

# A Study to Assess the Effectiveness of Self Instructional Module on Knowledge Regarding Transient Ischemic Attack among Hypertensive Patients in Selected Hospitals at Mysore

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**Abstract:** People who have had a TIA or minor stroke are at greater risk of having another TIA or stroke. High blood pressure is often one of the problems people need to address. Lifestyle changes such as quitting smoking, reducing alcohol intake, losing weight, eating a healthy diet and taking exercise can help to reduce the risks. Public awareness campaigns and health educations are most important part to combat increasing trend of stroke. Stroke needs to be addressed as a public health problem through the health system. **Methods:** Pre experimental one group pre test - post test design was used to assess the effectiveness of SIM on knowledge regarding transient ischemic attack among hypertensive patients in selected hospitals at Mysore. A SIM was prepared focusing on knowledge regarding TIA among hypertensive patients. A structured knowledge questionnaire was prepared and used to assess the effectiveness of self instructional module. The reliability was found to be 0.97 and validity was ensured in consultation with guides and experts in the field of statistics, neurosciences and nursing. **Result:** With regard to the knowledge assessment, the mean pre test score was 11.8 and post test score was 20.8. The mean difference between pre-test score and post test score was significant at 0.05% level as the 't' = 15.83 ( $p < 0.05$ ). This showed that SIM on knowledge regarding TIA was effective. Therefore the research hypothesis ( $H_1$ ) was accepted, i.e. there is a significant difference between mean pre-test and mean post-test knowledge score. With regard to association, the chi-square value of age ( $\chi^2=1.09$ ), gender ( $\chi^2= 0.05$ ), educational status ( $\chi^2=0.20$ ), family history of hypertension ( $\chi^2= 0.04$ ), duration of hypertension ( $\chi^2=0.75$ ), dietary pattern ( $\chi^2= 0.27$ ), previous attack of TIA ( $\chi^2=3.22$ ) and regularity in hypertension treatment ( $\chi^2= 0.04$ ), were not significant at 0.05% level of significance. Hence research hypothesis  $H_2$  was rejected. **Interpretation and conclusion:** This study revealed that the SIM on knowledge regarding TIA was effective among hypertensive patients.

**Keywords:** Knowledge, TIA, SIM

## 1. Introduction

The nervous system is the most complicated and highly organized of the various systems which make up the human body. It is the mechanism concerned with the correlation and integration of various bodily processes and the reactions and adjustments of the organism to its environment. The human brain is an extremely complex organ which, among many other things controls Blood Pressure (B.P) and heart rate, interprets the senses, initiates body movement and is the home of emotions and intelligence.<sup>1</sup> Without adequate supply of oxygen to the brain tissue via blood, the brain cells cannot function and a reduction or cessation of blood flow in an area of the brain will lead to ischemia, therefore give symptoms in the corresponding part of the body. This can include paralysis of an arm or a leg and impairment of vision and speech.<sup>2</sup> Transient ischemic attack (TIA) is an acute episode of temporary neurologic dysfunction resulting from focal cerebral ischemia not associated with permanent cerebral infarction. TIA is a brief interruption of blood flow to part of the brain that causes temporary stroke like symptoms. The risks for TIA are smoking, high blood pressure, cholesterol, diabetes, and family history.<sup>3</sup> TIAs cannot be ignored since they are warning signs for a potential future stroke. Ten percent of people with TIAs will have a stroke within three months. The purpose of accessing medical care is to help minimize risk factors to help decrease that 10% risk. Published studies suggested that if blood

pressure is tightly controlled, cholesterol levels are reduced with medication, and smoking cessation is begun, the risk of future stroke can be reduced to 2%.<sup>4</sup>

## Objectives

- 1) To assess the pretest knowledge regarding transient ischemic attack among hypertensive patients.
- 2) To administer self instructional module regarding transient ischemic attack.
- 3) To assess the posttest knowledge regarding transient ischemic attack among hypertensive patients.
- 4) To assess the effectiveness of self instructional module regarding transient ischemic attack among hypertensive patients.
- 5) To find out the association between pretest knowledge score and selected demographic variables such as age, gender, educational status, dietary pattern, family history of hypertension, previous attack of TIA and regularity in hypertension treatment.

## 2. Materials and Methods

The study was carried out in Gopala Gowda Shanthaveri Memorial Hospital Trust, Mysore. Non probability convenient sampling technique, 60 hypertensive patients were selected. Pre experimental one group pre test - post test design was used to assess the effectiveness of SIM on knowledge regarding transient ischemic attack among

hypertensive patients in selected hospitals at Mysore. A structured knowledge questionnaire was prepared and used to assess the effectiveness of self instructional module. The reliability was found to be 0.97 and validity was ensured in consultation with guides and experts in the field of statistics, neurosciences and nursing. Structured knowledge questionnaire was administered to collect the needed data. Data was analyzed by using descriptive and inferential statistics.

### 3. Result

Main findings are discussed under the following headings

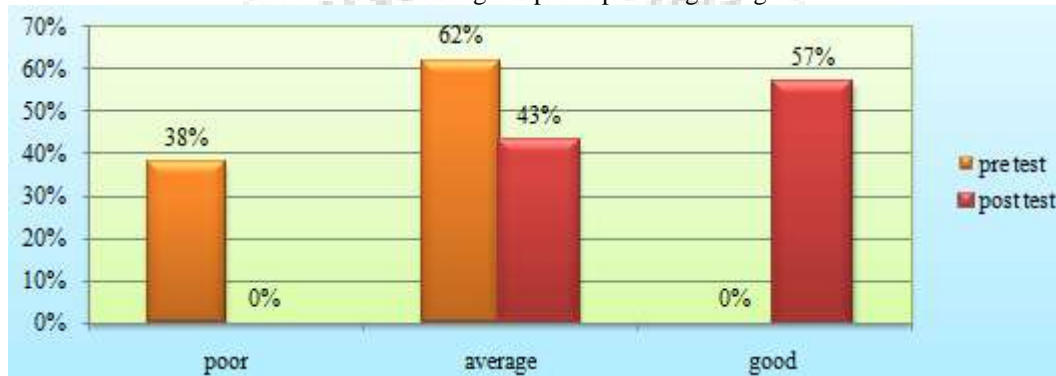
Section- A: Distribution of frequency and percentage analysis of demographic variables.

**Table 1:** Sample characteristics, n=60

S no	Demographic variables	Variables	No of subjects	Percentage
1	Age	30-35	15	25%

		36-40	12	20%
		41-45	16	27%
		Above 45	17	28%
2	Gender	Male	38	63%
		Female	22	37%
3	Educational status	Primary	20	33%
		Secondary	19	32%
		Graduate and above	21	35%
4	Family history of Hypertension	Yes	46	77%
		No	14	23%
5	Duration of hypertension	Below 3 years	11	18%
		4-7 years	21	35%
		8-11 years	17	29%
		Above 11 years	11	18%
6	Dietary pattern	Vegetarian	18	30%
		Non vegetarian	42	70%
7	Previous attack of TIA	Yes	18	30%
		No	42	70%
8	Regularity in hypertension treatment	Yes	46	77%
		No	14	23%

#### Section-B: Knowledge of participants regarding TIA



**Figure 1:** Distribution of samples according to pre test and post test knowledge score, n=60

#### Section C: Effectiveness of SIM regarding TIA

**Table 2:** Mean, SD, Mean%, t value of the knowledge scores in pre-test and post-test, n=60

Knowledge assessment	Mean	Mean difference	SD	df	Paired 't' value	Table value
Pre test	11.8	9	4.13	59	15.83	1.96
Post test	20.8		3.15			

Significance at 0.05% level

#### Section: D. Association between pre test knowledge score and demographic variables

**Table 3:** Association between pre test knowledge score and demographic variables, n = 60

Sl no	Demographic variables	Over all pre-test score level		Df	Tab value	$\chi^2$	
		Poor	Average				
1	Age	30 -35	7	8	3	7.81	1.09 NS
		36 -40	5	7			
		41 -45	6	10			
		Above 45	5	12			
2	Gender	Male	15	23	1	3.84	0.05 NS
		Female	8	14			
3	Educational status	Primary	7	13	2	5.99	0.20 NS
		Secondary	8	11			

4	family history of hypertension	Graduate and above	8	13	1	3.84	0.04 NS
		Yes	18	28			
5	Duration of hypertension	No	5	9	3	7.81	0.75 NS
		Below 3 years	5	6			
		4-7 years	7	14			
		8-11 years	6	11			
6	Dietary pattern	Above 11 years	5	6	1	3.84	0.27 NS
		Vegetarian	6	12			
7	Previous attack of TIA	Non vegetarian	17	25	1	3.84	3.22 NS
		Yes	10	8			
8	Regularity in hypertension treatment	No	13	29	1	3.84	0.04 NS
		Yes	18	28			

Significance at 5% level

NS: Not significant

### 4. Discussion

The present study was conducted to assess the effectiveness of SIM on knowledge of hypertensive patients regarding transient ischemic attack. In order to achieve the objectives of the study, one group pre test post test design approach was adopted. Non probability convenient sampling technique was used to select the sample. The data was

collected from 60 samples by using structured knowledge questionnaire. The findings of the study had been discussed with reference to the objectives and hypothesis.

As per the findings of our study among the 60 samples 23 (38%) samples had poor knowledge, 37 (62%) samples had average knowledge and none of the samples had good level of knowledge regarding TIA, during the pre test. The mean pretest knowledge score of the group was 11.8 and standard deviation 4.13 on TIA, suggesting that there was lack of knowledge. The finding of the mean post-test knowledge score of the hypertensive patients was 20.8 and standard deviation 3.15. These findings shows that after the administration of the SIM, the knowledge score of the samples had increased. Our study denoted that mean post-test knowledge score of the samples was 20.8. These findings showed that after the administration of the SIM, the knowledge score had increased. The pre-test and post test scores were compared using paired 't' test ( $t=15.83$  at  $p>0.0001$ ). It was found that there was a significant difference between performance in the pretest and post test. Hence the SIM was effective. The finding established that there was no significant association between pre test knowledge score of samples on TIA with age, gender, educational status, family history of hypertension, duration of hypertension, dietary pattern, previous attack of TIA and regularity in hypertension treatment.

## 5. Conclusion

From the findings of the present study, it was concluded that the level of knowledge of hypertensive patients regarding TIA was inadequate during the pre-test assessment. However, the findings of the post-test revealed that, the level of knowledge had improved. The improvement was due to the administration of the SIM. Therefore the knowledge of the hypertensive patients could be further improved by providing on-going educational programmes.

Out of the several demographic variables, none of the demographic variables were statistically associated

## 6. Implication of the Study

The findings of the study have implications for nursing education, nursing practice, nursing administration, and nursing research.

**Nursing Education:** Nursing education helps the student nurses with adequate knowledge, skills and attitude to fulfill their duties and responsibilities in the nursing field. The effectiveness of self instructional module should encourage the student nurses in providing information about transient ischemic attack and prevention of future stroke. Nursing curriculum should be such that it should prepare the prospective nursing students to assist and help hypertensive patients to manage their condition. The nursing curriculum should include more content on transient ischemic attack and prevention of future stroke. The holistic health care approach should be emphasized during the training of nursing students. The nurse educators have the responsibility to update the knowledge of students during clinical teaching

and thereby improve their knowledge through various educational programmes.

**Nursing Practice:** Constant updating and growth of knowledge are essential to keep abreast of scientific and technological change and changes within the nursing profession. In-service education programmes are designed to upgrade the knowledge of employees. Nurses play an important role in preventive and curative aspect of health care by providing health teaching as well as providing pamphlets, educational materials on transient ischemic attack. In order to improve client's knowledge the supportive educational role of nurse is essential. The investigator as a nurse felt the need for nurses to be facilitators to educate hypertensive patients and hypertensive patients who experienced TIA, so that they could help client's to manage themselves and to prevent future stroke. It is therefore important for the nurses to be knowledgeable and competent to provide information so as to prevent frequent hospitalizations.

**Nursing Administration:** In each and every organization (hospital) nursing administration must plan a separate budget for continuing education programs. They must make sure that in-service education programs are conducted periodically. After training, the nurses should be provided with adequate facilities and supervision to maintain the standards of knowledge regarding TIA and prevention of future stroke and should evaluate the nursing practices for the effectiveness of In-service education.

**Nursing Research:** Today nurses are actively generating, publishing and applying research in practice to improve client care and enhance scientific knowledge base of nursing. The present study throws light on knowledge level of hypertensive patients regarding TIA. Nurse need to engage in multidisciplinary research so that it will help improve the knowledge and by applying it, many health problems can be solved. Extensive nursing research in exploring the knowledge level on transient ischemic attack is needed, so that mortality and morbidity could be reduced. Health related studies need to concentrate on behavior modification of people by developing unique teaching materials.

## 7. Recommendations

On the basis of findings of the study the following recommendations were made.

- A similar study can be replicated on a larger sample with different demographic characters.
- A similar study can be conducted using other strategies like STP, VAT and pamphlets.
- An experimental study could be undertaken with control group.

A follow up study need to be conducted to find out the effectiveness in terms of retention of knowledge among hypertensive patients and to re-inforce health promotion among hypertensive patients.

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