Original Research Article

Effectiveness of Supplementary Training on Knowledge and Attitude Regarding Comprehensive Care of Acute Ischemic Patient among Nursing Staff

Gurjar Nema Ram

Professor, NIMS Nursing College, Jaipur

ABSTRACT

Background: Stroke is a major health problem worldwide, causing death and disability. Presently, the burden of stroke in India is higher in comparison to other developing countries. In India, approximately 1.8 million people suffer from stroke yearly. Nurses are having vital role in caring stroke patients. Therefore nursing staff must have updated knowledge as well as competence of skills in delivering care to the stroke patients. In view of this, regular in-service education and training is essential for nursing staff.
Objective: The aim of the study is to evaluate effectiveness of supplementary training on knowledge and attitude regarding comprehensive care of acute ischemic patient among nursing staff.
Methods: The one group pre-test and post-test, pre-experimental design was used. 40 nursing staffs were taken for the study by convenient sampling method. The study was done in Nims hospital from 01/11/2016 to 31st December, 2016.
Results: There were significant differences in pre test and post test knowledge and attitude scores, there were significantly higher score of both knowledge and attitude in post test.
Conclusion: Study provides support for the effectiveness of a supplementary training on knowledge and attitude regarding comprehensive care of Acute Ischemic Stroke patient among nursing staff.

Key words- Effectiveness, supplementary training, knowledge, attitude, comprehensive care, Acute Ischemic Stroke.

INTRODUCTION

Stroke is the second-leading cause of death behind ischemic heart disease. Globally, in 2013 there were 6.5 million stroke deaths, the highest prevalence of ischemic stroke (1015 to 1184 cases per 100000 people) was in high-income countries (particularly in the United States), with the lowest (up to 339 per 100000) in low- and middle-income countries. [1] Suwanwela NC, (2016) in his survey study on stroke burden and stroke care system in Asia in 2012 reported higher proportion of ischemic stroke in comparison to hemorrhagic stroke in all countries. The overall incidence of stroke in Asia found between 116 and 483/100,000 per year. [2]

Stroke is one of the leading causes of death and disability in India. Tapas Kumar et all, (2017) in his studies showed that the age-adjusted annual incidence rate was 105/100,000 in the urban community of Kolkata and 262/100,000 in a rural community of Bengal. The ratio of cerebral infarct to hemorrhage was 2.21. Hypertension was the most important risk factor. Stroke represented 1.2% of total deaths in India. [3] Proper management of stroke risk factors, awareness of stroke warning signs, and appropriate emergency action are critical for preventing stroke incidence, mortality, or morbidity. [4] Nurses require diverse education and training in order to deal with patients with complex

neurological needs and thus provide quality care to such patients. Nurses need ongoing stroke education to provide quality care. Therefore hospital must provide regular stoke education program to their nurses to keep their knowledge current. Education to nurses is critical. With early and informed actions, the number of strokes can decrease and lives can be saved. Registered nurses' need education and training in order to work with patients with complex neurological disabilities. A many studies results show that nurses need education and training program. A variety of area or topics were recognized to be included within a work-based education and training program, such as positively managing challenging behavior, moving and handling, working with families. Program also makes positive change among nursing staff toward the care of stroke patients. Victor O. Adika et al. (2012) conducted a descriptive survey design study was carried out among 100 nurses to assess nurses' knowledge and result indicates that knowledge was moderate (50-69) to excellent (70-100) for 71% of the 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. Study suggested urgent need for education to improve the knowledge and behavior of nurses for enhanced care of elderly stroke patients. [5] Zahra Aslani, MS et al.(2016) reported that lack of nurses' educating performance skills was overcome using action research and changes were made to improve the performance of nurses. [6] In this view ,the researcher evaluate the effectiveness of supplementary training on knowledge and attitude regarding comprehensive care of acute ischemic stroke patients among nursing staff. [6] Traynelis, Laura (2011) reported that knowledge deficit of nurses on ischemic stroke care guidelines. [7]

OBJECTIVES OF THE STUDY

• To assess the knowledge and attitude regarding comprehensive care of acute ischemic stroke patients among nursing staff.
• To assess the effectiveness of supplementary training on knowledge and attitude regarding comprehensive care of acute ischemic stroke patients among nursing staff.
• To determine the association between knowledge and attitude scores of nursing staff regarding comprehensive care of acute ischemic stroke patients staff with selected socio demographic variables.

Hypothesis

H_1: The mean post-test knowledge score regarding comprehensive care of acute ischemic stroke patients among nursing staff is significantly higher than mean pre test knowledge score.

H_2: The mean post-test practice score regarding comprehensive care of acute ischemic stroke patients among nursing staff is significantly higher than mean pre test practice score.

H_3: There is significant association between knowledge scores of nursing staff regarding comprehensive care of acute ischemic stroke patients with selected socio demographic variables.

H_4: There is significant between attitude scores of nursing staff regarding comprehensive care of acute ischemic stroke patients with selected socio demographic variables.

METHODOLOGY

Research approach: Quantitative research approach was used for the study.

Research design: One group pre-test, post-test, pre experimental research design

Population: Nursing Staff working in ICU and Neuro ward

Research setting: ICU and Neuro ward NIMS hospital, Jaipur.

Sample: 40 Staff Nurses were selected for the study.

Sampling technique: Convenient sampling technique was used for the study.

Description of tool – The data collection consist of three parts

Section I: Consist of five items related to socio-demographic characteristics of nursing staff such as age, sex, professional qualification, total period of service in the nursing profession and total experience of nursing staff of caring stroke patients.

Section II: Structured knowledge questionnaire on comprehensive care of acute ischemic stroke It consisted of 70 items related to comprehensive care of acute ischemic stroke, which are divided into seven areas namely -Area-A: Organization of services, Area-B: Early assessment and diagnosis, area C: Acute medical and surgical management, Area D: Secondary prevention area E: Rehabilitation Area F Managing complications and Area G: Community participation and long-term recovery. Each area consists of 10 items. All the area consists of multiple-choice questions with four options for each item. Each item is given score of one for the correct answer. Thus altogether there are 70 items with a maximum score of 70.

Section III: Likert attitude scale constructed from 14 statements scored from 5 to 1 (5 strongly agree, 1 strongly disagrees). The maximum score of the scale was 70 points and the minimum score was 14. Scale was divided into three parts: low score (<44 points), medium score (44–56 points) and high score (>56 points).

DATA COLLECTION PROCEDURE

Before collecting the data prior permissions were obtained from the concerned authorities of the Hospital. The data were collected after obtaining informed consent from the samples .Pre-test was conducted and followed by supportive training on clinical guidelines of acute ischemic stroke management. The intervention consisted of six days supplementary training on clinical guidelines of acute ischemic stroke management, researcher -led, in-person supplementary training for nursing staff was given comprising 12 hours lecture session(2hours each day) followed by distributing written contents on clinical guidelines on acute ischemic stroke management. Then each participant provided 6 days bedside training to develop skills in providing comprehensive care to patient with acute ischemic stroke. Post-test was conducted at 7th day after completion of supplementary training.

STATISTICAL ANALYSIS

The collected data were tabulated and analyzed by using descriptive and inferential statistics by using SPSS version 16.

RESULTS

Section 1: Finding related to socio demographic variables of Nursing Staff.

Table1: Frequency and percentage distribution of samples based on demographic variables.   N=40

S.No.	Demographic variables	Frequency (f)	Percentage (%)
1	Gender		
	Male	25	62.5
	Female	15	37.5
2	Age		
	21-30 years	26	65
	31-40 years	10	25
	41-50 years	04	10
3	Professional qualification..		
	GNM	32	80
	B.Sc.Nursing	05	12.5
	Post Basic B.Sc. Nursing	03	7.5
4	Total period of service in the nursing profession		
	Less than 1 year	17	42.5
	Between 1 and 3 years	07	17.5
	Between 3 and 5 years	03	7.5
	More than 5 years	13	32.5
5	Total experience of nursing staff of caring stroke patients (for example internal medicine, long-term care, neurology, rehabilitation)		
	Less than 1 year	17	42.5
	Between 1 and 3 years	7	17.5
	Between 3 and 5 years	6	15
	More than 5 years	10	25

Table 1: shows that out of the 40 nursing staff, majority 25 (62.5) were males and females were in less number15 (37.5%) .Majority of nursing staff 26 (65%) were from the age group of 21-30 years, 10(25%) were from the age group 31 to 40 years and very few 04(10%) were from the age group 41 to 50 years. Most of the nursing staff were having qualification of G.N.M (80%), only 05(12.5) were B.Sc. Nursing and very few 03(7.5) were having qualification of Post Basic B. Sc Nursing. Almost half of nursing staff i.e. 17(42.5) were having less than 1 year of service in nursing profession and this was followed by 13(32.5), 7(17.5%), 3(7.5%) more than 5 years, between 1and 3 years, and between 3 and 5 years of service in the nursing profession respectively. Majority of nursing staff 17(42.5%) had experience of less than 1 year and only 10(25%) were having experience of more than 5 years.

Section: II Findings related to the assessment of knowledge and attitude scores of staff nurses regarding comprehensive care of acute ischemic stroke patients.

Table 2 : Frequency and percentage distribution of pre and post- test knowledge scores of staff nurses regarding comprehensive care of acute ischemic stroke patients. N=40

Scores	Pre Test		Post Test	
	Frequency	Percentage	Frequency	Percentage
Excellent	09	22.5%	25	62.5%
Good	22	55%	14	33%
Average	08	20%	01	2..5%
Poor	01	2.5%	00	0%

Table 2: depicts that in pre test, out of the 40 subjects, only 22.5 % had excellent knowledge, majority (55%) of them had good knowledge, 20% had average knowledge and very few 2.5% had poor knowledge. Whereas in post test, out of 40 subjects, majority of them (62.5%) had excellent knowledge, 35% had good knowledge, very few 2.5% were had average knowledge and none of the subjects had poor knowledge.

Table 3: Frequency and percentage distribution of pre and post test attitude scores of nursing staff regarding comprehensive care of acute ischemic stroke patients. N=40

Scores	Pre Test		Post Test	
	Frequency	Percentage	Frequency	Percentage
Highly favourable	26	65%	38	95%
Favourable	10	25%	02	5%
Unfavorable	04	10%	00	0%

It was evident from table 3 that majority of nursing staff 26(65 %) had highly favourable attitude, 10(25%) of nursing staff had favorable and only 04(10%), nursing staff had unfavorable attitude regarding comprehensive care of acute ischemic stroke patients. Whereas in post test majority 95 % had highly favourable attitude, very few 5% had favourable attitude and no one had unfavorable attitude.

Findings related to effectiveness of supplementary training on knowledge and attitude regarding comprehensive care of acute ischemic stroke patients among staff nurses.

Table 4: Comparison of pre test and post test mean knowledge scores of nursing staff regarding comprehensive care of acute ischemic stroke patients. N=40

Pre Test			Post test			Mean Difference	Paired t-test value
n	Mean	SD	n	Mean	SD		
40	18.10	5.854	40	65.80	8.22	47.70	7.648 p=0.001

Highly significant (p < 0.001)

Table 4 reveals that mean pre test knowledge score of nursing staff was 18.10 with standard deviation 5.854 whereas the mean post test knowledge score of nursing staff was 65.80 with standard deviation 8.22. The statistical results established significant at 0.001 level indicating the effectiveness of supplementary training on knowledge of nursing staff.. Hence the research hypothesis $H_2$is accepted.

Table 5: Comparison of pre test and post test mean attitude scores of nursing staff regarding comprehensive care of acute ischemic stroke patients.   N=40

Pre Test			Post test			Mean Difference	Paired t-test value
n	Mean	SD	n	Mean	SD		
40	21.10	5.854	40	43.80	8.22	22.70	5.67 P=0.001

Highly significant (p < 0.001)

Table 5 reveals that mean pre test attitude score of nursing staff was 21.10 with standard deviation 5.854 whereas the mean post test attitude score of nursing staff was 43.80 with standard deviation 8.22. The statistical results established significant at 0.001 levels indicating the effectiveness of supplementary training on attitude of nursing staff. Hence the research hypothesis H_2 is accepted.

Association between knowledge and attitude scores of nursing staff regarding comprehensive care of stroke with their selected socio-demographic variables.

Table 6: Association between knowledge scores of nursing staff with the selected demographic variables.   N=40

S. No.	Variables	Calculated value	Tabulated value	Level of significance
1	Gender	2.63	2.04	P=0.05
2	Age	1.73	2.04	P=0.07
3	Professional education	8.75	3.55	P=0.001
4	Professional experience	6.67	3.55	P=0.001
5	Total experience of nursing wards with stroke patients	3.44	2.75	P=0.01

The table 6 reveals that the calculated value of gender, professional qualification, total professional experience and professional experience of nursing staff with stroke patients is greater than their table value at p<0.05 level. Hence the research hypothesis H_3 is accepted for

Table 7: Association between attitude scores of nursing staff with the selected demographic variables. N=40

S.No.	Variables	Calculated value	Tabulated value	Level of significance
1.	Gender	4.98	2.70	p=0.001
2.	Age	3.23	2.70	p=0.01
3.	Professional qualification.	8.991	3.55	p=0.001
4.	Professional experience	6.985	3.55	P=0.001
5.	Total experience of nursing wards with stroke patients	3.45	2.70	P=0.01

The table 7 reveals that the calculated value of age ,gender, and professional qualification, total professional experience and professional experience of nursing staff with stroke patients is greater than their table value at p<0.05 level. Hence the research hypothesis H_4 is accepted.

DISCUSSION

Nursing staff's knowledge and attitude regarding comprehensive care of stroke is one of the important factor in providing quality of care to patients with stroke. It has advantages on both sides that mean for the patient a well as for the nursing staff. It is well known that after when someone is having good knowledge then he or she will able to perform better. Good knowledge definitely make favourable attitude of nursing staff in providing care of patients. It takes long time to get recover from the disease but knowledge and attitude of nursing staff can prevent the patients from many unwanted problems or complications and can faster the recovery of the patient. In this regard to this, researcher believed that if nursing staff are given supplementary training on comprehensive care of stroke patients then it would improve their knowledge and attitude in caring patient with stroke.

Regarding levels of nursing staff's knowledge regarding comprehensive care of acute ischemic stroke patients, the study results revealed that there were highly statistically significant increase in nursing staff knowledge regarding comprehensive care of acute ischemic stroke patients after supplementary training. These findings were in accordance with James Trone McDaniel

(2016) who reported that nurses increased their knowledge of stroke by 16.79 % after the educational program based on the scores of the pretest and posttest [8] In addition, in a study by Reynolds Staci Sue et al.(2016) reported an improvement in nursing adherence as well as significant improvement in nursing knowledge after stroke competency program were noted. [9]

Regarding levels of nursing staff's attitude regarding comprehensive care of acute ischemic stroke patients, the study results revealed that there were highly statistically significant increase in nursing staff attitude regarding comprehensive care of acute ischemic stroke patients after supplementary training. Finding of the study is accordance of another study by Anne Forster (1999) reported that the training programme had some effect in changing nurses' attitudes to treating patients after a stroke. Such a training programme could be a useful contribution to post-stroke care. [10] Finding of another study by Mia Ingerslev Loft (2017) also reported that there was a high level of satisfaction with the educational programme in terms of its acceptability and feasibility. [11]

CONCLUSION

Study concluded the following findings:
Supplementary training was effective to increase knowledge and attitude of nursing staff regarding comprehensive care of acute ischemic stroke patients.
Study finding also revealed that there is significant association between gender, professional qualification, total professional experience and professional experience of nursing staff with stroke patients.
Study finding also revealed that there is significant association between age, gender and professional qualification, total professional experience and professional experience of nursing staff with stroke patients.
Ultimately, it is concluded that this supplementary training improves the quality of care for the stroke patients. Therefore this supplementary training program may be used as an ongoing learning opportunity for nursing staff in regards to improve efficiency of nursing staff in providing care to stroke patients.

REFERENCES

1. Benjamin et al. Heart Disease and Stroke Statistics. Update A Report From the American Heart Association Circulation. 2017;135:00–00.
2. Suwanwela NC, Poungvarin N. Asian Stroke Advisory Panel. Stroke burden and stroke care system in Asia, Neurol India. 2016: Mar-Apr;64 Suppl:S46-51.
   Available at:: https://www.ncbi.nlm.nih.gov/pubmed/26954968
3. Tapas Kumar banerjee .Shyamal Kumar. Epidemiology of stroke in India. NeurologyAsia. 2006: 11 : 1 – 4
   Available at http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.472.1262&rep=rep1&type=pdf
4. American Heart Association. (2004).Heart and stroke facts. Available at URL: http://www.heart.org/HEARTORG/General/ Heart-and-Stroke.Accessed on 1/10/2016
5. Victor O Adika et al. Knowledge of Nurses towards care of elderly Stroke patients in Bayelsa State Nigeria. International Journal of tropical medicvine.2012;7(2):74-79
6. Zahra Aslani, MS et al.Nurses' Empowerment in Self-Care Education to Stroke Patients: An Action Research Study. Int J Community Based Nursing Midwifery. 2016 Oct; 4(4): 329–338.
7. Laura Traynelis. Emergency Department Nurses' Knowledge of Evidence-Based Ischemic Stroke Care. Kaleidoscope: 2011; 10(44).

Available at: https://uknowledge.uky.edu/kaleidoscope/vol10/iss1/44 (accessed on 19/10/20198)

8. James Trone McDaniel (2016). Improving Nurses' Knowledge of Stroke Walden University. Availableat:http://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=3600&context=dissertations.Accessed on 19/10/2019.

9. Reynolds Staci Sue, Murray Laura L., McLennon Susan M., Bakas Tamilyn. Implementation of a Stroke Competency Program to Improve Nurses' Knowledge of and Adherence to Stroke Guidelines.

Journal of Neuroscience Nursing. 2016 November; 48 (6) :328 – 335

10. Forster Anne, Dowswell George, Young John. Effect of a physiotherapist-led training programme on attitudes of nurses caring for patients after stroke. Sage Journal. 2019;13(2).

11. Mia Ingerslev Loft et at. Strengthening nursing role and functions in stroke rehabilitation 24/7: A mixed-methods study assessing the feasibility and acceptability of an educational intervention programme wileyonlinelibrary.com/journal/nop2 Nursing Open. 2019; 6:162–174.

How to cite this article: Gurjar NR. Effectiveness of supplementary training on knowledge and attitude regarding comprehensive care of acute ischemic patient among nursing staff. Int J Health Sci Res. 2019; 9(12):90-96.

******