

Knowledge and Behaviour of Nurses Towards Care of Elderly Stroke Patients in Bayelsa State, Nigeria

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Abstract: Care of elderly stroke patients remains a high priority agenda in many countries around the world as disability and death are common sequelae posing a public health menace for health service providers. This study was carried out among 100 nurses; it investigated knowledge as well as behavior towards care of elderly stroke patients. Specific objectives were geared to determine knowledge of nurses on elderly stroke patient care; behavior of nurses towards elderly stroke patient and to determine the relationship between nurses' knowledge and behavior towards elderly stroke patient care. A descriptive survey design was employed for the selected nurses from the two main hospitals in Bayelsa State, utilizing convenient sampling method. Age range of the nurses was 20-65 years and mean age of 37.5 of whom 35% were males and 65% females. Result indicates that knowledge was moderate (50-69) to excellent (70-100) for 71% of the nurses and behavior was also moderate or good or acceptable (50-69) or very good to excellent behavior (70-100) for 86% of nurses. However, only a few nurses answered all the knowledge questions correctly and had doubt on the cure of stroke. Furthermore, there existed a relationship between nurses knowledge and behavior towards care of elderly stroke patient and being significant at $p = 0.001$, for $p < 0.05$. There is the urgent need therefore, to properly tailor the knowledge and behavior of nurses for enhanced care of elderly stroke patients.

Key words: Knowledge, nurses, behavior, elderly, stroke-patient, Bayelsa State, Nigeria

INTRODUCTION

The incidence of stroke is on the increase worldwide and according to a statement of the World Health Organization, one of the leading causes of death in 2030 will be stroke (WHO, 2008). Stroke is a leading cause of long term disability and loss of quality of life in Western countries (Feigin *et al.*, 2003; Helgason and Wolf, 1997). It can have devastating effects on individuals and families (The Stroke Association, 2006).

After a stroke, most elderly people return to their home environment quickly despite suffering from various impairments and disabilities and often without having received any rehabilitation services to reduce or compensate them (Mayo *et al.*, 1999). Nurses' needs adequate knowledge and good behavior/morals to help stroke survivors to promote health, prevent disease, disabilities and cope with stroke episodes as critical thinking is essential throughout the process and after evaluation as data are used for this process of rehabilitation (Burton, 2000; Forte, 2011).

Nurses focus on working with patients and their families involving appropriate decision making and taking responsibility for their own decision; taking into account the holistic needs of the patient and family, these including their physical, social and psychological needs and other aspects of care (Langhorne *et al.*, 2002; IHF, 2007).

Nursing stroke victims require nurses with not only excellent knowledge, adequate skills and interest to deliver effective therapeutic care and rehabilitation but also a right behavior which require education and training in stroke care (Langhorne *et al.*, 2002). A research publication suggests that there is extraordinary explosion of knowledge in all fields which requires an increased emphasis on lifelong learning. Nursing education must keep pace with these changes and prepare individuals to meet these challenges (American Association of Colleges of Nursing (AACN, 2007)).

As good knowledge base and proper orientation is critical to a nurse being compassionate, tolerant and showing empathy with the stroke victims and their

families. Overall, this leads to an improved quality of care and better therapeutic outcome. For such reasons, understanding the knowledge and behavior of nurses towards elderly stroke patient care becomes eminent in every tertiary and other institutions administering care to stroke patient. To date information on, knowledge and behavior of nurses towards the care of elderly stroke patients in Bayelsa State Hospitals-Nigerian is limited. Stroke is one of the principal reasons for dependency on nursing care among adults (Diederichs *et al.*, 2011) owing to disabilities even after recovery and may not be able to enjoy a full and productive life which often a times is the outcome of poor care and lack of necessary facilities to institute urgent intervention. This study was therefore, conducted to bridge such existing gap.

This research was therefore carried out with the objective of determining the level of knowledge of elderly stroke patient care; seek the behavior of nurses towards elderly stroke victims and to consider the relationship between knowledge and behavior of nurses towards elderly stroke patient care. To achieve these objectives the researchers sought answers to the following questions what is the level of knowledge of nurses on elderly stroke patient care? What is the behavior of nurses towards elderly stroke patient? What is the level of nursing care given to elderly stroke patient? Does any relationship exist between nurse's knowledge and behavior towards elderly stroke patient care?

MATERIALS AND METHODS

A descriptive survey design was employed in this study carried out in Niger Delta University Teaching Hospital (NDUTH) Okolobiri and Federal Medical Centre (FMC) both in Bayelsa State to assess nurses' knowledge and behavior towards the care of elderly stroke patients in Bayelsa State. Nurses of different wards postings that have had an experience in the medical ward caring for elderly stroke patients were included for the study and 100 nurses participated based on a simple convenient random selection.

A structured questionnaire that consists of 3 sections; Section A, B and C designed to elicit demographic data from the respondents; knowledge of nurses on elderly stroke patients and nurses behavior towards elderly stroke patients were used to gather data. The reliability of the instrument was determined through a test-retest method. The questionnaire distributed to the respondents were all filled in the presence of researcher and collected by second person to ensure completeness. SPSS for windows Version 16 (Chicago IL) was used for data analysis employing both descriptive and inferential statistics and for relationships by means of Chi-square.

Permission to conduct the study was obtained from the Chairman, Management Advisory Committee (C' MAC) of the NDUTH and FMC Bayelsa State, respectively.

RESULTS

One hundred nurses were sampled who completely responded to the survey. Age range was 20-65 years with a mean age of 37.5. Majority 61% belonged to the age bracket of 20-30 years within the 2nd and 3rd decades of life. About 35% of the respondents were male and 65% female of whom 54% were married, 6% divorced and 40% single. About 36% of the nurses had a bachelor of science in nursing and another 36% an associated degree in nursing, 23% a diploma in nursing degree and 5% master's degree in nursing. About 51% were registered nurse, 29% had positions of a matron or ward sister and 20% were students (Table 1).

Table 2 shows respondents score on knowledge on elderly stroke patient care in Bayelsa State. The result revealed that 29% of the respondents had <50% knowledge which was poor, 32% had 70-100% score on the level of knowledge which is considered very good to excellent level of knowledge while the remaining 39% had a moderate level of knowledge which was scored as 50-69%.

Table 3 shows respondents score on behavior of nurses towards elderly stroke patient in Bayelsa State. The result revealed that 14% of the respondents had <50% which was described as poor behavior, 42% moderate or good or acceptable behavior while 44% had 70-100% score considered very good to excellent behavior.

Table 1: Socio-demographic data of respondents (N= 100)

Variables	Frequency (f)	Percentage
Age		
20-25	29	29
26-30	32	32
31-35	17	17
36-40	9	9
≥41	13	13
Sex		
Male	35	35
Female	65	65
Marital status		
Married	54	54
Divorced	6	6
Single	40	40
Education		
Bachelor of science in nursing	36	36
Associated degree in nursing	36	36
Diploma in nursing	23	23
Master's degree in nursing	5	5
Present position		
Registered nurse	51	51
Matron/ward sister	29	29
Student nurse	20	20
Total	100	100

Table 2: Nurses respondents knowledge on elderly stroke patients care (N = 100)

Statement/questions	Response (%)		
	Yes	No	Not sure
Paralysis of one or both parts of the body	92	2	6
The incidence of stroke is higher in children than in the elderly	23	69	8
Difficulty in speech	71	15	14
Hypertension is a major cause	82	11	7
Complete recovery is possible in the elderly	28	53	19
Obesity is a predisposing factor	64	18	18
Hyperlipidemia is not a risk factor	30	46	24
Stress is a predisposing factor	61	22	17
Excess alcohol and smoking is a predisposing factor	61	23	16
Compliance to medication is not necessary in stroke prevention	44	41	15
Regular BP monitoring is essential in stroke prevention	80	14	6
Dietary practice is essential for stroke prevention	65	19	16
Stroke has a permanent cure	23	14	33
Positive family history is a predisposing factor	62	18	20

Knowledge score percentage is <50 = 29%, 50-69 = 39%, 70-100 = 32%

Table 3: Nurses respondents behavior towards elderly stroke patient care (N = 100)

Statement/questions	Response (%)		
	Yes	No	Not sure
Have you ever taken care of an elderly stroke patient?	80	19	1
Comfortable taking care of an elderly stroke patient	74	18	8
Do you communicate with elderly stroke patients?	64	31	5
Do you ignore/avoid caring for elderly stroke patients?	34	61	5
Willing to undergo a post hospital care for an elderly stroke patient	63	26	11
Educate patients and relatives of elderly stroke	74	22	4
Comfortable assigned to an elderly stroke patient care	74	22	4
I would not want to be assign to care for an elderly stroke patient	34	59	7
Happier for immediate discharge or referral of elderly stroke patient	42	47	11

Behavior score percentage is <50 = 14%, 50-69 = 42%, 70-100 = 44%

Table 4: Relationship between respondents' knowledge and some socio-demographic variable

Socio-demography	Knowledge score (%)			χ^2	df	p-value
	<50	50-69	≥70			
Age						
20-25	31.0	35.9	18.8	11.715	8	0.164
26-30	48.3	17.9	34.4			
31-35	13.8	20.5	15.5			
36-40	3.4	10.3	12.5			
≥41	3.4	15.4	18.8			
Sex						
Male	41.4	30.8	34.4	0.831	2	0.660
Female	58.6	69.2	65.6			
Marital status						
Married	44.8	64.1	50.0	17.158	4	0.002
Divorced	20.7	0.0	0.0			
Single	34.5	35.9	50.0			
Education						
BNSC	44.8	30.8	34.4	5.947	6	0.429
Associated degree in nursing	31.0	43.6	31.2			
Diploma in nursing	17.2	25.6	25.0			
Masters degree in nursing	6.9	0.0	9.4			

Table 4 shows the relationship between respondents' knowledge and some socio-demographic data. In terms of age distribution at $p < 0.05$, $\chi^2 = 11.715$, $df = 8$ with p-value of 0.164, there is no statistical significant relationship between nurses knowledge and age distribution of respondents. Also, for sex distribution at $p < 0.05$, $\chi^2 = 0.831$, $df = 2$ with p-value of 0.660, there is no statistical significant relationship between nurses knowledge

and their sex distribution. For marital status at $p < 0.05$, $\chi^2 = 17.158$, $df = 4$ with p-value of 0.002, there is a statistical significant relationship between nurses knowledge on elderly stroke patient care and their marital status. In terms of educational distribution at $p < 0.05$, $\chi^2 = 5.947$, $df = 6$ with a p-value of 0.429, there is no statistical significant relationship between nurses knowledge on elderly stroke patient care and educational qualification.

Table 5 shows the relationship between respondents' behavior and some socio-demographic data. With regards to age distribution at $p < 0.05$, $\chi^2 = 6.974$, $df = 8$ with p-value of 0.539, there is no statistical significant relationship between nurses behavior and their age distribution. Also, for sex distribution at $p < 0.05$, $\chi^2 = 1.132$, $df = 2$ with p-value of 0.568, there is no statistical significant relationship between nurses behavior and their sex distribution. For marital status at $p < 0.05$, $\chi^2 = 6.387$, $df = 4$ with p-value of 0.172, there is no statistical significant relationship between nurses behavior towards elderly stroke patient and their marital status. In terms of educational distribution at $p < 0.05$, $\chi^2 = 8.921$, $df = 6$ with a p-value of 0.178, there is no statistical significant relationship between nurses behavior towards elderly stroke patient and educational qualification.

Table 5: Relationship between respondents' behavior and some socio-demographic variable

Socio-demography	Knowledge score (%)			χ^2	df	p-value
	<50	50-69	≥70			
Age						
20-25	50.0	21.4	29.5	6.974	8	0.539
26-30	21.4	38.1	29.5			
31-35	14.3	19.0	15.9			
36-40	14.3	7.1	9.1			
≥41	0.0	14.3	15.9			
Sex						
Male	42.9	38.1	29.5	1.132	2	0.568
Female	57.1	61.9	70.5			
Marital status						
Married	28.6	64.3	52.3	6.387	4	0.172
Divorced	14.3	4.8	4.5			
Single	57.1	31.0	43.2			
Education						
BNSC	50.0	42.9	25.0	8.921	6	0.178
Associated degree in nursing	28.6	40.5	34.1			
Diploma in nursing	21.4	14.3	31.8			
Masters degree in nursing	0.0	2.4	9.1			

Table 6: Relationship between respondents' knowledge and behavior towards elderly stroke patient

Behavior score (%)	Knowledge score (%)			χ^2	df	p-value
	<50	50-69	≥70			
<50	42.9	33.3	20.5	19.034	4	0.001
50-69	50.0	50.0	25.5			
≥70	7.1	16.7	54.5			

Table 6 shows the relationship between respondents' knowledge and behavior towards elderly stroke patient. At $p < 0.05$, $\chi^2 = 19.034$, $df = 4$ with p-value of 0.001, there is a statistical significant relationship between nurses knowledge and behavior towards elderly stroke patient care.

DISCUSSION

Adequate knowledge and optimal behavior towards elderly stroke patient remains important because there remains a need to educate nursing and other members of the interdisciplinary team about the potential for recovery in the later or more chronic phases of stroke care (Maclean *et al.*, 2002).

The results are drawn from general medical wards with good staff turnover from a particular state in Nigeria; therefore, the nurses of the wards will have particular cultural beliefs including beliefs about the care given to elderly patients. Many of the respondent's nurses had been members of medical wards at least once or for only a short period of time before the survey. This makes it less likely that the results are merely reporting the idiosyncratic entrenched understandings of the medical wards but not a guarantee that the wards lack an idiosyncratic ethos (Maclean *et al.*, 2002).

Socio-demography: The social demographic data from this study with a total of one hundred ($N = 100$) respondents who are all nurses from two major hospitals in Bayelsa State revealed that most of the nurses have a mean age of 37.5 with peak in their twenties and thirties of life which may be accounted for by the fact that most nurses finish their course in their late twenties for this locality rather than in their teens as in developed countries.

Gender and marital distribution of the respondents reveals that most nurses are females (65.0%) and are married (54.0%), respectively (Table 1). The more females in this study may be due to the fact that there is gender bias with some profession disciplines in Nigeria and one such example is the nursing profession and discipline.

Knowledge on elderly stroke patient care: The result reveals that knowledge of nurses on elderly stroke patient care is relatively fair in Bayelsa State of Nigeria. Insufficient knowledge of signs, etiology, risk factors and prevention in elderly stroke persons were expressed in Table 2 shows that their theoretical knowledge is not being translated into practice. However, the result revealed knowledge of paralysis of one or both sides of the body as a sign of stroke, identified speech defect as a sign of stroke and the incidence of stroke to be higher among the elderly.

This therefore, suggest a need for caution and careful monitoring of this special group of people as nurses are the only group of health care professionals who are closest to the patients. About half of the respondent nurses (53.0%) could tell that complete recovery from a stroke episode is rare as shown in Table 2. An explanation for this finding could be that there is poor turnover of registered nurses with specialized training or experience in rehabilitation. Furthermore, there is shift focus of stroke medical advances and healthcare resources on acute and sub-acute recovery phases which have resulted in substantial health disparities in later phases of stroke care leading to fewer financial resources dedicated to providing optimal care during the later phases of stroke recovery (Miller *et al.*, 2010). Also in terms of risk factors; respondent nurses identify obesity, hyperlipidemia, stress, excessive alcohol and smoking respectively as risk factors for stroke.

Furthermore, the study revealed that less than half of the respondents (44.0%) were knowledgeable of the fact that compliance to medication by using of antihypertensive drugs, regular monitoring of blood pressure and proper dietary practice are essential in stroke prevention. These findings are no surprise as it is expected that the nurse in their practice demonstrate understanding of causes and pathophysiology of stroke

as well as nursing care management of stroke. Furthermore, nurses are trained to identify and manage stroke patients using their case history, clinical assessment and investigative techniques such as brain imaging and CT-Scan.

On the knowledge score scale in Table 2, it was also observed that 29% of the respondents had <50% which was poor and 32% had 70-100% score on the level of knowledge which is considered very good to excellent level of knowledge while the remaining 39% had a moderate level of knowledge which was scored as 50-69%. This finding shows that more than a quarter (29%) of the nurses lack adequate knowledge on elderly stroke patient care unlike the majority of the respondents that expressed adequate to excellent level of knowledge necessary for optimal care.

This finding agrees with Burton (2000) that suggested nurses provided care, facilitated personal recovery and managed multidisciplinary care teams and they could provide focused 24 h coordinated stroke rehabilitation. However, Guentz and Navales (1978) opined in their study that the nurse must have knowledge of both the subjective and objectives effects of a stroke to formulate an-effective nursing care plan.

Behavior towards elderly stroke patient: Kotzabassaki *et al.* (2002) observed that understanding of the elderly stroke patient needs is usually an issue of concern since some nurses usually with no previous special training on managing elderly patient may express poor behavior to patients and as such worsens their condition. The result revealed that 14% of the respondents nurses had <50% (poor behavior), 42% expressed moderate or acceptable behavior while 44% had 70-100% score considered.

This implies that less than half (44%) of the respondents alone are those who expressed optimal requirement of behavior necessary for better nursing care and management with subsequent reduction in disability and mortality. This finding also supports studies by Kotzabassaki *et al.* (2002) who also observed both positive and negative behavior of nurses in their study.

Relationship between knowledge and behavior of respondents: Knowledge has often been described as the fundamental ingredient for good to excellent behavior of health workers in every circumstance. In this study, the result (Table 6) reveals that at $p < 0.05$, $\chi^2 = 19.034$, $df = 4$ with p-value of 0.001, there is a statistical significant relationship between nurses knowledge and behavior towards elderly stroke patient care. This indicates that a strong relationship exists between nurses' knowledge and

behavior towards elderly stroke patient care. This is in agreement with recommendation suggesting that physicians and other health care professionals maximize the well-being of both patients and caregivers (Han and Haley, 1999). Understanding of the fundamental on stroke is crucial to better behavior and very good to excellent behavior.

Implication for nursing practice: Nurses remain the most important arm of care delivery including that for elderly stroke patient. Optimal knowledge and excellent behavior of nurses towards these patients and relatives become eminent as reports have indicated that they influence patients' outcome. Nurses with such qualities become crucial in management of these special groups of patients for better outcome.

CONCLUSION

Knowledge and behavior of nurses towards elderly patient care is an important aspect of management of stroke patient as it is the basis for instituting optimal patient care with culminant recovery and better outcome. This study has investigated nurses' knowledge and behavior towards elderly stroke patient. It was observed that knowledge and behavior towards elderly stroke patient care by nurses in Bayelsa State was generally fair although only a few of them expressed very good to excellent knowledge and behavior towards patient care. Some socio-demographic variable were observed to influence knowledge and behavior and statistical significance was observed between nurses' knowledge and behavior towards stroke patient care.

RECOMMENDATIONS

This study examined nurses' knowledge and behavior towards elderly stroke patient care. The following suggestions were put forward by the researchers in order to improve stroke patient care, they are:

- Health institutions should institute specialty training of nurses and all health officials on proper knowledge and behavior towards elderly stroke patient care
- Nursing schools should design their curriculum to provide optimal knowledge and behavior towards elderly patient care
- Government should make provision to nurses of all necessary equipment and encouragement needed for optimal patient care

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