

ANALYSIS OF PROCESSING ACTIVITIES AND CONSTRAINTS AMONG WOMEN CATFISH PROCESSORS IN ANKPA LOCAL GOVERNMENT AREA, KOGI STATE, NIGERIA

¹ Onimisi, M.M., ²Ajibade, Y.E., ¹Adah, P.M. and ^{*3} Ogunremi, J. B.

¹Department of Fisheries and Aquaculture, Prince Abubakar Audu University Anyigba, Kogi State, Nigeria

²Department of Agricultural Economics and Extension Prince Abubakar Audu University Anyigba, Kogi State, Nigeria

^{*3}Department of Fisheries and Aquaculture, Federal University Wukari, Taraba State
Corresponding Author *jogunremi@gmail.com

ABSTRACT

The status of women in our society over the ages and all over the culture had always been considered inferior to men. The study focused on analysis of processing activities and constraints among women catfish processors in Ankpa Local Government Area, Kogi State, Nigeria. Two-stage sampling procedure was used for this study. In stage one; (2) two villages with high level of catfish production and marketing were purposively selected from the 3 districts respectively making a total of 6 villages. Stage two involved random selection of twenty (20) women catfish processors from each village selected in stage one making a total of one hundred and twenty (120) respondents. Data collected were analyzed through descriptive and inferential statistics at ($P < 0.05$). Result shows mean age of 35 years among the respondents and married (56.7%). Women catfish processors major fish processing ranked by mean weighted score (WMS) revealed that washing fish ($\bar{x} = 2.83$), folding ($\bar{x} = 2.52$) and salting ($\bar{x} = 2.48$). **Majority (76.7%) got their information on fish processing through their family and friends. Price instability ($\bar{x} = 3.59$), seasonal in nature ($\bar{x} = 3.01$), poor extension services ($\bar{x} = 2.98$), high incidence of storage pest ($\bar{x} = 2.97$) and difficulty in accessing loans ($\bar{x} = 2.97$) were constraints faced by the respondents. Significant relationship existed between age ($t = 31.12$), educational level ($t = 19.06$), household size ($t = 13.16$) and catfish processing activities among the respondents. The study concluded that the respondents were highly involved in washing of fish before processing and recommended that awareness should be created on significance of catfish culture in order to boost artisanal supply to solve the problem of seasonality and price instability.**

Keyword: Catfish, constraints, processor, spoilage, women

INTRODUCTION

The importance of fish production in the tropics in particular and the world at large can never be over emphasized; it is a source of protein food, raw materials for industries, and job opportunity for the increasing population across the globe (Ike-Obasi and Ogubunka 2019). They are three modes of fish spoilage: Chemical, Enzymatic and Microbial spoilage. One-fourth of the world's fish supply is lost through microbial activity alone. With the a growing world population and the need to store and transport the food from one place to another, fish preservation becomes necessary in order to increase its storage time and maintain its nutritional value, texture and flavor (Ayuba et al., 2015). Fish processing is the process associated with the fish and fish products between the time the fish are caught or harvested and the time the final product is delivered to the consumers.

The processing and preservation of fish is of utmost importance because it is susceptible to deterioration immediately after harvest and to present economic losses. If fish is not sold fresh, preservation methods should be applied to extend the shelf-life (Anyim *et al*, 2019). Historically salting, drying, smoking, fermentation and canning were the methods to prevent fish spoilage and extend its shelf life. In response to consumer demand for texture, appearance and taste, new methods were developed including: Cooling, freezing and chemical preservation. Low temperature storage and chemical techniques for controlling water activity, enzymatic, oxidative and microbial spoilage are the most common methods use in the industry today (Ikape and Cheikyula 2017). **The status of women in our society over the ages and all**

over the culture had always been considered inferior to men. They are regarded as weaklings capable of doing nothing except child bearing and home making (Ajibade *et al*, 2022). The study therefore aimed at analyzing the processing activities and constraints among women catfish processors in Ankpa Local Government. Specific objectives include describing the demographic characteristics of the women Catfish processors, investigating the processing activities, examining sources of information on Catfish processing and identifying constraints faced by women Catfish processors.

MATERIALS AND METHODS

The research was conducted in Ankpa Local Government Area, Kogi State, Nigeria, its Headquarters is Ankpa town on the A233 highway at 7°22'14"N and 7°37'31"E. It has an area of 1,200 km². The major activities of the people are farming and fishing (dbpedia, 2023). Two-stage sampling procedure was used for this study. In stage one; (2) two villages with high level of catfish production and marketing were purposively selected from the 3 districts; the villages selected under Ankpa District: Ojapata and Ogoto, Enjema Distric:Enjema and Awo while Ojoku District: Okaba and Enele respectively making a total of 6 villages. Stage two involved random selection of twenty (20) women catfish processors from each village selected in stage one making a total of one hundred and twenty (120) respondents. Data were collected through structured questionnaire and scheduled interview administered to the women catfish processors. Data obtained were analyzed through descriptive statistics such as (frequency and percentage) while inferential statistics used was Chi square (X^2) at $P<0.05$.

RESULTS AND DISCUSSION

Table 1 shows the distribution of socioeconomic characteristics of women Catfish processors in the study area. The findings in Table 1 shows that half (50.8%) of women were within the age range of 30 – 39years with the average age of women Catfish processors in the study was 35 years. The average ages of processors indicated that most of the women were young and are expected to be agile to cope with the stress associated with the traditional method of fish processing.. More than half (56.7%) were married. Ike-Obasi and Ogubunka (2019) in a similar study reported that majority of the women fish processors were married and educated. Three quarters (75.8%) of women had secondary and tertiary education, The implication of this is that the majority of the women in fish processing activities would be highly productive and responsive to innovation understanding and adoption because the individual's horizon would have been broadened and there would be a more objective assessment of issues and the immediate environment (Jaji *et al*, 2014). Household size was 6 persons with an average monthly income of ₦85,708.57k.

Table 1 Distribution of socioeconomic characteristics of women Catfish processors in the study area.

Socio-economic variables	Frequency	Percentage	Average
Age			
20-29	28	23.3	35 years
30-39	61	50.8	
40-49	25	20.8	
50-59	4	3.3	
60 and above	2	1.7	
Marital status			
Single	44	36.7	
Married	68	56.7	
Divorced	2	1.7	
Widow	6	5.0	
Level of education			
No formal education	20	16.7	
Primary education	9	7.5	
Secondary education	46	38.3	
Tertiary education	45	37.5	
Household size			
1-4	50	41.7	6
5-8	38	31.7	
9-12	23	19.2	

13 and above	9	7.5	
Monthly income (₦)			
10-50,000	34	28.3	
51,000-100,000	30	25.0	
100,001-150,000	56	46.7	₦85,708.57k

Source: Field Survey, 2021

Various levels of processing activities among the women Catfish processors

Various levels of processing activities of the respondents are indicated in Table 2. Ranking by mean weighted score revealed that washing fish ($\bar{x} = 2.83$), folding ($\bar{x} = 2.52$) and salting ($\bar{x} = 2.48$) were the major fish processing activities. The essence of washing is to remove the slime and make the fish hygienic for the consumers, folding is to ease smoking and maximize space while salting add to the taste of fish.

Table 4.2: Level of processing activities among the respondents

Involvement	Always	Occasionally	Never	Mean score
Washing Fish	103	14	3	2.83
Folding	65	52	3	2.52
Salting	63	51	6	2.48
Sourcing	60	53	7	2.44
Sorting	48	65	7	2.34
Packaging	51	44	25	2.22
Storage	39	39	42	1.98

Source: Field Survey, 2021

Sources of information on catfish processing activities among the respondents

The results showed that majority of the processors (76.7%) got information through their family and friends, 75.0% through television, 66.7% through radio, 64.2% through marketers/customers. The implication is that family and friends are closer to the respondents aside those that could afford the cost of television. Information sources are means of improving on fish smoking, sourcing for fish and marketing.

Table 3: Sources of information on catfish processing activities among the respondents

Sources of Information	Frequency (*)	Percentage
Family & Friends	92	76.7
Radio	80	66.7
Marketer/Customer	77	64.2
Television	90	75.0
Extension Agents	61	50.8

Source: Field Survey, 2021 (*) = Multiple responses

Constraints faced by women catfish processors

Constraints faced by women catfish processors in the study area are indicated in Table 4. The result showed that catfish processors saw price instability ($\bar{x} = 3.59$), seasonal in nature ($\bar{x} = 3.01$), poor extension services ($\bar{x} = 2.98$), high incidence of storage pest ($\bar{x} = 2.97$), difficulty in accessing loans ($\bar{x} = 2.97$), perish ability ($\bar{x} = 2.91$), inadequate processing facilities ($\bar{x} = 2.83$), transportation problem ($\bar{x}$) were considered as important constraints to fish processing. As important as fish is to Nigerian, high degree of fish spoilage still occur due to the absence of storage facilities and serves a major constraint to the development of fishing industry in Nigeri (Akinpelu *et al*, 2013).

Table 4: Constraints faced by the catfish processors

CONSTRAINTS	VS	S	NS	UD	Mean score
Price instability	88	22	3	7	3.59
Seasonal in nature	31	65	18	6	3.01
Low product quality	37	27	56	0	2.84
Perish ability	39	38	36	7	2.91
High incidence of storage pest	34	54	26	6	2.97
Difficulty in accessing loans	35	48	35	2	2.97

Inadequate processing facilities	30	48	34	8	2.83
Poor extension services	41	41	33	5	2.98
Transportation problem	28	46	38	8	2.78
Poor market outlet.	29	29	52	10	2.64
Source: Field Survey, 2021 Very Sevier (VS), Sevier (S), Not Sevier (NS) Undecided (UD)					

Significant relationship between socio economic characteristics and the processing activities among the respondents

The result in Table 5 indicated that the socio economic characteristics of women catfish processors and processing activities were significant for age ($t = 31.12$), educational level ($t = 19.06$), household size ($t = 31.12$) and monthly income ($t = 24.01$). The implication is that the older, educated the respondents are the more they are involved in processing activities as age is associated with experience and education is a means of exposure to various processing activities. Also, the number in their house hold contributed to catfish processing activities as more helping hands would be provided. Monthly income on the other hand enables the women catfish processors to purchase tools, hire labour as the case may be for effective smoking activities.

Table 5: Significant relationship between socio economic characteristics and the processing activities among the respondents

Variables	t-value	Decision (HO)
Sex	12.019	Rejected
Age	31.120	Accepted
Marital status	9.166	Rejected
Educational level	19.062	Accepted
Household size	13.163	Accepted
Monthly income	24.014	Accepted

Source: Field Survey, 2021

CONCLUSION AND RECOMMENDATION

Most of the Catfish fish processors are young married women engaged in washing fish and folding before smoking while price instability and seasonality of catfish was a major constraint. The study recommended that awareness should be created on catfish culture to boost artisanal supply to solve the problem of seasonality and price instability, also more extension agents should be employed and mobilized to train catfish processors on modern methods of fish smoking.

REFERENCES

- Ajibade, Y. E., Onimisi, M. M., Yusuf, A. and Achor, A. F (2022). Fish processing and marketing among women fish mongers in Ofu Local Government Area, Kogi State, Nigeria *Journal of Agricultural Science and Practice* Volume 7(2), pp 27-35
- Akinpelu O.M, Ayeloja A.A, George F.O.A, Adebisi G.L, Jimoh W.A. (2013). Gender Analysis of Processing Activities among Commercial Catfish Processors within Ibadan Metropolis, Oyo State South-Western Nigeria *Journal of Aquatic Resources Development* 4: 176 doi:10.4172/2155-9546.1000176 Retrieved January, 2023
- Anyim C. O., Odoemelam L. E. and Okorie N. U (2019) .Women participation in fish processing and packaging in rural communities of Delta State, Nigeria . *Journal of Agricultural Extension and Rural Development* Vol.13(1), pp. 34-43
- Ayuba, V.O., Okomoda, V.T., Ikape, S.I. (2015).Suitability of corn husk and cow dung as alternatives to fuel wood for smoking fish. *Journal of Food and Health science*, pp 2149-0473
- Ikape S.I. and Cheikyula, J.O. (2017). Fish Spoilage In The Tropics: A Review *Octa Journal of Biosciences* Vol. 5(2):34-37
- Ike-Obasi J. and S. O. Ogubunka (2019). The Roles of Women in Fish Processing Activities in Some Local Government Areas of Rivers State, Nigeria. *Agricultural Extension Journal* 3(2), pp 73-77
- Jaji , M.F., Adegbuyi , B., Adedoyin, Yusuf- Oshoala, M. (2014) Assessment of Constraints of Women in Fish Processing and Accessibility to Extension Activities in Lagos State, Nigeria. *International Journal of Sustainable Development*, Vol. 7(5) pp. 61-70, www.dbpedia.org. Retrieved January, 2023