musa and Ala (2011). To engage in fish farming, an analysis of consumers' preferences for each species of fish is essential for successful fish farming Musa and Ala (2011). Sex is an important factor that has significant influence on the fish preference and consumption pattern in Hadejia local Government area of Jigawa state. This is because women patronize the market and select good quality varieties of protein rich food items, subsequently increase their consumption for them (Amao and Ayantoye, 2014). Education changes taste over time and usually affects consumption pattern, preference for food items and nutrition of a household, this is because consumers become aware of the nutritional value of protein rich food items like beef, eggs and fish and subsequently enhance their consumption. The distribution of households by sex, age, marital status, and educational status is presented in table1 which showed that the number of male headed households outweighs that of the female and the overall percentage for male headed households was 62.5% while that of the female is 37.5%. This showed that women headed households were less involved in the purchase and consumption of fish in the study area than their male counterparts. 65.0% of the households are married while 35.0% are single. Therefore there is a tendency for more purchases of fish and increased consumption by households

headed by married people than singles due to an expansion expenditures on food items (Amao and Ayantoye, 2014). There is a tendency for the age of the household head to affect the preference and consumption pattern of a household because it can determine to an extent the type and quality of nutrition of the household. A large number of household heads fell within the age group of 36 – 45 years and represented about 21.7%. This was followed by respondents with age group 26-35 years and 46 and above representing 25%, and 23.3% respectively. This showed that young people in the age bracket 26 - 25 consumed more fish than those in other age groups. Education changes taste over time and usually affect consumption pattern, preference for fish species and nutrition of a household this is because consumers become aware of the nutritional value of protein rich food items like beef, eggs and fish and subsequently enhance their consumption Jimoh *et al.*, (2013).

Consumer preference for food items is an important variable used in determining the extent on the degree of household purchasing ability. Households make choice out of various food items available at their disposal and this in turn determines the level and extent to which consumption would be based. Therefore, an analysis of consumer preference for type of fish is important, and this may be useful for fish production, planning, trade, distribution and marketing. Distribution of respondents by Most Preferred and consumed type of fish in the study area is showed in Table 3. 50.0% of the people preferred *Tilapia monadi* and *Clarias* this agree with Musa and Ala, (2011), and 29.17% preferred *Tilapia monadi*. Most of the respondents preferred and consumed fish as the protein sources mainly for its affordability and availability; this conforms to the observations of FAO (1996) that with awareness of fish nutritional values, peoples' consumption may switch to fish or fishery products if they can economically afford them. The data obtained in this research as shown in table three (3) are in line with the finding of Musa (2011) who reported that *Tilapia* and *Clarias* are most preferred fish species for consumers.

CONCLUSION

Understanding typical diet in populations with a high prevalence of under nutrition will help to develop strategies and appropriate interventions to improve the nutritional status. Therefore, further data on commonly consumed fish species, preference, seasonality and intra-household distribution are needed as well as consumption patterns of other food items. The people should be encouraged and trained on important of aquaculture and on possible reasons why nutrition is important.

RECOMMENDATIONS

The farmers should be encouraged, supported and can be given incentives, that will encourage people to embark on fish production and marketing processes while those who are already in the business but lack enough capital for improvement and enlargement should be given credit facilities. Farmers should also be trained by fish experts on new technologies in fish production, breeding and processing methods. This will include strict compliance to issues and practices involved in the economics of production, marketing, management with a view to developing a modernized package of technology for fish producers. The country should also develop the fishery

in family size and greater responsibilities in terms of manpower through regular seminars, workshops and conferences.

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