

Morbidity Patterns of Elderly Patients Attending the General Out-Patient Clinic of a Tertiary Centre in North-Central – Nigeria

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Abstract

The needs and problems of the elderly vary significantly because of the elderly socio-demographic profile. Hence, this study delineated the common health conditions affecting the elderly and its associated sociodemographic factors which may have important implications in planning for various health care delivery services for the elderly now and in the future. Cross sectional retrospective study of over 12 months, January 2018 - December 2018. Inclusion criteria: All elderly patients aged ≥ 60 years seen at the GOPC within that period (Jan 2018 to Dec 2018). Information that was used includes; sociodemographic data and final diagnosis made within the period of study. The sociodemographic characteristics of the study population showed female preponderance and 55.6% of the population falling between 60 – 69 years of age and only 22.5% were retired, the distribution of morbidities among 333 elderly patients who presented at the GOPC over a period of one year. Majority 236 (71%) of the study participants had multiple morbidities while 97 (29%) had single morbidities. The cardiovascular system was the most affected system with 227 of the study population followed by the musculoskeletal system 90 and 84 had metabolic derangement. The least affected system was the Ears, Nose and Throat with 13 persons. Also, a multivariate analysis, there was no statistical difference between the sociodemographic characteristics and the morbidities (single and multiple). Therefore, socio-demographic characteristics and multi-morbidity for urban location = 1.147(C. I=0.816-1.61 with significant p-value at <0.05).

Keywords: Morbidity, elderly patients, General Out-Patient Clinic.

Introduction

The world's population is aging: virtually every country in the world is experiencing growth in the number, and proportion of older persons in their population.¹³ The increasing share of older persons in the population is poised to become one of the most significant social transformations of the twenty-first century with implications for nearly all sectors of society, including labor and financial markets, the demand for goods and services, such as housing, transportation, and social protection, as well as family structures and intergenerational ties.¹³ Globally, the number of older persons is growing faster than the number of people in any other age group. As a result, the share of older persons in the total population is increasing virtually everywhere. While population aging is

a global phenomenon, the aging process is more advanced in some regions than in others, having begun more than a century ago in countries that developed earlier, and getting underway only recently in many countries where the development process has occurred later. Globally there are it is estimated that 605 million people aged 60 years and above which is expected to be approximately 1.2 billion by 2025.¹³ In 2015, one in eight people worldwide were aged 60 years or over. By 2030, older persons are projected to account for one in six people globally. By the middle of the twenty-first century, one in every five people will be aged 60 years or over. By 2030, older persons will outnumber children aged 0-9 years (1.4 billion versus 1.3 billion); by 2050, there will be more people aged 60 years or over than adolescents and youth aged 10-24 years (2.1

billion versus 2.0 billion).¹³ From the morbidity point of view, almost 50 percent of the elderly have chronic diseases.⁹ A major component of the burden of illness for the elderly derives from prevalent chronic disease.^{9,3} This poses a greater responsibility on the health services, especially in developing countries where there is a greater strain on available health infrastructure.¹⁴ The contribution of elderly populations to demographic figures are increasing day by day. Increasing problems of health care, psycho-social, personal and socioeconomic factors associated with the elderly further overwhelms this. Old age is not a disease in itself, but the elderly person is vulnerable to long-term diseases of insidious onset such as cardiovascular illness, cancers, diabetes, musculoskeletal and mental illnesses.⁵ they have multiple symptoms due to decline of various body functions. The fact that more and more people are reaching their older adulthood has resulted in a change in the disease pattern such that chronic medical conditions have become prominent also in low-income populations.¹⁰ Chronic health conditions are now common in elderly persons, and the prevalence of multiple chronic conditions are expected to increase.^{6,5} Chronic diseases, by nature will accumulate with aging and present as multiple morbidities.⁵ Studies have demonstrated that the elderly present with multiple morbidity and under-report their health problems, which they often attribute to aging.^{9,6,10} Adebuseye et al. reported that the most prevalent health problems of the elderly were chronic medical illnesses like hypertension, cataracts, osteoarthritis and psychosomatic disorders.⁹ One approach to determine the quantitative evaluation of the health status of elderly persons is to count the number of medical conditions they are affected by.⁵ A chief advantage of this procedure is simplicity, especially when numerous diseases are evaluated. Obviously, the prevalence of multi-morbidity largely depends on the number of diseases, and the diagnostic criteria used. Generally, the higher the number of diseases studied, the higher the occurrence of multi-morbidity.⁵ the aim of the study is to determine patterns of morbidity among elderly patients attending the GOPC. Justification of the study; the pace of world population aging is accelerating. Projections indicate that the proportion aged 60 years or over globally will

increase.¹³ By 2030, older persons are expected to account for more than 25 percent of the populations in Europe and in Northern America, 20 percent in Oceania, 17 percent in Asia and in Latin America and the Caribbean, and 6 percent in Africa.¹³ The pace of population aging in many developing countries today is substantially faster than occurred in developed countries in the past. Consequently, today's developing countries must adapt much more quickly to aging populations and often at much lower levels of national income compared to the experience of countries that developed much earlier. The needs and problems of the elderly vary significantly based on their socio-demographic profile. Therefore, this study is aimed at delineating the common health conditions affecting the elderly and its associated sociodemographic factors which may have important implications in planning for various health care delivery services for the elderly now and in the future.

Methodology

Study area

General Out-Patient Clinic of the UATH Gwagwalada, Abuja.

Study design

A cross sectional retrospective study of over 12 months January to December 2018.

Inclusion criteria

All elderly patients aged ≥ 60 years seen at the GOPC within that period (January to December 2018)

Exclusion criteria

No records would be excluded as all health records of patients who presented at the facility within the study period will be included in the study.

Records of all elderly patients aged ≥ 60 seen in the GOPC within the past one year were retrieved from the Medical Health Records Department. Information used include; sociodemographic data (age, occupation, and marital status) of the patients, presenting complaints, blood pressure, pulse rate and physical examination findings at first visits, diagnosis made within the period of study and other comorbidities.

Data Analysis

The data would be entered in a Microsoft excel sheet. The variables would be defined and assigned value labels. The data would be encrypted and kept in a pass worded computer that only the researcher has access to. Statistical Package for the Social Sciences (SPSS) version 22 software would be used for analysis of data. Descriptive statistic in form of tables would be used to represent the socio demographic data. Continuous variables would be expressed as means, ranges or standard deviation while Categorical variables would be expressed as proportions and percentages. T test will be used to compare the means, while chi squares will be used to test association and level of significance

between the two groups. P- Value of less than 0.05 will be considered statistically significant.

Ethical approval was obtained from the Health Research Ethics Committee of the UATH Gwagwalada. Since this is a retrospective research, the information was obtained from the patients' record at the Health Information Department, hence informed consent, privacy and confidentiality was not obtained from the individual patients.

Results

The sociodemographic characteristics of the study population showed a female preponderance and 55.6% of the population falling between 60 – 69 years of age and only 22.5% were retired.

Table 1. Sociodemographic Characteristics of the study population

Variable		Frequency	Percent
Sex	Male	139	41.7
	Female	194	58.3
	Total	333	100
Age Group	60-69 years	185	55.6
	70-79 years	115	34.5
	80-89 years	33	9.9
	Total	333	100
Residential Setting	Rural	181	54.4
	Urban	152	45.6
	Total	333	100
Religion	Islam	94	28.2
	Christianity	239	71.8
	Total	333	100
Occupation	Skilled	67	20.1
	Unskilled	183	55.0
	Professional	8	2.4
	Retired	75	22.5
	Total	333	100

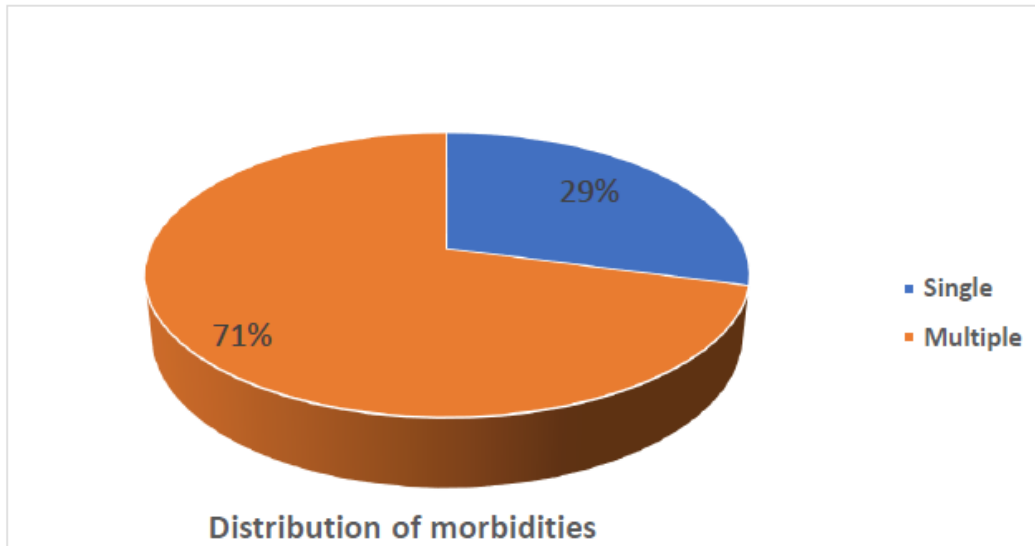


Figure1. The above shows the distribution of morbidities among 333 elderly patients who presented at the GOPC over a period of one year. Majority 236 (71%) of the study participants had multiple morbidities while 97(29%) had single morbidities

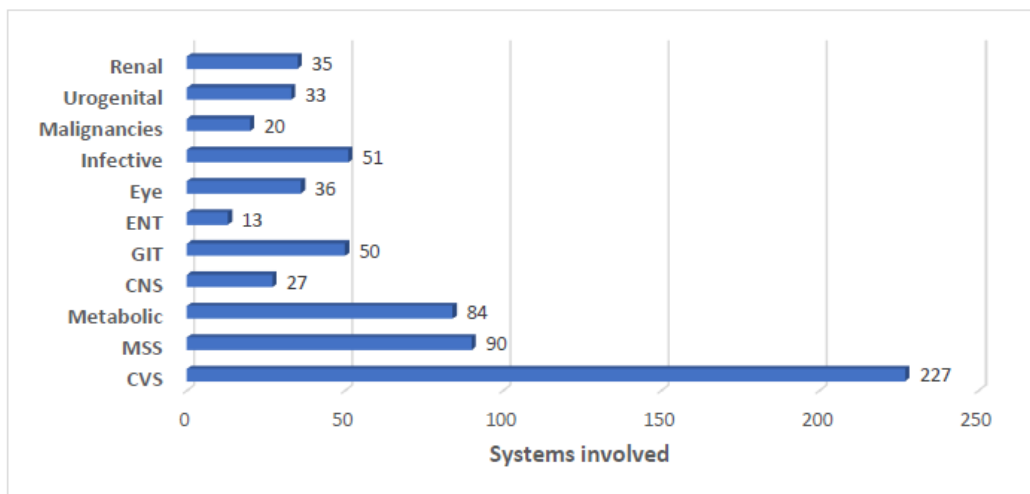


Figure 2. Distribution of morbidities according to systems

The cardiovascular system was the most affected system with 227 of the study population followed by the musculoskeletal system 90 and 84 had metabolic derangement. The least affected system was the Ears Nose and Throat with 13 persons.

In a multivariate analysis, there was no statistical difference between the sociodemographic characteristics and the morbidities (single and multiple).

Table 2. Socio-demographic characteristics and multi-morbidity

Variables	Single n=97(%)	Multiple n=236(%)	Total n=333(%)	χ^2 value	P-Value
Gender					
Male	37(26.6)	102(73.4)	139(100.0)	0.728	0.393
Female	60(30.9)	134(69.1)	194(100.0)		
OR for male gender = 1.062(C. I = 0.926-1.219)					
Age grouping					
60-69 years	54(29.2)	131(70.8)	185(100.0)	0.372	0.828
70-79 years	32(27.8)	83(72.2)	115(100.0)		
80-89 years	11(33.3)	22(66.7)	33(100.0)		
Religion					
Islam	24(25.5)	70(74.5)	94(100.0)	0.821	0.365
Christianity	73(30.5)	166(69.5)	239(100.0)		
Marital status					
Single	2(25.0)	6(75.0)	8(100.0)	2.824	0.244
Married	83(27.9)	214(72.1)	297(100.0)		
Divorced/Widowed	12(42.9)	16(57.1)	28(100.0)		
Occupation					
Skilled	22(32.8)	45(67.2)	67(100.0)	1.762	0.623
Unskilled	48(26.2)	135(73.8)	183(100.0)		
Professional	3(37.5)	5(62.5)	8(100.0)		
Retired	24(32.0)	51(68.0)	75(100.0)		

*p-value significant at <0.05.

Distribution of morbidity by location of patients

Variables	Single n=97(%)	Multiple n=236(%)	Total n=333(%)	χ^2 value	P-Value
Location					
Rural	56(30.9)	125(69.1)	181(100.0)	0.629	0.428
Urban	41(27.0)	111(73.0)	152(100.0)		
OR for urban location = 1.147(C. I=0.816-1.612)					

*p-value significant at <0.05.

Discussion

This study is a cross-sectional study to show the pattern of morbidity among geriatric patients attending the general out-patient clinic in a tertiary hospital in North Central Nigeria. Majority of the patients analyzed were female (n = 194/333) as seen in Table 1; 55.6% of subjects were in the age group 60 – 69 years, and 54.4% resided in urban areas. This pattern was seen in a larger hospital-based study in South-west Nigeria⁶. Abdulraheem and others in a similar study showed that majority of their patients dwelt in semi-urban areas; the trend of a preponderance of urban and semi-urban dwelling patients compared to those living in rural areas may depict a better health-seeking behavior of patients in urban areas¹¹.

Fifty-five percent are unskilled workers or had engaged in one form of unskilled job for a living, and 22.5% had retired from government service. The retirement age in Nigeria is generally pegged at 60 years but the high proportion of unskilled workers (55%) depicts a low socio-economic status among elderly patients in this study. The retired and unskilled workers are dependent on others for livelihood thus reflecting a high dependency ratio seen in many developing countries. This trend is what was seen in studies conducted in other parts of Nigeria^{6, 13}. A small proportion of subjects (n = 8) were in some form of professional employment, this could be accounted for by University lecturers who happen to have a higher retirement age, and other professionals in private practice (lawyers, accountants etc.).

Figure 1 shows that the prevalence of multi-morbidity in study subjects is 71%; figure 2 highlights the pattern of morbidity among the study participants. Conditions affecting the cardiovascular system were highest with 227 patients followed by musculo-skeletal system and metabolic diseases in 94 and 80 patients respectively. Disease of the ear, nose and throat were the least common (n= 13). These figures show that the great majority of elderly patients present with two or more morbidities and diseases are perhaps the most important causes of disease burden in elderly patients. This high prevalence of multi-morbidity among elderly patients was seen in several hospital-based studies in Nigeria ^{6, 10, 14}. However, two community-based studies in Asia showed much lower prevalence of multi-morbidity ^{11, 13}. What was strikingly common to all studies was that cardiovascular and musculoskeletal conditions were among the commonest causes of morbidity in this age group.

An analysis of the association between socio-demographic factors and multi-morbidities was done as seen in Table 2. Multi-morbidity occurred more in males (73.4% of males; OR = 1.062; CI = 0.926-1.219), age 70 – 79 years (72.2%), unskilled workers (73.8%) and urban dwellers (73% of patients living in urban areas). The p values show that these associations were not statistically significant though the relatively small sample size could account for this. A larger study by Abdulraheem and colleagues showed that age and sex are independent risks factors for multi-morbidity ¹⁴. A study in Indonesia revealed that level of education and employment status was significantly associated with multi-morbidity ¹¹. The two major religion that is, Islam 94(28.2%) and Christianity 239 (71.8%) did not have any association to morbidity patterns of elderly patients. According to Adams et. al⁴ religiosity tends to help older people to cope with physical and social losses.⁴

Conclusion

Multiple morbidities are common among elderly patients, most of these are chronic conditions thus exerting hugely on quality of life, health financing and health policy planning. Therefore, larger multicenter and preferably community-based research is required especially in the developing world where this population is rising rapidly. However, the gaps in knowledge

found from the literature review will be filled by this study in delineating the common health conditions affecting the elderly and its associated sociodemographic factors which may have important implications in planning for various health care delivery services for the elderly presently and in the future.

However, the contributions of elderly populations to demographic figures are increasing day by day. Increasing problems of health care, psycho-social, personal and socioeconomic factors associated with the elderly further overwhelms this and they have being side-lined in governance budgeting, hence it is expected that, this study will inform the appropriate budgeting and planning in the community and this study will also assist in achieving that appropriately.

Competing Interest

There is no competing interest.

Authors Contribution

- Conception or design of the work- BND, RNR
- Data collection- BND, RNR, ACO, AOV
- Data analysis and interpretation- IA, RNR
- Drafting the article- RNR, AOV, ACO
- Critical revision of the article- All authors
- Final approval of the version to be published- All authors

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