NUTRITIONAL STATUS AND WELLBEING OF OLDER PERSONS IN EDO STATE, NIGERIA

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Abstract

The study examined the nutritional status and wellbeing of older persons in Oredo and the Orhionmwon Local Government Area of Edo State. It was aimed at looking at the relationship between food intake, dietary intake and nutritional status of older persons. A total of one hundred and forty five respondents were used for the study through a mix method approach. The body weight, height and grip strength were measured, and the Mini Nutritional Assessment questionnaire was used to collect the nutritional data. We observed from the findings that 56% of the respondents eat three times daily, and the daily calorie intake from food composition was low due to limited milk use and dairy products. This study concludes that nutritional vulnerability includes good nutritional status and diet quality, and sufficient protein and micronutrient intakes are essential for the health and well-being of older people. The study recommends that the government should strengthen the elderly financial base through a social welfare system and the provision of food banks for older people.

Keywords: *Elderly; Gerontology; Nutritional status; Wellbeing*

ORIGINAL ARTICLE

INTRODUCTION

All over the world, the population of older persons is increasing rapidly. The Department of Economic and Social Affairs (2001) reported that the numbers of people above 60 years of age will more than double from 2013 to 2050. In the past 20 years for instance, an average of 10,000 Americans each day reached the age of 65 years, which is their retirement age (Myers, 2017). In Nigeria, the population of those aged 60 years and above represent a relatively small fraction (which is about 6%) and are expected to increase significantly to about 15% in the year 2015 (Fajemilehin, 2009; Giang and Dfau, 2009).

According to Tuovinen (2013) this demographic change has substantial social and economic consequences, including an increase in public healthcare expenses.

Nutrition among older population is associated with functional ability and quality of life (QoL). In the study of Oldewage-Theron et al. (2009), the nutritional status of the elderly is influenced by the ageing process. Steves et al. (2012) also reported that quality of food and physical activity influences the aging process. According to Mathers (2013), good nutrition leads to healthy aging and longevity. However, older persons experience a lot of changes that can make it more difficult for them to meet their nutritional needs. Some of the changes are physical and psychological that occur with the aging process and have potential adverse impacts upon the nutritional aspects of Health-Related Quality of Life (HRQoL).

Other major issues affecting the wellbeing of older persons are arthritis, stroke, depression and dementia. The medications used in treating these illnesses can

also have a detrimental impact on their nutritional status through loss of appetite, nausea, diarrhoea, etc. These changes potentially influence their well-being. Studies have examined the prevalence of malnutrition in various older populations, but less is known about the nutrient status and wellbeing of older persons in Edo State, which is the focus of this study.

Older persons and nutrition

The aging process can be seen as multidimensional, characterized by lack of diseases and disabilities, and sustained engagement in social and productive activities. The aging of persons can be influenced by genetic and environmental factors. Internationally, Mangino (2014) pointed out that environmental factors may account for as much as 75% of the aging process. While Hickson (2006) said that health issues may also contribute to the development of malnutrition such as oral and dental problems, difficulty in swallowing, gastrointestinal (GI) symptoms, and changing nutritional requirements. Furthermore, unhealthy risk behaviours such as alcohol abuse may restrict food choices, and limits nutrient intake. Lack of knowledge of nutrition and healthy eating as well as old customs and traditions may result in unbalanced and poor-quality-diets.

In Olayiwola and Ketiku (2006), a study on the socio-demographic and nutritional assessment of the Yorubas elderly in Nigeria, observed that only 10% of the males and 4% of the females had nutritionally insufficient food. Another study by Fajemilehin and Odebiyi (2011), focussed on the predictors of elderly persons' quality of life and health practices in Nigeria. They observed that elderly traditional lifestyles, educational background, state of finances, gender and marital stability contributed to positive health practices and quality of life. Alao et al. (2015) conducted a study on Dietary Intake and Nutritional Status of the Elderly in Osun State. The authors used information from a twenty-item questionnaire adapted from Nestle Mini Nutritional Assessment Scale to assess 418 elderly persons on Dietary Intake and Nutritional Status and found out that (9.1%) of the respondents in the study group were undernourished, and 25.9% of the respondents in the same group were overweight. They also asserted that the attendance of geriatric day care centers and income conferred no added benefit to the nutritional status and dietary pattern of the elderly. It is on the basis of these findings that this study intends to look at the Nutritional Status and the Wellbeing of Older Persons in Edo State in order to assess if the elderly in Edo State are experiencing similar situations and also to contribute to the existing literature in gerontology.

MATERIALS AND METHODS

Study area

The areas selected for this study are Oredo and Orhionmwon local government areas of Edo State. In 2006, the estimated elderly population is 194,256 persons aged 60 years and above out of 3,233,366 of the total population (Citi Population, © 2019). The main reason for the choice of Edo State for this study is the rapid migration among men and women. This has become a major issue and is likely to displace the safety net of the older population – which is the extended family system. A cross sectional research design was adopted for this study. This is usually designed to study a phenomenon or an issue by taking a cross section representation of the population at one point in time.

Sampling procedure

The population targeted for this study comprised the male and female older persons in the Oredo local government area – which is more urban, and Orhionmwon local government area – which is more of a rural area. We randomly selected eight wards in both Oredo and Orhionmwon Local Government Area. A multistage sampling technique was then adopted. Oredo has 12 wards (namely the Ogbe, GRA/Etete, Uzebu, Iwehen, Ihogbe/Isekhere, Oreoghehe/Ibiwe/ICE, New Benin, New Benin2, Oredo, Ikpema/Eguadase, Unueru/Ogboka, Ogbelaka/Nekpenekpen and Ibiwe/Iwegie/Ugbague). Of these 12 wards, 4 wards were randomly selected representing the urban setting (after due consideration) of the population, infrastructural development of the wards and other social amenities. Four wards were selected from Orhionmwon representing the rural setting, and these are Aibiokula 1, Igbanko East, Ugboko, Urhonigbo South, Aibiokula 1, Igbanko West, Ugu, Aibi-

okula li, Iyoba, Ukpata, Evboosi, Ugbaka, Urhonigbo North.

To be eligible for inclusion in the study, each targeted respondent was required to have attained the minimum age of 60 years and must have resided in the study area for at least five years continuously. The studied wards are Ogbe, New Benin, Uzebu and Oredo – representing the urban centre, while Aibiokula 1, Ugboko, Ugu and Evboosi represented the rural areas for the study. In each of the selected wards, 20 households were purposively selected using systematic random sampling to represent each ward. A total of 160 households were randomly selected from the eight wards. All respondents used in this study must have attained the age of 60 years or more. This sampling option was considered expedient in the absence of valid and comprehensive sampling frame in each ward. The total number of respondents studied came to 145 respondents.

Instrument for data collection

A structure household questionnaire and in-depth interview methods were used to elicit information from the targeted respondents.

Food records

Food records provide information on the amount of food, preparation, and timing of the meals. All questionnaires filled in at home prior to the assessment were checked and confirmed by a nutritionist. The respondents' body weight, height, and grip strength were measured and Body Mass Index (BMI) calculated. Nutritional status was assessed with the Mini Nutritional Assessment (MNA) and a nutritional anamnesis was developed. The cognition of the respondents was assessed, using the Mini-Mental State Examination (MMSE). They received food measures of 100 ml, 15 ml, and 5 ml to measure the amounts of the foods consumed. After the completed food records were received, the nutritionist checked them and called the respondents to verify the correct amounts, cooking methods, and to confirm that the type of meals was recorded correctly. The food diaries were analysed using the Nutrica 3.11 program developed for this purpose (Rastas et al., 1997). The dietary record method has the potential for providing quantitatively accurate information on foods consumed during the recording period.

Method of data analysis

All data were subjected to statistical analysis using percentages to describe the information gathered. Inferential statistics such as Pearson Product Moment Correlation was also used.

RESULTS

The socio-demographic characteristics of the sampled elderly are shown in Table 1. Of the 145 respondents studied, 58.6% were male and 41.4% were female. 54.5% of the respondents were between the ages of 60 and 69 years old, and 9% of the respondents were above 80 years old. Regarding the marital status, 50% were married and 29% were widowed. Not surprisingly, a high percentage of the respondents are polygamous in nature 70%, as Benin men often take a second or third wife at old age. The majority of the respondents were either illiterate or only had a primary school education (39%). Presently, the respondents' main occupation is farming. Most of them grow cash crops, poultry and engage in small ruminant rearing, while the rest are into mixed farming.

Table 2 below shows the Food Consumption Pattern of the respondents', the food habits of the respondents are actually not too different from each other. 56% eat three times daily, 34% eat between meals and 37.9% skip meals. More than half of the respondent's daily intake is fruits (54.5%), the types of food eaten are mainly tubers especially cassava products such as 'gari', 'fufu' and 'lafun'.

The respondents calorie and nutrients intake are shown in Table 3. Daily calories intake, as calculated from the food composition table, ranged from 685 to 4,000 calories in both sexes. The vitamin and mineral intake varied widely among the respondents. Calcium intakes are generally low. This may be due to the limited use of milk and dairy products. However, milk products are the best source of calcium; they are also a major source of good-quality protein, vitamin D, and iodine. Sufficient calcium combined with vitamin D has beneficial effects in maintaining bone mass and preventing osteoporosis in older people (Tang et al., 2007). Finally, adjustments should be made for the diet of an individual at risk of malnutrition. This may be

Table 1 – Characteristics of the sample population used for the study

Basic characteristics	Details of each variable	Frequency	Percentage
Sex	Male Female	85 60	58.6 41.4
Age group	60–64 65–69 70–74 75–79 >80	41 38 37 16 13	28.3 26.2 25.5 11.0 9.0
Household size	1–5 6–10 >10	78 44 23	54.0 30.0 16.0
Educational attainment	no education primary secondary university	57 42 35 11	39.0 29.0 24.0 8.0
Marital status	single married divorced widowed	3 73 27 42	2.0 50.0 19.0 29.0
Family structure	monogamy polygamy	44 101	30.0 70.0
Religion	christian muslim traditionalist	86 36 23	59.3 24.8 15.9

Table 2 – Food pattern of the respondents

Basic characteristics	Details of each variable	Frequency	Percentage
Number of eating times per day	once/day twice/day thrice more than 3 times irregular	1 20 81 15 28	1.0 14.0 56.0 10.0 19.0
Skip meals	yes no	55 90	37.9 62.1
Eat between meals	yes no	50 95	34.0 66.0
Type of meal skipped	breakfast lunch supper	43 64 38	30.0 44.0 26.0
Daily fruit intake	yes no	79 66	54.5 45.5
Alcohol intake	yes no	42 103	29.0 71.0
Food vendor patronage		80	55.2

done by fortifying served foods with protein and micronutrients.

Table 4 showed significant Pearson chi-square probability for variables such as food consumption pattern 9.780 at $P < 0.001$. The results of the multiple regression procedure on the use of all the health care system against the location of residence revealed itself as not significant (except for self-medication for older persons). The implication of this result is

Table 3 – Calorie and nutrient intake of the respondents per day

	Male		Female	
Variable	***Minimum***	***Maximum***	***Minimum***	***Maximum***
Calorie (Kcal)	909	4000	685.0	6218
Protein (gram)	13	129	8.6	120.3
Vit. A (Re)	22	2618	6.2	2618
Calcium (mg)	166	1130	2.0	1492
Iron (mg)	4	62	2.0	47

Table 4 – Impact of location on the well-being of older persons

Food consumption	**Urban**	**Rural**	**Pearson chi-square**
Yes	120	117	9.780*
No	25	28	
			***T*-value**
Government health care			0.785
Private health care			1.078
Traditional health care			–842
Self-medication			2.953*

Note: * means 1% level of significance in the cross tabulation Pearson chi-square used in the multiple regression findings.

that the residential locations of older persons used in this study seems not to have any significant impact on their well-being in terms of their use of a traditional health care system – even though the various residential locations of the respondents were of the same socio-cultural background.

DISCUSSION

Demographic aspects such as age, sex, household size, educational attainment, religion, the structure of the family and marital status are all factors that may influence the nutritional status of the elderly. Age enables us to rank the elderly into the age group of 60 years and above. It is the age information that allows us to monitor changes in the population and nutrition of older persons. Age is an important factor in recommended dietary allowances. The other important demographic variable is the sex distribution of the respondents. This variable is essential in understanding the current situation of the elderly. The differences in male and female respondents used in this study are minimal. The findings of the present study indicate that 56% of older persons eat 3 times a day, while 19% normally had irregular meals, 34% eat between meals and 37.9% skip meals. More than half of the respondents' daily intake of fruits is 54.5%, while 29% of the respondents consume alcohol.

We also observed low calorie and protein intake by the respondents (as indicated in Table 3). This result is in agreement with the findings of studies conducted by Olayiwola (2007) and Olayiwola and Ketiku (2006). They also observed a low intake of protein and calories by older persons. Another study conducted by the National Health and Nutrition Examination Survey (NHANES) in Olayiwola (2007) also reported low calorie intake among the elderly African Americans in the United States. According to Barr et al. (2003), food and nutrition contribute to one's physiological, psychological and social quality of life – which may due to some factors such as

nutrition, living arrangements and physical activity.

The results on food consumption were positively associated in favour of the urban rather than the rural area, although the differences are insignificant. On the use of health care centres, the older respondents prefer using private health care centres and self-medication than government health care and traditional health care. This implies that respondents residing in rural areas usually resort to self-medication, while respondents in the urban centres utilize the private health care centres – probably due to the under staffing and ill-equipped state of the government health care facilities. The high cost of treatment in most health care centres in urban areas may also be why older persons embarked on self-medication. Finally, lack of care for the elderly has led to reduced food intake and social isolation, with an increased risk of malnutrition.

CONCLUSIONS AND RECOMMENDATIONS

The Edo elderly in Nigeria are nutritionally vulnerable due to a lack of care and low socio-economic conditions. The various conditions attributed to the nutritional vulnerability of older persons include lifestyle, food security, psychological disposition, functional ability, health status, economic situation, and alcoholism. In conclusion, good nutritional status, diet quality, and sufficient protein and micronutrient intake are essential for the health and well-being of older people. Underlying deficiencies in multiple micronutrients should be identified and treated at the earliest possible time. Community care should integrate nutrition as part of normal care in older individuals. Vulnerable older people should be identified and appropriate care should be applied according to individual motivation and capabilities. The government should also strengthen the elderly financial base through the social welfare system and the provision of food banks for the elderly.

Conflict of interests
The author have no conflict of interests to declare.

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