

Assessment of Food Intake of Rural Pregnant Women in Ifelodun Local Government Area, Kwara State

Adebisi, W.O., Opaleke, D.O. & Abdulkadir. S.O.

Department of Home Economics and Food Science.

Faculty of Agriculture,

University of Ilorin,

Abstract

The study assessed the food intake of pregnant women in Ifelodun Local Government Area of Kwara State. Multistage sampling procedure was used to select 130 respondents from 650 population. Data were collected using a structured questionnaire, and were analyzed using descriptive statistics. Results showed that majority (68.5%) of the respondents were between age 20-29, Muslims (69.2%), with primary school education (43.8%), marketers (76.2%) with income between 4000-6000 naira and have at least two (2) children. Majority of the respondents (92.3%) agreed to consume more cereals and (82.3%) meat and (39.2%) less of vegetables, (30.0%) fruits and (29.2%) milk products, which are necessary during pregnancy. The study revealed that the major source of information was health center (98.5%) but information gotten was not utilized appropriately. The major constraints faced were Inadequate income (mean = 1.59), cost of food (mean =1.31) and pregnancy condition (mean =1.12).

Keywords: Assessment, Food, Intake, Pregnancy, Women, Rural

Introduction

Women constitute a sizable proportion of human race, According to Ubi (2008) women are the backbone of the rural economy in Africa. About 80 percent of the economically active female labour force is employed in agriculture and women comprise about 47 percent of the total agricultural labour force, (Iheanyi and Nnenna, 2012). They perform crucial roles in the domestic and economic life of the society, as farmers, they plant, weed and harvest

food crops and tend livestock. As caretakers, they look after children and relatives, prepare meals and manage the home. Many women earn extra income by working as wage laborers, producing and selling vegetables, or engaging in small scale trading and enterprises. In spite of their tremendous contribution to development, rural women continue to suffer invisibility, poor health, low levels of formal education and income and limited access to infrastructural development. Adepelumi, (2012) opined

that majority of the poor live in rural areas, 70% are women. Rural women have many roles, and they have responsibilities and their knowledge that differs from men.

Pregnancy is a period of dynamic change for the mother (Brown, 2005). During this period the foetus is nourished directly by the mother through placenta. Since the baby totally relies upon its mother for nourishment, the pregnant woman is to be provided with an adequate and well-balanced diet (Widen and Siega-Riz, 2010). Rural women are saddled with maternal responsibilities and they also have to secure a source of earnings for the homes which they achieve by their involvement in agricultural activities and they face enormous challenges and constraints in their roles as providers of household nutrition security (Agbo, 2013). Many rural women farmers have poor health status, this could be due to heavy farm work, childbearing and rearing and poor nutrition. The rural areas do not have good infrastructural facilities and basic social amenities (such as roads, potable water, health care services and electricity), they may have to walk long distance while performing their daily activities this results in drudgery that wear and tear the women down gradually. The involvement of the women in Ifelodun Local Government Area in marketing of the little agricultural farm produce available to them fetches them insufficient income thereby limiting the financial resources available to these women, preventing them from

providing healthy nutritional diet during the period of pregnancy.

According to Bredbenner, Beshgetoor, Moe and Berning (2009), women's nutrient needs increases during pregnancy, some of this increased nutrient requirement protect maternal health while others affect birth outcome and infant health. During pregnancy all women needs more food, a varied diet, and micronutrients supplements. When energy and other nutrient intake does not increase, the body's own reserves are used leaving the pregnant woman weakened. Energy needs increase in the second and particularly the third trimester of pregnancy (Joshi, 2010). Inadequate weight gain during pregnancy often results in low weight, which increases an infant's risk of dying. Pregnant women also require more protein, iron, iodine, vitamin A, folate, and other nutrients. Barasi, (2003) asserted that deficiencies of certain nutrients are associated with maternal complications such as death of fetal and newborn, birth defects and decreased physical and mental potential of the child.

For a very long time, the food intake which is attributed to the nutritional status of pregnant women has attracted the attention of many national and local bodies as well as international bodies or organizations. Pregnant women have been widely recognized as a vulnerable group from the health point of view. It has been universally accepted that they need more food for the growing foetus. They constitute the important segments of the population with higher nutrient requirements. Considerable amount of

attention has to be paid to the dietary intake and nutritional status of pregnant women. Hence, the present study is undertaken to know the food intake of pregnant women in the rural area and the constraints faced by these women. Meanwhile the pregnant women (together with young children) represents the group most vulnerable to nutritional deprivation and the effect of malnutrition are severe and long lasting.

Purpose of the Study

The purpose of this study was to assess the food intake of rural pregnant women in Ifelodun Local Government Area, Kwara State. Specifically, the study determined:

1. socio-economic characteristics of the pregnant women in the study area.
2. 24-hours frequency of food consumption by the pregnant women.
3. 30 days reference period of food consumption of pregnant women.
4. sources of information of pregnant women on their nutritional needs.
5. constraints facing the pregnant women on their food intake.

Research Questions

1. What are the socio-economic characteristics of the pregnant women in the study area?
2. What is the 24-hours frequency of food consumption by the pregnant women?
3. What is the 30 days reference period of food consumption of pregnant women?

4. What is the sources of information on their nutritional needs?
5. What are the constraints facing pregnant women on their food intake?

Methodology

Design and Area of Study: Descriptive survey research was used .The study was carried out in Ifelodun Local Government Area of Kwara State. The people of Ifelodun are Yoruba's and mostly of Igbomina origin with their roots in Ife, Oyo and Ketu, their headquarters in Share. It has an area of 3,435km² and a population of 206,042 at the 2006 census. Majority of the people in the local government practice subsistence farming and marketing of agricultural produce to earn their living. The government made available 11 basic health centers in some towns for the people to go for any medical issues and they have a general hospital at their headquarters in Share.

Population of Study: The target population of the study comprised of all pregnant women who registered for ante-natal clinic at the basic health centre between the periods of February, 2015 to June, 2015 at basic health centre Amoyo, Ganmo and Idofian. There are 650 pregnant women registered for ante-natal.

Sample and Sampling Technique: A multistage sampling procedure was used to select the respondents. Firstly, purposive sampling was used to select the 3 basic health care centres in towns of Ifelodun local government area based on distance from one another and level of patronage by the pregnant women in

the locality. Secondly, purposive sampling was also used to select pregnant women in their second and third trimester. Proportionate sampling technique was used to select twenty percent 20% of 150 registered pregnant women in Amoyo to give 30 respondents, 20% of 200 registered pregnant women in Ganmo to give 40 respondents and 20% of 300 registered pregnant women in Idofian to give 60 respondents, the total sample size was one hundred and thirty (130) respondents.

Instrument of Data Collection: The instrument for data collection was a structured questionnaire. Variables measured include the socio-economic characteristics, sources of information, constraints of nutritional intake and nutritional intake of pregnant women. A 24 hours dietary recall was used to assess their nutritional intake, a list of food groups (9) was presented to respondents to select if consumed or not in 24 hours diet recall method, the highest obtainable score was 9 and the lowest was 0. Their frequency of food consumption within 30 days reference period which was measured using a 3 point scale, highest obtainable score was

27 and the lowest obtainable score was 0.

Data Collection and Analysis Technique: A total of 130 questionnaires were administered with the help of a research assistant. All the copies were completed and retrieved. This represents 100% recovery rate. Data were analyzed using descriptive and inferential statistics.

Findings of the Study

The socio economic characteristics presentation showed that majority 89(68.5%) of the respondents were between ages 20-29years while few 3(2.3%) were between the ages of 40-49, this implies that respondents are in their most reproductive stage of life cycle. Muslims were 90(69.2%) while Christian 40(30.8%), close to half of respondents 57(43.8%) have primary school education, 19(14.6%) having no formal education, 46(35.4%) having secondary and 8(6.2%) having tertiary education. Majority of the respondents 99(76.2%) are involved in marketing, as an occupation and earns income between the range of ₦1000-₦6000 monthly, larger percentage 86(66.2%) have at least 1-3 children with 13(10.0%) carrying their first pregnancy.

Table 1: Distribution of respondents based on 24 hours diet recall intake

S/N	Food group	Frequency (%)
1	Cereals Millet (<i>Pennisetum glaucum</i>), rice (<i>Oryza sativa</i>), maize (<i>Zea mays</i>), bread and others	120(92.3)
2	Tubers Potatoes (<i>Solanum tuberosum</i>), yam (<i>Thisconeia spp</i>), cassava (<i>Manihot esculenta</i>), cocoyam (<i>colocasia spp</i>) and others	34(26.2)
3	Dark green leafy vegetables Ugu (<i>Telfairia occidentalis</i>), green leaf (<i>Amanrathus hybridus</i>),	51(39.2)

	waterleaf (<i>Talinum Triangulare</i>), bitter leaf (<i>Vermonia amygdalins</i>) and okro (<i>Ablemosdius esculentus</i>)	
4	Fruits Mango (<i>Magnifera indica</i>), orange (<i>Citrus aurantium</i>), watermelon (<i>Citrullus ionatus</i>), banana (<i>Musa spp</i>), pawpaw (<i>Carica papaya</i>), pineapple (<i>Ananias comosus</i>), guava (<i>Psidium guajava</i>) and others	39(30.0)
5	Meat Beef, pork, chicken and other birds, liver, kidney, heart	108(83.1)
6	Egg	16(12.3)
7	Seafood Fresh or dried fish, crayfish, shellfish	53(40.8)
8	Any food from; Beans (<i>Vigna unguiculata</i>), nuts, e.g. beans cake, cowpea paste, moi moi	53(40.8)
9	Any food from; Milk and other milk products	38(29.2)

Table 1 shows distribution of respondents based on 24 hours diet recall, majority of the respondents consume cereals (92.3%) and meat (83.1%) while it was observed that only few consume vegetables (39.2%), fruits (30.0%) and milk products (29.2%).

Table 2: Distribution of respondents by frequency of food consumption within 30-days.

S/N	Food groups	Not at all F (%)	1-3 days F (%)	4-14 days F (%)	In 15 days F (%)
1	Cereals: Millet (<i>Pennisetum glaucum</i>), rice (<i>Oryza sativa</i>), maize (<i>Zea mays</i>), bread and others	0(0.0)	0(0.0)	52(40.0)	78(60.0)
2	Tubers: Potatoes (<i>Solamum tuberosum</i>), yam (<i>Thisconea spp</i>), cassava (<i>Manihot esculenta</i>), cocoyam (<i>colocasia spp</i>) and others	7(5.4)	33(25.4)	75(57.7)	15(11.5)
3	Dark green leafy vegetables Ugu (<i>Telifairia occidentalis</i>), green leaf (<i>Amanrathus hybridus</i>), waterleaf (<i>Talinum Triangulare</i>), bitter leaf (<i>Vermonia amygdalins</i>) and okro (<i>Ablemosdius esculentus</i>)	0(0.0)	20(15.4)	86(66.2)	24(18.5)
4	Fruits: Mango (<i>Magnifera indica</i>), orange (<i>Citrus aurantium</i>), watermelon (<i>Citrullus ionatus</i>), banana (<i>Musa spp</i>), pawpaw (<i>Carica papaya</i>), pineapple (<i>Ananias comosus</i>), guava (<i>Psidium guajava</i>) and others	0(0.0)	23(17.7)	94(72.3)	13(10.0)
5	Meat: Beef, pork, chicken and other				

	birds, liver, kidney, heart	0(0.0)	13(10.0)	79(60.8)	38(29.2)
6	Egg	0(0.0)	51(39.2)	69(53.1)	10(7.7)
7	Seafood				
	Fresh or dried fish, crayfish, shell fish	0(0.0)	14(10.8)	95(73.1)	21(16.2)
8	Any food made from;				
	Beans (<i>Vigna unguiculata</i>), nuts e.g	0(0.0)	28(21.5)	86(66.2)	16(12.3)
	beans cake, cowpea paste, moi moi				
9	Any food made from;				
	Milk and other milk products	0(0.0)	41(31.5)	75(57.7)	14(10.8)

Table 2 reveals the frequency of food consumption of pregnant women within 30days reference period, it shows that the intake of pregnant women in cereals (60.0%) 15days in a month is high and their intake in fruits (10.0%), seafood (16.2%), vegetables (18.5%) were still low, this further buttress the findings in Table 1a.

Table 3: Distribution of respondents to selected sources of information on food intake.

Sources	Frequency (%)
Radio	42(32.3)
Television	9(6.9)
Friends	89(68.5)
Health center	128(98.5)
Association	15(11.5)
Family	67(51.5)

Table 3 shows that majority (98.5%) of the respondents obtain information on health issues through basic health center. It also showed that 68.5% and 51.5% obtained information on health related issues from friends and family respectively. However, television (6.9%) and association (11.5%) were not major source of information on health related issues.

Table 4: Distribution of respondents based on constraints to food intake.

Constraints	Not a constraint F (%)	Mildly severe F (%)	Severe F (%)	Mean	Rank
Inadequate Income	10(7.7)	34(26.2)	86(66.2)	1.59	1 st
Pregnancy condition	8(6.2)	98(75.4)	24(18.5)	1.12	3 rd
Inadequate Knowledge on food intake	122(93.8)	8(6.2)	0(0.0)	0.06	7 th
Season	80(61.5)	48(36.9)	2(1.5)	0.40	5 th
Culture	113(86.9)	17(13.1)	0(0.0)	0.13	6 th
Preference	32(24.6)	90(69.2)	8(6.2)	0.82	4 th
Cost of food	26(20)	38(29.2)	66(50.8)	1.31	2 nd

Table 4 above presents a list of various constraints that affects respondents' food intake. Inadequate income (mean = 1.59) and cost of food (mean = 1.31) were ranked first and second among the constraints faced. Pregnancy condition (mean = 1.12) and preference for food (mean = 0.82) were ranked 3rd and 4th respectively. However culture (mean = 0.13) and inadequate knowledge on food intake (mean = 0.06) were not major constraints to food intake.

Discussion of Findings

The findings of the study based on 24 hours diet recall reveals that pregnant women consume more of cereals and meat and only few consume vegetables, fruits, tubers, foods made from beans and milk products. Williamson (2006) opined that pregnant women intake in foods rich in proteins, vitamins, minerals is very necessary to enhance the growth of fetus and help build immunity against diseases. The intake of foods rich in proteins, minerals and vitamins is rather low among pregnant women in Ifelodun local government area, this negates (Allen, 2005) who confirmed the nutrients requirement of pregnant women that will help them go through pregnancy without complications on the mother and child.

Food intake of the pregnant women based on the 30 days reference period also reveals that the intake of carbohydrates foods is very high and their intake of foods rich in proteins, minerals and vitamins is low. This further confirms that the food intake of pregnant women within 24 hours, which was maintained and had an

overall effect on their food consumption within 30 days reference period. This also negates the opinion of (Anyakoha, 2015 and Joshi, 2010) who agreed that pregnant women should have increase intake in proteins, fruits and vegetables during pregnancy. This could be attributed to the income of pregnant women, that is insufficient thereby it allows these foods to be unaffordable within the period of 15days in a month by the pregnant women.

The pregnant women agreed that the major source of information on their food intake were obtained from the health centers which was not reflected in their food intake as they did not make good use of information given to them. Also, friends and families serves as a source of information, this is an indication that the pregnant women rely on interpersonal means of communication. However, television and radio were not good source of information for pregnant women on food intake. Annie and Otolu (2007) posited that rural women lack information needs that helps them in carrying out their individual living activities and Information Communication Technology can be used to pass reliable and comprehensive information to women which could be of great help in this information age. Rural women most often fail to access various information resources and services, even when such information is available. The reason may be related to socio economic status of the women or the format in which such information is packaged. This findings is in consonance with Hossain

and Islam (2012) who affirmed that women who live in villages lack access to information resources and ability to access information communication technology (ICT) resources.

The major constraints faced by the pregnant women on food intake were low income and high cost of food, this could be as a result of occupation of the pregnant women which is marketing which fetches them income that may not be sufficient for them to buy nutritious foods. Pregnant women face the challenge of high cost of foods which were unaffordable by them and they were also limited by inadequate income which affects their purchasing power to nutritious foods. Hence, they result to cheaper foods which at times may not contain the adequate nutrient required. This finding is consistent with Anugwom, (2012), who posited that rural dwellers lack access to needed food and nutrition which could be caused by their socio economic status.

Conclusion

The survival of living organism is dependent on their ability to access vital substance required for growth and development. Nutrition is a means by which individuals make provision for materials necessary (in terms of food) to support life and it adds that many common health problems can be prevented with healthy diets. It was observed that the major source of information of pregnant women on their food intake was the health center but information gotten was not utilized appropriately. Also, inadequate income, cost of food and pregnancy condition

were major constraints faced by pregnant women, because they agreed to the consumption of cereals and meat in their daily diet but not enough vegetables, fruits and milk products required by them in such condition. The study concluded on the importance of nutrition which was well known by the pregnant women but were limited by socio-economic factors which affects their food intake.

Recommendations

Based on the conclusions above, the following were recommended;

1. Care givers at the ante natal clinic should encourage and monitor women regularly on their intake of foods rich in proteins, minerals and vitamins.
2. Perishable foods like fruits and vegetables that are majorly consumed by pregnant women should be produced locally to enable affordability and accessibility.
3. Efforts should be made by governments to stabilize prices of staple food commodities that are locally produced.
4. More enlightenment programmes should be created on the importance of nutrition and dissemination of information regarding pregnancy and nutrition.

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Recipe Development and Sensory Evaluation of Cassava-Based Puddings

Davidson G.I. & Ogboji D.A.

Department of Home Science, Nutrition and Dietetics,
University of Nigeria Nsukka

Abstract

This study evaluated the sensory attributes of cassava-based puddings. Cassava-based puddings in the ratio 60:40 and 70:30 of cassava and cowpea flour as well as the control (100% cowpea flour) were prepared and subjected to sensory and proximate evaluation using standard procedures. Data were analysed using descriptive statistics and analysis of variance (ANOVA) at 0.05 level of significance. The puddings had appreciable proximate values. The colour and flavour of the two cassava-based puddings were significantly ($p < 0.05$) lower than the control. Taste, texture and general acceptability, showed no significant difference ($p > 0.05$) between the control and the cassava-based pudding in the ratio of 60:40. Since cassava-based pudding in the ratio of 60:40 compared favourably with the control, it could be accepted at household level.

Key words: Cassava-based Pudding, Proximate, Sensory Evaluation, Recipe

Introduction

Cassava (*Manihot esculenta*) is a woody shrub native to South America of the spurge family (United States Department of Agriculture (USDA), 2014). Nigeria is the world's largest producer of cassava. However, based on the statistics, Thailand is the largest exporting country of dried cassava, with a total of 77% of world export in 2005 (FAO, 2011). It is extensively cultivated as an annual crop in tropical and subtropical regions for its edible starchy tuberous root, a major source of carbohydrates. The cassava root is long and tapered, with a firm, homogeneous

flesh encased in a detachable rind, about 1 mm thick, rough and brown on the outside. A woody vascular bundle runs along the root's axis. The flesh can be chalk-white or yellowish. Cassava roots are very rich in starch and contain significant amounts of calcium (50 mg/100g), phosphorus (40 mg/100g) and vitamin C (25 mg/100g). However, they are poor in protein and other nutrients (Food and Agriculture Organization (FAO), 2011).

Cassava is the third largest source of food carbohydrates in the tropics, after rice and maize (FAO, 2011). Cassava is a major staple food in the developing

world, providing a basic diet for over half a billion people. It is one of the most drought-tolerant crops, capable of growing on marginal soils (FAO, 2014). Cassava plays a particularly important role in agriculture in developing countries, especially in sub-Saharan Africa, because it does well on poor soils and with low rainfall, and also because it is a perennial crop that can be harvested as required. Its wide harvesting window allows it to act as a famine reserve and is invaluable in managing labor schedules. It offers flexibility to resource-poor farmers because it serves as either subsistence or cash crop.

A great variety of cassava-based dishes are consumed in the regions where cassava (*Manihot esculenta*) is cultivated, and they include many national or ethnic specialties (Fredrick, 2008). In Nigeria and Sierra Leone, cassava is commonly prepared as *eba* or *garri*. The cassava is grated, pressed, fermented and roasted, then mixed with boiling water to form a thick paste. In West Africa the cassava root is pounded, mixed with boiling water to form a thick paste and cooked like *eba*. In Ghana, among all root crops and even all food crops, cassava is the most favored by Ghanaian consumers. It can also be processed into *agbelima* by lactic acid fermentation (Namwalizi & Rhoda, 2006). Cassava flour can also be made into a staple food with a consistency like polenta or mashed potatoes which is called *fufu*.

Cassava has the lowest protein/energy ratio (P:E) compared with any staple crop. Stephenson *et al.*

(2010) found that cassava intake is inversely correlated with protein intake and that populations that consume large amounts of cassava may well be at risk for inadequate dietary protein intake. Another condition that may result from cassava dependency includes kwashiorkor among children following weaning because of an imbalance of protein relative to calorie intake. This association identifies cassava consumers as a vulnerable population that may require interventions to improve nutrition (Stephenson *et al.*, 2010)

Studies have shown that cassava is the most commonly consumed food in South-eastern Nigeria. (FAO/IFAD, 2011; Ene-Obong *et al.*, 2013). It is consumed mainly as *fufu*/garri with soup and as tapioca salad (Davidson *et al.*, 2017). Heavy reliance on cassava leads to less dietary diversity. In south-eastern Nigeria where cassava is commonly consumed, household meals could therefore get quite monotonous and the monotonous nature of traditional diet has been attributed to the driving force behind nutrition transition. Development of new cassava based recipes with improved protein content could fight not only malnutrition but also nutrition transition in a cassava dependent population.

Cowpea pudding is one of the most popular Nigerian dishes. It is an important dietary staple in west African nations because of its high protein (Ogundele *et al.*, 2014). It can be consumed alone or as part of the main meal. Puddings of high panelist acceptability have been produced from blends of cowpea and other food items

such as African yam bean (Nwosu *et al.*, 2014), pigeon pea (Akajiaku *et al.*, 2014) and soy bean (Ogundele *et al.*, 2015). There is however a dearth of information on puddings made with blends of cowpea and cassava flour even though they have great potential in food formulation system.

Objectives of the study: The main objectives of the study were to carry out sensory evaluation and determine the proximate composition of cassava based puddings.

The objectives of this study were to:

1. evaluate the sensory qualities of cassava based puddings
2. determine the proximate composition of cassava based puddings

Research questions: The following research questions guided the study

1. What are the sensory qualities of cassava based puddings?
2. What is the proximate composition of cassava based puddings?

Materials and methods

Study design: The study adopted a quasi-experimental design. This is empirical study used to estimate the causal impact of an intervention without random assignment. Quasi experimental research shares similarities with the traditional experimental design or randomized controlled trial but it specifically lacks the element of random assignment.

Materials procurement: Ingredients (cowpea, cassava flour, palm oil, dry pepper, crayfish, salt, maggi and onion) that were used for the preparation of the cassava-based pudding and the control were purchased from retailers at Ogige market in Nsukka, L.G.A.

Processing of cowpea and cassava flour: The cowpea and cassava were processed into flour using the flow chart below.

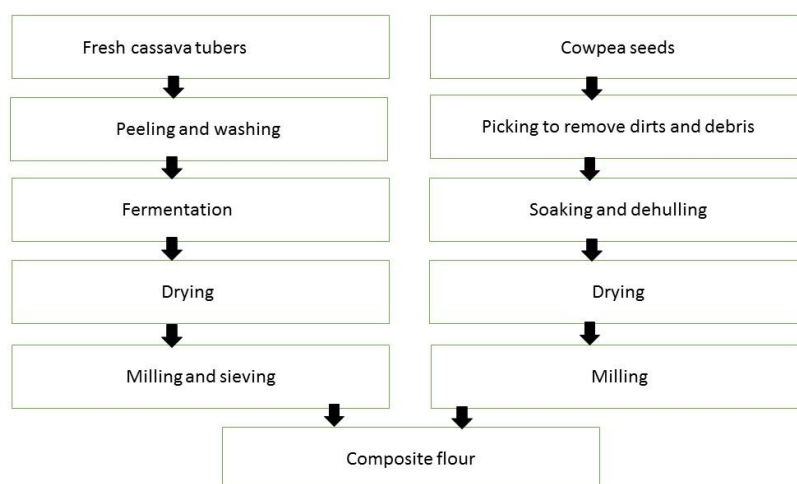


Fig 1. Flow chart for cassava and cowpea composite flour processing

Production of the puddings: Cassava and cowpea composite in the ratio of 60:40 and 70:30 (cassava and cowpea flour) were used to prepare cassava based pudding as outline below. Pudding prepared with only cowpea flour served as the control.

1 Recipe name: Cassava based puddings

Ingredient	60:40	70:30
Cassava	60	70
Cowpea	40	30
Salt	4.7	4.8
Maggi	4	4
Dry pepper (ground)	2.5	2.5
Onion	25	25
Crayfish (ground)	2.7	2.7
Palm oil	36	36
Water	250	250

Method of preparation

1. Mix the flours thoroughly
2. Add water gradually to form paste (mix thoroughly while adding the water)
3. Add the oil and mix thoroughly
4. Add the onion, maggi and salt and mix properly
5. Scoop the desired quantity into a prepared foil and steam
6. Allow to steam for 60 minutes
7. Serve hot

2 Recipe name: Cowpea pudding (control)

Ingredient	
Cowpea	100
Salt	4.7
Maggi	4
Dry pepper (ground)	2.5

Onion	25
Crayfish (ground)	2.7
Palm oil	36
Water	250

Method of preparation

1. Put the flour in a mixing bowl
2. Add water gradually to form paste (mix thoroughly while adding the water)
3. Add the oil and mix thoroughly
4. Add the onion, maggi and salt and mix properly
5. Scoop the desired quantity into a prepared foil and steam
6. Allow to steam for 60 minutes
7. Serve hot

Methods of data collection: Data was collected using sensory evaluation and chemical analysis

Instrument for data collection: A nine-point hedonic scale, where nine was the highest score and one the lowest score was used to evaluate the pudding. The nine-point hedonic scale was used to test for flavor, color, taste, texture and general acceptability.

Selection of panelists: A panel of 20 persons (both male and female) was selected randomly from the final year class of Home science, Nutrition and Dietetics to determine the sensory attributes of the products. The sensory evaluation was conducted in the diet therapy laboratory. The laboratory was well ventilated with windows opened for proper ventilation and lighting. Each of the panelists was comfortably seated and the environment was free from distractions.

Data collection procedure: The products were presented to each of the panelist as coded in the hedonic scale. The products were coded as follows: Cp - control (i.e. 100% cowpea), Cp₁ .cassava and cowpea in the ratio of 60:40 and Cp₂ - cassava and cowpea in the ratio of 70:30. Each panelist was given a disposable serving bowl with spoon and a cup of water to rinse the mouth to avoid carry over effect. An ambient room temperature was maintained throughout the testing session. The puddings were evaluated by the panelist (20) for flavor, texture, color, taste and general acceptability. The sensory evaluation hedonic scoring forms with the codes of the products were placed near the products and each judge collected and filled one accordingly. The forms were collected from the judges at the end of the evaluation for statistical analysis.

Chemical (Proximate) analysis

Determination of moisture, fibre, ash, fat, protein and carbohydrate were based on the official methods of analysis described by the association of

Official Analytical Chemist (A.O.A.C., 18th edition, 2005). All analysis was carried out in duplicate. Moisture was determined using the air oven method. Crude protein was determined by Kjeldahl procedure. Fat content was determined using Soxhlet solvent extraction method. Crude fibre was determined by heating the samples under reflux. Ash was determined by incineration of samples in a muffle furnace at 550°C for six hours. Carbohydrate was calculated by difference 100-(moisture + protein + fat + ash + crude fibre).

Statistical analysis

The data generated from the study was statistically analyzed using SPSS (Statistical product for Service Solution) Version 20. Analysis of variance (ANOVA) was also done and Duncan's multiple range test was used to group and compare the means. Significance was accepted ($p \leq 0.05$).

Result

Sensory evaluation of the puddings

Table 1: Organoleptic attributes of the puddings

Samples	Colour	Flavour	Taste	Texture	General Acceptability
Cp	8.15±0.88 ^a	7.55±1.00 ^a	6.70±1.87 ^a	7.15±1.27 ^a	6.60±1.96 ^a
Cp ₁	7.10±1.80 ^b	6.55±2.16 ^b	5.85±2.58 ^a	5.95±2.78 ^a	5.10±2.29 ^a
Cp ₂	6.85±1.81 ^b	5.25±2.02 ^b	4.75±2.20 ^b	4.65±2.68 ^b	3.30±1.49 ^b

Mean values of different superscripts in the same row were significant at ($p < 0.05$).

Cp (control) = 100g of cowpea

Cp₁ = 60:40% of cassava and cowpea flour

Cp₂ = 70:30% of cassava and cowpea flour.

Table 1 revealed that the values for colour and flavour of the pudding ranged from 6.85-8.15 and 5.25-7.55 respectively while taste, texture and

general acceptability scores were within the range of 4.74-6.70, 4.65-7.15 and 3.30-6.60. The colour and flavour of the two cassava-based puddings were significantly ($p < 0.05$) lower than the control. For taste, texture and general acceptability, there was no significant

difference ($P > 0.05$) between the control and the cassava-based pudding with the 60:40 ratio. The value of cassava-based pudding with the ratio of 70:30 was statistically lower for all the parameters examine.

Proximate analysis of the puddings

Table 2: Proximate composition of the puddings (%)

Samples	Protein	Carbohydrate	Moisture	Ash	Fat	Fibre
Cp	3.26 $\pm$ 0.21 ^a	54.98 $\pm$ 2.28 ^a	32.45 $\pm$ 0.35 ^a	0.08 $\pm$ 0.01 ^a	11.50 $\pm$ 0.71 ^a	0.25 $\pm$ 0.01 ^a
Cp ₁	2.37 $\pm$ 0.36 ^a	55.71 $\pm$ 1.94 ^a	33.18 $\pm$ 6.51 ^a	0.08 $\pm$ 0.01 ^a	9.00 $\pm$ 0.71 ^a	0.18 $\pm$ 0.02 ^b
Cp ₂	2.72 $\pm$ 0.15 ^b	62.31 $\pm$ 4.28 ^b	25.70 $\pm$ 3.68 ^b	0.08 $\pm$ 0.02 ^a	7.00 $\pm$ 0.71 ^b	0.21 $\pm$ 0.02 ^a

Mean values with different superscripts in the same row are significantly different ($p < 0.05$)

Cp (control) = 100g of cowpea Cp₁ = 60:40% of cassava and cowpea flour

Cp₂ = 70:30% of cassava and cowpea flour

Table 2 revealed that the protein content of the puddings ranged from 2.37-3.26%, being highest in the control (3.26%) and lowest in the pudding in the ratio of 60:40 (2.37%). Carbohydrate and moisture values ranged between 54.98-62.31 and 25.70-33.18% respectively. fat and fibre composition ranged from 7.00-11.50 and 0.18-0.25 respectively. Ash values were similar in all the pudding (0.08%). With the exception of fibre values, the control and cassava based pudding in the ratio of 60:40 had statistically similar proximate composition ($p > 0.05$).

Discussion

Sensory evaluation of the puddings

In terms of color the rate of acceptability of the puddings varied according to increase in the level of cowpea flour, the control which had 100% cowpea flour was the most accepted, followed by the cassava-based pudding in the ratio of

60:40 and lastly cassava-based pudding in the ratio of 70:30, this is in line with the study carried out on cowpea pudding by Funmi, (2013) which revealed that cowpea pudding with 100% cowpea flour had better acceptance in terms of color. The control had better flavor than the two cassava-based puddings. Similar finding was gotten in the study of Ibiyemi & Adebawale, (2013) on the sensory attributes of cocoyam and cowpea pudding. it was found that the pudding with 40% cowpea flour had better flavor compared to the pudding with 30% cowpea flour, this is in accordance with the findings of this study, the cassava-based pudding with 40% cowpea flour had better flavor compared to the cassava-based pudding with 30% cowpea flour. This could be because the strong cassava flavor might have masked the cowpea flavor which the panelists were already familiar with. It

is not surprising that the cassava-based pudding in the ratio of 70:30 had poorer attribute than the one in the ratio of 60:40 since more cowpea was used in the later. The taste of the control and the cassava-based pudding in the ratio of 60:40 was similar while that of the control and cassava-based pudding in the ratio 70:30 were different. This is in accordance with the study of Sanni, (2013) on cowpea pudding. He found out that the taste of cowpea pudding varied with increase in the percentage of cowpea flour, this explains the similarity in the taste of the control and cassava-based pudding with 40% cowpea flour and the differences in the cassava-based pudding with 30% cowpea flour. Similarity in the taste of the control and cassava-based pudding in the ratio of 60:40 could be because the percentage of cowpea (40%) in the pudding is significant enough to give similar taste to that of the control (cowpea pudding). The observed differences in the taste of the control and the cassava-based pudding in the ratio of 70:30, could be attributed to the judge's familiarity with the taste of the control (cowpea pudding), and it could also be because the percentage of the cowpea (30%) was insignificant. This is also supported by the study of Olapode *et al.* (2005), who discovered that the acceptance of the taste of the cowpea pudding by the judges could be affected by familiarity. The texture of the control and cassava-based pudding in the ratio of 60:40 was more accepted than that of the cassava-based pudding in the ratio of 70:30 was least accepted. This agrees with the study of Onabanjo & Afolabi,

(2010) who discovered that the texture of yam and cowpea pudding varied with increase in substitution of cowpea flour. For general acceptability, there was no significant difference ($p>0.05$) between the control and cassava based pudding in the ratio of 60:40 (cassava and cowpea). This finding disagrees with that of Nwosu *et al.* (2014) who only observed good comparison in the substitution level of up to 60:40 (cowpea and African yam bean). The result of this study is however in line with the finding of Akajiaku *et al.* (2014) who found high acceptability level at up to 60% substitution of cowpea with pigeon pea. In general, the cassava-based pudding with the ratio of 70:30 had statistically lower values than the control for all the parameters examined implying that this cassava-based pudding with such a ratio may not be accepted if prepared in the household. Though cowpea pudding (control) had better colour and flavor, its taste, texture and general acceptability compared very well with cassava-based pudding in the ratio of 60:40. This also means that cassava-based pudding with the ratio of 60:40 will be comfortably accepted at the household level.

Proximate composition of the puddings

The protein content of the control was higher than that of the two cassava-based puddings. This is expected because according to FAO, 2011 cowpea is a legume and has higher protein content than cassava (a tuber). The study on cocoyam and cowpea pudding by Funmi (2013) revealed that the

inclusion of cowpea flour increased the protein content of all the samples, this is line with this study, because the protein content of the cassava-based puddings increased with increase in cowpea flour. The proteins in the cowpea flour complemented those of cassava flour thus improving the protein content of the puddings. Proteins are useful in the body for growth, maintenance and repair of body tissues. The carbohydrate content of the samples varied according to increase in the level of cassava flour, the cassava-based pudding in the ratio of 70:30 had the highest level of carbohydrate (62.31%) while the control (100% cowpea) had the lowest carbohydrate content (54.98%). This was expected because cassava is a major source of carbohydrate (FAO, 2011). Chen *et al.* (2000) reported similar increase in the carbohydrate content of cocoyam-based pudding substituted with cowpea flour. Carbohydrate is a source of energy and it supports other metabolic activities within the body. It was observed that the moisture content of the cassava-based pudding with the ratio of 70:30 was the lowest, this could be because it had the lowest ratio of cowpea (30%) which is the protein source. This is in line with the study reported by Sanful *et al.* (2010) and Ihekoronye & Ngoddy, (2000) that proteins have high absorption capacity. The percentage ash which is an indicator of the mineral content of the puddings, was low (0.08%) in all the puddings, this is lower compared to the findings of Olaoye *et al.* (2006) and Sanful *et al.* (2010) who got 1.17% and 2.41 respectively as the ash content of

cowpea pudding (moi-moi). The fat content of the samples also varied according to increase in cowpea substitution, the control (100% cowpea) had the highest fat content followed by the cassava-based pudding with 40% cowpea and cassava-based pudding with 30% cowpea had the lowest fat content. This is not surprising because according to Deshpande & Damodaran, (2000) cowpea is higher in fat than cassava. Fat is needed for support of certain metabolic activities within the body of living organisms and equally a source of energy. The fibre content of the puddings including the control were low, this is similar to the study of George & Pamplona-Roger (2003). They reported that the fibre content in whole cowpea flour is higher than dehulled cowpea flour which was used in this study to prepare the puddings, thus accounting for the low fibre content in the puddings. When there is low fibre in food it can cause faeces to be hard, dry and concentrated, thus obliging the intestine to make enormous effort to eliminate them (George & Pamplano-Roger, 2003).

Conclusion

This study helped in the development of cassava-based puddings using 60:40 and 70:30 ratios of cassava and cowpea flour. The study has shown that cassava-based pudding with the ratio of 60:40 had better sensory attributes than cassava-based pudding with the ratio of 70:30. Cassava-based pudding in the ratio of 60:40 compared favourably with the control in terms of proximate values and sensory attributes and could

therefore be accepted at household level.

Recommendations

1. In order to fight against nutrition transition, Home Economists should develop more nutritious and palatable cassava based dishes.
2. Since food related behavior is difficult to change, nutrition education should focus on the need for home makers to incorporate the new cassava based dishes into the family menu.
3. The government should economically empower house wives so as to increase their purchasing power and reduce food insecurity as the household level

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Communication Skills for Enhancing Spousal Relationship within Families in Bauchi State of North East Nigeria

Abubakar, A. A.

Department of Home Economics,
School of Voc &Tech.
FCT College of Education, Zuba.

and

Anyakoha, E.U.

Department of Home Economics and Hospitality Management Education,
Faculty of Voc. &Tech. Education,
University of Nigeria, Nsukka.

Abstract

The study identified communication skills for enhancing spousal relationship within families in Bauchi State and ways of imbibing such skills. Two research questions and two null hypotheses were formulated. A descriptive survey design was adopted for the study. The population of the study was 1,779,112 married couples. Multistage sampling was used to select 600 couples. Questionnaire was used. Reliable coefficient of the instrument was 0.817. The data were analyzed using mean, standard deviation, frequency, and percentages and t-test at 0.05 level of significance. The findings include 39 communication skills and four major ways that could help spouses imbibe the skills. There was no significant differences in the mean ratings of the opinions of male and female on the communication skills. Based on the findings, one of the recommendations was the guidance and counselors, to include the skills identified as the things they need to teach spouses.

Key words: Communication, Skills, Spousal, Relationship, Divorce

Introduction

Marriage relationship is lifelong companionship that should bring about fulfilment and joy in the lives of spouses. Spousal relationship can be defined as the state of being married voluntarily for life or until divorced (Haviland, Prins, Walrath & McBride

(2011). The primary objectives of spousal relationship include companion-ship, affection, intimacy, cooperation, among others (Anyakoha, 2015). Spouses need special skills to live together in peace. Skills are abilities or competencies, dexterities, facilities that are acquired through training,

experiences and practices (Farlex, 2015). One of such skills (or abilities) considered in this study is communication skills, cohesion skills and flexibility skills. These skills are most important skills needed for enhancing spousal relationship.

Communication skills in spousal relationships are those set of abilities or dispositions that a spouse exhibits to show openness to the partner. Examples of such skills include: cheerfulness, politeness, pen and direct discussion about the nature of the relationship. Open and direct positive communication is such that allows spouses to learn about themselves and discuss their roles and goals while expressing love and respect for one another (Impett & Peplau, 2003). Bearing in mind that communication is a complex process that involves both skillful sending and receiving of messages with accompanied feedback from the sources (Olson & Defrain, 2006). Communication, according to Gana (2012), is a complex process of sending information, ideas, concepts or messages from a sender to a receiver, via a channel. In this regard, Montana and Charnou (2008) stressed that all forms of communication require a sender, a message, and an intended recipient to make meaning to the message being sent as feedback. The receiver decodes the message and gives a feedback. Olson & Defrain (2006) opined that communication system parallel the relationships system of spouses, since it is through communication that relationships are defined. This includes: speaking,

writing, body language, listening, personal mannerism, and styles (Esere, Yusuf & Omotosho, 2011). Listening is probably even more important than talking because spouses would be able to learn and grow far more in their relationship, if they sit down and listen to their partners, instead of talking and voicing all their opinions at once. One should listen to the other person's opinions as well and take them into consideration.

Communication can come in two major forms: there is the verbal communication and the non-verbal communication. Verbal communication is the relatively straight forward component of communication that must be done with words – written or spoken. It may not necessarily come from the heart of the person communicating with the words. Non-verbal messages, on the other hand, are the accompanying message between the people involved in a communication. It is also the message an individual conveys about the relationship at hand – whether it is a friendly relationship or not (Olson & Defrain, 2006).

Verbal communication is common and easy to identify. For this reason, Mellinger (2012) explained that speaking is one form of communication most recognizable. Yet, non-verbal communication needs to be understood as equally important, or may be, even more important. Non-verbal communication takes a wide variety of forms. In the listing by Olson and Defrain (2006), the various forms of non-verbal communication include: facial expression, eye contact, gestures

and other body movements, spatial behaviour (for example, how far apart two people stand or sit from each other, body contact), non-verbal vocalizations (for example: signs, grunts, and posture). Even spoken messages have non-verbal aspects to them. These non-verbal aspects of spoken messages include: tone of voice, volume, pitch, speed of speech, rhythm of speech, and so on. Even written messages too, have non-verbal aspects to them. These include: style of writing, medium of personal stationery (such as cards, napkin, and so on) (Olson & Defrain, 2006). In the communication between spouses, it is therefore important to pay close attention to non-verbal messages. This is because non-verbal communication conveys 65% of the messages between people; and unfortunately, some spouses select their words (which comprise only 35% of the messages) when they speak to their partners, whereas they pay little attention to the non-verbal messages (Olson & Defrain, 2006). The ability, therefore, to communicate both verbally and non-verbally is one of the essential skills individuals need to master if they are to enjoy close relationships.

Since communication is the way spouses create and share meanings, feelings, and thoughts - both verbally and non-verbally - this should mean that the relationship component of communication between spouses should have central influence on the accurate transmission and interpretation of verbal and non-verbal messages in order not to give room for one's spouse to make guesses about

(and thus misunderstand) their relationships. Instead, by means of careful communication, spouses should be able to deepen the confidence each other has in their relationship to make their union even more satisfying. Olson & Defrain (2006) enumerated dimensions of communication to include: listening skills: this involves positive listening skills comprising of empathy and feedback; speaking skills: speaking for oneself rather than another person; self-disclosure: this entails sharing personal feelings and ideas openly; clarity in the exchange of clear messages, and mutual regard: this reflects the good intentions each of the spouse for themselves, their family members and their friends.

Two major dimensions of communication skill discussed in this study are: self-disclosure and listening skills. According to Olson & Defrain (2006), self-disclosure means speaking for oneself. It occurs when an individual reveals to one or more people some personal information and feelings that they could not otherwise learn. This means that without moments of self-disclosure, some partners and friends may continue to be together without properly knowing some personal things about each other. On the other hand, listening skills, as the second dimension of communication skills discussed here implies attentive listening that requires suspending judgment and spending more energy trying to understand other people. Thus, to enhance spousal relationships, there is the need for spouses to have the self-disclosure skills to willingly disclose their feelings and

personal information to their spouses without waiting to be requested to do so, while also being ready to patiently listen to their partners with the intent to understand, rather than to judge/condemn them.

Some of the things that facilitate communication between spouses are closeness, flexibility and time spent together. On the other hand, the absence of all these are definitely detrimental to spousal relationship (Keymalaihen & Maniani, 2008). This means that poor communication is linked to diminished marital closeness, togetherness, or the degree to which spouses engage in activities together. Thus, poor communication leads to regressed relationship (Carlson, 2011).

In Bauchi State which is the focus of this study, the predominant type of spousal relationship is the one established between a teenage female spouse and a 'by-far-older' male spouse, which is known as child marriage. Child marriage occurs when one or both spouse is under the age of 18 (UNICEF, 2011). Most times, in child marriages, there is usually huge age difference between the spouses. The age difference is usually so much that most of the male spouses could be grandfathers to the young girls who are supposed to be their spouses. Hence, such female spouses do not have the maturity, experience and skills to engage in spousal relationships. In several of such marriages in Bauchi State, it is common that the female teenage spouse may be married into a polygamous family. This is the type of family where a man may be legally married to more than one

wife. In such situation, communication between husband and wife become problematic. Divorce often results.

Divorce is prevalent in Bauchi State, the area of the study. Available data show this (News Agency of Nigeria (NAN),2015a;News Agency of Nigeria(NAN),2015b). The continued high divorce rate in the area of the study had triggered the Governors of Kano, Kaduna, Zamfara and Sokoto states to assist as many as 3,000 couples by organizing and contracting remarriages (post-divorce) involving some of the divorcees(News Agency of Nigeria (NAN),2015a).The Governors paid for the marriage rites and contracted them accordingly. The couples were given fifty thousand naira (NGN50,000.00) each in 2012 to 2015 as assistance (NAN, 2015a).In addition. Mohammad (2013) reported that on 18th may 2013, for instance, the Sokoto State Government conducted a mass wedding screening. The aim was to contract marriage for those who want to re-marry. Unfortunately, the chairman of Sunnah Marriage Council, Alhaji Aliyu Kofar Rini in NAN (2015), reported that 20 out of the 125mass marriages contracted and sponsored by the state government in January 2014, have collapsed. It is therefore necessary to evolve ways of promoting marital stability. Enhancing communication among spouses is a way of doing this. Communication skills are important for spouses.

Purpose of the study

The main purpose of the study was to identify the communication skills

needed for enhancing spousal relationships among families in Bauchi State of North East Nigeria. Specifically, the study determined:

1. Verbal communication skills needed for appropriate spousal relationship among spouses in Bauchi State;
2. Non verbal communication skills needed for appropriate spousal relationships;
3. Ways of helping spouses in Bauchi State to imbibe relationship skills.

Research Questions

The study was guided by the following research questions:

1. What are the verbal communication skills needed for appropriate spousal relationship among spouses in Bauchi State?
2. What are the non verbal communication skills needed for appropriate spousal relationship?
3. What are the ways by which spouses in Bauchi State could be helped to imbibe skills to enhance their relationships?

Hypotheses

The following null hypotheses were formulated for the study and each was tested at 0.05 level of significance:

1. There will be no significant difference in the mean ratings of the opinions of male and female spouses on the verbal communication skills needed for appropriate spousal relationship among spouses in Bauchi State;
2. There will be no significance difference in the mean ratings of the opinions of male and female spouses on the non verbal communication

skills needed for appropriate spousal relationship;

3. There will be no significant difference in the mean ratings of the opinions of male and female spouses on the ways by which spouses in Bauchi State could be helped to imbibe the skills to enhance their relationships.

Methodology

Design of the Study: The study adopted descriptive survey design. The design helps in collecting views, facts and ideas, to analyze and to answer research questions in order to make some conclusions about what exists. A descriptive survey design was preferred for this study because information was gathered from individuals regarding their views on the skills they think can enhance spousal relationship among families.

Area of the Study: The study was conducted in Bauchi State, North-Eastern Nigeria. Bauchi State is made-up of three senatorial districts, namely: Northern, Central and Southern districts. The Northern district consists of seven local government areas; the Central has six, while the Southern consists of seven. The choice of Bauchi State as the area for this study was because of high divorce rates in the state which is a pointer to poor skills in spousal relationship.

Population of the Study: The target population of the study was made-up of all the married persons in Bauchi State (According to the National Populations Commissions (2010), this number is estimated to be 1,779,112) The spouses that served as the population for this

study varied in their social engagements: a good number were farmers, some others were civil servants, and yet others were traders. With regard to their academic attainments, the percentage of those who were literate (with secondary school education) was a little above those who had no secondary school education at the time of the study.

Sample and Sampling Technique(s): The sample for the study was 600 persons made up of 300 men and 300 women. Multi-stage sampling technique was used to select 10 LGAs from the three senatorial zones in the state, 30 towns from the 10 LGAs, and 10 households from each of the 30 towns

The multi-stage sampling technique was adopted for the sampling procedure because the area of study (Bauchi State) is grouped into districts, LGAs, towns, and then households. The choice of the purposive sampling technique for this stage was based on the fact that these are the LGAs which the researcher could visit with less risks of challenges from Boko Haram insurgents. The other reason for the choice of this sampling technique for this stage was to make sure that the households visited by the researcher and her assistants were those where both spouses were alive and living together.

Instrument for Data Collection: One instrument was used for data collection in this study, questionnaire titled

Questionnaire on Skills Needed for Enhancing Spousal Relationship (QSNESR) The questionnaire contained both structured and open-ended items. The instrument was divided into two sections (A and B). Section A contained 39 items on communication skills. These 39 items were subdivided into three subsections covering some of the different aspects of communication skills needed in spousal relationships. Section B had the open-ended items, required the respondents to indicate in their own words what they think could be done to improve the acquisition and utilization of spousal relationship skills among spouses in the study area.

Method of Data Collection: Six hundred (600) copies of the questionnaire were distributed through personal contact by the researcher. The respondents were given two weeks within which they were expected to complete the questionnaire. At the expiration of the two weeks, the researcher re-visited the places of the respondents to retrieve the copies of the questionnaire.

Method of Data Analysis: Responses from the respondents were coded by the analyst into the Statistical Package for Social Sciences (SPSS), version 16.0. While t-test statistics was used to test the hypotheses at the 0.05 level of significance.

Null Hypothesis

Table 1: Mean Scores and t-test results of the Opinions of Male and Female Spouses on Verbal Communication Skills needed for Appropriate Spousal Relationship Among spouses in Bauchi State of North East Nigeria

Among spouses in Bauchi State of North East Nigeria										
S/N	Spousal Relationship Communication Skills	Male		Female		$\bar{x}_g$	t-cal	df	Sig.	Dec
		$\bar{x}_m$	SD _m	$\bar{x}_f$	SD _f					
Verbal Communication/ Self-Disclosure Skills										
1	Freely express feelings to partner verbally	3.40	0.63	3.55	0.52	3.48	3.14	599	0.00	S
2	Freely express feelings and thoughts exactly as one wants	3.20	0.44	3.45	0.48	3.33	3.12	599	0.00	S
3	Not hide one's exact feelings and thoughts for fear of criticisms	3.58	0.24	3.44	0.55	3.51	3.84	599	0.00	S
4	Not harsh to partner during discussions	3.49	0.65	3.34	0.45	3.42	3.64	599	0.00	S
5	Regularly using the word, 'please' during discussions	3.32	0.66	3.05	0.78	3.19	3.63	598	0.00	S
6	Not defensive during discussions with negative feedbacks	3.10	0.54	3.21	0.65	3.16	3.43	599	0.00	S
7	Share experiences with partner with positive statements	3.33	0.50	3.45	0.39	3.39	3.90	599	0.00	S
8	Not hold back on personal interests	3.26	0.60	3.30	0.55	3.28	0.78	599	0.43	NS
9	Not hold back on personal opinions	3.41	0.51	3.37	0.83	3.39	0.35	599	0.72	NS
10	Express hopes with language of 'wants' instead of 'needs'	3.43	0.58	3.38	0.75	3.42	0.73	599	0.34	NS
11	Not talk-down on partner's relatives	3.26	0.59	3.26	0.85	3.26	0.98	599	0.27	NS
12	Offering useful pieces of advice to partner's relatives	3.29	0.88	3.36	0.68	3.33	2.88	599	0.00	S
13	Not talk-down on partner's friends	3.11	0.68	3.10	0.74	3.11	0.22	599	0.74	NS
14	Respond to partner's request for discussion without too much criticisms	3.60	0.56	3.48	0.68	3.53	2.99	599	0.00	S
15	Use clear language to ask questions	3.61	0.48	3.61	0.67	3.61	0.44	600	0.00	NS
16	Be clear on message	3.44	0.73	3.43	0.85	3.44	0.87	596	0.58	NS
17	Not speak to spouse aggressively with the intent to hurt and blame	3.57	0.65	3.83	0.55	3.70	1.01	599	0.08	NS
18	Ask questions with 'what' or 'how' instead of 'why'	3.55	0.49	3.54	0.67	3.50	0.24s	600	0.65	NS

Key: Key: Sig. = significance level, df = Degree of freedom, S = Significant at 5%, NS = Not Significant at 5%, $\bar{X}_m$ = Mean of Males; $\bar{X}_f$ = Mean of Females; $\bar{X}_g$ = Grand Mean

Table 2: Mean Scores and t-test Results of the Opinion of Male and Female Spouse on Non-verbal Communication Skills for Appropriate Spousal Relationship among Spouses in Bauchi State of North East Nigeria

S/ N	Non-verbal Communication/Listening Skills	Male		Female		$\bar{x}_g$	t-cal	df	Sig.	Dec
		$\bar{x}_m$	SD _m	$\bar{x}_f$	SD _f					
1	Maintaining eye contact during discussions	3.18	0.67	2.84	0.97	3.01	0.74	598	0.64	NS
2	Observant to know when partner is not in the mood for long discussions	3.30	0.84	3.50	0.64	3.40	0.97	599	0.64	NS
3	Give time to listen & understand each other's complaints	3.18	0.66	3.53	0.26	3.36	3.22	600	0.00	S
4	Observe coded expressions of partner in the form of gesture	3.73	0.58	3.22	0.45	3.48	3.84	596	0.00	S
5	Understand non-verbal messages of spouse	3.02	0.33	3.43	0.24	3.23	3.21	599	0.00	S
6	Observe change of mood of partner through body language	3.72	0.49	3.33	0.86	3.53	2.98	594	0.00	S
7	Listen actively to each other's communication	3.21	0.87	3.62	0.34	3.42	3.22	598	0.00	S
8	Nod during discussions to indicate active listening	3.29	0.88	3.30	0.54	3.30	0.39	596	0.43	NS
9	Freely express feelings to partner using gestures such as smiles, frown, pat on the back, and so on	3.19	0.85	3.62	0.43	3.41	2.98	599	0.00	S
10	Use of ICT (phones, email, and so on) to communicate with partner when and where necessary	2.89	0.66	3.42	0.36	3.16	3.27	598	0.00	S
11	Use of gifts, cards, and so on to communicate with partner	3.74	0.44	3.29	0.65	3.52	3.72	599	0.00	S
12	Avoid sources of divided attention during discussions	3.60	0.33	3.00	0.74	3.30	2.98	597	0.00	S
13	Not listen to partner aggressively with the intent to blame	3.41	0.69	2.87	0.77	3.14	3.65	600	0.00	S
14	Fast to commend partner's good efforts in the family	3.23	0.86	3.20	0.90	3.22	0.35	597	0.72	NS
15	Express admiration for partner	3.38	0.56	3.32	0.74	3.35	0.55	598	0.62	NS
16	Quickly commend partner's efforts at workplace	3.44	0.83	3.34	0.90	3.39	0.65	597	0.51	NS
17	Appreciate partner's assistance without delay	3.43	0.63	3.46	0.82	3.45	0.26	598	0.79	NS
18	Fast to commend partner's creative ideas	3.31	0.57	3.36	0.51	3.34	1.06	598	0.29	NS
19	Quickly commend partner's good dress	3.30	0.55	3.38	0.59	3.34	1.71	598	0.09	NS
20	Appreciate the slightest gift from partner without delay	3.35	0.54	3.31	0.67	3.33	0.93	598	0.35	NS
21	Quickly appreciate efforts of partner's relatives	3.15	0.72	3.44	0.49	3.30	1.94	598	0.05	NS

Key: Sig. = significance level, df = Degree of freedom, S = Significant at 5%, NS = Not Significant at 5%, $\bar{x}_m$ = Mean of Males; $\bar{x}_f$ = Mean of Females; $\bar{x}_g$ = Grand Mean

Table 1 and 2 shows the t-test analysis of the significant difference in the mean rating of the opinions of male and female spouses on the verbal communication and non verbal skills needed for appropriate spousal relationship among spouses in Bauchi State. Based on the result, there were no significant differences between male and female couples in items 6, 7, 10, 13 to 18 and 20 to 29. This was because of their respective significant values were greater than the maximum value 0.05. However, there were significant differences between the male and female couples in items 1 to 5, 8, 9, 11, 12 and 19 since the significant value in these items were less than 0.05. The cluster t-value of 0.84 with degree of

freedom of 598 and significant value of 0.41, it therefore showed that the result is insignificant. This means that the null hypothesis which stated that there will be no significant difference in the mean rating of the opinions of male and female spouses on the communication skills needed for appropriate spousal relationship among spouses in Bauchi State was accepted. The deduction deduced from this is that male and female spouses did not significantly differ in their opinion on the difference in the mean scores of the opinions of male and female spouses on the communication skills needed for appropriate spousal relationship among spouses in Bauchi State.

Table 3: Mean score & t-test results of the Opinions of Male and Female Spouses on the ways by which Spouses in Bauchi State could be Helped to imbibe the Skills to Enhance their Relationships

Ways suggested by the respondents	Male		Female		t-cal	df	Sig.	Dec.
	$\bar{x}$	SD	$\bar{x}$	SD				
Counselling	1.63	0.49	1.47	0.50	3.81	498	0.00	S
Age gap should be reduced	1.65	0.48	1.48	0.50	4.08	498	0.00	S
Mutual respect should be encouraged	1.65	0.48	1.51	0.50	3.50	498	0.00	S
Faithfulness and tolerance	1.65	0.48	1.49	0.50	4.09	498	0.00	S
Cluster t	1.65	0.01	1.49	0.02	15.9	498	0.00	S

Key: Sig. = significance level, df = Degree of freedom, S = Significant at 5%, NS = Not Significant at 5%

Table 3 above showed the t-test analysis of the significant difference in the mean rating of the opinions of male and female spouses on the ways by which spouses in Bauchi State could be helped to imbibe the skills to enhance their relationships. As the result depicted,

there were significant differences between male and female couples in all the items. This was based on their individual significant values which were less than the maximum value of 0.05. in the same way, the cluster t value of 15.9 with degree of freedom of 498

and significant value of 0.00, it therefore showed that the overall difference in the mean score is significant. This means that the null hypothesis which stated that there would be no significant difference in the mean scores of the opinions of male and female spouses on the ways by which spouses in Bauchi State could be helped to imbibe the skills to enhance their relationships is rejected. The deduction deduced from this is that male and female spouses significantly differ in their opinion on the ways by which spouses in Bauchi State could be helped to imbibe the skills to enhance their relationships.

Discussion of Findings

Table 1 revealed that male and female spouses did not significantly differ in their opinions on verbal and non-verbal communication skills needed for appropriate spousal relationship. The cluster t-value of 0.84 with degree of freedom of 598 and significant value of 0.41, showed that the result is insignificant which holds the null hypothesis that the opinions of spouses did not significantly differ. These findings confirm the view that appropriate speaking skills are very important to enhance spousal relationships (Olson & Defrain, 2006). The findings also confirm that speaking skills include, among other things: expressing admiration and listening attentively without getting defensive in order to avoid interruption since being too defensive signals that the person has things to hide from his/her partner. Speaking directly and honestly without blaming enhances positive

communication and therefore yield good spousal relationship. This implies that the use of both verbal and non-verbal communication skills can enhance spousal relationship. In addition, the findings revealed that appropriate communication skills require that as one spouse is expressing his or her feelings, the other spouse should listen attentively. It also requires suspending judgment and spending more energy trying to understand the other partner by making eye contacts, nodding frequently, focusing attention on what the speaker is saying, and asking relevant questions in order to make the relationship persist over time.

These findings corroborate the findings of Olson and Defrain (2006), Labban (2006), Mellinger (2012), and Gottman and Gottman (2012). These researchers had held that for spousal relationships to last, the partners need to share fondness and admiration by focusing attention on the amount of affection and respect within the relationship so that it can be sustained (Gottman & Gottman, 2012). According to Olson and Defrain (2006), listening attentively without interruption is the most effective type of listening because it lets the speaker get to the real point, avoiding misunderstanding and confusion, and improving rapport and trust. These findings also corroborate the findings of researchers like Millinger (2012) who were of the opinion that when spouses are speaking to one another, they should keep to facts, and should not focus on pronouncements, but on expressions of thoughts, feelings and desires, exactly

as one want it as an individual. Good listening requires suspending judgment and spending more energy trying to understand the other person. The attentive listening builds rapport and trust in spousal relationship (Olson & Defrain, 2006; Mellinger, 2012).

Information on table 3 revealed that there was significant difference in the opinions of male and female spouses on how spouses could be helped to imbibe skills to enhance their relationships. The table showed that the individual values of their responses were 0.00 which is less than the set maximum value of 0.05. Besides, the cluster t-value of their responses is 15.9, with degree of freedom of 498. The results indicated above imply that the suggested ways of helping spouses to imbibe and practice appropriate spousal relationship can be applied to enhance or improve spousal relationships. The suggestions of spouses on reducing age-gap differences between spouses implies that in the views of the respondents, huge age-gap differences influence the way and manner by which spouses relate to each other. When the age-gap is too wide, it can result to non-performance of marital roles. The respondents' suggestions on encouraging faithfulness and mutual tolerance among spouses implies that faithfulness and mutual tolerance can promote sharing, love and companionship. The above findings are in line with the views of such researchers as Erisman (2004), Larson and Olson (2004), Olson and Defrain (2006), and Allendorf (2013). The views of these experts, in various ways, are

that any positive action or change of action which can promote mutual sharing, love and companionship among spouses can also serve as a way of enhancing spousal relationships. For instance, there are certain feelings which help spouses to transcend themselves and positively improve/adjust their beliefs about life generally.

According to Olson and Defrain (2006), encouraging changes such as mutual respect and tolerance among spouses improve common beliefs and spiritual well-being. And, spouses with some degree of common belief and spiritual well-being are generally more happily married. The findings indicated above are also consistent with the views of Eldridge and Christenson (2002), Impett and Peplau (2003), Le and Agnew (2003), Okonkwo and Oha (2004), Okafor (2010), Glenn, Uecker and Love (2010), Oshadumo (2011), Gottman and Gottman (2012), and Allendorf (2013), who, in varied degrees of emphasis, indicated that counseling training for spouses can expose them to develop appropriate physical and mental capacities because good education is tool for upliftment and development of individuals. (Okafor, 2010). Okonkwo and Oha (2004) had noted, in line with the findings of this study, that good education of spouses helps them to acquire appropriate knowledge, it also helps spouses to understand their different emotional temperaments and be aware on the need to allow each other some amount of autonomy (Oshadumo, 2011).

Conclusions

The communication skills needed for enhancing spousal relationship within families in Bauchi State are Verbal Communication/Self-Disclosure Skills and Non-verbal Communication/Listening Skills. The verbal communication encompass abilities to express feelings and thoughts to partner freely and exactly what message the partner want to convey. The non verbal are the competencies of maintaining eye contact bu partners during discussion to show level of commitment and to observe the mood of the partner to be able to interpret the real meaning of the message passed across. However, there are some measures to be adopted to help spouses imbibe skills to enhance their relationships such as counseling, training, reduction of age-gap between spouses, mutual respect be encouraged, faithfulness and tolerance as strategies.

Recommendations

Based on the findings of this study, it is imperative that for spouses in Bauchi State, North-East Nigeria, and indeed spouses in any other part of Nigeria, to build up better homes, and more stable and peaceful Nigerian society, the following recourse should seriously be considered:

1. Individual spouses need to realize that spousal relationships require communication skills; and they should work hard to acquire such skills through reading relevant and well-written texts, and visiting marriage counsellors.
2. Individual guidance and counselling professionals need to include the

skills identified by means of this study as some of the things they teach spouses who visit them for guide.

3. Guidance counseling units need to design training programmes for spouses to train them on these identified skills and the need to use them for the betterment of their societies.

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Coping Strategies for Parents of Autistic Children in Benue State

Aondoakaa, B. N. & Kembe, E.M.

Department of Home Science and Management
University of Agriculture, Makurdi

Abstract

The study determined the different coping strategies used by parents of autistic children. Three research questions guided the study. The survey research design was used. Population was made up of 118 parents of autistic children under the custody and care of three institutional homes in Benue State. Questionnaire was used for data collection. Data were analyzed using mean and standard deviation. Findings include, among others, that parents of autistic children face a lot of challenges prominent of which are discrimination, vulnerability to physical stress, poor standard of living, and psychological depression. Effective coping strategies identified include: seeking professional support, self control and accepting responsibility. Recommendation include, among others, that parents of the autistic children should be encouraged through counseling (workshops, seminars and conferences) on how to handle, care and raise autistic children in a manner that will reduce stress and other challenges.

Key Words: Autism, Spectrum Disorders, Children, challenges, Coping, Strategies.

Introduction

The stress parents of autistic children undergo can be challenging. Autistic children need special attention that may be difficult for parents to cope with on their own. Autism also known as Autism Spectrum Disorders (ASD) once considered rare is now increasingly recognized throughout the world (Fombonne, 2009). According to Pushpalatha and Shivakumara (2016) autism is a neurodevelopment disorder characterized by impaired social interaction, verbal and non-verbal communication, and restricted and repetitive behavior.

Autism is characterized by moderate to severe impairments in social interactions, language and cognitive development including repetitive behaviours, restricted interests and emotional distress from environmental changes. Where some autistic children are severely affected, they lack interest in others, have no language skills and show a very restricted repertoire of interests Those that show only slight impairment may show concern for others but have no social skills, have formal communication skills but not at a pragmatic level, have good cognitive

function but may have specific skills in an area that becomes a stereotyped interest (Pozo, Sarria, & Brioso, 2011).

Autism affects essential human behaviors such as social interaction, ability to communicate ideas and feelings, imagination, and establishment of relationships with others (Obiozor, Onu, & Ugwoegbu, 2010). According to Tager-flusberg and Caronna (2007) communication problems include delayed onset babbling, unusual gestures, diminished responsiveness, and resynchronization of vocal patterns with the care giver. Many professionals in the medical, educational, and vocational fields are still discovering how autism affects children and how to work effectively with individuals with autism (Adelusi, Nnadi, Amesi & Amaewhule, 2012).

Nwokolo (2011), Bakare and Munir (2012) stated that the level of awareness about autism in Nigeria is pathetically low. Audu and Egbochukwu (2010) also asserted that there is a low level of awareness among parents and institutional care givers about autism. Available report also shows growing increase within the West African Sub-region which records about 2-20 cases in 1000 children at birth to three years.

In Benue State the prevalence rate of autism is high. The level of low awareness is pathetic and this is due to what Nwokolo (2011) termed parental misconception and cultural misinterpretation of autistic children as child witching. Some parents of the autistic children resort to hiding them while some troop to Christian worship

centers or traditional institutions to seek for solutions.

There are several organizations and government institutions in Nigeria such as the National Society for Autism Nigeria, Autism Associates, Healthcare Assessments, Aids and Training, Lagos and GTB Orange Ribbon Initiative working towards ensuring intervention and providing coping strategies for parents with autistic children. The interventions provide a method of functional communication and ample health and educational opportunities for parents and autistic children. Much is however, still needed to be done in enlightening the parents on best practices in caring-for and managing an autistic child (Nwokolo, 2011).

Prior research has characterized the experience of parenting a child with an ASD as stressful and psychologically distressing. For instance Mancil, Boyd, and Bedesem (2009) investigated into parental stress and found that autism is significant to parental stress among other factors.

Hing, Olivier and Everts (2013) investigated into coping with Autistic Spectrum Disorder, parental challenges and the role of School-Based Family Counseling. The research presents a South African perspective on the ASD-related challenges of parents. Three issues were addressed; difficulties experienced by parents of autistic children; their comprehension of autism and what is needed in order to cope effectively; and how professional intervention pertinent to School-Based Family Counselling (SBFC) can be of help. The first two issues were

addressed through a qualitative research investigation, with data collected by means of personal interviews with parents. The results indicate that parents often do not initially understand the lifelong nature of autism; they do not know how to adjust their family lives to meet the needs of the autistic child and other children in the family; and they are often overwhelmed by how to manage their ASD child. Therefore they are in need of professional intervention. In addressing such need for professional help, SBFC is considered.

Alli and Mupawose (2015) investigated into parent's journey into the world of autism. A qualitative descriptive research design was selected to explore the objectives of the study. Ten participants who were parents of a child with ASD attending Learners with Special Educational Needs School in Gauteng, South Africa were used for the study. Data were collected through a semi structured face-to-face interview survey comprising open-and closed-ended questions, and were analysed using thematic content analysis. The results revealed five main themes, namely communicative challenges, family experiences, communicative coping strategies, speech and language therapy services and strategies provided by the speech language pathologist (SLP). This study concluded that parents and children with ASD experience challenges in communication and interaction.

Gona, Newton, Rimba, Mapenzi, Kihara, Vijver, and Abubakar (2016) investigated into challenges and coping

strategies of parents of children with autism on the Kenyan coast. They held thirty-seven interviews and eight focus group discussions with parents of children with autism and professionals in regular contact with these parents from rural and urban counties of the Kenyan coast. A purposive-convenience sampling procedure was used in selecting the study participants. The results indicate that parents of children with autism on the Kenyan coast experience common challenges including stigma, lack of appropriate treatment, financial and caring burdens regardless of their religious and cultural backgrounds. Coping strategies applied by parents comprised problem-focused aspects that involve diet management and respite care, and emotion focused aspects that consist of beliefs in supernatural powers, prayers and spiritual healing.

Arora and Pandey (2016) determined the level of stress and different coping mechanisms used by parents of children with Autism Spectrum Disorder on pre-training and post-training tests. A researcher-developed training module was used to impart training to enhance the coping mechanisms used by parents to reduce their level of stress. A sample of 100 parents of one child with Autism Spectrum Disorder was taken. They were sourced from early intervention centres, specialist schools, Autism associations and support groups in New Delhi. The study utilized a quantitative approach, using Means, Standard Deviation and t -test in analysing data. Results reveal that parents of autistic

children differed significantly on coping strategies and level of stress after the training.

The above related empirical studies all ascertained coping strategies adopted by parents with very few suggested effective coping strategies an indication that much is still needed to be done since the challenges of parents of autistic children and those related to the children still remain a serious concern. Most a times the coping strategies of parents are affected by a number of factors including religious beliefs, level of education, financial status, cultural norms and living in rural areas. It is to this effect that this study was carried out to enumerate coping strategies that will be more effective and less expensive for parents of autistic children in Benue State.

Objectives of the Study

The main purpose of the research was to study the coping strategies that could help parents of autistic children in Benue State. Specifically, the study:

- 1.identified the challenges faced by families with autistic children in Benue State.
- 2.identified coping strategies presently being used by families in handling children with autism in Benue State.
- 3.determined coping strategies parents still need to be adopted in the management and care of autistic children in Benue State.

Research Questions

The following questions guided the study:

- 1.What are the challenges faced by parents of autistic children in Benue State?
- 2.What are the coping strategies presently being used by parents to reduce stress with autistic children in Benue State?
- 3.What coping strategies do parents still need to adopt to reduce stress with autistic children in Benue State?

Methodology

Area of the study: Area of the study was Benue State. The study was conducted in three special institutions in Benue state. They are; St. Francis School Vandikya, Elim School Ibilla Oju and Nan-Tor Special School, Makurdi.

Research Design: The survey research design was adopted for the study.

Population for the study: Population of the study consists of 118 parents of autistic children in three special institutions in Benue State. This is made up of 5 parents in St. Francis School Vandikya, 67 parents in Elim School Ibilla Oju and 46 in Nan-Tor Special School Makurdi. Their records were accessed from Benue State Ministry of Women Affairs and Social Development in August, 2016.

Sample and Sampling Technique: The researcher adopts a purposive sampling technique. Therefore 118 respondents formed the entire sample and there was no sampling because the sample size is small, with peculiar characteristics and the results are not generalized.

Instrument for data collection: The instrument used in data collection was Coping Strategies for Parents of Autistic Children Questionnaire (CSPACQ). The

questionnaire was divided into sections A - C and covered all the objectives of the study. The study adopted a 5 point likert scale with Strongly Agree SA - 5points; Agree A - 3points; Strongly Disagree SA -2points and Disagree D - 2point, undecided - 1point. The instrument for data collection was validated by three experts in Child/Developmental Psychology and Statistics at Federal University of Agriculture, Makurdi. The reliability of the instrument was established using cronbach Alpha and .60 was taken as significant for the instrument.

Data Collection Techniques: A total of 118 copies of the questionnaire were

distributed by hand. On-the-spot administration and collection of the instrument was adopted. All the copies of questionnaire administered were duly returned. This gives 100 percent return.

Data Analysis Techniques: Descriptive method of data analysis was used in analyzing the research questions. Specifically, the research questions were analyzed using mean and standard deviation.

Results

The results of data analysis are presented below in Tables 1 - 3 below.

Table 1: Mean responses on challenges faced by parents of autistic children in Benue State

Challenges faced by Parents of autistic children	Mean	Std. Deviation	Remarks
1. Vulnerability to physical stress	4.66	.589	Accepted
2. Financial stress	4.54	.675	Accepted
3. Poor standard of living	4.66	.596	Accepted
4. Psychological depression	4.55	.675	Accepted
5. Divorce	4.22	.978	Accepted
6. Discrimination	4.67	.593	Accepted
7. Loss of employment	4.28	.789	Accepted
8. Reduction in Leisure activities	4.26	.972	Accepted
9. Treats to established relationship within the family	4.43	.721	Accepted
10. Disorganization and despair	3.60	1.137	Accepted
12. Lack of verbal speech by the child	4.66	.589	Accepted
13. Difficulty expressing needs and wants by the child	4.66	.589	Accepted
14. Discrimination from siblings	4.66	.596	Accepted
15. Poor response to verbal instruction by the child	4.28	.789	Accepted
16. Difficulty in relating with others by the child	4.43	.721	Accepted
TOTAL	4.43	.824	Accepted

Table 1 shows the challenges faced by parents including those related to the children. The major challenge faced by families of Autistic Children in Benue State is discrimination with a mean score of 4.67, vulnerability to physical

stress, poor standard of living and challenges related to the children such as lack of verbal speech, difficulty expressing needs and wants and discrimination from siblings with a mean score of 4.66 each. This is closely

followed by psychological depression with a mean of 4.55, financial stress with a mean of 4.54. The child's difficulty in relating with others has a mean of 4.43, poor response to verbal instruction by the child has a mean of

4.28, while the least challenge is disorganization and despair with a mean of 3.60. The overall mean score for the challenges faced by parents of autistic children in Benue State is 4.43.

Table 2: Mean responses on coping strategies presently being adopted by parents to reduce stress with autistic children in Benue State

Coping strategies adopted by parents	Mean	Std.Dev.	Remark
1. Seeking for medical attention	4.02	0.984	Accepted
2. Seeking for more knowledge about Autism	3.52	1.340	Accepted
3. Adapting to the health challenge	3.95	1.327	Accepted
4. Adapting to the behavioural tantrums	3.95	1.327	Accepted
5. Getting support from family and friends	4.22	0.986	Accepted
6. Joining Association and groups concerned with autism	4.02	0.984	Accepted
7. Hiding the child	3.60	1.137	Accepted
8. Seeing the child as cursed	3.52	1.340	Accepted
9. Seeking for traditional and spiritual help	3.95	1.327	Accepted
TOTAL	3.98	1.037	Accepted

Table 2 shows that the major coping strategies presently being adopted by parents of autistic children in Benue State are seeking social support system from family and friends with a mean of 4.22, seeking for medical attention and joining association and groups concerned with autism with a mean score of 4.02 each, adopting to the health challenge, adapting to the

behavioural tantrums and seeking for traditional and spiritual help with a mean score of 3.95 each; hiding the child with a mean score of 3.60 while seeking for more knowledge about autism and seeing the child as cured have a mean score of 3.52. The overall mean score for the coping strategies adopted by parents with autistic children in Benue State is 3.98.

Table 3: Mean responses on coping strategies that parents still need to adopt.

Coping Strategies to be adopted by Parents	Mean	Std.	Remark
Behavioural Therapy	4.02	0.984	Accepted
Seeking support from professionals	4.22	0.986	Accepted
Set up reinforcement coping	4.02	0.984	Accepted
Emotional regulation coping	4.02	0.984	Accepted
Positive reframing	3.93	1.107	Accepted
Escape/avoidance coping	3.93	1.107	Accepted
Planful problem-solving	3.93	1.107	Accepted
Self-control by parents	4.22	0.984	Accepted
Parents accepting responsibility	4.22	0.986	Accepted
Confrontative coping	3.93	1.107	Accepted
TOTAL	3.96	1.096	Accepted

Table 3 shows that the major coping strategies that parents of autistic children in Benue State still need to adopt are seeking support from professionals (medical practitioners and care givers), self control by parents and parents accepting and taking up the responsibility with a mean score of 4.22 each, behavioural therapy (a systematic way of managing a disruptive behavior of autistic children), set up reinforcement coping, and emotional coping or control with a mean score of 4.02 each; positive reframing (changing one's view of a stressful situation in order to see it in a positive or more tolerable light), escape/avoidance coping, planful problem solving (coping with stress in organized manner), and confrontative coping (tackling the situation with aggression) with a mean score of 3.93 each. The overall mean score for the coping strategies that parents of autistic children in Benue State still need to adopt is 3.96.

Discussion

From the analysis, the results of the study revealed that families of autistic children in Benue State face a lot of challenges prominent of which is discrimination, vulnerability to physical stress, poor standard of living, psychological depression, financial stress, treats to established relationship within the family, loss of employment, reduction in leisure activities, divorce, and disorganization and despair. Brown and Remington (2005) stated that parents of autistic children face a lot of challenges and the care of such children

cannot be borne by parents alone; the inability of the parents to successfully play this role may frustrate them thus, deprive the children from developing adaptive coping strategies. Also Montes and Halterman (2007) assert that mothers of a child with autism are highly stressed and more likely to report poor or fair mental health. These findings also support the findings of Gona *et al* (2015) who reported that raising a child with autism puts a tremendous strain on parents due to the stigma associated with the disorder and that the need for constant monitoring of the child with autism has negative economic impact on the parents.

The difficult task of bringing up the autistic children and managing with these challenges may also result in psychological and mental stress for the parents. Bhagat, Simbak and Haque (2015) states that parents of autistic children are found with disturbances in their psychological parameters such as social, sexual, economic, and emotional. This shatters them from their interpersonal relationship and family life. Ghanizadehm, Alishahi, and Ashkani (2009) emphasize that the burden of parents of autistic children is not just limited to psychological aspects but on the quality of life, economic aspects, and parent-child relationship. Knapp, Remeo and Beecham (2007) assert that the consequences of autism can be seen in many domains, including family and other social relationships, employment, leisure activities, standards of living, social and personal functioning, and of course an individual

and family quality of life. Bashir, Bashir, Lone and Ahmad (2014) found out that the presence of an autistic child in a family adversely affects marriage and relationship among siblings. These consequences may not be too far from financial and other severe implications. According to Arora & Pandey (2016) frequent and intense tantrums to extreme rigidity and refusal to sleep are some few behaviour problems that autistic children often have thereby straining relationship in the entire family, siblings and marriage.

Coping strategies currently being adopted by parents of autistic children are identified as getting support from family and friends, seeking for medical attention, seeking for traditional and spiritual help among others. This agrees with Dunn, Burbin, Bower, and Tantleff-Dunn (2001) who reported that social support were effective coping mechanism for dealing with the daily stress of parents with autistic children. Also Predescu and Şipoş (2013) found out that coping strategies of mothers of children with autism spectrum disorders such as positive refocusing, positive re-evaluation and catastrophizing significantly correlates family quality life. On the other hand Gona *et al* (2016) found out that coping strategies applied by parents comprised emotion focused aspects that consist of beliefs in supernatural powers, prayers and spiritual healing. Qodariah and Puspitasari (2016) however found out that the effective aspect of coping strategy more effectively applied by mothers is problem focused coping.

The major coping strategies identified that need to be adopted are seeking social support from professionals, self control and accepting responsibility. This means that when parents are supported by health practitioners, professional care givers and non-governmental organizations and government it will assists in reducing their stress since the task of caring for autistic children is so involving. This agrees with Hing, Olivier, and Everts (2013) who found out that parents also look for support from professional resource personnel, who will hopefully, act in a constructive and multidisciplinary manner. Also self control by parents and accepting responsibility play a significant role in psychological and physical wellbeing of parents of autistic children as it changes ones view of a stressful situation in order to see it in a positive or more tolerable light. Furthermore, reinforcement, emotional coping, positive reframing, escape/avoidance coping, planful problem solving and confrontative coping are all significant in curbing the psychological feelings of parents with autistic children. Vidyasagar and Koshy (2010) have found that those who handle autistic children frequently use coping strategies like social support, escaping/avoiding or by positively reappraising the situation more. This also agrees with Pottie and Ingram (2008) who found that higher levels of daily positive mood were predicted by problem focused, social support, positive reframing, emotional regulation and compromise coping.

Parents who adopt coping strategies of active avoidance (denial distraction and guilt) report more stress than those who adopt positive and problem focused strategies. That is, parents should positively confront the challenges instead of avoiding the problem.

Developing communication and social skills is an important part of teaching and learning process in autistic children as it helps them to know what is expected of them in specific situations and to assist them in anticipating what comes next and to learn and generalise a variety of skills (Lovannone, Dunlap, Huber & Kincaid, 2003). To Dawson (2008) a communication system that uses alternative and augmentative forms of expression may be necessary and parents needs to have full knowledge of it. Similarly, Litras, Moore and Andreson (2010) assert that social stories greatly aid in teaching children with autism on how to manage their behaviour during social situations. Therefore, Autism should be treated as a state of mind and people dealing with autistic children must have positive social skills of appropriate communication.

Conclusion

Autism is a mental condition characterized by difficulty in communication and social interaction. This study established that parents of autistic children face a lot of challenges prominent of which is discrimination, vulnerability to physical stress, poor standard of living, psychological depression, financial stress, treats to established relationship within the

family, loss of employment, reduction in leisure activities, divorce, and disorganization and despair. It is imperative for practitioners to provide appropriate professional support and other social support systems to families with autistic children. Parents counselling, creating awareness on care services and developing appropriate trainings are some of the measures suggested to enhance effective coping strategies.

Recommendations

Based on the results, the following recommendations are made.

1. Parents of the autistic children should be encouraged through counseling (workshops, seminars and conferences) on how to handle, care and raise autistic children in a manner that will reduce stress and other challenges.
2. Governmental and NGOs, Community and Faith Based organizations should all be involved in creating awareness about autism. The focus should include creating awareness on care services, eliminating the negative perception of parents, family members and siblings about autism. This will go a long way in assisting parents adopt appropriate coping strategies devoid of negativism leading to reduction in their stress and other challenges.
3. Donor agencies and other humanitarian organizations should look into the direction of autistic children in Benue State with a view to assisting in their educational development, training people in the

area of behavioral therapy, reduction in prevalence rate and enhancing their social status which will also go a long way in reducing the social challenges of the parents.

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Essential Skills Needed by Business Education Graduates for Effectiveness in Entrepreneurship

Azubuike, R.N.

Department of Business Education
University of Nigeria, Nsukka

Abstract

The study investigated essential skills needed by the Business Education graduates for effectiveness in entrepreneurship. Two research questions and two null hypotheses guided the study. Population consists of 659 respondents. Questionnaire was used for data collection. It was face-validated by five experts and reliability test was analyzed with the use of cronbach alpha which yielded coefficient of .91. Data were analyzed using mean, standard deviation, and t-test at 0.05 significant levels. Findings reveal 12 essential skills for idea generation/opportunity evaluation and business start-up including: skills to cultivate, develop and analyze business idea; recognize and evaluate business opportunities; create, evaluate business goals and attain the goals through self ambitions, confidence and motivation. Others are 25 essential skills for management of business for growth and sustainability which include: skills for raising capital; creativity, business, among others. Recommendations include that: Universities should integrate the identified skills into their curriculum for the training and retraining of BEUS.

Keywords: Essential, Skills, Entrepreneurship, Business, Education

Introduction

Economy of many developing countries has experienced great Entrepreneurship impact in the 21st century. Larger percentage of adults in Nigeria engaged in diverse entrepreneurship for a promising and sustainable economy. In spite of the involvement, Nigeria nation is still faced with harsh problems in creating and managing entrepreneurship effectively. Entrepreneurship is a process of innovating and creating new valuable products, using available resources, devoting time and effort, and marketing them for further values,

assuming the accompanying psychic, financial and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence. Ikeme (2007), in reference to Anyakoha, Azikwe and Onu, (2006) asserted that Nigeria nation is faced with myriad of local and global problems which include poverty, unemployment, diseases and conflicts. The situation still poses great challenges to the existence of individuals and families in the country.

Nigeria society is perturbed by decrease in number of jobs available, continued privatization of government

owned organizations and reduction of government interference in private sector (Anyakoha, 2012). Individuals and families are worried about what future holds if the situation persists. To meliorate the situation, Federal Republic of Nigeria (2007) stressed acquisition of entrepreneurial skills and stated that education shall be geared towards self-realization, economic and technical progress. Government made entrepreneurship studies compulsory in tertiary institutions to equip university graduates with basic entrepreneurial skills that will enable them utilize available opportunities after graduation (Anyakoha, 2012). The need to equip university graduates with basic entrepreneurial skills that will enable them utilize available opportunities after graduation enforced the challenge of getting Nigerian universities Business Education undergraduates (BEUS) empowered to acquire entrepreneurial skills for creating employment for self and others, a critical challenge for the development of small, medium and large scale businesses that will later metamorphose into promising, sustainable economy and national development.

In response to the government's demand that education shall be geared towards self-realization, economic and technical progress, Business Education undergraduates (BEU) training is channeled towards acquisition of appropriate entrepreneurial skills that will enable the graduates function effectively in the society. Possession of the essential entrepreneurial skill is demonstrated in the habit of acting,

thinking and behaving on a specific activity in such a way that the process becomes natural to the individual through repetition or practice. As stated by Lawal, Famiwole and Muhammed, (2014), ability to manipulate input resources effectively within a particular enterprise to achieve a production goal is entrepreneurial skill.

Rita, (2013) stated that entrepreneurial skills are the abilities to encourage or seek investment, establish and run an enterprise successfully based on identified opportunities. Adeyemo, (2016), defined entrepreneurial skills as the ability of the individual to exploit an idea and create an enterprise, not only for personal gains but also for social and developmental gains. Skill is an excellent performance which does not depend only on the performer's fundamental abilities or innate capacities but is developed through training practice and experience. Skills are efficient, flexible and economy in performance. Adeyemo (2016) noted that skill depends essentially on learning and includes the concept of efficiency and economy in performance. According to Adeyemo skills represent particular ways of using capacities in relation to environmental demands, with human being and external situation forming a functional system.

The field of Business Education (BE) trains the students in cognitive, affective and psychomotor domains for enrichment in skills required for the practice of the practical entrepreneurship (Azubuike, 2008). Business Education curriculum provides experiences that when properly

acquired, develops in the students various skills including, technical, managerial, accounting and marketing skills for entrepreneurship. As a result, the training embarks on possible tactics to develop in the students, skills for critical and divergent thinking, productive conception and decision making, creativity, interpersonal and communication skills among others. The skills tallied with Frank's (2016) report that skills necessary for successful entrepreneurship are planning, marketing, management, accounting and interpersonal skills among others. Possession of entrepreneurial skills makes BEGS self-reliant and employable. It enables them live in and contributes to the development of the society. BEGS have the ability to redefine risks as an opportunity to use their expertise rather than as a possible reason for failure. They have the ability to recognize and analyze market opportunities, ability to mentally identify, discuss, persuade and communicate with customers, clients, suppliers, competitors and other stakeholders in the business environment. They comprehend their needs, expectations, apprehensions and requirements better. They act responsibly with regard to the social environment and community. BEGS have the ability to establish linkages with other business persons for mutual learning, collaborative undertakings and other joint activities aimed at achieving common objectives. Unfortunately, some BEGS still move about aimlessly in the name of unemployment. Those BEGS lack

communication ability that can enable them market their possessed skills. Some BEGS cannot establish and manage an enterprise successfully (Tichagwa, 2016). Some among those who were employed in industries lost the job as a result of inefficient or poor performance (Ndubuisi-Amadi, 2016). Termination of those BEGS employments was in consonance with Heneman, (2015), who stated that the aim for selection in an organization is to fill existing vacancies with personnel who will be effective contributors to unit and system goals and eliminate candidates unlikely to succeed. Some BEGS complained of absence of capital to go into business, showing that they lack the ability to raise capital in absence of already made cash. The scenario did not conform to the aim of entrepreneurship training and practice in Business Education. The study investigated the essential skills needed by BEGS for effectiveness in entrepreneurship.

The study is significant to Nigerian universities, business educators and undergraduates, researchers, National Universities Commission (NUC), Policy Makers and Employers of Labour. The findings will encourage Nigerian universities, business educators, NUC and undergraduates to demonstrate high level of commitment to entrepreneurial skills acquisition by placing it on its priority table. The findings will motivate them to give full financial and nonfinancial supports for the acquisition of the skills. It will serve as a guide to Policy makers and NUC in planning entrepreneurship education

curriculum to be taught and learnt at the university level; and to employers of labour in employment processes. It will provide an empirical basis for supporting the mandatory entrepreneurship education for university/BEU and serve as reference material for those venturing into similar research. It will direct the minds of the BEU to what the appropriate entrepreneurial skills for effectual production after school are. And the experience will extensively ameliorate the problems and effects of unemployment in the families and society, and enhance Nigerian economy.

Purpose of the Study: The general purpose of the study was to investigate the essential skills needed by the business education graduates for effectiveness in entrepreneurship. Specifically, the study determined the essential skills needed by the business education graduates for:

1. idea generation/opportunity evaluation and business start-up
2. management of business for growth and sustainability

Research Questions: What are the essential skills needed by the business education graduates for:

1. idea generation/opportunity evaluation and business start-up?
2. management of business for growth and sustainability?

HOs: There is no significant difference between the mean ratings of the Business Educators and final year

Business Education students on the essential skills needed by Business Education graduates for:

- Ho₁ idea generation/opportunity evaluation and business start-up.
- Ho₂ Management of business for growth and sustainability.

Scope of the Study: The study was delimited to the determination of essential skills needed by the Business Education graduates for effectiveness in entrepreneurship.

Methodology

Design of the study: The study was a descriptive survey.

Area of the study: The study was carried out in Northwest and Southeast geopolitical zones of Nigeria.

The two zones have 13 States and 34 Universities including Federal, States and Private Universities. Eight Universities out of the 34 offer Business Education courses. Among them were Ahmadu Bello University, Zaria in Kaduna State and University of Nigeria, Nsukka, in Enugu State, two out of the first four oldest universities in Nigeria offering Business Education courses with equitable resources for standard entrepreneurship education.

Population for the Study: The Population consisted of 659 respondents. That included 584 final years Business Education Undergraduates and 75 Business Educators in the 8 universities offering Business Education in Northwest and Southeast geopolitical zones of Nigeria as at 2015/2016 session. The study made use of Business Educators with masters' degree and

above. Business Educators were chosen because of their possessed wealth of knowledge and experiences in entrepreneurship. Final year BEUS were chosen because they possess theoretical knowledge of entrepreneurship, some of them were in petty businesses already; and they will become graduates soonest. No sample was drawn. The entire population was studied because the number was manageable.

Instrument for data collection: The instrument for data collection was questionnaire. Items were generated through the literature reviewed and consultation with Business Educators and entrepreneurs. The instrument consisted of 37 items organized under two clusters. Each cluster elicited information on one research question. The items were subjected to four-point scale labeled from “strongly agreed” to “strongly disagreed”, with their corresponding value of 4,3,2 and 1. Face validity of the instrument was done by five experts from UNN and ABU, three experts in BE, one in measurement and evaluation and one in education research. It was subjected to internal

consistency test using Cronbach alpha to establish reliability for the instrument. The valutors were provided with the purpose of the study, the research questions and the instrument for the validation. Their recommendation resulted in deletion, restructure, acceptance and suggestion of some items. The reliability coefficient was 0.91. The high reliability co-efficient implies that the instrument was highly reliable for the purpose of the study.

Method of Data Collection: Six hundred and fifty-nine copies of the questionnaire (100%) distributed to the respondents through research assistants and personal contacts were properly completed and returned.

Techniques for Data Analysis: The data collected were analyzed using mean and standard deviation. Items that attracted mean rating of 2.5 and above on the four-point scale were regarded as “agreed”, but items that attracted less than 2.5 were regarded as “disagreed”.

Findings

Table 1: Mean, standard deviation and t-test results of the respondents' responses on the essential skills needed by the Business Education graduates for idea generation/opportunity evaluation and business start-up

S/N	Essential skills	Business Educators		Under-graduates				t-value at 0.05	Dec
		x ₁	SD ₁	x ₂	SD ₂	X ₃	SD ₃		
	Business Education graduates should be able to: cultivate, develop & analyze								
1.	business ideas	3.6	.518	3.7	.52	3.6	.58	.256	NS
2.	recognize and evaluate business opportunities	3.6	.52	3.7	.52	3.6	.58	.168	NS
3.	create and evaluate business goals and attain the goals through self ambitions, confidence and motivation	3.6	.518	3.7	.52	3.6	.58	.256	NS
4.	develop vision and mission	3.8	.62	4	.75	3.9	.72	.019	NS
5.	use brainstorming techniques successfully	3.8	.62	3.9	.71	3.8	.64	.217	NS
6.	use problem inventory analysis (PIA) successfully	3.9	.89	3.8	.62	3.8	.64	.196	NS
7.	hold effective discussion with the focus groups	3.8	.62	4	.75	3.9	.72	.292	NS
8.	be confident in himself to face obstacles and achieve definite goals	3.8	.62	3.9	.71	3.8	.64	.217	NS
9.	source and raise initial capital with ease	4	.75	4	.75	4	.75	.292	NS
10.	kickoff an establishment	4	.75	4	.75	4	.75	.019	NS
11.	fund establishment	4	.75	4	.75	4	.75	.019	NS
12.	Exercise effective leadership	4	.75	4	.75	4	.75	.019	NS

Note: N = Number of the respondents: N₁ = 75, N₂ = 584; SA = Strongly Agreed; SD = Standard Deviation; x = mean, NS = Not Significant, df = degree of freedom = 657, critical t-value 1.96

Table 1 shows that all the respondents strongly agreed that all the items listed as essential skills needed by the BEGS for idea generation/opportunity evaluation and business start-up were very important for their effectiveness in entrepreneurship. The items numbered 1 to 12 had mean ratings of 3.6 to 4 by the respondents. Items 1, 2&3 attracted grand mean of 3.6; items 4 & 7; had mean ratings of 3.9; 5, 6&8 had 3.8; items 9,10,11&12 had 4 respectively. The table also revealed that the calculated t-value

for all the items for essential skills needed by the BEGS for idea generation/opportunity evaluation and business start-up were less than critical t-value of 1.96 at 0.05 level of significance and 657 degree of freedom. The calculated t-value for all the items ranged from .019 to .292. That implied that there was no significant difference in the respondents' opinion about entrepreneurial skills necessary for BEGS effectiveness in entrepreneurship.

Table 2: Mean, standard deviation and t-test results of the respondents' responses on the essential skills needed by the Business Education graduates for the management of business for growth and sustainability

S/ N	Essential skills	Business Educators		Under- graduates				t-value at 0.05	Dec
		x ₁	SD ₁	x ₂	SD ₂	X ₃	SD ₃		
A	Creativity:								
1.	critical thinking	3.6	.07	2.6	.01	3.1	.06	.0395	NS
2.	divergent thinking	3.5	.06	3.5	.06	3.5	.06	.028	NS
3.	creative thinking	3.9	.09	3.8	.08	3.9	.006	.0586	NS
4.	visionary/foresight	2.8	.02	2.8	.02	2.8	.02	.0231	NS
5.	met cognitive	2.5	0	2.6	.01	2.5	.006	.0225	NS
6.	inventive mindset	3	.03	2.8	.02	2.9	.012	.0414	NS
7	venturing and risk taking	2.9	.03	2.7	.01	2.8	.012	.0414	NS
8	problem solving	2.9	.03	2.8	.02	2.8	.006	.0025	NS
9	information and technology (ICT)	2.6	.01	2.6	.01	2.6	.01	.0228	NS
10	team building/negotiation	3.1	.04	3.2	.05	3.1	.006	.0025	NS
11.	productive	3.9	.09	4	.13	3.9	.09	.0012	NS
12	analytical	2.7	.01	2.7	.01	2.7	.012	.0414	NS
B	Business Skills:								
13	communication	3.9	.09	3.5	.06	3.7	.025	.0199	NS
14	administrative	2.8	.02	2.6	.01	2.7	.012	.0414	NS
15	organization behavioural	2.9	.03	3.4	.06	3.1	.03	.0414	NS
16	leadership	3.3	.05	3.1	.04	3.2	.012	.0414	NS
17	marketing/sales	3.9	.09	3.9	.09	3.9	.09	.0012	NS
18	human and industrial relationship	3.7	.08	3.9	.09	3.8	.08	.0028	NS
19	accounting/record keeping	4	.13	4	.13	4	.13	.0018	NS
20	financial management	3.9	.09	3.9	.09	3.9	.09	.0012	NS
21	project control and accountability	2.8	.02	2.7	.01	2.8	.076	.0025	NS
22	continuous learning	2.7	.01	2.5	0	2.6	.012	.0414	NS
23	time management	3.9	.09	4	.13	4	.13	.0018	NS
24	business planning and management	4	.13	4	.13	4	.13	.0018	NS
25	decision making	3.8	.08	4	.13	3.9	.09	.0012	NS

Note: N = Number of the respondents: N₁ = 75, N₂ = 584; SA = Strongly Agreed, A = Agreed; NS = Not Significant; SD = Standard Deviation; x = mean; df = degree of freedom = 657, critical t-value 1.96

Table 2 Shows that items 1, 4,5,6,7,8,9,10,12,13,14,15, 16& 22 were rated 'Agreed' while items 2,3,11,17,18,19,20,21,23,24&25 rated 'Strongly Agreed' by the respondents for the essential skills needed by the BEGS for the management of business for growth and sustainability. The means were within the positive decision

levels. Items 1,10 & 15 had a grand mean of 3.1; item 2, had 3.5; items 3,11,17,20&25 had 3.9; 4,7,8 & 21, had 2.8; 5, had 2.5; 6, had 2.9; 9 &22, had 2.6; 12&14 had 2.7; 13, 3.7; 16, 3.2; 18, 3.8; 19, 23,&24, had 4. The results depict that the respondents' responses for the management of business for growth and sustainability were less than critical t-

value of 1.96 at 0.05 level of significance and 657 degree of freedom. The calculated t-value for all the items ranged from .0012 to .0414. That implied that there was no significant difference in the opinions of the respondents on the essential skills needed by BEGS for management of business for growth and sustainability.

Discussion of the Findings

The skills identified in the study were paramount to BEGS' effectiveness in entrepreneurship as indicated by BETS' and BEUGS' ratings. The results shown on table 1 revealed that ability to: cultivate, develop and analyze business ideas; recognize and evaluate business opportunities; create and evaluate business goals and attain the goals through self ambitions, confidence and motivation; develop visions and missions; successfully use problem inventory analysis (PIA); raise capital and fund the establishment; among others were essential skills needed by the BEGS for idea generation/opportunity evaluation and business start-up. The findings were in consonance with Kisyombe, (2014), whose work dwelled on challenges and opportunities of financing a start-up. Kisyombe noted that process of building business from the scratch demand that BEGS possess skills in developing the vision and business idea; raising capital for start-up; finding good employees and customers among others. The findings tallied with EU Skills Panorama (2014), who noted that perception of business opportunities, recognizing, evaluating and

implementing opportunities among others for business creation and growth were skills required variously by Commercial managers and creative workers. Turkish Science Education (TSE) agreed with the findings, and stated that an essential leadership skill entrepreneurs must possess is the ability to develop a vision and inspire others to pursue the vision as a team. The skills are essential and paramount to the BEGS effectiveness in entrepreneurship.

It was observed on table 2 that all the 25 skills listed were essential to BEGS for management of business for growth and sustainability. The study identified skills for critical and divergent thinking, business planning and management, financial management, accounting/record keeping, marketing/sales, communication, among others. In agreement with the findings, research work reported by Turkish Science Education (Retrieved April 5, 2017), stated that man's rehabilitation requires new skills with special consideration to his aptitudes and work functions. The 25 skill items listed on table 2 relate greatly to BEGS aptitudes and work functions in establishing and managing organizations. Turkish Science Education (TSE) stated that few entrepreneurs possess every skill needed to ensure business success. TSE noted that they look to outside experts for help in areas like strategic planning, accounting and specialized marketing. The results were supported by Frank, (2015), (Accessed Nov 2016), who identified and emphasized that every successful entrepreneur must possess marketing/sales, negotiation, leader-

ship, creativity, self motivation, financial management, administration, time management and a range of interpersonal skills. Frank emphasized the need for the business schools to equip the undergraduates with those skills, attitude and behavior enabling them to function effectively in the competitive atmosphere of the 21st century and become potentially entrepreneurs. The findings are in consonance with the Nigeria Entrepreneurship Education goal (2006), as documented by Onele, (2014), to inculcate in the trainees the ability to:

- ❖ Identify and solve problems using critical and creative thinking;
- ❖ Work effectively with others as a proactive team member and cultivate the ability to resolve conflict;
- ❖ Organize and manage one-self and one's activities;
- ❖ Collect, analyze and critically evaluate information (to make decisions that must be carried through);
- ❖ Communicate and negotiate effectively;
- ❖ Reflect experiences and explore various strategies for learning;
- ❖ Become curious leading to readiness to experiment and innovate (being never satisfied with the status quo);
- ❖ Consider self employment as a viable option upon graduation from their institution.

The BEGS should have abilities for business planning, finance and accounting skills, as well as ability to create new and innovative marketing

plans that utilize modern communication technology. That was supported by Carlson, (2016) that small business enterprises have numerous challenges because of their lack of knowledge for proper techniques related with procedures in marketing. Confirming the negative effect of lack of essential entrepreneurial skills on business performance, Baker, (2016) noted that an entrepreneur who does not have the essential skills or the ideas about marketing in business tend to have marketing problem. Baker classified lack of marketing orientation as a major factor for failure in business. The Universities should endeavour to inculcate in the BEUG the knowledge of those essential skills for adjustment in the world of work.

Conclusion

Most Universities in Northwest and Southeast geopolitical zones of Nigeria are less effective in inculcating in Business Education students Entrepreneurship Education goals stipulated by the presidency in 2006. Business Education students graduate without acquiring meaningful skills that would offer those means of livelihood. The students appear not to be encouraged to generate and nurture their ideas into reality due to lack of education that offers challenges and enforces diligence and commitment in the students. And the educational programmes in the country tend to produce no solution to the problem. The graduates of BE will be efficiently and effectively creating, controlling and managing businesses when the essential

skills identified in this study are acquired. More job opportunities will be created and youths' unemployment and poverty drastically reduced when the students are graduated with the identified skills. Income for most families will be enhanced and there will be unspeakable improvement in the family resources and standard of living; national economic growth, stable and sustainable economy attained as a result of full employment of youths.

Recommendation: Based on the findings, the following recommendations are made:

1. The Universities should integrate the identified skills into their curriculum for the training and retraining of BEUS.
2. The Universities should endeavour to inculcate in the BEUG the knowledge of those essential skills for adjustment in the world of work.
3. The NUC should integrate the identified skills into the Universities' mandatory curriculum for Entrepreneurship Education of BEUS. NUC should investigate into the cause of failure in attainment of the actual Entrepreneurship Education goals by those Universities.
4. BEUGS should be encouraged to establish and run mini enterprise while in the school.

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Empowerment of Farm Families in Cross River State, Nigeria

Onu, F.M.; Ubua, I.B. & Ubua, R.L.

Department of Agricultural and Bio-Resource Education
University of Nigeria, Nsukka

Abstract

The paper examined the challenges which face the farm families in agricultural production and suggested mechanisms for empowering the farm families to improve their agricultural productivity. Many factors hinder the progress of farmers in food production which include adaptation to climate change issues like flooding, high rate of inflation, high cost of farm inputs, insecurity and corruption challenges. Unfortunately, many farmers find it difficult to grapple with the problems of food insecurity caused by some obvious challenges. The farmers therefore need to be empowered to enable them solve the problem of food production especially in Cross River state where flooding, insecurity of lives and other challenges make farmers not to do their best in food production. The paper therefore examined some factors which affect the farm families in agricultural production and ways of empowering the farmers to improve agricultural productivity in Cross River state, Nigeria. Conclusions were reached that the problem of food insecurity could be addressed if the farmers are empowered and obstacles that hinder the farmers' food production removed. Based on the conclusions, some recommendations were made; one of which is that farmers should be encouraged to form association-based co-operatives on their value chain and geographical location to enable them channel their problems collectively as a group for easy recognition by the government and her agencies.

Key words: farm families, empowerment, agricultural productivity and food security

Introduction

Agriculture is the predominant occupation of most of the rural dwellers in Nigeria. It is estimated that about 70-75% of the population of Nigerians live in rural areas and over 80% of rural dwellers are involved in agriculture and

agricultural related activities(Mama and Alkali, 2013; Osagie and Tinko, 2014 and Mgbenka, Mbah and Ezeano,2015). However, the authors noted that about 90% of the food consumed in Nigeria is produced by resource poor and illiterate farm families (households).

A farm family is one where the household head or main income earner is economically active in agriculture (Organization of Economic Community and Development OECD, 2015). Farm family therefore is viewed in this study as any family in Cross River State in which the main income generating activity is agriculture or agriculture related. Farm families are the backbone of Nigerian agriculture. They produce the food consumed in the country, provide raw materials needed in the industries and generate income for themselves and revenue for the country (Ele, Omini and Adinya, 2013). Unfortunately, agricultural production in Nigeria is characterized by low productivity (Donye, Ja'afaru and Obinne, 2013) leading to low farm income as a result of numerous production constraints (Agom, Susan, Kingsley and Nyambi, 2012).

Cross Rivers State, Nigeria is blessed with abundant natural resources that support agricultural productivity (Osagie and Tiko, 2014). Kingsley, Eucharia, Uket and Onu (2015) decried the situation where agricultural production in the state is dominated by small holder farming and still at subsistence level due to production constraints faced by farm families. It is therefore necessary to identify agricultural production constraints faced by farm families in Cross River State and find ways through which the farm families can be helped to overcome these constraints through appropriate empowerment mechanisms.

Empowerment refers to the process of giving individuals more control over their life or situation. Cheryl (1999) explained empowerment as a social process that helps people to gain control over their own lives. In the view of the Swedish International Development Association (SIDA, 2009), farmer's empowerment is the process which increases the farmer's real power over economic decisions that influence their lives and priorities in the society. Therefore, empowerment is used in this study as a process of helping farm families overcome their agricultural production constraints in Cross River State. Graeab, Jahichapell, Wittman, Kerr and Herran (2016) stated that farm families should be empowered to build innovative capacity for enhanced food production through education and training and also to improve the market condition for the farmers to enable them overcome market failure. When farm families are empowered to grow more food and earn more income, it will help to improve the living standard of the farm families and strengthen their immediate community economically. Unfortunately, farmers in Nigeria and especially those in Cross River State face several challenges that have impacted negatively on their farm productivity. Such challenges are discussed below for greater understanding of the problems at hand.

Constraints Confronting Agricultural Productivity of Farm Families in Cross River State, Nigeria

Farmers are faced with many constraints that affect their agricultural

productivity thus making them to remain in perpetual hunger, starvation and poverty. Some of challenges limiting increased and successful production of agricultural produces in Cross River state are discussed below:

Poor Information Dissemination:

Information is said to be power and therefore important for any meaningful agricultural development. Mgbanka, *et al* (2015) noted that Nigerians seldom feel the impact of agricultural innovations either because they have no access to such vital information or because it is poorly disseminated. Supporting this position, the International Fund for Agricultural Development (IFAD, 2014) pointed out that some farmers in developing countries such as Nigeria receive less than 5% extension services. IFAD observed that extension services such as supply of agro-chemicals for the control of weeds, pest and diseases, provision of improved seeds and seedlings for planting, drugs and vaccines for livestock, provision of fertilizers to farmers and modern agricultural machineries are inadequately provided. When farmers are not properly informed of improved agricultural practice and continue holding on to traditional, primitive and inefficient production systems, the farmers perpetually remain hungry and poor. The farmers therefore need to be empowered on how to access information to improve their agricultural production.

Insecurity Challenge: The emergence of insecurity such as terrorism, kidnapping, Fulani herdsmen attacks,

armed robbery among others disrupt the peace of the nation and scare away foreign investors. Blanchard and Husted (2016) stated that the slow economic growth and development of Nigeria in spite of oil wealth is majorly caused by insurgency that claims the lives of thousands of Nigerians. The above listed threats to security negatively affect agricultural productivity directly or indirectly. Many farmers are afraid to go to farms for fear of being killed or molested as a result of which they will have little or nothing to harvest. This situation exposes farm families to various forms of hardships such as hunger, starvation and poverty. The situation requires empowering the farmers on how to cope with the security challenges in their communities. The measure will enhance food production.

Limited Access to Modern Agricultural Technology:

One of the important advances that has been recorded in the field of agriculture is production of labour saving and effective technology such as machineries and equipment among others. The farmer needs information on production technology that involves cultivation, fertilizer application, weeding, harvesting, soil erosion control and prevention. Access to affordable fertilizers, herbicides and machineries used in cultivation increases efficiency and expansion of farm business and consequently raises the farmers yield and income. Unfortunately, Osagie and Tiko (2014) reported that farmers in the state have limited access to these modern agricultural technologies and as a result

barely produce for family consumption. The farmers therefore should be equipped with the ideas on how to access the modern agricultural technology for increased food production.

Inadequate and High Cost of Farm Inputs: Access to timely and appropriate inputs as well as finance enable farmers to expand production and achieve greater farm output. For example, an effective distribution system is needed to give farm households access to fertilizers and seeds at affordable prices. Mgbanka *et al* (2015) observed that the existing seed and planting material industries are under-developed and supplies are often of sub-standard quality. Planting of sub-standard seeds results in reduced productivity and by extension, affect farm income.

High Level of Unemployment: many graduates in Nigeria end up roaming the streets doing little or nothing after school. This frustrating situation drives many young people into various types of crimes and social vices. According to Africa (2016), most unemployed graduates engage themselves in online scams and other fraudulent activities in order to survive. This situation also contributes to the insecurity challenges in Nigeria and especially in Cross Rivers state where kidnapping is rampant among the inhabitants. This situation is threatening the very existence and survival of the rural farmers and scares them from going about their legitimate businesses including farm work. Empowering

them on how to engage in farm work for business is necessary.

High Rate of Inflation: The prices of every commodity in the market has increased as a result of the global economic recession. Whenever there is inflation, the poor masses and fixed income earners feel the impact more. Ewentan and Urkie (2014) stated that the country is faced with dwindling developmental challenges including endemic rural and urban poverty, unstable and deteriorating exchange rate which is accompanied by high inflation rate, inadequate physical and social infrastructure and large domestic debt. The high rate of inflation affects the farmers more because the farm inputs are above their reach. They need to be empowered to grapple with the situation of inflation related to agricultural production.

Ways of Empowering Farm Families in Cross River State to Improve Agricultural Productivity

Several approaches can be adopted towards addressing the constraints of agricultural productivity in Cross River state and invariably empower farm families. Some of these approaches that can be used are discussed as follows:

Empowering Farm Families through Research Institutes: Research institutes identify problems that affect agricultural production. The research gives the best approach and technologies to address both the current and future problems. According to Ebba, Rubby and Daita (2012), agricultural research institutes strengthen dissemination and exchange

of information, experience and research results to the farmers through extension agents and other stakeholders. They address the mismatch between the research and the farmers needs. They create platform for exchange of best practices and innovative ideas to rural farmers. Postnote (2012) noted that research institutes develop new crops and breeds of livestock, introduce new farming technologies and new farming techniques to African small holder farmers. Research efforts of the agricultural institutes enable the farmers produce crops with high yield and short period, and breed of livestock that are very prolific with most desirable qualities. When these yielding crops and prolific animals are made available to farm families, their farm productivity and income are increase and consequently empowering them. Government and other stakeholders should therefore support research programmes by investing and funding research institutes to solve farmer's problems.

Empowering Farm Families through Agricultural Extension Service: Agricultural extension services are programmes that are designed to link farmers with research institutes in order to improve their production. Donye, Jaafar and Obinne (2013) stated that extension programmes usually focus on new agricultural techniques, innovations and technologies available to farmers, and by the process instruct them on how to adopt the various innovations and services to improve their farming. Extension agents assist farmers on how to get loans from

financial institutions. According to Donye *et al* (2013), extension agents assist farmers on how to have access to improved modern farm inputs such as fertilizers, seeds, vaccines, drugs and modern equipment for their farming operations. They also assist the farmers to manage risks in their farms, such as risk associated with production, storage and marketing their produce. They provide them with information on how to secure their farms through insurance services. Agricultural services are funded, financed and run by the government under the ministry of agriculture. Ebba, Rubby and Daita (2012) pointed out that agricultural extension is provided by the government or non-governmental organization to implement extension programmes responsible for developing and monitoring activities that promote farmers capacity and by so doing empowering the farmers.

Empowering Farm Families through Government Support: The government is the major stakeholder in agricultural development of any country. Government programmes that promote agriculture are managed under federal and state ministries of agriculture. Government in collaboration with other stakeholders sponsor programmes like research institutes and agricultural extension services to provide the basic infrastructures for agricultural development. Government plays an important role in achieving food security by supporting research development and enhance agricultural infrastructure to ensure that farmers produce enough food for the country.

The government also makes policies that grant farmers access to credits, subsidies and farm inputs in order to create more income to the rural farmers. Rural farmers also need information that will enable them improve in their production and also market their produce. Imoloame and Olanrewaju (2013) called on government to create new funding services to deliver extension services to build farmers capacity and help them make informed decisions that can make farmers to improve their productivity thereby reduce hunger and poverty among the farm families. Farm families need to be provided with adequate market infrastructure and storage facilities to reduce the level of post harvest losses that farmers incur. Kareem and Akinbele (2015) observed that when government provides the farmers with market infrastructure, adequate and efficient storage facilities and accessible market information losses which farmers incur after harvest are prevented. Another strategy which government can use to enhance the productivity of farm families is by investing in rural infrastructures and assisting farm families through provision of incentives in form of subsidies. Karla (2013) stated that government can enhance food production through adequate investment in small holder agriculture and rural infrastructure and by so doing, empower the farm families.

Empowering Farm Families through Non-Governmental Organization: Non-governmental organizations (NGOs) are groups of individuals or non-profit

organizations that take interest in alleviating human suffering, improve the environment and maintain peace in the society. The NGOs are interested in some of the areas of human endeavour that receive less attention from government or private sectors. Siddaraju (2011) noted that NGOs provide strong support to development issues, especially where the government and private sector show less interest. They focus on building social capital such as farmer groups, farmer organizations and network among farmers. NGOs also promote sustainable agricultural development that is based on ecological principles and practice to maintain soil fertility and the environment. NGOs confront the problems that small farm families face in their daily struggle for survival. To enable farmers increase their efficiency and realize higher produce to meet the growing consumer demand for food, NGOs need to assist the farmers in various ways to increase food production and eradicate poverty. NGOs assist farmers by implementing some of the government programmes towards sustainable agriculture, promote market facilities and enhance farmers awareness programmes. Warker (2007) pointed out that NGOs promote the interest of poor people by providing some basic social services at the community level. Some of the NGOs provide direct and indirect subsidies to improve farmer's access to market by helping the market to benefit both producers and consumers. If NGOs can be involved in performing the aforementioned assistance to the

farmers in Cross River state, it will go a long way in empowering the poor farm families for better agricultural productivity.

Conclusion

Farm families in Cross River state constitute the major food producers in the area. However the farmers are faced with a lot of constraints which limit their production capacity making them to produce barely enough for the food needs of the family with little or nothing for the market. Some of the agricultural production constraints faced by farmers in the area include limited access to credit, market and agricultural technologies. Other constraints are inadequate and high cost of farm inputs, insecurity, poor information dissemination, poor infrastructure, high rate of inflation among others. As a result of these production challenges, farm families continue to grapple with the problem of food insecurity, hunger, and poverty. If the identified farmer's production constraints are contained, it will help to empower the farmers for greater productivity. For instance, good road net work, access to improved seeds and fertilizers and other agricultural technologies will boost agricultural productivity and bring more income and food to the table of farm families and the masses in Nigeria.

Recommendations

The following recommendations are proffered for improving the situation of farm families in Cross River state, Nigeria:

- ❖ Farmers should be encouraged to form association based co-operatives on their value chain and geographical location to enable them channel their problems collectively as a group for easy recognition and consideration by the government and other donor agencies.
- ❖ Development of rural infrastructure will serve as a means of empowering the farm families especially the youths, through provision of basic amenities like good road network, water supply and irrigation facilities.
- ❖ Farmer groups should be encouraged to get registered with the government especially those in the rural areas to enable them benefit from government assistance through empowerment schemes.

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Financial Coping Strategies of selected families in Enugu State in the face of Economic Recession in Nigeria

Ogbonne, I.P.

Institute of African Studies
University of Nigeria, Nsukka

Abstract

The major purpose of this study was to determine the financial coping strategies families have adopted to survive in the current economic recession in Nigeria. The area of the study was Enugu State. The sample was 384 while the population was 16,491,395. The instrument of data collection was the questionnaire. Data analysis was done using mean and standard deviation. Major findings of the study revealed that the financial coping strategies families have adopted to survive economic recession include: family budgeting, saving plan, debt reduction plan, modification in basic needs like food, shelter, education as well as investment strategies like saving target, spending plan among others. Based on the result of this study, it is recommended, among others, that heads of households should always take the wellness of the family into account while implementing coping strategies.

Keywords: Coping, Economy, Family, Finance, Strategies

Introduction

The economic recession in Nigeria has put enormous pressure on the family. This is because finance is very essential for the running of the day-to-day activities of the family. Scholars (including Molly, Laveren, & Deloof 2010; Mandel, 2012; Lusardi & Mitchell 2014; Vyvyan, Blue & Brimble 2014) agree that all families, irrespective of size, need finance to meet their daily needs such as payment of school fees, health care services, feeding, shelter among others. Meeting these needs has posed a serious challenge recently because of non-payment of salaries and increasing cost of living occasioned by

recession in the country. Farayibi (2016) describes economic recession as a downturn in the economy which is often characterized by symptoms such as rising prices of goods and services, inability of government to meet its financial obligations, exchange rate fluctuations, and poor performance of other macroeconomic variables which defines the state of the economy per time. The National Bureau of Economic Research (NBER, 2010) conceptualized economic recession as a substantial reduction in the economic activity spread across the country, lasting more than a few months, normally visible in real gross domestic product (GDP)

growth, real personal income, employment (non-farm payrolls), industrial production, and wholesale-retail sales. Mazurek and Mielcová (2013) aver that economic recessions are often studied from three perspectives viz: recession causes, its consequences and the last focuses on recession predictions. In this study, more attention was paid to consequence of recession which Mazurek and Mielcová (2013) describe as the sociologic and economic consequences of recessions on human life. Families have been forced to adjust their financial spending so as to survive recession. Cherlin, Cumberworth Morgan and Wimer (2013,p. 27) commented on the influence of economic recession on the family thus: 'Recessions can alter family life by constraining the choices that individuals and couples make concerning their family lives and by activating the family's role as an emergency support system.' Recession in Nigeria is evidenced in the fact that many states in Nigeria cannot pay workers' salaries. Ahiuma-Young (2015) in a lead story on workers' celebration of May 1st, reported that only nine out of 36 states in Nigeria paid workers' salaries up to April. The states are: Lagos, Edo, Delta, Ebonyi, Anambra, Kano, Cross River, Akwa-Ibom, Enugu. Rivers was said to have paid up to March as at that time. The rest of the 26 states were owing salaries ranging from two to four months. Studies (by Ahmed, Muddasar & Perviaz 2012; Sen & Ariizumi 2013;) have shown significant relationship

between salary payment and family wellness.

The National Bureau of Statistics (2016) in its Labour and Productivity Report for Q1 noted that many firms had to sack their staff while those that did not sack workers had them doing less productive work than they did in previous quarters. The report also observed that the scarcity of foreign exchange caused a large divergence between the parallel and official exchange rates, which made imported goods more expensive and affected the ability of businesses reliant on raw material imports for their production. The report for Q2 of 2016 revealed that the retrenchment of workers continued while growing hardship was commonplace. These reports do not present a cheering picture because when more people are out of work, their income reduce and this has a very negative impact on the family generally. When people do less work, there is a possibility that they will earn less. This will also eventually, put financial pressure on their families. Such a scenario will affect their purchasing power. This is indicative in the Consumer Price Index as reported by the National Bureau of Statistics (2016). According to the Bureau, The Consumer Price Index measures the average change over time in prices of goods and services consumed by people for day-to-day living. The result of the Bureau showed that in July 2016, the Consumer Price Index (CPI), increased by 17.1%, which is 0.6% points higher from the rate recorded in June (16.5%). Increases were recorded in all consumer

products. For example, the Food index increased by 15.8% in July, 0.5% points from 15.3% recorded in June. The index was supported by a faster increase in the prices of bread and cereals, meats and fish groups, amongst others. On a month-on-month basis, the highest price increases were recorded in the fish, potatoes, yams and other tubers. These are all items that families need to survive and an increase in their prices calls for greater financial management technique to be able to survive the hard times. Studies (Murakami 2012 and Wiemers 2014) have shown that unemployment significantly influences family purchasing power. What this means is that coping strategies among families in times of economic recession is desired. Scholars (including Rason and Gayer 2010, Ogbonne 2015, Boex and Muga, 2009) have advocated investment as coping strategies to survive economic recession. Noko (2016) suggests the copy strategies for individual and families to survival economic recession include limiting basic needs to only the essentials, investing for future benefits as well as reduction in leisure related activities. Ologbon-Ori (2016,p.1) noted that families are expected to know when to draw thick line between needs and wants and prioritize accordingly. Families in Enugu State, which is one of the five states also have to adopt ways of coping with recession. This is more so that Enugu is largely a commercial area where most of the families are into one form of trade or the other. Recession has greatly affected business activities as it reduced the purchasing power of many

people. Therefore, a study of the financial coping strategies families in Enugu State adopt to survive economic recession is very essential to financial management experts and researchers, home economic experts and researchers and even government agencies and non-governmental organizations who are interested in family wellness.

Purpose of the Study

The main purpose of this study was to investigate the financial coping strategies families have adopted to survive in the current economic recession in Nigeria. Specifically, the study sought determine:

- basic need related (food, clothing, housing, education and transportation) to coping strategies adopted by families to survive economic recession in Enugu State.
- investment related coping strategies of families in Enugu State.
- challenges families in Enugu face in implementing their financial coping strategies in the face of economic recession in Nigeria.

Research Questions

This Study sought answers to the following questions:

- What basic need related (food, clothing, housing, education and transportation) to coping strategies adopted by families to survive economic recession in Enugu State?
- What are the investment related coping strategies of families in Enugu State in the face of economic recession?

- What challenges do families in Enugu face in implementing their financial coping strategies in the face of economic recession in Nigeria?

Methodology

Design and area of the study:

Descriptive survey was adopted. Area of the study was Enugu State. The state is one of the five states in South East Nigeria with 17 Local Government Areas and three senatorial zones.

Population of the study: The target population of this study was all the heads of households in study area. The total number of households in Nigeria according to the National Bureau of Statistics [NBS](2011) is 16,491,395. It is important to add here that the NBS did not provide the number of heads of households in each state, thus making it difficult to determine the total number of household heads in Enugu State. The occupation households in Enugu include trading, farming, civil service.

Sample and Sampling Technique: The sample size for this study was made up of 385 household heads in Enugu State. The Cochran formula (1963, p.75) was used. With 95 percent level of confidence (confidence interval - $\pm 5\%$), population estimate of 50% (.5) and a permitted margin of error at .05 (5 percentage points), the Cochran Equation '1' which yielded a representative sample for population that are large. Multi-Stage sampling technique was used for this study. To arrive at the individual respondents, first all the three senatorial zones in

Enugu State were selected. At the second stage, two Local Government Areas were purposively selected in all the three senatorial zones, arriving at six LGAs. At the next stage, six communities were randomly selected in each of the five LGAs leading to a total of 36 communities for the study. In each of the communities, purposive sampling was used to select the longest street, thus arriving at 36 streets.

Instrument for Data Collection:

Questionnaire was used as the instrument of data collection. A total of 384 copies of the questionnaire distributed to the respondents by hand to heads of households in Enugu State. The response format was a four pointscale ranging from Strongly A (SA), Agree (A) Disagree (D) and strongly Disagree (SD). The benchmark for accepting or rejecting a statement was 2.5. The questionnaire instrument was validated by three experts from the field of study while the reliability of the instrument was determine by Cronbach Alpha method was adopted to measure the consistency coefficient of the questionnaire. The Cronbach Alpha values were .780 for Table I, .82 for Table II.

Data Collection and analysis techniques:

The data for this study was collected using the questionnaire. The instrument was administered to the respondents face-to-face by the researcher and retrieved through the same means out of the total number of

385 copies of the questionnaire that were administered to the respondents, 367 were returned and found useful. This represents 95% response rate. In the analysis of data for the study, the researcher used mean and standard

deviation. The analyses were done with the Statistical Package for Social Sciences Version 22. The result was presented in the tables.

Results

Table 1: Mean Responses on the Basic Needs Related to Coping Strategies Families in Enugu State have adopted to survive economic recession in Enugu State.

SN	Item	Mean	SD	Remarks
(a)	Food and feeding related			
1	Reducing the number of meals per day	2.6	.67	Adopted
2	Reduction in the quality of meal	2.71	1.09	Adopted
3	Reduction in menu variation	2.9	.86	Adopted
	Clothing related			
4	Paying less attention to fashion	3.4	.91	Adopted
5	Buying of fairly used clothes	3.1	.92	Adopted
6	Proper care for available cloth	2.6	.78	Adopted
	Shelter and Housing related			
7	Change of location to less expensive houses	3.0	.45	Adopted
8	Complete relocation to free houses	2.9	.78	Adopted
9	Less decoration of houses	2.7	.99	Adopted
	Education of children related			
10	Change of school for children	3.1	.89	Adopted
11	Stoppage of children's education	1.5	.86	Not adopted
13	Stoppage in the buying of text books for children	2.4	1.04	Not adopted
	Transportation			
14	Stoppage of unnecessary journeys	2.5	.87	Adopted
15	Stoppage of use of private car	3.7	.67	Adopted
16	Trekking to cover short distances	3.3	.89	Adopted

Table 1 above shows that all but stoppage of children's education and stoppage in the buying of text book were accepted as coping strategies related to basic needs family have adopted to survive economic recession in Nigeria. According to the results, the respondents reported that they reduce the number of meals per day, reduced the quality of the meal, vary their menu,

and pay less attention to fashion. Others are buying fairly used clothes, proper care for available clothes, change of location to less expensive areas, complete relocation to free houses, less decoration of houses, change of school for children, stoppage of unnecessary journeys and stoppage of private cars as well as trekking to cover short distances.

Table II: Mean Responses on Investment Related Strategies Families in Enugu have Adopted to Cope with Economic Recession

SN	Investment related coping Strategies	Mean	SD	Remarks
1	Increasing the number of working hours	3.10	.79	Adopted
2	Creating savings target	2.70	.67	Adopted
3	Credit management strategy	2.60	.89	Adopted
4	Setting spending plan	2.50	.098	Adopted
5	Budgeting	2.80	.87	Adopted
6	Minimising tax and creating additional 'after tax' cashflow	3.10	.77	Adopted
7	Reducing the effect of the debt through the review of loan facilities	3.50	.90	Adopted
8	Securing and protecting capital to allow for transition to next generation	3.40	.96	Adopted

Table 2 showed that all the items presented are used as investment strategy among families in Enugu to cope with economic recession. This is because all the items had mean scores of 2.5 and above which is within the benchmark for accepting or rejecting items. The respondents reported that as part of their investment strategies, they

have increased the number of working hours, created savings targets, developed credit management strategy, set spending plans, maintained good budgeting, minimized tax and created additional after tax cash flow and reduced secure and protect capital to allow for transition to next generation.

Table 3: Mean Responses on Challenges Families Face in Implementing their Financial Coping Strategies in the Face of Economic Recession

SN	Item	Mean	SD	Remarks
1	Poor knowledge of financial management	2.7	.78	
2	Pressure from extended family	2.6	.89	Challenge
3	Peer influence	2.5	.98	Challenge
4	Pressure from children	3.1	.77	Challenge
5	Increasing cost of consumable items	3.5	.92	Challenge
6	Increasing cost of services	3.4	.68	Challenge
7	Lack of show of understanding from spouse	2.6	.76	Challenge
8	Irregular income	2.9	.87	Challenge

The result from Table 2 above showed that all the nine items presented were accepted as the obstacles to the implementation of financial coping strategies families have adopted to

survive the harsh economic realities in Nigeria. This is because all the items had mean scores that is within the acceptable benchmark of 2.5. According to the results, families face challenges

like pressure from extended families, peer influence, pressure from children, increasing cost of consumable items, increasing cost of services, lack of show of understanding from spouse and irregular income.

Discussion of Findings

This study investigated the financial coping strategies families adopt to survive the economic recession in Nigeria. The coping strategies were found to have ranged from basic needs such as food/feeding, clothing, shelter, education and transportation and investment strategy such as savings target, spending plan, credit management among others (see Tables 1 and 2). While some of the strategies could be commended as good financial management strategies, others have corresponding negative implications on the family wellbeing. For example increase in the number of working hours to rise more fund, stoppage of unnecessary journeys, family budget, savings plan and debt reduction plan could be considered as good financial management strategies, reducing the quality of food could have corresponding negative effect on the family wellness. Ahmed, Muddasar, and Perviaz (2012) had argued that good diet behaviour is essential for family wellness. The result of this study corroborate the submission of Ogbonne (2015) who notes that effective financial management strategies are very essential to both individual and the government and that the current fall in the price of oil, which is the major source of income for Nigeria suggests

that effective financial management strategies are needed. Kenyon and Borden (2004) corroboratively identify family budget, savings plan and debt reduction as good financial management approaches for families. The Center for Personal Financial Education (2004) in stressing the importance of planning in financial management notes that taking steps to plan before spending could help individuals and family manage their income well, not minding how little. The result is also consistent with the submission of Ologbon-Ori (2016) who argued that families need to during difficult times are so as to remain alive.

The financial coping strategies that could pose a challenge to the family well being include: reducing the number of meals per day, reduction in the quality of meal. The moderation in the feeding families could pose a challenge when poorly handled. This is because, good feeding is very essential to the wellness of the family. Hawkes (2013) notes that good eating behavior is essential for healthy living and families cannot afford to be exceptions. In recognition of the value of good diet, the 57th World Health Assembly of May 2004, approved the World Health Organization's (WHO) Global Strategy on Diet, Physical Activity and Health . The strategy aims to achieve energy balance and a healthy weight, limit energy intake from total fats and shift fat consumption away from saturated fats to unsaturated fats and towards the elimination of transfatty acids, increase consumption of fruits and vegetables,

and legumes, whole grains and nuts, limit the intake of free sugars, limit salt (sodium) consumption from all sources and ensure that salt is iodized. A reduction in the quality of meals consumed by families as a financial coping strategy can hardly achieve this goal. Withdrawal of support for extended family could affect the unity of the family because of the communal style that is identifiable with African setting. In most African setting, helping extended family members is perceived obligatory and any attempt to do otherwise could have a negative outcome on the wellness of the family. The result of this study is consistent with that of Sen and Ariizumi (2013), Murakami, (2012) Molly, Laveren and Deloof, (2010) Lusardi, and Mitchell (2014) who reported that changes in family income will lead to changes in family life style.

The result of the study on the limitations of the implementations of the family financial coping strategies have implications in the attainment of Sustainable Development Goals. It suggests that achieving the SDGs could pose a challenge if obstacles that limit families from achieving certain goals are not addressed. The result also suggests that efforts aimed at promoting the family wellness should also incorporate the challenges families face.

Conclusion

Based on the result of this study, the researcher concludes that families in Enugu have responded to the prevailing economic hardship in Nigeria by

coming up with different financial coping strategies like family budgeting, reduction in debt plan, savings plan, less attention to fashion among others. The researcher also concludes that even though families have come up with these financial coping strategies, there exist some challenges that limit their easy implementation. The contribution of this study is that it has provided data for understanding how families are striving to survive in the face of current economic hardship. Such an understanding is very fundamental in the study of families wellness and eventual implementation for the United Nations Sustainable Development Goals.

Recommendations

Based on the result of this study, the researcher makes the following recommendations:

- ❖ Families should continue to adopt financial coping strategies so as to survive the current economic hardship in Nigeria.
- ❖ The financial coping strategies on diet should be implemented with caution so as not to compromise the wellness of the family.
- ❖ The government of Nigeria at all levels should continue to adopt measures that will improve the financial wellness of families.
- ❖ Further researchers should determine the adoption of financial strategies along the line of demographic variables like family size, location, educational level of family head, income level of family head among others.

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Evaluation of Physicochemical and Sensory Properties of Bread Samples Produced from Blends of Rice, Wheat and Winter-squash Seed Flours

Obeta, N. A., Ndukwe, V. N.

Department of Food Science and Technology,
Michael Okpara University of Agriculture, Umudike

and

Onwurafor, E.U

Entrepreneurship and Development Research and Development of Food Science
and Technology, University of Nigeria, Nsukka

Abstract

The study evaluated the physicochemical and sensory properties of bread from composite flour of wheat (W), rice (R) and winter-squash (S) seeds. Flours were blended in the ratios of 100:0:0, 80:10:10, 60:20:20, 40:30:30, 50:50:0 and 50:00:50 for W, R and S respectively and bread samples produced were designated as W₁₀₀, WRS₈₁₁, WRS₆₂₂, WRS₄₃₃, WR₅₅ and WS₅₅. The result of proximate showed low moisture content, increased carbohydrate content with addition of rice (from 68.71 % in W₁₀₀ to 70.68 % in WR₅₅) and decreased protein content (from 11.23 % in W₁₀₀ to 9.71 % in WR₅₅). The loaf volume for sample WRS₈₁₁ (823.50 cm³) compared favourably with the sample W₁₀₀ (845.77 cm³). Bread samples W₁₀₀ and WRS₈₁₁ had the best overall acceptance with 7.34 and 7.29 scores in 9-point hedonic scale.

Key words: Wheat, Rice, Winter-Squash, Composite and Bread.

Introduction

Food security exists when all people at all times have physical, social and economic access to sufficient safe and nutritious food. This indicates that availability of food alone does not mean food security in a country (Ojo and Adebayo, 2012). Nutrition security means access to adequate utilization and absorption of nutrients in food to live a healthy and active life (FAO,

2009). Bread, a staple food prepared from dough of flour and water, usually by baking is popular around the world and is one of the oldest convenient foods. It is eaten by people of all ages, served in all meals, used as snacks, as staple depending on the social status of the individual; and therefore can be used to fight food insecurity. There are wide varieties of types, shapes, sizes, and textures of breads in various

regions. Bread may be leavened by many different processes ranging from the use of naturally occurring microbes (for example in sour dough recipes) to high-pressure artificial aeration methods.

Wheat flour is unique for bread and other baked products because of its unique gluten protein which is not present in other cereal and legume seeds. Gluten protein forms elastic dough during fermentation and baking to trap substantial amount of air either from yeast or from artificial leavening agent. This permits substantial increase in volume of baked products (Ihekoronye and Ngoddy, 1985; Gil-Hamane, Piston, Altamirano-Fortoul, Real, Comino, Sousa, Rosell and Barro, 2014). Unfortunately, wheat, like every other cereal, is deficient in some essential amino acids, namely lysine and tryptophan which are high in legumes.

The current high demand for bread, particularly in Nigeria, as regular food requires demands that enriched bread with high protein and increased dietary fibre, low glycaemic index and of low calorie counting quality is in circulation for consumers (Branlard and Dardevet, 1985; Dowell, Maghirang, Pierce, Lookhart, Bean, Xie, Caley, Wilson, Seabourn, Ram, Park and Chung, 2008). Again, the scarcity and cost of wheat as an imported product limits its utilisation in Nigeria. Wheat has also been implicated to celiac disease, a type of food allergy common among regular wheat consumers.

There is need to supplement wheat with numerous under-utilized, rich

indigenous crops in bakery products (Sanful and Darko, 2010). Currently many indigenous cereals, legumes, roots and tubers are being complemented with wheat for bakery products in Nigeria.

Rice (*Oryza glaberrima*; African rice) is one of such indigenous cereals with high food value and of high yield in Nigeria. Rice provides 20% of the world's dietary energy supply. It is high in vitamins (thiamine, riboflavin, niacin, vitamin D and vitamin B₆) and minerals (Ca, Fe, Mg, Mn, P, K and Zn) (Oko, Ubi and Etisue, 2012). This quality supports its supplementation to wheat for bread production.

Cucurbita maxima D. (winter-squash) is one of the profusely grown legumes in the Tropics. The pod is the part mostly consumed in Nigeria. Fortunately, the seeds which are usually discarded have been shown to be non-toxic and have high food value. The seeds have malleable, chewy texture, subtly sweet, nutty flavour, and can be eaten dried or roasted throughout the year (Sanjur, Piperno, Andres and Wessel-Beaver, 2002; Ferriol, Pico, and Nuez, 2004). The seed confers good health to consumers and is used in the treatment of many ailments such as kidney, prostate and gallbladder cancers; to expel tapeworms and roundworms from infested persons (Stevenson, Eller, Wang, Jane, Wang and Inglett, 2007). The seeds are high in protein, potassium, magnesium, zinc, iron, copper and essential fatty acids with strong antioxidant activity (Stevenson *et al.*, 2007; Leila, Moncef, Kamel and Salem, 2012). This seed

needs to be exploited for its food value, particularly as a legume for high protein and fibre source.

The high cost and over dependency on wheat, the absence of some essential amino acids in wheat flour and the motivation towards utilization of indigenous food crops have led to the use of composite flour in bread production thereby making food abundant for the populace. This study will encourage the utilization of winter-squash seed a legume high in protein and fat to replace a portion of wheat in bread production. Also the study will evaluate the physicochemical and sensory properties of the bread samples.

Objective of the study

The general objective of the study was to evaluate the physicochemical and sensory properties of bread samples produced from blends of rice, wheat and winter-squash seed flours. Specifically, the study:

1. produced bread samples from blends of rice, wheat and winter-squash seed flours,
2. determined composites (proximate) properties of the bread samples,
3. determined the physical properties of the bread samples and
4. evaluated sensory characteristics of the bread samples.

Materials and Methods

Materials

Sourcing of Materials: Dehulled paddy rice, wheat grains, winter-squash seeds, granulated sugar, hydrogenated

vegetable oil were purchased from commercial stocker at Ndi-Oru market, Ikwuano Local Government Area of Abia State while analytical reagents were bought from authorised Dealer on analytical reagents in Umuahia.

Preparation of materials: Dehulled paddy rice (2kg) was sorted, washed and steeped in excess clean water (1:5, w/v) for 20 min to soften the pericarp. The steeped water was decanted and the rice washed out of clean water. This was air-dried for 8h, oven dried (55°C, 24h), milled into powder using Attrition Mill and then sieved into fine flour using 4µm sieve size. The flour was packaged in black polyethylene bags, put in air-tight bottles and stored for use.

Winter squash pods (pumpkin pods) were cut with a kitchen knife and the seeds handpicked, washed with water and air dried for 8 h. About 2kg of the dried seeds were shelled (manually) to remove the kernels, oven dried (55°C, 24h), milled into powder using Attrition Mill and then sieved into fine flour using 4µm sieve size. The fine flour of the whole seeds was packaged in a black polyethylene bags, put in an air tight bottles and stored for use.

Wheat flour was prepared using the conventional method. The whole wheat (2kg) was cleaned, sorted and washed with warm water. The washed grains were drained, air dried (8 h), oven dried (55°C, 24h), milled into powder using Attrition Mill and then sieved into fine flour using 4µm sieve size.

Table 1: Flour blend Formulation

Blends	Wheat (%)	Rice (%)	Winter squash (%)
W ₁₀₀	100	-	-
WRS ₈₁₁	80	-	-
WRS ₆₂₂	60	20	20
WRS ₄₃₃	40	30	30
WR ₅₅	50	50	-
WS ₅₅	50	-	50

W₁₀₀=100% wheat; WRS₈₁₁=80% wheat, 10%rice and 10% winter-squash; WRS₆₂₂=60% wheat, 20% rice and 20% winters-quash; WRS₄₃₃=40% wheat, 30% rice and 30% winter-squash; WR₅₅=50% wheat and50% rice; WS₅₅=50% wheat and 50% winter-squash;

Preparation of bread samples

Recipes: Blends of flours (450g) as in Table 1, active dried yeast (12g), granulated sugar (180g) (Dango, Nigeria), common salt (5g), warm water (150ml), liquid peak milk (150ml) (WAMCO, Nigeria Ltd) and melted hydrogenated fat (120g) (Simas) were used for each of the bread samples.

Procedure: Baking was done in the Processing Laboratory of the Department of Food Science and Technology, Michael Okpara University of Agriculture, Umudike. Each of the bread samples from different flour samples was produced using straight dough method as described by Potter and Hotchkiss (2007). In each preparation with particular flour, the dry ingredients were first sieved and mixed together. The yeast was, however, rehydrated in warm water and then added with the liquid components, milk and vegetable oil into the mixture. This was manually mixed and kneaded for about 10min and then allowed to ferment for 1h. The dough was knocked back, cut into 125g sizes and then placed in greased bread pans to proof for 20 min. These were baked

in an electric oven (Thermocool, G3031, Italy) maintained at 225°C for 45 min. After baking, bread samples were cooled in the open air in the Processing Laboratory and subjected to sensory and physicochemical analysis the next day

Proximate (Nutrient) analysis: Protein content was determined using Kjeldahl method AOAC (2005). A half gram (0.5g) of sample in 10ml of H₂SO₄ and a tablet of selenium catalyst was digested. The digest was diluted to 100ml and 10ml from the digest was mixed with equal volume of 45% NaOH in a Kjeldahl distillation apparatus. The mixture was distilled into 10ml of 4% boric acid containing 3 drops of mixed indicators (Beomocressol green and methyl red) colour changed from green to deep red. The titration value was used for calculating the percentage nitrogen. The nitrogen value obtained was multiplied by a factor (6.25) to obtain the percentage protein content.

Fat content was determined according to AOAC (2005) using Soxhlet lipid extraction apparatus as described by Onwuka (2005). About 5g of the sample was wrapped in filter

paper and place in Soxhlet reflux flask which was mounted on extraction flask containing the petroleum ether and heated to boiling point for four hours. The filter paper was removed, dried at 105 °C and weighed after cooling; the difference in weight was used in calculating percentage fat content.

Ash content was determined by furnace incineration gravimetric method described by James (1995). About 2g of the sample was weighed into a porcelain crucible of known weight. The sample was incinerated in a furnace (muffle China Sx2-25-10) at 550°C. Ash content was calculated from the difference between the weight of sample and ash.

Crude fibre was determined using acid and alkaline hydrolysis followed by incineration according to AOAC (2005). About 5g of the sample was boiled in 15ml of 1.25% H₂SO₄ for 30 min under reflux. After washing through a twofold muslin cloth it was returned to the flask and boiled with 150ml of 1.25% NaOH under the same conditions. After washing it was dried in oven at 105°C and incinerated in a furnace (muffle China Sx2-25-10) at 550°C. The difference in weight of the crude fibre and sample was expressed as percentage of the crude fibre.

Moisture content was determined by gravimetric method of AOAC (2005). Five grams of the sample was weighed into a moisture can and dried in the oven at 105°C until constant weight was obtained. The moisture content was calculated as percentage of the weight of the sample analysed.

Carbohydrate content was estimated by arithmetic difference. % Carbohydrate = (100 - moisture + protein + ash + fat + fibre contents).

Physical parameter determination of the bread (Weight, volume and specific volume): The weight of the bread samples was determined using a digital electronic weighing balance (A&D, HR-60, Japan) of 0.1 accuracy. The loaf volume and specific loaf volume were determined using the seed displacement method as described by Onwuka (2005).

The loaf volume was determined by filling a four litre (4000cm³) bucket with wheat seeds until the seeds start dropping from the container at about 15cm above the rim of the container, a straight ruler edge was used to cut off all the seeds above the rim. The seed inside the bucket was weighed and was used to fill the same bucket to one third of the volume, the loaf sample was placed flat at the centre of the bucket and the bucket filled with the remaining seeds and levelled with ruler edge. The seed displaced by the loaf sample was weighed and used in calculating loaf volume and specific loaf volume.

Sensory evaluation of bread samples

Instrument for data collection: A sensory evaluation questionnaire on colour, taste, texture, chewiness, fibrousness and general acceptability of the bread samples using a 9- point hedonic scale where 1= extremely disliked, 2= very disliked, 3= moderately disliked, 4= slightly disliked, 5= neither disliked nor liked, 6= slightly liked, 7= moderately liked,

8= very liked, 9= extremely liked was used to assess the acceptability of the bread samples (Melligard, Carville and GV 1999; Iwe, 2002).

Selection of panellists: A 25-member untrained panellists who were regular consumer of bread were randomly drawn from students and staff of Michael Okpara University of Agriculture Umudike. Prior to final selection, panellists were examined to ascertain the level of their liking and regular consumption of bread. Only those that have flare for bread and consume bread very regularly for at least thrice weekly were selected.

Data collation: The panellists were arranged in rows at about 2.5m apart; they were given coded sensory

evaluation questionnaires and presented with coded saucers containing equal 5 slices of each bread samples. They were also provided with portable water to rinse mouths between samples after each test. Panellists analysed the bread samples and completed the questionnaire.

Data analysis: Analysis of Variance (ANOVA); means and Duncan multiple range test at 0.05 confidence level were used for data analysis. Each analytical determination was carried out in triplicates.

Results

Proximate composition of bread samples

Table 2: Proximate composition of bread samples

Bread samples	Moisture (%)	Carbohydrate (%)	Protein (%)	Fat (%)	Ash (%)	Fibre (%)
W ₁₀₀	8.17 ^a ±0.04	68.71 ^{bc} ±0.14	11.23 ^{ab} ±0.09	5.13 ^a ±0.36	4.46 ^{bc} ±0.03	1.24 ^a ±0.02
WRS ₈₁₁	8.05 ^a ±0.07	69.00 ^b ±0.50	11.00 ^b ±0.06	6.17 ^b ±0.02	4.17 ^{ab} ±0.12	1.25 ^a ±0.01
WRS ₆₂₂	8.17 ^a ±0.06	69.38 ^b ±0.22	10.85 ^{bc} ±0.18	5.95 ^{ab} ±0.10	4.32 ^b ±0.05	1.33 ^a ±0.01
WRS ₄₃₃	8.24 ^a ±0.02	68.85 ^{bc} ±0.10	10.78 ^{bc} ±0.10	6.67 ^c ±0.08	4.17 ^{ab} ±0.18	1.29 ^b ±0.02
WR ₅₅	8.17 ^a ±0.06	70.68 ^a ±0.30	9.71 ^c ±0.05	6.08 ^b ±0.16	4.04 ^a ±0.12	1.23 ^{bcd} ±0.02
WS ₅₅	8.15 ^a ±0.01	68.00 ^c ±0.73	11.59 ^a ±0.10	6.78 ^c ±0.08	4.09 ^a ±0.13	1.30 ^{bc} ±0.03

Values are mean ± S.D. Values in the same column with different superscripts are significantly difference (p<0.05). W₁₀₀=100% wheat; WRS₈₁₁=80% wheat, 10% rice and 10% winter-squash; WRS₆₂₂=60% wheat, 20% rice and 20% winter-squash; WRS₄₃₃=40% wheat, 30% rice and 30% winter-squash; WR₅₅=50% wheat and 50% rice; WS₅₅=50% wheat and 50% winter-squash.

Bread samples were produced according to the flour blends in Table 1. The results of laboratory analysis of the bread samples were shown in Tables 2-4.

Tables 2 showed the proximate composition of the bread samples. All the bread samples were low in moisture

content which ranged from 8.05% in WRS₈₁₁ (bread with 80% wheat, 10% paddy rice and 10% winter squash) to 8.24% in WRS₄₃₃ (bread with 60% wheat, 30% rice and 30% winters quash) while the control bread sample (100% wheat) had 8.17% moisture content. There was no significant difference (p>0.05) in

moisture contents among the bread samples. The carbohydrate content (%) of the bread samples ranged from 68.00 in WS₅₅ (bread with 50% wheat and 50% winter squash) to 70.68 in WR₅₅ (bread with 50% wheat and 50% rice). Thus, while winter squash addition significantly ($p < 0.05$) decreased carbohydrate content, rice addition significantly ($p < 0.05$) increased carbohydrate content of the bread. The protein content (%) of the bread samples ranged from 9.71 in WR₅₅ to 11.59 in WS₅₅ and 11.23 in the control sample with 100% wheat flour. Again, rice addition decreased protein content while winter squash addition improved protein content of the bread.

Protein content (%) of the bread samples range from 9.71 in the bread with 50% rice to 11.59 in bread with 50% winter-squash. Fat content (%) of the bread samples increased with rice or winter squash addition, and ranged from 5.13 in the 100% wheat bread to 6.78 in the bread with 50% winter squash addition. Ash content ranged from 4.04 in bread with 50% rice addition to 4.46 in bread with 100% wheat bread. Also, fibre content (%) ranged from 1.24 to 1.33, and increased with substituting rice or winter squash for wheat in the bread samples.

Physical parameters of bread samples

Table 3. Physical properties of bread samples

Sample	Volume (cm ³)	Weight (g)	Specific Volume (cm ³ /g)
W ₁₀₀	845.77 ^a ±2.45	367.53 ^a ±13.89	3.17 ^a ±0.15
WRS ₈₁₁	823.50 ^c ±6.50	268.67 ^d ±8.11	3.07 ^{ab} ±0.12
WRS ₆₂₂	814.16 ^e ±2.84	271.38 ^d ±0.97	3.00 ^b ±0.00
WRS ₄₃₃	825.33 ^b ±1.527	275.11 ^d ±0.51	3.03 ^{ab} ±0.06
WR ₅₅	816.00 ^d ±1.00	318.03 ^b ±6.91	2.57 ^c ±0.06
WS ₅₅	795.33 ^f ±0.58	293.75 ^c ±3.65	2.02 ^d ±0.02

Values are means ± S.D, Values in the same column with different superscripts are significantly different at 5% level. W₁₀₀=100%wheat; WRS₈₁₁=80%wheat, 10%rice and 10%winter-squash; WRS₆₂₂=60%wheat, 20%rice and 20%winter-squash; WRS₄₃₃=40%wheat, 30%rice and 30%winter-squash; WR₅₅=50% wheat and 50% rice; WS₅₅=50%wheat and 50%winter-squash.

The physical properties of the bread samples were shown in Table 3. There were significant differences ($p < 0.05$) in the loaf weight of the bread samples which ranged from 268.67g to 367.53g. Sample W₁₀₀ (100% wheat) had the highest score (367g) and WS₈₁₁ the lowest (268.67g).

There were significant differences ($p < 0.05$) in the loaf volume of the bread

samples. Bread volume ranged from 845.77cm³ to 795.33cm³ with sample W₁₀₀ (845.77cm³) having the highest ($p < 0.05$) loaf volume and WS₅₅ (795.33cm³) the lowest. The specific volume of the bread samples decreased with increasing addition of rice and winter squash.

The control bread had the highest specific volume (3.17cm³/g) while the bread sample with 50% rice addition

had the lowest specific volume (2.02cm³/g). The 20% substitution of wheat flour (10% rice and 10% winter squash addition) decreased specific volume of bread from 3.10 to 3.07cm³/g. specific volume decreased while the

50% winter squash substitution decreased the specific volume to 2.10cm³/g.

Sensory evaluation

Table 4: Sensory scores of bread samples

Samples	Taste	Texture	Chewiness	Fibrousness	Colour	Overall Acceptability
W ₁₀₀	6.65 ^h ±0.03	6.65 ^e ± 0.02	6.47 ^d ± 0.04	6.96 ^h ± 0.04	6.60 ^d ± 0.02	7.34 ^g ± 0.04
WRS ₈₁₁	7.64 ⁱ ± 0.02	7.36 ^g ± 0.04	6.68 ^e ± 0.04	6.44 ^g ± 0.02	7.68 ^h ± 0.02	7.29 ^g ± 0.03
WRS ₆₂₂	5.84 ^f ± 0.02	6.85 ^f ± 0.02	7.43 ^f ± 0.03	6.53 ^f ± 0.03	7.29 ^f ± 0.03	6.41 ^f ± 0.03
WRS ₄₃₃	5.99 ^g ± 0.03	4.85 ^a ± 0.03	5.43 ^b ± 0.03	4.87 ^a ± 0.06	5.08 ^a ± 0.08	5.04 ^b ± 0.02
WR ₅₅	3.85 ^a ± 0.03	5.64 ^c ± 0.02	5.17 ^a ± 0.03	5.08 ^b ± 0.02	6.92 ^e ± 0.02	5.47 ^d ± 0.06
WS ₅₅	5.48 ^e ± 0.02	6.16 ^d ± 0.02	6.66 ^e ± 0.07	5.60 ^d ± 0.06	7.60 ^g ± 0.02	5.64 ^e ± 0.04

Values are mean ± S.D, Values in the same column with different superscripts are significantly different at 5% level. W₁₀₀=100%wheat; WRS₈₁₁=80%wheat, 10% rice and 10%winters-quash; WRS₆₂₂=60%wheat, 20%rice and 20%winter-squash;WRS₄₃₃ =40% wheat 30% rice and 30%winter-squash;WR₅₅=50%wheat and 50%rice; WS₅₅=50%wheat and 50%winter-squash;

The sensory scores of the bread samples are shown in Table 4. Scores for each sensory attribute among samples differed (p<0.05) significantly. The sensory scores by the panellist ranged from 3.85 in taste for WR₅₅ (50% wheat and 50% rice) to 7.68 in colour for WRS₈₁₁ (80 wheat, 10% rice and 10% winter squash) for taste, texture, chewiness, colour and overall acceptability of the bread samples. The control sample W₁₀₀ (100% wheat flour) was the most acceptable but was not significantly different (p>0.05) from WRS₈₁₁ (80 wheat, 10% rice and 10% winter squash) in overall acceptability. The least overall acceptability score (5.04) was for sample WRS₄₃₃ (40% wheat, 30% rice and 30% winter squash). The sensory scores decreased with increasing substitution of rice,

winter squash or both for wheat in the bread samples.

Discussion

The low moisture content (< 12%) of the bread samples indicates high shelf stability, easily adaptable to packaging and general acceptability to consumers (Okaka and Okaka, 2001). There was no significant difference (p>0.05) in the moisture contents among the bread samples, implying that that they might have almost the same shelf life. The moisture content was low enough to prevent any microbial proliferation during ambient storage.

Bread is ideally an energy giving food, and this is evidenced in the high carbohydrate content in all the samples. Bread samples from rice blended flour showed higher carbohydrate content

than 100% wheat, this was in line with the high starch content (75-80%) of the rice grain (Daudu, Yakubu and Sambo, Okworie, Adeosun and Onyibe. 2014). Even though sample with 50% winter-squash substitution had the least carbohydrate content yet 90% of the energy value of the seed is from starch and it contains homogalacturonan unit which have antioxidant, anti-inflammatory anti diabetic and insulin regulated properties (Nara, Kamaguchi and Maeda, 2009).

Substituting rice flour for part of wheat in bread production did not significantly ($p>0.05$) improve nutrient composition of the bread samples. The low protein contents of WRS₄₃₃ (40%w, 30%r and 30%s) and WR₅₅ (50% and 50%r) was as a result of the low protein contents of rice flour. Substituting rice and/or winter-squash seed flours for part of wheat flour in bread making produced low gluten-protein bread suitable for consumers having gluten intolerance and prevents inflammation in the digestive system and autoimmune problems associated with wheat gluten (Jayakasam, Seeram, and Nair, 2003; Gil-Hamanes, *et al.*, 2014). The bread samples had approximately protein contents of 10 to 12%. High quality breads are supposed to have protein content of 12 - 14% (Branlard and Dardevet, 1985; Dowell *et al.*, 2008).

The improved fat contents of the wheat-rice-winter-squash composite bread was as a result of the high oil content in the winter-squash seed flour. However the fat content of the bread could contribute only about 15% of total calorie in the bread. The winter-squash

seed oil is composed of mainly about 75% of linoleic acid (the polysaccharide omega -6-fatty acid) and Oleic acid (monounsaturated fatty acid) proven to be of health promoting to consumers (Maltra, *et al.*, 2009; Leila, *et al.*, 2012).

High specific volume of bread implies good aeration during fermentation and high numbers/large sized air cells in the bread. High specific breads volume is an indication of good physical quality of bread. However, too high specific volume may imply cheating the consumers where high sized-volume bread of small weight is sold to the consumers. This also implies that excess raising agent (yeast) or longer fermentation time was used during the bread production. The bread may be sour or bland in taste, indicating poor quality and high level of fermentation. Thus, improving the bread quality can be addressed from this perspective.

The controlled bread samples (100% wheat flour) with the highest specific loaf volume implies the best physical quality in comparison to the other bread samples of blended flour. This assumed that wheat gives the best loaf volume in bread. Samples with rice composition gave a fair loaf volume. From the result it was observed that winter-squash was responsible for the high weight of the bread because it possessed a significant fat content. This means that the bread sample would weigh more than conventional bread due to the incorporation of the seed germ in the production of the flour. The means of the specific volume range did not

conform to the specification of Standard Organization of Nigeria.

The high sensory scores for taste, texture and chewiness in winter-squash substituted bread samples may be attributed to high fat content of winter-squash seed which according to Ahsan, Shahangir, Addul, Manirujjaman, Belal, Sahel, Khan, Maftah, Minaral, Mahadi, Muedar, Asaduzzaman, Sohanur, Islam, Khatun, and Matiar. (2015) is about 36.70% of the proximate composition.

Similar variations were recorded in chewiness and colour scores. Colour as an important criterion in determination of the acceptability of products as it has to do with the aesthetic value of the products. Notwithstanding the variations, the bread samples scored high in their acceptability rankings.

Conclusion

Bread samples from the composite flours, WRS₈₁₁ (80% wheat, 10% rice and 10% winter-squash) and WRS₆₂₂ (60% wheat, 20% rice and 20% winter-squash) were of comparable quality with that of the 100% wheat bread and may be used in the production of the bread for commercial purposes.. This has added value to winter-squash seeds which were actually discarded while using the pod for food. The incorporation of rice and winter-squash into bread can serve as a booster to the utilization of both as well as the reduction in the post-harvest losses associated with winter-squash.

Recommendation

From the findings,

1. Food processors and manufacturers are encouraged to in co-operate winter-squash seed flour in bread and other baked products to improve on their weight, fat and protein contents.
2. The awareness created through this research on winter-squash seed should motivate farmers to plan towards increasing their production to meet with future demands on the crop.
3. Rice flour substitution of wheat flour (up to 10%) in baked products should be encouraged to boost the production and reduce the countries exchange rate.

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Meeting the Clothing Needs of Pregnant Women in Imo State

Ohaka, A.R,

Department of Home Economics,
Alvan Ikoku Federal College of Education,
Owerri. Imo State

Igbo, C.A.

Department of Home Economics & Hospitality Management Education,
University of Nigeria, Nsukka.

and

Oluwaleyimu, O. O

Department of Science and Tech. Education,
University of Lagos.

Abstract

This study determined ways of meeting the clothing needs of pregnant women in Imo state. Two research questions were raised for the study. One null hypothesis was tested at 0.05 level of significance. Survey research design was used. The population for the study comprised 7381 respondents consisting of 7120 pregnant women, 105 midwives/nurses and 156 Home Economics teachers. The sample size was 530 which comprised 396 pregnant women, 54 nurses and 80 Home Economics teachers drawn from both Urban and rural locations in Imo State. Questionnaire was used for data collection. Data were analyzed using mean, standard deviation and t-test. Results indicate that wearing of tight clothes, corsets, girdles, and narrow high heeled and spike heeled shoes predisposed the pregnant women to health problems. It was recommended that pregnant women should be educated on their clothing needs and factors to consider when purchasing maternity clothing by the nurses during their ante-natal sessions in the clinic.

Key word: Clothing, Needs and Pregnancy and Women.

Introduction

A pregnant woman is one who is carrying a developing fetus in her womb for about nine calendar or ten lunar months. During this period the

body undergoes some changes. The changes occur both physically and physiologically (Patrea & Blazena, 2010). The physical changes common to pregnant women include enlargement

of the abdomen, breast and darkening of the nipples. These physical changes imply changes in the clothing needs of the pregnant women. The need comfortable clothes that will take care of their changing body size and shape (Ashleigh, 2013).

Anwasha (2011) stated that pregnant women should wear comfortable clothing during pregnancy for it makes them feel at peace. Dresses that are tight around the waist areas are not comfortable for pregnant women. Secondly, pregnant women usually sweat so much; hence, tight clothing makes them feel very uncomfortable. Rios, Chen, Rios-chen, Fillo, Amorim, Lin, & Vogt (2017) reported that tight clothing may predispose one to breast cancer (e.g. wearing very tight bra), it can impede the blood circulation in the veins and it can increase susceptibility to varicose vein and edema (Towler, 2002) and Myles, 2005). Further, Ofor (2002) emphasized that inappropriate clothing worn by pregnant women can predispose them to infection, diseases and mal-presentation or even death of the baby in the womb. Therefore, they need maternity clothes to accommodate the expanding physical body changes (enlargement of the stomach). The essential features of maternity clothing include clothes that have expandable features or provide room for expansion of the stomach e.g. gathered and flared waist and bust line dresses. Maternity clothes are described by Blunnin (2001) and Norah (2011) as special clothes worn by pregnant women to accommodate physical changes associated with pregnancy periods.

Maternity clothes should be dresses that should not hamper the growth of the baby and clothes that provide support to the heavy weight of the tummy (Warson, 2015). Mom, (2015) reported that the best clothes for pregnant women are clothes that allow for expansion of the abdominal area as it is very necessary for both the mother and the baby in the womb. Supporting this, Vitma (2015) concludes that most pregnant women start wearing maternity clothes when they begin to feel uncomfortable in their old tighter fitting clothes. She noted that size of the growing uterus is one of the factors that influence the time when pregnant women start wearing maternity clothes. As the uterus is growing the breasts are growing as well. Other factors which determine when pregnant women start using maternity clothing include the number of babies on board, weight gain, differences in body size and shape and the individual clothing choice.

Clothing choices of pregnant women vary depending on the type of job and businesses they engage themselves in. Most of them like to wear flattering clothes that exposes their body parts. Ohaka and Igbo (2012) stated that pregnant women wear clothes that exposes sensitive parts of their body like the erogenous zone suggesting careless life styles as well as contravening the values, ideas and norms of the society in which they live. Such life styles attract rebuke, provoking abuses and curses. The case is not different with pregnant women in Imo State.

In Imo state the pregnant women either live in urban or rural areas in the state. The urban pregnant women have access to information and communication technology (ICT) and the internet and these influence their dressing pattern as they dress to catch up with moving fashion. On the other hand the rural pregnant women dress poorly and in manners uncomplimentary to the clothing needs of pregnant women (Emelue, 2004). Therefore, it is necessary to communicate to the pregnant women and future mothers what constitutes the clothing needs of pregnant women by the nurses who attend to them during their ante-natal visit and Home Economics teachers who teach Clothing and Textiles/Home Economics in the secondary schools in the state.

Efforts have been made by researchers such as Emelue (2004) and Agbo (2013) on wardrobe management practices of pregnant women. Also, Ohaka and Igbo (2012) carried out a study on determinates of functionality in clothing of pregnant women with one of the specific objectives as ways of providing clothing for pregnant women. None of these works centered on meeting the clothing needs of pregnant women. It is this gap that the study seeks to bridge.

Purpose of the Study

The general purpose of the study was to find out ways of meeting the clothing needs of pregnant women in Imo state. Specifically the study identified:

1. clothing needs of pregnant women.

2. factors to consider when purchasing maternity clothing.

Research Questions:

The following research questions guided the study

1. What are the clothing needs of pregnant women?
2. What are the factors to consider when purchasing maternity clothing?

Hypothesis of the Study:

The null hypothesis that guided the study is stated below:

There is no significant difference between the mean response of nurses and Home Economics Teachers on clothing needs of pregnant women.

Methodology

Design of the Study: Survey research design was adopted for the study.

Area of the Study: The study was carried out in Imo state. Imo State comprises three senatorial zones (Owerri, Okigwe and Orlu) with various public and private hospitals located within the zones.

Population for the study: The population for the study was 7381 consisting of three different groups namely: 7120 registered pregnant women in government owned general hospitals and the teaching hospital in the state, 105 trained nurses who work in the ante-natal section of the hospitals and 156 Home Economics teachers in public secondary schools in Imo state all in the year 2014 to 2015 (Imo State Health Management Board, (2014) and

Imo State Secondary Education Management Board (2014).

Sample and Sampling Technique:

Multistage random sampling technique was used to select 530 respondents. The first stage was stratifying the state into local government areas (LGAs) followed by selection of LGAs according to location (urban and rural). Secondly four hospitals each were randomly selected from the urban and rural LGAs in the state. The Third stage was random selection of 319 urban registered pregnant women and 77 rural registered pregnant women, 32 urban nurses and 22 rural nurses and 59 urban Home Economics teacher and 21 rural Home Economics teachers bringing the sample size to 530 for the study.

Instrument for Data Collection:

Questionnaire was the instrument used for data collection with five point likert rating scale. The questionnaire sought information on the clothing need of pregnant women and factors to consider when purchasing pregnancy clothing. The scaling point and their

respective numerical values were strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1). The instrument was face validated by three experts and pre-tested using 13 pregnant women, four nurses and three Home Economics teachers to test the internal consistency of the instrument. A reliability coefficient of 0.995 and 0.86 were obtained for the two research questions one and two respectively using Cronbach Alpha.

Method of Data Collection and

Analysis: Data collection was carried out through personal contact with the help of research assistants. A total of 530 copies of questionnaire were administered and all were retrieved giving 100% return rate. Frequency, mean score and standard deviation were used to analyze the research questions and cut off mark of 3.5 was used as decision rule. While t-test statistics was used to analyze the hypothesis at .05 level of significance.

Results

Table 1: Mean Responses and t-test Analysis of Nurses and Home Economics Teachers on Clothing Needs of Pregnant Women.

s/n	Clothing needs of pregnant women	$\bar{X}_1$	SD ₁	Remark	$\bar{X}_2$	SD ₂	Remark	t-cal	Dec
1	Well fitted bra	3.65	1.03	Agree	4.11	2.02	Agree	-0.15	NS
2	Bra with wide shoulder and adjustable Cups	4.07	2.30	Agree	3.31	0.52	Agree	0.27	NS
3	Clothing to meet weather conditions	3.31	0.63	Agree	4.39	3.08	Agree	-0.29	NS
4	Cotton fabric to keep the body cool	3.67	1.07	Agree	4.02	3.32	Agree	-0.16	NS
5	Non restricting clothing	3.52	0.81	Agree	3.28	0.51	Agree	0.18	NS
6	Attractive clothing	3.67	1.07	Agree	3.09	1.39	Agree	-0.09	NS
7	Low heeled shoes	3.61	0.96	Agree	4.11	2.02	Agree	-0.17	NS
8	Shoes that are not too tight	3.74	1.24	Agree	3.78	1.09	Agree	-0.01	NS
9	Swing shirt	3.62	1.00	Agree	4.48	0.62	Agree	0.96	NS
10	Highly absorbent fabrics	4.11	2.45	Agree	3.03	1.20	Agree	0.80	NS
11	Clothing with adjustable waistline	3.07	1.60	Agree	3.81	1.17	Agree	0.02	NS
12	Clothes with fullness at the waist line	3.31	1.63	Agree	3.73	0.99	Agree	-0.25	NS
13	A line dresses that flare from the top	4.26	3.10	Agree	3.68	0.91	Agree	0.14	NS
14	Light weight clothing	3.39	0.67	Agree	3.86	1.29	Agree	-0.24	NS
15	Empire tops/ dresses	4.17	2.68	Agree	3.96	1.55	Agree	0.05	NS

Key: $\bar{X}_1$ = mean of the Nurses, $\bar{X}_2$ = mean for Home Economics Teachers, NS= not significant, SD₁= standard deviation for nurses, SD₂ standard deviation for Home Economics Teachers, N₁= number of nurses (54), N₂= number of Home Economics Teachers (80), t-cal= t-calculated value, t-tab= t-table value 1.96.

Table 1 indicates that both the nurses and home economics teachers agree on the clothing needs of pregnant women since the value of each group of respondents is above the cut-off mean scores. Almost all the items had low

standard deviations showing that the deviations from the mean are very low. Also, all the items were agreed as clothing needs of pregnant women by both the nurses and the pregnant women.

Table 2: Mean Responses of Pregnant Women, Nurses and Home Economics Teachers on Factors to Consider When Buying Maternity Clothes

s/n	Factors	$\bar{X}_1$	$\bar{X}_2$	$\bar{X}_3$	$\bar{X}_g$	SD	Remarks
1	Cloth with classic and timeless design	3.62	3.90	3.94	3.82	0.63	Agree
2	Soft and comfortable cloth	4.12	3.98	4.05	4.05	0.48	Agree
3	Size of clothes	3.46	3.80	4.32	3.86	0.65	Agree
4	Colour of clothes	3.46	3.40	3.43	3.43	0.29	Agree
5	Money available	3.13	3.19	3.11	3.14	0.32	Agree
6	Garment style	3.92	3.80	3.94	3.88	0.66	Agree
7	individual life style	3.88	3.97	4.12	3.99	0.74	Agree
8	Pregnancy stage	3.61	3.68	3.62	3.64	0.52	Agree
9	Care label	3.29	3.46	3.42	3.39	0.67	Agree
10	Garment fit	3.46	4.07	4.05	3.86	1.29	Agree
11	dresses that provide support to the body	3.91	3.93	3.32	3.72	1.20	Agree
12	Strong stretchy fabric	3.62	3.46	3.48	3.52	0.66	Agree
13	Cool and absorbent cloth	4.10	4.06	4.11	4.09	0.37	Agree
14	quality of the cloth	3.87	3.40	3.74	3.67	1.07	Agree

Key: $\bar{X}_1$ = Pregnant Women; $\bar{X}_2$ = Nurses; $\bar{X}_3$ = Home Economics Teachers; $\bar{X}_g$ = grand mean, SD=standard deviation, N= 530

Table 2 shows certain factors that are of importance that should be considered when purchasing maternity clothes with means 3.0 and above. All the factors were accepted. They include size of dresses, colour, and garment style, quality of clothes, finance and garment fit, among others.

Discussion

The findings of the study on clothing needs of pregnant women in Table 1 reviewed that pregnant women need soft and comfortable clothes, well fitted bra, bra wide shoulder straps and adjustable cups, cotton fabrics, shoes with low and wide heel base, loose flowing clothes, fabrics that are highly absorbent and clothes with extra fullness. Low heeled shoes should be worn by pregnant women to balance the body and to prevent accidents and backache (Offor 2002). Pregnancy phase

is characterized physical transformation of the body accompanied with enlargement of body parts especially the breast and stomach, so, it is necessary for them wear loose clothes that are soft and comfortable to provide support to the stomach. Pregnancy is also characterized by indigestion; therefore, wearing tight clothing around the waist will make them feel uncomfortable. Fitted bra with wide shoulder straps and adjustable cups give support to the enlarged breast. More so, without the right bra, the tops and dresses will not look flattering (Patty, 2013). Loose flowing clothes allow baby's movement and free flow of blood to the stomach. Hence, Mom (2015) advised that tight clothing should not be worn by pregnant mothers for it obstructs the baby's movement and restricts the flow of blood to the stomach. Merenstein and Gardner

(2000) stated that the changing breast size promotes healthy functioning of the lymphatic and milk producing system of the breast during pregnancy. This makes it very necessary for correct bra to be worn during pregnancy. Bra with wide shoulder strap helps to hold the increased size of the breast. The findings of the study is in line with the findings of the study carried out by Ashley (2015) and Jone (2015) who concluded that comfortable and absorbent clothing is of great importance to pregnant women for it helps to cool their body. Pregnant women always feel hot as a result of hormonal changes in the body and they sweat profusely. So, they need soft absorbent clothes to absorb the excessive sweat. Agbo (2013) reported that uncomfortable maternity clothing can lead to a feeling of isolation and unwholesome attitude of a pregnant women towards colleagues' at work place and that it can also lead to low productivity, moreover, the baby's comfort should be considered. Most often, their comfort can be determined by the type of clothing they put on. Breathable fabrics, patterns or solid colours are accepted as clothing needs of pregnant women. Natural fabrics such as cotton and modal that are soft and breathable are of great help in controlling hot flashes and itching that are common with pregnancy.

However, pregnant women's awareness of their clothing need entails that they and their husband should provide finance for provision of appropriate maternity clothing. Unavailability of finance is one of the

problems they encounter in providing their clothing need which may lead to purchase of low quality clothing. Poorly made maternity clothes fall apart quickly, are not colour fast, may shrink, pull, fray, itch, and sometimes make them feel hot. These possess problems to the comfort of the pregnant women and it is recommended as one of the factors to be considered when purchasing maternity clothing.

Table 2 shows that clothes that are cool and absorbent are highest factor to consider by the pregnant women (4.09) when purchasing maternity clothing followed by soft and comfortable clothes (4.05), individual life style (3.99), garment style (3.88), garment fit (3.86), size of garment (3.86) and garment size (3.86). Finance is the least (3.14) among the factors. The findings is in agreement with the findings of Anwasha (2011) who indentified that cool, absorbent and comfortable clothing are the most important factors to consider when purchasing maternity clothing. However, the study's findings is not consistent with the findings of Mom (2015) who concluded that size of clothes is the most important factor to consider when buying maternity clothing. The agreement that cool, absorbent and comfortable clothing are one of the most important factors that should be considered when purchasing clothes is not surprising because pregnant women always feel hot during pregnancy so, it will help them to feel comfortable and relaxed. Also, they sweat and feel exasperated with heat hence; they need absorbent clothes to absorb excessive heat as a result of

pregnancy. Likewise size was also accepted as one of the factors. This is because dresses that have allowance on the tummy, arms, hips and chest areas are the perfect choice as they provide room for the growing sizes of the body parts during pregnancy. More so, stretchy clothes have been identified as one of the factors. Acceptance of stretchy fabric, clothing with adjustable waistline and hemline are in agreement with the findings of Krieger (2012) who recommended that stretch fabric like lycra and spandex give room for expansion of the body and allow for easy movement. They also provide shape retention that is required to accommodate the body as it changes. This supports the findings of several studies which suggested that stretchy fabric provides room for the growing stomach (Petra & Bazena 2010, and Ebay, 2014).

Conclusion

The study concludes that both the nurses and the pregnant women were aware of the clothing needs of pregnant women. It implies that most pregnant women wearing inappropriate clothing may be in an attempt to appear fashionable, flattering or because of their inability to provide appropriate pregnancy clothing. It is then imperative for the nurses to lay more emphasis on the importance of pregnant women wearing appropriate clothing during their ante-natal talk in the hospitals. Since the pregnant women desire to appear fashionable and attractive, the garment features or factors that will allow them achieve this

should also be communicated to them by the nurses. This will enable them to make right choices whenever they are purchasing maternity clothing.

Recommendations

- Pregnant women should acquire clothing based on their clothing needs.
- Pregnant women should purchase good quality and comfortable clothes that can ensure serviceability and durability.
- Nurses should lay more emphasis on clothing needs of pregnant women and consequences of inappropriate clothing worn by pregnant women during their ante-natal talk in the hospital.
- Efforts should be made by Home Economics teachers toward giving effective classroom instructions to their students who are future mothers on clothing needs and factors to consider when purchasing maternity clothing.

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Factors Influencing the Utilization of Soybean among Homemakers in Ilorin Local Government Area of Kwara State, Nigeria

Opaleke, D.O., Adebisi, W.O. and Gbadebo, C.T
Department of Home Economics and Food Sciences
Faculty of Agriculture, University of Ilorin. Ilorin, Nigeria.

Abstract

The study investigated factors influencing the utilization of soybean among homemakers in Ilorin West Local Government Area of Kwara State. Two research questions were raised, survey research design was adopted. The population comprised of 98,802 homemakers. 264 samples were randomly selected. Likert scale questionnaire was used to collect data. Pearson's product moment correlation coefficient was used for reliability of the instrument which yielded a correlation of 0.78. Data collected were analysed using Mean and Standard Deviation. Findings showed that Soybean is used because it is cheap ($\bar{x} = 3.22$) and affordable ($\bar{x} = 2.87$). The study concludes that affordability, high nutritional value and its health benefits are factors influencing the utilization of soybean. It is recommended that more awareness campaigns should be frequent on the nutritional value and uses of soybean products.

Keywords: Factors, Influence, Utilization, Soybean, Homemakers.

Introduction

Soybean (*Glycine max*(L.) Merr), an important oil seed belonging to the family leguminosae is usually grown as a food crop. Soy protein contains all the essential amino acids, most of which are present in amounts that closely match those required for humans or animals. It has a protein-digestibility-corrected amino acid score very close to 1, the highest rating possible and the same rating for animal proteins such as egg white and casein. In phytochemicals, which have been shown to offer unique health benefits. Soybean has versatile

end uses, including human food, animal fed and industrial material (Liu, 2000, 1997). Soy foods have high protein content and high protein utilization (the percentage of the available protein the body can use), leading to the highest amount of protein gained.

In the Kwara State (study area), the women planters (home makers) often describe the crop as their "second husband" because it helps to solve many financial obligations, feed their families and assist to promote good health. Fabiyi (2011) expressed his views on the need to improve the

nutritive quality of local food among home makers through better processing and enrichment. It seemed that the developing countries of the world especially West African countries have poor feeding culture among the poor people. High protein foods such as meat, fish, eggs and milk are very expensive especially to the low income home makers who are the majority in the population of Nigeria. Henkel (2005) and Ashaye (2005) pointed out that, soybean is considered by many agencies to be a source of complete protein which contains significant amount of all the essential amino acids that must be provided to the human body because of the body's inability to synthesize them. For this reason soybean is a good source of protein, among many others for vegetarians and vegans or for people who want to reduce the amount of meat they eat.

Ugwu and Nwoke (2011) explained that locality influenced the utilization of soybean as the production site is in the rural area where there are large expanse of land. They use it in making cheap protein products at affordable price such as (meat, infant formula and oil). On the other hand, Olatunji, Etuk and Adesope (2012) viewed that in the Urban areas, Urban residents find it difficult to adopt the use of soy beans in their meals because they have access to other proteinous foods and supplements that they thought had been prepared under a better hygienic condition. Also, urban dwellers are mostly medium or high income earners. They may find it easier to afford protein products other than soybeans.

Poor utilization of soyabeans can be a problem because of the impending dangers it can cause to health if not well processed before use, other constrain and challenges confronting utilization of soybean could be as a result of odors, crude processing method, inadequate training and lack of awareness of its health benefit. (Messina, 2010). One of the major challenge confronting these home users is validating the process and devising methods that will help check for quality. For instance the fermentation of soybean to produce tempeh and the production of soy milk are common products that are produced in rural areas with quality of many of the products being inferior because of lack of standardization. Hence, there is the need for urban-rural integration in order to assist home users and rural processors in producing soybean products with wholesome consistent quality.

The odour of soybean drives some homemakers away from utilizing it, because some do not like the odour, it has a beany odour that must be remove by adding flavor. According to File, Hartley, Alom, and Rattray (2003). Some of the products obtained from soybean e.g. soybean oil turn rancid easily and give rise to green, grassy odors. The perception of most of the homemakers about the soybean is very low, the reason is that most of them have been seeing soybean everywhere but they don't know its importance. Some believe that it is only used for animal feed not for human consumption.

Some factors that may influence soybean utilization includes locality, economy, availability, processing method, level of awareness of its nutritional knowledge and storage facilities. Locality influence the utilization of soybean in the rural areas, because proteinous food of animal origin may be so expensive for them to afford. On the other hand, in the urban areas, urban residents find it difficult to adopt the use of soybeans in their meals because they have access to other proteinous food and supplements that they thought had been prepared under a better hygiene condition. Soybean is a product that is used in food and in confectionary and in oil industries for making general products to supplement diet. Furthermore, it is one of the major raw materials in agro allied sectors as components of animal feeds. As a result of this, there is high demand for soybean because of its diverse uses and this promote it and make its demand to be high and also create job opportunities which helps in development of the state. Availability of soybeans in the rural areas also serves as an encouraging factors that promote its utilization. Inadequate storage facilities influences utilization of soybeans during off seasons. Low level of awareness of nutritional knowledge and health benefits of soybeans reduces its utilization as most home makers may be ignorant of the extent which soybean can be used. The long processing and uniqueness in preparing of soybean which is different from other legume's products may discourage most users from using it. Homemakers believes

soybean is very cheap can be used to replace animal protein in foods. Due to the medicinal and nutritional value of soybean, some homemakers see the need to inculcate it into their diets as it fights against cancer, it's known to be an anti-oxidant, it helps in menopausal age and also helps to reduce aging.

Olatunji, Etuk and Adesope (2012) discovered that many farm-families in Abia State have discontinued utilization of soybean products due to lack of storage facilities, inadequate training in processing and production methods and decrease in level of awareness.

According to Fakorede (2001) children and young mothers are benefiting from locally made protein rich foods using soybeans in Nigeria. To homemakers, Soybeans are making it possible for a lot of women to earn their own way and achieve a greater degree of independence than ever before because it helps to pay school fees and medical bills. In places where soybeans are grown, roughly 40 percentage of the income earned by women is thought to be derived from soybean production or processing. Soybean reduces hunger; flavor soup, and is very good for children" therefore, soybean has been well integrated into the local diet. According to (Opaleke, 2012) both the rural and urban women in Ilorin West Local Government Area use soybean as the major weaning food for their infants. The intent of this study therefore is to investigate factors influencing the utilization of soybean among homemakers. The study will be of great importance to all the stakeholders concerned, vis-à-vis

homemakers, nutritionist, Home Economist, researchers, dieticians, social health workers students, Extension workers and government.

Objective of the study

The main purpose of the study was to investigate factors influencing the utilization of soybean among homemakers in Ilorin West Local Government Area of Kwara State, Nigeria. Specifically, the study determined:

- i. factors influencing utilization of soybeans by homemakers in Ilorin West Local Government Area of Kwara State, Nigeria.
- ii. Location (urban/rural) related factors influencing utilization of soybeans by homemakers in Ilorin West Local Government Area of Kwara State, Nigeria.

Research Questions

1. What are the factors influencing utilization of soybeans by homemakers in the study area?
2. What are the Location (urban/rural) related factors influencing utilization of soybeans by homemakers in Ilorin West Local Government Area of Kwara State, Nigeria?

Methodology

Design and Area of study :- The study adopted a survey research design where data was collected from subjects using Likert type scale questionnaire. Survey research design was chosen because the researcher collected information from a large population using sample to generalize. The study was conducted in

urban and rural areas of Ilorin West Local Government Area of Kwara State. The study covered the eight (8) wards in Ilorin West Local Government Area of Kwara State. Out of the eight wards, five (5) are situated at the Urban Area while three (3) are situated in the rural area

Population: The population comprised of all the women (homemakers) who are traders in all the markets in the eight wards in Ilorin West Local Government Area of Kwara State. The total population was Ninety eight thousand eight hundred and two (98,802) home makers. (Population Census 2006).

Sample and sampling technique: Multistage sampling technique was used to select 264 respondents for the study as follows:

Stage 1 involved stratifying Kwara State into 16 local government areas (LGAs)

Stage 2 involved selecting one LGA which is Ilorin West Local Government Area.

Stage 3 involves stratifying the LGA into eight (4) wards

Stage 4 involves using convenient sampling technique to select one (1) Market from each of the wards in the above Local Government making a total of eight(8) eight markets.

Stage 5 involves randomly selecting thirty (33) women traders (homemakers) from each markets thereby resulting to 264 homemakers which were used for the study.

Instrument for data collection: The instrument used for this study was a Questionnaire titled: Analysis of Factors Influencing Soybean Utilization among

Homemakers (QAFISUH)AH). The questionnaire was developed based on the objectives and research questions. Responses of each item was rated on a on a "4-point" scale ranging from "1" which indicates "strongly disagree" to "4" which indicates "strongly agree". The questionnaire was face validated by three experts in Home Economics. The test- retest method of reliability was adopted in ascertaining the reliability of the questionnaire. The responses were then correlated using Pearson Product Moment Correlation and a coefficient of 0.78 was obtained. This was in agreement with the proposition of Cooper & Schindler (2008) who indicated that 0.7 could be an acceptable reliability coefficient.

Method of Data Collection: The questionnaire were administered to the homemakers in Ilorin West Local Government area on different days by the researcher with the help of two trained research assistants who understood the local language and

facilitated interaction with the homemakers. Out of three hundred (300) questionnaire administered to the homemakers, two hundred and sixty four (264) were retrieved in Ilorin West Local Government Area. This represent 88% return rate.

Method of data analysis: Mean (X) and Standard Deviation (SD) were used for data analysis. Any item with a mean value between 2.50 and above was regarded as agreed fact of the factor influencing the utilization of soybean, while less than 2.50 were regarded as disagreed fact of the factor influencing soybean utilization. The Standard Deviation (SD) of each item was used to determine how the opinions of the respondents deviated from the mean.

Findings of the Study

Research Question 1: What are the factors influencing utilization of soybeans by homemakers in the study area?

Table 1: Mean responses of homemakers on factors that influence soybean utilization

S/N	Factors influencing utilization of soybean	Mean	S.D	Remark
1	Soybean is used because it is comparatively cheap	3.22	0.91	Agree
2	People who use soybean are perceived relatively poor	3.01	1.03	Agree
3	Soybean is use because of its nutritional value	2.76	1.18	Agree
4	Soybean is used because of its health benefits	2.93	1.02	Agree
5	Low income homemakers consume soybean more	2.88	1.05	Agree
6	People do not use soybean because of its odour	2.91	1.01	Agree
7	Soybean is preferred to other protein products	3.12	0.88	Agree
8	Soybean is used because it is affordable compared to meat	2.87	1.02	Agree
9	Hotels, eateries and other outdoor meal providers use soybean	3.24	0.84	Agree
10	Soybean is used to prepare babies food	2.91	1.08	Agree
11	Soybean is used on a daily basis	2.44	1.21	Agree
12	Soybean is used in boosting the nutritive value of meal.	3.17	0.88	Agree
	Grand Mean/Standard Deviation	2.96	1.01	Agree

Table 1 revealed mean opinions of the respondent among selected homemakers in Ilorin. The mean scores to the items ranged from 2.44 to 3.24. The table showed that the respondents agreed to the entire variable 1-12 on factors influences the utilization of soybeans among selected homemakers in Ilorin West Local Government Area of Kwara State. This implied that Soybean is used because it is cheap ($\bar{x}$ = 3.22), affordable compared to meat ($\bar{x}$ = 2.87) and is used in boosting the

nutritive value of meal ($\bar{x}$ = 3.17) in the study area. The standard deviation of the items ranged from 0.84 to 1.21 which indicated that the respondents were close in their responses.

Research question 2: What are the Location (urban/rural) related factors influencing utilization of soybeans by homemakers in Ilorin West Local Government Area of Kwara State, Nigeria?

Table 2: Mean Responses on location (urban/rural) related factors that influence soybean utilization among respondents.

S/N	Location (urban/rural) related factors	Mean	S.D	Remark
1	Soybean is rarely available to urban homemakers	3.10	0.92	Agree
2	Soybean is readily available to rural homemakers	3.11	0.99	Agree
3	Some rural homemakers cultivate their soybean so it is used in rural households.	3.48	0.81	Agree
4	Soybean is expensive in urban location	2.95	0.99	Agree
5	There is no farmlands for soybean cultivation in urban area	2.97	1.05	Agree
6	Distance from farmlands to markets is a barrier in purchasing soybean in urban areas.	2.61	1.16	Agree
Grand Mean/Standard Deviation		3.04	0.99	Agree

Table 2 revealed that mean opinions of the respondents ranged from 2.61 to 3.48. The table showed that all the variables were rated as agreed. The result showed that almost all the location parameters affect the utilization ofn soybeans among the selected homemakers in the study area. This result implied that soybean is readily available to rural homemakers ($\bar{x}$ = 3.11) but distance from farmlands to markets is a barrier in purchasing soybean in urban areas ($\bar{x}$ = 2.61). The standard

deviation of the items ranged from 0.81 to 1.16 which indicated that the respondents were close in their responses.

Discussion of findings

The main objective of this study was to investigate the factors influencing the utilization of soybean among homemakers. The result of the mean ratings in research question one (Table1) revealed that soybean is used because it is cheap and affordable

compared to other protein source and is used in boosting the nutritive value of meals in the study area. This implied that factors influencing utilization of soybeans by homemakers in the study area includes the fact that soybean is comparatively cheap and mostly consumed by hotels, eateries, other outdoor meal providers and homemakers. This is in line with Fakorede (2001) who explained that children and young mothers are benefitting from this local plant that are protein-rich in food.

The findings agreed with that of Ijarotimi and Famurewa (2006) who established that high percentage of the mothers agreed that soybean was a good source of protein, and that soybean could be used as protein substitute in weaning food. The findings also corroborate that of Ugwu and Nwoke (2011) who revealed that soybean products have been accepted and consumed by a great number of people in Orumba South Local government Area of Anambra State in Nigeria because its nutritive value. This findings also confirms the study of Wolf (2012) who stated that homemakers believes soybean is very cheap and can be used to replace animal protein in foods. This findings also agreed with Encyclopedia.com (2017) that soybeans are used in a multitude of forms, e.g., as soy sauce, soybean meal, vegetable oil, tofu (bean curd), miso (fermented soybean paste), and soy milk, and as a coffee substitute. In the United States, soybean products such as tofu, miso, and soy milk have become especially popular in lowfat and

vegetarian diet. The green crop is used for forage and hay, and the cake as stock feed and as fertilizer. Soybean oil is used commercially in the manufacture of glycerin, paints, soaps, rubber substitutes, plastics, printing ink, and other products. This also agreed with North Carolina Soybeans producers association(2017) who discovered that soybeans are high in protein and are a major ingredient in livestock feed. They reiterated that most soybeans are processed for their oil and protein for the animal feed industry. Some percentages are processed for human consumption and made into products including soy milk, soy flour, soy protein, tofu and many retail food products.

It was also confirmed that in addition to its high food value, Soybean is one of the least expensive sources of protein in Nigeria. This findings also agree with Liu (2000) who discovered that Soy foods are becoming some of the fastest-growing categories in the food industry, with products ranging from traditional soy foods to protein ingredients and from dairy and meat alternatives to various types of Western and traditional food enriched with soybean flour. This findings revealed that soybean is of high nutritional value and has health benefits. The findings is in consonant with the views of Henkel (2005) ; Ashaye (2005) ;Ugwu and Nwoke (2011) who all pointed out that, soybean is considered by many agencies to be a source of complete protein. One that contains significant amount of all the essential amino acids that must be provided to the human

body because of the body's inability to synthesize them. This findings agreed with Organic Information Services (2017) whose research discovered that soybean oil has health benefits like helping with cognitive disorders, such as Alzheimer's disease, improves bone growth and helps to prevent osteoporosis, improves heart health and improves skin health. This findings is also in consonant with Arnarson, (2015) who discovered that Soybeans are high in protein, and are also a decent source of both carbs and fat. They are a rich source of various vitamins, minerals and beneficial plant compounds, such as isoflavones and that soybeans may reduce the risk of breast and prostate cancer, and alleviate the symptoms of menopause. This disagree with Levis, et al (2011) and Newton & Grady (2011) who in a recent trial discovered that the daily administration of tablets containing 200 mg of soy isoflavones for 2 years did not prevent bone loss or menopausal symptoms.

The findings also agreed with Onwueme and Sinha, (1999). who stated that about 40% in soybean seed is protein and contain 20% unsaturated fatty acids. Soybean also provides adequate amount of carbohydrate, digestible fiber, minerals and Vitamins. They also explain that due to the medicinal and nutritional value of soybean, some homemakers see the need to inculcate it into their diets as it fights against cancer, it's known to be an anti-oxidant, it helps in menopausal age and also helps to reduce aging. They reiterated that the meal is rich in minerals particularly calcium,

phosphorous and iron, it has good as to excellent content of the vitamins, thiamin, riboflavin and niacin.

The result also revealed that some home makers do not use soybean because of its odour. This findings agree with File, Hartley, Alom, and Rattray (2003) whose findings revealed that some of the products obtained from soybean e.g. soybean oil turn rancid easily and give rise to green, grassy, beany odors which drives some homemakers away from utilizing it. This findings is in consistent with Turner (2016) who discovered that soybean oil is a substitute for palm oil as they are both vegetable oils and that this has helped a lot as demand is higher for bean oil due to the palm oil shortage. The findings also revealed that locality affect utilization of soybean as it is rarely available to urban homemakers because of distance from farmlands to markets and this serves as a barrier to purchasing soybean in urban areas and so it is expensive in urban locations but is readily available to rural homemakers because some rural homemakers cultivate their soybean. This findings agreed with the views of Ugwu and Nwoke (2011) who explained that locality influenced the utilization of soybean as the production site is in the rural area where there are large expanse of land. This finding is in variance with Olatunji, Etuk and Adesope (2012) who are of the opinion that urban residents find it difficult to adopt the use of soy beans in their meals because they have access to other proteinous foods and supplements that they thought had

been prepared under a better hygienic condition and not because of non-availability. The findings also disagree with Brandon (2001) and Olatunji, Etuk and Adesope (2012) who discovered that many farm-families in rural areas discontinued utilization of soybean products due to lack of storage facilities, inadequate training in processing and production methods and decrease in level of awareness of its nutritive content and health benefits. This disagreed with Malvick,(2016) who observed that planting date seemed to be a factor in production of soybean and high levels of Sudden death syndrome (SDS) also affect production which may be difficult to manage by rural farmers because it is important to use resistant soybean varieties as well as selected seed treatments to manage Sudden death syndrome (SDS).

Conclusion

The study concludes that locality, affordability, high nutritional value and health benefits of soybeans are factors influencing its utilization among homemakers. This implied that the low price, high nutritional value and numerous health benefits are factors influencing the utilization of soybean among homemakers in Ilorin West Local Government Area of Kwara State. The findings also concludes that soybean is rarely available to urban homemakers because of distance from farmlands to markets and so it is expensive in urban locations but is readily available to rural homemakers

because rural homemakers cultivate their soybean.

Recommendations

Based on the findings of this study, the following recommendations were made:

- More awareness campaigns should be frequent on the nutritional value and uses of soybean products in both rural and urban locations.
- Access to soybean should be made easy to both the farmers and the consumers via provision of road and transportation in production sites.
- Storage facilities should be provided for by all stakeholders for soybean in the rural areas to preserve its use for longer period .
- There is the need for urban-rural integration in order to assist home users and rural processors in producing soybean products with wholesome consistent quality.

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Finance Management Related Strategies Adopted by Households in Coping with Challenges of Economic Recession in Port Harcourt Local Government Area

Sonye, C.U

Department of Home Economics & Hotel Management
Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt
and

Kparevzua, R. M

Department of Home Economic and Hospitality Management Education
University of Nigeria, Nsukka

Abstract

The study determined financial-management related strategies adopted by households during economic recession crisis as well as ways through which households can generate more income to cope with the challenges arising from economic recession. It was a survey research. Area of study was Port Harcourt Local Government Area (LGA). Population was made up of civil servants (both males and females). Questionnaire and focus group discussion (FGD) were used for data collection. Data were analyzed using mean. FGD information was also summarized. Major findings include 25 financial management strategies and 15 possible ways of generating more income. Based on the findings it was recommended among others that households should have an emergency fund savings, plan their budget, follow their budget strictly and have multiple source of income.

Keywords: Strategies, Family, Coping, Challenges, Economic Recession

Introduction

Economic recession is a period of generally turn down in any economy. It is often marked by a drop in the stock market, an increase in unemployment and a decline in the housing market etc (Chika, 2016). The National Bureau of Economic Research (NBER) (2010) defined Economic recession as a

significant decline in economic activity spread across the economy lasting more than a few months normally visible in a real gross domestic product (GDP), real income, employment, industrial production and wholesale-retail sales. Economist sees economic recession as a negative real gross domestic product (GDP) growth rate for two consecutive

quarters (Say first and second quarters) (Noko, 2016). According to Uchem, (2010), Economic recession is a time of difficulty, danger or anxiety about the future economics of government policy of a country/nation. Likewise the global economy recession is a time of difficulty, danger or anxiety about the future of economics of the government policy of the world usually measured or calculated with the economic policy of the United States of America (U.S.A) (Uchem, 2010). The global economic recession is concerned with difficulty, danger or anxiety about the future of economics of the government policy of the entire world while the national economic recession has to do with difficulty, danger and anxiety about the future of economics of the government policy of a particular nation.

The indicators of economic recession are embedded in the context of changes in gross domestic products, high interest rate, increase in inflation, increase in rate of unemployment, reduce consumer confidence, reduce real wage/income, accumulation of debt servicing (foreign debt), depletion of currency strength and poor planning policy among others. When recession hits the economy of any nation, families as a unit of the society suffers the most. Economic recession can displace and reduce the functioning of families because of the effects of the stressful situation (Robert 2000 in Alabi and Anyakoha, 2014)). Consequently numerous issues and challenges arise in the society and have over the ages continued to impact the family. Such

concerns include: hunger, poverty, unemployment or loss of job.

Today, economic recession is one of the major challenges faced by families in Nigeria. It is no longer a matter of contention that Nigeria has entered into recession with the latest growth figure showing that the economy has contracted between April and June 2016. The minister of finance, Mrs Kemi Adeosun on July 21, 2016, painted a gloomy picture of the economy when she appeared before the senate, saying the country was at the moment in tough place and in recession (Umorue and Erunke, 2016). The crisis that has ravaged many economy around the world has caused noticeable imbalance in Nigeria. Apart from depleting the country's external reserves, it has also led to substantial crash of the stock market, erosion of the countries revenue by 60% and depletion of the national currency (Umoru and Erunke, 2016). The country has now seen two consecutive quarters of declining growth. Nigeria economy shrank in the first quarter of 2016 as oil output fell and the manufacturing, financial and real estate industries declined. This came with increasing unemployment rate, Gross Domestic Product (GDP) contracted by - 0.36% from a year earlier (National Bureau of Statistics, 2016). This informs one that the economy is into recession. As the economic recession takes its toll on state finances and organizations (big and small), the home front is not left out with job losses and unpaid salaries, families are under serious crisis (fear, confusion, nightmares etc) due to financial pressure. The increase in the

price of food item is skyrocketing with each passing day, with the means of income shrinking or not even there. It is indeed tough to make ends meet during this period of economic recession. A survey by the National Bureau of Statistics on perceptions of Nigerians regarding their current personal economic situation revealed that two third (66%) of Nigerians have been lamenting the worsening state of their personal economic situation; 97% acknowledge that the recent economic realities have had negative effect on the general wellbeing of the average Nigerians.

According to World Food Report (2016) Some 795 million people in the world do not have enough food to live a healthy life. This figure represents about one in every nine people on earth. Also, 800 million people go to bed hungry and 66 million primary school age children attend classes hungry across the developing world with 23million in Africa alone (Source: NAIJ.com Retrieved 23/07/2016). The high rate of inflation, unemployment, hunger has stressed families to a breaking point consequently stimulating an exponential increase in the rate of suicide cases, stealing, begging, kidnaping and ritual killings among others (Gabriel, 2016). In the same vein, an investigation by Akintoye (2017) revealed increase cases of petty stealing and robbery, cases of children withdrawn from schools due to lack of money to settle school bills, cases of sick people seeking herbal remedies because they can't afford medical bills, and cases

of women who now engage in professional begging and prostitution.

According to Uko (2017), crime rate has increased and there are cases of missing pots of soups especially among households that share common kitchens in housing units. In another instance, a twenty nine years old man was reported to have pleaded guilty and was sentenced to two years imprisonment by an Osogbo magistrate court for stealing ten bowls of uncooked rice and four bottles of alcoholic drink valued at eight and ten thousand naira respectively (The Heat Nigeria Online News,2016). In yet similar case, Ola (2016) reported that a 35 years old man blamed hunger and economic recession for stealing *fufu*, *garri* and soup in Bayelsa State. The suspected thief was said to have confessed that hunger and economic hardship led him to steal the pot of soup and other items.

World Health Organization (WHO) (2012) report indicates that an estimated 6.5 out of 100000 people kill themselves each year in Nigeria due to economic hardship. Gallagher (2014) reported that recession led to 10,000 suicides in Europe and America. Oyibode (2016) reported that the number of beggars is on the increase as people live on credit and beggarly lives on a daily basis. Recession is thus having a profound effect on many households in Nigeria. Many households have adopted various strategies to cope with the challenges of economic recession.

Coping strategy involves some rationale and calculated responses to minimize the intensity of crisis, to maximize limited resources and to

preserve long term livelihood security (Adams, Jindra and Rainer 1988). Strategies include the various ways families adopt in overcoming their financial challenges during economic recession. Family financial management involves the use of family finance to achieve the goals of the family. Efficient financial management is necessary for family survival, stability, growth and development. It is easy to witness a scenario where a household that is doing well at present suddenly experiences a decline in wellbeing because of unpredictable events such as loss of employment, jobs cuts, collapse of stock markets, inflation, spread of epidemic, natural disaster and economic recession (Jha and Dang, 2010).

In Port Harcourt, the current economic recession has brought about increase in crime rate such as arm robbery, kidnapping for ransom, illegal crude oil refinery and theft (illegal bunkery), among others. According to Ihenacho (2017), two thieves were caught stealing generator in Port Harcourt. One of the thieves was allegedly released from jail recently and now faces the possibility of going back because of his action. In the same vein, John, (2017) reported how police killed three kidnap suspects and rescued their three victims in Port Harcourt. Edozie, (2013) reported that oil theft and illegal refinery suspects were paraded in Port Harcourt by Nigerian Navy Pathfinder. One of the suspects claimed he joined the business after searching endlessly for a job. He added that he earns ten thousand Naira per night for 'cooking' crude oil in a make shift oven. Illegal

bunkering sites were also burnt down by Nigerian Navy in Port Harcourt according to Chim (2017).

Economic recession has thus posed many challenges for households. This has made money management a challenge for individuals and households. Whatever is the cause of financial challenge, the household needs to cope with the situation. Therefore, there is need for households to evolve coping strategies as family goals can no longer be achieved (Obioha and Tilley-Gyado, 2009). As households may not be able to avoid the effect of recession, they can make changes that can improve their situations and evolve appropriate financial coping strategies to survive and help them prepare for the future while they wait for an economic upswing. It is in view of this that this paper sought to evolve coping strategies households adopt in coping with the challenges arising from economic recession.

Purpose of the Study

The major purpose of this study was to explore coping strategies adopted by families in coping with the challenges arising from Economic Recession in Port Harcourt LGA. Specifically, the study determined:

1. financial management related strategies households adopt during economic recession crisis.
2. ways households in Port Harcourt LGA generate additional income to cope with challenges arising from economic recession

Research Questions

1. What are the financial management related strategies household adopt during economic recession crisis?
2. What are the ways households generate additional income to cope with the challenges arising from economic recession?

Methodology

Design and Area of Study: Survey research design was adopted for the study. The area of the study was Port Harcourt Local Government Area (LGA) in Rivers State. Port Harcourt is the capital of Rivers state, Nigeria. It lies along the Bonny River and it is located in the Niger Delta. Port Harcourt LGA is in Rivers East senatorial district. Port Harcourt Local Government Area is made up of 13 towns. Fishing, farming and trading are the predominant occupation of people of Port Harcourt LGA. The discovery of oil brought about oil companies and an increase in industries in Port Harcourt. There are also civil servants and employees in numerous establishments in the area. Port Harcourt is flooded by migrants due to collapse of rural economy that sustained people. This is worsening by the devastation of Rivers and farm lands through oil pollution. People trooped to Port Harcourt in search of greener pastures but sadly, life in Port Harcourt is a difficult one.

Population for the Study: The population for the study is made up of households in Port Harcourt Local Government Area (LGA). Households in Port Harcourt LGA were used because most heads or older members

of each household are civil servants who rely on monthly income and the study is aimed at finding out financial management related strategies households member adopt. in the area of study. In 2011, Port Harcourt LGA population was estimated at 638,360 (Port Harcourt (LGA) city population 2011)

Sampling and Sampling Technique: A total of 420 households made up of the samples for the study. Multistage sampling technique was used. At the first stage seven towns were randomly selected from thirteen towns used for the study area. In the second stage, three wards were randomly selected from each of the seven towns making a total of 21 wards across the LGA. In the last stage, 21 longest streets were purposively selected from the 21 wards. Thereafter, 20 households were randomly selected from the 21 longest streets making a total of 420. Focus group discussion was also used. A total of 12 participants were purposively selected from each of the three zones making a total of 36 participants.

Instrument for Data Collection: A structured questionnaire and focus group discussion guide were the instrument for data collection. They were developed based on related literature and objectives of the study. Responses to questionnaire items were based on a 4-point scale of Strongly Agreed (4), Agreed (3), Disagreed (2), and Strongly Disagreed (1). The instruments were face validated by three experts in the field. The reliability of the instruments was determined using the Cronbach's Alpha procedure.

A reliability co-efficient of the questionnaire obtained was 0.92.

Data Collection Technique: Distribution and collection of the instrument was by hand. Two research assistants were trained and used for data collection. Out of the 420 copies of the questionnaire distributed to the respondents, 410 were duly completed and returned. This represent 98 % return rate. Three focus group

discussion (FGD) sessions were also organized.

Data Analysis Technique: Data were analysed using mean. A cut off mean value of 2.50 and above was regarded as agreed while those mean items whose mean values were below 2.50 were regarded as disagreed. The data from focused group were also summarized.

Findings of the Study

Table 1: Mean Responses on Financial Management related Strategies Households Adopt during Economic Recession Crisis

S/N	Financial management strategies of families that could be adopted	Mean	Remarks
1.	Cutting out luxury items	3.85	Agreed
2.	Postponing purchase of non- essential items	3.75	Agreed
3.	Switching to cheaper substitutes	3.17	Agreed
4.	Cut back on vacations	3.53	Agreed
5.	Cut down on visits to and from relatives	2.85	Agreed
6.	Cut back on eating out	2.58	Agreed
7.	Creating alternative source of income	3.85	Agreed
8.	Engaging in subsistence agriculture	2.63	Agreed
9.	Make wise use of money	3.02	Agreed
10.	Make wise decision	3.07	Agreed
11.	Purchase only what they need	3.17	Agreed
12.	Purchase what they want	2.01	Disagreed
13.	Reduce impulsive buying	3.53	Agreed
14.	Reduce unnecessary demands from family members	2.58	Agreed
15.	Proper budgeting to avoid reckless spending	3.75	Agreed
16.	Avoid excessive borrowing by family members	3.46	Agreed
17.	Practice micro investment	3.11	Agreed
18.	Take low quality food	1.90	Disagreed
19.	Children discontinue school	2.01	Disagreed
20.	Downsize to a more frugal life style	2.78	Agreed
21.	Effective communication among family members	2.81	Agreed
22.	Prioritize projects	3.24	Agreed
23.	Reduce size or number of meals	2.87	Agreed
24.	Adjust family feeding pattern	2.70	Agreed
25.	Purchase locally manufactured goods	3.75	Agreed

Table 1 shows the mean response of families on financial management strategies that families can adopt during

economic recession crisis in Port Harcourt LGA. The respondents agreed with 22 out of 25 strategies identified.

They all have the cut- off point of 2.5 and above while only item 12 18 and 19 fell below the cut -off point (See Table 1).

Focus Group discussion also reveals the following finance- management strategies families could adopt

- Three square meals should be reduced to two as home makers creatively combines breakfast/lunch or lunch/dinner.

- cut back on frequent restaurant visits/eat at home
- downsizing trips and forgo annual trips/travel less
- budget cuts
- prudent electricity consumption
- some who intended to have second and third wives said they have to wait / avoid polygamy
- children are been transfer from private to public schools

Table 2: Mean responses on ways households can generate income to cope with the challenges arising from economic recession

S/N	Possible ways of generating income	Mean	Remarks
1.	Have multiple source of income	3.77	Agreed
2.	Diversify investment	3.63	Agreed
3.	Have an emergency fund savings	3.83	Agreed
4.	Have saving account for children	3.58	Agreed
5.	Buy shares for family members	3.10	Agreed
6.	Family members can use their talents in exchange for money	3.52	Agreed
7.	Fill the gap for entrepreneurial opportunity in the society	3.34	Agreed
8.	Invest in farming	3.20	Agreed
9.	Invest in land and real estate	3.40	Agreed
10.	Invest in food business	3.67	Agreed
11.	Invest in event planning	2.93	Agreed
12.	Invest in rental business	2.89	Agreed
13.	Invest in waste disposal business	3.05	Agreed
14.	Invest in elderly care facility	2.76	Agreed
15.	The family should be debt free	3.43	Agreed

Table 2 shows that the respondents agreed with all the ways families can generate income to improve their financial status during economic recession crisis as their means are above the cut-off point of 2.5 and above.

Focus Group Discussion also reveals the following strategies families could adopt to improve their financial

management challenges arising from economic recession

- families should learn to live within their means.
- the recession has forced a lot of them to go back to the farm.
- determining necessity
- Have emergency savings
- Make investment

Discussion on Findings

The findings revealed that the respondents agreed with all the items identified as financial management strategies that families can adopt. Cutting out luxury items, cut back on vacations, creating alternative source of income, purchase locally manufactured goods, and postponing purchase of non-essential items has the highest rating as shown in table 1. This finding is in line with those of Essien (2016) who noted that cutting out luxury items, creating alternative source of income, making use of talent and purchasing more of locally manufactured goods will help families cope better in economic recession crisis. It is important to note that crisis affected households reduced expenditure during crisis to help them cope. Also, non-essential expenditures (such as vacation and durables) and expenditure with potential effects on basic welfare (such as food, health, and education) are most affected. It was also found out that households should create alternative source of income. This is in consonance with the view of Nwuzor (2016) who noted that alternative source of income for households will help them reduce the suffering due to recession as well as help them improve their well-being. This is because it is difficult these days for the individual or household to survive on only one source of income. Income from diversified sources will help household adjust to the new financial situation and realities when one source of income dries up. Most of the respondents also agreed that effective communication among family

members can help reduce friction that will result from lack of resources to meet basic needs. This confirms the findings of Adegbite (2016) who noted that the effect of no source of income to meet basic family needs and obligations may cause friction among family members. This may lead to long lasting damaged family relationship. Families should establish effective communication channels so that every family member is aware of what the family is facing and suggestion on how to move the family forward could also be sought from family members. FGD revealed that some families have reduced cooking of three square meals to two with budget cuts, cut back on frequent restaurant visits, downsizing trips and foregoing annual trips. The respondents agreed that families should learn to live within their means of income and that children can be transferred from private to public schools. The FGD also revealed prudent electricity consumption, opting for cheaper options, determining necessity could also help families cope better. FGD also revealed that men who intended to marry second and third wives have decided to wait and that the recession has forced them to go back to the farm.

Findings in Table 2 revealed that the subjects agreed with all the 15 possible ways families can generate income. Having an emergency funds saving, multiple source of income and diversifying investment has the highest rating as shown in Table 2. This findings collaborate those of Becker (2015) who pointed out that during economic

recession, people need to diversify income and save more. Alabi and Anyakoha (2014) also agreed that heads of families and their members should learn to save on monthly basis and that family members should take up new roles and reduce unnecessary expenditure. Anyakoha (2015) also noted that family members may have to take on new responsibilities, in order to keep the household running smoothly. The author also emphasize that family members needs to make different forms of sacrifices, such as getting involved in income generating activities to aid the family. Families need to find ways to save money as certain expenses can be controlled. Food expenses can be controlled by cooking and eating at home instead of eating out, repair of clothing can be done instead of replacing and a do for yourself the task you might normally pay to have done (e.g sweeping the compound, mending clothes etc) as a way of saving money (Anyakoha, 2015). Households that have savings can conveniently rely on their savings to cushion the income shock during crisis and their income can be increased by expanding their labour supply with their talent and skills. This can help reduce the burdens of families. In the same vein, Njoku, 2009 supporting this view noted that having multiple streams of income, developing saving habit among others are sure ways to financial freedom. Saving skills should be part of family life and families should not go into debt to support life style because they will live below their means. The study also found out that households can generate

income during recession by investing in numerous businesses such as farming, land and real estate, Food business, event planning among others. This is in consonance with Allen (2005) who noted that one of the smartest ways to make serious money is investing in land and real estate. This is because land and real estate appreciates on a daily basis and investment in real estate secure funds and revenue generated from rent establishes a standard revenue stream that is renewable yearly or monthly. Gregory (2016) also noted that households can engage in event planning for weddings, retirement parties and special anniversaries. This is encouraging as special anniversaries will be celebrated whether the economy is thriving or not. The author also noted that households can also engage in restaurant, outdoor catering services or food business. This may be because food businesses in any capacity is ever green and it can operate in a slow economy and people will continue to eat food, eat out if it is convenient for them or see it as a way to celebrate with friends and family no matter how bad the economy is. According to Peavler (2017), households can engage in bulk food sales as business. This is because a lot of people buy in bulk to share with friends and neighbors as a way of helping themselves during economic downturn because it is cheaper when goods are purchased in bulk. The study also found that families can engage in several entrepreneurship businesses (farming, event planning, rental services, elderly care facilities etc) to help them generate income. This

finding is in line with Troy (2017) who noted that hard times can turn into opportunities and that the present economic recession has also open doors of opportunities for households. Thus households can find gaps in the market and fill them in the area of event planning, rental services, Agriculture, farming fresh vegetable business, elderly care facilities among others. According to the author the demand for agricultural products will always be on high both in Nigeria and the world at large. This is because food is one of the basic needs of man. In the same vein, Isidro (2012) noted that elderly care is another business that can thrive whether the economy is going up or down. This is because people will continue to grow old and services such as adult day care services will still be needed as parents can't depend solely on their children to take care of them.

Conclusion

The study determined financial management strategies families could adopt in coping with challenges of economic recession and ways families could generate income to improve their financial coping strategy in Port Harcourt LGA. Based on the findings, the following conclusions were made; Families go through challenges during period of economic recession and the effect of recession on families may last longer than the duration of the recession. Families can survive by adapting and adjusting to a new lifestyle, working together and making changes to improve their future.

Recommendations

Based on the findings of this study the following recommendations were made:

1. Families should have savings account for emergency, plan, budget and follow up their budget strictly.
2. Skill diversification emanating from education and empowerment should be encouraged in families as this will be of help to families in time of crisis.
3. Families should be educated on media (radio, television, newspaper etc) on how to cope with economic recession by home economist, government and non-governmental organization.
4. Social welfare unit can also organize free counseling in mass media for families.
5. The church can also organize programmes for her members and creating a forum where such issues could be discussed.

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Towards Enhancing Environmental Awareness of Urban Slum Households in Lagos State

Seriki-Mosadolorun, J.S., Abiamuwe, N. O.,

Department of Vocational Education, School of Technical Education,
Yaba College of Technology, Yaba, Lagos State

Ogbonna, K. P,

Postgraduate School,
University of Nigeria, Nsukka.

&

Otobo, V. O

Federal College of Education (Technical),
Akoka, Lagos State

Abstract

The study determined how environmental awareness can be enhanced among urban slum households in Lagos State. Descriptive survey design was adopted. The study was carried out on two slum areas in Mainland Local Government, Lagos State. The population for this study was 9,675 slum household members. The sample size was 450 slum household members in Ijora-Badiya and Makoko. Multi-staged sampling technique was used to select the households for the study. Questionnaire and focus group discussion guide were used for data collection. Data were analyzed using mean and standard deviation. Findings revealed 6 sources of information on environmental awareness and 12 methods of waste disposal adopted by the slum households. Findings also showed 11 challenges of waste disposal and 12 ways of enhancing environmental awareness among urban slum households. Conclusions were made. Among recommendations proffered was that environmental awareness should be carried out through varying sources for the slum households and there should be strict enforcement of environmental laws.

Keywords: Sustainability, Environmental Awareness, Slum, Urban, Households,

Introduction

Lagos is one of the fastest growing cities in the world and it has witnessed rapid population explosion and its

consequences (Adewusi, 2012). Its current patterns of urban development and human activities have led to environmental degradation, and have

created serious threat to continued human existence, and to the sustainability of life on earth. Adewusi (2012) mentioned that urban growth and land conversion involving human activities are major threats to the ecosystems. Lagos state has become legendary for its congestion and environmental problems resulting into slum development (Alagbe, 2005). According to United Nations Centre for Human Settlement (UNCHS, 2006), slum development is closely linked to general economic development as it relates to employment and wages. Slums play a useful role in providing cheap (though not necessarily cheerful) housing for those who cannot or as likely will not want to spend money on housing than they possibly can especially in such areas like Makoko, Bariga, Ijora-badiya, Ajegunle, Iwaya, Okokomaiko and the erstwhile Maroko in Lagos State. The lack of basic services, good drainage system and infrastructures that makes for decent living condition in these areas makes it a concern.

United Nation (UN, 2007) defined slum as a heavily populated urban area characterized by substandard housing and squalor. This definition reflects the essential physical and social features of slums. The term "slum" has however come to include also the vast informal settlements that are quickly becoming the most visual expression of urban poverty. The quality of dwellings in such settlements varies from simple shack to permanent structures, while access to water, electricity, drainage system and other basic services and

infrastructure tends to be limited. According to Funsho, Adegoke and Adewale (2013), basic household utilities are mostly non-existent in slums and there are often pools of stagnant dirty fluids along with refuse dumps. Alagbe (2005) opined that the drainage system in most slums is open and poorly maintained and that often mixes with drinking water due to leakages in pipes which exposes the residents of slums to various ailments and diseases.

Nigeria is ranked as one of the countries with high slum prevalence. The proliferation of shanty dwellings, squatter settlements and slums in Nigeria and other less developed nations of the world attributed to a chain of factors such as low level socio-economic status and cultural lifestyles of the inhabitants (Omole, 2010). As a result of the population of Lagos and the high concentration of industrial and commercial activities, the level of wastes generated is very high. Method of handling waste such as its storage, collection and disposal determines risk to environment and public health.

The common methods of waste disposals are dumping garbage and refuse to a designated dumping site, burning, composting, dumping in incinerators and using solid wastes as land refills to reclaim swampy areas (Amaoko, 2015). While the entire urban population suffers from poor environmental quality, the urban poor living in slums tend to be the most vulnerable as they are often living in marginalized part of the city, contiguous with waste sites and well

beyond the reach of water and other environmental services. Their condition is further amplified because they do not have sufficient resources to invest in infrastructure (Arimanh, 2015). Healthy cities require safe, easily accessible and affordable water; sanitation; safe home and work environments; uncontaminated air and reduced exposure to disease pathogens. Poor housing conditions, exposure to contaminated air, excessive heat or cold, diseases, soil and water pollution along with industrial and commercial occupational risks, which are inherent features of the urban settlements and their dwellers, worsen the already high environmental health risks for the urban poor. These might have resulted through the fact that humans are unconscious of their environment.

Environmental awareness encompasses incorporating knowledge of contemporary issues affecting nature locally and beyond, discovering which actions can make a difference in the surroundings; and self awareness concerning personal environmental philosophies (Bocher, 2015). It is not just a question of air and water pollution but also includes elimination of diseases, hunger, malnutrition and poverty, destruction of forests, extermination of wildlife, erosion of soil and accumulation of waste and many more. Raising environmental awareness involves translating the technical language of a natural science or related field into terms and ideas that a non-scientist can readily understand. Effective environmental education programs and materials need to present

information and ideas in a way that is relevant to the people (Schmidt, 2009). According to Pandian (2011), achieving sustainable development outcomes requires an understanding of the complexities of relationships of issues and interests of state. It involves establishing mutually beneficial trade-offs and reinforcing social, economic and environmental linkages. The environmental quality of urban areas has a serious effect on the health status of all urban residents. Failure to recognize the linkages between human activities, the society and the environment at large and the impact of one on other, may lead to distant consequences and endangering all the components in the total eco-system (Pandian, Nair and Rajeswari, 2011). Being sustainable requires one to be prudent in the use of resources; mindful of quality and quantity of wastes generated; more accommodation and engaging with others; proactive in recognizing the dynamism of the changing patterns of lives, environment and productive systems and responding with responsible, creative, innovative and practical solutions to restore hope and promise to present and future generations (Diamond, 2006). Hill (2006), opined that environmental sustainability entails conserving, recycling and establishing priorities for the use of non-renewable resources.

One of the Sustainable Development Goals is to make cities and human settlements safe, resilient and sustainable (Goal 11). This can only be achieved when people are aware of their environment and perceive

environmental issues as the concern of everyone. It therefore needs to be clearly understood that environment and development are not contradictory to each other. There is a need for holistic development which has to do with taking the process of development and environment as a unit. Every home should be persuaded to adopt environment friendly lifestyle. Information should be properly passed on to the grass root level for real action to occur. Environmental education should lead for gathering mass awareness which should bring environmentally wiser policies (Schmidt, 2009). Thus, in order to protect and conserve the environment and for people to live quality life, due emphasis needs to be given to environmental awareness in all areas of the state to prevent the consequences of environmental disorderliness. It is against this background that the study determined environmental awareness among urban slum households in Lagos State.

Purpose of the Study

The major purpose of the study was to investigate environmental awareness among urban slum households and issues relating to household refuse disposal. Specifically, the study determined;

1. the sources of information on environmental awareness for slum households;
2. ways slum households dispose their waste;
3. the challenges faced by slum households in waste disposal;

4. ways of enhancing environmental awareness among slum households.

Research Questions

The following research questions were raised to guide the study:

1. What are the households' sources of information on environmental awareness?
2. How do the households dispose their waste?
3. What are the challenges faced by slum households in waste disposal?
4. In what ways can environmental awareness be enhanced among slum households?

Methodology

Research Design: The study adopted descriptive survey design.

Area of the Study: The study was carried out on two slum areas in Mainland Local Government, Lagos State. This is an urban area situated in Lagos Central Senatorial District. Lagos State is located within the South-Western part of Nigeria. It is bounded to the north and east by Ogun State and the Republic of Benin to the west. The state was chosen due to its high level of congestion and environmental pollution problems. Lagos State was also chosen because it has the highest population that is over 5% of the national estimate. Furthermore, Lagos state population growth rate is 8%, which has resulted in capturing about 37% of Nigeria's urban population (Odebiyi, 2010).

Population for the Study: The population for this study was 9, 675

members of urban slum households (Source: National Bureau of Statistics, 2014). The slum areas are Ijora-Badiya and Makoko.

Sample for the Study: The sample size for the study was 450 members of urban slum households in Ijora-Badiya and Makoko who were 18 years of age and above. Taro Yamen" statistical method of determining sample size was used in calculating the sample size of the slum household's population. Multi-staged sampling technique was used to select the slum households for the study. At the first stage of the multi stage sampling technique, Mainland Local Government area was purposefully selected for the study because it is located in Central Lagos with slum areas. At the second stage, two slums were chosen from the Local Government area. At the third stage, 450 members of urban slum households who were 18 years and above were selected from the population size. Systematic random sampling technique was used to select the households. Hence; two people in every 10th house were selected for questionnaire administration.

Instrument for Data Collection: Questionnaire and focus group discussion guide were used for data collection. The questionnaire was titled "Towards Enhancing Environmental Awareness of Slum Households (TEEASH). It was divided into two sections. Section A sought for demographic information while section B was based on the research questions.

Section B was drawn on a four point scale rating: Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD). Focus group discussion guide was also used for data collection from the respondents and their responses were recorded. Five Home Economics experts validated the instruments. Cronbach Alpha method was used in determining the internal consistency of the questionnaire and it yielded reliability co-efficient of 0.92.

Method of Data Collection: Four hundred and fifty (450) copies of the questionnaires were distributed to the household members who were 18 years and above by the researchers. Efforts were made to ensure that the items were filled correctly without omitting any of the needed information. Four hundred and twenty-six (426) copies of the distributed questionnaires were returned showing 95% return rate. For the focus group discussion, the participants were grouped into twelve for each batch. Each of the slums had four batches for the group discussions. The discussions were guided with the purposes of the study. Town halls in the urban slums were utilized for the focus group discussion after seeking permission from the "Baale" (Community head). Three research assistants helped the researchers in taking notes, comments, recording and videoing while the researchers moderated the discussions.

Method of Data Analysis: Data were analyzed using mean and standard deviations. Mean ratings from 2.5 and

above were considered as agreed upon while mean ratings of 2.49 and below were considered as disagreed upon. The responses of the participants were

recorded, summarized and used to corroborate the findings of the study.

Results

Table 1: Mean and Standard Deviation on Sources of Information on Environmental

Awareness of Slum Households				
S/N	Sources of Information on Environmental Awareness	X	SD	Remark
1.	Television	3.59	0.91	Agreed
2.	Radio	3.65	0.75	Agreed
3.	Computer (Internet)	2.20	1.02	Disagreed
4.	Social Media	2.31	1.04	Disagreed
5.	Newspapers	2.30	1.04	Disagreed
6.	Magazines	2.41	0.89	Disagreed
7.	Fliers	2.22	1.02	Disagreed
8.	Charts	2.31	1.04	Disagreed
9.	Posters	3.27	1.06	Agreed
10.	Handbills	2.94	1.02	Agreed
11.	Bill boards	3.00	1.05	Agreed
12.	Health workers	3.57	1.02	Agreed
13.	Extension workers	2.36	1.03	Disagreed
14.	Family Members	2.38	1.03	Disagreed
15.	Friends	2.40	0.89	Disagreed
16.	Seminars	2.48	0.91	Disagreed

Table 1 shows that only 6 items out of the sixteen listed sources of environmental awareness were agreed upon. Item 2 (Radio) had the highest mean value (3.65, SD=0.75), followed by item 12 (Television, Mean=3.59, SD=0.91). This indicated that the respondents' major sources of environmental awareness were through the radio and television.

Findings from focus group discussion revealed the following sources of information on environmental awareness among urban slum households:

- Radio,
- Television,
- Handbills and
- Health workers.

Table 2: Mean and Standard Deviation on Waste Disposal Methods of Slum Households

S/N	Methods of Waste Disposal	X	SD	Remark
1.	Household refuse are deposited in:			
i.	dust bins provided in homes	3.89	0.90	Agreed
ii.	government bins	2.94	1.02	Agreed
iii.	incinerators	2.31	1.02	Disagreed
iv.	dump sites	2.55	0.90	Agreed
v.	gutters during the raining season	3.24	1.06	Agreed
2.	Household waste waters are channeled to:			
•	drains	3.92	0.98	Agreed
•	canals	3.89	0.99	Agreed
•	septic tanks	2.53	0.89	Agreed
3.	Household refuse are:			
•	used as land refills	3.58	0.95	Agreed
•	burnt	3.96	0.98	Agreed
4.	Household refuse are collected from homes by:			
•	government officials (LAWMA)	2.62	0.91	Agreed
•	private agencies	2.87	0.72	Agreed
•	Hausa waste collectors	2.53	0.87	Agreed
5.	Household wastes are disposed through compost	2.46	1.00	Disagreed

Table 2 shows that all the listed items were agreed upon as waste disposal methods of the slum households. They had mean values ranging from 2.53 to 3.96. Though, items 4 (refuse are deposited on incinerators) and 14 (household waste are disposed through compost) were disagreed upon as methods of waste disposal. Their mean ratings were between 2.31 and 2.46 respectively.

Findings from focus group discussion revealed that the waste

disposal methods adopted by the slum households included:

- Channeling waste water to gutters, drains and canals;
- Household refuse are collected by LAWMA officials but not on regular basis hence the unsightly nature of the environment.
- Burning of dry refuse
- Composting but they complained of unavailability of spaces for composting.

Table 3: Mean and Standard Deviation on Challenges Faced by Slum Households in Disposing Waste

S/N	Challenges Faced by Slum Households in Waste Disposal	X	SD	Remark
1.	Inadequate waste collection agencies	2.84	1.57	Agreed
2.	Irregular collection of refuse by government	3.77	1.03	Agreed
3.	Poor drainage system in the slum area	3.89	0.98	Agreed
4.	Lack of dump sites in the slum areas	2.87	0.92	Agreed
5.	High cost of patronizing waste disposal agencies	3.24	1.06	Agreed
6.	Inadequate waste collection sites for recycling	3.06	0.82	Agreed
7.	Inadequate incinerators	3.10	0.97	Agreed
8.	Poor utility services provision.	3.40	1.05	Agreed
9.	Indiscriminate defecation especially in open spaces	3.29	1.02	Agreed
10.	Inadequate public places of convenience.	3.40	1.05	Agreed
11.	Use of solid waste for the reclamation of land for the swampy areas	2.70	1.00	Agreed

Table 3 shows that all the listed items were agreed upon as challenges faced by the slum households in disposing waste. Their mean values ranged from 2.70 to 3.89. Standard deviation of the responses were within ranges of 0.82 to 1.57. Findings from focus group discussion revealed that the challenges

faced in disposing household wastes included:

- Irregular collection of refuse by LAWMA officials,
- Lack of government designated dumpsites,
- Unavailability of incinerators and
- Inadequate collection sites for recyclable wastes.

Table 4: Mean and Standard Deviation on Ways of Enhancing Environmental Awareness among Urban Slum Households in Lagos State

S/N	Ways of Enhancing Environmental Awareness	X	SD	Remark
1.	Provision of adequate waste management system	3.08	1.02	Agreed
2.	Enforcement of environmental laws	3.40	1.09	Agreed
3.	Provision of adequate drainage systems	3.77	1.08	Agreed
4.	Provision of refuse bins in strategic places	3.65	1.02	Agreed
5.	Establishment of waste sorting and collection centers for recyclable wastes.	2.86	0.64	Agreed
6.	More effective laws banning indiscriminate dumping of refuse and litter have to be promulgated and vigorously enforced.	3.65	0.75	Agreed
7.	Market places and shopping centers should have designated and properly managed waste disposal areas	3.24	1.06	Agreed
8.	Avoiding open burning of refuse	3.57	1.02	Agreed
9.	Enlightenment campaign to educate the masses on environmental education	3.92	0.98	Agreed
10.	Establishment of Neighborhoods Project Partnerships Revitalization aimed at managing wastes in a given neighborhood	3.29	1.02	Agreed
11.	Avoid pouring refuse in gutters	2.84	0.88	Agreed
12.	Prevention of all types of pollution	3.56	0.69	Agreed

Table 4 reveals that all the listed ways of enhancing environmental awareness among urban slum households were agreed upon. They all had mean values above 2.50. The mean values ranged from 2.84 to 3.79. The standard deviations of the respondents ranged from 0.64 to 1.09 implying that there mean values were not far from each other. Findings from focus group discussion showed that the ways of enhancing environmental awareness among slum households included provision of varying sources of environmental awareness such as handbills, workshops, seminars and radio programs in local dialects.

From focus group discussion, respondents also agreed that the environment can be enhanced through:

- Provision of adequate incinerators,
- Placing refuse bins in strategic places,
- Regular collection of household refuse by LAWMA officials and
- Establishment of waste sorting and collection centers for recyclable wastes.

Discussion of Findings

Findings revealed that the respondents' sources of environmental awareness are through the radio, television, health workers, handbills, posters, bill boards and handbills. This showed that viable information about the environment can easily reach the masses through the media such as radio, television and the health workers. Effective dissemination of environmental problems can promote awareness of slum residents. In support

of the finding, Bocher (2015) asserted that awareness encompasses incorporating knowledge of contemporary issues affecting nature locally and beyond, discovering which actions can make a difference in one's surroundings, and self awareness concerning personal environmental philosophies. This corroborates WHO (2014) report that using mass media has been effective in raising community awareness of problems or issues.

Findings from focus group discussion revealed that the major source of information on environmental awareness among urban slum households was radio. Other sources included television, handbills and health workers. In line with the findings, Contento, Balch and Bronneer (2015) reported that the source of information can reinforce the message and persuade the receiver/learner to accept it. Olusanya (2016) also mentioned that the mass media can be effectively used for disseminating nutrition information and other relevant information to the community. Peter (2015) affirmed that appropriate dissemination of environmental awareness in the language the population understands will enhance environmental health and will in-turn reduce the mortality rate of children. This is in agreement with World Health Organization (WHO, 2014) report that between 25% and 33% of the global burden of disease can be attributed to environmental risk factors.

Results of findings on table 2 showed that all the items listed were agreed upon as waste disposal methods

adopted by the slum households. Item 12 (Household refuse are burnt) had the highest mean value ($M = 3.96$). This indicated that the respondents' easiest method of managing waste is through burning. Open burning of refuse degrades the environment through pollution. The results of this findings is in line with the assertions of Department of Environmental Quality (2006) that open burning has been practiced by a number of urban centres because it reduces the volume of refuse received at the dump and therefore extends the life of their dumpsite. Item 4 (Refuse are deposited on incinerators) and 14 (Household waste are disposed through compost) were disagreed upon as waste disposal methods adopted by the respondents. This implied that appropriate waste management sites and facilities were not available for slum house-holds to utilize. They have to manage household waste through any convenient and available method. However, findings from focus group discussion revealed that the waste disposal methods adopted by the slum households included channeling waste water to gutters, drains and canals; household refuses collected by LAWMA officials but not on regular basis hence the unsightly nature of the environment. The respondents also reiterated that dry refuse are often burnt and that the burning was usually done at night or early morning. The respondents were aware that vegetable and other degradable wastes can be disposed by compost but there were no available spaces for composting. In line with the finding, Smith (2011) mentioned that

open burning has many negative effects on both human health and the environment. This uncontrolled burning of garbage releases many pollutants into the atmosphere. These include dioxins, particulate matter, polycyclic aromatic compounds, volatile organic compounds, carbon monoxide, hexachlorobenzene and ash. According to Smith (2011), all of the aforementioned chemicals pose serious risks to human health. The dioxins are capable of producing a multitude of health problems; they can have adverse effects on reproduction, development, disrupt the hormonal systems or even cause cancer. Agboola and Agunbiade (2009) mentioned that particulate matter creates smoke and haze which contribute to air pollution and environmental degradation.

Inferring from table 3, results of findings revealed that all the listed items were agreed upon as challenges faced by slum households in waste disposal. Item 3 (Poor drainage system) had the highest mean rating ($M = 3.89$). This problem is peculiar to slum communities making the dwellers more vulnerable to infectious diseases. This supports Amaoko (2015) that the urban poor living in slums tend to be the most vulnerable as they are often living in marginalized part of the city, contiguous with waste sites and well beyond the reach of water and other environmental services. The negative consequence according to Arimanh (2015), impacts every aspect of their lives as well as the livability and health of the community at large. Item 3 (Irregular collection of refuse by

government (M=3.77) was among the major challenges encountered by the respondents in waste disposal. This might have resulted from poor monitoring of the waste management officials. Irregular collection of refuse leads to land surface pollution. Findings from focus group discussion revealed that the challenges faced in disposing household wastes included irregular collection of refuse by LAWMA officials, lack of government designated dumpsites, incinerators and collection sites for recyclable wastes. Land surface pollution is the occurrence of unwanted materials or waste on land. The commonest pollutant on land is the waste products that are often scattered on land area in the cities (Omofunwa and Osa-Edoh, 2008).

Results of findings on table 4 revealed that all the listed items were agreed upon as ways of enhancing environmental awareness among urban slum households. Item 9 (Enlightenment campaign to educate the masses on environmental education) had the highest mean (M=3.92). This indicated that environmental awareness can be achieved through environmental education. In line with the finding, Warwick (2011), mentioned that learning to play an active role in the creation of an ecologically compatible and economically efficient world in which social equality prevails is not an automatic process. Item 12 (Preventing all types of pollution M=3.79) was also accepted as a way of achieving environmental awareness. Pollutants reduce the quality of the environment as well as the well-being of the house-

hold members. This supports Dubos (2016) that due to the activities of housing and construction, mining, agriculture, industry, fishing, and the likes, man has inevitably produced thousands of pollutants discharged from factories, vehicles, incinerators, and engines which have adverse effects on man and his environment.

From focus group discussion, respondents also agreed that the environment can be enhanced through provision of incinerators, adequate refuse bins in strategic places, regular collection of household refuse by LAWMA officials and establishment of waste sorting and collection centres for recyclable wastes. This corroborates WHO (2012), that at least 3.0 million people die every year from illness caused by air pollution. Also, pollutants of domestic waste, chemical waste, and animal droppings all cause environmental degradation.

Conclusion

The study determined ways of enhancing environmental awareness among slum households. Findings revealed that the respondents' sources of environmental awareness were through the radio, television, handbills, posters, and bill boards. Results indicated that the ways of disposing wastes in slum households included refuse used as land refills, waste water channeled to canals, gutters and drains. This can be attributed to the poor drainage stem in the slum area. Results also revealed among others that the challenges households face in waste disposal among others include

inadequate waste collection agencies and irregular collection of refuse by LAWMA which could be attributed to the filthy nature of slum areas. Findings also showed that some of the ways of enhancing environmental awareness among slum households included adequate waste management system and establishment of waste sorting and collection centers for recyclable wastes.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Environmental awareness programmes should be organized periodically for the slum households.
2. Environmental awareness can be carried out through varying sources for the slum households.
3. Adequate method of waste disposal should be adopted by the slum households in order to make the environment sustainable.
4. Environmental sustainability can be effectively achieved through collective efforts of household members, society and government.
5. There should be strict enforcement of environmental laws.

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Meal Management for the Aged by Brafem Geriatric Foundation in Ilorin South Local Government Area, Kwara State

Adebisi, W.O., Adebisi, T.T. and Oyeyemi M.O.
Department of Home Economics and Food Science,
Faculty of Agriculture,
University of Ilorin, Ilorin,

Abstract

The study assessed nutritional management for aged by Brafem Geriatric Foundation in Ilorin South Local Government Area, Kwara State. The total population comprised of 6000 aged accommodated in the foundation. Simple random sampling was used to select 120 respondents. Data was collected using a questionnaire, and were analyzed using descriptive and inferential statistics. Results showed that the aged agreed to eat three times daily, taking balance diet, eating early in the morning. Also, the aged agreed to take much of fruits and water when eating and during their regular day activities. The aged also agreed that Brafem Geriatric Foundation managed all the nutrient intake in their meals. The study concluded on the role of nutrition in the maintenance of aged health and that they should adopt diets and lifestyle habits that will minimize risk to diseases.

Keywords: Nutrition, Management, Aged, Mealtime, Pattern.

Introduction

Proper nutrition is important for good health to every individual including the older population. It affects the aging process and is one of the most determining factors of longevity. Nutritional needs change throughout life. For the elderly, these changes may be related to normal aging processes, medical conditions, or lifestyles. It is therefore important for the aged to adopt a diet and lifestyle habits that minimize the risk of morbidity and maximize the prospects for healthy ageing (WHO, 2002). Ageing is a natural phenomenon that everyone across the globe has to

face within the incessant years of their lives. According to Ogbuyi and Iwuagwu (2014), Igbo (2009) and Harman (2001) aging starts at birth and ends at death encompassing physical, social, psychological and spiritual changes. The changes can be influenced by genetic, environmental and lifestyle factors. The three main nutritional issues in older people are frailty, sarcopenia, cognitive decline which leads to malnutrition related to dependency. During aging, eating well can be the key to positive outlook and staying emotionally balanced, a variety of colourful fruits and vegetables, whole

grains, and lean protein will make them feel vibrant and healthy, both inside and out (Olusanya, Bala, Eyisi and Olojola, 2010). A proper diet reduces the risk of wart disease, stroke, high blood pressure, hypertension, diabetes, bone loss, cancer and anemia. Also, eating sensibly means consuming fewer calories and more nutrient dense foods, keeping weight to function very well, as this will improve memory and mental alertness as they age (Anyakoha, 2015).

Mealtime pattern is a universal concept understood across societies and culture, although the symbolic meaning of meals differ for groups and individual (Fjellstrom, 2004). For Elderly, mealtime pattern may change either by virtue of disease, caregiving or even shifts in the living environment (Asalage and Amella, 2009). There are also changes in patterns of diet composition and reduction in the variety of foods consumed in the aged population that further reduces the energy intake. Eating three times a day, utilization of nutrient intake of aged vary. Consumption of carbohydrates, protein, minerals and vitamins and manage quantity of nutrients. Also, Fluid intake in form of eating fruits, drinking water while eating and drinking water regularly. (Groot, Verheijden, De Henauw, Schroll and Staveren, 2004). Collective mealtimes in nursing homes and long term care hospitals provide an opportunity to integrate and implement good nutritional care. A pleasant and social environment during mealtimes may add a sense of security and satisfaction. Meeting the needs of the aged is essential for their

health. Some of the needs of aged include: proper diet rich in protein, calcium and vitamins, safe environment, moderate exercises, good hygiene, decreased sun exposure, sleep and rest, periodical medical checkup and treatment of sores and injuries, protection from cold, suitable housing, interaction with people, special counselling among others (World Health Organisation (2014) and Balami, Vurha and Ojoba (2012).

Geriatric Care Management involves planning and coordinating care of aged and others with physical and mental impairments to meet their long term needs, improve their quality of life and maintain their independence for as long as possible. It entails working with person of old age and their families in managing, rendering and referring various types of health and social care services.

Brafem Geriatric Foundation is a Non-Governmental Organization formed locally in 1998 by Mrs. Beatrice O. Oyegbade. It became officially registered in July, 2010 with cooperate affairs commission Abuja. Brafem geriatric foundation was conceptualized out of deep love and passion for the care of the elderly and aged people in the society. The objectives are to: decrease the effect of aging in the body, to care for the aged people within and outside their home, to prevent boredom and neglect at old age, to create an avenue for old people to relate and chat together and to assist the working class people to take care of their aged ones.

The increasing number of aged is leading to an increase in demand on

health care. Aged individuals are often vulnerable to many illnesses, they are frail, and they have disabilities in self-care tasks (Fried 2004). The role of nutrition in the maintenance of aged health, management of chronic conditions, treatment of serious illness and rehabilitation of functional limitations has risen to the top of the agenda for public interest and research during the last decades (Niji, 2006; Fiatarone, 2004; Vellas, 2006).

Purpose of the Study

The purpose of the study is to assess the nutritional management for aged by Brafem Geriatric Foundation in Ilorin South Local Government Area, Kwara State.

Specifically the study to determine:

1. socio-economic characteristics of the aged in Brafem Geriatric Foundation.
2. mealtime pattern of the aged in Brafem Geriatric Foundation.
3. fluid intake of the aged in Brafem Geriatric Foundation.
4. nutrient intake of the aged in Brafem Geriatric Foundation.

Research Questions

1. What are the socio-economic characteristics of the aged in Brafem Geriatric Foundation?
2. What is the mealtime pattern of the aged in Brafem Geriatric Foundation?
3. What is the fluid intake of the aged in Brafem Geriatric Foundation?
4. What is the nutrient intake of the aged in Brafem Geriatric Foundation?

Methodology

Design and Area of Study: Descriptive survey research design was used. The study was carried out in Brafem Geriatric Foundation Ilorin South local Government Area, Ilorin, Kwara State. It is a Non-Governmental Organization.

Population of the Study: The population of the study consists of 6000 aged (male and female) who were accommodated at Brafem Geriatric Foundation in Ilorin South Local Government Area, Ilorin, Kwara State.

Sample and Sampling Technique: Simple random sampling was used to select respondents, one hundred and twenty (120) Aged were selected.

Instrument of Data Collection: The instrument for data collection was a structured questionnaire which was used as interview schedule. Variables that were measured include; socio-economic characteristics, indicators of mealtime pattern, fluid intake and nutrient intake of the aged. Mealtime pattern and fluid intake was measured on a 3 point scale of Yes (3), No (2) and Undecided (1). Mean of 2.00 was used for deciding the level of acceptance. Also, nutrient intake was measured on a 5 point Likert scale of Strongly Agree (5), Agree (4), Strongly Disagree (3), Disagree (2) and Undecided (1). Mean of 3.00 and above was used for deciding the level of acceptance.

Data Collection and Analysis: A total of 120 questionnaires were administered with the help of a research assistant. The collection of all copies were by hand. Data were analyzed

using descriptive and inferential statistics.

Findings of the Study

The socio-economic characteristics presentation showed that (27.5%) of the respondents were less than 85years, Close to half (49.2%) were between ages 85-89, (16.7%) were between ages 90-94 and (6.7%) were above age of 95 implying all the respondents were in

their old age. Majority (52.3%) of the respondents were females while the remaining (47.5) were males, (59.2%) of the respondents were Christians, (37.5%) were Muslims and (3.3%) were Traditionalist. Majority (53.3%) of the respondents has tertiary education with (38.3%) as public servant and they earn above ₦35,000 as their monthly income.

Table 1: Responses of the Aged on Mealtime Pattern in Brafem Geriatric Foundation

S/N	Indicators of mealtime pattern	Mean	Remark
1.	B.G.F provides meals three times daily	2.24	Agree
2.	There are days I do not eat at B.G.F because of loss of appetite	2.16	Agree
3.	B.G.F has time table for my food schedule on each day	2.05	Agree
4.	B.G.F provides adequate diet in order to ensure sound health	3.41	Agree
5.	I like to eat very early in the morning at B.G.F	3.03	Agree
6.	I like to eat early at night at B.G.F	1.31	Disagree
7.	I take sugar in my food at B.G.F	0.83	Disagree
8.	I take much of salt in my food at B.G.F	1.45	Disagree
9.	I take proteinous food at B.G.F	2.15	Agree
10.	B.G.F combines different classes of food in a meal	2.13	Agree
	Grand mean	2.07	Agree

Table 1 above reveals the mealtime pattern of the aged in Brafem Geriatric Foundation, seven items out of ten items were agreed by the aged with the mean rating above 2.00 while the other

three items had a mean rating less than 2.00. The grand mean for the responses on mealtime pattern is 2.07. This implies that the respondents agreed with the mealtime pattern of the foundation.

Table 2: Responses of Aged on their Fluid Intake in Brafem Geriatric Foundation.

S/N	Indicators of fluid intake	Mean	Remark
1.	Do you take much fruits	2.35	Agree
2.	Do you like drinking water while eating	2.35	Agree
3.	Do you drink water regularly in a day	2.41	Agree
4.	Apart from water, do u take carbonated drinks	1.93	Disagree
5.	Do you enjoy drinking pap (ogi) every morning	1.12	Disagree
	Grand Mean	2.03	Agree

Table 2 above shows the fluid intake of the aged, three out of five items were agreed, with the mean rating of 2.00. The grand mean score of fluid intake is

2.03. The grand mean score is higher than 2.00. This implies that majority of the respondents agreed with the statements.

Table 3: Responses of Aged on their Nutrient Intake of in Brafem Geriatric Foundation.

S/N	Indicators on nutrient intake	Mean	Remark
1.	regulates the intake of carbohydrate foods	3.91	Agree
2.	manage the quantity of protein intake	3.75	Agree
3.	cautious of fat intake given to the aged	3.63	Agree
4.	regulates intake of minerals and vitamins	3.55	Agree
5.	manages the quantity of nutrients intake for all meals	3.87	Agree
6.	gives calcium supplement after each meal	3.25	Agree
	Grand Mean	3.66	Agree

Table 3 above reveals the nutrient intake of the aged at Brafem Geriatric Foundation, each of the item listed were agreed by the aged to be managed by the foundation, where the rating mean score is 3.00 and the grand mean score is 3.66. This implies that all the items were accepted by the respondents.

Discussion of Findings

Findings of the study based on the response of aged, who agreed to having a pattern in which they take their meals at Brafem Geriatric Foundation such as; eating three times daily, they do not eat sometimes because of loss of appetite, they take balance diet to ensure sound health, they eat very early in the morning, to taking proteineous food and combining different classes of food. Amella (2007) asserted that mealtime pattern of aged changes as a result of frailty or sarcopenia or cognitive decline, which if not properly monitored can lead to a cycle of malnutrition in aged. Karen, Olivia and

Sandra (2015) also opined that meals should be planned and organized for the aged to encourage proper meal consumption with varieties by prioritizing choices over food which in turn can impact the quality of life.

Fluid intake of aged in Brafem Geriatric Foundation, the aged agreed to taking much of fruits, drinking water while eating and during the course of their regular day activities, they disagreed to taking carbonated drinks. Fluid intake is necessary for the aged to prevent dehydration and it helps to keep the urinary tract and kidney healthy (Tabloski, 2006). This also agreed with the work of Hodgkinson, Evans and Woods (2003) who reported the importance of hydration for the older people and risk factors that are caused by lack or inadequate fluid intake by aged.

The responses on nutrient intake of aged in Brafem Geriatric Foundation, the foundation agreed to manage the quantity of carbohydrates, protein, fat,

minerals and vitamins intake, they also agreed to manage all the intake of meals and giving calcium supplement after each meal, this findings is in consonance with Asalage and Amella (2009); Christenson (2001), who agreed that meals of the aged should consist of their energy needs (20-30kcal/day), protein needs (4kcal/day), fluids and macronutrients which includes the intake of foods with adequate fibre content. Also, they asserted that collective mealtime pattern in nursing homes provide an opportunity to integrate and implement good nutritional care.

Conclusion

Good nutrition and physical activity are health promoting lifestyle approaches in the aged population, the role of nutrition in the maintenance of aged health provides lots of benefits. Generally, aged who are placed in care of caregivers receives better treatment, are able to manage the nutritional intake and eat when necessary and meals are made available at all times.

Therefore the study concludes on the fact that food is important for healthy living and that it is important for the aged to adopt a diet and lifestyle habit that will minimize the risk of diseases that will endanger them to give them long stay period in the hospital.

Recommendations

Based on these conclusions, it was recommended that;

1. In cases of loss of appetite, meals should be well garnished as to arouse their appetite of the aged.

2. The aged should have caregiver or place in nursing homes, so that their nutritional needs can be properly met.

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Prevalence of Malnutrition among School-aged Children in Abakaliki Education Zone

David E. I.

Department of Home Economics
Ebonyi State University, Abakaliki

and

Ogunji J.O.

Department of Fisheries and Aquaculture
Ebonyi State University, Abakaliki

Abstract

This study assessed the prevalence of malnutrition among school age children in Abakaliki Education Zone. Specifically, it determined stunting (height for age), wasting (weight-for age) and under weight (BMI-for-age). The design used was survey design. Instrument for data collection was anthropometry indicator. Population for the study comprised all public primary school pupils in the zone. 500 school-aged children were randomly selected for the study. Data were analyzed using National Centre for Health Statistics Reference Growth Chart, frequency and simple percentages. Major findings revealed that 26.4% children were underweight, 35.6% stunted and 46.2% wasted. Findings include long-term and present nutritional deprivations and prevalence was high and critical. Gender and location did not influence the nutritional status of the respondents. Recommendations include among others, that school lunch programme should be introduced and monitored in public primary schools by state government. Women should be empowered to ensure household food security.

Key words: Malnutrition, School-aged, Children, Stunting, Wasting, Underweight.

Introduction

Malnutrition is a common disorder among young children aged 6-12 years in developing countries and it is a major public health concern, (National Institute of Child Health and Human Development, (NICHD) 2006). The main positive factors of malnutrition are inadequate food intake and poor health status that are influenced by poverty,

lack of access to food, family size and feeding pattern. Though, it is not an infectious disease, its effect extends to millions of survivor who are left crippled, chronically vulnerable to infections, illness and intellectual disability (Azubuike, 2013). Malnutrition affects future productivity

and ultimately the viability of the society (Grigsby, 2006).

Malnutrition is a complex condition that can involve multiple overlapping deficiencies of protein, energy and micro-nutrient deficiencies (De-Regil Haddad, 2014). Malnutrition is linked with a variety of illness and other diet-related diseases. The most lethal form of malnutrition is protein energy malnutrition (PEM) (WHO, 2006). PEM develops when the consumption of protein and energy is insufficient to satisfy the body's nutritional needs (Ma, Savoy and Agim, 2013). PEM induced dysfunctions directly impinge upon and stunt the development of a child's intelligent quotient (Gratham and Ani, 2000). It is not a surprise that children affected with PEM tend to function at reduced levels of intellectual development and academic achievement. Micronutrient deficiencies such as Iodine, Zinc and Iron deficiencies are the world's greatest causes of mental retardation and brain damage such that can affect school performance (World Food Programme 2012; Young, 2012).

Malnutrition encompasses stunting, wasting and under-nutrition (WHO, 2014). Symptoms include weight loss. Lack of strength, breathlessness, fatigue, anaemia, changes in skin, hair, hands irritability, inability to concentrate etc. The body of a malnourished child has difficulty doing normal things such as growing and resisting diseases, physical work becomes a problem and even learning abilities are diminished. Malnutrition occurs when there is a deficiency of certain vital nutrients in a

person's diet. The deficiency fails to meet the demands of the body leading to defects on growth, physical health, mood, behaviour and other functions of the body (NICHD, 2006).

Malnutrition is a common disease or disorder especially in the rural areas. It is common among the low income groups (Zulkifi, 2004). Malnutrition raises the risk of infection with diarrhea, malaria, measles and respiratory tract infection in children. Malnutrition prevents a child from taking maximum advantage of the learning opportunities available to them in the environment. Recent studies have demonstrated that nutrition affects students thinking skills, behaviour and health (Li and O'Connell, 2012). Nutritional deficiencies early in life can affect cognitive development of school-aged children.

Prevalence indicate general existence of a condition in a particular area, it is a measure of the widespread of malnutrition in an area. It may be high or low depending on relative factors such as socio-economic status, culture, level or education, feeding pattern etc. According to Babatunde, Olagunju, Fakayode and Sola-Ojo (2011), chronic malnutrition experienced during early life inhabits growth, retards mental development; reduce motivation and energy life thereby causing a reduction in educational attainment and delay in school entry and exit. Sternberg (2011) also affirms that health problems due to measurable nutritional status are among the most common causes of low enrollment, high absenteeism, early

dropout and unsatisfactory classroom performance. However, this can vary as a result of gender. Females are more affected by malnutrition due to their physiological need. In situations of crisis, where food is in short supply, females are likely to reduce their food intake as a coping strategy in favour of other household members. These can contribute to under nutrition (UNICEF, 2011).

Nutritional status levels may be due to environment in which children live. Geographical region has been identified to influence food and nutrient composition of household diets (Townsend and Lake, 2009). Differences in food availability have been proposed as explanation for the disparities in disease risk between individuals living in rural and urban areas. Rural and urban differences have been reported, however these differences have not been consistent.

Child growth is recognized as an important public health indicator (Daelmeans and Saadeh, 2003). Childhood falls within ages five and fifteen years (Srivastava, Mahmood, Srivastava, Shotriya and Kumar, 2012). It is a time of actual growth in terms of physical size, mental, emotional, sexual maturation and psychological development (WHO, 2006). Normal growth is dependent on adequate nutrition and encompasses major transformations from birth to adulthood. These also may be the cause of the problem associated with how students cope with or accomplish different task given to them by their teachers. The present nutritional status

of school age children is an overall measure of the productivity level of that society.

Most parents especially in the rural areas have poor educational background and poor nutrition knowledge. The implication is that many children from these parents may not be properly provided for nutritionally. It was also noted that Ebonyi women feed more or less predominantly on starchy foods such as fufu with watery soup, boiled yam with little or no oil, etc. This type of food is what they give to their children. This also is a major determinant of the nutritional status of their children. However, poor nutrition knowledge, poor education and occupation background heightens the doubt on the nutritional status of the children. Furthermore, low rate of primary school enrolment, (Ebonyi State Ministry of Education, 2012), frequency of health problems, infection and poor academic performance make one to suspect prevalence of malnutrition in the study area and that is the interest of this study.

Purpose of the Study

The main purpose of the study was to assess the prevalence of malnutrition among school-aged children in Abakaliki Education Zone. It specifically determined the prevalence of:

- 1 underweight (BMI – for- age) among school age children.
- 2 stunting (height –for- age) among the children.

3 wasting (weight-for-age) among the children.

Research Question

Three research questions guided the study.

What is the prevalence of the following malnutrition factors among school-aged children in Abakaliki Education Zone?

1. Underweight
2. Stunting
3. Wasting

Hypotheses (H₀s)

The following two hypotheses guided the study, they include:

H₀₁: There is no significant difference in the nutritional status of school age children in Abakaliki education zone as a result of their location.

H₀₂: There is no significant difference in the nutritional status of school age children in Abakaliki education zone as a result of their gender.

Methodology

Design of the Study: The study adopted a descriptive survey design. Descriptive design aims at collecting pertinent information with which to describe a system.

Area of the Study: The area of the study was Abakaliki Education Zone, it comprised of Abakaliki, Izzi, Ebonyi and Ohaukwu L.G.A in Ebonyi State. The area is predominantly rural and poor (Egwu, 2004). The populace has poor education and socio-economic background thus indicating a situation of inadequate resources.

Population of the Study: The population of the study comprised all

the primary 4-6 pupils of public primary school in Abakaliki Education Zone. The zone has 451 public primary schools with 202,650 pupils (Ebonyi State Ministry of Education, 2012). Most of the pupils are aged 8-12 years.

Sample and sampling techniques: The sample for this study was 500 school age children. Random sampling technique was used to select the pupils. The zone comprised of four communities namely: Izzi, Ebonyi, Ohaukwu and Abakaliki. Ten schools were randomly selected from the study area using balloting without replacements, five from urban and five from rural communities. Fifty pupils were also randomly selected from primary four to six classes from each school to make up the sample size.

Instrument for Data Collection: Anthropometric indicator was used to measure the height and weight of the respondents. A height metre graduated to the nearest 0.1cm attached to the wall was used to measure their height while a weighting scale was used to obtain the weight of the respondents to the nearest 0.1kg.

Data Collection Technique: The anthropometric measurements taken were height and weight. With the help of research assistants, the body weights of the respondents were taken using a bathroom scale with minimum clothing on. The weights were measured to the nearest 0.1kg. The heights were measured using measuring tape, colored chalk, pen and paper. The subjects stood on flat floor, leaned on the wall with their feet parallel to their heels. Their buttocks, shoulder and back

of head touched the wall. The crown of the head was marked on the wall with a coloured chalk; the children were then asked to step out. The height measurement was taken to the nearest 0.1cm.

Data Analysis Technique: Anthropometric data collected were analyzed using frequency and simple percentages. The national centre for health statistic (N.C.H.S) percentile cut off standard was used to check conformity. The BMI was calculated using the formular weight/height^2 (kgm-2). Anthropometric indices percentile cut off standard is as follows: BMI-for-age < 5th percentile indicates thinness (underweight) Height--for-age < 5th percentile indicates stunting Weight-for-age < 5th percentile indicates wasting

Results

Table 1: Nutritional Status of School-aged Children in Abakaliki Education Zone

Variable		Frequency
BMI-for-Age (Underweight)	Normal	368 (73.6%)
	Abnormal	132 (26.4%)
		500 (100.0%)
Height-for-Age (Stunting)	Normal	322 (64.4%)
	Abnormal	178 (35.6%)
		500 (100%)
Weight-for-Age (wasting)	Normal	269 (53.8%)
	Abnormal	231 (46.2%)
		500 (100%)

Table 1 indicates the prevalence of underweight, stunting and wasting as 26.4%, 35.6% and 46.2% respectively.

H₀₁: There is no significant difference in the nutritional status of school age children in Abakaliki education zone as a result of their location.

Table 2: Summary of Chi-square Test Results of no Significant Difference in the Nutritional Status of School Age Children in Urban and Rural Schools

Variables	χ^2 cal	df	χ^2 crit	Decision
BMI-for-age and location	.692	1	5.991	Accept
height-for-age and location	.536	1	5.991	Accept
Weight-for-age and location	1.005	1	5.991	Accept

Table 2 indicates that there is no significant difference in the nutritional status of school age children in urban and rural schools because chi-square calculated is less than chi-square tabulated. The hypothesis is therefore accepted implying that location did not

influence the nutritional status of school age children in Abakaliki education zone.

H₀₂: There is no significant difference in the nutritional status of school age children in Abakaliki education zone as a result of their gender.

Table 3: Summary of Chi-square Test Result of no Significant Difference in the Nutritional Status among Male and Female School Age Children in Abakaliki Education Zone

Variables	χ^2 cal	df	χ^2 crit	Decision
BMI-for-age and gender	.558	1	5.991	Accept
height-for-age and gender	1.351	1	5.991	Accept
Weight-for-age and gender	3.343	1	5.991	Accept

Table 3 shows that there is no significant difference in the nutritional status among male and female school age children because chi-square calculated is less than chi-square tabulated. The hypothesis is therefore accepted implying that gender did not influence the nutritional status of school age children in Abakaliki education zone.

Discussion

The results indicate that in Abakaliki education zone, both present (wasting) and long term (stunting and underweight) nutritional deprivation were manifested. It also reveals that present nutritional deprivation is high such that is due to famine (hunger) and epidemic. The observed value of underweight and stunting presented a high prevalence and critical for wasting when matched with nutritional status cut-off value for public health significance, (WHO, 2006). When compared with the study of Uwem et al (2008) who observed a high prevalence of malnutrition among the pastoral Fulani in the South West of Nigeria, it was observed that there is a high prevalence of malnutrition among school age children in Abakaliki Education Zone. Furthermore, the study of Makoka (2013) revealed a

higher prevalence in the study area than in Malawi, Tanzania and Zimbabwe. Prevalence of malnutrition is higher in Makurdi, compared to the study area, based on the works of Goon, Toriola, Shaw, Amusa, Monyeke, Akinyemi and Alabi (2011). Prevalence of thinnes and stunting when compared with the average national prevalence of 40 percent is lower in Abakaliki education zone while wasting is higher (Ekpo, Omotayo and Dipeolu, 2008).

Nutritional status does not only directly reflect the socioeconomic status of the family and social well being of a community, it also reflect the efficiency of the health care system, the surrounding environment and family background (Srivastava *et al.*, 2012). Malnourished children according to Makoka (2013) are likely to be associated with frequent illness and infection. Poor nutritional status in childhood can affect brain development that controls fine motor functions (Chang et al., 2010). These can be seen after several years of malnutrition. Furthermore, poor nutritional status of children can become a risk for them to develop disease in later life thus hindering them from actualizing full intellectual or educational potentials. Malnourished children may never reach their full intellectual or educational

potentials. It also diminishes adult intellectual ability and work capacity causing economic hardship for individuals, families and society. The high prevalence could be as a result of current economic crisis (de Pee *et al*, 2010).

There is no significant difference in the nutritional status of the respondents as a result of their location and gender. This indicated that location and gender did not have influence on the nutritional status of the respondents: The apparent lack of association between these variables and nutritional status in this study may be ascribed to the probability that the children were exposed to the same nutrition and environmental condition. This also agrees with the study of Townsend *et al* (2009) who found that there was no significant difference in the nutritional status of children in urban and rural areas. On the contrary, Sozina *et al* (2013) found that adolescents living in urban highland were more predisposed to malnutrition in Ecuador. Also, Ngabo *et al* (2014) discovered that gender was very significant in determining the nutritional status of children in Rwanda as males were highly exposed to malnutrition compared to females in their study.

Conclusion

Based on the findings of the study, it was concluded that the children were thinned stunted and wasted. This indicated long term and present nutritional deprivation in the study area. Poor nutritional status may jeopardize the children's educational

potential and also future productivity. This is because adequate nutrition enables school-aged children to be sound, have good brain and behavioural development which prepares them to study. Thus there is need to provide intervention strategies to improve nutritional status of school-aged children in the study area.

Recommendations

1. School lunch programmes should be introduced and monitored in public primary schools by government and donor agencies so as to ensure that children get a balanced meal at least once a day.
2. Nutrition education via community based approach school be aggressively adopted and pursued.
3. Women empowerment for food security.

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Early Girl-Child Marriage Issues and Families in Ezza North Local Government Area, Ebonyi State

Akubue B.N.

Technology and Vocational Education (Home Economics Unit)
Ebonyi State University, Abakaliki

Abstract

The study investigated issues relating to early girl-child marriage and families in Ezza North Local Government Area, Ebonyi State. Specifically it identified causes of early girl-child marriage and problems associated with it. Descriptive survey research design was used. The population was made up of 75808 married women. Samples of 280 young married women were used for the study. Questionnaire and focus group discussions (FGD) were used to collect data. Data were analysed using mean .Nine causes were revealed which include illiteracy, poverty, culture and tradition, among others as the causes of early girl-child marriage and ten problems including separation, divorce, sexual transmitted diseases, poverty among others are common among the woman. Recommendations include, that Home economics Association in collaboration with non- governmental organizations should conduct awareness campaign on the implication of early girl-child marriage in the area of study and that federal government of Nigeria should enforce law against early girl-child marriage. Girls education and sex education should be compulsory in the area of study and Nigeria in general.

Keywords: Early, Marriage, Girl, Family, Issues.

Introduction

Marriage is the process in which a male and female who love each other make their relationship publicly official and permanent (George, Girgls and Aderson 2010). It is an institution marked by the union of man and woman who make a permanent and exclusive commitment to each other as a couple. It is one of the oldest institutions which regulates the system upon which a couple bear and rear children according to established social norms and custom of a society.

Marriage is distinguished from any form of relationship as it involves togetherness, shearing of life and resources. Marriage ceremony is often marked by legal commitment, customary and/or religious ceremonies, among others (Sussex 2013). It is a bond joining a man and woman often for life.

Marriage practices often vary from one culture to another. Thus there are often different forms of marriage. Puja (2015) classified marriage into monogamy, polygamy and polyandry.

Monogamy and polygamy are forms of marriage practiced in Ezza-North Local Government Area (LGA). Monogamy is the best and wide spread form of marriage. It refers to a marriage of one man with one woman at a time, that is, the marriage involves one sexual partner. Polygamy according Puja (2015) is the form of marriage where there is plurality of partners. It involves a man marrying more than one woman or a woman marrying more than one man at a time. Polygamy has two forms as sororal polygamy and non-sororal polygamy sororal polygamy refers to a marriage between a man and his sister-in-law, that is, a system of marriage in which a man marries two sisters at a time or a man marries his sister in-law after the death of his wife. Non –sororal polygamy is where a man marries many women at a time who are not related to each other.

For both types of marriage, there is a specified age for marriage. Silver (2014) noted that the minimum age of the girl to be married is 18 years. Involvement of a girl into marriage before the age of eighteen is referred to as early girl-child marriage in Africa tradition (Sovzey and Aburime 2005).Federal Republic of Nigeria Constitution (CFRN) (1999) chapter 111stipulated that the official age for marriage in Nigeria is 18 years. Child Right Act (CRA) (2003) also stated that full age to contract marriage is 18 years and above. Thus any marriage under the age of 18 years is against the law of the country. Such marriage can be considered invalid (Brammah 2014). Olasode, Olaogun, Fatusi and Mosaku

(2008) noted that eighteen (18) years is the legal age for marriage in Nigeria, the law is rarely enforced. Early marriage has been prohibited and criminalized but the law has not been effective in arresting the high incidence of child marriage among Fulani, Hausa and other communities in Nigeria (Brammah 2014). The practice of early girl-child marriage is still upheld by tradition and social norms in Ezza-North Local Government Area (LGA).

Early girl-child marriage is practice in two ways in Ezza-North Local Government Area. The most common practice of early girl-child marriage in the area of study is that a young girl of less than 15 years old is given out in marriage to an old man of often 50 years and above. In many cases parents often arrange marriage for their children without the consent of the young girl. It constitutes forced marriage most of the time. Parents pressurize girls to marry at early age before the girl become too old to marry in relation to culture and tradition of the area. Kayoed (2015) noted that parents are disposed to marrying off their daughters at tender age to ensure that the girl are virgin as emphasized by the cultural norms of some communities in Nigeria.

Early childhood marriages coerce girls into adulthood before they are physically, socially and emotionally matured. Such early marriage often affects the overall development of girls. They become socially isolated with little or no education, skill and opportunities for employment. They remain poor. Roy (2008) stated that early girl-child marriage denies girls their chances in

society and causes numerous health problems. It is observed that many young women, especially those married by old men in Ezza-North LGA undergo high risk during pregnancy and child delivery, including heavy bleeding, fistula infections, anemia and so on (Ude, 2015). These can increase high maternal mortality rate in the area of study. Issues relating the early childhood marriage influence the children, their husbands and families in various ways. These can lead to various forms of marital problems; such as conflicts, stress, poor communication, separation, divorce among others. Child marriage is recognized as one of the strongest social malaise which must be eradicated to improve on the quality of life of the girls child in the pursuit of sustainable development (Kayode 2015).

Ideally marriage is stable when the couples have considerable emotional support, romantic relationship and communicate well with each other. Most married woman in Ezza North Local Government Area do not share the same building with their husbands. Separate house is built for the wife and her children. This situation impairs effective communication between couples. Their relationship is always coarse and strange. National Council on Family relationship (2014) indicated that compatibility in marriage involves understanding, trust and passionate relationship between the concerned couples. A couple should have confidence in the stability of their relationship to enable them feel strong responsibility for each other, make

happy home and give their children quality training and sound education (Rhoda 2016). Happy marriage is therefore characterised with inseparable love, unity, merged realistic financial lives and common goal plan. It is observed that married women in Ezza North Local Government Area are not involved in any important family discussion and decision

Observation shows that many young married women bleed to death during labour and after child delivery in Ezza-North Local Government Area, Ebonyi state. Some of the young married females are uneducated, poor and unhealthy. They are not adequately nourished, face a lot of social disadvantages and subjected to domestic violence. Ills of early girl-child marriage according to Arinze (2015) can not be justified for any reason. Ajumobi (2014) also opined that out of school during adolescence has serious health and development hazard, on both males and females. Unfortunately early girl-child marriage is still much in vogue in Ezza- North Local Government Area, Ebonyi State, Nigeria.

Purpose of the Study

The main purpose of the study was to investigate issues relating to early-girl-child marriage in families in Ezza-North Local Government Area, Ebonyi State. Specifically, the study identified;

1. Causes of early girl-child marriage in Ezza-North Local Government Areas
2. Problems associated with early girl-child marriage in families in the area of study.

Research Questions

1. What are the causes of early girl-child marriage in Ezza-North Local Government Area?
2. What are problems associated with early girl-child marriage in families in the area of study?

Methodology

Design and Area of Study: Descriptive survey design was used for the study. Area of study was in Ezza-North Local Government Area, Ebonyi State. The local Government is made up of 14 communities with 11 wards and head – quarter at Ebiaji. It has a total population of 145,619 (population census commission 2006). The indigenes are predominantly uneducated farmers.

Population for the Study: The population for the study comprised all the married women from the 14 communities in Ezza North Local Government Area. With a total number of 75808 married women (population census commission 2006), Ebonyi State. The age ranges from 15-65 years who are mainly farmers and petty traders.

Sample and Sampling Techniques: The sample for the study was 280 married women drawn from the population. The sampling size was arrived using multi-stage sampling techniques, Firstly, the local Government was stratified into 11 political wards. Secondly, the researcher selected seven (7) political wards from the 11 wards through simple random sampling method by balloting. Thirdly, forty (40) married women from each of the seven political wards were selected

through purposive sampling technique which is summed up to 280 married women used for the study.

Instrument for Data Collection:

Questionnaire and focus group discussion method were used for data collection. The questionnaire had a 4-point scale of strongly agree, agree, disagree and strongly disagree with rating of 4, 3, 2 and 1 respectively. It contained twenty items separated into two sections of ten (10) items based on the two specific purposes of the study. The questionnaire was validated by three Home Economics lecturers in the university. The focus group discussion method was also used to illicit some information from the respondents who cannot adequately fill the questionnaire.

Data Collection and Analysis

Techniques: Two hundred and eighty copies of the questionnaire were distributed by hand. All the copies were properly completed and returned. Mean was used to analyze the data. Any item with mean value of 2.50 and above was regarded as agreed while those with mean scores below 2.50 was regarded as disagreed.

Finding of the study: the following findings were made:

1. Ten causes of early girl-child marriage out of which nine (9) were identified in Ezza Local Government Area (Table1)
2. ten problems of early girl –child marriage were identified in the area of study (Table2)

Table 1: Mean Responses on Causes of Early Girl-child Marriage in Ezza-North LGA (N = 280).

S/N	Causes of early girl-child marriage	Mean($\bar{x}$)	Remark
1.	Poverty	3.80	Agreed
2.	Parental ignorance.	3.70	Agreed
3.	Illiteracy of all concerned	3.40	Agreed
4.	Culture and tradition of Ezza-North people	3.80	Agreed
5.	Parents want their daughters to be married by titled men and to settle conflict between families.	2.90	Agreed
6.	Some girls are very eager to marry even at tender age.	1.40	Disagree
7.	Lack of sexual education from parents	3.50	Agreed
8.	Most parents want their daughters to marry wealthy men to ensure their social status	3.60	Agreed
9.	To prevent pre-marital sex by the girls.	3.20	Agreed
10.	Child abuse cause early girl-child marriage	2.90	Agreed

Table 1 shows that item 1-5 and 7-10 had mean score above cut off points of 2.50. This means that the respondents agreed that nine items constituted causes of early girl-child marriage in Ezza North LGA.

Table 2: Mean Responses on the Problems Associated with early Girl-child Marriage (N =280)

S/N	Problem associated with early girl-child marriage	Mean($\bar{x}$)	Remark
1.	It causes gap in communication between husband and wife.	3.50	Agreed
2.	There is poverty on the side of woman	3.50	Agreed
3.	Children do not receive adequate education and training.	3.40	Agreed
4.	Sexually transmitted diseases may be common in the family.	3.80	Agreed
5.	Women may suffer vesico vagina fistula (VVF)	3.70	Agreed
6.	Prevents education of girl-child	2.95	Agreed
7.	It causes high maternal mortality rate among young women during birth.	3.30	Agreed
8.	It causes separation of the couple	3.60	Agreed
9.	Separation brings disunity between the families of separated husband and wife	3.80	Agreed
10.	Leads to divorce	3.60	Agreed

Table 2 shows that all the ten identified problems associated with early girl-child marriage in the area of study scored mean value above 2.50. This implies that women suffer all identified problems of early girl child marriage in Ezza North Local Government Area.

Discussion of Findings

The result of the study indicated that poverty ignorance illiteracy, poor sexual education, culture and tradition of Ezza people are the cause of early girl-child marriage in Ezza North local

Government Area, Ebonyi State. In spite of growing awareness in the society that early girl child marriage is harmful to girls and their families, parents in Ezza-North still insist upon marrying their daughter in early and mid-teens, to respect their culture. One of the reasons for early girl-child marriage is to respect culture and tradition of the area (Roy 2008). The pursuit to tradition in the face of compelling negative consequence in families of early girl child marriage is common to tradition and culture of many societies (Singh and Samara 1996). Early girl-child marriage prevails due to poor sex education from families of under developing countries. Parents are afraid of unwanted pregnancy from their daughters.

The study also revealed that some parents want their daughters to marry wealthy and titled men, parents give their children to marriage to resolve family dispute and that child abuse causes early-girl child marriage. Some families use marriage to socially affiliate their families to wealthy families. Arinze (2015) noted that many families marry their daughters off at early age essentially for economic survival. Nwimo and Egwu (2015) noted that marriage is one of the means of establishing politics and social bounds in a community. Murray and Lapez (2009) noted that parents give their daughter to marriage to resolve conflicts and strengthen mutual relationship between families and communities. In other words, the value of girls increases with their availability for such unlawful transactions. The

desire to get the girl's dowry is an incentive to arrange a marriage for a young girl without of her consent (Roy 2008).

Child abuse which include failure to provide physical needs such as appropriate clothes, provision of adequate foods, good medical treatment, when sick among others. These ugly conditions lead to girl child marriage.

Some parents do not really understand the negative consequences of early girl-child marriage. The results of the study revealed that early girl-child marriage cause numerous problems in the area of study. It results to gap in communication between the husband and wife, causes separation and divorce, sexual transmitted diseases, women suffer vesico vagina fistula (VVF), disunity between the divorced families among others. The results of the finding confirm the finding of Roy (2008) that early girl-child marriage causes serious disorder in homes such a quarrel and separations. This could be attributed to the fact that, the man has no time to share common view or discuss family issues with the young girl. Arinze (2015) stated that age gap between the early married girls and the husband reinforces the risk of these girls to the subjected to domestic violence having physical, psychological, and fatal outcomes on. United National International Children's Emergency Fund (UNICEF) (2005) reported that consequences of early girl child marriage are high maternal mortality rate for young women who gave birth

at the age between 15 and 17 years. Dali and Pradham (2009) noted that complications during pregnancy at very young age include obstetric fistula, that is, perforation of the bladder or bowel. Ndyanabo, Mupambireyi and Zaba (2009) opined that early girl-child marriage curtails girls of their personal freedom, opportunity to develop and right of choice.

Conclusion

The study has investigated issues relating to early girl-child marriage in Ezza-North LGA, Ebonyi State with particular references to the causes and problems associated with early girl-child in the area of study. The causes of early girl-child in the area of study include poverty, illiteracy, culture and tradition among others, many problems are associated with early girl-child marriage; such problems are marriage separation and divorce, women suffer various types of sexual transmitted diseases, women remain under developed and have no freedom even at their family level. These inherent causes and problems of early girl-child marriage need to be addressed through individuals, families associations and so on to improve the life of women. There is need to raise awareness of the benefits of educating female child to limit the extent early marriage constitute gross woman rights abuses on the part of girls.

Recommendations

1. Awareness programme should be organized in Ezza-North LGA emphasizing the negative

consequences of early girl-child marriage by Home Economics Teachers Association and Non Governmental Organization (NGOs).

2. The Federal Government of Nigeria should make practicable policies and laws guiding against early girl-child marriage in the area of study and Nigeria in general.
3. State legislatures should be persuaded to domesticate the Child Right Act (2003 (CRA) which outlaws child marriage.
4. Adult school and non-formal education programmes, economic and social programmes should be developed for out-of-school married young females.

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Assessment of Tailoring Training Facilities in Implementation of School-On-Wheel Scheme of National Directorate of Employment in Anambra State of Nigeria

Anowai, C.C. & Anyakoha, E.U.

Department of Home Economics and Hospitality Management Education
University of Nigeria, Nsukka

Abstract

The study assessed tailoring facilities used in training beneficiaries of School-on-Wheel Scheme of National Directorate of Employment on tailoring occupation in Anambra State. Descriptive survey design was used. The study population was 328. A sample of 103 was drawn using snowball technique plus all the scheme's 15-tailor-instructors, making the total sample 118. Data were collected using a questionnaire; focus group discussions provided in-depth information. Frequency, mean, standard deviation and t-test were used in data analysis. Nine training facilities were found to be functionally available with six in right quantities. Epileptic power supply rendered few available electrical facilities non-functional. Staff enumeration was adequate, nevertheless, office accommodation, training consumables, take-off grants for beneficiaries were grossly inadequate. Clearer policy framework, adequate funding and further research were recommended by the study.

Key Words: Tailoring, Facilities, Training, Beneficiaries, School-on-Wheel Scheme.

Introduction

The School-on-Wheels (SOW) scheme is an aspect of the National Directorate of Employment (NDE) programme. The directorate was established in 1991 with a mandate to combat mass unemployment in Anambra State in the context of poverty alleviation initiatives of Nigerian government. The scheme targets interested rural unemployed persons that lack employable skills and provides them training on tailoring for earning a living (NDE, 2010). Training is a purposeful development of skills,

knowledge and attitudes that involves teaching, informing or educating people for effectiveness in workplaces (Sangbe, 2002). The NDE uses formal (vocational schools) and informal (apprenticeship) sectors in training beneficiaries of the scheme on tailoring skills. Tailoring is act of sewing that involves taking of body measurements and recording, pattern illustration and drafting, cutting, stitching and production of different apparels that require a lot of facilities. Tailoring training facilities are sewing tools and equipment which are

classified into small sewing hand tools and large sewing equipment by many authors. The authors include; Rajitha, and Geetha, (2005); NDE, (2006), Anyakoha, (2011) and Oseni, (2012). The authors' examples of small sewing hand tools include;

- Tools for measuring e.g. tape measure, metre stick or yardstick, ruler, hem gauge, etc. ;
- Tools for pattern drafting and marking e.g. fashion magazine, commercial patterns, standard measurements, hem marker, tracing wheel, tracing paper, tailor's chalk, etc;
- Tools for cutting e.g. shears /scissors, seam rippers, fabrics, cutting tables, stiletto etc;
- Stitching tools e.g. needles, embroidery tools, thimble, pins, magnets, pincushions, etc.;
- Pressing tools e.g.: charcoal, electric, steam and pressure irons, scissors press iron, carousal machines and steam dolly, ironing and sleeve boards, tailor's ham, seam roll,
- Safety Tools e.g. pincushion, magnet, thimble, fire extinguisher etc.

Large sewing equipment according to the authors includes;

- Storage equipment e.g. large cupboards and ward robes
- Sewing machines of different classifications, types and models (e.g. commercial, industrial, embroidery, over-locking and zigzag sewing machines; hand-operated, treadle or foot operated and electric motor operated; domestic, industrial, portable and cabinet.

Ideally, all these facilities should be functionally available in right quantities for effective teaching and learning of tailoring skills in designated tailoring training workshops. Nevertheless, NDE stipulated minimum quantities of what should be functionally available in each training centre for it to be accredited and used in training beneficiaries on tailoring under the scheme. The stipulated minimum quantities of basic tailoring training facilities are; three working tables, eight chairs, eight straight/zigzag sewing machines, one embroidery machine, one weaving/interlocking machine, one cover button machine, one electric pressing iron, one charcoal pressing iron, eight pairs of scissors, eight measuring tapes, eight needles, different colours of threads and two well ventilated large rooms (NDE, 2014). Implicit is that availability and use of these quantities of the training facilities in the training workshops would make for mastery of tailoring skills by beneficiaries trained under the scheme. In addition, effectiveness of the training is equally dependent on efficacy of monitoring and supervisory roles of NDE that calls for enough administrative resources otherwise called coordinating resources by Obayi quoted by Inyiagu (2014). The author gave examples of coordinating resources as men, money and materials used in planning, organizing, directing and controlling programme activities in achieving set objectives. In this study, administrative resources are NDE's office space, personnel and their remunerations, training consumables, training duration and take off grant for

trainees that are available in the implementation of SOW's tailoring scheme in Anambra State.

Whether NDE is sticking to its stipulated standard on facilities availability in the implementation of its SOW scheme tailoring initiative is in doubt. This is because many beneficiaries of the scheme borrow and or hire training facilities for their training (Anowai, 2015). It is possible that some of the trainees could neither afford to borrow nor hire the facilities thus compromising the skill acquisition training. The situation suggests that all could not be well in the implementation of the poverty alleviation scheme, more so when unemployment and poverty is still on the rise in the state (Nation Bureau of Statistics (NBS), 2010). According to NBS, Nigeria's unemployment rate was 21.1% in 2010 with Anambra State having 21.3% that is above the national average after many years of implementing the scheme. Ifejika & Igboanusi (2014), reporting NBS states that unemployment rate stands at 23.9% with 72% of the people living in poverty. The authors attributed the cause to inadequate material provisioning in Technical Vocational Education and Training (TVET) institutions in Nigeria which they traced to improper funding of training programmes. The state of provisioning of the needed training facilities and administrative resources in the implementation of SOW scheme's tailoring training in Anambra State is virtually unknown in the face of dearth of empirical evaluation on the scheme, which justifies the study. Findings of

the study will have implications to policy makers, stakeholders in poverty alleviation programmes including Nigerian government among others.

Purpose of the Study

The major purpose of the study was to assess availability and level of functionality of tailoring facilities used in training beneficiaries of SOW scheme in Anambra State. Specifically, the study;

1. Ascertained available number of each type of approved facilities used in training beneficiaries on basic tailoring under SOW scheme of the NDE
2. Determined levels of functionality of available facilities used in training beneficiaries on basic tailoring under the scheme
3. Determined levels of adequacy of administrative resources provided by NDE in training beneficiaries on tailoring under the scheme

Research Questions

The study sought answers to the following research questions.

1. What facilities are available in right quantities in training beneficiaries on tailoring under the SOW scheme of the NDE?
2. What is the level of functionality of each of the available facilities used in training beneficiaries on basic tailoring under the scheme?
3. What is the level of adequacy of administrative resources provided by NDE in the implementation of the SOW scheme?

Research Hypothesis

H0: There is no significant difference in the mean responses of beneficiaries and instructors on the adequacy of administrative resources provided by NDE in training beneficiaries on basic tailoring under the SOW scheme.

Methodology

Design and Area of the Study: The study adopted descriptive survey research design and covered three senatorial zones in Anambra State. Anambra State is in South-East geopolitical zone of Nigeria with high unemployment rate of 21.3 % that is higher than 21% national unemployment rate (National Bureau of Statistics 2010).

Population of the Study: The population for the study was 343 subjects made up of 328 beneficiaries of the SOW scheme trained on tailoring between 1991 and 2013 in Anambra state and their 15 instructors. The figures were obtained from records in the office of NDE in Anambra State.

Sample and Sampling Technique: Total sample for the study was 118 subjects. Snowball sampling technique was used to sample 103 beneficiaries. All the 15 instructors were used for the study due to its small size, hence there was no sampling.

Instrument for Data Collection: A questionnaire was developed by the researcher from reviewed literature and was used to generate data for the study. Three experts from University of Nigeria, Nsukka, two from clothing and textile unit of Department of Home Economics and Hospitality

Management Education and one from Department of Science Education validated the instrument. Information on available number of each training facilities was obtained using open ended fill in questioning technique in answering research question 1, which was responded only by the beneficiaries. Obtained answers were later compared with the NDE's stipulated facilities bench marks for approving training centres in determining Adequately Available (AA) and Not Adequately Available (NAA) facilities. A 4-point Likert scale questionnaire solicited information on levels of; functionality of available facilities with response options of; Highly Functional (HF), Moderately Functional (MF), Slightly Functional (SF), Not Functional (NF) in answering research question 2; adequacy of administrative resources in the implementation of the scheme using Highly Adequate (HA), Moderately Adequate (MA), Slightly Adequate (SA), Not Adequate (NA) in answering research question 3. Items in the two four point scales questionnaire have weighted means of 4, 3, 2, and 1 respectively. Cronbach Alpha method was used to determine the internal consistency reliability of the instrument which had overall reliability co-efficient of 0.701. Four Focus Group Discussions (one FGD group per zone for beneficiaries and one FGD for all the instructors) that consisted of seven persons in each group were used in obtaining qualitative information on key issues of the study. The study's

three research questions served as the FGDs guide.

Data Collection and Analysis: Six trained research assistants (two per zone) assisted the researcher in the administration of the questionnaire and FGDs during field works. Mean and standard deviation were used to analyze items in research questions 2 and 3. The computed 2.50 criterion mean was the decision benchmark. Any item with a mean that is equal to or

above 2.50 was considered functional or adequate while item with a mean that is below 2.50 was considered not functional or not adequate. A null hypothesis was tested using t-test at the 0.05 level of significance. For the hypothesis, any item with p-value greater than ($>$) 0.05 was not significant while any item with p-value less than ($<$) 0.05 was said to be significant.

Results

Table 1: Average Frequency Distribution of Available Tailoring Facilities in Training Workshops

S/N	Names of Facilities	Required No	% Available	Remarks
1	Working tables	3	67	NAA
2	Chairs	8	100	AA
3	Straight /zigzags sewing machines	8	75	NAA
4	Embroidery machines	1	0	NAA
5	Edge Stitching (weaving machines / interlocking sewing machines	1	25	NAA
6	Cover - button machines	1	25	NAA
7	Electric pressing iron	1	100	AA
8	Charcoal pressing iron	1	100	AA
9	Pairs of different types of scissors	8	125	AA
10	Measuring tapes,	8	125	AA
11	Needles and threads	8	125	AA
12	Two well ventilated spacious rooms	2	84	NAA

AA= Adequately Available, NAA = Not Adequately Available

Table 1 shows that six facilities in items 2, 7, 8, 9, 10 and 11 were adequately available in training beneficiaries on basic tailoring under the SOW scheme based on the established criteria of NDE for approving training venues on basic tailoring under the scheme. This is because their rate of availability was 100

percent or more. Facilities in items 9, 10 and 11 scored 125 % that is more than 100% showing that they were abundantly available. The other six facilities in items 1, 3, 4, 5, 6 and 12 were not available in adequate quantities as their scores are less than 100% bench.

Table 2: Mean and Standard Deviation of Beneficiaries on the Level of Functionality of Available Facilities under the SOW Scheme (N = 103 Beneficiaries)

S/N	Available Facilities	Beneficiaries		Remark
		$\bar{x}$	SD	
1	Working tables	3.73	0.631	F
2	Chairs	3.50	0.900	F
3	Sewing machines (straight and zigzag)	3.73	0.631	F
4	Embroidery sewing machines	2.10	0.502	NF
5	Edge stitching (weaving / interlocking) sewing machines	2.15	0.654	NF
6	Cover – button sewing machines	2.85	0.701	F
7	Electric pressing iron	2.33	0.483	NF
8	Charcoal pressing iron	3.73	0.631	F
9	Pairs of different types of scissors	2.96	0.209	F
10	Measuring tapes	3.50	0.900	F
11	Needles and threads	3.39	0.713	F
12	Two well ventilated spacious rooms	3.83	0.631	F

N = Functional, NF= Not Functional.

Table 2 shows the mean and standard deviation responses of beneficiaries on the level of functionality of available facilities used in training them on basic tailoring. The responses indicated that 9 items of 1, 2, 3, 6, 8, 9, 10, 11, and 12 were functionally available for the training. This is because the items have mean values that ranged from 2.96 to 3.83 that are above 2.50 decision level. Nevertheless, three facilities

represented in items 4, 5, and 7 were not functionally available for the training. This is because the items have mean values that ranged from 2.10 to 2.33 that are below 2.50. The standard deviations of items ranged from 0.209 to 0.900, which indicates that the responses of beneficiaries were not too far from their means and from the opinions of one another.

Table 3: Mean and Standard Deviation of Beneficiaries and Instructors on the Level of Adequacy of Administrative Resources (N = 118: Beneficiaries =103, Instructors =15)

S/N	Indicators on Levels of Adequacy of Resources The NDE was able to:	Beneficiaries			Instructors		
		$\bar{x}$	SD1	R	$\bar{x}$	SD	R
1	provide office accommodation for staff	1.74	0.210	NA	2.00	0.876	NA
2	provide all the needed consumables for the training	1.92	0.429	NA	2.07	1.203	NA
3	provide business start-off grant (tools & equipment) o graduates of the scheme	1.45	0.402	NA	1.13	0.352	NA
4	allocate sufficient time for training	1.50	0.513	NA	1.62	0.087	NA
5	remunerate hired instructors	2.30	0.067	NA	1.60	0.183	NA
6	remunerate staff of the scheme	2.93	0.971	AD	2.50	0.961	AD

AD= Adequate, NA= Not Adequate

Table 3 reveals that both beneficiaries and instructors agreed on five indicators on levels of adequacy of administrative resources except item 6. Item 6 has mean values of 2.93 and 2.50 that are above and equals 2.50 decision level which means that it was adequately provided during the training. Items 1, 2, 3, 4 and 5 have their mean values ranged from 1.13 to 2.30

and are below 2.50 decision level. This means that the resources they represent were not adequately provided during the training. The table also shows that the standard deviations of items ranged from 0.210 to 1.203, meaning that the opinions of respondents were not too far from their means and from the opinions of one another.

Table 4: t-test Analysis of the Mean Ratings of Beneficiaries and Instructors on the Adequacy of Administrative Resources used in Training on Basic Tailoring at 0.05 level of Significance (N= 118:- Beneficiaries = 103, Instructors = 15, df=116).

S/N	Indicators of Adequacy	BEN		INST		t-cal	p-value	R
		$\bar{x}$	SD	$\bar{x}$	SD			
1	Provision of office accommodation for staff	1.74	0.21	2.00	0.876	2.182	0.132	NS
2	Provision of consumables for the training	1.92	0.429	2.07	1.203	-1.032	0.305	NS
3	Provision of graduate business start-off grant	1.45	0.402	1.13	0.352	-0.435	0.665	NS
4	Allocate sufficient time for training	1.50	0.513	1.62	0.087	1.204	0.232	NS
5	Remunerate staff of the scheme	2.93	0.971	2.50	0.961	0.811	0.419	NS
6	Remunerate hired instructors	2.30	0.067	1.60	0.183	0.687	0.494	NS

NS= Not Significant

Table 4 shows the t-test analysis of the hypothesis tested. The table reveals that the computed P-values are higher than 0.05 level of significance in 6 items at 116 degree of freedom (df). This implies that the mean responses of beneficiaries and instructors are Not Significant (NS). Thus, the hypothesis that there is no significant difference in the mean responses of beneficiaries and instructors on the on the adequacy of administrative resources provided by NDE in training beneficiaries on basic tailoring under scheme is retained.

Discussion

Table 1 shows that half of the twelve major facilities were available in stipulated quantities in training beneficiaries on tailoring under the SOW scheme of the NDE. The other six were not adequately available. Most of the adequately available facilities were functional except those that require electricity for their operations (Table 2). The adequately available and functional facilities were; chairs, pairs of different types of scissors, electric and charcoal pressing irons, measuring tapes, needles and threads. Facilities that were not adequately available were different

types of sewing machines (e.g. edge stitching, cover – buttons, straight/ zigzag stitching, and embroidery). Others not adequately available facilities were working tables and well ventilated spacious training workshops. Literally, most facilities were available and functional in training on basic tailoring skills under the scheme. However, beneficiaries during focus group discussions noted that they brought most of the training facilities. This is a travesty of NDE's policy that training workshops owners would be supported with training facilities (when there are needs) instead of tasking poor beneficiaries (NDE, 2006). Implicit is that without the beneficiaries bringing most of the training facilities, all the training facilities would have been grossly inadequate. Table 3 shows that; office accommodation, training consumables, provision of business start-off grants for beneficiaries, remuneration for instructors and training duration were equally not adequate in the implementation of SOW scheme tailoring training. The t-test of no significant difference in the mean responses of beneficiaries and their instructors further authenticated findings that administrative resources were not adequate (Table 4) in the implementation of the scheme.

Findings of the study are in line with what Arkhust and Anyakoha (2004) found in their survey of facilities in teaching and learning of clothing and textiles in Ghanaian secondary schools. The authors reported that 23 out of the 42 needed facilities were available during the training, while the rest were

not available. The available facilities which the authors equally noted were mostly supplied by the students and teachers include; measuring tools, cutting shears, hand sewing machine, pressing iron, working table, modeling tools, thimbles, needles, thread and fabrics while unavailable were treadle and edge stitching sewing machines among others. Equally, Obeta (2016) reported inadequate and or total lack of instructional facilities in teaching and learning of clothing and textiles subject in secondary schools in Abia State of Nigeria. The same scenario applies in Papua New Guinea and Philippines where Vagi & Salley (2016) and Limon, & Vallente (2016) respectively found that teaching and learning of home economics in both primary and secondary levels are marred with inadequate supply of training facilities. In related but different studies, Achebe (2004), Ibiam & Ugwu, (2009), Ezebe & Nwaubani (2009) and Nwachukwu (2010) equally noted that instructional facilities are in short supply in training programmes and they adduced poor funding as the reason.

Even where poor funding could be negatively affecting implementation of SOW scheme, issues of corruption cannot be ruled out. Eze & Azunna (2014) noted that corruption practices like bribery, over-invoicing, kick backs, misappropriation and embezzlement of public funds abound among government officials and cronies in the implementation of development programmes in Nigeria with many consequences. In the list of consequences are; lack of interest in a

vocational skill subject like Home Economics by students (Seriki-Mosadolorun & Lemon, 2014; Vagi & Salley, 2016), inability of trainees to acquire relevant vocational home economics skills (Okeke, 2004) and lack of competencies in outcome based Home Economics training programme (Limon, & Vallente, 2016).

Availability of training resources correlates positively with high achievements in training programmes. Accordingly, Adebeisi, and Ukpore, (2014) reported that adequate resource provisioning and monitoring that are witnessed in the implementation of National Poverty Eradication Programme - Capacity Acquisition Scheme (NAPEP-CAS) in southwestern Nigeria translated to the achievement of set objectives of the scheme. Arubayi (2010) had earlier noted that courses that are properly taught with relevant tools and equipment enable acquisition of saleable skills for self-reliance. Gains of adequate resource provisioning in a skill training programme such as SOW tailoring scheme cannot be overemphasized. It would enable learners to experiment, test, construct, modify, innovate and create knowledge and wealth resulting in poverty reduction. In other words, propensity towards high achievement in a training programme can be positively influenced by availability of the needed resources and reduction in training for job mismatch and unemployment. Ukoha (2012) estimated that five million Nigerian youths are unemployed youths and Effiong, Anangagbor and Ayam, (2014) warned that

unemployment will rise if measures are not put in place to accelerate job creation in Nigeria.

In the final analysis, efforts towards enhancing effective training for gainful tailoring employment under SOW scheme should ensure adequate provision of training facilities cum administrative resources even though reasons for NDE not doing so, that call for further research and possible NDE programme policy review, are unknown.

Conclusion

Majority of the facilities were available for the training. The facilities were mostly provided by the beneficiaries and instructors. The response patterns of beneficiaries and instructors were very similar and reflected what the researcher saw on ground during field work but differed from those of NDE staff. Majority of the facilities was functionally available during the training but were provided by beneficiaries and instructors and not the scheme. There was no significant difference in the mean responses of the SOW beneficiaries and instructors on the functionality of available facilities used in tailoring training under the scheme.

Findings of the study are pointers that NDE does not implement its policy on tailoring training facility provisioning giving reason for further research in the area. Without adequate facilities, skill training can at best be training for mismatch or for unemployment. Already social unrest is mounting due to millions of

unemployed youths in that are wasting in Nigeria. The fear is that unemployment and social vices will continue to rise. Proactive measure such as policy review of NDE programmes including those of other poverty alleviation programmes in Nigeria is apt. The needful should be done. Dismantling measures that hinder accelerated job creation and self-reliance could be possible through the suggested policy review.

Recommendations

1. The administrative resources such as accommodation, training consumables, support for business start-off tools for trainees and adequate funding should be adequately provided including proper monitoring and evaluation implementation of the scheme.
2. Again clearer policy framework with well-defined roles of each stakeholder in the context of signed memorandum of understanding with regards adequate provision of all the needed resources in the implementation of the scheme.
3. Comprehensive policy evaluation of NDE poverty reduction programme to find out if it requires review or reformulation.

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Prerequisites for Development of Individualized Instruction in Clothing Crafts for Teaching Home Economics Students in College of Education, Akwanga, Nasarawa State

Ombugadu, A. E.

Department of Home Economics,
College of Education Akwanga, Nasarawa State

and

Igbo, C. A.

Department of Home Economics and Hospitality Management
University of Nigeria, Nsukka

Abstract

The study determined prerequisites for developing individualized instruction for teaching textile crafts to Home Economics students in college of education Akwanga, Nasarawa State. The study answered four research questions and tested two null hypotheses at 0.05 level of significance. The design of the study was survey. The population was 120 comprising of 11 Home economics lecturers, 10 Fine and Applied Arts lecturers and 99 Home economics students. Questionnaire was used for the collection of data. It was subjected to face validation by five Home economics experts. Cronbach Alpha statistics was used to determine the internal consistency of the instrument which yielded reliability coefficient of 0.90. ANOVA was used for data analysis. Findings included; 10 objectives of knotting textiles crafts, 11 material resources, 11 step by step procedures to follow and 9 evaluation activities for assessing students performance on knotting textile crafts. Recommendations among others include; Home Economics lecturers should adopt the use of individualized instruction for teaching textile crafts to Home economics students in college of Education Akwanga, Nasarawa state. The National Commission for Colleges of Education (NCCE) should adopt the use of individualized instruction in all practical courses in Colleges of education in the country.

Keywords: Textile, Textile Craft, Individualized Instruction, Tie Dyeing Technique, Knotting Textile Crafts,

Introduction

Craft can be described as a distinctive knowledge that is intuitive and expressed through making and doing. It

is a profession that requires a particular kind of skilled work and usually attached to people occupied in small scale production of goods (Banjoko,

2010). Craft is classified into paper craft, decorative craft, fashion craft and textile crafts. Textile crafts are types of crafts where useful and decorative devices are made completely with hands using fabrics or surface design (Shailong 2010). They required special kind of skilled work where special skills are required in making articles from local materials for use. There are different types of Textile crafts. They include; patchwork, fabric printing, decorative stitches, toys making, tie dyeing techniques among others (Pluckrose, 2010).

Tie dyeing technique is a process of fabric decoration in which a piece of fabric is tied together tightly to prevent the absorption of dye in penetrating the fabric (Ajayi, 2012). Tie-dyeing textile crafts include the following; pleating, marbling, twisting, folding and knotting. Knotting textile crafts is produced by wrapping the pebbles and using twine to tie at every point of the pebbles. The dyestuff is then applied to the fabric (Uzoagba, 2010). The material needed in producing knotting textile crafts include twine, pebbles, fabric, caustic soda, hydrosulphite, dyestuff, glove, water among others. The various tasks involved in knotting textile crafts include prewashing the fabric to remove industrial starch, using pebbles to make knots, mixing of dyes in proportion using boiling water, dyeing the fabric by submerging in the dye bath. The fabric is removed for oxidation, rinsed and dried. The resulting design is moonlike (Kolade et al. 2015).

Textile craft is an integral aspect of Clothing and Textile (Shailong, 2010). In the National Curriculum for Colleges of Education (NCCE, 2012) minimum standard, Textile crafts have been included in the courses of NCE 11 and 111 students to make them acquired enough manipulative skills for self employment. A closer look at the curriculum of Home economics put in place to achieve the laudable goals of vocational and technical education for self employment seems not be achieved by Textile crafts students, hence after three years of sojourn the graduates still remain jobless. The reasons for this, is that the method used in teaching and learning of these skills do not encourage skill acquisition.

Lecturers used mostly lecture method to reach out to students, moreover, knotting textile crafts are practical intensive and the period allotted on the timetable for teaching and learning of these skills are not sufficient for any effective practical to be carried out. The researcher observed that in the present Home Economics curriculum, courses are just listed with no specific objectives, no step by step procedures to follow, no instructional materials listed among others to guide subject lecturers. Lecturers just used any type of method to reach out to students. In the view of Dagana (2010) instructional method employed by lecturers play an important role in the acquisition of skills and meaningful learning. They noted that positive changes take place when a teacher changes his teaching method towards a more students - centred approach.

Lecture method which does not give students individual attention, however contributes to more than 85% of the instruction in schools. Individualised instructional approach holds a great potential for individual learning and needs a great potential for individual learning to be promoted.

Individualized instruction refers to those classrooms practices of teaching which recognizes the uniqueness of each learner and provides for adequate tutorial guidance and other support services suitable to bring about a wholesome development in the person (Nwafor, 2010). Individualized instructions is an instructional procedure designed to the particular needs of the learner in which case, the learner works at his/her own pace The teacher acts more as a facilitator to the students and not as a provider of information or knowledge. Nwizu (2011) stressed that the teacher should also adapt new ways of instruction such as teaching through life based inquiry, Audio-Tutorial Training model, learner controlled instruction, computer assisted instruction, learning activity package among others. Usually, instructional design model shows how to organize appropriate pedagogical scenarios to achieve instructional goals (Dick & Carey, 2005). Individualized instructional model is designed to present series of activities, planned to enable the learners achieve the objectives of a model for a group of related skills with minimal assistance from the teacher.

Individualized instruction particularly is important in teaching

knotting textile crafts which involves many unique tasks and students must learn to perform through series of intricate steps and operations. Knotting textile crafts involve practical and as such training for skill acquisition obviously involves training materials such as tools, equipment and facilities. Where practical skills are learnt without the required equipment and facilities, the skill turns out to be theoretical base which cannot equip students for employability (Lemchi and Anyakoha 2006). In the present curriculum, there should be prerequisites for developing Individualised Instruction which would enhance the acquisition of skills by the students and also serves as a guide to lecturers. Presently, no such Individualized Instruction on knotting textile Crafts exist for teaching Home Economics students, hence, the present study seeks to determine prerequisites for developing individualized instruction on knotting textile crafts for teaching Home economics students.

Purpose of the Study

The main purpose of the study was to evolve prerequisites for developing Individualised instruction for teaching Home Economics students in College of Education, Akwanga, Nasarawa State. Specifically; the study is determined;

1. Specific objectives of individualised instruction in knotting textile crafts for teaching Home Economics students in College of Education Akwanga, Nasarawa state.
2. Material resources for individualised instruction on knotting textile crafts.

3. Step by step procedures to follow in individualized instruction in knotting textile crafts
4. Evaluation activities for assessing student's performance in knotting textile crafts.

Hypotheses

H₀₁: There is no significant difference on the mean responses of Home economics lecturers, Fine and Applied Arts lecturers and Students on: Ho1, the objectives of individualised instruction in knotting textile crafts.

H₀₂: step by step procedures for individualised instruction in knotting textile crafts.

Methodology

Design of the Study: The design was survey.

Area of the Study: The study was conducted in Nasarawa State, College of education Akwanga. The choice of the study area was based on the fact that knotting textile crafts are offered by students in second and third year respectively in College of Education Akwanga.

Population of the Study: The population of the study was 120 comprising of 11 Home economics lecturers, 10 Fine and Applied Arts lecturers and 99 NCE 11 and 111 Home Economics students in school of Vocational and Technical education, College of Education Akwanga, Nasarawa State. Source: Admission office (2014- 1017, College of Education Akwanga)

Sample and Sampling Technique: No sampling was used as the population was manageable.

Instrument for data Collection: The instrument used to collect data was a structured questionnaire. The instrument was divided into two sections: Section A elicited information from the respondents while section B elicited information based on the four research questions. Research question 1 consists of ten (10) items which seek to determine the objectives of knotting textile crafts, research question 2 contains eleven (11) items on materials resources, research question 3 contains eight (8) items on step by step procedures in carrying out the task and research question 4 contains eight (8) items which sought to determine the evaluation activities for assessing students performance. For all the research questions, a Likert rating scale was adopted and was assigned the following values; very necessary (VN)=5, Necessary(N)=4, Unnecessary (UN)=3, Very unnecessary(VUN)=2, Undecided (UD)=1.

The instrument was face validated by five experts, three Home economics lecturers and two fine and applied Arts lecturers. Cronbach Alpha method was used to determine the internal consistency of the questionnaire. The entire instrument yielded a reliability coefficient of 0.90.

Method of Data Collection and Analyses: One hundred and twenty copies of the instrument were distributed . This means a 100 percent return rate. Data collected were analysed using mean, standard

deviation and the analysis of Variance (ANOVA) at 0.05 level of significance.

Findings of the Study

Table 1: Mean Scores of Responses on the Objectives of Individualized Instructions on Knotting Textile Crafts for Teaching Home Economics Students in College of Education Akwanga, Nasarawa State.

N=120				
S/No	Objectives of Knotting Textile crafts.	$\bar{x}$	SD	Remarks
By the end of the lesson, learners should be able to				
1.	explain the concept of knotting,	4.47	0.50	Necessary.
2.	list materials for knotting.	4.49	0.50	Necessary
3.	pre wash the fabric	4.25	0.47	Necessary
4.	lay the fabric flat on the surface	4.27	0.48	Necessary
5.	make the required number of knots using stones.	4.28	0.49	Necessary
6.	lopping rubber band over the fabric	4.22	0.46	Necessary
7.	emerge fabric inside the dye bath.	4.37	0.59	Necessary
8.	rinse the fabric	4.61	0.53	Necessary
9.	dry the fabric	4.49	0.54	Necessary
10.	press the fabric	4.58	0.53	Necessary

Table 1 shows the mean score ratings of Home Economics lecturers, Fine and Applied Arts lecturers and students on the objectives of Individualised instruction of knotting textile crafts for teaching Home economics students in college of education Akwanga, Nasarawa state. The data showed that all the 10 items have their means ranging from 4.22 – 4.61 and are greater than the cut-off point of 3.00. This indicates that the 10 items were

accepted by the respondents as necessary objectives for Individualised instruction of knotting textile crafts.

The Standard Deviation (SD) of the 10 items ranged from 0.46-059 and are less than 1.96 (95%) confidence limit; this indicates that the responses of Home Economics lecturers, Fine and Applied Arts lecturers and students are not far from the mean and response of one another.

Table 2: Mean Responses of Home Economics Lecturers, Fine and Applied Arts Lecturers and Students on Individualized Instruction on Material Resources Required in Knotting Textile Crafts for teaching Home Economics Students. N=120

S/No	Material resources for knotting crafts	$\bar{x}$	SD	Remarks
1	flat surface	4.78	0.42	Necessary.
2	fabric	4.89	0.32	Necessary
3	dye stuff	4.81	0.39	Necessary
4	gloves	4.81	0.39	Necessary
5	nose and mouth mask	4.85	0.36	Necessary.
6	apron	4.81	0.39	Necessary
7	stones	4.83	0.38	Necessary
8	twine	4.80	0.40	Necessary
9	measuring cups and teaspoons	4.83	0.38	Necessary
10	hydrosulphite	4.78	0.42	Necessary
11	caustic soda	4.80	0.40	Necessary

Table 2 shows the mean score ratings of Home Economics lecturers, Fine and Applied Arts lecturers and students on material resources for Individualised instruction of knotting textiles crafts for teaching Home Economics students. The data shows that all the 11 items have their means ranging from 4.78 – 4.89 and were greater than the cut-off point of 3.00. This indicates that the 11 items were necessary material resources

in knotting textile crafts for teaching Home Economics students in College of Education, Nasarawa State

The Standard Deviation (SD) of the 11 items ranged from 0.32-0.42 and are less than 1.96 (95%) confidence limit; this indicated that the responses of Home Economics lecturers, Fine and Applied Arts lecturers and students were not far from the mean and response of one another.

Table 4: Mean and Standard Deviations of Responses of Home Economics Lecturers, Fine and Applied Arts Lecturers and Students on Individualised instruction on Step by Step Procedures in Knotting Textile Crafts for teaching Home Economics students N = 120

S/No	Step by Step Procedures	$\bar{x}$	SD	Remarks
1	Pre-wash by soaking the fabric in water using rubbing method to remove industrial starch	4.03	.79	Necessary
2	Prepare and lay the fabric flat on the table	3.97	.83	Necessary
3	Make knot on the fabric by folding and tying tightly with pebbles to obtain moonlike shape.	4.03	.84	Necessary
4	Prepare dye bath by mixing the measured out dye stuff	3.99	.83	Necessary
5	Dye the fabric by submerging in the dye bath. Turning the knotted fabric from time to time with a stick.	4.04	.79	Necessary
6	Remove twines and pebbles from the fabric and spread for oxidation for 15 minutes	4.00	.84	Necessary
7	Wash and rinse the fabric to remove excess dyes	3.96	.83	Necessary
8	Prepare starch solution and emerge the fabric and dry	4.02	.82	Necessary

Table 3 shows the mean score ratings of Home Economics lecturers, Fine and Applied Arts lecturers and students on Individualised instruction on step by step procedures in knotting textile crafts. The table shows that all the 8 items have their means ranging from 4.96 – 4.04 and are greater than the cut-off point of 3.00. This indicates that the 8 items were accepted by the respondents as necessary step by step

procedures in knotting textile crafts for teaching Home Economics students in College of Education, Nasarawa State.

The Standard Deviation (SD) of the 8 items ranged from 0.79-0.84 and are less than 1.96 (95%) confidence limit; this indicates that the responses of Home Economics lecturers, Fine and Applied Arts lecturers and students were not far from the mean and responses of one another.

Table 5: Mean Responses of Home Economics Lecturers, Fine and Applied Arts Lecturers and Students on Individualised instruction of Evaluation Activities of Knotting Textile Crafts for teaching Home Economics Students.

N = 120

S/No	Items	$\bar{X}$	SD	Remarks
	The learners should;			
1	explain the concept of knotting	4.57	0.50	Necessary
2	list material for knotting.	4.40	0.49	Necessary
3	demonstrate pre-washing of fabric	4.40	0.49	Necessary
4	explain laying of fabric flat on the surface.	4.33	0.47	Necessary
5	demonstrate how to tie knots using stones.	4.43	0.50	Necessary
6	demonstrate looping rubber bands over the knots.	4.44	0.50	Necessary
7	explain how to apply dye to fabric	4.53	0.50	Necessary
8	demonstrate how to rinse and dry fabric.	4.50	0.50	Necessary

Table 5 shows the mean score ratings of Home Economics lecturers, Fine and Applied Arts lecturers, and students on Individualised instruction on evaluation activities on knotting textile crafts for teaching Home Economics students in College of Education, Nasarawa State. The table shows that all the 8 items have their means ranging from 4.33 – 4.57 and are greater than the cut-off point of 3.00. This indicates that the 8 items were necessary evaluation activities on

knotting textile crafts for teaching Home Economics students in College of Education, Nasarawa State.

The Standard Deviation (SD) of the 8 items ranged from 0.47-0.50 and are less than 1.96 (95%) confidence limit; this indicates that the responses of Home Economics lecturers, Fine and Applied Arts lecturers and students were not far from the mean and responses of one another.

Table 6: ANOVA Responses of Respondents on the Objectives of Individualised Instruction on knotting Textiles Crafts for Teaching Home Economics Students in College of Education Akwanga Nasarawa State.

N=120						
	Sum of Squares	Df	χ^2	F	P-value	Remark
Between Groups	.569	2	.285	12.816	.00	S
Within Groups	5.797	261	.022			
Total	6.366	263				

Key: N - Number of respondents df - degree of freedom, χ^2 - Mean square, F - F-ratio, S - Significant

Table 6 shows the ANOVA responses of respondents on the objectives of individualized instruction of knotting Textiles Crafts for teaching Home economics students in College of Education Akwanga, Nasarawa State, Nigeria. The results showed that the p-value of .00 is less than 0.05 level of significance. The null hypothesis is

therefore rejected as postulated that there is significant difference in the responses of Home Economics lecturers, Fine and Applied Arts lecturers and students on the objectives of individualized instruction on knotting Textiles Crafts for teaching Home Economics students in College of Education Akwanga, Nasarawa State.

Table 7: ANOVA Responses of Respondents of Individualized Instruction on Step by Step Procedures of Knotting Textiles Crafts for Teaching Home Economics Students in College of Education Akwanga States.

(N = 246)						
	Sum of Squares	Df	χ^2	F	P-value	Remark
Between Groups	.063	3	.021	1.247	.292	NS
Within Groups	6.437	384	.017			
Total	6.500	387				

Key: N - Number of respondents df - degree of freedom, χ^2 - Mean square, F - F-ratio, NS - Not significance

Table 7 ANOVA results of the mean rating responses of respondents on the individualized instruction on 9 items on step by step procedures on knotting textiles crafts for teaching Home Economics students in Colleges of Education Akwanga, Nasarawa. The results revealed that the p-value of 0.292

is greater than 0.05 level of significant. The null hypothesis is therefore accepted as postulated. Hence, there is no significant difference in the responses of Home Economics lecturers, Fine and Applied Arts lecturers and students on individualized instruction on step by step procedures of knotting

textile crafts for teaching Home Economics students in Colleges of Education Akwanga States, Nigeria.

Discussion

The discussion of findings in this study has been organized based on the research questions and the responding hypotheses that have been formulated to guide the study. Four research questions sought to determine the prerequisites for developing individualized instruction for teaching Home economics students in College of education, Akwanga, Nasarawa state. The data presented show that all the items on the objectives of knotting textile crafts are suitable and effective for Home Economics students. These objectives are in line with the general objectives of vocational and technical education as stipulated in the National policy in education (NPE, 2004) that students must be trained for self employment and prepare them for personal growth and development. Study carried out by Igbo (1979) on development and psycho-productive skill test for assessing senior secondary students which when acquired enabled them earn a living. According to Ogbuanya (2013), objectives may be short or long term for specific tasks for the overall goal of the activity or programme. The claim for this is manifested by the responses to 10 objectives which were necessary. The degree of its necessity is equally revealed by the extent to which items are close to one another in their standard deviation. Objectives provide information on what to be evaluated.

This is in line with the study by Alpha (2013) who said for objectives to be achieved teaching must be vigorously and effectively carried out. The necessary objectives of knotting textile crafts which include explain, list, prewash, lay, mix among others are in the domain of knowledge, skill and attitude. The stated objectives with their key verbs that help to express intended learning outcomes (ILO) are in consonance with the suggestions of Ukwe and Anyakoha (2008) who stipulated that specific objectives are stated using action verbs such as list, mention, defined, explain among others. The findings of the objectives showed that at the end of instruction on individualized instruction on knotting textile crafts students in College of Education Nasarawa State should be able to confidently explain defined identify and list the achievement of the intended learning outcome of knotting textile crafts tasks. The hypothesis that was formulated on the basis of this showed that the p-value of .005 is statistically significant at 0.05 level of significance. The null hypothesis was therefore upheld as postulated there is no significance difference in the responses of HCL, FAAL and students on the objectives of individualized instruction on knotting textile crafts for teaching Home Economics students. This indicates that the objectives of individualized instruction on knotting textile crafts are considered necessary.

The findings presented in respect of research questions two showed that 11 items are all accepted by the respondents to be necessary for

individualized instruction. Some of these materials resources include; pebbles, tables, fabrics, dye colours, caustic soda, sodium hydrosulphite among others. The findings of this study on material resources are also with the findings of Chukwone (2013) in a study on development of clothing merchandising programme for integration in home economics curriculum in universities in south east Nigeria where it was found out that posters fabrics magazine, computer aided instructional material among others, are necessary for teaching and learning clothing merchandising in universities. These findings are on agreement with the views of Uzoagba (2004) that instructional materials help to facilitate the acquisition of skills in individual and also make learning easier. In the same vein, Olaoesebikan (2016) stated that material resources contribute to meaningful learning and this helps to facilitate the acquisition of skills.

The findings of this study revealed eight (8) items on individualized instruction on step by step procedures of knotting textiles crafts. This include: prewashing, laying flat to dry, twisting, with pebbles, preparing dyestuff and dyeing. It was also revealed that all the 8 items were in 100 percent agreement with the respondents. Kolade *et al* (2015) also stated that step by step procedures include; pre-washing of the fabric using hand to remove industrial starch, placing the fabric on a flat surface, tying the pebbles, tying the fabric with twine, mixing the dye stuff and submerging them in the dye bath. The hypothesis

that was formulated based on this research question shows the ANOVA result of the responses of HECL, FAAL and students on individualized instruction on knotting textile crafts revealed that the p- value of .00 is statistically significant at .05 level of significance. The null hypothesis was therefore upheld.

The findings of the study based on research question 4 revealed that the respondents accepted all the identified 8 items on evaluation activities of individualized instruction on knotting Textiles Crafts for teaching Home Economics students in college of education Akwanga, Nasarawa state. Dagana (2010) pointed that the purpose of evaluation is to give feedback to both the students and the teacher. In the opinion of Alpha (2013) for evaluation to be effective in any programme, it should be sequential and access all the three educational domains which are cognitive, psychomotor and affective but the author emphasized that where the three domains cannot be represented, the content that is taught must accompanied strongly with evaluation activities that reflect the content taught. In the view of the author, evaluation activities help to bring out evidence of changes in the learners after instruction. Evaluation activities as shown in this study will help identify the extent to which the objectives of individualised instruction on knotting textiles crafts have been achieved.

Conclusion

The Nigeria educational system is expected to devise appropriate strategies for equipping individuals with skills to cope with the situations of unemployment facing individuals, families and the country at large. The situation calls for prerequisites for developing individualized instruction on knotting textile crafts for teaching Home Economics students in College of Education, Nasarawa State to fill the gap created by the teaching and learning of skills towards achieving the overall objectives.

Recommendations

Based on the findings of the study the following recommendations were made:

- ❖ Home Economics lecturers should adopt the use of individualized instruction in knotting textile crafts.
- ❖ Lecturers and students should be aware of the use of knotting textile crafts for individualized instruction in Home Economics.
- ❖ The knotting textile crafts should be incorporated into the NCCE. Home Economics curriculum.

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Establishment of Mean Body Measurements for Development of Block Patterns for Preschool Children (2 to 5 years) in Umuahia and Aba zones of Abia State

Ekumankama, I.O.

Department of Home Science / Hospitality Management and Tourism,
Michael Okpara University of Agriculture, Umudike, Abia State.

and

Igbo, C.A.

Department of Home Economics and Hospitality Management Education
University of Nigeria, Nsukka.

Abstract

The study compared the mean body measurements of preschool children (2 to 5 years) in Umuahia and Aba zones of Abia State. The research design was a survey design. The sample consisted of 928 preschool children who were randomly selected from the population. The research instrument was a Body Measurement Chart (BMC). Data obtained on the measurement of the preschool children (2 to 5 years) in Umuahia and Aba zones were analyzed using means, standard deviation, and student t-test. Results on the comparison of the mean body measurements of the preschool children (2 to 5 years) in Umuahia and Aba zones showed that the differences in the mean body measurements of the subjects in the two zones were non significant (at 0.05 probability level) in most of the body parts that were measured for all the age groups with the exception of 4 year old preschool children. Therefore, the null hypothesis was rejected (at 0.05 probability level) for variables with significant values and accepted for variables with comparable values. The mean body measurements established in this study were recommended for use in teaching pattern drafting, adaptation and alteration in secondary and tertiary institutions in Nigeria.

Key words: Mean, Body, Measurements, Preschool, Children.

Introduction

Infants and children grow rapidly. Children in their rapid growth stage and growth patterns have been shown to differ from one locality to another (Santrock, 2005; Papalia, Olds and

Feldman, 2002). The preschool years are between the ages of two (2) to five (5) years. It is an exciting and active period for young children. Research findings revealed that the preschool period is the

period children develop fastest (Papalia, Olds and Feldman, 2002).

Garments for children can be manufactured as made- to-measure (custom-made) or ready -to- wear. They can be made with patterns. A pattern is a piece of paper, drafted and cut to size and shape which is used for sewing dresses. A designer uses a foundation pattern (block pattern) as a basis for making the pattern for a design (style pattern). Successful blocks can only be drafted if the personal measurements are taken accurately in the correct positions of the body (Hosegood 2006; Igbo and Iloeje, 2012 ; Duncan, 2004).

Personal measurements refer to the body measurements needed for drafting the blocks for individual figures. Components of personal or body measurements required for drafting the blocks include, chest/bust, waist, hip/seat, across back/back width, neck size, shoulder, upper arm/biceps, wrist, scye depth, neck to waist/back waist length, waist to hip, cervical height, waist to knee, body rise/crotch, inside leg, sleeve length, head circumference, vertical trunk, leg base, foot, skirt length and trouser length. Accurate personal measurements are required for drafting patterns for constructing perfectly fitted garments. The processes of taking body measurements include the following:

- i. Take body measurements over a close fitted garment.
- ii. Check that the tape measure is placed correctly.
- iii. Determine the waist positions by tying a piece of tape firmly but comfortably around the waist before taking the measurements.

iii. Ensure that the tape measure is not pulled too tightly.

iv. Add allowance for ease of movement to all round measurements (Aldrich, 1999; Aldrich, 2006; Cock, 2003; Weber, 1990). Patterns for preschool children can be produced from the basic blocks namely front bodice, back bodice, front skirt, back skirt, sleeve, front trouser, and back trouser blocks. The use of patterns have been shown to facilitate large scale garment production (Aldrich, 1999; Simplicity Pattern, 2004; Igbo and Iloeje, 2012 ; Duncan, 2004).

Research reports reveal that children in their rapid growth stage and growth patterns have been shown to differ from one locality to another (Santrock, 2005; Papalia, Olds and Feldman, 2002).

Therefore, a comparative study on the establishment of mean body measurements for development of block patterns for constructing perfectly fitted garments of preschool children in Umuahia and Aba zones of Abia State was necessary. This is a measure towards meeting the clothing needs of Nigerian preschool children.

Objectives of Study

The general objective of the study was to compare the mean body measurements of preschool children in Umuahia and Aba zones of Abia State. Specifically, the study,

1. took body measurements of preschool children of ages (2 to 5 years) in Umuahia zone in Abia State.

2. took body measurements of preschool children of ages (2 to 5 years) in Aba zone in Abia State.
3. compared the mean body measurements of the preschool children in Umuahia and Aba zones of Abia State for ages 2 to 5 years.

Hypothesis

The following null hypothesis was tested by the study at 0.05 level of significance:

There are no significant differences in the mean body measurements of the different parts of the body for preschool children (2 to 5 years) in Umuahia and Aba zones of Abia State.

Methodology

Area of the study: The study was carried out in Abia State. The study was carried out in Abia State, Nigeria. Abia State is located in Eastern part of Nigeria. It is bounded in the south by Rivers State, South- East by Akwa-Ibom sharing boundary with Cross River State in the North- East while in the West and South, it shares boundaries with Imo, Anambra and Ebonyi respectively. It is made up of seventeen local government areas. Administratively, preschools and primary schools in the state are zoned under Umuahia, Aba and Ohafia. The Abia State Universal Basic Education Board (ASUBEB) takes charge of the pre-primary and primary schools in the seventeen local governments in Abia State, Nigeria.

The Design and Procedure for the study was as follows: The study design

was a survey design. The procedure for the study involved the following:

- i. obtaining a sample of the preschool children (2 to 5 years) to measure
- ii. taking body measurements at 21 designated parts of the body of preschool children (2 to 5 years) sampled.
- iii. Obtaining average body measurements of parts of the body measured.

Population for the study: The population which comprised the entire preschool children (males and females) (2 to 5 years) in Abia State was 44, 865 as at January to June 2006 when the study was conducted. Information on the statistical data on school enrolment in Abia State was collected from the Abia State Universal Basic Education Board (ASUBEB).

Sample for the study: Multistage sampling procedure was used in selecting the sample for the study. Administratively, preschools and primary schools in the state are zoned under Umuahia, Aba and Ohafia. Two zones namely Umuahia and Aba were randomly selected for the study.

Fifty percent of preschool children were randomly selected from each school. Four schools were selected in each zone while eight schools were used for the study. A Simple random technique was used in selecting the children in order to ensure that every child had equal chance of being selected. Altogether, 928 preschool children (males and females) were used as the sample size. The sample size was

considered adequate owing to the fact that the population was homogenous.

Instrument for Data Collection: The research instrument was a Body Measurement Chart (BMC) developed by the researcher on essential body measurements needed for drafting flat patterns and constructing garments for accurate fit. The researcher developed the instrument through a review of literature. The form was developed to collect information in the following aspects: age, location of school, local government area, twenty-one different body parts to be measured namely height, chest/bust, waist, hip/seat, across back/back width, neck size, shoulder, upper arm, wrist, scye depth, neck to waist, waist to hip, cervical height, waist to knee, body rise, crotch depth, inside leg, sleeve length, head circumference, vertical trunk, leg base and foot.

The instrument was validated by five lecturers. Two lecturers each in Textiles

and Clothing and Statistics at Michael Okpara University of Agriculture Umudike, Abia State as well as one lecturer in Textiles and Clothing at University of Nigeria, Nsukka, Enugu State validated the instrument. Validation of the instrument was based on content validity.

The body measurements were pretested on (10) pupils in a study area that did not form part of the study. The reliability of the instrument was established using test-retest reliability method. The mean body measurements of pre/post test was 0.84. This indicated high consistency reliability of the instruments.

Data Analysis: Data obtained on the measurements of preschool children in Abia State was analyzed using means, standard deviation and t-test. Mean was used in establishing the mean body measurements of preschool children ages 2 to 5 years in Umuahia and Aba zones of Abia State.

Table 1: Comparison of Average body measurements of preschool children (2 years old) in Umuahia and Aba Zones in Abia State

S/N	Body Parts	Means		Standard deviation		t-test	Remarks		
		S _A	S _B	$\overline{X}_A$	$\overline{X}_B$	SD _A	SD _B		
	Height (X ₁)	78	51	98.45	95.22	8.04	6.34	2.419	*
	Chest/Bust (X ₂)	78	51	54.96	54.94	3.07	4.01	.033	Ns
	Waist (X ₃)	78	51	54.22	54.33	3.05	4.71	-.169	Ns
	Hip/seat (X ₄)	78	51	58.32	59.02	4.32	5.47	-.808	Ns
	Across Back/Back Width (X ₅)	78	51	21.82	20.78	2.66	3.82	1.818	Ns
	Neck size (X ₆)	78	51	28.90	30.84	3.27	3.85	-3.081	*
	Shoulder (X ₇)	78	51	6.91	7.69	.98	1.24	-3.947	*
	Upper Arm (X ₈)	78	51	20.32	21.55	3.03	3.08	-2.237	*
	Wrist (X ₉)	78	51	14.12	15.00	1.79	1.98	-.2633	*
	Scye Depth (X ₁₀)	78	51	11.24	10.31	1.98	1.68	2.770	*
	Neck to waist (X ₁₁)	78	51	24.03	22.57	2.03	2.89	3.364	*

Waist to Hip (X ₁₂)	78	51	10.90	11.90	1.78	5.65	-1.466	Ns
Cervical Height (X ₁₃)	78	51	80.40	80.53	7.01	5.85	-.111	Ns
Waist to Knee (X ₁₄)	78	51	28.73	27.75	5.00	6.28	.989	Ns
Body Rise /crotch Depth (X ₁₅)	78	51	14.03	13.73	2.25	3.07	.640	Ns
Inside leg (X ₁₆)	78	51	42.97	41.53	5.98	7.07	1.247	Ns
Sleeve Length (X ₁₇)	78	51	37.40	41.98	4.71	5.32	-5.133	*
Head circumference (X ₁₈)	78	51	50.50	49.37	4.85	6.60	1.117	Ns
Vertical trunk (X ₁₉)	78	51	112.97	101.86	109.73	13.33	.719	Ns
Leg Base (X ₂₀)	78	51	17.64	17.98	1.64	3.39	-.759	Ns
Foot (X ₂₁)	78	51	16.71	16.02	1.88	1.86	2.033	*

S_A = Umuahia Sample; S_B = Aba Sample; $\bar{X}_A$ = Mean for Umuahia; $\bar{X}_B$ = Mean for Aba; SD_A = Standard Deviation for Umuahia; SD_B = Standard Deviation for Aba; Df = 127; P = 0.05; * = Significant; NS = Non significant.

Table 1 shows non-significant differences (at 0.05 probability level) in the mean body measurements of preschool children in Umuahia and Aba zones in Abia State in most of the variables measured. However, significant values existed between the preschool children in the two zones in their height (t = 2.419), neck size (t = -3.081), shoulder (t = -3.947), upper arm (t = -2.237), wrist (t = -2.633), scye depth (t = 2.770), neck to waist (t = 3.364), sleeve length (t = -5.133) and foot (t = 2.033).

Table 2: Comparison of Average body measurements of preschool children (3 years old) in Umuahia and Aba Zones in Abia State

S/N	Body Parts	Means				Standard deviation		t-test	Remarks
		S _A	S _B	$\bar{X}_A$	$\bar{X}_B$	SD _A	SD _B		
	Height (X ₁)	78	51	102.83	96.26	6.93	7.41	5.098	*
	Chest/Bust (X ₂)	78	51	56.61	56.23	3.73	3.57	0.640	Ns
	Waist (X ₃)	78	51	53.46	55.93	3.17	3.48	-0.891	Ns
	Hip/seat (X ₄)	78	51	59.39	59.94	3.65	5.41	-0.699	Ns
	Across Back/Back Width (X ₅)	78	51	23.74	21.80	3.07	3.82	3.291	*
	Neck size (X ₆)	78	51	29.79	31.13	3.27	3.64	-2.559	*
	Shoulder (X ₇)	78	51	7.46	8.03	0.85	1.06	-3.608	*
	Upper Arm (X ₈)	78	51	22.20	21.74	2.63	3.13	0.950	Ns
	Wrist (X ₉)	78	51	15.57	15.40	1.68	1.91	0.618	Ns
	Scye Depth (X ₁₀)	78	51	11.49	11.76	1.73	1.92	-0.970	Ns
	Neck to waist (X ₁₁)	78	51	24.66	23.46	2.10	2.51	4.294	*
	Waist to Hip (X ₁₂)	78	51	11.10	11.84	1.42	2.78	-1.995	*
	Cervical Height (X ₁₃)	78	51	85.39	80.57	6.26	10.33	3.519	*

Waist to Knee (X ₁₄)	78	51	28.97	27.90	4.51	6.38	1.104	Ns
Body Rise /crotch Depth (X ₁₅)	78	51	15.07	14.34	1.97	3.03	1.605	Ns
Inside leg (X ₁₆)	78	51	45.24	42.60	4.54	7.65	2.728	*
Sleeve Length (X ₁₇)	78	51	40.23	41.59	5.07	5.78	-1.458	Ns
Head circumference (X ₁₈)	78	51	52.36	50.89	3.81	5.13	1.887	Ns
Vertical trunk (X ₁₉)	78	51	104.86	103.27	8.78	12.62	0.952	Ns
Leg Base (X ₂₀)	78	51	18.50	18.77	1.67	3.08	-0.697	Ns
Foot (X ₂₁)	78	51	17.99	16.69	1.80	1.77	4.209	*

S_A = Umuahia Sample; S_B = Aba Sample; $\bar{X}_A$ = Mean for Umuahia; $\bar{X}_B$ = Mean for Aba; SD_A = Standard Deviation for Umuahia; SD_B = Standard Deviation for Aba; Df = 127; P = 0.05; * = Significant; NS = Non significant.

Table 2 indicates that there are variations between the mean body measurements of the preschool children (3 years) in Umuahia and Aba zones. The differences were significant in nine body parts namely (t = 5.098), back width (t = 3.291), waist to hip (t = -1.995), cervical height (3.519), inside leg (t = 2.728), and foot (t = 4.209) while the rest recorded non- significant (at 0.05 level of significance).

Table 3: Comparison of Average body measurements of preschool children (4 years old) in Umuahia and Aba Zones in Abia State

S/N	Body Parts	Means						t-test	Remarks
		S _A	S _B	$\bar{X}_A$	$\bar{X}_B$	SD _A	SD _B		
	Height (X ₁)	173	162	106.94	104.76	9.89	5.93	2.430	*
	Chest/Bust (X ₂)	173	162	58.46	59.55	5.03	5.73	-1.858	Ns
	Waist (X ₃)	173	162	55.97	57.12	3.74	4.67	-2.502	*
	Hip/seat (X ₄)	173	162	59.14	60.48	10.37	4.69	-1.503	Ns
	Across Back/Back Width (X ₅)	173	162	22.98	22.83	3.13	4.52	.368	Ns
	Neck size (X ₆)	173	162	30.31	31.88	3.75	3.54	-3.949	*
	Shoulder (X ₇)	173	162	7.71	8.30	1.14	1.71	-3.746	*
	Upper Arm (X ₈)	173	162	21.10	22.12	3.45	4.11	-2.482	*
	Wrist (X ₉)	173	162	14.82	16.29	1.90	3.28	-5.079	*
	Scye Depth (X ₁₀)	173	162	12.68	11.44	9.73	2.00	1.589	Ns
	Neck to waist (X ₁₁)	173	162	25.57	25.03	2.90	3.74	1.485	Ns
	Waist to Hip (X ₁₂)	173	162	12.92	15.46	9.43	10.25	-2.630	*
	Cervical Height (X ₁₃)	173	162	88.94	89.19	9.39	5.36	-.303	Ns
	Waist to Knee (X ₁₄)	173	162	32.79	28.70	7.02	7.26	5.231	*
	Body Rise /crotch Depth (X ₁₅)	173	162	15.93	18.06	5.70	11.74	-2.134	*
	Inside leg (X ₁₆)	173	162	49.57	47.57	4.12	6.95	3.227	*
	Sleeve Length (X ₁₇)	173	162	41.68	44.04	4.66	4.06	-4.914	*

Head circumference (X ₁₈)	173	162	53.26	53.51	7.00	5.83	-.348	Ns
Vertical trunk (X ₁₉)	173	162	105.85	105.72	12.75	14.64	.085	Ns
Leg Base (X ₂₀)	173	162	18.56	18.64	2.28	2.28	-.302	Ns
Foot (X ₂₁)	173	162	18.09	17.84	2.14	2.02	1.113	ns

S_A = Umuahia Sample; S_B = Aba Sample; $\bar{X}_A$ = Mean for Umuahia; $\bar{X}_B$ = Mean for Aba;

SD_A = Standard Deviation for Umuahia; SD_B = Standard Deviation for Aba; Df = 127; P = 0.05; * = Significant; NS = Non significant.

Significant differences between the mean body measurements of the preschool children (4years) in Umuahia and Aba zones were obtained in their height (t = 2.430) waist (t = -2.502), neck size (t = -3.949), shoulder (t = -3.746), upper arm (t = -2.482), wrist (t = -5.079), waist to hip (t = -2.360), waist to knee (t = 5.231), body rise/crotch depth (t = -.134), inside leg (t = 3.227), and sleeve length (t = 4.914) as shown in Table 3.

Table 4: Comparison of Average body measurements of preschool children (5 years old) in Umuahia and Aba Zones in Abia State

S/N	Body Parts	Means						t-test	Remarks
		S _A	S _B	$\bar{X}_A$	$\bar{X}_B$	SD _A	SD _B		
	Height (X ₁)	173	162	109.53	106.36	6.57	5.89	5.341	*
	Chest/Bust (X ₂)	173	162	59.90	59.45	5.07	5.06	0.989	ns
	Waist (X ₃)	173	162	57.91	57.78	4.32	5.23	0.274	ns
	Hip/seat (X ₄)	173	162	61.99	60.46	4.65	6.38	2.740	*
	Across Back/Back Width (X ₅)	173	162	24.48	23.08	2.82	5.04	3.670	*
	Neck size (X ₆)	173	162	32.05	31.86	3.47	3.49	0.686	ns
	Shoulder (X ₇)	173	162	8.12	8.61	1.16	1.01	-5.264	*
	Upper Arm (X ₈)	173	162	23.17	22.71	2.85	4.33	1.330	ns
	Wrist (X ₉)	173	162	16.03	16.27	1.83	3.24	-0.967	ns
	Scye Depth (X ₁₀)	173	162	12.15	12.97	2.14	2.41	-3.744	*
	Neck to waist (X ₁₁)	173	162	26.12	25.79	2.54	3.55	1.145	ns
	Waist to Hip (X ₁₂)	173	162	12.10	12.98	6.07	6.39	-1.545	ns
	Cervical Height (X ₁₃)	173	162	92.63	89.08	9.79	10.34	3.789	*
	Waist to Knee (X ₁₄)	173	162	32.92	30.07	7.44	7.45	3.966	*
	Body Rise /crotch Depth (X ₁₅)	173	162	17.00	15.79	7.92	4.56	2.108	*
	Inside leg (X ₁₆)	173	162	49.53	48.92	4.31	5.36	1.389	ns
	Sleeve Length (X ₁₇)	173	162	43.91	44.30	4.40	4.56	-0.921	ns
	Head circumference (X ₁₈)	173	162	54.30	54.30	4.60	6.23	-0.017	ns
	Vertical trunk (X ₁₉)	173	162	109.83	107.50	9.21	11.22	2.433	*
	Leg Base (X ₂₀)	173	162	19.50	19.35	2.45	2.23	0.719	ns
	Foot (X ₂₁)	173	162	19.09	18.58	2.10	2.01	2.716	*

*Significant S_A = Umuahia Sample; S_B = Aba Sample; $\bar{X}_A$ = Mean for Umuahia; $\bar{X}_B$ = Mean for Aba; SD_A = Standard Deviation for Umuahia; SD_B = Standard Deviation for Aba; Df = 127; P = 0.05; * = Significant; NS = Non significant.

Table 4 indicates that the mean body measurements of the preschool children (5 years old) in Umuahia zone were higher than those of their age mates in Aba zone in most of the body parts that were measured. The same mean (54.30cm) was recorded for the head circumference, for the two groups of preschool children. Also, significant values were recorded in ten body parts while the rest had non-significant values (at 0.05 probability level).

Findings of the Study

The following findings were made:

- 1) The mean body measurements of the preschool children increased as the ages of the subjects increased for all the variables that were measured. (See Tables 1, 2, 3 and 4).
- 2) Preschool children (ages 2, 3 and 5) in Umuahia zone had higher average body measurements in a greater number of body parts that were measured compared to their age mates in Aba zone (See Tables 1, 2, 3 and 4).
- 3) The subjects who were 4 years old in Aba zone had higher mean measurements in a greater number of body parts that were measured compared to their age mates in Umuahia zone (See Table 3).
- 4) The differences in the average body measurements of the subjects in the two zones were non significant (at 0.05 probability level) in most of the body parts that were measured for all the age groups with the exception of 4 year old preschool children as presented in Tables 1, 2, 3 and 4.

Discussion

The grand mean body measurements of preschool children (2 to 5 years) in Umuahia and Aba zones of Abia State, Nigeria were established for the following variables: height, chest/bust, waist, hip/seat, across back/back width, neck size, shoulder, upper arm/biceps, wrist, scye depth, neck to waist/back waist length, waist to hip, cervical height, waist to knee, body rise/crotch, inside leg, sleeve length, head circumference, vertical trunk, leg base, foot, skirt length and trouser length. Results from this study revealed that the average body measurements of the preschool children increased as the ages of the subjects increased for all the variables measured. A similar report were made by Aldrich (1999) and Schlenker *et al.* (1996) who recorded an increase in the mean body measurements of British preschool children as the ages of the children increased. According to Santrock (2005) changes in body proportion and appearance will be attributed to the growth of muscles and bones. Hence, bone growth results in increased stature. In view of this, Halliburton and Gable (2002) also reported that in early childhood, changes in bone proportions are prominent. Hence, a gradual lengthening of the body occurs as bone and muscle growth progress. The individual therefore changes from appearance of a baby to that of a young child.

Results from the study showed that there were variability in the mean body measurements of preschool children in

the various locations that were used for the study. Preschool children (2, 3, and 5 years) in Umuahia zone had higher mean body measurements in a greater number of body parts that were measured compared to their age mates in Aba zone. Alternatively, the subjects who were 4 years old in Aba zone had higher mean body measurements in a greater number of body parts that were measured compared to their age mates in Umuahia zone. However, non significant values (at 0.05 probability level) existed in the mean body measurements of the subjects in the two zones in most of the body parts that were measured with the exception of 4 year old preschool children as shown in Tables 2,3,4 and 5. The null hypothesis which states that there are no significant differences in the mean body measurements of the different parts of the body for preschool children (2 to 5 years) in Umuahia and Aba zones was therefore rejected for variables with significant values (at 0.05 probability level) in their average body measurements. However, the null hypothesis was accepted for other variables where comparable values were obtained. Research studies have shown that individual differences become observed more frequently in early childhood. These characteristics are based on biological, cultural and social factors and are very noticeable in the difference between females and males for example, differences occur in the rate of growth, height, weight, motor skills, sex-role development, aggression and other related aspects (Lloyd and Lederman, 2002; WHO,

2000; Peisner-Feinberg, 2004). Other aspects where unique differences in development occur involve broader social class and ethnic group characteristics, personality difference due to birth order among siblings and expressions of creativity. In the study of the development of infants and children , it has been shown that all children are different. (Bigner, 1983; Huston, Mcloyd and McColl, 1994). Similarly, Okeke; Madukwe; Eme and Nwagbo (2013) investigated the anthropometric and nutrient intake of pre-school children (2-5 years) in Nsukka Local Government Area of Enugu State, Nigeria and reported that socio-economic/ cultural factors do affect child growth. Therefore, individual differences occur in the rate of growth, height, weight, and other related aspects of preschool children.

Conclusion

The mean body measurements of preschool children (2 to 5 years) in Umuahia and Aba zones in Abia State have been established in this study. Home Economics teachers and lecturers as well as their students in tertiary institutions can use the average body measurements in drafting patterns for different body sizes of preschool children. This is necessary for meeting the heavy demand for Nigerian children's clothing following the ban on importation of clothing. Hence, Nigeria can export children's commercial patterns and garments to other African countries with similar body structure.

Recommendations

The following recommendations were made based on the findings of this study:

1. The mean body measurements of preschool children in Umuahia and Aba zones should be provided to students who are undertaking courses in textiles and clothing for use in pattern drafting.
2. The mean body measurements of preschool children in Umuahia and Aba zones should form data base for commercial pattern production in Nigeria which is necessary for large scale garment production. Hence, Nigeria can export children's commercial patterns and garments to other African countries with similar body structure.
3. The mean body measurements of the preschool children (2 to 5 years) in Umuahia and Aba zones can serve as anthropometric data that can be useful in evaluating the nutritional and growth status of preschool children in Abia State.

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Family Awareness of the Causes and Effects of Climate Change

Anyaegbunam, N.J. & Onu, W.O.

Department of Science Education,
University of Nigeria, Nsukka.

Abstract

The study investigated family awareness of causes and effects of climate change. Area of the study was Nsukka town in Enugu state of Nigeria. Population of the study included all 111, 026 families residing in Nsukka town. Purposive random sampling technique was used to select 278 (139 rich and 139 poor) adult family representatives, with means of livelihood. Descriptive survey design was employed. Questionnaire and structured interview schedule were used to collect data. Mean was used for data analysis. Findings reveal low awareness of the causes and effects of climate change among families (much lower among poorer families); climate change information is disseminated through various media, including television, radio programs/announcements, special columns on climate change in newspapers, social media, group forums and school subjects. Recommendations include that the strategies to be put in place to raise climate change awareness levels and measures for mitigating climate change influence be designed to reach both poor and rich families.

Keywords: Family, Awareness, Causes, Effects, Climate Change.

Introduction

The family is an intimate domestic group made up of people related to one another by bond of blood, sexual mating or legal ties. As a resilient social unit, families have survived and adapted through time. The family exists in the environment and whatever affects the environment affects the family. Climate change (CC) as an environmental issue impacts heavily on the environment, and by extension constitutes a threat/challenge to the existence and sustenance of families.

Climate change is described as a gradual change (increase or decrease) in the average temperature of the Earth's atmosphere and its oceans, believed to be permanently changing the Earth's climate (Livescience, 2016). It describes a change in composition of the atmosphere that is over natural variations, attributed directly or indirectly to human activities, which in addition to natural climate variability, is observed over comparable time periods (Obioha, 2009; Omotosho, 2007; United Nations Framework Convention on

Climate Change UNFCCC, 2007) and manifests in temperature increases, change in precipitation, sea level rise and the intensification of natural hazards such as storms, floods, droughts and landslides (Odjugo, 2010). The scientific consensus on climatic changes related to global warming is that the average temperature of the Earth has risen between 0.4 and 0.8°C over the past 100 years, and is predicted to increase between 1.4 and 5.8 °C by the year 2100 (Livescience, 2016).

Two main causes of CC include natural or bio-geographical processes and human or anthropogenic activities (Olaniyi, Funmilayo & Olutimehin, 2014; Olaniyi, Ojekunle & Amujo, 2013). Astronomical and extraterrestrial factors make up the natural process that cause CC. The astronomical factors include changes in the eccentricity of the earth's orbit, changes in the obliquity of the plane of ecliptic and changes in orbital procession while the extra-terrestrial factors are quantity (intensity) and quality of solar radiation, effect of impact craters, near earth objects, aerosols, and meteorites, among others. The anthropogenic factors implicated in CC revolve around human activities that either emit large amount of greenhouse gases (CO₂, CFCs, CH₄, N₂O, and H₂O_g) into the atmosphere that depletes the ozone layer or activities that reduce the amount of carbon absorbed from the atmosphere like deforestation (Ishaya & Abaje, 2008; Wallace & Hobbs, 2006). The human factors that emit large amounts of greenhouse gases include industrialization, burning of fossil fuel,

gas flaring, urbanization and agriculture (Odjugo, 2010; Behnke & Macdermid, 2004).

Available evidence shows that CC as a global phenomenon, is characterized by global effects, the most adverse of which will be felt mainly by poor people, developing countries (especially those in Africa) due to their low level of coping capabilities (Nwafor 2007; Jagtap 2007). Scotland and Northern Ireland Forum For Environmental Research, SNIFFER (2009) insists that the impact of CC is not evenly distributed. They opined that poorest countries and people will suffer earliest and the most because they are more exposed, more vulnerable to the impacts and finds it harder to recover when they occur. The 4th IPCC Assessment report confirmed that Africa, of which Nigeria is a part, will be worst hit by these effects of CC (IPCC, 2007). This is in conformity with SNIFFER- Project Search "UKCC 22" documentation that the people who are likely to be most vulnerable to the impacts of CC are those;

- Living in places at risk.
- People who are already deprived by their health, level of income, quality of their income and mobility, as well as capacity to adapt and who are less supported by family, friends and agencies.
- People who lack awareness of the risks of CC, the capacity to adapt and who are less well supported by family, friends and agencies.

As predicted, Nigeria is experiencing adverse climate conditions, with the

negative impacts manifesting on the welfare of millions of her populace, which is adversely affecting productivity in the country (Ziervogel, Bharwani & Downing, 2006). Nigeria, as a developing country, has witnessed persistent droughts, flooding, off-season rains and dry spells, all of which have immensely altered farming seasons in Eastern Nigeria, increased the prevalence of diseases (like malaria, diarrhea, Meningitis) and drought in the Northern part of the country, increased the incidences of flooding and erosion in the South (Odjugo, 2010). These variations in climate parameters as seen in the country affect different sectors of the economy such as agriculture, health, water resources, energy, and so on (Ministry of Environment of the Federal Republic of Nigeria, MoEFRN, 2010). All these have major implications for families. As critical as the effects of CC is on families, it remains unclear whether they are aware of what causes CC or its effects (Obioha, 2009).

Present strategies set by governments and agencies to address the challenges posed by CC recognize that there is no best solution. In this sense, CC provides new incentives for the need to plan ahead, to observe trends and anticipate extreme events (Zevenbergen, Veerbeek & VanHerk, 2008). There thus arises the urgent need to sensitize the general population regarding CC. To address all CC-related issues effectively and make for environmental sustainability and by extension family wellbeing, it is essential to assess awareness regarding

CC among families. Lack of proper information, dissemination of information about climate change is in the view of Mbah and Ayegba (2013) one of the major problems militating against proper climate mitigation of and adaptation to climate change. Within the context of the above, all that is needed is anticipation and increased awareness of causes, effects, management strategies to meet the present needs and a path of adjustment for the future, in order to cushion families from severely suffering the impacts of CC, and consequently promote family wellbeing. It is on the backdrop of this that the present study was conducted.

Purpose of the Study

The general purpose of the study was to investigate family awareness of the causes and effects of CC. Specifically, the study:

1. determined the extent to which families are aware of the causes of CC.
2. determined the extent to which families are aware of the effects of CC.
3. identified media via which families get information about CC.

Research Questions

The following research questions guided the study:

1. To what extent are families aware of the causes of CC?
2. To what extent are families aware of the effects of CC?
3. What are the media via which families get information about CC?

Methodology

Design of study: The study adopted descriptive survey design.

Area of study: The study was conducted in Nsukka town, situated in Nsukka local government area of Enugu state, Nigeria. Families here include civil servants, traders and farmers, majorly dependent on rain-fed agriculture, which is seriously implicated in CC.

Population for the study: The population of the study include all 111,026 family representatives in Nsukka town. The family representatives which made up the study population were adult members of families above the age of 21, that have a means of livelihood and/or a source of income.

Sample for the study: According to Nwanna in Onuoha, Nnodu & Uwadiogwu (2014), should the population for a survey study be up to hundred thousand or more, a sample of 0.5% or 0.25% is appropriate for the study. Considering the population size, a sample of 278 family representatives (adult members of a family above 21 years and earning an income), representing 0.25% of the entire population was used for the study. This sample comprising 139 rich persons and 139 poor persons, based on their monthly income, were selected using the purposive random sampling technique. The World Bank poverty index which defined a poor person as an individual earning less than \$ 1.90, approximately N 597.65 per day was used for the categorization (The World Bank, 2015). All family representatives

within this income bracket were considered poor and those above it were taken to be rich.

Instrument for data collection: The instruments for data collection were questionnaire and structured interview schedule. The questionnaire tagged Questionnaire on Family Awareness of the Causes and Effects of CC (QFACECC), was developed in line with reviewed literature and the purpose of the study, so as to elicit data with which the research questions were answered. The questionnaire had two sections, the first requesting respondents' biodata and the second made up of three clusters with 10 items each on causes, effects and media. Altogether a total of 30 items with a 4-point Likert type response scale of strongly agree, agree, disagree and strongly disagree was used. The interview schedule included follow-up questions from the questionnaire items and served the purpose of eliciting more information about the responses given by the interviewed respondents on their awareness of the causes and effects of CC. They were both face validated, trial-tested, and the former had a reliability index of 0.92.

Data collection techniques: Two hundred and seventy-eight copies of the questionnaire were administered to respondents by hand. The entire 278 copies were returned. This gave 100 percent return. Twenty respondents (ten poor, ten rich) were interviewed using the interview schedule. Qualitative data was also collected through the interviews. Respondents were interviewed briefly upon return of

their questionnaire to ascertain the extent to which they are aware of the causes and effects of CC. The interview was such that the respondents provided more insight into the responses they had given in the questionnaire.

Method of data analysis: Collected data was analyzed using mean. Criterion mean of 2.50 was adopted as decision rule, thus mean responses < 2.50 were tagged "disagree," indicating that the

respondents disagreed with the item for which the mean score was calculated. However, mean scores ≥ 2.50 were tagged "agree," indicating that the respondents agreed to the item which had such mean score.

Findings of the Study

The following findings were made:

Extent of Families' Awareness of Causes of CC

Table I: Mean scores of respondents on extent to which families are aware of the causes of CC.

S/N	Indicators of Awareness of Causes of CC	Status	
		$\bar{X}_p$	$\bar{X}_r$
1.	Solar radiation	2.76**	3.50***
2.	Aerosols	1.38*	2.31*
3.	Volcanic eruptions	1.09*	1.57*
4.	Impact craters/meteorites	1.04*	1.94*
5.	Sun spots and solar wind	1.14*	1.22*
6.	Deforestation	2.15**	3.02***
7.	Emitted Greenhouse Gases	1.32*	3.17***
8.	Burning of fossil fuel	1.91*	2.90**
9.	Increased use of chemical fertilizers	1.13*	1.56*
10.	Increased emission of fossil Carbon (IV) oxide	1.47*	2.07**
	Grand Mean	1.54*	2.42**

$\bar{X}_p$ = Mean Responses for Poor Families $\bar{X}_r$ = Mean Responses for Rich Families *** Very Highly Aware ** Highly Aware * Least Aware

Table I shows the extent to which families are aware of the causes of CC. Results show that families are aware of the causes of CC to varied extents, with grand mean scores 1.54 and 2.42 indicating that poor families are least aware of these causes while rich families are highly aware.

Findings from the interview shows:

- Very low level of awareness to the causes of CC.- some insisted that the only thing responsible for CC is the increased intensity of the sun

- Respondents do not know what aerosols and meteorites are, or how they contribute to CC.
- Respondents do not know and expressed shock at the fact that fertilizers used on the soil can cause CC. One quipped "How can fertilizer used on land affect climate"
- Sunspots and solar wind are concepts alien to the respondents. They asked "is solar wind different from the normal wind on earth?". Does the sun

have its own wind? How does the wind of the sun affect the Earth climate

Extent of Families' Awareness of Effects of CC

Table 2: Mean scores of respondents on extent to which families are aware of effects of CC.

S/N	Indicators of Awareness of Effects of CC	Status	
		$\bar{X}_p$	$\bar{X}_r$
1.	Hotter dry seasons (increase in average temperature)	2.59**	2.77**
2.	Wetter rainy season (increase in average rainfall)	2.83**	2.96**
3.	Changes in agricultural timetables	2.77**	2.21**
4.	Appearance of new diseases	2.54**	1.99*
5.	Fluctuations of weather patterns and seasons	2.00*	2.43**
6.	Drought	2.13**	2.80**
7.	Floods	2.77**	2.96**
8.	Water shortages	2.78**	2.51**
9.	Extreme weather	2.80**	2.82**
10.	Colder harmattan	2.39**	2.72**
	Grand Mean	2.26**	2.52**

$\bar{X}_p$ = Mean Responses for Poor Families $\bar{X}_r$ = Mean Responses for Rich Families *** Very Highly Aware ** Highly Aware * Least Aware

Table 2 shows the extent to which families are aware of the effects of CC. Results show that families are aware of the effects of CC to varied extents, with grand mean scores of 2.26 and 2.52 indicating that poor and rich families are highly aware of the effects of CC, even though rich families seem to be more aware.

Findings from the interview reveal among other things that:

4. Respondents have witnessed increasing temperatures, floods, shortage of water, drying up of water bodies, extreme weather (colder and hotter temperatures), dry seasons being hotter than normal, among other effects of CC listed in the questionnaire.
5. Very few of the respondents seem to know that these phenomena outlined above are all due to CC.

The following comments from some of the interviewees serve to buttress these points:

6. A respondent said "for some time now whenever you plant cocoyam it rots in the soil and doesn't grow. It made cocoyam very scarce in Nsukka. We use to think it's because the ground was too hot. Was it CC causing it?"
7. Another respondent highlighted the lack of starch in *garri* made from Nsukka cassava and the once popular *ose Nsukka* (Nsukka pepper) known for being very hot and having a distinct flavour losing all its distinguishing attributes. She said: "in recent time, the yellow *Ose Nsukka* is no longer peppery and rots faster than normal once plucked. Cassava from Nsukka land doesn't ferment when soaked in water and if

- used to produce Nsukka garri, the garri doesn't have starch. Is it CC that has been causing all these?"
8. Another interviewee noted that there was a particular lake around her home when she was in primary school but it has dried up. In her words, "back in primary school there was this lake in our neighborhood. I recall we kids going to swim there but growing up now the lake have dried up; it is no longer there. Is this due to the changing climate too?"
9. Other interviewees observed that Nsukka weather has been getting hotter too, and the ice pellets which used to fall with rain during rainy seasons in Nsukka have all disappeared.

Media via Which Families Get Information About CC

Table 3: Mean scores of respondents on media via which families get information about CC.

S/N	Indicators of media via which families get information about CC	Status $\bar{X}_p$	$\bar{X}_r$
1.	The use of television via TV programs.	3.13**	3.33**
2.	Radio programs/announcements.	3.16**	3.29**
3.	Special columns on CC in newspapers.	2.55**	2.59**
4.	CC sensitization campaigns/programme.	2.74**	2.81**
5.	Social media platforms on the internet.	2.51**	3.17**
6.	Bulk SMS	1.32*	2.11*
7.	Group forums (meetings)	2.61**	3.77**
8.	School subjects	3.35**	3.04**
9.	Symposia	1.35*	2.47*
10.	Workshops/Conferences	1.10*	3.12**
	Grand Mean	2.54**	2.85**

$\bar{X}_p$ = Mean Responses for Poor Families $\bar{X}_r$ = Mean Responses for Rich Families ** Agreed

* Disagreed

Table 3 shows the view of respondents on the media via which families get information about CC. Data on the table indicates that the respondents agreed to items 1-5, 7 and 8 as being the media via which families get information about CC. Respondents however disagreed to items 6 (bulk SMS), 9 (symposia), and even 10 workshops and conferences indicating that they do not represent media through which families get information on CC.

Results from the interview indicate the following:

8. Climate change information gets to families through radio, television, sensitization campaigns, social media platforms and the internet, newspapers, school subjects, among others.
9. Respondents do not believe it is possible for bulk SMS to be used to disseminate information on climate change.

10. Some of the respondents do not know what symposium is and those who do, believe that symposia, conferences and workshops are restricted to academicians/people in universities and as such the common man has nothing to do with them.

On bulk SMS being used to disseminate information on CC, one of the interviewees expressed shock at the possibility, making such comments as “is bulk SMS no longer used for sending wedding invitation? How can it be used to give CC information?” Another respondent with a curious expression on her face queried “who will send the messages on CC? who will it be sent to? How will the sender get people’s phone numbers?” Regarding symposia, most of the interviewed respondents expressed almost zero knowledge of what symposia are, talk more of it being a media through which CC information is spread. One of the interviewees actually asked “ what is symposia? How is it done?”

Discussion

It is evident from table 1, that poor and rich families are generally aware of the following causes of CC: solar radiation and deforestation. The former representing a natural cause and the later a human cause. This is in line with the submission of Olaniyi, Funmilayo & Olutimelim (2014) who classified these causes of CC into two basic factors: natural or bio-geographical processes and human or anthropogenic causes. The natural causes of CC include among others solar radiation, aerosols, volcanic eruption, impact craters,

changes in solar climate and solar flares. The anthropogenic causes of CC on the other hand include emission of GHGs, burning of fossil fuel, increased use of chemical fertilizers, among others. The results further show that rich families are more aware of all the causes of CC than poor families. The rich families are more aware of such causes of CC as solar radiation, emitted GHGs, deforestation, burning of fossil fuel, aerosols, increased emission of CO₂, impact craters/metorites, volcanic eruptions, increased use of fertilizers, sunspot and solar wind (in descending order). Poor families are however aware of such causes as solar radiation and deforestation only. This finding is corroborated by Harvey (2015), who posits that urban populations (who are mostly rich) are more aware about CC causes than people residing in rural areas (who are mostly poor). This could be attributed to among other things the enhanced economic status in the urban areas, as well as increased access to information and education.

Data presented on Table 2, shows clearly that families are aware of the effects of CC outlined in the instrument. The respondents from the interview explained that they have noticed these effects but did not know they were caused by CC. These effects include weather fluctuations, increase in average temperature, prolonged rainy seasons, changes in agricultural time tables, appearance of new diseases, drought, flood, water shortages longer season and colder harmattan. The table further shows that the effects of CC is as high among the poor as it is among the

rich. For this reason, the effects of climate change are described as global by Udenyi (2010). In Sub-Saharan African countries like Nigeria, CC constitutes a threat to agricultural systems and food security (Okoli & Amaechi, 2014), health and healthcare systems (Nichols, Maynard, Goodman & Richardson, 2009; Hosking, Jones, Percival, Turner & Ameratunga, 2010), finance and economic growth, sustainable growth and development, melting of the polar ice caps, as well as an increase in occurrence and severity of storms and other severe weather events adversely affecting movement, shelter and even education (Ogbo & Onyedinma, 2012; Olaniyi, 2013; Okoli & Amaechi, 2014; Alexander & Dim, 2016; Livescience, 2016).

The media through which families get information about climate change include TV programs, radio programs, CC columns in newspapers, sensitization campaigns, social media platforms on the internet, group forums and school subjects. Ameller, Cervone, Kafatos & Jones (2008) posit that the various forms of media have been and is currently being used as a tool for dissemination of information regarding environmental issues, one of which is climate change. Respondents interviewed indicated that other media via which families get information about CC in villages include village town hall meetings, announcements on possible changes in climate in churches among others. The interviewees however opined that because workshops, conferences and symposia

are mostly paid for and open to experts in the field for whom it is conducted, only people who attend such gatherings partake in whatever is discussed there. As such, the rural poor people who do not have access to workshops, conferences and symposia cannot receive information on CC when they are disseminated there. They also add that around Nsukka metropolis, bulk SMS is used mostly to disseminate information about gatherings such as meetings, weddings and the likes. They expressed shock at the question of bulk SMS being used to inform people about CC and that if it is being used anywhere in Nigeria, they are yet to receive any. However, it is possible for bulk SMS messages on CC to be designed and disseminated to people, thus making it a novel avenue via which information on CC can be disseminated. As Kirui, Oseni and Omedo (2012) pointed out, access to climate information and support services is necessary for coping, adaptation and mitigation strategies necessary in the face of changing climate, it is therefore necessary for CC information dissemination techniques to be broadened and made more flexible and accessible to people.

Conclusion

CC is a social as well as an environmental issue, posing great threat to family wellbeing. The findings of this study have unraveled poor and rich families awareness of causes, effects and available media for information on CC. The direct and indirect impacts of CC on family wellbeing in areas of finance, health, food, shelter, education and

even movement is becoming increasingly obvious. These highlight the need for concerted efforts to minimize these impacts and ensure the wellbeing and sustainability of families. Following the findings of the study, it could be concluded that creating awareness to the causes and effects of CC and increasing, improving on and diversifying media for information on CC could go a long way to promote family wellbeing.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Strategies for creating awareness of CC issues should be modified and re-designed to meet the CC awareness needs of both poor and rich families.
2. Families should be open to CC information and follow recommendations given in-order to reduce their contribution to CC and promote overall family wellbeing both in the short and long run.
3. Adaptation measures must consider differential social impacts to help build the capacity of vulnerable groups to adapt better to CC.
4. CC adaptation programs should involve collaboration with the poor people who are most vulnerable to CC (by involving, engaging, empowering & ultimately building their adaptive capacities).
5. Government should as a matter of urgency recognize the need to set mitigating strategies to cushion the impact of CC on families as soon as they occur.

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Promoting Gender Parity in Families in Enugu State through Media Campaigns

Oyeoku, E. K. & Onigbo, L. N.

Department of Educational Foundations,
University of Nigeria, Nsukka

&

Gever, C.V.

Department of Mass Communication,
University of Nigeria, Nsukka

&

Ohia N.C.

Institute of African Studies,
University of Nigeria, Nsukka

Abstract

This study investigated ways media campaigns can be used to promote gender parity in families in Enugu State. Descriptive survey research design was adopted for the study. Three research questions guided the study. The population of the study was, 368 respondents made up of 322 registered journalists and 46 mass communication lecturers in Enugu state. The population of the study was small and could easily be managed. There was no sampling. Questionnaire was used to collect data. Mean and standard deviation were used for data analysis. Results showed that existing media that can be used to promote gender parity in families include: radio, television, facebook, twitter, among others. The approaches media campaign can adopt to promote gender parity in families include: jingles; advertisements, and drama, while the campaign will address areas of sexuality, girl child education and rights, among others. Recommendations include journalists should make effective use of available media and use contents that are persuasive and educative to promote gender parity in families.

Keywords: Campaigns, Gender, Media, Parity, Inequality

Introduction

Promoting gender parity in families is one of the issues that have received attention in literature among researchers of sociology, media studies and special education. Scholars such as Arpita, (2013); Khan (2013) and Shastri

(2014) agree that there exists various forms of gender disparity in families. Gender describes roles a particular culture assigns to a persons' biological sex. The American Psychological Association (2011) describes gender as the attitudes, feelings, and behaviours

that a given culture associates with a person's biological sex. Gender refers to the socially and culturally constructed roles, qualities, behaviours, among others, that are ascribed to men and women by different societies (UNESCO, 1997). Gender therefore, is a social construct that is highly influenced by societal values. In most cases, the societal values often influence the social construction of gender in a manner that does not leave room for gender parity. Reeve and Baden (2000) posit that gender parity denotes women having the same opportunities in life as men, including the ability to participate in the public sphere. Unfortunately, the attainment of gender parity especially in families has remained a challenge globally.

In many African societies, male chauvinism is accepted as part of cultural values. The man is regarded as the head of the family and owns everything including the wife. The woman's decisions must receive approval from the man but the man has the freedom to take decisions without seeking the approval of the wife. Haralambos and Holborn, (2013) opine that women produce children, they are mothers and wives, they do the cooking, cleaning, sewing and washing, take care of men and yet they are subordinate to male authority.

In Enugu state specifically, there are societal attitudes and values which discriminate against women based on gender. Gender disparity starts at the instance of the birth of a child. When a child is born, the first question people ask is, "is it a boy or a girl?" The birth

of a male child is often heralded with greater joy than that of a female child. Ejikeme (2001) reports that the male child is often the preferred child in many Nigerian cultures. In some cases, couples go to the extent of consulting oracles to ensure that they will give birth to a male child. In line with the above assertion UNESCO, (1997) noted that preference for sons operates at all levels of the society-rich or poor, rural or urban. Shankar Rao (2015) states that male preference and female negligence has almost become a working policy especially in the rural areas. In the rural areas of Enugu state for example, a boy's education is taken very seriously while investment in education of girls is not considered to yield adequate returns. The girl child may be enrolled in school, but when her work is needed at home to help in house work, to mind younger siblings or do domestic chores, she is kept back from school (Nam 2004). Serving as domestic labour, undertaking family responsibilities such as taking care of members of the family and engaging in household chores are viewed as the responsibilities of women unlike their male counterparts (Beleeza, 2003). Yet, in terms of sharing the family assets such as land the women are discriminated against.

The issue of gender disparity in families is more pronounced among women with disabilities. Females with disability experience dual challenge of being a woman and having a disability. According to Beleeza (2003) there are difficulties women encounter in society and disability in women significantly compound the difficulties. The

disability therefore, further serves as a basis for greater discrimination based on their gender. In the family, women with disabilities are usually looked down upon; they are more prone to domestic violence, physical and sexual abuse as well as neglect (Dutta, 2015). Most of these violence have negative effects on the upbringing of the children. Abbas, Akram and Manzoor (2015) reported that battering cause many psychological problems such as psychological stress, fear and humiliation in the entire family. The gender disparity in families could be addressed through the media.

The media, being the watch dog of the society have a role to play in promoting gender parity within their immediate environment. Research findings indicate that the media have a responsibility to plan and execute campaigns aimed at enhancing gender parity (Ajibua, Oladitan, Oyerinde, & Bewaji, 2013;Trolan 2013; Popa & Gavrilu 2015; Ashong & Batta, Nwabuzor & Gever 2015). The findings are consistent with the social responsibility theory (Nerone, 1995). According to the tenets of the theory, freedom carries with it a corresponding responsibility which the media must not compromise. (Beleeza, 2003) suggested that the television and cinema are important media that play significant roles in constructing positive image of women with disabilities. Beleeza also suggested that media campaign in form of advertisement and jingles can be used to create awareness and bridge the gender gaps in the family.

Media campaigns are coordinated media efforts geared towards achieving a particular goal. Media campaigns could assume advocacy dimension wherein the audience are persuaded to take a particular action with promised benefits. Gever and Nwabuzor (2014) describe media campaign as strategically planned and coordinated media activities aimed at changing behaviour. Sandman in Day and Monroe (2000), posits that campaigns are designed to increase awareness, inform or change behaviour in target audience. Beleeza (2003) noted that media campaign could be in such areas as education, employment, social policy, participation and access to decision making, sexuality, prejudices and social representation, motherhood, family life and violence. In recognition of the discriminatory practices against women the United Nations Convention on the Rights of Persons with Disabilities (CRPD, 2006) called for state measures that will safeguard women's full enjoyments of their rights and freedom such as right to education, employment, health care, and a personal life, free of torture, exploitation and violence. These could be achieved through media campaigns. Bragt (2004) holds that media campaigns should focus on the following: how to use the types of media available, how to use existing media in such a way that will give the campaign the maximum effect and how to make best message best suitable. The findings of this study will provide a framework on how the media can enhance gender parity in families in Enugu State. Such a

framework could also be found useful for other countries, especially where there are high cases of gender disparity.

Purpose of the Study

The general purpose of this study was to investigate ways gender parity can be promoted through media campaigns in Enugu State. The study determined:

1. existing media that can be used to promote gender parity in families.
2. approaches media campaign can adopt to promote gender parity in families.
3. areas media campaign should address in order to promote gender parity in families.

Research Questions

This study sought answers to the following research questions:

1. What are the existing media that can be used to promote gender parity in families in Enugu State?
2. What approaches could media campaign adopt to promote gender parity in families in Enugu state?
3. What are the areas media campaigns should address in order to promote gender parity in families?

Methodology

Design of the study: This study adopted descriptive survey research design. A descriptive survey design aims at collecting data on, and describing in a systematic manner, the characteristics, features or facts about a given population. The design was considered suitable and appropriate for the study because it allowed the collection of data from the respondents

on the available media that can be used to promote gender parity in families, the approaches the media campaign can adopt and the areas media campaign should address in order to promote gender parity in the families.

Area of the Study: The study was conducted in Enugu State, Nigeria. The state is among the five states in South East Nigeria. It has 17 Local Government Areas and three senatorial zones. The area shares borders with Abia State and Imo State to the south, Ebonyi State to the east, Benue State to the northeast, Kogi State to the northwest and Anambra State to the west. The state places so much value on male children. A man without male children is considered not to have a future and they would prefer to train a man rather than a woman especially where the resources are meager.

Population of the study: The population of this study was 368 respondents comprising all the registered journalists and lecturers of mass communication in Enugu State. The population of registered journalists in Enugu State is 322 (Enugu Chapel of Nigerian Union of Journalists, 2016). Journalists in Enugu State work in media houses like radio, television, newspapers and magazines. Most of them also studied mass communication at first degree. Journalists in Enugu State are mostly men.

The population of mass communication lecturers in Enugu State was 46 at the time of data collection. These were distributed in the tertiary institutions as follows University of Nigeria Nsukka,

(UNN) 26, Enugu State University of Science and Technology (ESUT), 10 and Godfrey Okoye University 10 (Academic Planning Unit of the various institutions, 2016). Mass communication lecturers in Enugu State are mostly of Igbo origin. Most of them have higher degrees ranging from masters to doctoral. The population for this study was small and could easily be managed. Therefore, there was no sampling.

Instrument for Data Collection: Questionnaire was used to collect data. it was developed based on the purpose of the study and available literature. It was divided into three sections. Section A focused on existing media that can be used to promote gender parity, section B dealt with approaches the media campaign can take, while Section C focused on areas the media campaign should address in order to promote gender parity in families. The response format was a 4- point rating scale ranging from Strongly Agree (SA, 4 points), Agree (A, 3 points) Disagree (D, 2 points) and strongly Disagree (SD,

1 point). The questionnaire was face-validated by five experts in Mass Communication, Sociology of Education and Special Education. The coefficient of internal consistency .78 .87 and 0.89 for Sections A, B and C respectively using Cronbach Alpha. These results show that the instrument was reliable.

Method of Data Collection: A total of 368 copies of the questionnaire were distributed to the respondents by hand. Only 322 copies were distributed to the journalists while 46 copies were given to lecturers. Journalists returned 284 copies while lecturers returned 41 copies totaling 325 copies. This represents 88% return rate.

Method of Data analysis: Data were analyzed using mean and standard deviation. An item with a mean response of 2.50 and above was accepted while an item below 2.50 was rejected.

Results

The results of this study are presented below.

Table 1: Mean Responses on Existing Media that could be Used to Promote Gender Parity in Families in Enugu State

S/No	Existing Media	$\bar{x}_j$	SD _j	$\bar{x}_L$	SD _L	Remarks
1	Radio	3.12	0.72	3.25	0.62	Agree
2	Television	3.25	0.67	3.54	0.67	Agree
3	Newspaper	2.71	0.66	3.72	0.96	Agree
4	Magazine	3.54	0.93	3.45	0.56	Agree
5	Facebook	3.68	0.73	3.37	0.86	Agree
6	Twitter	2.77	0.61	2.61	0.61	Agree
7	Blogs	2.83	1.02	2.99	1.03	Agree
8	WhatsApp	3.67	1.23	3.58	1.25	Agree
9	Instagram	2.62	0.65	2.84	0.75	Agree
	Grand Mean	3.01		2.71		

$\bar{x}_j$ - Journalist's mean responses; SD_j - Journalist's standard deviation; $\bar{x}_L$ - Lecturer's mean responses; SD_L - Lecturer's standard deviation

Table I reveals that the respondents agreed on the items presented in the table above on the available media that can be used to promote gender parity in families in Enugu State. This is because all the items had mean scores of 2.5 and above.

Table 2: Mean Responses on Approaches Media Campaign Can Adopt To Promote Gender Parity in Families in Enugu State.

S/No	Approaches	$\bar{x}_j$	SD _j	$\bar{x}_L$	SD _L	Remarks
1	Jingles	2.91	0.94	3.05	0.27	Agree
2	Children's programmes	3.17	0.76	3.94	0.86	Agree
3	Interviews	3.27	0.49	2.68	0.68	Agree
4	Advertisements	3.18	0.93	3.28	0.81	Agree
5	Caller tunes	3.37	0.54	3.57	0.74	Agree
6	Cartoons	3.59	0.76	2.69	0.36	Agree
7	Illustrations	3.22	0.75	2.63	0.95	Agree
8	Discussions	2.76	0.67	2.96	0.57	Agree
9	Films	2.78	0.67	2.91	0.88	Agree
10	Drama	2.67	0.59	3.54	0.77	Agree
	Grand Mean	2.82		3.13		

$\bar{x}_j$ - Journalist's mean responses; SD_j - Journalist's standard deviation; $\bar{x}_L$ - Lecturer's mean responses; SD_L - Lecturer's standard deviation

Table 2 indicates that the respondents agree that jingles, children's programme, interviews, advertisements, Caller tunes, Illustrations, discussions, films and drama are approaches that media campaign can adopt to promote gender parity in families. All the items have mean ratings above 2.50.

Table 3: Areas Media campaign should address in order to promote gender parity in families

S/No	Media campaign should	$\bar{x}_j$	SD _j	$\bar{x}_L$	SD _L	Remarks
1	Promote sex education to empower girls to make wise decisions in sexual matters	2.38	0.91	3.15	0.92	Agree
2	Discourage all forms of neglect against women including those with disabilities	3.23	0.71	3.42	0.76	Agree
3	Educate the public on the benefits of gender parity in family	2.77	0.99	2.66	0.89	Agree
4	Project the rights of women in the families	3.52	0.83	3.34	0.63	Agree
5	Discourage all forms of abuse against women including those with disabilities	3.73	0.84	3.57	0.94	Agree
6	Discourage negative cultural practices against women like denial of rights to inheritance	3.78	0.66	2.85	0.96	Agree
7	Portray positive image of women with disabilities and not just the problem surrounding their disabilities	2.92	0.55	2.53	0.65	Agree
8	Participation and access to decision making by women in the family	2.74	0.67	2.95	0.67	Agree
9	Display the achievements of women with disabilities	2.63	0.67	2.98	0.69	Agree
	Grand Mean	2.86		2.94		

$\bar{x}_j$ - Journalist's mean responses; SD_j - Journalist's standard deviation; $\bar{x}_L$ - Lecturer's mean responses; SD_L - Lecturer's standard deviation

Table 3 reveals that the areas media campaign should adopt to promote gender parity in families. The respondents agree that the media campaign should address areas such as girl child education, sexuality. Participation and access to decision making in families, sexuality, abuse of women. All the items had mean scores that was up to 2.5 which is within the acceptable benchmark for the study.

Discussion of Findings

The result of this study revealed the existing media that can be used to promote gender parity in families. These include the use of radio, television, newspaper, magazines, face book, twitter , blogs, whatsapp and instagram. The findings of this study is similar to some previous studies (Ajibua, Oladitan, Oyerinde, & Bewaji, 2013;Trolan 2013; Popa & Gavriliu 2015; Ashong & Batta, Nwabuzor & Gever, 2015) that have reported that the media occupy a central place in promoting gender parity generally. Rousso (2003) also noted that the media can be used to change cultural and parental attitudes towards girls especially those with disabilities. They noted that in India the media has been used to successfully portray positive images of women with disabilities. In other countries such as Egypt and Lebanon the use of media in promoting gender parity is also practiced (Nagata, 2003). In line with the above, Beleeza (2003) found that television and cinema are important media outfits that can be used to promote gender parity. Dutta (2015)

also views the media as a good platform for creating awareness of the general public on the various challenges and discriminations against women with disability on the grounds of gender and disability. Thus Dutta asserts that the media can do this through visual representations, arts, advertisements and language. The media will create a platform to discourage all forms of gender disparity in the Nigerian society and particularly Enugu State while making a case for gender parity and mainstreaming. Meekosha, (2004) noted that in families women with disabilities are more likely to be divorced, more likely not to be married, more likely to experience sexual violence and are more likely to be seen as hypersexual. These are issues the media will address. Gever (2016) argues that good combination of the existing media is a vibrant strategy for successful media campaigns.

The result further showed that in order to promote gender parity in the families in Enugu State the media campaign can adopt the following approaches jingles, children's programme, interviews, advertisements, callertunes, cartoons, illustrations, discussion, films and drama. The result of this study is in consonance with the findings of Beleeza (2003) who found that the media can use approaches such as advertisements and jingles to promote gender parity in families. Beleeza further stressed that the media is an important tool that can disseminate information and create awareness programmes on gender

parity and convey the message that women with disabilities are in charge of their own lives and they have abilities irrespective of their disabilities. Through television and radio discussion programmes as well as drama the rights of women in families can be discussed. Through drama also, violence, and neglect of women including those with disabilities can be criticized and cultural practices which are discriminatory tackled. These approaches would create awareness on those cultural practices that promote gender disparity in families and through these avenues people's attitude can be less discriminatory especially in families. The result of this study is also consistent with that of Dutta, (2015) who reported that illustrations and other media contents are capable of promoting gender parity.

The results also showed that the media campaign should address sex education, all forms of abuse and neglect against women, benefits of gender parity in homes, rights of women in families, negative cultural practices against women. It should also portray positive image of women with disabilities, their participation and access to decision making and the achievements of women including those with disabilities. This finding is in line with most of the areas Beleeza (2003) outlined as crucial areas for the status of women. Beleeza outlined such areas as education, employment, social policy, participation and access to decision making, sexuality, prejudices and social representation, motherhood, family and domestic life and violence.

This finding is also in conformity with the United Nations Convention on the Rights of Persons with Disabilities (CRPD, 2006) which call for measures that will safeguard women's full enjoyments of their rights and freedom such as right to education, employment, health care, and a personal life, free of torture, exploitation and violence. Addressing these areas could change the values and belief systems of the people and transform gender disparity, addressing such issues such as education, violence and safety, abuse and neglect and sexuality.

Conclusion

Based on the results of the study, it was concluded that the media can promote gender parity in families to a large extent. The media can play a major role in promoting gender parity and discouraging families from discriminating among themselves on the basis of gender. The society is advancing and more and more people are clamoring for gender equality as part of human rights. People should therefore, not be discriminated against on the basis of their gender. People should be perceived first, as human being born equal and with all the rights and privileges irrespective of any form of disability. The basic contribution of this study is that it has provided practical steps on ways the media can promote gender parity in families. This guide, when implemented could help reduce cases of gender disparity in families with its attendant negative consequences.

Recommendations

based on the findings of this study the following recommendations:

1. The media should ensure that some of their programmes address issues that promote gender parity in families
2. Media messages on promotion of gender parity in families should be persuasive and educating enough to achieve the intended aim.
3. The social media should be used to promote gender parity in homes

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