

Original Research Article

Clinical Expertise on Acute Stroke Management of Health Professionals Working at Hidar 11 Hospital, Akesta

Prem Kumar¹, Samuel Anteneh²

¹Asst. Professor, Department of Nursing, College of Medicine and Health Sciences (CMHS), Wollo University, Dessie, Ethiopia

²Lecturer, Department of Adult Health Nursing, Wollo University, College of Medicine and Health sciences (CMHS), Dessie, Ethiopia

Corresponding Author: Prem Kumar

ABSTRACT

Brain attack or stroke is one the leading cause of death among adults, children and pregnant mother as well in Ethiopia. According to the latest WHO data published in may 2014 Stroke Deaths in Ethiopia reached 28,320 or 4.71% of total deaths. The age adjusted Death Rate is 71.94 per 100,000 of population ranks Ethiopia #107 in the world.

Objective: To assess the clinical expertise clinical expertise on acute stroke management among health professionals.

Methods: Institution based cross sectional study design employed. Stratified simple random sampling method used to select 102 health professionals. The collected data were analyzed using descriptive and inferential statistics.

Results: the research revealed that, 46.09 % had adequate knowledge as compare with 54.90% of health professional had inadequate knowledge acute stroke management. The overall mean 5.676 with SD of ± 2.28 among health professional. The findings revealed that the clinical expertise of the health professionals regarding acute stroke management is not up to the reach in all the areas. Conclusion: It can be finished that, conventional number of the health professionals had inadequate level of clinical expertise on acute stroke management and recommend for intervention strategies to empower the health professionals.

Key Words: clinical expertise, Acute Stroke Management, Health professionals

INTRODCUTION

Stroke is a disease that affects the arteries leading to and within the brain. According to 2015 WHO updated report it is an estimate that more than 17.5 million people died of cardiovascular diseases such as heart attack or stroke. Contrary to popular belief, more than 3 out of 4 of these deaths occurred in low- and middle-income countries, and men and women were equally affected. ⁽¹⁾ A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain is either blocked by a clot or

ruptures. When that happens, part of the brain cannot get the circulation it needs, so it and brain cells die. Stroke is the No. 5 cause of death and a leading cause of disability in the developed world. The brain is an extremely complex organ that controls various body functions. If a stroke occurs and blood flow can't reach the region that controls a particular body function that part of the body won't work as it should (The American Stroke Association). ⁽²⁾ Hospital studies have shown that stroke is an

important cause of hospital morbidity and mortality in Ethiopia. ⁽³⁾

According to the World Health Organization (WHO), stroke is defined as rapidly developing clinical signs of focal (or global) disturbance of cerebral function, with symptoms lasting 24 hours or longer or leading to death which may be either ischemic or hemorrhagic disturbances of the cerebral blood circulation. ⁽⁴⁾ The 2013 Global Burden of Disease study reported that cerebrovascular diseases ranked the second leading cause of death after ischemic heart disease. ⁽⁵⁾ Adding to this, the poor are increasingly affected by stroke, which can be attributable to the changing population exposures to risk factors and inability to afford the high cost of stroke care. ⁽⁶⁾ The WHO has estimated that 15 million people suffer from stroke each year globally with African countries accounting for 86% of the stroke deaths. ⁽⁷⁾ According to the WHO data published in 2014, stroke accounted for 28,320 (4.71 %) of total deaths in Ethiopia. ⁽⁸⁾ Risk factors for stroke can be classified as modifiable and non-modifiable. Age, sex, family history and race/ethnicity are non-modifiable risk factors; while hypertension, smoking, diet, and physical inactivity are among some of identified modifiable risk factors. ⁽⁹⁾ Stroke is increasingly becoming a challenging public health issue in Africa, and the non-availability of data has limited research output and consequently the response to this burden. ⁽¹⁰⁾ According to the latest (2017) WHO data published in may 2014 Stroke Deaths in Ethiopia reached 28,320 or 4.71% of total deaths. The age adjusted Death Rate is 71.94 per 100,000 of population ranks Ethiopia #107 in the world. ⁽¹¹⁾ A growing body of evidence indicates that patients do better with a well-organized, Interdisciplinary stroke care will not only reduce mortality rates and the likelihood of hospital care and long-term disability but also may enhance recovery and increase activities of daily living (ADL) independency. Hence the health professional should have concrete clinical

expertise on stroke management since they play a pivotal role. ⁽¹²⁾ Effective and active intervention for stroke patients can effectively reduce the recurrence and mortality of the disease as well increase the surveillance rate. ⁽¹³⁾

OBJECTIVE

The objective was to assess the clinical expertise on acute stroke management among health professionals from December 2017 to April 2018.

METHODOLOGY

Study Area and Period: The study conducted in the Hidar 11 hospital, Akesta from December 2017 to April 2018.

Study Design: An institutional based cross sectional study employed.

Source Population: All among health professionals working at Hidar 11 Hospital, Aketsa, Ethiopia.

Study Population: All health professionals working at Hidar 11 Hospital.

Study Subjects: The study subjects were the selected health professionals who meet the inclusion criteria.

Sampling techniques and sample size: Stratified simple random sampling used to select 102 subjects.

Inclusion criteria: All health professionals working at Hidar 11 Hospital who are working as full time faculty.

Exclusion criteria: Health professionals who are severely ill and not available in working area during data collection.

Dependent variable: Clinical expertise regarding acute stroke management.

Independent variables

Socio-demographic variables: Age, Sex, Religion, Ethnicity, Marital status.

Professional variables: Profession, Work experience, Qualification, Similar research.

Data Collection Procedure: Structured questionnaire used to collect the data. The questionnaires contain variables related to knowledge, practice, and socio-demographics of the health professionals regarding acute stroke management. The questionnaires were prepared in English.

Data Quality Control: Data were collected trained individuals. Pre-test based feasible corrections were made in questionnaires. Moreover, investigators closely supervised the field activity on daily basis during data collection. At the end, the principal investigator/s checked the completeness of filled questionnaires and quality of the recorded information. To evaluate the consistency of the questionnaires, pre-test

conducted on 10% of the sample size before the actual data collection.

Ethical Considerations: Ethical clearance obtained from Wollo University, College of Medicine and Health Sciences, Research Review Ethical Committee. Then, the formal permission obtained from concerned authority of Akesta Hospital. Informed consent taken from the participants and assured that response will be keep it confidential.

RESULTS

Table 1: Clinical expertise (Knowledge & Practice) on acute stroke management

Items	W	Percentage (%)	R	Percentage (%)	χ^2	Inference	Mean	SD (\pm)
Q.1	60	58.82	42	41.17	3.176	NS	.41	.49
Q.2	65	63.72	37	36.27	7.686	NS	.36	.48
Q.3	52	50.98	50	49.01	0.394	S	.49	.50
Q.4	45	44.11	57	55.88	1.412	NS	.55	.49
Q.5	60	58.82	42	41.17	3.176	NS	.41	.49
Q.6	56	54.94	46	45.09	.980	NS	.45	.50
Q.7	68	66.66	34	33.33	11.333	NS	.33	.47
Q.8	79	77.45	23	22.54	30.745	NS	.22	.41
Q.9	38	37.25	64	62.74	6.627	NS	.62	.48
Q.10	76	74.50	26	25.49	24.510	NS	.25	.43
Q.11	82	80.39	20	19.60	37.686	NS	.19	.39
Q.12	94	92.15	08	7.84	75.510	NS	.07	.27
Q.13	46	45.09	56	54.90	.980	NS	.54	.50
Q.14	67	65.68	35	34.31	10.039	NS	.34	.47
Q.15	63	61.76	39	38.23	5.647	NS	.38	.48

[* $p \leq 0.05$] Key: SD=Std. Deviation, R= Right, W= Wrong, NS=Not significant, S= Significant

Table 2: Over all clinical expertise on acute stroke management

Clinical expertise on acute stroke management	Adequate	Inadequate	Mean	SD
	46.09 %	54.90%	5.676	± 2.28

Above stated table results revealed that, 46.09 % had adequate knowledge as compare with 54.90% of health professional had inadequate knowledge acute stroke management. The overall mean 5.676 with SD of ± 2.28 among health professional. The findings revealed that the clinical expertise of the health professionals regarding acute stroke management is not up to the reach in all the areas.

[* $p \leq 0.05$ = Significant] NS=Not significant, S= Significant

Above stated data depict that, the demographical variables viz. Age (0.354), Sex (0.207), Ethnicity (0.381), Religion (0.823), Marital status (0.591), Profession (0.526), Experience (0.289), Income (0.467) and Similar programmed (0.73) p-values are more than $p \leq 0.05$ so there is no significant association between these variables with clinical expertise on acute stroke management among health professional. Whereas the p value (0.006) of Qualification is less than the table value ($p \leq 0.05$), so there is a likely association between qualification with clinical expertise on acute stroke management among health professional.

Table 3: Association between clinical expertise with selected demographic variables

Demographic variable	Clinical Expertise	
	χ^2	Inference
Age	.354	NS
Sex	.207	NS
Ethnicity	.381	NS
Religion	.823	NS
Marital status	.591	NS
Profession	.526	NS
Experience	.289	NS
Qualification	.006*	S*
Income	.467	NS
Similar study	.073	NS

DISCUSSION

A research from Brazil revealed that one-hundred forty-nine of 205 (73%) participants answered the questionnaire; 49% were women, average age of 37 years (Range 21–59). Ninety (60%) were professionals allied to medicine (PAM—nurses, health auxiliary, dentists), six (4%) were physicians, and 53 (36%) were other professionals (secretary, driver). In this study the percentage distribution of health professionals according to their age in years shows that the uppermost percentage (50.98%) of the respondents was in the age group between 22–25 years. In gender allocation most (59.80%) of the respondents were males and 40.19% were female and majority (82.35) were belongs to Amhara ethnicity and least were belongs to Gurage. Forty-nine (48.03%) were belongs to orthodox and same (48.03%) with Muslims and 63.72% were married. Off 9.80% were general practitioner, 44.11% & 34.31% nurses & midwives respectively and 11.76 % are other health professionals. Qualification reveals that highest percentage (67.64%) of the respondents from BSc Nursing, 27.45% are diploma holders, 3.92% are completed MD and 1% are others. Among participants majority (61.76%) of them have less than 2 years of experience. The monthly income of the health professionals more (66.66%) are earning 10000 and above and greater part (75.49%) of the participants was not participated in similar study.

A study from China found that of the 331 participants, 39% were aware of the clinical guidelines for cerebrovascular diseases, whereas 48% considered themselves to have stroke management capabilities. Concluded that GPs & Nurses have lack knowledge of stroke treatment urgently need to be improved. This study results revealed that, 46.09 % had adequate knowledge as compare with 54.90% of health professional had inadequate knowledge acute stroke management. The overall mean 5.676 with SD of ± 2.28 among health professional. The findings

revealed that the clinical expertise of the health professionals regarding acute stroke management is not up to the reach in all the areas.

A study from Chongqing revealed that regarding management knowledge on acute stroke, there were no significant differences between medical staff with different genders, ages, occupation, job titles, GP training, clinical experience times and workplace ($P > 0.05$). Whereas health professionals with post-graduate education found to have, good knowledge and skill on medical management of acute stroke. Similar to that, this study revealed that Age (0.354), Sex (0.207), Ethnicity (0.381), Religion (0.823), Marital status (0.591), Profession (0.526), Experience (0.289), Income (0.467) and Similar programme (0.73) p-values are more than $p \leq 0.05$ so there is no significant association between these variables with clinical expertise on acute stroke management among health professional. Whereas the p value (0.006) of Qualification is less than the table value ($p \leq 0.05$), so there is a likely association between qualification with clinical expertise on acute stroke management among health professionals.

CONCLUSION

The present study showed the clinical expertise towards acute stroke management among health professionals is not up to the expectation. It can be finished that, conventional number of the health professionals had inadequate level of clinical expertise on acute stroke management.

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Conflict of Interest

The authors declare that they have no competing interests.

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