



ABSTRACT

The purpose of the study is to identify entrepreneurial skills required by retirees in processing tiger nut tubers into milk for productive life after retirement in Imo State. Descriptive survey design was used for the study. The study was carried out in Imo State Neria. The population of the study comprises of all the lecturers in the departments of food and nutrition/ food science technology in Federal university of Technology Owerri, Imo State University Owerri, Federal Polytechnic Nekede, Alvan Ikeoku College of Education Owerri and home economics teachers in the 456

ENTREPRENEURIAL SKILLS REQUIRED BY RETIREES IN PROCESSING TIGER NUT MILK FOR PRODUCTIVE LIFE AFTER RETIREMENT IN IMO STATE, NIGERIA.

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Introduction

Tiger nut botanically known as *Cyperus esculentus* is an underutilized tuber crop that belongs to the family *cyperaceae*, which provides rhizomes from the tuber base, with shape that is spherical. It is a tuber plant that grows freely and is eaten widely in Nigeria (Gambo and Da'u, 2014). It can be eaten fresh, dried or processed as milk. Tiger nut is known in Nigeria as "Akiausa" in Igbo, "Aya" in Hausa and "Ofio" in Yoruba, with black, brown and yellow varieties cultivated in Nigeria (Gambo and Da'u, 2014). Tiger nut has high nutritious starch content, dietary fiber and carbohydrate, (Rita, 2009). Studies have shown that tiger nut is rich in the following mineral contents: sodium, calcium, potassium, magnesium, zinc and traces of copper. (Abodunrin and Belewu, 2008). Tiger is a healthy tuber with high content of vitamin E, oleic acid with positive effect of cholesterol level, good for diabetic patients, older people, sportsmen and children. (Rita, 2009). These nutritional contents of tiger nut can better be harnessed for human consumption when processed to tiger nut milk.

Processing is the act of putting a raw material through a manufacturing process or procedures to change its form (Mama, Asogwa and Ukonze, 2012). In the context of this study processing is viewed as the act of subjecting raw tiger nut tubers through a manufacturing process to obtain tiger nut milk. Tiger nut milk processing enterprise has the potentials of increasing of retirees



public secondary schools in Imo State. Simple random sampling techniques was used to select 45 lecturers and 105 teachers from schools in the urban areas of Imo state (Owerri, Orlu, Oguta and Okigwe). Data was collected with the use of a skill structured questionnaire titled Entrepreneurial Skills in Tiger Nut Processing (ESTNPQ). The instrument consists of 9 skill items in planning, 11 skill items in processing and 10 skill items in marketing of tiger nut milk, making it a total of 30 skill items. The questionnaire has four-point response options of highly required (HR), averagely required (AR), slightly required (SR), and not required (NR) with corresponding nominal value of 4, 3, 2 and 1 respectively. Three experts validated the instrument. Data collected were analyzed using mean and standard deviation, while the hypothesis were measured using t-test at 0.05 level of significance. Mean less than 2.50 was regarded as not required, while items with mean value of 2.50 and above are required. Findings indicate that retirees require 9 entrepreneurial skills in planning for tiger nut processing enterprise, 11 in processing tiger nut milk and 10 in marketing. The researchers recommended that the identified entrepreneurial skills should be developed as a training manual for vocational training schools in the State.

Keywords: Entrepreneurial, skills, retirees, processing tiger- nut,

income, help them remain active and productive. However for retirees to be productive in processing tiger nut milk, they require entrepreneurial skills.

Entrepreneurial skills according to (Asogwa, Isiwu and Amonjenu, 2015), is the ability or competencies required to manipulate input resources effectively within an enterprise to achieve the goal of production. Entrepreneurial skills in tiger nut milk processing are those related step by step activities or operations which retirees require to transform tiger nut into milk for human consumption and for the purpose of generating income while being active. Such operations and activities according to (Asogwa et al, 2015), include: planning for tiger nut milk processing enterprise, processing of tiger nut into milk and marketing of tiger nut milk. Many retirees are faced with the challenges of delay or non payment of pension and gratuity, hunger and poor nutrition especially those that retired at the low end of service. Many retired civil servants have died out of frustration over delay in payment of pension and gratuity, while some develop sicknesses as a result of inactivity. Acquiring entrepreneurial skills in processing tiger nut milk will be helpful to retirees because it will help them to still be active, productive and keep feet against sicknesses that comes as a result of being inactive. According to Chukwukelu, Obhiokhenan and Enemchukwu, (2022) until skills are acquired in any processing enterprise one may not be able to engage effectively. This study therefore identified those entrepreneurial skills and made appropriate recommendations.



Statement of problems

There is an increased demand for more nutritional and natural beverage drink that is friendlier to human health. Many retirees in Nigeria are faced with the challenges of poor nutrition, financial crisis and fatigue as a result inactivity. There is need for retirees to acquire entrepreneurial skills in processing tiger nut milk for them to remain active, productive, healthy and financially independent in the event of delay in payment of pension and gratuity.

Purpose of study

The purpose of the study is to identify entrepreneurial skills required by retirees in processing tiger nut tubers into milk for productive life after retirement in Imo State. Specifically the study sought to identify entrepreneurial skills required by retirees in:

1. Planning for tiger nut milk processing enterprise.
2. Processing of tiger nut tuber into milk.
3. Marketing of tiger nut milk.

Research question

1. What are the entrepreneurial skills required by retirees in planning for tiger nut milk processing enterprise?
2. What are the entrepreneurial skills required by retirees in processing of tiger nut tuber into milk?
3. What are the entrepreneurial skills required by retirees in marketing tiger nut milk?

Methodology

Descriptive survey design was used for the study. Descriptive survey design according to (Anikweze and Danladi ,2021),are planned to gain more information about a particular characteristics within a particular field of study. It is concerned with determining what is going on in quantitative terms. The study was carried out in Imo State. The population of the study comprises of all the lecturers in the departments of food and nutrition/ food science technology in Federal university of Technology Owerri .Imo State University Owerri, Federal Polytechnic Nekede, Alvan Ikeoku College of Education Owerri and home economics teachers in the 456 public secondary schools in Imo State. Simple random sampling techniques was used to select 45 lecturers and 105 teachers from schools in the urban areas of Imo state(Owerri ,Orlu, Oguta and Okigwe). Data was collected with the use of a skill structured questionnaire tittles Entrepreneurial Skills in Tiger Nut Processing (ESTNPQ) and were administered to the respondents by the researchers.The instrument consists of 9 skill items in planning,11 skill items in processing and 10 skill items in marketing of tiger nut milk, making it a total of 30 skill items. The questionnaire has four-point response options of highly require (HR) averagely required (AR), slightly required



(SR), and not required (NR) with corresponding nominal value of 4,3,2 and 1 respectively. Three experts from department of home economics Alvan Ikoku College of Education validated the instrument. Data collected were analyzed using mean and standard deviation, while the hypothesis were measured using t-test at 0.05 level of significance. Mean less than 2.50 was regarded as not required, while items with mean value of 2.50 and above are required. The null hypothesis with p-value less than 0.05 were rejected while those with p-value of 0.05 and above were accepted.

Results

Research question 1: What are the entrepreneurial skills required by retirees in planning for tiger nut milk processing enterprise

Table 1: skills required in planning tiger nut milk processing enterprise.

S/N	ITEMS	HR	AR	SR	NR	X	SD	RMARK
1	Develop specific objective for tiger nut processing enterprise	135	15	0	0	3.90	0.30	Required
2	Identify market and targeted customers for tiger nut milk	120	30	0	0	3.80	0.40	Required
3	Review the objective regularly to meet business demand and supply that may change with time	90	60	0	0	3.60	0.49	Required
4	Decide on the best location for the tiger nut processing enterprise	105	30	15	0	3.60	0.66	Required
5	Schedule activities to cover different stages and steps involved in processing tiger nut milk	105	0	45	0	3.70	0.45	Required
6	Identify other important inputs resources required for the enterprise	90	60	0	0	3.60	0.49	Required
7	Identify shopping mulls, offices, schools and markets to supply tiger nut milk	75	75	0	0	3.50	0.50	Required
8	Identify sources of finance to fund tiger nut milk enterprise	105	45	0	0	3.70	0.45	Required
9	Identify relevant records to keep for tiger nut business enterprise.	45	75	15	15	3.00	0.89	Required
	Grand Mean					32.4		

X= Mean, SD= Standard deviation.

Result in table 1 indicates that all the items are required by retirees in planning for tiger nut milk processing enterprise, with the mean rating of 3.00 to 3.90 and standard deviation of 0.40 to 0.89 with grand mean of 32.4.



Research question 2:What are the entrepreneurial skills required by retirees in processing of tiger nut tuber into milk?

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Table 2:skills required in processing tiger nut milk .

S/N	ITEMS	HR	AR	SR	NR	X	SD	REMARK
1	Sources and buy dry tiger nut from the market, sort them to remove spoilt ones sand and dirt.	134	10	6	0	3.85	0.45	Required
2	Pour the sorted dried tiger nut in a bowl of with water and allow to soak for 3 to 6 hours.	129	12	9	0	3.80	0.53	Required
3	Drain the water after soaking and rinse.	126	14	10	0	3.77	0.55	Required
4	Pour tiger nuts into high power blender,add water and blend in the ratio of 3 litre of water for each kilogram and allow the mixture to soften for 10 minutes.	120	14	16	0	3.69	0.65	Required
5	Turn the the nut bag inside out and keep the seam on the outside	105	30	15	0	3.60	0.66	Required
6	Place the tiger nut milk bag in the centre of a large a large bowl, drape fine meshed-cheese cloth over the edges of the bowl and pour the milk through it to filter	90	45	15	0	3.50	0.67	Required
7	Gather the cheese cloth around the almond meal and twist close and squeeze the nut pulp with clean hands to extract the milk	90	45	15		3.50	0.67	Required
8	Add vanilla or any other flavor	90	30	15	15	3.30	1.00	Required
9	Add up to one table spoon of lecithin or nut butter thickener and emulsifier per 2-3cups of water used.	104	32	13	1	3.59	0.67	Required
10	Store the milk in an air tight container	134	16	0	0	3.89	0.30	Required
11	Freeze or store in a cool dry place.	134	16			3.89	0.30	Required



	Grand mean					40.38		
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X =Mean, SD = Standard deviation

Result in table 2 shows that all the items are required by retirees in processing tiger nut milk with the mean rating of 3.30 to 3.89 and standard deviation of 0.30 to 1.00 with grand mean of 40.38.

Research Question 3: What are the entrepreneurial skills required by retirees in marketing tiger nut milk?

Table 3: skills required in marketing tiger nut milk.

S/N	ITEMS	HR	AR	SR	NR	X	SD	REMARK
1	Conduct market survey for tiger nut milk to determine the level of demand for it.	75	45	30	0	3.30	0.78	Required
2	Sort milk into groups according to the volume of milk in the container	60	60	30	0	3.20	0.75	Required
3	Fix price for each group of milk	90	60	0	0	3.60	0.49	Required
4	Identify channels of distribution for marketing of tiger nut milk	105	45	0	0	3.70	0.45	Required
5	Advertise the product locally or through social media	105	30	15	0	3.60	0.66	Required
6	Sell to buyer in the markets, schools, offices or distribute to super markets and shopping mulls.	105	45	0	0	3.70	0.45	Required
7	Seek for strategies for promoting tiger nut milk as a nutritious drink.	105	45	0	0	3.70	0.45	Required
8	Review all marketing strategies to meet the current condition	75	75	0	0	3.50	0.50	Required
9	Keep accurate sales records	135	15	0	0	3.90	0.30	Required
10	Calculate income and expenditure to determine profit.	15	135	0	0	3.10	0.30	Required
	Grand mean					35.3		

X =Mean, SD =Standard deviation.

Result in table 2 reveals that all the items are required by retirees in marketing tiger nut milk with the mean rating of 3.10 to 3.70 and standard deviation of 0.30 to 0.78 with grand mean of 35.3.

Discussion of findings.

Findings on the entrepreneurial skills required by retirees in processing of tiger nut milk for productive living after retirement indicates that retirees requires 9 entrepreneurial skills in



planning for tiger nut processing enterprise,11 in processing tiger nut milk and 10 in marketing. This agrees with the findings of Asogwa,*et al*, (2012) in a study titled Entrepreneurial Skills Required by Woman Farmers in Processing Tiger nut Tuber into Milk for Poverty Reduction in Benue State, the study reveals that women farmers require 10 entrepreneurial skills in planning,14 in processing and 10 in marketing of tiger nut milk. Findings from the study is in consonance with that of Chukwukelu, *et al* (2019) who in a study on entrepreneurial skills required by youths for processing of processing of pineapple fruit into juice as a sustainable in Delta State observed that youths require 8 skills in planning, 12 skills in processing and 7 skills in marketing pineapple juice. Findings from this study is also in line with Chukwukelu, *et al* (2022) who identified that civil servants require 30 competencies in in production and marketing of bitter leaf for sustainable income in Anambra State. The situation of many retirees in the state is a clarion call for them to engage in ventures that will make them remain active and productive.

Conclusion

The researchers observed that there is high demand for tiger nut beverage drink while the supply is low owing to the fact that the number of people who are into the enterprise can not meet up with the demand. Many retirees are totally dependent on their pension for survival which most time do not come as and when due. Therefore acquiring entrepreneurial skills in processing of tiger nut will be of great benefit to the retirees.

Recommendations.

1. The identified entrepreneurial skills should be developed as a training manual and use in different vocational training schools.
2. National productivity centre should organize periodic workshops to civil servants and retirees on the need to acquire skills that will make remain productive after retirement from service retiree.
3. Retirees should be encouraged to form cooperative societies to enable them have access to soft loan for the purpose of tiger nut milk processing enterprise.

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