

A Study to Evaluate Effectiveness of Structured Teaching Programme on Knowledge Regarding the Prevention of Cerebrovascular Accident among Hypertensive Patients in Selected Hospitals at Jaipur

Tarun Mudgal

Assistant Professor, NIMS Nursing College, NIMS University

Corresponding author : Tarun Mudgal, Assistant Professor, NIMS Nursing College, NIMS University

Corresponding E-mail : tarunmudgal1612@gmail.com

Abstract

Introduction : The chapter has deals with the statement of the problem, objectives of the study, operational and methodology and different steps which were undertaken for gathering and organization of data for the investigation .

Methodology : It includes research design, setting, sample and sampling technique, development and description of the instruments, pilot study and procedure for data collection and plan for data analysis.

Results : Findings revealed that patient average knowledge regarding prevention of cerebrovascular accident among hypertensive patients.

Conclusions : The pre- test knowledge score among patient were average and poor.

Keywords : evaluate; effectiveness; cerebrovascular Accident

GFNPSS Global Nursing Journal of India is a journal of Open access. In this journal, we allow all types of articles to be distributed freely and accessible under the terms of the creative common attribution- non commercial-share. This allows the authors, readers and scholars and general public to read, use and to develop non-commercially work, as long as appropriate credit is given and the newly developed work are licensed with similar terms.

How to cite this article: Mudgal T. A Study to Evaluate Effectiveness of Structured Teaching Programme on Knowledge Regarding the Prevention of Cerebrovascular Accident among Hypertensive Patients in Selected Hospitals at Jaipur. Glob. Nurs. J. India 2023; 6: III: 605-611.

Submitted: 03/12/2023, Accepted: 23/12/2023, Published: 12/01/2024

Introduction

"Without health life is not life it is only a state of languor and suffering an image of death."

Buddha

The human brain is the center of the human nervous system. The brain constitutes about one-fifth of the bodyweight and lies within the cranial cavity. The brain has three main parts ,the cerebrum, the cerebellum, and the brain stem. The brain stem consists of mid brain, pons and medulla oblongata. The cerebrum cortex is the largest part of the human brain, associated with higher brain function such as thought and

action. The cerebellum, or "little brain", is associated with regulation and coordination of movement, posture, and balance. Brain stem is responsible for basic vital life functions such as breathing, heartbeat, and blood pressure.¹

Cerebrovascular accident is a very serious condition in which the brain is not receiving enough oxygen to function properly. Cerebrovascular accident is also called CVA or brain attack, cerebrovascular disease, cerebral infarction or stroke. A cerebrovascular accident often results in permanent serious complications and disability and is a

common cause of death. Cerebrovascular disease is the most disabling of all neurologic diseases. Approximately 50 percentage of survivor have a residual neurologic deficit and greater than 25 percent require chronic care. Stroke incidence and mortality are declining primarily due to the successful treatment of hypertension and control of risk factors.²

Cardiovascular disease and a trial fibrillation are also associated with an increased risk of stroke. Diabetes mellitus increases the risk of stroke and morbidity and mortality after stroke. Prior stroke, carotid stenosis, and a history of transient ischemic attacks are considered modifiable risk factors for stroke. Early recognition and treatment of carotid stenosis and treatment of transient ischemic attacks with anti-platelet agents reduce the risk of stroke. Alcohol conception and drug abuse increases the risk of stroke. High dose oestrogen oral contraceptives combine with hypertension, cigarette smoking and migraine headaches increasetheriskofstrokeinwomen.^{3,4,5}

Hypertension has become a significant problem in many developing countries experiencing epidemiological transition from communicable to non communicable chronic diseases. The emergence of hypertension and other cardiovascular disease as a public health problem in these countries is strongly related to the aging of the populations, urbanization, and socioeconomic changes favouring sedentary habits, obesity, alcohol consumption, and salt intake, among others. A cost-effective use of health services to control these emerging chronic diseases is particularly needed in developing countries because resources are limited and generally must be shared with the concurrent burden of persistent communicable diseases.^{6,7,8}

Methodology

Research approach : The research approach adopted for this study was an evaluative approach. Evaluative approach helps to explain the effect of independent variable on the dependent variable.

Research design : A pre-experimental research design with one group pre and post-test approach was used to evaluate the effectiveness of the structured teaching programme for the present study.

Setting of the study : Setting is a physical location and condition in which data collection takes place in the study. This study was undertaken in Hospital. This study was undertaken in Jaipur, Rajasthan.

Population : The population for the present study

comprised of the hypertensive patient in Jaipur, Rajasthan.

Sample : Sample comprise of 60 hypertensive patient Rajasthan.

Sample size : The sample of the present study comprised of hypertensive patient who met the inclusion criteria were selected for the study.

Sampling technique : Non-random sampling technique ,a type convenient sampling technique approach was used to select the sample of 60 hypertensive patient.

Results:

Section-1

Distribution of demographic variables among hypertensive patients

Table-1: Frequency and percentage distribution of demographic variables of hypertensive patients.

n=60			
S. No.	Demographic Variables	Frequency (f)	Percentage (%)
1.	Age		
	a. 31-40years	24	40
	b. 41-50years	23	38.3
	c. 51-60years	13	21.7
	d. Above60	0	0.0
2.	Sex		
	a. Male	36	60.0
	b. Female	24	40.0
3.	Religion		
	a. Hindu	34	56.7
	b. Muslim	16	26.7
	c. Christian	10	16.7
	d. Others	0	0.0
4.	Education status		
	a. Illiterate	0	0.0
	b. Primary	16	26.7
	c. Secondary	14	23.3
	d. Higher secondary	20	33.3
	e. Graduate and above	10	16.7
5.	Occupation		
	a. Unemployment	20	33.33
	b. Government sector	6	10.00

	c. Private sector	14	23.3
	d. Coolie	10	16.7
	e. Business	6	10.0
	f. Others	4	6.7
6.	Monthly Income		
	a. Below 2000 Rupees	5	8.3
	b. 2001-4000 Rupees	10	16.7
	c. 4001-5000 Rupees	20	33.3
	d. 5001 and above	25	41.7
7.	Place of Residence		
	a. Urban	48	80.0
	b. Rural	12	20.0
8.	Food Pattern		
	a. Vegetarian	12	20.0
	b. Non-vegetarian	48	80.0
9.	Duration of illness		
	a. Below 1 year	0	0
	b. 1-2 years	16	26.7
	c. 3-4 years	20	33.3
	d. Above 5 years	24	40.0
10.	Habits		
	a. Smoking	24	40.00
	b. Alcoholism	5	8.3
	c. Tobacco chewing	14	23.3
	d. None	17	28.4

Section-2

Distribution of pre test level of knowledge regarding prevention of cerebrovascular accident

Table-2 Frequency and percentage distribution of pre test level of Knowledge regarding prevention of cerebro vascular accident among hypertensive patients.

n=60

Level of knowledge	Score	No of Respondents	
		No	%
Inadequate	<50%	43	71.67
Moderate	50-75%	17	28.33
Adequate	>75%	0	0

Table-3 Mean, SD and Mean% of pre test knowledge regarding prevention of cerebro vascular accident among hypertensive patients.

n=60

Domain	Max Statements	Max Score	Range	Mean	SD	Mean %
Pre test	30	30	19-2	9.5	4.78	31.67

Section-3

Distribution of post-test level of knowledge regarding prevention of cerebrovascular accident.

Table-4 Frequency and percentage distribution of post test level of Knowledge regarding prevention of cerebro vascular accident among hypertensive patients.

n=60

Level of knowledge	Score	No of Respondents	
		No	%
Inadequate	<50%	0	0
Moderate	50-75%	28	46.67
Adequate	>75%	32	53.33

Table-5 Mean,SD and Mean% of post test knowledge regarding prevention of cerebrovascular accident among Hypertensive patients

n=60

Domain	Max Statements	Max Score	Range	Mean	SD	Mean %
Post test	30	30	30--15	22.38	3.58	74.60

Section-4

Effectiveness of Structured Teaching Programme on knowledge regarding prevention of cerebro vascular accident among hypertensive patients.

Table-6 Pre-test and post test level of knowledge among hypertensive patients

n=60

Level of knowledge	Pre test		Post test	
	No	%	No	%
Inadequate	43	71.67	0	0
Moderate	17	28.33	28	46.67
Adequate	0	0	32	53.33

Table-7 Comparison of Mean, SD and Mean % of pre and post test level of knowledge regarding prevention of cerebrovascular accident.**n=60**

Domain	Range	Mean	SD	Mean%
Pre test	19-2	9.5	4.78	31.67
Post test	30-15	22.38	3.58	74.60
Enhancement	22-5	12.88	5.04	42.93

Table-8 Comparing the effectiveness of structured teaching programme regarding prevention of cerebrovascular accident among hypertensive patients.**n=60**

Domain	Range	Mean	SD	Mean %	Paired 't' test
Pre test	19-2	9.5	4.78	31.67	19.76**
Post test	30-15	22.38	3.58	74.60	
Enhancement	22-5	12.88	5.04	42.93	

N.S.-Not significant

S-Significant

*P<0.05 level,

**P<0.01 level,

***P<0.001 level

The effectiveness of STP was assessed through paired 't' test. There was a significant improvement obtained following STP on prevention of cerebrovascular accident. Pre test mean is 9.5, SD is 4.78 and after STP mean is 22.38, SD is 3.58. Its enhancement mean is 12.88, SD is 5.04. Paired 't' test value 19.76 is significant at p<0.01 level.

Section-5

Association between the level of pre test knowledge and Selected demographic variables of hypertensive patients.

Table-9 The association between pre test level of knowledge and demographic variables of the hypertensive patients**n=60**

Sr.No.	Demographic variables	No	%	Level of Knowledge				Chi square
				<Median(26)		≥Median(34)		
				No	%	No	%	
1.	Age (In Years)							
	a. 31--40	24	40	12	46.2	12	35.3	0.73
	b. 41--50	23	38.3	9	34.6	14	41.2	df2
	c. 51--60	13	21.7	5	19.2	8	23.5	N.S
	d. Above 60	0	0.0	0	0.0	0	0.0	
2.	Sex							
	a. Male	36	60.0	19	73.1	17	50.0	3.26
	b. Female	24	40.0	7	26.9	17	50.0	df1N.S
3.	Religion							
	a. Hindu	34	56.7	16	61.5	18	52.9	0.92
	b. Muslim	16	26.7	7	26.9	9	26.5	
	c. Christian	10	16.7	3	11.5	7	20.6	
	d. Others	0	0.0	0	0.0	0	0.0	N.S
4.	Educational Status							
	a.Illiterate	0	0.0	0	0.0	0	0.0	19.42*
	b. Primary	16	26.7	12	46.2	4	11.8	

	c. Secondary	14	23.3	9	34.6	5	14.7	df3
	d. Higher secondary	20	33.3	5	19.2	15	44.1	S
	e. Graduate and above	10	16.7	0	0.0	10	29.4	
5.	Occupation							
	a. Unemployment	20	33.3	15	57.7	5	14.7	14.26*
	b. Government sector	6	10.0	2	7.7	4	11.8	df5
	c. Private sector	14	23.3	2	7.7	12	35.3	S
	d. Coolie	10	16.7	3	11.5	7	20.6	
	e. Business	6	10.0	2	7.7	4	11.8	
	f. Others	4	6.7	2	7.7	2	5.9	
6.	Monthly Income							
	a. Below 2000 Rupees	5	8.3	3	11.5	2	5.9	7.63
	b. 2001-4000 Rupees	10	16.7	7	26.9	3	8.8	df3
	c. 4001-5000 Rupees	20	33.3	10	38.5	10	29.4	N.S
	d. 5001 and above	25	41.7	6	23.1	19	55.9	
7.	Place of Residence			26				
	a. Urban	48	80.0	17	65.4	31	91.2	6.12*
	b. Rural	12	20.0	918	34.6	3	8.8	df1 S
8.	Food Pattern							
	a. Vegetarian	12	20.0	6	23.1	6	17.6	0.27
	b. Non-Vegetarian	48	80.0	20	76.9	28	82.4	df1N.S
9.	Duration of Illness							
	a. Below 1 Year	0	0	0	0.0	0	0.0	
	b. 1-2 Years	16	26.7	11	42.3	5	14.7	7.5*
	c. 3-4 Years	20	33.3	9	34.6	11	32.4	df2
	d. Above 5 Years	24	40.0	6	23.1	18	52.9	S
10.	Habits							
	a. Smoking	24	40.0	12	46.2	12	35.3	2.34
	b. Alcoholism	5	8.3	3	11.5	2	5.9	df3
	c. Tobacco Chewing	14	23.3	6	23.1	8	23.5	N.S
	d. None	17	28.4	5	19.2	12	35.3	

N.S.-Not significant* S-Significant at P<0.05 level

Discussion

SECTION-I : Sample characteristics: According to age, 40% were between the ages of 31-40 years, 38.3% were between 41-50 years of age, and rest 21.7% were between the age group of 51-60.

According to sex, 60.0% were males and the rest 40.0% were females.

On the basis of religious believes, majority of the patients (56.7%) were Hindu, 26.7% were Muslim and 16.7% were Christian.

Regarding educational status, 26.7% had primary school education, 23.3% had secondary education 33.3% had higher secondary education and rest 16.7% had graduate and above educational status.

On the basis of occupation, 33.3% were unemployed, 10% were working in government sector, 23.3% were working in private sector, 16.7% were coolie workers, 10.0% were doing business and 6.7% were doing other works.

Regarding monthly income of the family, 8.3% were having below 2000 rupees, 16.7% were with in 2001 and 4000 rupees. 33.3% was within 4001 and 5000 rupees and 41.7% were having the family income of 5001 and above.

According to place of residence, Majority of the samples (80%) were from urban and the rest (20%) from rural area.

Regarding dietary pattern, 20.0% were vegetarian and remaining 80.0% were nonvegetarian.

According to the duration of illness, 26.7% were between 1 to 2 year of duration, 33.3% were between 3 to 4 year of duration and 40.0% was above 5 years of illness duration.

Regarding habits, 40% of hypertensive patients were smokers, 8.3% were alcoholics, 23.3% were chewing tobacco and 28.4% do not have any bad habits.

Section II : Assessment of pre test knowledge of hypertensive patient regarding prevention of cerebrovascular accident.

In the present study the levels of knowledge were seen into 3 categories, inadequate, moderate and adequate of the hypertensive patients more than two third of the patients (71.67%) had inadequate knowledge, 28.33% had moderately adequate and no one had adequate knowledge.

A concurrent study conducted to assess the knowledge of patients admitted with hypertension in the medical ward of an Italian hospital. Data collected using structured questionnaire. Results of the study shows that most patients have incorrect life styles: 50% eat cheese every day and never exercise for at least 30 minutes every day before the event. Clients showed poor knowledge on lifestyle before the event.

Section-III : Assessment of post test knowledge of hypertensive patients regarding prevention of cerebrovascular accident. The present study showed a marked improvement in knowledge regarding prevention of cerebrovascular accident in post test. Among the hypertensive patients more than half of the patients (53.33%) had attained adequate knowledge, 46.67% had attained moderately adequate and no one had inadequate knowledge. A concurrent study conducted in Norway to assess the effect of dietary and anti smoking advice on the incidence of cerebrovascular accident. The study conducted in

experimental and control group. The results of the study showed that effect of dietary and anti smoking advice had a significant effect in the experimental group.

Section-IV : Effectiveness of STP on knowledge regarding prevention of cerebrovascular accident

The table 8 shows that there is a significant improvement in knowledge of hypertensive patients after structured teaching programme.

The present study showed a marked improvement in knowledge regarding prevention of cerebrovascular accident among hypertensive patients.

A prospective, randomized study was conducted in USA on reducing the stroke risk in hypertension. The purpose of this study was to test the effectiveness of an educational intervention to improve patients knowledge regarding preventive aspects and life style modification. 40 patients were selected. The result suggested that the educational intervention improved patient's knowledge and life style. They concluded that a brief, individualized educational intervention about stroke risk improved patients knowledge and achieved lifestyle changes.

Section-V : Association between level of knowledge and selected demographic variables of hypertensive patients regarding prevention of cerebrovascular accident

The tables 9 describes the association between knowledge and selected socio-demographic variables of hypertensive patients such as Age, Sex, Religion, Educational status, Occupation, Family income per month, Place of residence, Food pattern, Duration of illness, Habits.

A study was conducted on effect of socioeconomic status on prevention of stroke in China the samples were interviewed through questionnaire regarding patients' socioeconomic and living status, and a clinical examination at the research center. The study showed that socio economically disadvantaged patients had greater hypertension risks every at baseline than wealthier better-educated counterparts. The study concluded that successful intervention or education the risk factors will have to be addressed, not just with regard to specific risk factors, but also with the societal conditions that lead to the adoption and maintenance of high-risk behaviors.

Conclusions

This chapter enlightens the importance of this research, reveals that there was a significant lack in knowledge regarding prevention of cerebrovascular accident among

hypertensive patients in selected hospitals at Jaipur and structured teaching programme had a significant role in improving the knowledge. The study also reveals that, there was significant association between knowledge with educational status, occupation, place of residence and duration of illness of hypertensive patients at Jaipur.

Financial support and sponsorship : No

Conflict of Interest : There are no conflicts of interest

References

01. Waugh Anne, Grant Allison. Anatomy and physiology in health and illness. 9th ed. Churchill Livingstone Publication; 2003. p. 149-55.
02. Human brain. [Online]. 2010 Dec 6 [cited 2010 Dec 12]; Available from: URL:<http://www.en.wikipedia.org>
03. Joyce M B, Jane H H. Medical surgical nursing. 7th ed. St.Louis: Saunders An Imprint of Elsevier Publication; 2005. p. 1707-29.
04. Papadopoulos DP, Papademetriou V. Aggressive blood pressure control and stroke prevention. J Hypertens. 2008 May; 26(5):844-52.
05. Kona Vishnu. Cerebrovascular diseases. [Online]. 2010 Sep 9 [cited 2010 Sep20]; Available from: URL: <http://www.omnimedicalsearch.com>
06. Dr. Yasser Mokhtar. Cerebrovascular disease and risk of stroke. [Online]. 2004 Jan 7 [cited 2004 Jan 10]; Available from: URL:<http://www.strokerisk8.htm>
07. Wadley. Cognitive status, stroke symptom reports, and modifiable risk factors among individuals with no diagnosis of stroke or transient ischemic attack in the reasons for geographic and racial differences in stroke (REGARDS) Study. J Stroke. 2007; 38:1143-47.
08. Kase CS, Wolf PA, Bachman DL, Linn RT, Cupples LA. Dementia and stroke: the Framingham study. In: Ginsberg MD, Dietrich WD, editors. Proceedings of the 16th Research Conference of Cerebrovascular Diseases; 2002; New York: Raven Press; 2002; 193-8.

