Effectiveness Of Information Booklet on Knowledge Regarding Stroke Management Among Staff Nurses in Selected Hospitals

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Abstract—**Introduction: Background of the study: The burden of stroke is increasing in India; stroke is now the fourth leading cause of death and the fifth leading cause of disability. Previous research suggests that the incidence of stroke in India ranges between 105 and 152/100,000 people per year. However, there is a paucity of available data and a lack of uniform methods across published studies. Stroke is a leading cause of long-term disability in community as about 30 to 50% of the patients who sustain a stroke are left with considerable residual deficits. A hospital-based study done at National Institute of Mental Health and Neurosciences (NIMHANS), showed that 57% of subjects with stroke had moderate to severe disability at the time of discharge. The post stroke disabilities are due to loss of locomotion and activity of daily living (ADL), cognition and communication skill.**

Objective: The objective of the study was assessing the effect of information booklet on stroke management among staff nurses. An experimental research approach and one group pre-test post-test research design was used to collect data before and after an administration of questionnaire on stroke management. The staff nurses were the samples selected by a convenient sampling technique and data was collected by using Standardized stroke management Questionnaire with structured interview schedule. The analysis was done by using descriptive and inferential statistics.

Results: It was observed that the Before intervention, the staff nurses had mean knowledge score of 15.80 ± 3.44. After intervention, the staff nurses had mean knowledge score of 26.36 ± 1.54. The post-test knowledge scores on stroke management has shown highly significant difference in "t" value (t=26.40, p<0.05) among staff nurses serving in hospital. The student's paired' t' test shows significant difference (26.40) at 0.05% level. There was a significant difference between mean pretest and post test scores of knowledges among staff nurses (t=26.40, p<0.0001). Hence, Hypothesis H₁: There is a significant difference between the pre-test and post-test knowledge scores on stroke management among staff nurses was accepted. There was no significant association between knowledge scores and selected demographic variables of staff nurses. Hence, Hypothesis H₂: There is a significant association between the post-test knowledge scores on stroke management among staff nurses and selected demographic variables were rejected.

Conclusion: Analysis of data showed that A self-learning material in the form of information booklet was used among staff nurses those who were selected by using convenient sampling technique to assess the knowledge on stroke management. Information Booklet & SAQ was used before and after intervention among staff nurses working in selected hospital of the city. The post-test knowledge scores on stroke management has shown highly significant difference in "t" value (t=26.40, p<0.05) among staff nurses serving in hospital. Therefore, the information booklet on stroke management was effective among staff nurses.

Index Terms—**Information booklet, Self-Administered Questionnaire, Stroke Management.**

I. INTRODUCTION

Stroke is a global health problem. Stroke is the 3rd largest killer disease in India. Incidence of stroke in India is around 130 per 10, 0000 people every year. It causes nearly 5 million deaths each year in the world. Stroke affects 0.25% of entire population. 15 million peoples suffer stroke worldwide each year, of these, 5millions are permanent disabled. Stroke is defined as ''the rapidly developing clinical symptoms and/or signs of focal disturbance of cerebral function, with symptoms lasting more than 24 hours or leading to death with no apparent cause other than that of

vascular origin. The concept of stroke was first noted from 460 to 370 before the Common Era by Hippocrates. At this time, the symptoms of convulsions and paralysis were referred to as apoplexy. Stroke are classified as ischemic or haemorrhagic based on the causes and underlying pathophysiologic finding. Ischemic stroke result from inadequate blood flow to the brain and partial or complete occlusion of an artery. Ischemic strokes are further divided into thrombolic and embolic stroke Haemorrhagic strokes occur result from bleeding into the brain tissue itself or into the subarachnoid space or ventricle. The medical management of the client with stroke is directed at early diagnosis and early identification of the client who can benefit from thrombolytic treatment. Preserving cerebral oxygenation, preventing complications and stroke recurrence and rehabilitating the client are other goals.

II. OBJECTIVES

The objectives of the study are:
1. To assess the pre-test knowledge on stroke management among staff nurses in selected hospitals.
2. To assess the post-test knowledge of information booklet on knowledge regarding stroke management among staff nurses.
3. To find out the association between the post-test knowledge score with selected demographic variable.

III. MATERIALS AND METHODS

A quantitative research approach was selected to assess the knowledge of staff nurses on stroke management. A pre- experimental design was used for this study. The study was carried out in the three selected hospitals of city. The period of data collection was two weeks. The permission was obtained from concern authority of respective hospitals, at city. The convenient sampling technique was used to select 60 staff nurses from different settings of the selected hospitals. Written consent was obtained from the samples and pretest has been assessed for all the 60 staff nurses using demographic and stroke management questionnaire for assessing knowledge of staff nurses. Then the information booklet on stroke management was carried out for all staff nurses those who are participated to whom the pre-test was

conducted. After two weeks, the post-test was taken and the data was analyzed.

IV. STATISTICAL ANALYSIS

The data was analyzed by descriptive and inferential statistics. Demographic data was analyzed using frequency and percentage, data from the stroke management questionnaire before and after information booklet administered was also analyzed using frequency, percentage and student paired 't' test. The association between knowledge scores findings and demographic variables was analyzed by using t test and chi square test.

V. RESULTS

Table 1: Percentage wise distribution of Staff Nurses according to their demographic characteristics.

Demographic Variables	No. of Staff Nurses	Percentage (%)
Age in years		
21-30 yrs.	49	81.7
31-40 yrs.	7	11.7
41-50 yrs.	2	3.3
≥51 yrs.	2	3.3
Gender		
Male	8	13.3
Female	52	86.7
Qualification		
GNM	44	73.3
BSc Nursing	10	16.7
PBBSc Nursing	6	10.0
GNM/BSc/PBBSc with any certified course		
Work Experience(years)		
0-5 yrs.	48	80.0
5-10 yrs.	7	11.7
10-15 yrs.	2	3.3
>15 yrs.	3	5.0
Source of information		
Mass Media	6	10.0
Journal	4	6.7
Working Area	39	65.0
Books	11	18.3

Table 2. Assessment with level of pre-test knowledge

Level of pre-test knowledge	Score Range	Level of Pre-test Knowledge Score	
		No of Staff Nurses	Percentage
Very Poor	0-6(0-20%)	1	1.67
Poor	7-12(21-40%)	7	11.67
Average	13-18(41-60%)	40	66.67
Good	19-24(61-80%)	11	18.33
Very Good	25-30(81-100%)	1	1.67
Minimum score		6	
Maximum score		25	
Mean knowledge score		15.80 ± 3.44	
Mean % Knowledge Score		52.66 ± 11.49	

The above table shows that each 1.67% of staff nurses from selected hospital had very poor and very good level of knowledge score, 11.67% had poor, 66.67% had average and 18.33% of them had good level of knowledge score.

Minimum knowledge score in pretest was 6 and maximum knowledge score in pretest was 25.

Mean knowledge score in pretest was 15.80 ± 3.44 and mean percentage of knowledge score in pre-test was 52.66 ± 11.49.

Table 3: Assessment with level of post-test knowledge

Level of posttest knowledge	Score Range	Level of Post test Knowledge Score	
		No of Staff Nurses	Percentage
Very Poor	0-6(0-20%)	0	0
Poor	7-12(21-40%)	0	0
Average	13-18(41-60%)	0	0
Good	19-24(61-80%)	4	6.67
Very Good	25-30(81-100%)	56	93.33
Minimum score		21	
Maximum score		29	
Mean knowledge score		26.36 ± 1.54	
Mean % Knowledge Score		87.88 ± 5.13	

The above table shows that 6.67% of staff nurses from selected hospital had good level of knowledge score and 93.33% of them had had very good level of knowledge score.

Minimum knowledge score in post-test was 21 and maximum knowledge score in post-test was 29.

Mean knowledge score in post-test was 26.36 ± 1.54 and mean percentage of knowledge score in post-test was 87.88 ± 5.13.

Table 4: Significance of difference between knowledge score

Test	Mean	SD	Mean Difference	t-value	p-value
Pre-Test	15.80	3.44	10.56±3.09	26.40	0.0001 S,p<0.05
Post Test	26.36	1.54			

This table shows the calculated 't' value i.e., 26.40 are much higher than the tabulated value at 5% level of significance for overall knowledge score of staff nurses which is statistically acceptable level of significance. Hence it is statistically interpreted that the Information Booklet on knowledge regarding stroke management among staff nurses from selected hospital of the city was effective. Thus, the H1 is accepted.

Table 5: Association of post-test knowledge score regarding Stroke Management among staff nurses in relation to their age in years

Age in years	No. of patients	Very Poor	Poor	Average	Good	Very Good	χ^2-value	p-value
21-30 yrs.	49	0	0	0	4	45	0.96	0.81 NS,p>0.05
31-40 yrs.	7	0	0	0	0	7		
41-50 yrs.	2	0	0	0	0	2		
≥51 yrs.	2	0	0	0	0	2		

This table shows the association of knowledge score with age in years of staff nurses from selected hospitals of the city. The tabulated 'x^2' values was 3.84(df=3) which is higher than the calculated 'x^2' i.e., 0.96 at 5% level of significance. Also, the calculated 'p'=0.81 which was higher than the acceptable level of significance i.e., 'p'=0.05. Hence it is interpreted that age in years of staff nurses is statistically not associated with their post-test knowledge score.

Table 6: Association of post-test knowledge score regarding Stroke Management among staff nurses in relation to their gender

n=60

Gender	No. of patients	Very Poor	Poor	Average	Good	Very Good	x^2-value	p-value
Male	8	0	0	0	0	8	0.65	0.41 NS,p> 0.05
Female	52	0	0	0	4	48		

This table shows the calculated 'p'=0.41 which was higher than the acceptable level of significance i.e., 'p'=0.05. Hence it is interpreted that gender of staff nurses is statistically not associated with their posttest knowledge score.

Table 7: Association of posttest knowledge score regarding Stroke Management among staff nurses in relation to their Qualifications

Qualifications	No. of patients	Very Poor	Poor	Average	Good	Very Good	x^2-value	p-value
GNM	44	0	0	0	4	40	1.55	0.45 NS,p >0.05
BSc Nursing	10	0	0	0	0	10		
PBBSc Nursing	6	0	0	0	0	6		
GNM/BSc/PBBSc with any certified course	0	0	0	0	0	0		

Table 8: Association of posttest knowledge score regarding Stroke Management among staff nurses in relation to their Work Experience(yrs)

Work Experience (years)	No. of patients	Very Poor	Poor	Average	Good	Very Good	x^2-value	p-value
0-5 yrs.	48	0	0	0	4	44	1.07	0.78 NS,p> 0.05
5-10 yrs.	7	0	0	0	0	7		
10-15 yrs.	2	0	0	0	0	2		
>15 yrs.	3	0	0	0	0	3		

Table 9: Association of post test knowledge score regarding Stroke Management among staff nurses in relation to their Source of information

n=6

Source of information	No. of patients	Very Poor	Poor	Average	Good	Very Good	x^2-value	p-value
Mass Media	6	0	0	0	0	6	2.30	0.51 NS,p> 0.05
Journal	4	0	0	0	0	4		
Working Area	39	0	0	0	4	35		
Books	11	0	0	0	0	11		

VI. DISCUSSION

From the findings of the study, Minimum knowledge score in pretest was 6 and maximum knowledge score in pre-test was 25. Mean knowledge score in pretest was 15.80 ± 3.44 and mean percentage of knowledge score in pre- test was 52.66 ± 11.49. The comparisons of the pre-test and post-test means of the knowledge were done by the paired t test. The pre-test average score was mean 15.80 with standard deviation of 3.44. The post-test average score was 26.36 with standard deviation of 1.54. The test statistics value of the paired t test was 26.40 with p value 0.0001. The p value less than 0.05, hence H1 is accepted. Shows that,

information booklet on knowledge regarding stroke management among the staff nurse was effective.

VII. CONCLUSION

After the detailed analysis, this study leads to the following conclusion. The knowledge of staff nurses on stroke management among staff nurses does not have 100% knowledge regarding stroke management. A self-learning material in the form of information booklet was used among staff nurses those who were selected by using convenient sampling technique to assess the knowledge on stroke management. Information Booklet & SAQ was used before and after intervention among staff nurses working in selected hospital of the city. The post-test knowledge scores on stroke management has shown highly significant difference in "t" value (t=26.40, p<0.05) [92] among staff nurses serving in hospital. Therefore, the information booklet on stroke management was effective among staff nurses.

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