Original Article

Patterns of Chronic Medical Conditions and Depressive Illness Distribution Among Elderly Patients in a Community of South-South Nigeria

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ABSTRACT

Aging is a natural process with physical, organic and psychological changes. The aged are faced with challenges of disability, functional limitation, chronic diseases such as diabetes mellitus, hypertension and mental health disorders. Depression is not a normal part of aging; it is a true and treatable medical condition. Healthcare providers may mistake an older adult's symptoms of depression as just a natural reaction to illness or the life changes that may occur as they age and therefore not see the depression as something to be treated. The aim of this study was to determine the relationship between chronic medical conditions and depression in a community in South-South Nigeria. This study was a hospital based descriptive cross-sectional study that was conducted in Eku Baptist Hospital in Delta State. The study instruments were Questionnaires which included socio-demographic variable, a validated tool (Geriatric Depression Scale SF-15), medical history and physical examination. Data was collated and analyzed using the Statistical Package for Social Sciences (SPSS-21). Test of association was done using Pearson's chi square (or Fisher's exact test). The level of significance was set at 5% ($p<0.05$). The participants were largely females (64.1%) and their mean age was 69.7 ± 6.7 years. The data showed a higher proportion 82(50.9%) of respondents with a chronic medical condition had depression and 79(49.1%) had no depression compared to respondents without chronic medical condition, of which 20(44.9%) had depression and 25(55.6%) had no depression. The relationship between chronic medical condition and depression status of respondents was however not statistically significant ($p=0.501$). This study showed that chronic medical conditions in the elderly are common and many of these individuals were depressed as well.

Keywords: Body mass index, Chronic medical conditions, Depression, Elderly, Patients.

INTRODUCTION

Aging presents with different organic changes that result in characteristic affective and behavioural patterns usually viewed as normal aging process.[1] One of the major concerns of population aging in Nigeria and Sub-Saharan Africa as a whole is the vulnerability of the elderly to poor health outcomes.[2] They are faced with challenges of disability, functional limitation, chronic diseases such as diabetes mellitus, hypertension and mental health disorders.[1]

Mental health is a major public health challenge. Approximately 15% of adults aged 60 years and above suffer mental health disorders, of which depression is the commonest.[3] Depression is one of the commonest mental health disorders in the elderly presenting in primary care setting, yet only a small percentage of sufferers are recognized and treated.[4]

This is chiefly due to the masking of depressive symptoms by somatic complaints which in some cases could be attributed to somatisation disorders, or cognitive impairment that the elderly patients may have.

At the biological level, ageing results from the impact of the accumulation of a wide variety of molecular and cellular damage over time. This leads to a gradual decrease in physical and mental capacity, a growing risk of disease, and ultimately, death. But these changes are neither linear nor consistent, and they are only loosely associated with a person's age in years.[5]

The aging process currently encompasses more than a generation and exceeds three decades. The common framework for describing different older adult population is "young-old", "old", and "old-old." The "young-old" are people in their 60s and early 70s who are active and healthy. The "old" are people in their 70s and 80s who have chronic illnesses and are slowing down with some bothersome symptoms. The "old-old" or "oldest-old" are often sick, disabled, and perhaps even nearing death.[6]Morbidity patterns vary with age, and chronic non communicable diseases become prominent causes of morbidities and mortalities as people grow older.[7] These non-communicable diseases are now the world's leading causes of death, and their burden is increasing rapidly.[7] The majority of the health burden in developed countries is attributable to chronic conditions, and a similar trend is emerging in developing nations.[8]Chronic disease conditions tend to cluster and people with one chronic condition are more likely to have other types of chronic conditions.[10]The co-occurrence of two or more chronic disease conditions in the same person over a specific period is termed multimorbidity.[9]

Some of the variations in older people's health are genetic, much is due to people's physical and social environments including their homes, neighbourhoods, communities as well as their personal characteristics such as their sex, ethnicity, or socioeconomic status.[5]Environments have an important influence on the development and maintenance of healthy behaviours. Supportive environments enable people to do what is important to them, despite losses in capacity. Maintaining healthy behaviours throughout life, contribute to reducing the risk of non-communicable diseases and improving physical and mental capacity.[5]

As the number of aged in our population is increasing, many of their traditional life sustaining and fostering influences have been eroding. Changes in society seem to leave them no meaningful social role either within the family or in the community.[10]Aging process brings many social, biological and psychological changes to elderly, which may appear slowly in years or decades.[11] These changes can result in several mental health problems, thus posing a challenge to effective delivery of healthcare services for the elderly.[12]

To this end, the need for early detection, proper diagnosis and management of any form of mental ill health at every level of health care delivery in elderly cannot be overemphasized as this population is increasing globally.

Depression is not a normal part of aging process, it is rather a true and treatable medical condition, but elderly are still at an increased risk for experiencing depression.[13] Healthcare providers may mistake an older adult's symptoms of depression as just a natural reaction to illness or the life changes that may occur as they age and therefore not see the depression as something to be treated. Elderly people themselves often share this belief and do not seek help because they do not understand that they could feel better with appropriate treatment.[13] The most common mental health problem in the elderly, depression exerts a profoundly deleterious effect on patients, their families, and their communities.[13] Elderly persons often suffer from depression without anyone around them noticing. Depression among the aged may often go undiagnosed, especially in rural areas where symptoms of mental illnesses are entangled with myths, superstitions, taboos and ignorance. Moreover, psychiatric illness causes considerable stigma that strip them off their dignity and results in isolation and hopelessness.[14]

The mental health of the elderly has been investigated in various parts of Nigeria, mainly in

the urban areas and only a few has been done in the rural areas and we do not have sufficient local data in Eku Baptist Hospital to establish this fact. The aim of this study is to determine the proportion of the elderly attending the GOPC of EBH with depression, its relationship with clinical condition for the purpose of improving the care of the elderly patients generally.

MATERIALS AND METHODS

The study was conducted at Eku Baptist Hospital (EBH), Eku, Delta state. EBH is a secondary health facility that is strategically located in Ethiope East Local Government Area (LGA) of Delta state. Delta state is located in the Niger Delta region, the South-South geopolitical zone of Nigeria. It shares common boundaries with Edo state on the North and West, Anambra state on the East and Bayelsa state on the south.

The hospital serves the people of Eku, nearby towns in the state and neighbouring states. The community is inhabited by the Urhobo ethnic group mainly and people from other ethnic groups are in a minority. The people engage mostly in subsistence farming, fishing and trading.

The hospital is a renowned centre for Family Medicine training and practice; The Family Medicine clinic/ General Outpatients Clinic represent the primary care unit of the hospital. All patients except in emergencies are expected to pass through it for evaluation and assessment.

The elderly patients aged 60 years and above attending the General Out-patient Clinic (GOPC) of EBH, who met the inclusion criteria were recruited into the study. The study was conducted for a period of three months (August, 2019 to October 2019).and was a descriptive cross sectional study.

Leslie Kish's formula was used to determine the sample size: giving a total of 206 with a sampling interval of 3. The Study Instruments were : Questionnaires, Combined weight scale and Stadiometer, (ZT-160) made by Harris Medical England, Lithman® Classic II S.E. Stethoscope (CE 2201) made by 3M Health Care, USA, Mercury Sphygmomanometer (MK.3) made by Accoson Surgical Limited, England. Interviewer administered

questionnaire was used. It comprised of five sections which includes socio-demographic variable, validated tools (Geriatric Depression Scale SF-15), medical history and physical examination.

The Geriatric Depression Scale (GDS-15) developed by Yesavage et al is a screening instrument for depression in the elderly.[15] It is a fifteen-item validated screening instrument for depression in the elderly. The GDS-15 yields a sensitivity of 92% and a specificity of 81% using a cut off of 5. The GDS-15-item was used in this study to screen for depression and respondents answered each question in a yes and no format, one point for each of "yes" answers and zero for " no". It was scored from 0 to 15. The severity was divided into the following categories: 0-5 no depression (normal), 6-10 (moderate depression) and 11-15 (severe depression).

Medical History was obtained from self-reported health related problems of the respondents.

The collected data was sorted, coded and entered into the computer for analysis using the

Version 21 software packages of the Statistical Package for Social Sciences (SPSS-21). Data was calculated in means and percentages and chi square for categorical variables. Bivariate analysis was performed to determine associations, while multivariate logistic regression was used to identify factors that significantly predict depression in the subjects at 5% level of significance ($P \leq 0.05$). Descriptive data was presented using frequency tables, graphs and charts.

Ethical Considerations

Permission to undertake the study was sought from the Head of Department of Family Medicine, EBH. The approval to undertake the study was obtained from Ethical Review Committee of Eku Baptist Hospital, Eku and Faculty of Family Medicine, West African College of Physicians.

Informed consent was obtained from eligible subjects before administration of questionnaire and examination. Privacy and confidentiality of the respondents were guaranteed by anonymity of respondents.

RESULTS

A total of 206 participants were analyzed, the subjects were 60 years and above. Thirteen (13) subjects were interviewed in English language, one hundred and eighty six (186) in Pidgin English and seven (7) were interviewed in Urhobo language.

The socio-demographic characteristics of the study subjects is shown in Table 1. The majority of study population were in the age range of 60 to 69 years old. Almost three-fifth, 119(57.8%) of the respondents were between the ages 60-69 years while nine (4.4%) respondents were 90 years and above. The mean (SD) age of respondents was 69.7 ± 6.7 years. The male to female ratio of the study subjects was 1:1.8.

Baseline Clinical Status of the Study Subjects was shown in Table 2. It depicted the baseline clinical status of the study subjects, the mean (sd) weight (Kg) of the respondents was 66.6 (±14.3). The mean (sd) height (Metres) of the respondents was 1.6 (±0.07); the mean (sd) Systolic blood pressure was 125.7 ± (21.3) mmHg and the mean(sd) Diastolic blood pressure was 79.7 (±12.3) mmHg. Thirteen (6.3%) respondents were underweight while forty-two (20.4%) were obese.

Presence of Chronic Medical Conditions in the Study Subjects was shown in Table 3. The majority of the respondents 161(78.2%) had one or more chronic diseases. Seventy six (36.9%) respondents had one chronic disease, eighty five (41.3%) had two or more chronic diseases and 45(21.8%) had no chronic diseases.

Distribution of Chronic Medical Diseases according to Systems as shown in figure 1 shows that some respondents had multiple system involvement and gave multiple responses, with a total of 285 responses. The cardiovascular system was the most affected system with 93(32.6%) of the study subjects affected followed by the musculoskeletal system 66(23.2%) and 32(11.2%) for gastrointestinal system. The least occurring chronic disease was malignancy with four (1.4%) reported.

The Proportion of study subjects with depression is shown in Figure 2. Approximately half of the subjects,102 (49.5%) had depressive symptoms while 104(50.5%) had no depressive symptoms.

Relationship between chronic medical condition and depression is shown in Figure 3.The data showed a higher proportion 82(50.9%) of respondents with a chronic medical condition had depression and 79(49.1%) had no depression. Among the respondents without chronic medical condition, 20(44.4%) had depression and 25(55.6%) had no depression. The relationship between chronic medical condition and depression status of respondents was however not statistically significant (p=0.501).

Table 1: Age and Sex distribution of the study subjects

Variable	Frequency (n =206)	Percentage (%)
Age group (years)		
60 – 69	119	57.8
70 – 79	59	28.6
80 – 89	19	9.2
>90	9	4.4
Mean ± sd age (years)	69.7 ± 6.7	
Sex		
Female	132	64.1
Male	74	35.9

Table 2: Baseline clinical status of study population

Parameters	Mean	(±) Standard deviation
Weight (Kg)	66.6	14.3
Height (M)	1.6	0.07
Systolic Blood pressure (mmHg)	125.7	21.3
Diastolic blood pressure (mmHg)	79.7	12.3

BMI category	Frequency (n=206)	Percentage (%)
Underweight	13	6.3
Normal weight	86	41.7
Overweight	65	31.6
Obese	42	20.4

Table 3: Presence of chronic medical conditions among study subjects

Variables	Frequency (n=206)	Percentage (%)
Chronic disease		
Yes	161	78.2
No	45	21.8
Number of chronic diseases		
None	45	21.8
One	76	36.9
Two or more	85	41.3
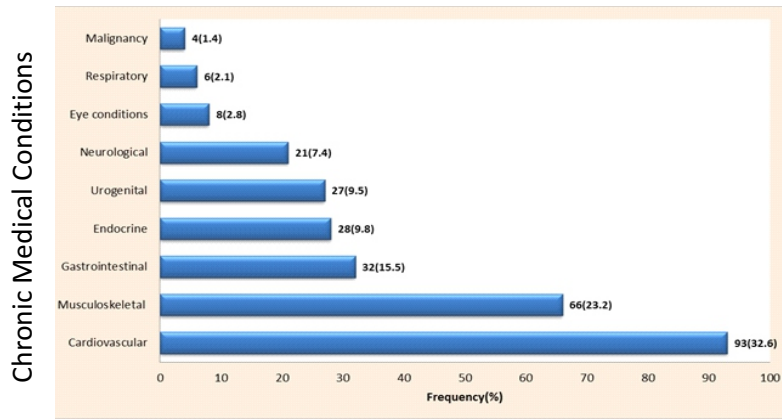
*Multiple responses

Figure 1. Chronic medical conditions among the study subjects

Key:

[Depression Present]   [Depression Absent]
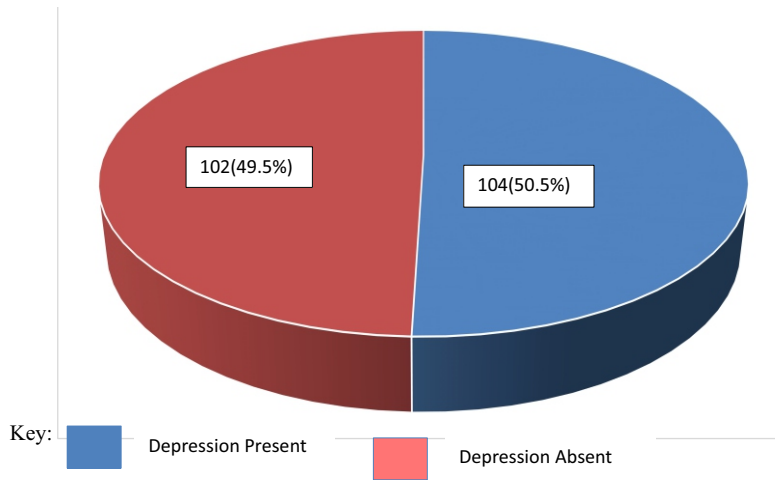
Figure 2. Rate of Depressive illness among the study subjects

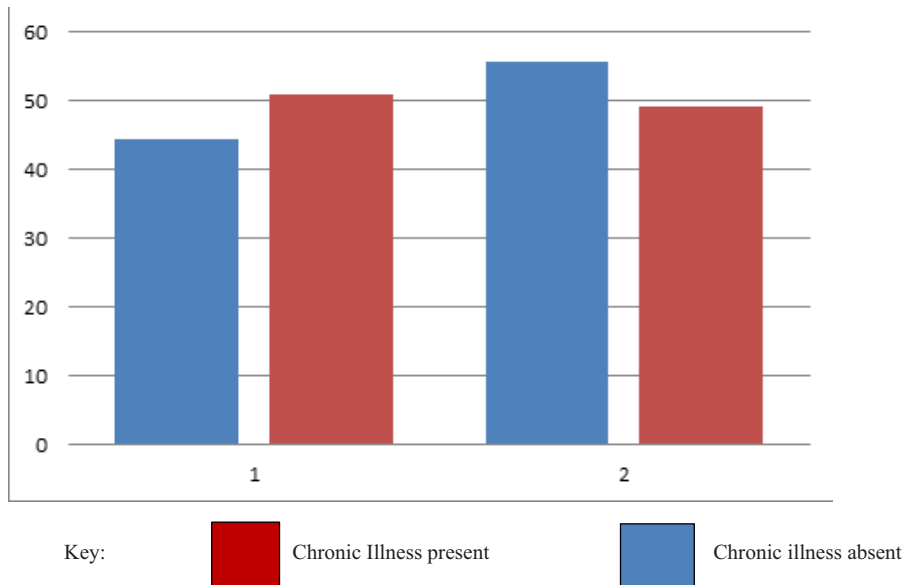Key: [Chronic Illness present]   [Chronic illness absent]

Figure 3. Relationship between chronic medical conditions and depression

DISCUSSION

As one age, degenerative changes also increase, which in turn leads to increased morbidity.[16] The rising incidence of chronic diseases and the lack of treatment of diseases may give rise to significant treatment costs and associated morbidity in later life. Most elderly have no form of health insurance coverage and this could lead to catastrophic health expenditure in view of dwindling resources and reducing family support.[17]

Findings from the present study revealed that majority of the participants 161 (78.2%) had chronic diseases. More than two-fifth (41.3%) of the study subjects had two or more morbidities. It is worthy of note that the cardiovascular and musculoskeletal system were the predominantly affected. This high prevalence of chronic morbidity among the elderly patients was consistent with findings in several hospital-based studies in Nigeria.[16-18] Cadmus et al reported high prevalence of chronic diseases in a study with over half having two or more morbidities and cardiovascular and musculoskeletal conditions were among the commonest cause of morbidity in the participants.[16]

In this current study the likelihood of getting depressive symptoms was found to be higher among the elderly with multiple chronic morbidities than those with one or no medical condition. However, there was no significant statistical association between chronic medical condition and development of depressive symptoms. This finding may be because the effect of the chronic morbidity may have been blunted by other factors. This is consistent with findings from some previous studies.[19-23] Morgan and colleagues reported no association between chronic medical illness and depression but noted that some chronic medical conditions were found to be associated with high rates of depression.[107] Dejean and colleagues also found that multiple chronic diseases were associated with increase in the prevalence and severity of depressive symptoms.[23] Evidence has shown that depressive symptoms associated with chronic diseases have various causes, such as the increased risk of complications, increased economic loss due to health care utilization, loss of productive work time, more functional impairment, poorer quality of life and increased mortality.[16-17] Depression impairs independence in the older population and, over time, worsens functional outcomes among the multi-morbid group. The decline in functional status may make them more dependent and vulnerable to mistreatment.

CONCLUSION

This study showed that chronic medical conditions in the elderly are common and many of these individuals were depressed as well. However, the level of chronic medical conditions and depression was not significant.

Recommendations

It is important that clinicians should learn to separate aging from depression and treat elderly patients with symptoms of depression. Family physicians and primary care physicians should be sensitized continually on the importance of incorporating routine screening for depression in elderly and on the management of uncomplicated cases in the outpatient clinic. They should familiarize themselves with simple tools/questionnaires such as the Geriatric Depression Scale that can be used in primary care settings. Also the government should ensure formulation and implementation of policies that will promote the proper integration of mental health into primary care as this is the current global trend.

Limitation: The findings from this study being a hospital based study cannot be generalized as the picture for the entire community. There may be a need to carry out a community-based study with a larger sample size in order to have the true picture in the community.

Conflict of interest: None

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