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Cerebrovascular accident: Perceived causes and effects among the elderly in Anambra State Nigeria

Nnaemezie Nkiru Onyinyechukwu[1], Nwankwo N S[2], Machie K U[1], Ifediora U l[1]
[1] Department of Human Kinetics, Health Education, Nnamdi Azikiwe University, Awka, Nigeria
[2] Nwafor Orizu College of Education, Nigeria

Abstract
This study determined the causes and effects of cerebrovascular accident among the elderly in Anambra state in Nigeria. Three purpose and research questions were raised by the researcher to solve the identified problem. Analysis of the research questions was done with the aid of mean, frequency counts and percentage analysis. Questionnaire instrument was administered to survivors of cerebrovascular accident, their healthcare givers and family members. In all, the instrument was administered on 50 survivors, 97 healthcare givers and 53 family members of the survivors making a total of 200 respondents. The findings of the study suggest that some underlying risk factors such as hypertension, obesity, diabetes, etc. are diagnosed in these patients who if checked or detected earlier and managed appropriately would prevent cerebrovascular accident death. The family members of elderly people should ensure that the cerebrovascular risk factors are detected and managed earlier to prevent them from degenerating to cerebrovascular and increase the burden of these diseases. The government should make available sufficient resources needed to provide health care to a large number of chronic patients and for sustaining increasing sophisticated equipment necessary in managing the risk factors of cerebrovascular accident if detected early.

Keywords: cerebrovascular accident, perceived causes

Introduction

The aging process of individuals with declining age is related to psychological, physical and social changes as well as to the emergence of pathological conditions coming from inadequate life habits such as sedentarism, smoking, drinking, and inadequate diet rich in fat or sugar, among others. The increase of the elderly population together with the increase in longevity has resulted in changes to the epidemiological picture of a population. The most prevalent infectious diseases in young individuals have been decreasing progressively, whereas chronic degenerative diseases have been increasing, becoming more and more incident in the elderly population. The increase in life expectancy has contributed to the appearing of chronic diseases as cancer, dementia, cerebrovascular Accident (CVA), which may generate sequels that lead to losses in quality of life, reducing the elderly persons' capacity to perform basic daily-life activities (Costa, Guinmaraes, *et al*. 2014).

Stroke, or a cerebrovascular accident, is a serious illness that can change one's health and future in an instant. A stroke is caused by the interruption of the blood supply to the brain, usually because a blood vessel bursts or is blocked by a clot (67 - 80%). This cuts off the supply of oxygen and nutrients, causing damage to the brain tissue. The consequences of a stroke depend on which part of the brain is injured and the severity of the tissue damage. In some cases there is only a brief interruption of blood supply leading to a transient loss of function without damage of brain tissue. The most common symptoms of a stroke are sudden weakness or numbness of the face, arm or leg, most often on one side of the body. Other symptoms include: confusion; difficulty speaking or understanding speech; difficulty seeing with one or both eyes; difficulty walking, dizziness, loss of balance or coordination; severe headache with no known cause; fainting or unconsciousness (Artwert, 2018).

Cerebrovascular accident is the second leading cause of death and the third leading cause of disability worldwide. It is estimated that 15 million people suffer from stroke every year. Out of this number, about six million people die and another five million are left permanently disabled. A total of 44 million disability-adjusted life-years (DALYs) are lost to stroke every year. The prevalence is projected to increase throughout the world because the number of persons aged 60 years and above is expected to more than double by 2050, and more than triple by 2100, increasing from 901 million in 2015 to 2.1billion in 2050 and 3.2 billion in 2100. In low- and middle-income countries (LMICs), stroke incidence is increasing, and research has shown that stroke mortality will triple in Latin America, the Middle East, and sub-Saharan Africa between 2002 and 2020. Community-based studies in sub-Saharan Africa (SSA) show that cerebrovascular accident is the cause of 5–10% of all deaths, and this is partly because of inadequate health systems and increasing rates of hypertension (sanude, Didoo, Koram & Atkins, 2019).

Further, the impact of cerebrovascular accident is projected to go up in this region as a result of urbanization, poor socio-economic status and the change in the demographic structure of the population from young to an ageing population. By 2025, it is projected that about half of SSA's populations will be living in urban areas and the number of people who are aged 60 years and above double in countries like Ghana, Cameroon, Democratic Republic of Congo, and Mozambique. This projected demographic transition may increase stroke-induced disability in the region in the near future if serious measures are not put in place (Sanude, Didoo, Koram & Atkins, 2019).

According to Truesen, Begg and Matters (2006), The 1990 Global Burden of Disease (GBD) study provided the first global estimate on the burden of 135 diseases, and cerebrovascular diseases ranked as the second leading cause of death after ischemic heart disease. During the past decade the quantity of especially routine mortality data has increased, and is now covering approximately one-third of the world's population. The increase in data availability provides the possibility for updating the estimated global burden of stroke. Data on causes of death from the 1990s have shown that cerebrovascular diseases remain a leading cause of death. In 2001 it was estimated that cerebrovascular diseases (stroke) accounted for 5.5 million deaths worldwide, equivalent to 9.6 % of all deaths 2. Two-thirds of these deaths occurred in people living in developing countries and 40% of the subjects were aged less than 70 years.

Additionally, cerebrovascular disease is the leading cause of disability and each year millions of CVA survivors have to adapt to a life with restrictions in activities of daily living as a consequence of cerebrovascular disease. Many surviving stroke patients will often depend on other people's continuous support to survive.

From the personal observation of the researcher, the rate at which the elderly suffers from stroke is alarming. CVA has become a threat to old age or the elderly. The admission of CVA cases into the medical wards and traditional herbalist homes has increased drastically. Most of these patients usually present late with complications which reduces their chances of survival. Particularly some underlying risk factors such as hypertension, obesity and diabetes were diagnosed in these patients who if detected earlier and managed appropriately would have prevented the death due to CVA. In addition, patients who presented with co-morbid conditions were found to have some risk factors during the process of investigations. History obtained from these patients showed that they sought medical attention only when alternative medicine and symptoms became unbearable. Some of these patients are so reluctant of their health. For example a man who knew that Smoking is an unhealthy habit but kept on smoking upon all the warnings by Federal Ministry of Health (FMH) which states that "smokers are liable to die you", this lead to CVA. This leaves the researcher wondering what are the causes and effects of CVA among the elderly in Anambra state.

The fact remains that if these causes of cerebrovascular risk factors are not detected and managed earlier, they may degenerate to cerebrovascular accident. CVA lands the increasing burden of these diseases have important economic implications such as loss of revenue at household level. From a health perspective huge resources are needed to provide health care to a large number of chronic patients and for sustaining increasing sophisticated equipment and more skilled and harder to replace workforce than it would take to manage the risk factors of cerebrovascular accident if detected early.

The most efficient and effective means of preventing cerebrovascular accident among the elderly is through primary prevention by targeting individuals without established cerebrovascular accident. This requires identification of those at risk and the prevalence of those CVA risk factors. These observations as a matter of concern triggered the need to research into causes, effects and preventive measures of cerebrovascular accident among the elderly in Anambra State.

Purpose of the study

The purpose of this study is to determine the causes and effects of cerebrovascular accident among the elderly in Anambra state in Nigeria. The specific objectives of this study were to:

1. To determine the causes of cerebrovascular accident among elderly in Anambra State.
2. To determine the effects of cerebrovascular accident among elderly in Anambra.
3. To determine the preventive measures of cerebrovascular accident among elderly in Anambra state.

Research question

The following research question would guide the study:

1. What are the causes of cerebrovascular accident among the elderly in Anambra state?
2. What are the effects of cerebrovascular accident among the elderly in Anambra state?
3. What are the preventive measures of cerebrovascular accident among the elderly in Anambra?

Method

Cross-sectional research design was adopted for this study. The study was carried out at Chukwuemeka Odumegwu Ojukwu Teaching Hospital (COUTH) Awka, Anambra State and General Hospital Onitsha. Amaku Teaching Hospital, Awka is located at 6°13'19.7"N 7°04'49.8"E. 6 Amachalla Avenue, Amaenyi 420108, Awka. Onitsha General Hospital is located at: Awka Rd, GRA, Onitsha, Nigeria. In the study the total population was consists to be all the survivors and caregivers at Chukuemeka Odumegwu Ojukwu Teaching Hospital (COUTH), Awka. the sample of the study consisted of 198 respondents. Three experts validated the instrument. The instrument was subjected to reliability test using Kuder-Richardson (K-R 20) and the reliability coefficients was 0 .74. This instrument for data collection was a researcher's constructed questionnaire, based on the objectives of the study. Cerebrovascular Accident Perceived Causes and Effects Questionnaire (CAPCEQ). The raw data collected was first examined an organized by the researcher. The data was then analyzed using descriptive statistics (Frequencies and percentage). The data was then analyzed using descriptive statistics (Frequencies and percentage and mean).

Presentation of data and analysis

Research Question One: What are the major causes of cerebrovascular accident among the elderly in Anambra State?

Table 1: Analysis of Research Question One

Causes	Frequency	Percentage (%)
Uncontrolled high blood pressure	38	19.2
High cholesterol	33	16.7
Hereditary	21	10.6
Uncontrolled Diabetes	29	14.6
Excessive alcohol in-take	20	10.1
Smoking	12	6.1
Physical inactivity	10	5.1
Obesity	8	4.0
Trauma (such as a car accident)	7	3.5
Age	20	10.1
Total	198	100

Table 1 shows the responses of all the sampled participants to the research question I as to the causes of cerebrovascular accident among the elderly in Anambra State. 38 (19.2%) believes uncontrolled high blood pressure causes CVA among the elderly in Anambra state; 33 (16.7%) opted for high cholesterol. 21 respondents (10.6%) opined that the cause is hereditary while 29 (14.6) believes it is as a result of uncontrolled Diabetes. 20 respondents (10.1%) chose that excessive alcohol in-take is the major cause of CVA among the elderly in Anambra state. 12 respondents (6.1%) believes that smoking is the major cause of CVA among the elderly in Anambra state while 10 (5.1%) opted for physical inactivity. Among the respondents, 8 (4%), 7 (3.5%) and 20 (10.1%) are of the opinion that obesity, trauma (such as a car accident) and age are the major causes of CVA among the elderly in Anambra state, respectively. Conclusively, this implies that most of the respondents opined that the major cause of CVA among the elderly in Anambra state is uncontrolled high blood pressure, followed by high cholesterol and uncontrolled Diabetes.

Research Question Two: What are the effects of cerebrovascular accident among the survivors and caregivers in Anambra State?

The second research question ascertained the causes of cerebrovascular accident among the survivors and caregivers in Anambra state. The analysis of this research question was done using mean point approach since the responses were ordered in 4-point Likert scale of 4-strongly agree, 3-agree, 2-disagree, and 1-strongly disagree.

Table 2: gives the mean point analysis of the research question.

Table 2: Analysis of Research Question II

S/N	Effects	SA	A	D	SD	Mean	Decision
1	Motor impairment.	64	85	20	29	2.93	Accept
2	Post stroke cognitive impairment.	71	57	42	28	2.86	Accept
3	Bladder and bowel dysfunction.	70	61	49	18	2.92	Accept
4	Pains.	68	84	21	25	2.98	Accept
5	Disability in performing daily activities of life.	69	58	47	24	2.87	Accept
6	Widespread burden of care on the family and healthcare systems.	67	74	33	24	2.93	Accept
7	Problems such as anxiety, confusion, jobless, depression and many physical problems due to the burden	66	63	57	12	2.92	Accept
8	It causes survivors and family caregivers to encounter different health problems in various aspects of elderly care	82	42	29	45	2.81	Accept
9	Family caregivers tend to neglect their needs in different dimension	70	74	44	10	3.03	Accept
10	The lives of stroke survivors and their families change drastically that it becomes difficult to return to their lives pre-stroke	16	127	15	40	2.60	Accept

To identify the causes of cerebrovascular accident among the survivors and caregivers in Anambra state, the mean point of 2.5 was used to adjudge the effects as either accepted or rejected. Statements of which mean scores are greater than 2.5 were accepted while statements of which mean scores are less than 2.5 were rejected. On average, all the statements about the effects of cerebrovascular accident among the survivors and caregivers in Anambra state were accepted since their mean scores exceeded 2.5.

Research Question Three: What are the preventive measures of cerebrovascular accident among the elderlies in Anambra State?

The third research question ascertained the preventive measures of cerebrovascular accident among the survivors and caregivers in Anambra state. The analysis of this research question was done using mean point approach since the responses were ordered in 4-point Likert scale of 4-strongly agree, 3-agree, 2-disagree, and 1-strongly disagree.

Table 3: Analysis of Research Question Three

S/N	Preventive Measures	SA	A	D	SD	Mean	Decision
1	Medical Checkups	56	82	36	24	2.86	Accept
2	Treatment of hypertension	64	69	53	12	2.93	Accept
3	Cholesterol lowering	72	77	22	27	2.98	Accept
4	Blood pressure reduction	64	61	49	24	2.83	Accept
5	Influeza vaccination	107	44	25	22	3.19	Accept
6	Avoiding smoking	128	32	25	13	3.39	Accept
7	Avoiding excessive alcohol intake	156	35	6	1	3.75	Accept
8	Remaining physically active	133	24	14	27	3.33	Accept
9	Avoiding obesity	123	26	28	21	3.27	Accept
10	Eating a healthy diet	146	37	9	6	3.63	Accept

To identify the preventive measures of cerebrovascular accident among the survivors and caregivers in Anambra state, the mean point of 2.5 was used to adjudge the preventive measures as either accepted or rejected.

Statements of which mean scores are greater than 2.5 were accepted while statements of which mean scores are less than 2.5 were rejected. On average, all the statements about the preventive measures of cerebrovascular accident among the survivors and caregivers in Anambra state were accepted since their mean scores exceeded 2.5.

Discussion of findings

Having analyzed the causes and effects of cerebrovascular accident among the elderly in Anambra state, among the

causes, the worst group cause as shown in the analysis was Uncontrolled high blood pressure * High cholesterol. The findings of the first research question agrees with the results found by Reddy *et al*. (2019) [9]; Odiase and Kayode (2018) [8]; Alharbi *et al*. (2019) [1].

The result of the analysis of second research question showed that cerebrovascular accident has significant effects among the survivors and caregivers in Anambra State. The analysis further showed that an increase in CVA by 1 individual will result in an increase in chances for problems such as anxiety, confusion, jobless, depression and many physical problems due to the burden. The result found in this analysis of research question II agrees with the results found by Lui (2018); Silliman, Edward, Wagner *et al*. (2021) [13].

Finally, the analysis of research question III revealed that, among the preventive measures, medical check-up has the most negative impact on CVA since an increase in medical checkup by one unit will reduce the chances of CVA occurrence by -.439. The finding in the analysis of research question III is in tandem with the studies of Sarikaya, Ferro, and Arnold (2015) [12]; Alharbi *et al* (2019) [1].

Conclusion

Cerebrovascular disease is adjudged one of the leading causes of disability every year. It is even a problem that survivors of the illness have to adapt to a life with restrictions in activities of daily living as a consequence of cerebrovascular disease. Because the surviving patients will often depend on other people's continuous support to survive, it results in significant adverse consequences to both the survivors and caregivers. Given the risen and alarming rate at which the elderly suffers from stroke. CVA has become a threat to old age or the elderly and a source of worry to caregivers. The findings of the study suggest that some underlying risk factors such as hypertension, obesity, diabetes, etc. are diagnosed in these patients who if checked or detected earlier and managed appropriately would prevent death due to CVA.

Recommendations

The researcher makes the following three recommendations in line with the findings of the study.

Relevant authorities such as government and ministry of health particularly should sensitive the elderly and their family members and encourage CVA patients to present early cases of cerebrovascular disease to avoid complications and increase their chances of survival.

The family members of elderly people should ensure that the cerebrovascular risk factors are detected and managed earlier to prevent them from degenerating to cerebrovascular and increase the burden of these diseases.

The government should make available sufficient resources needed to provide health care to a large number of chronic patients and for sustaining increasing sophisticated equipment necessary in managing the risk factors of cerebrovascular accident if detected early.

Public and community health programme planners should mount up aggressive awareness and health promotion programmes about the currently existing cerebrovascular accident.

The primary health care approach can also be sensitizing to strengthen early detection and timely treatment through regular periodic checkups and assessment of those individuals at risk. This will lead to a reduction in complications and deaths resulting from these risk factors.

Relevant authorities such as government and ministry of health should establish healthy public policies that promote CVA prevention and reorientation of health systems to address the needs of elderly with stroke risk factors. It will also compel them to step up efforts in the area of education, seminars and workshops with a view to raising the level of awareness of the people regarding the causes, effects and preventive measures of strokes.

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