

Effectiveness of Self-Instructional Module Among Primary Care Givers

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Abstract

Stroke is common clinical problem that occurs without a warning. The major responsibility for providing adequate care to patient has fallen on primary caregivers or family members. The nurse has to provide comprehensive care to stroke survivors as well as to care givers. The present study sought to assess the knowledge of primary care givers regarding care of stroke patients before and after administration of self-instructional module (SIM). It was a pre-experimental and evaluative approach covering 30 primary care givers from KC General Hospital, Bangalore (Karnataka). Purposive sample technique was used to select the samples. The tool used for data collection was structured questionnaire schedule. A self-instructional module was provided for the sample to improve their knowledge. The overall mean percentage of post-knowledge score of respondents (63.08%) was apparently higher than the overall mean of pre test knowledge score (37.50%) thereby revealing that the self-instructional module on care of stroke patients was effective.

Cerebrovascular Accident is the most common neurological disorders in adults and is third leading cause of death, after heart disease and cancer. Stroke is a medical emergency and causes permanent neurological damage and death if not promptly diagnosed and treated; it leaves many of its survivors with physical and mental disabilities thus creating a major social and economic burden. Stroke and care of stroke patients have complex associated care needs which share the common goal of maximising the patient and their dependence in self-care for as long as possible and supporting overall coping. New therapies can now prevent or limit the extent of damage to brain tissue. It is now really a challenge for the nurses to provide comprehensive care to stroke survivors as well as to care givers. The nurse to provide care of stroke survivors patient which include physical therapy, occupational therapy, speech therapy, communication nutrition, self-care and complication and its prevention. Most stroke patients require assisted care services, education information and family support.

Stroke can affect patients physically, mentally, emotionally or a combination of the three. Disability affects 75 percent of stroke survivors enough to decrease their employability. Stroke is a common clinical problem that occurs without a warning. The hospital mortality rate for stroke patients is around 20

percent. Those who survive stroke are discharged to home disabled and the responsibility of providing adequate care to patient falls primarily on family members or primary caregivers. It is estimated that 25-74 percent of stroke survivors require help for daily living activity from informal care givers, often family members. Approximately 31 percent of stroke survivors require assistance with self-care impairment in vocational ability up to 7 years following the stroke and 16 percent are institutionalised.

Support by family members or care givers are critical to achieving the best possible long term outcome for individual with disabilities. So it is important to provide education and training to caregivers so that they can provide better care to their patients and improve their quality of life. Keeping this in mind this study was undertaken to study the effectiveness of SIM among care givers in respect of stroke patients.

Objectives

The objectives of the study were to: (i) To Assess the pre-test knowledge of primary care gives regarding care of stroke patients (ii) To find the effectiveness of self-instructional module by comparing pre-test and post-test knowledge score and demographic variables and (iii) To find out the association between knowledge scores and demographic variables.

Hypothesis:

H₁. There will be a significant difference between the means of pre-test and post-test knowledge scores of

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respondents exposed to SIM on 'care of stroke patients'.
 H_2 . There will be a significant association between the post-test knowledge scores and selected demographic variables.

H_{01} . There will be no significant difference between the means of pre-test; and post-test knowledge scores of respondents exposed to SIM on care of stroke patients.

H_{02} . There will be no significant association between the post-test knowledge scores and selected demographic variables.

Conceptual framework

According to Treece & Treece (1986) an important purpose of the conceptual framework is to communicate clearly the inter-relationship of various concepts. The conceptual formwork adopted for the present study is based on Ernestine Widenbach's "prescriptive theory" (Helping Art of Clinical Nursing); factors included in prescriptive theory are central purpose, prescription and realities (Fig 1).

'**Central purpose**' refers to acquisition of knowledge by primary care gives on care of stroke patients. '**Prescription**' refers to prescription in the SIM on care of stroke patients to administer to primary care givers. '**Realities**' refers to immediate situation the fulfilment of the central purpose, (a) Agent: the researcher (b) Recipient: the primary care giver of stroke patients (c) Goal: the desired outcome the researcher wishes to gain in knowledge of primary care regarding care of stroke patients, (d) Means: Self-instructional module (e) Framework: Hospital setting for the fulfilment of the central purpose.

The action was taken out through: (a) Identification is pre-test and assessment of knowledge of primary care givers on care of stroke patient by administration of unstructured questionnaire, (b) Ministration is intervention and distribution of SIM on care of stroke patient to primary care givers, (c) Validation in post-test assessment of knowledge on primary care givers on care of stroke patient by administration of structured questionnaire and compare it with pre-test score.

Assumption: Care givers of stroke patient will be willing to express their knowledge regarding stroke.

Methodology

The approach used for this study was evaluative research type with pre-experimental one group pre-test post-test research design.

Knowledge test as the measure O1 was used to measure the knowledge before administration of SIM, the experimental variable 'X' was the SIM the after measure was the second administration of the knowledge test for, the measure O2 after administrator of SIM (Table 1).

Variables: Self-instructional module was the independent variable and knowledge of the primary care givers on care of stroke patient was the dependent variable in the present study.

Sample and Sampling technique: Total sample size of present study was 30 primary care givers of stroke patients at KC General Hospital and Spandana Hospital Bangalore. Purposive sampling technique was adopted for the present study.

Criteria for selecting the sample: The sample included the primary care givers of patients diagnosed with cerebrovascular accident and admitted in medical wards of selected hospital who had given consent during date collection, who could read and write Kannada or English. SIM was prepared on the basis of criteria checklist, extensive review literature and opinion of the expert.

Content Validity of SIM

The final draft of the SIM included 1. Table content

Table 1: Schematic representation of study design

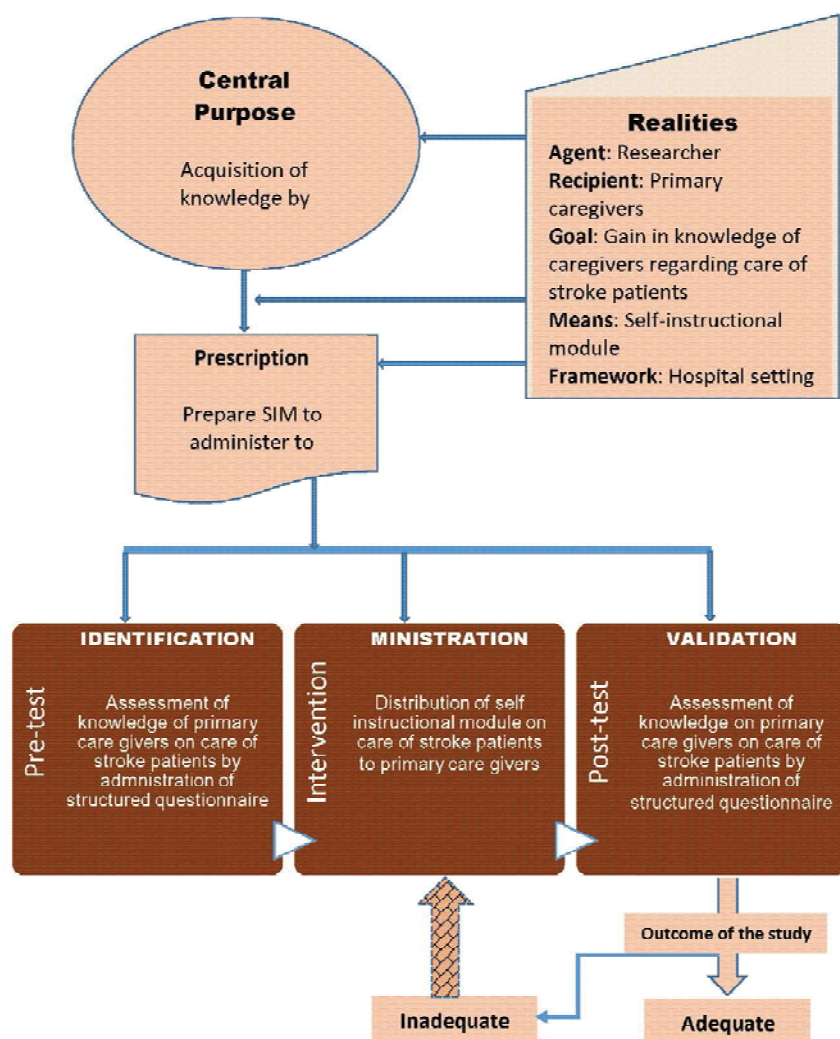
Group	Pre-test	Intervention	Post-test
Primary care givers 30	Day 1	Day 1	Day 6
	O ₁	X	O ₂
	(Dependent variable)	(Dependent variable)	(Dependent variable)

Table 2: Comparison of knowledge score between pre-test and post-test of respondents

Aspects	Pre-test		Post-test		t-value	p-value
	Mean	SD	Mean	SD		
Meaning and definition of stroke	0.80	0.81	1.93	0.25	7.577	< 0.001 (S)
Causes and types of stroke and risk factors of the stroke	1.37	0.96	1.67	0.99	1.201	< 0.234 (NS)
Signs and symptoms of stroke	2.20	1.10	2.83	0.99	2.726	< 0.011 (S)
Physical therapy	1.50	1.31	3.37	1.25	6.911	< 0.001 (S)
Communication	2.10	1.21	3.77	1.07	6.906	< 0.001 (S)
Nutrition	2.37	1.35	4.07	0.91	6.567	< 0.001 (S)
Self-care	2.50	1.17	3.80	1.10	4.510	< 0.001 (S)
Complications and their prevention	2.17	1.26	3.80	0.85	5.977	< 0.001 (S)
Total	15.00	4.12	25.23	3.68	13.094	< 0.001 (S)

p value is considered significant whenever $p \leq 0.05$.

Fig 1: Conceptual framework based on Ernestine Wiedenbach's Prescriptive Theory (1968)



2. Objective of the self-instructional module 3. Guidelines for the use of SIM 4. Introduction 5. Definition and meaning of stroke 6. Causes and types of strokes 7. Risk factor of stroke 8. Signs and symptoms of stroke 9. Care of stroke patients covers (a) Physical therapy (b) Communication (c) Nutrition (d) Self-care (e) Complication and its prevention 10. Glossary. The content was divided into three units. Each unit has separate content outline, objectives, content and learning activities. The language expert translated the SIM to Kannada language.

Based on conceptual framework and objective of the study the data are presented in four sections:

Section A: Distribution of demographic variables of primary care givers of stroke patients.

Section B: Assessment of existing knowledge of respondents regarding care of stroke patients aspect wise.

Section C: To find out the effectiveness of SIM on knowledge among respondents.

Section D: Association between post-test knowledge scores and demographic variables.

Data collection procedure

Administrative approval and ethical clearance was obtained. The purpose of the subject was explained to them and informed consent was obtained from the respondents. A pilot study was conducted among 5 primary care givers and the study was found feasible. In the actual study 30 primary care givers were included after taking informed consent. A pre-test questionnaire was given on the first day after that copy of SIM was given to respondents with instruction to retain and read the SIM thoroughly. Post-test was administered on day 6 following the administration of SIM using the same questionnaire and according to schematic design to collect the information, data was analysed in terms of descriptive and inferential statistics.

Results

- Out of 30 samples 12 (40%) were in the age group;
- Majority i.e 19 (63.33%) were female and 11 (36.67%) were males;
- Majority i.e. 30 respondents 20 (66.67%) were from joint family;
- 26 (86.67) had no previous experience.

Maximum numbers of respondents had no exposure to structured health education programme (22 out of 30).

Findings related to knowledge scores: Comparison of knowledge score between pre-test and post-test of respondents in all aspects reveals that total pre-test mean $\pm$ standard deviation 15 ± 4.12 and post-test mean $\pm$ standard deviation 25.23 ± 3.68 (Table 2). The t-value of total all aspects is 13.094 whereas p-value is <0.001 (s) significant. All the aspects were significant (S) except the causes and types of stroke and risk factors of stroke aspect was not significant (NS). Therefore, research hypothesis is accepted as there is significant difference between pre-test, and post-test knowledge scores of respondents exposed to SIM on care of stroke patient. Thus, the knowledge gain scores indicate the effectiveness of SIM.

Table 3 indicates the aspects wise pre-test and post-test knowledge score on care of stroke patients among primary caregivers. The findings reveal that

Table 3: Area wise mean and mean percentage gain of pre-test and post-test knowledge on care of stroke patients

Aspects	Pre-test		Post-test		Mean % gain
	Mean score	Mean % score	Mean score	Mean % score	
Meaning and definition of stroke	0.80	40	1.93	96.67	56.67
Causes and types of stroke and risk factors of the stroke	1.37	34.17	1.67	41.67	7.5
Signs and symptoms of stroke	2.20	55	2.83	70.83	15.83
Physical therapy	1.50	25	3.37	56.11	37.11
Communication	2.10	35	3.77	62.78	27.78
Nutrition	2.37	39.44	4.07	67.78	28.34
Self-care	2.50	41.67	3.80	63.33	21.66
Complications and their prevention	2.17	36.11	3.80	63.33	27.22
Total	15.00	37.40	25.23	63.08	27.07

p value is considered significant whenever $p \leq 0.05$.

the aspects were found to be higher than the pre-test knowledge scores on care of stroke patients. The enhancement of mean knowledge was found higher in the aspects (of meaning and definition of stroke 56.67%, Physical therapy 37.11%, Nutritional issue 28.34%, Communication 27.78%, Complication and its preventions 27.22%, Self-care 21.66%, Sign and symptoms of stroke 15.83%, Causes, types and risk factors of stroke 7.5%). However the enhancement of knowledge of all the knowledge aspect was found; $t_{gt} > t_{e}$. significant statically ($p < 0.05$), indicating the effectiveness of SIM on care of stroke patients. The overall mean percentage of post-test knowledge score of respondents was 63.08 percent which was apparently higher than the overall mean percentage of pre-test knowledge score (37.50%) which thereby revealed that the SIM was effective on care of stroke patients.

Association between knowledge score and demographic variables: This study reveals that there is no significant between post-test and selected demographic variables viz. age gender, relationship to care recipients, type of family, education, occupation, previous experience, exposure to health education training, exposure to structured health education programme. Fisher's exact probabilities were computed for age, gender, type of family, previous experience, structured education programme because statistically significant the expected self-frequency was below 5(<5), hence Chi-square test could not be applied it and found to be not significant except the structured health education programme found to be significant. The Fisher's exact probability of age was 1.0, gender

was 0.266 type of family 1.0, previous experience 0.274, found to be not significant and structured health education programme 0.37 found to be significant. It indicates that there is no significant association between post-test knowledge scores with demographic variables, hence H_2 was rejected and H_{O2} was accepted.

Implications: The findings of the study have implications on the field of nursing education, nursing practice, nursing administration and nursing research.

Nursing Practice: Structured health education programme conducted by the nursing personnel both in the hospital and community areas helps in providing adequate health services to the patients and care givers of stroke patient.

Nursing research: The chosen area demands conduct of more research and findings that is

to be obtained and should be drawn out as a protocol in caring patients with stroke which ultimately improves quality care. Despite, literatures, books and journals offering nursing procedures the protocol of holistic care of patients with evidence based nursing is yet to be brought out. Such studies would help in enhancing quality of patient care.

Nursing education: Nurse educators should make use of the SIM, which is prepared for use as a teaching tool. This tool reduces their lecture hours and may be beneficial as an audio visual aid. The students should be motivated to give health teaching using the available materials. Educational programme should be planned according to the needs, and understanding levels of the beneficiaries.

Nursing administration: The nurse administrator should take interest in providing information on care of stroke patient to caregivers. The nurse administrator should organise and provide materials for the effective, structured health education programmes regarding care of stroke patients. Cerebrovascular accident patients including appropriate nursing intervention.

Recommendations

Similar study can be replicated with a control group. A comparative study may be conducted to compare the knowledge and practice regarding care of stroke patient with care givers and trained care givers. A similar study can be conducted on a large sample for wider generalisation. A study can be done (a) to assess the knowledge and practice of care givers regarding care of stroke patient. (b) to assess the needs of the care givers regarding care of stroke patient. A similar study

can be replicated on a sample with different demographic characteristics. Effective structured teaching programme on care of stroke patient can be done among primary care givers.

Conclusion

There was a deficiency of knowledge among primary care givers regarding care of stroke patient. Self-instructional module on care of the stroke patient was effective in terms of increasing the knowledge of the primary care givers had acceptability and utility among primary care givers.

Limitations: The study is limited to the knowledge of primary care givers only and does not use any control group.

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