

VALUE ADDED FISH PRODUCTS AS MEANS FOR YOUTH ENTREPRENEURIAL SKILL EMPOWERMENT IN SELECTED FISHING COMMUNITIES

AROUND DAKINGARI

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ABSTRACT

Consumers are used to consumption of ordinary chin-chin, it is therefore used as a control to determine differences in taste, flavour, appearance, colour, odour and level of patronage of the products. Fish value addition products and ordinary chin-chin are prepared in the Department of fisheries technology in conjunction with the Centre for Entrepreneurial Development (CED) of Kebbi state Polytechnic, Dakingari. 30 youths are selected from fishing communities of Aljannare, Bendu, Kawara, Kalel, Tuga and Bahindi. VAF products are ordinary chin-chin (control) fish crispy, fish balls, fish cakes, fish flakes, fish chin-chin and fish pasta Ordinary chin-chin initially probably due to familiarization, but, declined with the presence of VAFPs. Fish chin-chin steadily appreciated through to the end. However, other VAFP also appreciated in terms of various organoleptic tests. Poor awareness of VAFP and its nutritional advantage is responsible for its poor patronage. Consumer preference shown that many respondents are willing to consume VAFP at whatever cost as soon as available. This confirmed that there is potential market outlet for VAFP in the fishing communities. This agrees with the report by Sabat et al, 2008.

Keywords: VAFP, CED, Organoleptic Test, Fishing Communities And Consumer Preference.

I. INTRODUCTION

Vincent, (2016) "Generally, value addition in any supplementary or extra activity that in the one way or the other alter the nature of fish thus enhancing its market value or value at the time of sale value addition is an expanding sector in processing industry, especially in the fish export market. Value is added to fish and fishery products depending on the requirement of different consumers of market.

In addition to processing, fish can be industrially processed further into wide array of products to increase their economic value and allow fishing industry and exporting countries to reap the full benefit of their aquatic resources. Besides, value addition, fish generates more employment and hard currencies are earned. This is important these days because of societal changes that have led to the development at the outdoor catering, Convenience products and fish services requiring the fish products readily to eat or requiring little preparation before serving".

Sabat et al, (2018) said " Recent development in fish processing technology is oriented towards technology upgrade diversification and quality assurance. These have lead among others, to a great demand for fish-based convenience product in ready -to-eat or ready-to-cook forms. There are several factors which have influenced this demand. One is increasing affluence and consequential changes that have influenced the eating habit, particularly in the western countries, which have resulted in the demand for value added convenience products based on fish. There is also an increasing trend of eating away from home and this has triggered there growth of fast food concerns serving value added fish based products.

Selvaganapathy and Krishnan (2015). Value addition is of increasing importance, particularly in fish processing industry, mainly because of the increased opportunities, the activity present for earning foreign exchange. Besides, value addition is one of the possible approaches to the profitability of fish processing industry, which now lay a greater emphasis on quality assurance, there appears to be a good potential for Nigeria to its share in international fish trade by exporting value added fish products. Rapid industrialization and urbanization of rural areas in Nigeria provide ample scope for the development of such markets increasing number of working women, shrinking family size, education and general consciousness about hygiene and health are the other favourable factors. A large number of value added and diversified fish products both for export and internal

market based on farmed fish and minced meat from low-priced fish have being identified. The technology for their production is readily available.

Salim and Geetha (2013). Women are known for their multi-talent, tacking both indoor and outdoor activities without much effort. In the local markets of the coastal region, the fisher women are tending to be vendors to sell catch of that day.

Most of the times, the women are forced to sell at lower cost as the fresh and raw fish does not have a long shelf life. In order to prevent this issue and to improve the living condition of the fisher women there are various methods like that of bakery, dried and thermal treated products and pickles can be followed.

Akter et al, (2013) "Throughout the world, the main work of sphere of women in fisheries is in processing and marketing the major processing work undertaken by women is fish drying/curing. The traditional methods of fish drying is undertaken in unhygienic way, exposed to sun, pest, microbes, animal and other impurities. The twenty-sixth session of the FAO Committee on Fisheries (COFL) held in Rome from 7 to 11 March 2005, noted a range of issues that should be addressed so that small-scale fisheries can make a greater contribution to rural development, sustainable livelihoods, poverty alleviation and food security. The issues noted and that that need to be addressed were the lack of rural infrastructure and services , access to credit and microfinance services as well as the reduction in post-harvest losses, better access to market and adding value to fish and fish products through improved practices in the field of fish handling, preservation, processing and marketing.

Empowerment theory focuses on process that enables participation, enhances control through shared decision making; and create opportunities to learn , practice and increase skill empowerment theory suggests that engaging youth in pro-social, meaningful, and community enhancing activities that the youth themselves defines and control, helps, youth gain vital skills, responsibilities and confidence necessary to become a productive and healthy adults. Youth empowerment programmes are aimed at creating healthier and higher qualities of life for underprivileged or at-risk youths.

There are various types of empowerment programs across the globe that empower youth through many different tactics and programs. Programs can operate in variety of settings. The majority of programs operates in more than one setting, which may be a key factor in their success. The beneficial outcome to youth empowerment programmes are improved social skills, improved behaviour, increased academic achievements, increased self-esteem and increase self-efficacy.

There are programs aimed at just empowering women and young girls. Regardless of specific goals or methods, empowering effect include improving women wellbeing, self-esteem, self-efficacy and enhancing social status by teaching technical and organizational skills.

II. MATERIALS AND METHOD

30 youths are selected from fishing communities of Aljannare, Bendu, Kawara, Kalel, Tuga and Bahindi. They are grouped into five, each group was taught ordinary chin-chin (control) and one value added fish product for five days. At the end of the training each participant, was given #10,000 (Ten thousand Naira) to start with. They are monitored on weekly basis for six (6) weeks to ascertain the growth of their business, patronage and acceptance of new value fish addition when compared to ordinary chin-chin (control) fish crispy, fish balls, fish cakes, fish flakes, fish chin-chin and fish pasta are all value added fish.

The ingredients for the manufacture of the products are purchased from a local markets and the fishes used were tilapia and clupeids, obtained from the local fish market of the experimental fishing communities.

1. MATERIALS

FISH BALL

- (i) Flour/corn meal
- (ii) Fish mince.
- (iii) Salt.
- (iv) Spices.
- (v) Cooking oil.

FISH FLAKES

- (i) Flour/corn meal
- (ii) Fish mince
- (iii) Salt.
- (iv) Tapioca starch
- (v) Cooking oil.

FISH CAKE

- (i) Flour/corn meal
- (ii) Fish mince.
- (iii) Salt.
- (iv) Green pepper and garlic
- (v) Cooking oil
- (vi) Onion.
- (vii) Curry.
- (viii)Egg.

FISH CHIN-CHIN

- (i) Baking powder
- (ii) Fish mince
- (iii) Salt
- (iv) Cooking oil
- (v) Butter.
- (vi) Sugar.

FISH CRISPY /FINGER

- (i) Flour/corn flour.
- (ii) Fish mince.
- (iii) Salt.
- (iv) Baking powder.
- (v) Cooking oil

ORDINARY CHIN-CHIN

- (i) Baking powder
- (ii) Salt
- (iii) Cooking oil
- (iv) Butter
- (v) Sugar.

2. METHODS

To sensitize the public opportunities available in VAFP, awareness was created among the youth regarding the nutritional and business benefits in the value addition of fish products. Later, youths motivation was given through social, economic and the health benefits of these value added fish products. Further to develop local expertise, these youths were trained and empowered to acquire skills and knowledge in areas production, processing and packaging and marketing of the products, among which the procedure for the production of ordinary chin-chin, fish crispy, fish balls, fish cakes, fish flakes and fish chin-chin. In order to ensure sustainability, continuous follow up of these groups were done for 6 consecutive weeks after the training and empowerment.

Five (5) youth members from six (6) fishing villages from Suru and Bagudo local government areas are enrolled for the exercise totalling 30 youths with gender equality of 50%- 50% male to female ratio. They are divided into five (5) groups of 6 members with at least a member from every participating fishing village (Aljanna'are, Bahindi, Bendu, Kalel, Kawara and Tuga) in a group.

Table 1: Showing VAFP to each Group

GROUP	PRODUCTS
I	Fish chin-chin and ordinary chin-chin
II	Fish ball and ordinary chin-chin
III	Fish cake and ordinary chin-chin
IV	Fish flakes and ordinary chin-chin
V	Fish crispy and ordinary chin-chin

III. DATA COLLECTION

The average weekly sales of value added fish products and ordinary chin-chin, weekly records for the sales were taken for 6 consecutive weeks using the instruments below. All figures are in Naira.

Table 2: Weekly Sales of Value Added Fish Products and Ordinary Chin Chin

WEEK	Ordinary Chin chin	Fish Crispy	Fish Ball	Fish cakes	Fish flakes	Fish Chin chin
1	9,400	8,000	7,700	7,500	7,450	8,500
2	8,900	8,500	8,400	7,950	7,900	9,700
3	8,750	9,000	9,200	8,050	8,300	9,700
4	8,000	9,650	9,700	8,650	9,000	10,200
5	7,500	9,850	10,100	9,000	9,500	10,600
6	7,050	10,400	10,800	10,600	10,450	11,700

Table 3: Cost and Sales Analysis at 6th Week

S/n	Value added fish products	Cost of production at 6 th week	Sales at 6 th week
1.	Ordinary Chin chin	6,400	7,050
2.	Fish crispy	9,300	10,400
3.	Fish ball	9,500	10,800
4.	Fish cake	9,400	10,600
5.	Fish flakes	9,400	10,450
6.	Fish Chin chin	9,800	11,700

After 6 week of transaction 120 questionnaire was distributed amongst the consumers from the experimental village to assess their opinions and perception on value added fish products.

Table 4: Organoleptic Responses from Consumers

S/n	Products	Appearance	Colour	Odour	Texture	Taste	Flavour
1.	Ordinary Chin chin	88.3	88.3	87.5	95.8	81.7	80.0
2.	Fish crispy	85.0	88.3	85.8	86.7	87.5	84.1
3.	Fish ball	86.7	83.3	91.7	93.3	95.0	91.7
4.	Fish cake	82.5	96.7	87.5	92.5	94.2	83.3
5.	Fish flakes	83.3	93.3	94.2	95.8	92.5	94.2
6.	Fish Chin chin	97.5	96.7	95.8	93.3	94.2	94.2

Out of 120 questionnaires the result in Table 4 recorded those who agree or strongly agree in each case.

Table 5: Consumers Willingness for Value Added Fish Products

S/n	Statement	Response	Percentage
1.	Once every month	35	29.1
2.	Every forth night	20	16.7
3.	Once every week	20	16.7
4.	As soon as available	45	37.5

Table 6: Consumer Response about Value Added Fish Products

S/n	Statement	Disagree	Neutral	Agree	Strongly agree
1.	VAFP are good and cheap alternative protein source	----	16.7	16.7	66.7
2.	The fish used are of low quality	-----	16.7	33.4	50
3.	VAFP are ready to cook or ready to eat food	8.3	8.3	16.7	66.7
4.	VAFP cannot be preserved for a long time.	8.3	4.2	4.2	83.3
5.	I prefer imported VAFP	-----	12.5	20.8	66.7
6.	I prefer locally produced VAFP	-----	12.5	4.2	83.3
7.	I am ready to buy at any price once its available	16.7	8.3	24.0	50
8.	There is no/low awareness about VAFP in our village.	-----	-----	41.7	58.3
9.	VAF Products are more costly than non VAF products.	----	16.7	58.3	25.0

IV. RESULTS

From the Figure below, it would be observed that at the beginning the weekly sales of ordinary chin-chin appreciated at 9, 400 but gradually depreciated to as low as 7,050 at 6th week. Also, fish chin-chin had appreciable start at 8, 500 and continued to rise to 11,700 at 6th week. While, other VAFP had average weekly sales of between 8,000 and 10,000 within the time frame.

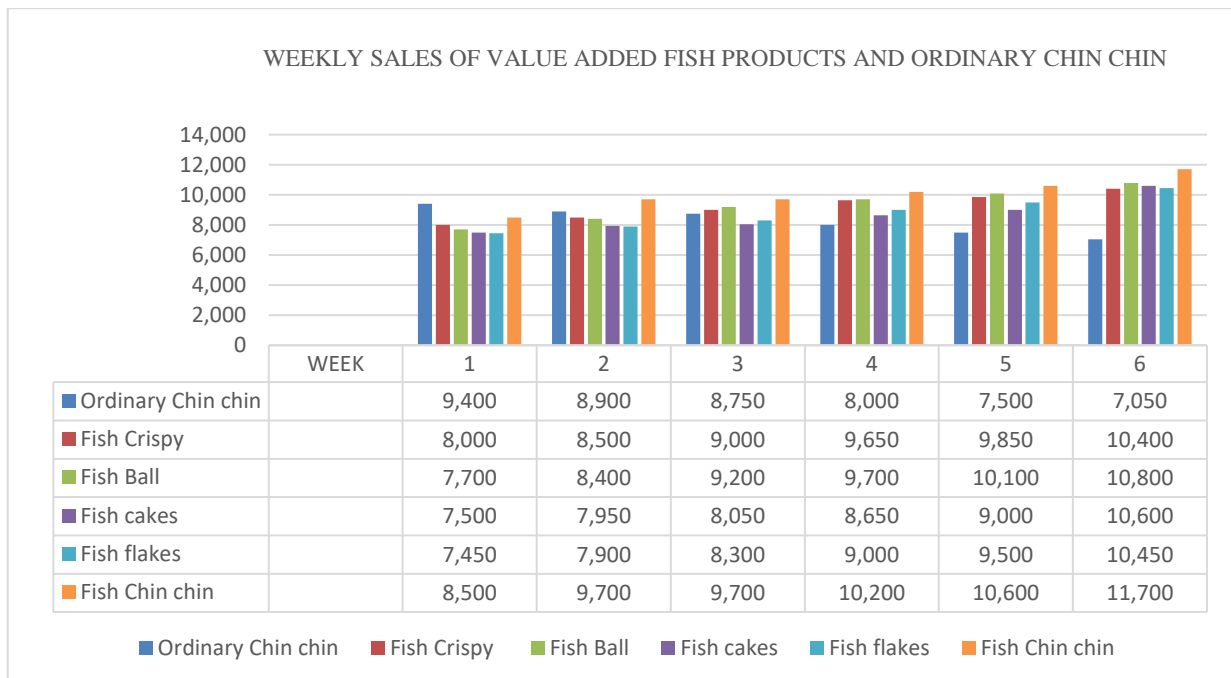


Figure 1: Average weekly sales of VAFP and Non-VAFP

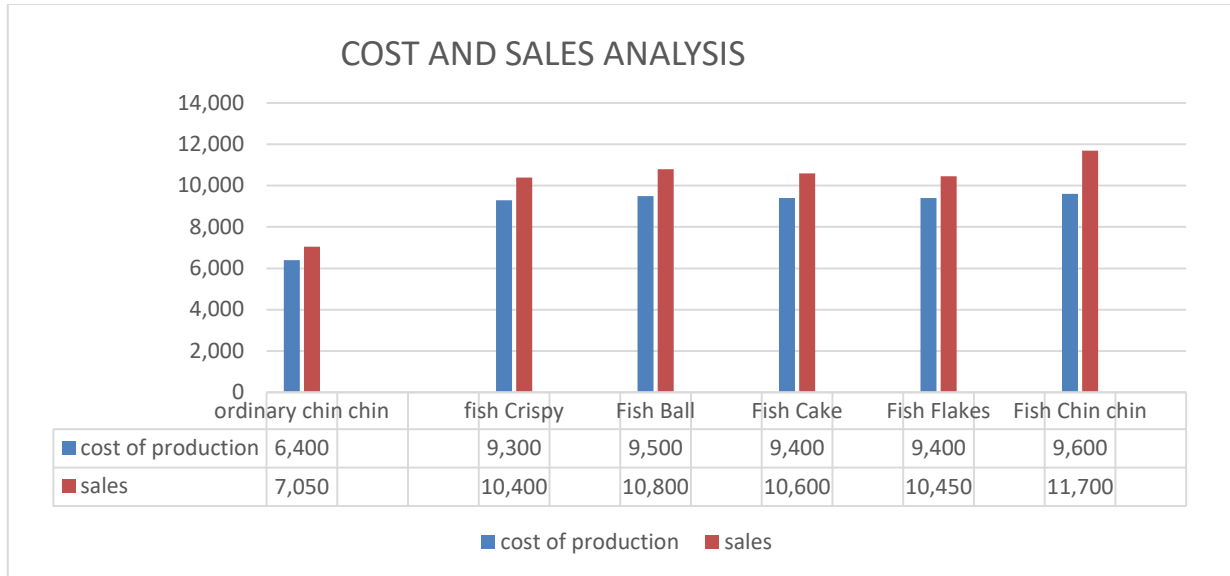


Figure 2: Cost and sales analysis at 6th weeks

From the figure 2 above, fish chin-chin had the highest cost of production (9,600), ordinary chin-chin had the least (6,400). While, fish cake and fish flakes had equal cost of production (9,400) each. Fish crispy and fish ball were produced at 9,300 and 9,500 respectively. Highest sales was recorded for fish chin-chin (11,700) and 70,050 was recorded as lowest sales for ordinary chin-chin, other VAFP sales ranged from 10,400 to 10,800.

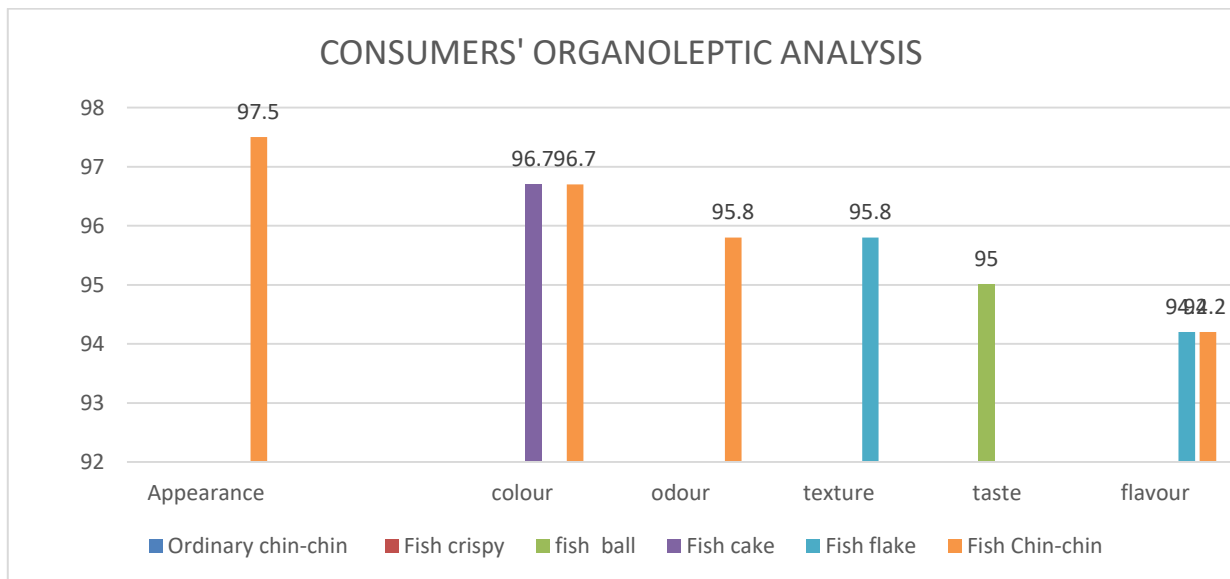


Figure 3: Consumers' Organoleptic responses

The figure 3 above shows the organoleptic assessment of consumers' responses. 97.5%, 96.7% and 94.2 all responded that fish chin-chin has good appearance, odour and flavour respectively, 95% agreed that fish ball has a better taste while fish flake and fish chin-chin both got 96.7% for having a good odour

The figure below show consumers' willingness for VAFP. 37% respondents shows their willingness to consume the product as it is available while 29% expressed their willingness to consume it at least once month. Those willing to consume VAFP at least once every week or once every fourth night stood at 17% each

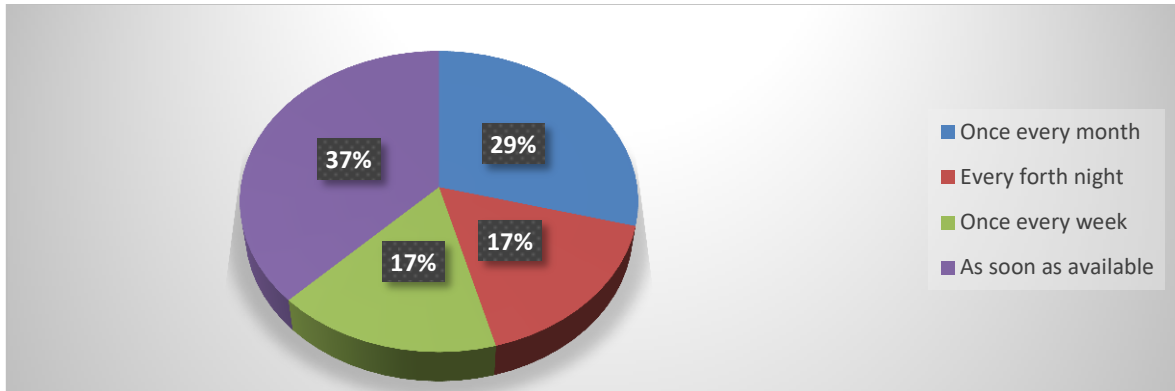


Figure 4: Consumers' willingness for value added fish products

The figure below shows consumers' perception of VAFP, 85% of them agreed that it is cheap and alternative source of protein which is readily eatable or cook able, considerable percentage also agreed that the species of fish used are of low quality. 87.5% of the consumers prefer locally made VAFP to the imported ones, while 74% are ready and willing to buy the product at any price once it is available. Although 83.3% agreed that VAFP products are more costly than non-VAFP products. They agreed in totality 100% that there is poor or no awareness of VAFP in their areas.

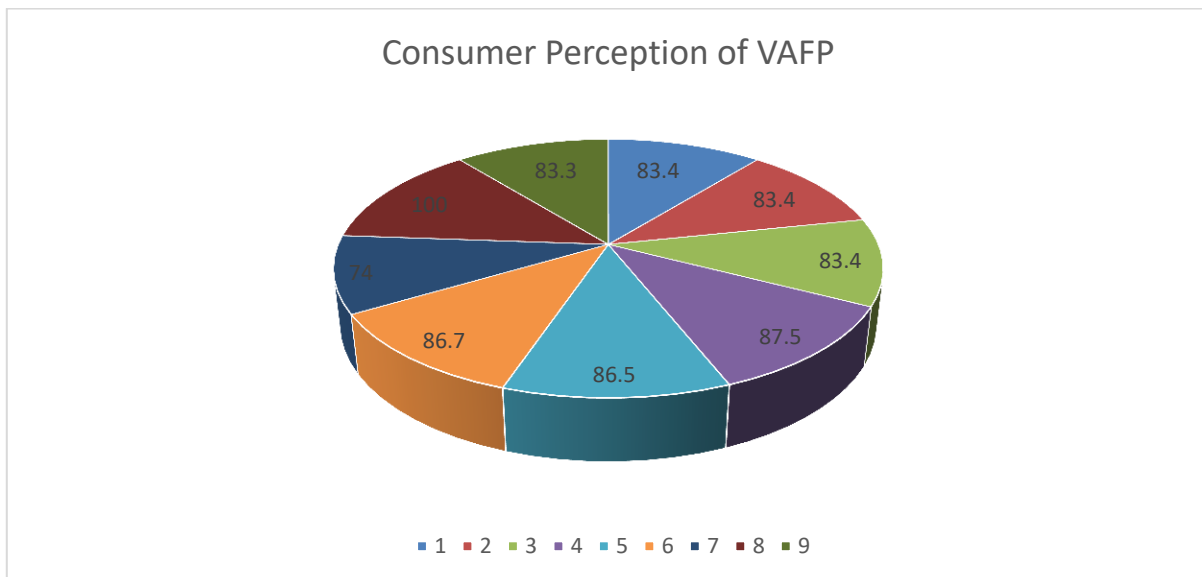


Figure 5: Consumers Perception on VAFP

V. DISCUSSION

VAFP plays a vital role in the generation of employment, entrepreneurial sustainability and tool for the emancipation of individuals from the vicious cycle of poverty. Youth empowerment and grouping them into clusters for self-help had led to creation of small scale production of VAFP.

This work discovered that Fish chin-chin enjoys good patronage if its sales and organoleptic or sensory indices are to be considered, the same trend was reported by Murthy, 2000. Also, ordinary chin-chin being a conventional chin-chin to the consumers, initially had the best sale probably because of their familiarization with it.; but it lost its patronage due to the availability of the VAFP as alternative.

In every VAFP, price and taste are major factors of consideration as reported by Boughanmi, et al, 2017. But this study is in contrary because appearance, colour, texture and odour are the factors that attracted the consumers. All consumers are willing to consume VAFP at a various time interval but majority are willing to buy at any price and as soon as it is available. This confirmed that there is potential market outlet for VAFP in the fishing communities. This agrees with the report by Sabat et al, 2008

Although, many of agreed that VAFP are more costly to non-VAFP but placed their preference for VAFP on its nutritional benefits and its readiness to eat or cook. This agrees with the report by Sarmal, et al, 2013.

VI. CONCLUSION

It can be concluded that demand for value added fish products exists among consumers in the fishing areas and there is scope for entrepreneurship development in the area especially for the youths and the women if they are equipped with the necessary skills, financial and market strategies. Production of fish value added products have been helping in the development of sustainable livelihoods capable of emancipating the youths from poverty and social vices. Such as banditry, kidnapping and terrorism.

VII. RECOMMENDATION

However, from the responses, in order to improve the consumption of VAFPs in the fishing villages the following points should be considered;

- Creation of awareness on the health benefits of eating VAFPs through government agencies and mass media programmes
- Availability of the locally made VAFP products at an affordable price
- VAFP should be produced with focus on good quality, safe and wholesomeness.
- Capacity building of interested beneficiaries for hygienic production of these VAFPs
- Empowerment of youths poor and women.
- Creation of market outlets.

VIII. REFERENCES

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