

Inhibitors militating against artisanal fisherfolks in Epe local government area, Lagos, Nigeria

Bolarin, O., S.E. Komolafe* and O.E. Adetula

Department of Agricultural Extension and Rural Development, Faculty of Agriculture, University of Ilorin, P.M.B. 1515, Ilorin, Kwara State, Nigeria

Abstract

This study examined the inhibitors militating against artisanal fisherfolks in Epe Local Government Area, Lagos, Nigeria. A two stage sampling procedure was used to select 120 respondents. Data were obtained by the use of structured questionnaire. Based on the result of findings, most of the respondents were female (66.7%) with average age of 44 years. The average farming experience was 12 years. Tilapia and Croaker (mean=3.99), Catfish (mean=3.98), Obokun fish (mean=3.97), Pink shrimp (mean=3.91), Ejaosan (mean=3.88), Abo (mean=3.06) and Akokoni (mean=3.03) were highly harvested fish among respondents. The top ranked inhibitors were infestation of water by hyacinth (mean=2.67), inaccessibility to credit (mean=2.05), and inadequate technology (mean=2.02). Borrowing money (mean=2.27), Borrowing equipment (mean=2.05), Servicing boats before breakdown (mean=1.68) were the leading coping strategies to inhibitors against fisher folks in the study area. PPMC results show that sex ($r=0.254$; $p=0.006$), education ($r=0.233$; $p=0.012$) and primary occupation ($r=0.357$; $p=0.000$) were socioeconomic characteristics that significantly affect inhibitors against fisher folks in the study area. There is need for government to make fund available for artisanal fisher folks by creating loans through bank of Agriculture. Fisher folks should also be enlightened through extension programmes on how to control water hyacinth, improvement of fishing practices and technology adoption.

Keywords: Constrains; Coping strategies; Fishing; Fish harvested; Sources of information

1. Introduction

Fish plays a vital role in feeding the world's population and contributing significantly to the dietary intake of millions of the populace (Ajao, 2011). World apparent per capita fish consumption has been increasing steadily from an average of 9.9kg in the 1960s and risen to above 20kg in 2016 (Abasilim *et al.*, 2020). The fisheries sub-sector of the Nigerian economy is made up of artisanal (traditional), coastal (industrial) and cultured fisheries. The artisanal covers the operations of small-scale canoes, fisheries operating in the coastal areas, creeks, lagoons, inshore water and the inland rivers. The artisanal fishery is characterized by low capital

outlay, low operational costs, low technology application and it is labor intensive (Aminu, Ojo and Adekunle 2017; Bolarinwa, 2014). Artisanal fishing occurs around the world (particularly in developing nations) and are vital to livelihoods and food security (Daniel and Monsi, 2019). In Nigeria, large populations of artisanal fishermen who rely on the predominant use of small fishing gear are found around the coastal communities. Apart from being an income earner to many Nigerians especially people in coastal, riverine and lake areas of the country, people earn their living from fish processing and marketing while others engaged in fisheries research (Komolafe *et al.*, 2018; Bolarinwa, 2012). Faturotu, (2010) reported that artisanal fisheries in Nigeria provide more than 82% of the domestic fish supply, giving livelihoods to

*Corresponding author: Sola Emmanuel Komolafe

Email: kemmas04@yahoo.com

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up to 5.8million fisher folks in the secondary sector but are faced with several challenges in their operation. To formulate relevant fisheries developmental programmes that will positively affect the enormous fishermen, it is important to identify the inhibitors to fisher folks in fish community like Epe. Therefore, this research seeks to examine the inhibitors militating against artisanal fisher folks in Epe Local Government Area of Lagos State, Nigeria. The specific objectives of the study are to describe the socio-economic characteristics, identify dominants fish harvested, identify the constraints to fishing activities and coping strategies to the constraints identified.

2. Methodology

This study was conducted in Epe, Lagos State, Nigeria. Epe (town and port) lies on the north bank of the coast lagoon and has road connected to Ijebu-ode and Ikorodu. It has a land area of about 965km² with coordinates 6° 35'N and 3° 59'E. Fishing is the major occupation of Epe people. Epe fish market is one of the leading Fish Market in Lagos State. The population of the study comprised of all fish marketers in Epe, Lagos State. A two-stage sampling procedure was used for the study. The first stage involved the purposive selection of Chief Market because of the concentration of artisanal fisher folks in the market. The second stage was the random selection of 120 respondents from the market. A content validated interview schedule was used to collect primary data. The instrument used was subjected to reliability test. The test of reliability was done using test pre-test method and the data was analysed and result gave r-value of 0.81 which indicated that the instrument used was reliable. Likert type scale was used to measure inhibitors of artisanal fisher folks as very severe=3, severe=2 and not severe=1. The collected data were analysed using frequency counts, percentages, and means score to achieve the set objective while Pearson Product Moment

Correlation (PPMC) was used to assess the significant relationship between socioeconomic characteristics and inhibitors militating against artisanal fisher folks. The function of PPMC expressed as:

$$r_{xy} = \frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{\{n \sum x^2 - (\sum x)^2\} \{n \sum y^2 - (\sum y)^2\}}}$$

r = correlation coefficient

x =independent variables: age (years), sex (male=1, female=0), household size (number of persons), fishing experience (years), primary occupation in fishing (fishing=1, others=0), membership of cooperative (yes=1, no=0), source of information (yes=1, no=0).

y = dependent variable: Inhibitors militating against artisanal fisher folks

n = total number of observation

∑ =summation

3. Results and Discussion

Results presented in Table 1 show that the average age was 44 years with average household size of 5 persons and average farming experience was 12 years. This finding agrees with Olaoye *et al.* (2012) who found that most fisher folks are in their active ages to undergo strenuous tasks associated to the fishing enterprise. The table further show that most of the respondents were female (66.7%), implying that women involvement in fishing activities was high in the study area. This finding agrees with Olupade and Sesay, (2019) that women make up an important part of the fishing sector and play critical roles, particularly, in small-scale fisheries and increasingly in capture fishing and other activities. Similarly, Odili *et al.* (2012) reported that women are more commonly occupied in subsistence and commercial fishing from small boats and canoes in coastal or inland waters. The roles of women in the sector are diverse; and according to

Olufayo (2012), they take part specifically in fishing, processing and marketing. According to Cliffe and Akinrotimi (2015), fisher women engage in coastal fisheries activities to meet their daily need which includes feeding, taking care of their children and lending a helping hand to support their husbands. More than half of the respondents (58.3%) had primary education

where fishing business is their primary occupation (56.7%). Only half (50.0%) of the respondents were members of cooperative society. The results also show that radio (48.3%) and family and friends (45.8%) were the main sources of information of respondents on fishing activities.

Table 1. Socio-Economic Characteristics of Respondents

Variables	Mean score	Frequency	Percentage
Age	44 years		
Household size	5 persons		
Farming experience	12 years		
Sex:			
Male		40	33.3
Female		80	66.7
Educational level:			
No formal education		25	20.8
Primary education		70	58.3
Secondary education		25	20.8
Membership of cooperative society:			
Yes		60	50.0
No		60	50.0
Primary occupation:			
Fishing		68	56.7
Others		52	43.3
Sources of Information:			
Television		7	5.8
Radio		58	48.3
Family and Friends		55	45.8

Source: Field survey, 2017

The results illustrated in Table 2 reveal that Tilapia and Croaker (mean=3.99), Catfish (mean=3.98), Obokun fish (mean=3.97), Pink shrimp (mean=3.91), Ejaosan (mean=3.88), Abo (mean=3.06) and Akokoni (mean=3.03) were highly harvested among respondents. Earlier

report by Okeowo, Bolarinwa and Ibrahim (2015) had similarly found *Mulletts (Mugil spp & Liza spp)* (Atoko) and *Cynoglossusspp* (Sole) Abo species of fishes harvested by artisanal fisher folks in Epe.

Table 2. Dominant fish species harvested

<i>Fish species</i>	<i>Percentage Responses</i>				<i>Mean score</i>
	<i>Always</i>	<i>Occasionally</i>	<i>Sometimes</i>	<i>Never</i>	
Tilapia	99.2	0.8	0	0	3.99
Croaker	99.2	0.8	0	0	3.99
Catfish	98.3	1.7	0	0	3.98
Obokun	96.7	3.3	0	0	3.97
Pink shrimp	95.0	2.5	0.8	1.7	3.91
Ejaosan	89.2	9.2	1.7	0	3.88
Abo	5.8	94.2	0	0	3.06
Akokoni	3.3	96.7	0	0	3.03
Crabs	2.5	25.8	68.3	3.3	2.28
Kote	2.5	0	2.5	95.0	1.10
Atoko	1.7	0.8	2.5	95.0	1.09
Shawa	0	0.8	3.3	95.8	1.05

Source: Field survey, 2017

The top ranked inhibitors as revealed in Table 3 were infestation of water by hyacinth (mean=2.67), inaccessibility to credit (mean=2.05), and inadequate technology (mean=2.02). Olaoye *et al.* (2012) also identified infestation of water by hyacinth, inaccessibility to credit, and inadequate

technology as major constraints among artisanal Fisher Folks in Ogun Water-Side Local Government Areas of Ogun State, Nigeria. Several authors have identified lack of access to credit as major constraints among artisanal Fisher Folks in Nigeria (Daniel and Monsi 2019; Bonjoru *et al.*, 2019; Oladimeji *et al.*, 2013).

Table 3. Constraints faced by artisanal fisher folks

<i>Inhibitors</i>	<i>Percentage Responses</i>			<i>Mean</i>
	<i>Very Severe</i>	<i>Severe</i>	<i>Not severe</i>	
Infestation of water by hyacinth	75.0	16.7	8.3	2.67
Inaccessibility to credit	5.0	95.0	0	2.05
Inadequate technology	23.3	55.0	21.7	2.02
Unavailability of spare parts	17.5	54.2	28.3	1.90
Poor boat maintenance	15.8	51.7	32.5	1.83
High cost of equipment	13.3	50.0	36.7	1.77
Inadequate storage facilities	17.5	37.5	45.0	1.73
Scarcity and high cost of net	5.0	50.0	45.0	1.60
Climate condition	5.0	22.5	72.5	1.33
Menace of trawlers	4.2	21.7	74.2	1.30
Difficult access to fuel	2.5	22.5	75.0	1.28
Lack of electricity	3.3	11.7	85.0	1.18
Distance to market	2.5	9.2	88.3	1.14

Source: Field survey, 2017

Table 4 show that borrowing money (mean=2.27), borrowing equipment (mean=2.05), servicing boats before breakdown

(mean=1.68) were the leading coping strategies to mitigate the inhibitors against fisher folks in the study area.

Table 4. Coping strategies of artisanal fisher folks

Coping strategies	Percentage Responses			Mean	Ranking
	Always used	Rarely used	Never used		
Borrowing money	29.2	68.3	2.5	2.27	1 st
Borrowing equipment	15.0	75.0	10.0	2.05	2 nd
Servicing boats before breakdown	20.0	27.5	52.5	1.68	3 rd
Hawking fish harvested	8.3	48.3	43.3	1.65	4 th
Catching small amount of fish	12.5	30.8	56.7	1.56	5 th
Fishing early in the morning	15.0	23.3	61.7	1.53	6 th
Use of ice block for preservation	8.3	24.2	67.5	1.43	7 th

Source: Field survey, 2017

Results of the relationship between socioeconomic characteristics and inhibitors against fisherfolks show that sex ($r=0.254$; $p=0.006$), education ($r=0.233$; $p=0.012$) and

primary occupation ($r=0.357$; $p=0.000$) were socioeconomic characteristics that significantly affect inhibitors against fisher folks in the study area.

Table 5. Relationship between socioeconomic characteristics and constraints faced by respondents

Variables	r –values	p -values	Decision
Age	0.025	0.791	Not significant
Sex	0.254*	0.006	Significant
Education	0.233*	0.012	Significant
Household size	0.038	0.684	Not significant
Primary occupation in fishing	0.357*	0.000	Significant
Fishing experience	0.140	0.133	Not significant
Membership of cooperative	0.053	0.529	Not significant
Source of information	0.060	0.520	Not significant

*Correlation is significant at 0.05 level

4. Conclusion and Recommendations

Based on the major findings of the study, it could be concluded that artisanal fisher folks are given little or no attention by the extension services and the government even with the great role they play in the fisheries subsector of Nigeria. Due to lack of funding or credit facilities, they use baskets and cages which has great effect on their catch levels. The need for extension programme is of great importance to the artisanal folks to help improve their livelihood economically and socially. There is need for government to make fund available for artisanal fisher folks by creating loans through

bank of Agriculture. Fisher folks should also be enlightened through extension programmes on how to control water hyacinth, improvement of fishing practices and technology adoption.

Authors' Contributions

All authors are contributed in equal.

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Institutional Review Board Statement

The study was conducted according to the guidelines of the Department of Agricultural Extension and Rural Development, University of

Ilorin, Nigeria and approved by the Head of Department.

Data Availability Statement:

The authors confirm that the data supporting the findings of this study are available within the article.

Ethics Approval and Consent to Participate

Informed consent was obtained from all participants involved in the study.

Consent for Publication

The authors agree to publish this study

Conflicts of Interest

The authors declare no conflict of interest

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