

ASSESSMENT OF WOMEN INVOLVEMENT IN THE PROCESSING AND MARKETING OF FISH AND FISH PRODUCTS: IMPROVED TECHNOLOGY IMPERATIVE

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ABSTRACT

This study examined the processing and marketing of aquatic, animal resources with particular reference to fish and fish products. The study highlighted the various techniques of collecting these animals, processing them and marketing the finished products. Majorly, the men do the harvesting while the women do the processing and marketing. In the course of this study, a well-structured questionnaire was designed and administered to selected women involved in these activities. Results from the study showed that fewer women were involved in harvesting while majority of the women do the processing and marketing of the fishes and their products. It was also revealed that majority of the women fall between the age brackets of 25-54 years. The married women constituted 59% of the total work force while the unmarried accounted for 16% and the widows formed 12.7%. Results also showed that the annual economic benefit accruable from this business is valued between #400,000 and #500,000 per marketer, which in most cases constituted about 75% of the Gross Annual Income of such communities. The study evaluated the various challenges faced by these women especially in the areas of collection, processing and marketing of these resources and their finished products, some of which include inaccessibility to suitable and modern collecting gadgets, lack of modern equipments for processing and preservation of both the raw and finished products, financial constraints especially in securing loans from banks and cooperatives, difficulty in getting their products transported from rural to urban cities due to deplorable state of the roads and so on. The study proffered useful suggestions which will help in ameliorating some of the hardships encountered by both men and women involved in this venture.

Keywords: Fish, Involvement, Marketing, Processing Products,

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Introduction

Fish is an important source of good quality protein required in human diets. It represents about 55% of the protein intake source of Nigerian citizens (Ayoola, 2010). It has the highest level of metabolizable protein, fats, vitamins, calcium, iron and essential amino-acids when compared to other sources of animal protein such as poultry and beef. This factor makes fish a key ingredient on the global menu. Fish is also important to the ever-increasing world population, especially in most parts of Africa as it forms the major source of cheap high quality animal protein contributing about 50-60% of the animal protein intake of the population, especially in the rural communities. The total demand for fish and fish product is higher in Nigeria than many other West African countries (Abowei and Tawari, 2011). Artisanal fishing in Africa, historically dominated by fishermen in canoes and boats has provided fish as a nutritious source of food of high protein yield, cheaper than meat and globally accepted among the different religious groups (Ahmed and Agbelege, 2007). Fish production is traditionally considered as masculine enterprise but women's role in fisheries is complementary and crucial. In coastal wetland communities, women are deeply involved in artisanal fisheries activities. These activities include unloading of fish from landing canoes, fish marketing and processing (Cochrane *et. al.*, 2009). Olufayo, (2012) described the gender roles of women in aquaculture production and recognized three phases of production:

fishing, processing and marketing that women are majorly involved in. their role, especially in coastal fishery, has become a more relevant way of reducing poverty and enhancing food security both in Nigeria and the entire universe.

Women in India play a major in fish processing, marketing, fish curing, shrimp processing and net making. However, it was found that extension work related to these specific technologies had been geared towards men (F.A.O., 2012). In Nigeria, women are identified with fish processing, marketing, preservation of fish and its products. However, there are other aspects of the fish value chain performed by women but go unnoticed, such as contribution of women to fish production, vis-a-vis food production to livelihoods, especially in the rural and semi-urban areas in Nigeria is apparent (Bada and Rahji, 2010). Women's role especially in the areas of fish processing and marketing has become more relevant as a way of fighting poverty and ensuring food security (Okorley *et. al.*, 1998).

F.A.O. (2016) reported that women play key roles in the fishery industry and in household livelihoods and nutrition. These women, estimated it approximately 90 million, are often discriminated upon by policy-makers who have traditionally assumed (mistakenly) that fisheries are largely male domains. Many studies indicate that millions of rural men and women engage in subsistence fishing on a seasonal or occasional basis, especially in inland fisheries in Asia and Africa, but are not recorded as "fishers" in official statistics

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due to their engagement in other activities, which may be more economically productive, but reluctant to self-report as fishers. It was also noted that the fisheries sector is mainly documented through statistics on capture and aquaculture, where the quality of sex-disaggregated data has been low and the reporting frequency variable. Policies and developmental plans obscure the economic contributions of the pre-and post-harvest subsectors, where women are most active (Okorley and Kwanten, 2006) Tonye and Amiye (2014), noted that despite the involvement of women in the fishery, they are still under estimated, under documented, underappreciated and under supported by the prevailing economic policies and development programme.

In Ilaje, Southern Western Nigeria, fish marketing live and processed forms) is mostly done by women. Women are involved in all stages of harvesting, sorting and grading, processing and preservation, distribution and marketing. Over the years, fish marketing has become such an important occupation among womenfolk that some women inherit the enterprise from their mothers. It is unfortunate that the role of women in the fishing industry in this part of Nigeria is yet to be documented. Therefore, this paper is filling a knowledge gap on women involvement in fishing industry in Ilaje area of Ondo State Nigeria.

Study Area

Ilaje is a Local Government Area in Ondo State, Nigeria. Its headquarter is Igbokoda town. The Local Government Area lies between longitudes $6^{\circ}12^{\circ}\text{E}$ and

$6^{\circ}30^{\circ}\text{E}$ of the Greenwich Meridian and between latitudes $4^{\circ}10^{\circ}\text{N}$ and $4^{\circ}6^{\circ}\text{N}$ of the Equator. Abdul-Salami *et al.*, (2010). The Ilajes are a distinct coastal linguistic group of people originally made up of four geo-political entities namely: Ode-Ugbo, Ode-Mahin, Ode-Etikan and Aheri. Ilaje land has an area of about 1,318 km² and a population of about 290,615 at the 2006 census (National Population Commission, 2006).

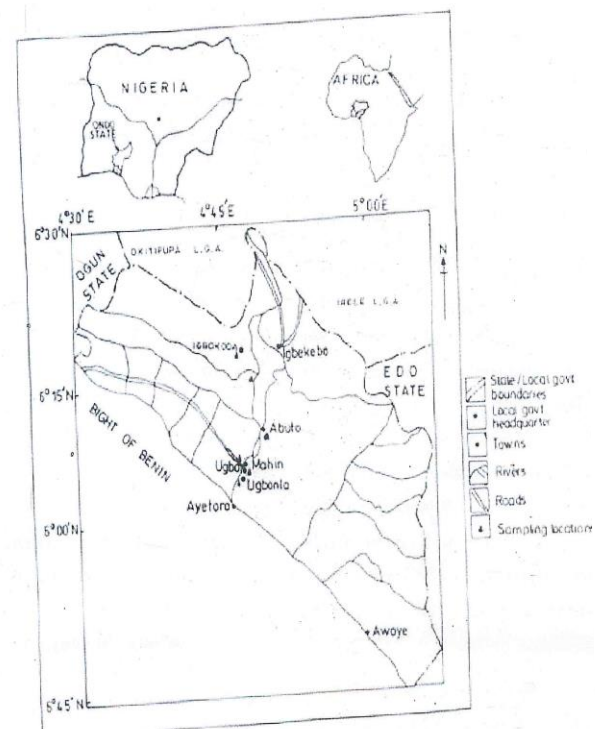


Figure 1: Map of Ilaje Local Government Area showing the sample Locations.

Source: Abdus-Salami *et al.*, 2010.

Sampling Procedure and Data Collection

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This research was carried out, using multi-stage sampling technique. The first stage was the purposive selection of Ilaje Local Government Area of Ondo State, Nigeria. The area was chosen because of its potential for large and small scale fishing business and the establishment of fishing terminal at Igbokoda by the Federal Government. The second stage is the random selection of 300 respondents in each of the five kingdoms that make up the local government area. Sixty (60) well-structured questionnaires were administered on respondents in each of these kingdoms. Visits were made to these areas between 4.00 and 6.00 p.m on the days of visit. This is to cater for women who would have been on fishing expeditions all day and those involved in other occupational activities. The questionnaires were given to each respondent. Information was obtained from all the respondents. Data collected were analyzed using simple descriptive statistics.

Results and Discussion

The socio-economic profile of the respondents is shown in Table 1. The table which showed that majority of the respondents fall between the age bracket of 25 and 54 years (76.3%) while those between 55-64 years constituted 8.7%. Those below 24 years formed 6.7% and those above 65 years constitute 8.3% of the respondents. The majority of the respondents are middle age, full of strength and highly energetic for the aquacultural activities which have more or less becomes part and parcel of their life and

with which they contribute meaningfully to the sector. However, there is a decline in the participation of those above 55 years old. Majority of the respondents were married women forming about (59%) while those separated and divorced constitute 12.3%. Widowed accounted for about 12.7% of the respondents while the single made up 16%. This is in line with Nwabeze, *et. al.*, (2013) who opined that the predominance of more married women in fishery activities is due to their pro-activeness on their part to ensure food security, generate income and reduce feminine vulnerability within the family.

Most of the respondents had house-hold size 1-4 (54%); those with household size 5-8 constitute 26%; those with 9-12 households' size formed 17.3% of the respondents while those with greater than 12 household size make up 2.7% of the respondents. Analysis of the educational status of the respondents revealed that those with secondary education were in the majority (56.7%); those with primary education constitute 29% while those having no formal education and accounted for 8.7% and those with tertiary education were least (5.6%) respondents. This corroborates the report of Cliffe and Akinrotimi (2015). Odulate *et. al.*, (2011) reported that women in the coastal wet areas of Ogun State were not highly educated. This study however showed general trend that the women are averagely educated. This could be due to the fact that Ondo state is educationally advantaged. The years of experience of the respondents on the job showed that 12.7% of the

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respondents had less than 5 years; 16.3% had between 6-10 years; 28.7% had between 11-15 years; 34.6% had between 16-20 years while those with greater experience of more than 20 years constitute 7.7% of the respondents. This could be attributed to the fact that majority of the highly experienced women had trained their daughters who in turn had taken over the business from their mothers, thus allowing their mothers to do little work. The study shows that most of the women had been in the fish between 16-20 years.

The study also revealed that the respondents enjoy substantial annual economic benefits. For example, majority of the respondents (36%) noted that they earn between N401,000.00-N500,000.00 annually, 21% of the respondents earn between N501,000.00-N600,000.00. Those that earn between N201,000.00 – N300,000.00 and N301,000,00 – N400,000.00 constitute 11% and 11.3% respectively. Respondents earning between N101,000.00 – N200,000.00 formed about 7.7% of the population while 9% earn less than N100,000.00. However, very few of the respondents (3%) earn more than N600,000.00. This shows that fishing business is lucrative in the community and suggests why more women are involved.

The involvement of women in the different levels of fish value chain is shown in Table 2. Majority of the women (43%) are into marketing only, 15.7% into processing; 23.3% into marketing and processing; 12.3% into fishing and harvesting while 5% of the respondents engage in gear rental. The involvement of

more women in fish marketing was reported by Oparinde *et al* (2014), Tonye and Amiye (2014) also reported on post-harvest handling of fishes by 60%-80% of the women and youth. The low percentage of women involved in sea fishing was reported by Odulate *et. al.* (2011). This was because engagement of women in active fishing is limited to the lagoon area and it is forbidden for women to be engaged in active sea fishing in the marine wet land area. These authors noted that in some cases, women that are middle men bought fishing gear and hired them out to men for a share of the catch.

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| Parameters | Frequency | Percentage Frequency |
|----------------------------|------------------|-----------------------------|
| Age in years | | |
| < 24 | 20 | 6.7 |
| 25-34 | 76 | 25.3 |
| 35-44 | 76 | 25.3 |
| 45-54 | 77 | 25.7 |
| 55-64 | 26 | 8.7 |
| >65 | 25 | 8.3 |
| Total | 300 | 100 |
| Marital Status | | |
| Single | 48 | 16 |
| Married | 177 | 59 |
| Widowed | 38 | 12.7 |
| Divorced | 27 | 9 |
| Separated | 10 | 3.3 |
| Total | 300 | 100 |
| House hold size | | |
| 1-4 | 162 | 54 |
| 5-8 | 78 | 26 |
| 9-12 | 52 | 17.3 |
| >12 | 08 | 2.7 |
| Total | 300 | 100 |
| Educational Status | | |
| No formal education | 145 | 48.3 |
| Pry Six | 85 | 28.3 |
| Secondary school | 45 | 15 |
| Tertiary | 25 | 8.3 |
| Total | 300 | 100 |
| Years of experience | | |

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| | | |
|--------------------------------|-----|------|
| <5 | 38 | 12.7 |
| 6-10 | 49 | 16.3 |
| 11-15 | 86 | 28.7 |
| 16-20 | 104 | 34.6 |
| >20 | 23 | 7.7 |
| Total | 300 | 100 |
| Annual economic benefit | | |
| <N100,000.00 | 27 | 9 |
| N101 – 200,000.00 | 23 | 7.7 |
| N201,000 – 300,000.00 | 35 | 11.7 |
| N301,000.00 – 400,000.00 | 33 | 36.3 |
| N401,000.00 – 500,000.00 | 109 | 21 |
| N501,000.00 – N600,00.00 | 63 | 3.3 |
| >N600,000.00 | 10 | 3.3 |
| Total | 300 | 100 |

Source: Field survey, 2018.**Table 2:** Job description of the respondents.

| Job description | Frequency | Percentage Frequency |
|--------------------------|------------------|-----------------------------|
| Marketing only | 131 | 43.7 |
| Processing only | 47 | 15.7 |
| Marketing and Processing | 70 | 23.3 |
| Renting of gears | 15 | 5 |
| Fishing and harvesting | 37 | 12.3 |
| Total | 300 | 100 |

Source: Field Survey, 2018.

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| Job description/Reasons | Frequency | Percentage Frequency |
|--|------------------|-----------------------------|
| Marketing only | | |
| Easiest and requires little skill | 300 | 100 |
| East financial gains | 300 | 100 |
| No restriction to age group and gender | 231 | 77 |
| Processing only | | |
| Skill required | 184 | 61.3 |
| Financial gains not much | 287 | 95.7 |
| Restricted to certain group | 15 | 5 |
| Marketing and Processing | | |
| More financial gains | 237 | 79 |
| Stressful | 279 | 93 |
| Renting of gears | | |
| Capital intensive | 285 | 95 |
| Male sector | 278 | 92.7 |
| Fishing and harvesting | | |
| Family sustenance | 239 | 79.6 |
| Gender restriction | 297 | 99 |
| Hazardous | 300 | 100 |

* Multiple choices allowed

Source: Field survey, 2018.

The result on Table 2 showed the reasons respondents gave for being involved in the different aspects of the fish value chain. All the respondents noted that marketing is done by most women because it requires no special skill and it brings immediate financial returns; 77% of the respondents noted that marketing is not restricted to any age group or gender; 61.3% of the respondents noted that processing is done by fewer

women because of the required skill; 95.7% of the respondents noted that the financial gain is not much while 5% of the respondents noted that it is restricted to certain age groups.

Respondents, according to Table 3, showed that marketing and processing give more financial returns (79%) but could be stressful with stress score of 93%. It was also noted that those involved in gear rental are

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very few because it is capital intensive with stress score (95%) while 92.7% of the respondents noted that it is a male dominated sector.

This sector was described as a no go area for women except the so called stubborn and the daring ones. It was also noted that those women in rental businesses are always cheated by the men. To reduce this ugly situation, such women always hand over the gears to trusted men who are their husbands, brothers or friends.

The respondents (79.6%) noted that women are involved in fishing or harvesting for family sustenance especially in female-headed households. Ninety-nine percent of the respondents observed that fishing is restricted to the males and they all noted that fishing and harvesting are hazardous for the women. The study revealed the financial returns the women get determines the aspect of the fishery sector they are involved in. gender restrictions also determine what the woman does. Other factors are the stress and hazards on the job.

The result on Table 4 captured the challenges encountered by the women in aquaculture business. All the respondents noted that access to finance to expand their businesses and purchase modern equipment was a major challenge. Ninety-nine point three percent (99.3%) of the respondents complained of gender bias. Issues raised on the gender bias are found in the table. Transportation associated with bad roads and high extortion were reported by 96% of the respondents while 85.7% of the respondents agreed

that epileptic electricity supply is an issue they contend with resulting in inability to keep excess harvest and deterioration of products since they could not be frozen. Lack of modern equipment/technology was raised by 92.7% of the respondents as a challenge.

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| Challenges | Description of challenges | Frequency | Percentage frequency |
|-------------------------------------|--|-----------|----------------------|
| Gender bias | Restriction to where to fish; limited to small scale fishing; aspect of the value chain that are poorly remunerated are apportioned to the women; lack of training, inability to take part in decision making on issues that affect women; high dependence on men to operate gears, resulting in cheating from the men; domestic responsibilities. | 298 | 99.3 |
| Transportation | High cost of transporting products due to bad roads and illegal extortion from law enforce agents on the roads. | 288 | 96 |
| Access to finance | Respondents have little or poor access to credit facilities to expand their business. | 300 | 100 |
| Electricity | Epileptic power supply resulting in inability to keep excess harvest; deterioration of products because they could not be frozen | 257 | 85.7 |
| Lack of modern equipment/technology | The use of fire and the sun in drying the products are time consuming and stressful, therefore they need modern equipment that will enable them to process larger quantity of their products and also reduce the stress associated with. | 278 | 92.7 |

* Multiple choices allowed

Source: Field survey, 2018.

Conclusion and Recommendations

This study has filled part of the knowledge gaps by providing information on women involvement in fish value chain in the study area. The study showed that all aspects of the fishing business are lucrative but majority of the women are marketers and processors with a few daring ones, venturing into gear renting. The women do have their challenges on the job. Notably are the gender restrictions on them which have hindered the maximization of their potentials. Other challenges include lack of access to fund, poor

transportation system and lack of modern equipment coupled with epileptic power supply.

These issues need prompt intervention in the following areas:

1. Formation of self-help groups which may eventually transform into cooperative society. These groups assist the women to come together, interact, save part of their earnings through which they can access soft loans. If the groups are well managed, they can metamorphose into bigger financial institutions.

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The self-help group helps the woman to develop confidence, speak up their minds, be part of decision making. All these would enable them to fight for their rights. Also, self-help groups can serve as an intermediary between members and other bodies such as Non-Governmental Organisations (NGOs), the government and even banks.

2. Government should improve on provision of infrastructural facilities such as good and accessible roads, regular electricity supply and health care services to the coastal areas.
3. Modern technology in processing and preservation of fish and its products should be made available. NGOs should come to the aid of these women to get the modern equipment. The women could also get this equipment through their self-help groups or the cooperatives. The self-help groups or cooperatives serve as the umbrella body to access the equipment for their members. The purchase of equipment should be accompanied by relevant trainings on their technology. When the women are given all necessary encouragements especially in the areas of easy access to finance, educational empowerment, provision of modern processing facilities, access to cost-effective and appropriate technologies for fish processing and marketing, improved

livelihood will be achieved and they will contribute greatly to gross national income.

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