A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Rehabilitation of Stroke Patients among Care Givers in Selected Hospitals of Bagalkot

Daneshwari A. Koujalagi[1], Varesh G. Chilapur[2], Dr. Deelip S Natekar[3]

[1]M. Sc. Nursing final Year, Shri B. V. V. S Sajjalashree Institute of Nursing Sciences, Bagalkot, Karnataka
Email: *daneshwarikoujalagi49[at]gmail.com*

[2]Corresponding Author; Professor & HOD, Department of Medical-Surgical Nursing, Shri B. V. V. S Sajjalashree Institute of Nursing Sciences, Bagalkot, Karnataka. Email: *varesh. chilapur[at]gmail.com*

[3]Principal, (Ph. D. in Nursing), Shri B. V. V. S Sajjalashree Institute of Nursing Sciences, Bagalkot, Karnataka
Email: *deelipsn[at]gmail.com*

Abstract: <u>*Introduction:*</u> *Stroke is the most common neurological disorders in adults and is the third leading cause of death, after cancer and heart disease. Stroke is a medical emergency and cause permanent neurological damage and death if not promptly diagnose, treated and leaves many of its survivors with physical and mental disabilities. Thus, creating a major social and economic burden.* <u>*Objectives:*</u> *1) To assess the knowledge regarding rehabilitation of stroke patients among the Caregivers. 2) To evaluate the effectiveness of structured teaching programme regarding rehabilitation of stroke patients among caregivers. 3) To find out the association between post-test knowledge scores with their selected socio demographic variables.* <u>*Method:*</u> *The pre-experimental, i. e. one group pre-test post test design was adopted for the present study. The sample includes 30 care givers of stroke patients from selected Hospitals of Bagalkot District. Using Non probability convenience sampling technique. Data collected using structured knowledge questionnaire & analyzed using descriptive and inferential statistics.* <u>*Results:*</u> *The mean percentage of knowledge scores of the care givers in the pre-test was 51.94% with mean and SD (18.7±3.33), whereas the mean percentage of knowledge scores in post-test was 70.16% with mean and SD (25.26±4.45). The paired 't' test showed the significant difference in the knowledge of care givers of stroke patients regarding rehabilitation of stroke, after the administration of STP.* <u>*Conclusion:*</u> *A significant difference was found between the pre-test and post-test knowledge scores of care givers. The study showed that STP was effective in improving the knowledge of care givers of stroke patients regarding rehabilitation of stroke*

Keywords: Effectiveness; Care givers of stroke patients; Rehabilitation of stroke patient

1. Introduction

The word "stroke" is centuries old. The **World Health Organization** defined stroke as a "neurological deficit of cerebrovascular cause that persists beyond 24 hours or is interrupted by death within 24 hours. " This definition was supposed to reflect the reversibility of tissue damage and was devised for the purpose, with the time frame of 24 hours being chosen arbitrarily[1]

A stroke is a disease with various symptoms, such as hemiplegia, sensory disorders, spasticity, balance disorders, cognitive disorders, or difficulty in swallowing. Without proper care and treatment, a stroke may result in many secondary complications, such as pressure sores, joint contracture, shoulder pains, and aspiration pneumonia. To prevent secondary complications and to support the activities of daily living (ADL) in patients, the role of the caregiver is important, particularly if the patients are in an acute stage.2

A stroke happens when blood flow to part of our brain is cut off without the oxygen in blood brain cells start dying within minutes, to help prevent a stroke learn about the causes and the things that can raise your odds of getting one. Stroke may be caused by high blood pressure, tobacco chewing, obesity, high cholesterol levels, diabetes mallitus, excessive alcohol intake, atrial fibrillation, stress, lack of exercise.3

Objectives
- To assess the knowledge regarding rehabilitation of stroke patients among the Caregivers.
- To evaluate the effectiveness of structured teaching programme regarding rehabilitation of stroke patients among caregivers.
- To find out the association between post-test knowledge scores with their selected socio demographic variables.

2. Materials and Methods

Study design: The research design selected for this study was pre-experimental, i. e. one group pre-test, post-test design. The sample size was 30 Care givers of stroke patients in HSK Hospital and Research center Bagalkot, Kerudi Hospital and Research Centre Bagalkot

Setting of the study: The present study will be conducted in selected hospitals of Bagalkot.

Participants: Care givers of stroke patients admitted in selected Hospitals of Bagalkot.

Sampling Technique: Non probability convenience sampling technique used for present study. There are many hospitals in Bagalkot city. Out of that researcher selected 2 hospitals according to easy accessibility of location of hospital They are Shri B. V. V. S HSK Hospital and Research centre, Bagalkot and Kerudi Hospital and Research Centre Bagalkot.

Criteria for Sample Selection

Inclusion criteria:-Care givers of stroke patients,
- Who are willing to participate in the study.
- Who are available at the time of data collection
- Who can able to understand and write in English or kannada.

Exclusion criteria:-The study excludes care givers of stroke patients,
- Who are not willing to participate in the study.
- Who are not willing to give consent to the study.

Sample Size Estimation:
The sample size was estimated using **Epi Info Software.** The estimation was done using the results (mean and standard deviation) obtained in a previous research study conducted in Bangalore, Karnataka, India. The confidence level was 95% (α = 5%) The Zα Value at 5% level of significance is 1.96. The power of the test was 80%. The sample size estimated by statistician was 30. To satisfy the estimated sample size the research enrolled the subjects (Care givers of stroke patients) admitted 2 selected Hospitals in Bagalkot. The final data was collected from 30 Care givers of stroke patient.

Description of data collection instrument:
The instrument for present study consist of 2 sections.
Section 1: Socio demographic factors.
Section 2: Structured knowledge questionnaire.

Section 1: Socio Demographic Factors: Consists of items seeking information regarding socio-demographic characteristics of care givers of stroke patients such as, age, gender, religion, income of the family per month, education, relationship of the patient, duration of illness, source of health information, type of family.

SECTION 2: Consists of 36 items pertaining to knowledge regarding rehabilitation of stroke among care givers of stroke patients. It has three sections as mentioned below.
Part A: Consists of 7 questions on general information about stroke
Part B: Consists of 12 questions, general management of stroke.
part C: Consists of 17 questions rehabilitative management of stroke.

Data Collection
The data was collected from 13-04-2021 to 15-05-2021. The exact time and data was planned with authority and was communicated to the respondents in selected hospitals of Bagalkot (Shri B. V. V. S HSK Hospital and Research centre, Bagalkot and Kerudi Hospital and Research Centre Bagalkot).

Variables under the Study
Dependent variables: Knowledge of care givers of stroke patients on rehabilitation of stroke.
Independent variable: Structured teaching programme

Statistical Analysis
The data was analyzed using SPSS 18 statistical package. The data obtained from the sample, was organized and summarized with the help of descriptive statistics like frequency and percentage, arithmetic mean, and standard deviation. Karl Pearson's correlation coefficient was used to justify the reliability of tool. Paired t test was used to find the difference between pre-test and post-test knowledge scores; Chi-square test was used to find the association between selected demographic variables with their post test knowledge scores.

3. Result

The study was begun with selection of 30 care givers of stroke patients who are attending selected Hospitals of Bagalkot. All the care givers are screened for eligibility criteria.

Table 1: Frequency and percentage distribution of socio-demographic characteristics of sample, N=30

Variables	Frequency	Percentage (%)
Age		
15-25 years	9	30%
25-35	7	23.33%
35-45	7	23.33%
45 & above	7	23.33%
Gender		
Male	13	43.33%
Female	17	56.66%
Religion		
Hindu	21	70%
Muslim	6	20%
Christian	3	10%
Others	0	0
Family income per month		
Rs5000-10000	9	30%
Rs10001-15000	10	33, 33%
Rs15001-20000	9	30%
Rs20001 & above	2	6.66%
Education		
No formal education	4	13.33%
Primary	6	20%
High school	10	33.33%
PUC & above	10	33.33%
Relationship of the patient		
Spouse	8	26.66%
Son/Daughter	9	30%
Siblings	6	20%
Others	7	23.33%
Duration of illness		
Since 1 year	9	30%
Since 2 years	10	33.33%
Since 3 years	6	20%
3 years & above	5	16.66%
Source of health information		

Magazines	4	13.33%
News papers	4	13.33%
Media	15	50%
Relatives	7	23.33%
Type of family		
Nuclear	21	70%
Joint	9	30%

Table 2: Level of pre-test knowledge of the care givers of stroke patients regarding rehabilitation of stroke, N=30

Level of knowledge	Range of scores	Number of respondents	Percentage (%)
Very poor	0-7	0	0
Poor	Aug-14	4	13%
Average	15-22	20	67%
Good	23-29	6	20%
Very good	30-36	0	0
Total		**30**	**100%**

Assessment of the level of knowledge of the care givers of stroke patients reveals that majority (67%) of the care givers of stroke patients, had average knowledge, 20% of them had good knowledge and 13% of them had poor knowledge there were no care givers of stroke patients who had very good knowledge and very poor knowledge regarding rehabilitation of stroke.

Table 3: Area wise mean, SD and mean percentage of pre-test knowledge scores of care givers of stroke patients. N=30

Knowledge area	Max. score	Mean	SD	Mean%
General information about stroke	7	3.33	1.21	47.57%
General management of stroke	12	6.36	1.42	53.00%
Rehabilitative management of stroke	17	9	1.66	52.94%
Total	36	18.7	3.33	51.94%

The total mean percentage of the pre-test knowledge scores was 51.94 percent with mean and SD 18.7±3.33. Area wise mean percentage of knowledge scores was 47.57 percent in the area of General information about stroke with mean and SD 3.33 ± 1.21 In the area of 'General management of stroke', the mean percentage was 53 percent with mean and SD 6.36 ± 1.42. In the area of 'Rehabilitative management of stroke', the mean percentage was 52.94 percent with mean and SD 9 ± 1.66. These findings reveal that care givers of stroke patients had average knowledge in the areas; General information about stroke, General management of stroke, and Rehabilitative management of stroke

Table 4: Comparison of level of knowledge of care givers of stroke patients in pre-test and post-test, N=30

Level of knowledge	Pre – test		Post-test	
	No. of respondents	Percentage	No. of respondents	Percentage
Very poor	0	0.0	0	0.0
Poor	4	13%	0	0.0
Average	20	67%	8	27%
Good	6	20%	15	50%
Very good	0	0.0	7	23%
Total	30	100%	30	100%

Analysis related to pre-test assessment of the level of knowledge of the care givers of stroke patients reveals that majority (67%) of the care givers of stroke patients had average knowledge, 20% of them had good knowledge and 13% of them had poor knowledge there were no care givers of stroke patients who had very poor knowledge and very good knowledge regarding rehabilitation of stroke. Where as in post-test majority (50%) of the care givers of stroke patients had good knowledge, 27% of them had average knowledge, and 23% of them had very good knowledge regarding rehabilitation of stroke.

Table 5: Significance of the difference between the pre-test and post-test knowledge scores of the care givers of stroke patients, N=30

Knowledge area	Test	Mean	SD	Mean Diff.	SD Diff.	Paired t-value	Table value
General information about stroke	Pre test	3.31	1.21	1.49	0.18	14.06*	2.045
	Post test	4.8	1.39				
General management of stroke	Pre test	6.36	1.42	02	0.27	12.04*	2.045
	Post test	8.36	1.69				
Rehabilitative management of stroke	Pre test	09	1.66	3.1	0.66	15.98*	2.045
	Post test	12.1	2.32				
Total	**Pre test**	**18.7**	**3.33**	**6.56**	**1.12**	19.43*	2.045
	Post test	**25.26**	**4.45**				

*p<0.05 *Significant

The calculated values were much higher than table value (2.045). Hence the **H₁** stated is accepted. Findings reveal that the difference between mean pre-test (18.7±3.33) and post-test (25.26±4.45) knowledge scores of care givers of stroke patients found to be statistically significant at 0.05 level of significance [t= 19.43, p<0.05].

Table 6: Area wise mean, SD and mean percentage of the knowledge scores in pre-test and post-test. N=30

Knowledge area	Max. score	Pre-test (O₁)		Post-test (O₂)		Effectiveness (O₂-O₁)	
		Mean ± SD	Mean %	Mean ± SD	Mean %	Mean ± SD	Mean %
General information about stroke	07	3.33±1.21	47.57%	4.8±1.39	68.57%	1.47±0.18	21%
General management of stroke	12	6.36±1.42	53.00%	8.36±1.69	69.66%	2±0.27	16.66%
Rehabilitative management of stroke	17	09±1.66	52.94%	12.1±2.32	74.70%	3.1±0.66	21.76%
Total	36	18.7±3.33	51.94%	25.26±4.45	70.16%	6.56±1.12	18.22%

Findings regarding comparison of mean percentage of the knowledge score of the pre-test and post-test reveals an increase of 18.22 percent in the mean knowledge score of the care givers of stroke patients after STP.

Table 7: Association between the post-test knowledge scores of care givers of stroke patients regarding rehabilitation of stroke and selected socio-demographic variables

The hypothesis was tested using Chi-square test.

S. No	Socio-demographic variables	DF	Chi-square value	Table value	Level of significance
1.	Age	1	2.01	3.84	P >0.05 NS
2.	Gender	1	0.47	3.84	P>0.05 NS
3.	Religion	1	0.31	3.84	P>0.05 NS
4.	Family income per month	1	0.23	3.84	P>0.05 NS
5.	Education	1	1.35	3.84	P>0.05 NS
6.	Relationship of the patient	1	0.13	3.84	P>0.05 NS
7.	Duration of illness	1	00	3.84	P>0.05 NS
8.	Source of health information	1	0.40	3.84	P>0.05 NS
9.	Type of family	1	0.057	3.84	P>0.05 NS

DF – Degree of freedom
NS – Not significant

Findings reveal that there is no significant association found between knowledge of care givers with their socio demographic variables like age, gender, religion, income of the family per month, education, relationship of the patient, duration of illness, source of health information, type of family. Thus H_2 stated is rejected for socio demographic variables.

4. Conclusion

A significant difference was found between the pre-test and post-test knowledge scores of care givers of stroke patients. The study showed that the STP was highly effective in improving the knowledge of care givers of stroke patients on rehabilitation of stroke. There was no significant association found between knowledge of care givers with their socio demographic variables like age, gender, religion, income of the family per month, education, relationship of the patient, duration of illness, source of health information, type of family.

5. Delimitations

1) This study is delimited to care givers of stroke patients who are available at the time of study.
2) This study is delimited to caregivers of stroke patients.
3) The study is delimited to 30 care givers of stroke patients.

References

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