



**A SURVEY OF KNOWLEDGE AND AWARENESS ABOUT STROKE AMONG
FIRST AND SECOND YEAR PHYSIOTHERAPY STUDENTS**

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ABSTRACT

Background: Awareness of stroke, especially the risk factors, warning signs and response to stroke is important in the control of the disease. The aim of the study was to evaluate stroke awareness, the risk factors and warning signs, among the first and second year physiotherapy students.

Methodology: The study was conducted among 150 students of first and second year physiotherapy students using a structured opened ended stroke awareness questionnaire. The study was conducted after taking a written consent from the subjects.

Results: Only 33% of the subjects correctly defined stroke as circulation problem in the brain .21% of the subjects were not familiar with the risk factors of the stroke. 22% were able to identify high blood pressure as a risk factor. 33% of the population denied the knowledge of warning signs. The subjects were not familiar with the disabilities / impairments following stroke.

Conclusion: Though stroke is perceived as a serious and preventable disease, awareness of the risk factors and warning signs is sub-optimal. This indicates that community-based education programs to increase public awareness of stroke could contribute to decreasing the risk of stroke and to increasing the speed of hospital presentation after stroke onset.

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INTRODUCTION

Stroke is ranked as a second leading cause of death worldwide with an annual mortality rate of 5.5 million ⁽⁸⁾⁽¹⁰⁾ It is the leading cause of adult disability. ⁽⁸⁾ Stroke is the most preventable neurological disease, and this is mainly because, many of its risk factors such as hypertension, high cholesterol, diabetes and smoking can be prevented either through healthier lifestyle choices or by medication ⁽⁸⁾.

Stroke is a sudden neurologic deficit manifested either by vascular occlusion from thrombosis or embolism, or from haemorrhage into the brain due to a blood vessel rupture by hypertension. It is very well known that brain ischemia persisting for more than 4 to 6 h will produce permanent neurological damage. ⁽¹⁹⁾

Stroke is one of the leading causes of death and disability in India. Prevalence rate of stroke range, 84-262/100,000 in rural and 334-424/100,000 in urban areas. The incidence rate is 119-145/100,000 based on the recent population based studies ⁽¹⁶⁾. Only one quarter of stroke patients correctly interpret their symptoms as representing a stroke and even when they know that it is a stroke, most present late because they perceive their symptoms as "not serious". ⁽⁸⁾.

Even in developed countries like USA, UK and France there is a lack of knowledge among stroke patients about warning symptoms and risk factors.

In a multi centre survey in USA, over one-half of patients at a risk for stroke were unaware of their risk factors. ⁽¹⁶⁾ It has been estimated that only as many as one third of patients with acute stroke reaches emergency medical services within two hours of onset of their symptoms ⁽⁶⁾.

Survey in different parts of India has shown that the prevalence of stroke varies in different regions of India and range from 40 to 270 per 100000 populations. ⁽⁸⁾

Greater understanding of perceived risk factors and warning signs for stroke would facilitate health interventions aimed at reducing morbidity and mortality from stroke. ⁽⁷⁾ Awareness and knowledge in general population, regarding risk factors and warning symptoms of stroke are essential for the prevention and initiation of immediate effective treatment of stroke ⁽⁸⁾.

Many researchers in developed and developing countries have studied stroke awareness, and a lack of knowledge of stroke symptoms and risk factors has been documented. ⁽¹⁰⁾ Several studies revealed that most acute stroke patients arrive too late to hospital, mainly due to delay in the decision to seek medical care following acute stroke symptoms onset. ⁽¹⁶⁾

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South Asian countries, on the one hand, have a very large stroke population and, on the other hand, are limited by human resources (neurologists and stroke specialists) and financial resources.⁽¹⁶⁾

The purpose of this study was to systematically review and summarise the existing scientific literature exploring the knowledge of the public, stroke patients and carers in relation to the risk factors, symptoms, treatments and sources of information around stroke and transient ischemic attack (TIA).⁽⁸⁾

MATERIALS AND METHODS

Aims and Objectives

To assess the awareness of risk factors and warning symptoms of stroke in general population and to associate the level of awareness with selected variables. ⁽⁸⁾

Methodology

Study design: Observational study.

Sampling: Simple Random Sampling

Study Population: First and Second Year Physiotherapy students, SPB Physiotherapy College, Surat

Study tool: Stroke Awareness Questionnaire prepared from previous studies which consisted of 4 sections in which first section included demographic data , second section included knowledge and views on stroke , warning signs and risk factors, third section included the response to stroke and fourth section included treatment, prevention and disabilities in stroke.

Inclusion and Exclusion Criteria

Subject having some schooling and agreeing to participate in the survey by signing a letter of consent, adults of age 18 - 19 years, and a first or second year physiotherapy student were included in the survey. While third and final year physiotherapy students were excluded as they already came across the condition in their academic sessions

Procedure

The study was conducted among first and second year physiotherapy students. The students were interviewed face-to-face using a structured open ended questionnaire about stroke risk factors and warning signs, prevention. Subjects were firstly elucidated about the aim of our study and confronted the several alternative designations of stroke. No public campaigns or educational efforts were launched before or during the study.⁽⁷⁾The survey was conducted after taking a written consent from the subjects .

Data Analysis

The study data was analysed with statistical package for the social science version 16 (SPSS Inc). Descriptive analysis including frequency, percentage was carried out on the study variables

RESULTS

The study included the sample of 150 subjects , out of which 16 were male and 134 were female. A total of 6(4%) out of 150 subjects recognized stroke as blood clot in the brain, 7 (5%) recognized it as brain haemorrhage.

The most commonly recognized risk factors of the stroke by the respondents were high blood pressure 42 (22%) , stress 30 (14%) ..

Dizziness , numbness on one side of the body , and severe headache were most commonly recognized warning signs of the stroke by the respondents.

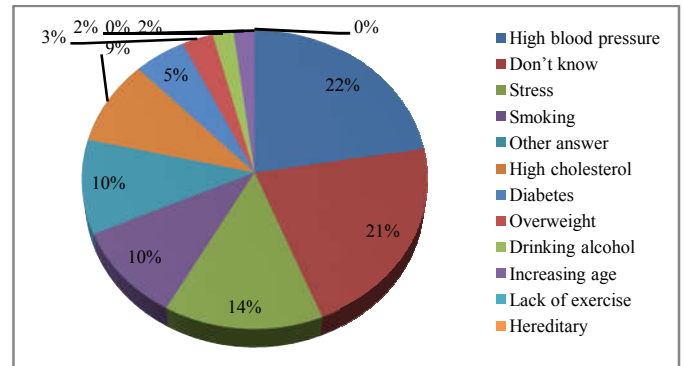


Figure 1 Risk Factors of Stroke

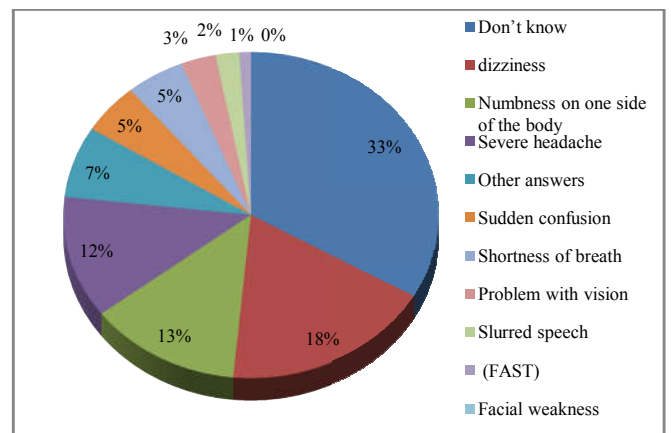


Figure 2 Warning Signs of Stroke

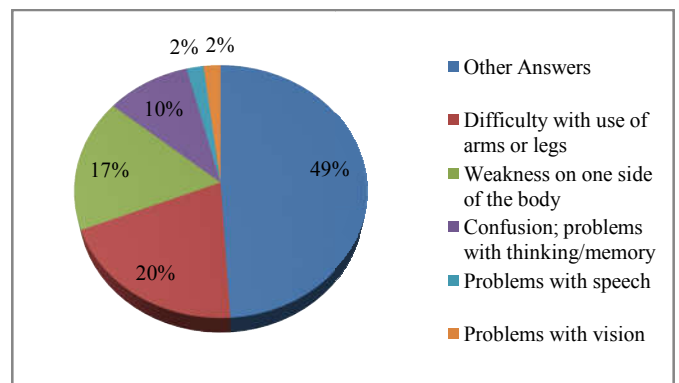


Figure 3 Impairments/disabilities due to stroke

The most common impairments / disabilities following stroke described by the subjects were difficulty using arms and legs 34 (20%), weakness on one side of the body 28 (17%), confusion; problem with thinking or memory 16 (10%), problem with speech 3 (2%), problem with vision 3 (2%).

DISCUSSION

Data from this study indicates that generally , stroke is perceived as a serious illness (requires emergency treatment), is preventable and lifestyle alterations can be made to reduce its risk. However, the data also shows

that there is poor community awareness of stroke risk factors and its warning signs⁽⁸⁾. It is alarming that more than half of the examinees in this study did not recognize individual increased risk of stroke. Our findings indicate a significant lack of knowledge and the need for education⁽⁹⁾.

Our findings suggest that about 32% of the subjects were not aware of the meaning of stroke. Only 33% of the subjects correctly defined stroke as circulation problem in the brain.

Knowledge of stroke risk factors can affect the stroke incidence, and help design the prevention strategies⁽¹⁹⁾. Poor awareness of stroke risk factors in the study is shown by the fact that hypertension which is the most common risk factor in stroke could not be recognized by the majority of the subjects. Only 22% were able to identify high blood pressure as a risk factor⁽⁸⁾. If more people understand that stroke treatments can reverse symptoms, decisions after symptom occurrence could possibly occur more quickly.⁽⁷⁾ Our results show that the dizziness, severe headache, numbness on one side of the body were most commonly recognized symptoms of stroke⁽⁹⁾. Majority of the respondents could not recognize any of the basic stroke warning signs such as slurred speech and vision problems⁽⁸⁾.

33% of the population denied the knowledge of warning signs. Numbness or paralysis was the commonest stroke warning sign in this study, which concurs with studies done in Nigeria^[18] and Benin^[16] but contrasts with studies in Australia^[12] and Ireland^[14] where vision problems and slurred speech respectively were the commonest warning signs identified.⁽⁸⁾ Poor community knowledge of stroke warning signs is of serious concern, as recognition of the warning signs is a predictor of early hospital reporting of the disease.⁽⁸⁾

More than half of the population of study were unaware of the medical treatment for reduction of the extent and effect of stroke. Also the subjects were not familiar with the disabilities / impairments following stroke, half of the population didn't know the occurrence of disabilities post stroke attack.

In our study, we made the important observation that the younger generation had less knowledge of proper stroke treatments. Also it is the younger generation who can give the fastest response to stroke on identifying its warning signs.⁽¹⁰⁾ Awareness of stroke warning symptoms is unsatisfactory. This lack of awareness can lead to delay in hospitalization and initiation of necessary treatment.⁽¹⁹⁾

Limitations of the study include possibility that the characteristics and knowledge level of stroke symptoms and stroke risk factors in those individuals who did not return a questionnaire and who were not selected to participate were different than the sample respondents. The sample, though large, was quite homogenous, as they were mostly young, and educated. The use of random method to select a sample may have resulted in the under representation of certain populations.⁽¹⁸⁾

CONCLUSION

From the study conducted it can be concluded that there is lack of awareness of risk factors and warning signs of stroke among first and second year physiotherapy students. Since stroke is a medical emergency and the symptoms occurs suddenly which requires immediate hospitalization. Considerable education is needed to increase awareness in modern concepts of particularly about risk factors and warning signs.⁽²⁰⁾

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