



Original Article

Determinant Factors for Preference of Catfish as Better Protein Source for Middle Aged Nigerian Residents in Ilorin, Kwara State

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ABSTRACT

Nourishment is a physiological peculiarity that plays a huge part in giving the energy expected to proceed with metabolic working in the body. This study assessed the sources, reasons and preference of catfish as better protein source of catfish for consumption among middle aged Nigerian residents of Ilorin, Kwara State. The instrument was a self-structured questionnaire with a co-effective of 0.89 utilizing a test re-test technique. All theories were tried at 0.05 alpha level. The study reveals that the utilization of catfish among moderately aged Nigerian occupants of Ilorin, Kwara State was high; the level of the explanations behind consuming catfish among moderately aged Nigerian inhabitants of Ilorin, Kwara State was high; the degree of inclination of catfish as better protein source among moderately aged Nigerian inhabitants of Ilorin, Kwara State was high the information on catfish as better protein source affect the inclination of the moderately aged Nigerian occupants of Ilorin, Kwara State. Based on the above, it is hereby recommended that seminars should be given to elderly people in the society on the importance of catfish as better protein source in Ilorin and market women should also encourage wives to buy and cook catfish meals for their families and most especially, their husbands if he is within 35years and 55years.

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Introduction

Nourishment is a physiological peculiarity that plays a critical part in giving the energy expected to proceed with metabolic working in the body (Orak *et al.*, 2016). It is a basic determinant of resistant reactions and hunger is the most widely recognized reason for disappointment of the safe framework on the planet. Such requirements as eating, lodging and dressing are the main essential necessities of humankind.

It is obligatory to devour the food sources from plant and creature beginning expected by the human digestion satisfactorily to keep a solid and healthy lifestyle (Candemir, 2016). People should eat enough; have a fair and solid eating regimen and gain fitting dietary patterns to keep a sound and better life (Asik, 2016). Nourishment is a center mainstay of human wellbeing. Fish is a significant wellspring of human nourishment. The supplements present in fishes

assume a fundamental part in the wellbeing improvement of individuals as well as it forestalls numerous sicknesses that are probably going to happen. The supplements like proteins, lipids, and micronutrients assist in numerous ways with keeping a human healthy. Fish is one of the main wellsprings of creature protein and has been generally acknowledged as a decent protein source and other fundamental supplements important for the support of solid body (Fagbenro *et al.*, 2015; Akinneye *et al.*, 2017). It is viewed as the best meat choice because of its long chain poly unsaturated fats content which advances great wellbeing and forestall infections (Ndife, 2016).

In Nigeria, and especially in Kwara State, fish is profoundly acknowledged for its accessibility, reasonableness and tangible quality (Ighodaro and Abolagba, 2010; Gulshan, *et al.*, 2014). Fish has sound sorts of fat that contain omega-3 unsaturated fats which help to take a chance of creating coronary illness and other clinical issues. Fish consumption has likewise been connected to a lower chance of stroke, sadness, and cognitive deterioration with age. For pregnant ladies, moms who are breastfeeding, ladies of childbearing age, and moderately aged. Fish admission is significant on the grounds that it supplies DHA, a particular omega unsaturated fat that is valuable for the mind development (Onwuka, 2014; Ndife, 2016).

Catfish is additionally wealthy in micronutrients which will quite often be more effectively accessible than those from plant food sources. When contrasted with land living creatures, catfishes are a rich wellspring of protein and have a high happy of omega-3 long chain poly unsaturated fats (Sujatha *et al.*, 2013).

Abraha *et al.* (2018) checked on that people consume catfish in various assortment of far by making various dishes for themselves. Catfish has turned into a significant food source in the eating regimen of the middle matured ahead of schedule before the start of the development. Its accessibility and moderateness make them more than different fishes and creatures protein sources. It is the least expensive wellspring of creature protein for the present. Its convenience for individuals is according to its wellbeing perspective as it helps gives proteins, oils, nutrients and a lot more minerals. In any case, catfish can be valuable to be consumed entire as it shows high protein-fat proportion when contrasted with meat of goat, sheep, bison and chicken.

Catfish (*Clarkias gariepinus*) is a vital new water fish in Nigeria which appreciates wide worthiness in many pieces of the country due to the simplicity of development and its exceptional taste, flavor and surface (Alfa *et al.*, 2014).

Fish is one of the fundamental creature proteins on the planet, which contains 63% protein supply in the public eating regimen (DoF, 2018; Haque *et al.*, 2019). It is plentiful in unsaturated fats, amino acids, nutrients, and minor components as per Roos *et al.* (2013). Other than this reality, fish is extremely simple to process due to the shortfall of conjunctive tissue which stand as a benefit for the moderately aged (Kızılaslan and Nalinci, 2013).

The utilization of fish including catfish has turned into a significant piece of the eating regimen for the moderately aged in Nigeria and Ilorin isn't an inception. Because of different human medical advantages, it is fundamental to evaluate the inclination of catfish by moderately aged' for a sound life. As a consequence of this and as a hole to fill, hence this study to assess determinant factors for preference of catfish as better protein source for middle aged Nigerian residents of Ilorin, Kwara State.

Specific Objectives

1. assess the source of catfish for consumption among middle aged Nigerian residents of Ilorin, Kwara State.
2. determine the reasons for consuming catfish among middle aged Nigerian residents of Ilorin, Kwara State
3. determine the level of preference of catfish as better protein source among middle aged Nigerian residents of Ilorin, Kwara State.

Methodology

A descriptive survey designed was employed for the study for middle aged Nigerian residents of Ilorin, Kwara State. The population are the 250 middle-aged people between the ages of 35 and 55years old. Using Fisher's formula, sample size of 230 was selected for the study. determined through a simple random selection procedure. The instrument for data collection was collected using a self-development structured questionnaire. A -Test-retest method was carried out and correlated using Pearson's Product Moment Correlation [r] (PPMC). The co-efficient of obtained from the instrument will determine the reliability of the instrument. The data was analyzed using descriptive and inferential statistics.

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Results

Table 1: Socio-Demographic Data

Item	Variable	Frequency	Percentage %
Gender	Male	130	52.0
	Female	120	48.0
	Total	250	100.0
Qualification	OND	60	24.0
	HND	90	36.0
	Other Qualifications	100	40.0
	Total	250	100.0
Age	35-45 years	100	40.0
	46 years and above	150	60.0
	Total	250	100.0
Religion	Christian	121	48.4
	Muslim	127	50.8
	African Traditional Religion	2	.8
	Total	250	100.0

Table 1 indicates that 130 (52.0%) respondents were male while 120 (48.0%) were female. 100 (40.0%) of the respondents were at range of 35 - 45 years while 150 (60.0%) of the respondents were at range of 46 years and above, 60(24.0%) of the respondents were OND certificate holders, 90(36.0%) of the respondents

were HND certificate holders while 100(40.0%) of the respondents were other qualification holders, 2(0.8%) were from African Traditional Religion, 121 (48.4%) were Christianity while 127 (50.8%) were between Muslim.

Table 2: Means and Rank order analysis on the source of catfish for consumption among middle aged Nigerian residents of Ilorin, Kwara State

Item No.	Sources of catfish for consumption among middle aged	Mean score	Rank
1	Grocery Store	2.8400	1st
2	Restaurant	2.7240	2nd
3	Recreational Catch or Fish Farms	2.7000	3rd
4	Fish Market or Gourmet Store	2.6720	4th
	Total Average Mean Score	2.734	

Table 2 presents the mean and rank order on the source of catfish for consumption among middle aged Nigerian residents of Ilorin, Kwara State. The table

indicates that Grocery Store has a mean score of 2.84, Restaurant has a mean score of 2.72 and Recreational Catch or Fish Farms has a mean score of 2.70.

Table 3: Means and Rank order analysis on the reasons for consuming catfish among middle aged Nigerian residents of Ilorin, Kwara State

Item No.	Reasons for consuming catfish among middle aged	Mean score	Rank
1	Enjoy flavor	2.8840	1 st
2	Health/Nutrition	2.5880	7 th
3	Tradition/Habit	2.7640	3 rd
4	Price is attractive	2.8440	2 nd
5	Availability	2.7000	5 th
6	Convenience	2.7120	4 th
7	Variety in diet	2.7000	5 th
	Total Average Mean Score	2.741	

Table 3 presents the mean and rank order on the reasons for consuming catfish among middle aged Nigerian residents of Ilorin, Kwara State. The table

indicates that item Enjoy flavor has a mean score of 2.88), Price is attractive has a mean score of 2.84 and item Tradition/Habit has a mean score of 2.76.

Table 4: Means and Rank order analysis on the level of preference of catfish as better protein source among middle aged Nigerians residents of Ilorin, Kwara State

Item No.	Preference of catfish as better protein source among middle aged	Mean score	Rank
1	catfish contained catfish oil for health of middle aged	2.7680	5 th
2	Fish oil contains saturated fatty acids which are quite high	2.7000	6 th
3	catfish helps reduce weight	2.9240	1 st
4	catfish helps retaining muscle mass	2.7800	4 th
5	catfish helps maintaining appetite	2.6960	7 th
6	catfish helps for a healthy heart	2.8200	3 rd
7	catfish helps in promoting the development of brain and eyes	2.6640	8 th
8	Catfish is rich in micronutrients	2.6040	9 th
9	catfishes are a rich source of protein and have a high content of omega-3 long chain poly unsaturated fatty acids	2.8400	2 nd
Total Average Mean Score		2.755	

Table 4 presents the mean and rank order on the level of the reasons for consuming catfish among middle aged Nigerian residents of Ilorin, Kwara State. The table indicates that catfish help reduce weight with mean score of 2.92, catfishes are a rich source of

protein and have a high content of omega-3 long chain poly unsaturated fatty acids with mean score of 2.84 and catfish help for a healthy heart with mean score of 2.82.

Hypotheses Testing

Hypothesis 1: There is no significant difference in the determinant factors and gender.

Table 5: Means, Standard Deviations and t-value of Respondents' view on the basis of gender

Gender	No.	Mean	SD	df	Cal. t-val.	Crit. t-val.	p-value	Decision
Male	130	70.3692	12.58283	248	2.31	1.96	0.000	Rejected
Female	120	73.2917	6.02850					

*Significant; $p < 0.05$

The mean, standard deviation, and t-value of respondents are shown in Table 8 by gender. The table's outcome showed that, with 248 degrees of freedom and a 0.05 threshold of significance, the computed t-value of 2.31 is higher than the crucial t-

value of 1.96. The null hypothesis is rejected since the 0.000 p-value is less than 0.05. Therefore, there is a gender difference in the determining variables for choosing catfish as a superior source of protein for middle-aged Nigerians living in Ilorin, Kwara State.

Hypothesis 2: There is no significant difference in the determinant factors and age.

Table 6: Means, Standard Deviations and t-value of Respondents' view on the basis of age

Age	No.	Mean	SD	Df	Cal. t-val.	Crit. t-val.	p-value	Decision
35-45 years	100	69.7200	13.87686	248	2.66	1.96	0.00	Rejected
46 years above	150	73.1400	6.08445					

The mean, standard deviation, and t-value for respondents based on age groups of 35 to 45 and 46 and older are shown in Table 9 above. The table's outcome showed that, with 248 degrees of freedom and a 0.05 level of significance, the computed t-value of 2.66 is higher than the crucial t-value of 1.96. The

null hypothesis is disproved since the 0.00 p-value is less than 0.05. Therefore, there is a substantial age-based variation in the determining variables for middle-aged Nigerian citizens of Ilorin, Kwara State who chose catfish as a better protein source.

Hypothesis 3: There is no significant difference in the determinant and religion status.

Table 7: ANOVA comparing respondents on the determinant factors for preference of catfish as better protein source for middle aged Nigerian residents of Ilorin, Kwara State on the basis of religion status

Sources	SS	df	MS	Cal. val.	F- val.	Crit. F-val.	p-value	Decision
Between Group	536.357	2	268.178	2.67*	3.00	0.071	Accepted	
Within Group	24745.647	247	100.185					
Total	25282.004	249						

*Significant; $p < 0.05$.

The computed F-value in Table 10 is 2.67, which is below the crucial F-value at 0.05 alpha level of 3.00. The hypothesis is accepted since the p-value of 0.071 is larger than 0.05. According to this, there is no discernible difference in the determining variables for middle-aged Nigerian citizens of Ilorin, Kwara State who chose catfish as a superior source of protein.

Discussion

The sources of catfish for consumption among middle aged Nigerian residents of Ilorin, Kwara State indicates that Grocery Store has a mean score of 2.84, Restaurant has a mean score of 2.72 and Recreational Catch or Fish Farms are regarded as having most high mean score of catfish for consumption among middle aged Nigerian residents of Ilorin, Kwara State. Since all the items have average mean scores of 2.73 that is above the mid-mean score of 2.50. It implies that the level of the source of catfish for consumption among middle aged Nigerian residents of Ilorin, Kwara State was high. This supports the view of Goldman-Rakic and Brown (2011) that elderly people preferred nutrient-rich meals that will have significant impact on their health.

The reasons for consuming catfish among middle aged Nigerians residents of Ilorin, Kwara State, indicates that indicates that item Enjoy flavor has a mean score of 2.88), Price is attractive has a mean score of 2.84 and item Tradition/Habit has a mean are regarded as the most the reasons for consuming catfish among middle aged Nigerians residents of Ilorin, Kwara State. Since all the items have average mean scores of 2.74 that is above the mid-mean score of 2.50. It implies that the level of the reasons for consuming catfish among middle aged Nigerians residents of Ilorin, Kwara State was high. This corroborates the statement of Ighodaro and Abolagba (2010) that people between the age range of 35 years and above consider nutrient-rich foods instead of taking tablet medications for their health.

The determinant preference of catfish as better protein source among middle aged Nigerians residents of Ilorin, Kwara State, indicates catfish help reduce weigh, catfishes are a rich source of protein and have a high content of omega-3 long chain poly unsaturated fatty acids, and catfish help for a healthy heart are

regarded as the most the reasons for consuming catfish among middle aged Nigerian residents of Ilorin, Kwara State.

Knowledge of catfish as better protein source have significance preference on the middle-aged Nigerian residents of Ilorin, Kwara State. Findings revealed that response from strongly agree 57(23.0%) and agree 77(31.0%) were more than the responses from disagree 80(32.0%) and strongly disagree 34(14.0%) and this implies that the knowledge of catfish as better protein source have significance preference on the middle-aged Nigerian residents of Ilorin, Kwara State. This supports the statement of Onwuka (2014) that knowledge of catfish as better protein source has significance impact on the middle-aged Nigerians.

Attitudes of middle-aged Nigerian residents of Ilorin, Kwara State have significant preference on catfish as better protein source. Findings revealed that response from strongly agree 66(26.0%) and agree 86(35.0%) were more than the responses from disagree 66(26.0%) and strongly disagree 30(13.0%) and this implies that the attitudes of middle-aged Nigerian residents of Ilorin, Kwara State have significant preference on catfish as better protein source. This supports the statement of Thomas and Chung *et al.* (2016) that middle-life individuals see fish as better protein source for the healthy system.

There is no huge contrast in the determinant factors for inclination of catfish as better protein hotspot for moderately aged Nigerian occupants of Ilorin, Kwara State based on orientation, uncovered that the determined t-worth of 2.31 is more prominent than the basic t-worth of 1.96 with 248 level of opportunity at 0.05 degree of importance. Since the p-worth of 0.000 is not exactly the 0.05, the invalid speculation is dismissed. Thus, there is a massive contrast in the determinant factors for inclination of catfish as better protein hotspot for moderately aged Nigerian occupants of Ilorin, Kwara State based on orientation. This supports the finding of Oyewole (2010) that there is a huge impact in the determinant factors for inclination of catfish as better protein hotspot for moderately aged Nigerian occupants of Ilorin, Kwara State based on orientation.

There is no huge contrast in the determinant factors for inclination of catfish as better protein hotspot for

moderately aged Nigerian occupants of Ilorin, Kwara State based on age, uncovered that the determined t-worth of 2.66 is more prominent than the basic t-worth of 1.96 with 248 level of opportunity at 0.05 degree of importance. Since the p-worth of 0.00 is not exactly the 0.05, the invalid speculation is dismissed. In this way, there is a huge contrast in the determinant factors for inclination of catfish as better protein hotspot for moderately aged Nigerian occupants of Ilorin, Kwara State based on age. This helps the discoveries of Goodwin and Goodwin (2013) that many individuals of a specific age section have catfish as their favored protein source.

Conclusion

The demand for catfish in/as meals has shown via research to be a very important food source for middle-aged individuals who have proven that it is a vital and probably the cheapest protein source that can meet their dietary requirements and helpfully prevent or curb mid-age-related ailments. This is of course relevant if the determinant factors for preference are all met with positive considerations, in this case study, individuals in their mid-lives residing in Ilorin, Kwara state.

The Implications of the Studies for Healthcare Providers

The current economic realities of the Nigerian state provide a soft landing and window for quick choice of catfish as better protein source for middle-aged Nigerian residents to practical business and management situations.

For the protein requirements in daily diets to be adequately met and guarantee repair of worn-out tissues and general growth and development of the younger ones, healthcare providers should understand the ageing process and the demands of affordable menu for adults to be selective in the kind of protein requirements that they ingest that will help in making the process less burdensome.

An increased and improved knowledge of its existence, inherent values, availability of varied sources of accessing the different processed forms of catfish among others should be well thought during training and effective use should be encouraged.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Seminars should be given to elderly people in the society on the importance of catfish as better protein source in Ilorin, Kwara State.
2. Value re-orientation should be made to take a compulsive approach on meal types.

3. Market women should also encourage wives to buy and cook catfish meals for their families and most especially, their husbands if he is within 35years and 55years.

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