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PREVALENCE AND PATTERNS OF HEALTH STATUS IN AGEING POPULATION: A CROSS – SECTIONAL STUDY OF OLDER ADULTS IN NIGERIA.

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Abstract

Ageing is an inevitable demographic transition that comes with significant implications for health and well being. Understanding the physical health status and healthcare access of elderly population is crucial for policy making and health care planning. However, this paper investigates the proportion of elderly people in Nigeria, their physical health status and the barriers they face in accessing health care services. A cross-sectional study of 500 consenting older adults (65 years and above) were successfully interviewed using structured and pre-tested questionnaire across 6 communities that made of Auchi in south-south region of Nigeria. The study adopted a descriptive statistics using percentage distribution and pie charts, chi-square test on physical health status and multivariate binary logistic regression model was used to predict good health and access to health care and significant associations were found at p-value less than 0.05. Findings revealed that 65.7% were men participants. Highest participants were the age group 65-69 with 36.5%. 46.3% were still living with their spouses. 63.1% were engaged in one work or the other but 26.9% received forty-one thousand naira and above monthly. 66.3% older adults lived several kilometers away from health facilities and 24.0% reported not being healthy at the time of the survey. Chi-square test results indicate elderly persons with tertiary education, those with income higher than 41,000 naira per month and also higher among those with access to health care. Logistic regression model suggests higher education and higher income were significant predictors of good health among elderly persons while higher education, higher income and those with good physical health status were significant predictors of access to health care. Implementing social security systems to alleviate financial burdens and developing specialized healthcare services tailored to the needs of the ageing populace.
 Keywords: : Healthy ageing, older adults, health outcome, binary logistic regression model

Introduction

As Nigeria undergoes a demographic transition, the proportion of its population aged 60 years and above is increasing steadily (UN, 2022). This trend presents both opportunities and challenges, particularly regarding the health and well being of the elderly population. Understanding the prevalence and patterns of health status among older adults is crucial for informing public health strategies, health care delivery and social policy. Despite this importance, Ageing in Nigeria is often accompanied by a high burden of non-communicable diseases, functional disabilities and unmet healthcare needs (Gureje et al, 2008; Ajayi and Akpan, 2019).

The health status of older Nigerians is shaped by a complete interplay of factors including socioeconomic status, gender, geographical location, access to healthcare and

lifestyle behaviours (Adebayo et al, 2017). Evidence from the Ibadan study of Ageing (Gureje, et al 2006) indicates that functional disability is highly prevalent among Nigerian elders, particularly women and those residing in rural areas. Moreover, studies show that self-rated health– a strong predictor of morbidity and mortality- is generally poor among older Nigerians, with significant variations linked to educational level income, and social support (Ajayi and Akpan, 2019; Olatunde and Adisa, 2015). While previous research has provided valuable insights into specific health outcomes such as disability (Gureje, et al 2006) and cognitive impairment (), there is still limited comprehensive data on the overall prevalence and patterns of health status across diverse regions and subgroups of the Nigeria elderly population. In particular, few cross-sectional studies have systematically examined both physical and mental health indicators, functional ability and quality of life in a holistic manner (Ogunniyi and Gureje, 2011)

This gap underscores the need for a cross-sectional study, in the south-south region of Nigeria to assess the prevalence and patterns of health status among elderly Nigerians. By exploring the proportion of elderly people in Nigeria, their physical health status, and the barriers they face in accessing healthcare services. This study, which was part of a larger study, contributes to a better understanding of the ageing experience in Nigeria and support the development of responsive health and social care system for older adults.

The WHO notes unequivocally in the preface of the first World Report on Ageing and Health that "healthy ageing is more than merely the absence of disease" (WHO, 2015).The first WHO Global Strategy and Action Plan on Ageing and Health which was unanimously endorsed by all WHO Member States during the World Health Assembly in May 2016, proposes a new definition of healthy ageing as "the process of developing and maintaining functional ability that enables well-being in older age" (WHO, 2020; WHO, 2021, WHO, 2022)

Materials and Methods
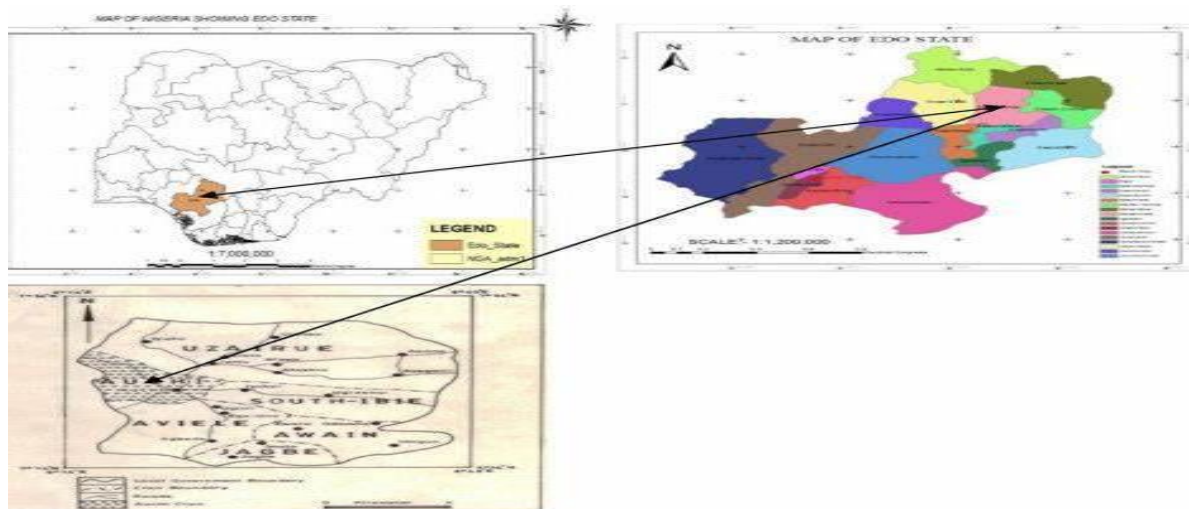
Source: State's Land and Surveys Ministry, Benin- City, Nigeria (2021).

Map of Auchi Community in Edo State, Nigeria

The study population comprises of all older adults of 65 years and above in the four Wards of Auchi community. It was a cross-sectional study of 500 consenting older adults who

have resided in Auchi community for at least one year prior to study. Auchi is an urban centre and the administrative headquarter of the Etsako-West Local Government Council of Edo state, Nigeria. It is situated approximately on Latitude 70^0 4N' and Longitude 60^0 4E' of the Equator. The 193,585 people (2012 estimate from 2006 National Census, NPC, 2011) settled in a valley with rich alluvium deposit. The sample size of 500 for the study was determined using Cochran sample size formula (Cochran, 1963).

Sampling was done using a simple random design. Lottery method was used in selecting older adult from 2300 houses picked as the sampling frame. All the houses were listed and numbered. Each individual older adults selected was contacted and information was sort from them. With a larger sample of 500 sizes, the simple random sampling design ensured high external validity that represents the characteristics of the larger older adult population.

The instrument for the study was a survey questionnaire developed on a nominal scale with a specific focus on indices of healthy ageing in Nigeria and socio-economic characteristics of the older adults under study. The research instrument was translated to Etsako Language, the predominant local dialect (in the community) for ease of communication. It was re-translated to English Language to ensure the original meaning was retained. The research instrument was pre-tested in Afuze (a semi-urban community in Owan-West Local Government Council) which is similar to the study location in terms of geographical location, culture, beliefs and lifestyle of the people. Twenty-five questionnaires were pretested and appropriate amendments were then made after the pre-test (Adeyemi, etal 2022; Adeyemi and Adeyemi-Gidado, 2024).

The data collected were coded and analyzed using statistical package for social science (SPSS version 23) while the research questions guiding the study were answered and tested with descriptive statistics to examine the proportion of socio-economic characteristics of the respondents, using percentage distribution and pie charts. Chi-square test was used on physical health status while multivariate binary logistic regression model was used to predict good health and access to health care. In the end, the results were presented in texts and tables with adjusted odd ratio and the corresponding 95% confidence interval.

Informed oral consents were obtained from the participants before their participation in the study while written permission was sort and approved by the chairman Etsako-West Local Government Council. The permission was given before the commencement of the field survey.

Presentation of Results

The table 1 presented the description of healthy ageing outcomes among older adults in Auchi, Nigeria according to design of this study. From the table, older adults' mean age and standard deviation were 2.31 and ±1.20 years. Highest among them were the age 65-69 years age group with 36.5%. Over half 65.7% were men participants. In all, 46.3% were still living with their spouses. From the survey, only 11.2% of the participants indicated no formal education. Few of them 26.9% were receiving forty-one thousand naira and above monthly.

Currently, over half 66.3% of the participants were not having access to health facilities. Out of the 500 participants surveyed, 64.2% reported good health, 23.4% fair health and 12.4% poor health. Additionally 33.8% had access to health care services.

Table 1: Summary of the Descriptive Analysis on Socio-Economic Characteristics

Univariate Variable Category	Frequency (%)
Age Group	
65 – 69 years	183 (36.2)
70 – 74 years	100 (20.2)
75 – 79 years	97 (19.4)
80$^+$ years	119 (24.0)
Mean $\pm$ SD	2.31 $\pm$ 1.20
Gender	
Men	328 (65.7)
Women	172 (34.3)
Educational Level	
No formal education	56 (11.2)
Quranic education	26 (5.2)
Primary education	132 (26.2)
Secondary education	217 (43.4)
Tertiary education	69 (13.8)
Monthly Income	
Less than ₦20,000	197 (39.3)
₦20,000 – ₦30,000	104 (20.8)
₦31,000 - ₦40,000	65 (13.0)
₦41,000 and above	134 (26.9)
Access to Health Care	
Within walking distance	169 (33.8)
Several kilometres	331 (66.2)
Physical Health Status	
Good	321 (64.2)
Fair	117 (23.4)
Poor	62 (12.4)

Table 2 presents chi-square test on the association between physical health status and socio-demographic/economic variables. With null hypothesis H_0; there is no relationship between physical health status and socio-demographic/economic variables. The proportion of elderly reporting good health was significantly higher among those with tertiary education than other educational level (87.0%, χ^2 = 45.07, P =0.000). Likewise, the proportion of elderly reporting good health was significantly higher among those with income higher than 40,000 naira per month (96.3%, χ^2 = 45.07, P =0.001).

In the same vein, the proportion of elderly reporting good health was significantly higher among those with health care access (66.2%, χ^2 = 45.07, P =0.015).

Table 2: Chi-Square test on Association between Physical Health Status and Socio-Demographic/Economic Variables.

Variable	Physical Health Status				
	Good	Fair	Poor	Total	Chi-Square Test
Age Group 65 – 69 years 70 – 74 years 75 – 79 years 80+					
	113 (67.2)	38 (20.8)	22 (12.0)	173 (100.0)	0.103
	64 (64.0)	23 (23.0)	13 (13.0)	100 (100.0)	
	61 (62.9)	24 (24.7)	12 (12.4)	97 (100.0)	
	73 (60.8)	32 (26.7)	15 (12.5)	120 (100.0)	
Gender Male Female					
	231 (70.2)	67 (20.4)	31 (9.4)	329 (100.0)	0.092
	90 (52.6)	50 (29.2)	31 (18.1)	171 (100.0)	
Education No education Quranic education Primary education Secondary education Tertiary education					
	35 (62.5)	12 (4.4)	9 (16.1)	56 (100.0)	0.000
	14 (53.8)	4 (15.4)	8 (30.8)	26 (100.0)	
	74 (56.1)	35 (26.5)	23 (17.4)	132 (100.0)	
	138 (63.6)	57 (26.3)	22 (10.0)	217 (100.0)	
	60 (87.0)	9 (13.0)	0 (0.0)	69 (100.0)	
Income < ₦20,000 ₦20,000 – ₦30,000 ₦31,000 – ₦40,000 ₦41,000 and above					
	104 (52.8)	54 (27.4)	39 (19.8)	197 (100.0)	0.001
	60 (57.7)	21 (20.2)	23 (22.1)	104 (100.0)	
	27 (42.2)	37 (57.8)	0 (0.0)	64 (100.0)	
	130 (96.3)	5 (3.7)	0 (0.0)	135 (100.0)	
Health Care Access Yes No					
	219 (66.2)	75 (22.7)	37 (11.2)	331 (100.0)	0.015
	102 (60.4)	42 (24.9)	25 (14.0)	169 (100.0)	

Chi-Square value (χ^2) = 45.07, $p < 0.05$

Pie charts illustrate the proportion of elderly persons as it relates to physical health status and access to health care. Older adults' response to physical health status as shown in figure 1, 64.2% reported good health while 12.4% reported poor health. 23.4% were classified as having fairly physical health. Figure 2 revealed older adults' responses to access to health care, 33.8% reported having access to health care and more than half of them 66.2% were reported no having access to health care.
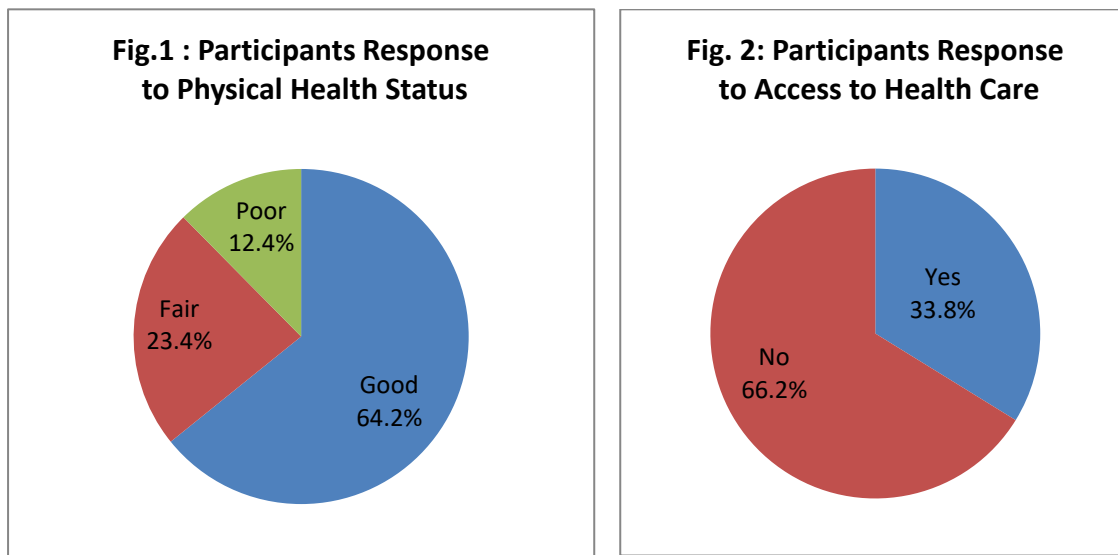
Fig.1 : Participants Response to Physical Health Status

Fig. 2: Participants Response to Access to Health Care

Table 3 (a): Logistic Regression Predicting Physical Health Status

Multivariate Variable	Odd Ratio [β]	P-Value Sign	95% CI for Exp [β]	
			Lower	Upper
Age	0.063	0.072	1.962	13.685
Gender	0.364	0.065	0.379	1.252
Education	2.655	0.013	0.948	7.436
Income	2.750	0.001	1.965	16.822

Statistically Significant at P= 0.05 level; β – odd ratio, P-Value– Sign

Table 3a indicates the logistic regression predicting good health among socio-demographic/economic variables. Age group was not a significant predictor of good health among elderly persons (OR =0.043, P = 0.072). Likewise, gender was not a significant predictor of good heath among elderly persons but higher education are 2.7 times more likely to report good health compare to those without higher education. i.e higher education was a significant predictor of good health among elderly persons (OR =2.655, P = 0.013).

In the same vein, elderly individuals with higher income are 2.8 times more likely to report good health compare to those without higher income. Income was a significant predictor of good health among elderly persons (OR = 2.750, P = 0.001).

Table 3 (b): Logistic Regression Predicting Physical Health Care Access

Multivariate Variable	Odd Ratio [β]	P-Value Sign	95% CI for Exp [β]	
			Lower	Upper
Age	0.043	0.583	0.891	1.222
Gender	-0.152	0.768	0.394	0.906
Education	1.422	0.004	0.878	1.760
Income	1.901	0.013	0.970	2.346
Physical Health Status	1.690	0.005	0.619	1.907

Statistically Significant at P 0.05 level; β – odd ratio, P-Value– Sign

Table 3b indicates the logistic regression predicting access to health care among socio-demographic/economic variables. Age group was not a significant predictor to access to health care among elderly persons. Also, elderly individuals with higher education are 1.4 times more likely to report access to health care compare to those without higher education, i.e higher education was a significant predictor of access to health care among elderly persons (OR =1.422, P = 0.004).

In the same vein, elderly individuals with higher income are 1.9 times more likely to report access to health care compare to those without higher income. i.e higher income was a significant predictor of access to health care among elderly people (OR =1.901, P = 0.013). Again, elderly individuals with good physical health status are 1.7 times more likely to report access to health care compare to those without good physical health status. i.e good physical health status was a significant predictor of access to health care among elderly persons (OR =1.690, P = 0.005).

Age and gender were not statistically significant in the model, suggesting that functional health is more influenced by socio-economic factors.

Conclusion

Addressing the physical health status and health care access in Nigeria is crucial. Elderly population in Nigeria requires comprehensive policy interventions. This should focus on improving healthcare infrastructures especially in communities, implementing social security systems to alleviate financial burdens and developing specialized healthcare services tailored to the needs of the ageing populace.

References

Adebayo, S. O. Taiwo, O, Durodola, A, Ogah, C (2017). Quality of life in heart failure: A review. Jour, of Cardiology 14(1) Pp1-8 Jul.

Adeyemi, T. O, Ntoimo, L.F.C and Odusina, E. K (2022). Socio-economic disparities and their impact on healthy ageing: A study of older adults in Nigeria. International Conference on research and Development, Vol. 11. No. 1

Adeyemi, T. O and Adeyemi-Gidado S. A (2024). Prevalence and Pattern of healthy Status in Ageing Population: A Cross-sectional study of older adult in Nigeria. International Conference on research and Development, Vol. 3. No. 4

Ajayi, A. I and Akpan, W (2019). Determinants of self rated health and disability among older adults in South Africa and Nigeria. Evidence from WHO SAGE. BMC Geriatrics. 19(1), 310.

Cochran, W. G. (1963). Sampling Techniques, 2nd Ed., New York: John Wiley and Sons, Inc.

Gureje, O, Kola, L, Afolabi, E, Olley, B. O (2008). Determinants of quality of life of elderly Nigerians: results from the Ibadan Study of Ageing. Afr J Med Med Sci. 2008 September ;37(3): 239–247.

Gureje, O and Ogunniyi, A. (2006). Incidence of and risk factors for dementia in the Ibadan study of aging. Afr J Med Med Sci. May;59(5):869-74.

Ministry of Health, Federal [Nigeria]. 2017.

National Population Commission (NPC)[Nigeria] and ICF International 2019.

Ogunniyi, A, Gureje, O, Kola, L, Abiona, T (2011). Incidence of and risk factors for dementia in the Ibadan study of aging. Int J Ment Health Syst. Mar 27;12:11.

Olatunde, O and Adisa, B. O (2015). Lifestyle and well-being of elderly people in selected communities in Osun State, Nigeria. International Journal of Humanities and Social Science. 5(4), 130-137.

State Ministry of Land and Surveys, Benin- city, Nigeria (2021).

WHO. (2021). World Health Organization. Decade of Health Ageing (2021-2030). Available at http://www.who.Int/initiatives/decade-of-healthy ageing.

WHO. (2020). World Health Organization. World Health Organization. Global Report on Falls Prevention in Older Age.

WHO. (2022). World Health Organization. Global Report on Falls Prevention in Older Age. Retrieved from http://www.who.int/ageing/publications/Falls_prevention7March.pdf.

WHO. (2019). World Health Organization. Statistics 2019. Monitoring health for the SDGs.

World Bank (2020). World Development Report 2020. Global value chains in a Post-COVID- 9. World Bank.

Note: The spelling and definition of 'ageing' in this study is according to the style of the World Health Organization (WHO).

Conflicts of Interest: None.