



## **Factors Influencing Women Involvement In Fish Processing And Marketing Around Lake Kainji**

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### **ABSTRACT**

The study examined women fish processors and marketers around Kainji Lake area. 150 respondents were purposively selected from five fishing communities in the area. Descriptive and inferential statistics were used to analyze the data. The objectives were to identify the various processing methods used by the fish processors; determine the motivational factors responsible for women involvement in fish processing and marketing; determine the respondents' access to fishery extension services in the study area and identify the constraints of the respondents. The study hypothesized that there is no significant relationship between the socio-economic characteristics of the women fish processors and marketers and their adoption of improved processing techniques. The results revealed that 46 and 32 percent of the respondents were engaged primarily in fish processing and marketing to generate income to meet family's different needs. Majority (62%) of the respondents adopted the improved smoking kiln technology while only 22% of them still used the traditional sun-drying method. The prominent problem faced by women fish processors and marketers in the study area include difficulty in accessing credit facilities (rank 1). The chi-square analysis showed a non-significant relationship ( $P = 0.05$ ) between adoption of improved fish processing technologies and marital ( $\chi^2$  cal = 0.252;  $\chi^2$  tab = 3.841); monthly income ( $\chi^2$  cal= 7.815;  $\chi^2$  tab= 2.427) and educational ( $\chi^2$  cal= 7.815;  $\chi^2$  tab= 2.619) characteristics of the respondents. Based on the findings of the study, it is recommended that government should provide the women fish processors and marketers with credit facilities and modern fish processing equipment at subsidized rates; extension services should also be strengthened among women fish processors and marketers.

**Keywords:** Women, Motivational factors, Fish processors and marketers

### **INTRODUCTION**

Nigeria is endowed with enormous natural and human resources. Part of these natural resources is the several inland water resources which are estimates to be over 15 million hectares. These water bodies consist of rivers, floodplains, lagoons, ponds and lakes of which Kainji Lake stands out to be one of the most outstanding in fish production (Ita 1993). Nigerian women produce over 70% of the nation's food supply. They solely handle the food processing and marketing sector of agriculture, including fish. Women are generally looked upon as the providers of food, i.e., source of food security to the families (UN, 1995; Khan, 2002). Traditionally, women are the invisible back-bone of the family and the national economy (Tadesse, 1986). Women participate actively in different agricultural activities, fish processing and marketing inclusive (Ani, 2004). According to FAO (2005), majority of fish processing in Nigeria is done by women because of the low capital requirement of artisanal fishery economy.

Around the lake, majority (75%) of the fish processors and marketers are women. Considerable number of women is involved in fish processing and marketing using both modern and traditional fish processing methods. As one of the major components of the nation's economy, the fish sub-sector provides self employment, income, trading opportunities and valuable supply of protein for human

consumption (Alamu, 1994)). The fisheries extension services in Nigeria are provided by the three tiers of Government, (Federal, State and Local Governments). The fishery extension agents are saddled with the responsibility of providing technical services to the fish farmers, teaching and demonstrating improved fish processing techniques and exposing marketing skills and avenues to the fish processors marketers while men catch the fish women are engaged in processing them.

## **METHODOLOGY**

The population of this study was women fish processors and marketers. Multistage sampling techniques were used in the selection of the villages and respondents. One hundred and fifty (150) respondents were interviewed based on structured interview guide. The data collected were analyzed using descriptive and inferential statistics.

### **Data analysis**

Frequency distribution and percentages were used to categorize respondents based on socio-economic characteristics while the chi-Square was used to test relationship between some socio-economic characteristics of the respondents and their adoption of improved fish processing technologies.

## **RESULTS AND DISCUSSIONS**

### **Socio-economic characteristics of the respondents**

Data on the socio-economic characteristics of the respondents are shown in Table 1. Twenty-eight percent of the respondents were within 30 to 35 years age bracket while 22% of them were between 36 and 40 years of age, 18% and 20% of them were within 41 to 45 years and above 45 years of age, respectively. Only 12% of them were under 30 years of age. Essentially, majority (68%) of the respondents were within the agile and economically active age bracket of 30 to 45 years. They will therefore quickly adopt improved fish processing techniques. And according to FAO (1997) that those in the age bracket of 30 – 50 years is the economically active population category that is always physically and mentally alert to responsibility.

Majority (72%) of the respondents were married, while only 28% of them were single. The implication of this is that being married did not hinder or limit their involvement in this aspect of fishing activities. Also, 46 percent of the respondents had between 6 to 10 household members, while 36% of them had 5 household members or under. Only 18% of them had more than 10 household members. In the African perspective, majority (82%) has moderate household size, that is, between 6 and 10 members. This according to Khan (2002) will conversely improve or increase the woman's labour demand in the area of fish processing marketing.

More than half (52%) of the respondents had primary or Qur'anic level of education, 20% had no formal education while 14% of them had the adult literacy education. Twelve percent of them had secondary education or teachers' college education. Only 2% had tertiary level of education. The study showed that majority (86%) of the respondents had out of school education while fourteen percent were found to be literate that is, they can read and write. The low level of literacy among them may imply that most fisherwomen and women entrepreneurs may not be able to read write or have favourable disposition towards recommended innovations or making systems.

Forty percent of the respondents had 6 to 10 years of experience in fish processing/marketing, 24% of them had 16 to 20 years of experience while 18% and 14% had 11 years to 15 years and 1 year to 5 years, respectively. Only 4% of them had over 20 years of experience in fish processing/marketing. The results showed that the respondents are already experts in fish processing/marketing, with 86% of them having experience of over six years. This will improve their managerial skills.

However, 40% percent of the respondents earned estimated income of between ₦50,000 and ₦100,000 per month from fish processing/marketing. While 30% of them realized ₦101,000 to N150, 000 per month, 16% and 8% of them earned under ₦50,000 and between ₦151,000 and N2000, 000 respectively. Only 6% of the respondents realized over ₦200,000 monthly. The result hence shows that the respondents generated estimated high income, with 84% of them earning above ₦50,000 per month. Income of the fish processors and marketers, to a great extent, determines their ability to purchase improved fish processing equipment.

**Table 1: Distribution of Respondents According to their socio-economic Characteristics (N=150)**

Variable	Frequency	Percentage
<b>Age (in years)</b>		
Less than 30	18	12.0
30-35	42	28.0
36-40	33	22.0
41-45	27	18.0
Above 45	30	20.0
<b>Marital status</b>		
Single	42	28.0
Married	108	72.0
<b>Household size (numbers)</b>		
5 and below	54	36.0
6-10	69	46.0
Above 10	27	18.0
<b>Educational level</b>		
No Education	30	20.0
Adult Education	21	14.0
Primary/Qur'an Education	78	52.0
Secondary school/teachers' College	18	12.0
Tertiary education	3	2.0
<b>Fish processing/marketing experience (in years)</b>		
1-5	21	14.0
6-10	60	40.0
11-15	27	18
16-20	36	24
Above 20	06	4.0
<b>Monthly income (₦)</b>		
Under 50	24	16.0
50-100	60	40
101-150	45	30
151-200	12	8.0
Above 200	09	6.0

**Source:** Field Survey, 2019.

### **Fish processing methods**

Table 2 shows the various fish processing methods adopted by the respondents. Majority (62%) of the respondents used the improved smoking kiln while 22% used the sun drying method. Only two (2) percent of the respondents use salting while 14% of them adopted salting and drying method. This result supports the findings of Ibrahim (2006) that smoked fish constitute more than 60% of the processed fish.

**Table 2: Distribution of respondents according to various fish processing methods adopted (N=150)**

Fish Processing Method	Frequency	Percentage
Smoking kiln	93	62.0
Salting	03	2.0
Salting and sun drying	21	14.0
Sun drying	33	22.0

**Source:** Field Survey, 2019

### Motivational factors responsible for women involvement in fish processing

Factors that motivated the respondents to engage in fish processing/marketing are shown in Table 3. Forty-six percent of the respondents indicated that they are engaged in fish processing/marketing because it was a quick source of generating income, while 32% of them claimed that it was because the business helped them in the improving of their household nourishment, 12% of the respondents reported that they took to the business because they could easily afford the required capital outlay. Only 10% of them claimed they were in fish processing / marketing for recreational purpose. This study confirms the study of Ibrahim (2006) that income is the major reason for going into fish processing and marketing.

**Table 3: Distribution of respondents according to factors that motivated them to opt for fish processing (N=150)**

Motivational Factor	Frequency	Percentage
Quick income generating business	69	46.0
Improvement of household nutrition	48	32.0
It is recreational	15	10.0
Affordability of capital requirement	18	12.0

Source: Field Survey, 2019.

### Access of respondents to fisheries extension services

Table 4 shows the accessibility of respondents to extension workers and areas where they require assistance. More than half (58%) of the respondents reported that they have access to extension services while 42% claimed they have no access. Those who have access to extension services reported that the services were provided to them through training workshops and demonstration of improved fish processing techniques, as well as in loan acquisition. Majority (64%) of the respondents reported that they needed credit assistance. While 30% of them claimed they needed assistance in acquiring processing equipment. Only 6% wanted more market outlet for the sales of their processed fish.

**Table 4: Distribution of respondents according to accessibility to extension services (N=150)**

Variable	Frequency	Percentage
<b>Access to extension services</b>		
Yes	87	58.0
NO	63	42.0
<b>Areas where assistance is needed.</b>		
Credit facilities	96	64.0
More market outlet	09	6.0
Processing equipment	45	30.0

Source: Field Survey, 2019

### Problems of women fish processors/marketers

The ranking order of problems facing the respondents is shown in Table 5. The results revealed that the respondents ranked lack of capital as their number one constraint as reported by 64%. This is probably due to the cash-strapped nature of women in developing countries. Capital is necessary for the purchase of equipment which is normally associated with improved technology as recognized by Petrick (2004), De Castro and Teixeira (2006). Lack of modern processing equipment ranked second among the problems faced by the women fish processors/marketers. This was attested to by 30% of the respondents. Other problems include poor quality and quantity of extension service as well as transportation problem. A dismal 4% reported poor market linkages. The low ranking of poor market linkage is probably due to the high presence of the “middle men”.

**Table 5: Distribution of respondents according to constraints faced in fish processing (N=150)**

Constraint	Rank
Difficulty in accessing loans	1
Inadequate processing facilities	2
Poor extension services	3
Transportation problem	4
Poor market outlet.	5

Sources: Field Survey, 2019

#### Test of empirical relationship between variables

The analysis in table 6 indicates a non significant relationship between selected variables (Marital status of respondents, their educational level, as well as estimated income) and type of fish processing technologies used (both traditional and modern). The implication of these results is that the variables do not affect the adoption of improved fish processing technologies by the respondents. This is perhaps due to the fact that the availability of qualitative extension services play significant role in promoting the adoption of technologies.

**Table 6: Summary of chi-square among variables**

Variable	Calculated $\chi^2$	Tabulated $\chi^2$	Degree of freedom	Remark.
Marital status	0.252	3.841	1	NS
Educational level	7.815	2.619	3	NS
Estimated Income	7.815	2.427	3	NS

Sources: Field Survey, 2019

#### CONCLUSION AND RECOMMENDATIONS

It could be concluded that the respondents engage in fish processing/marketing mainly because the business has the capacity to generate the much needed family income and household nutrition.

Based on the findings of the study, it is recommended that:

- Credit facilities are made available to women fish processors/marketers. They should also be encouraged to form cooperative societies to cater for their interests.
- Provision of fish processing equipment should also be made a priority. This can be achieved through encouraging the development of appropriate technologies that the local people can easily understand and use.
- Extension activities should be stepped up to ensure that women fish processors receive up-to-date information on fish processing technologies.
- Expansion of marketing activities to generate more income is a necessity for their empowerment. Government should help link them with appropriate market both within and outside the study area.

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