Original Research Article

Risk Factors and Warning Signs of Stroke: Cross Sectional Study

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ABSTRACT

Background: Stroke is the leading cause of adult disability and it kills about five million people each year making this the second major cause of death worldwide. The aim of the study was to assess the knowledge on risk factors and warnings of stroke among older adult.
Methods: Community based cross sectional research design adopted to conduct the study with 60 samples who met inclusion criteria at rural community. Structured questionnaire was used to collect the data. Data were analyzed by using descriptive and inferential statistics.
Results: The results of the study observed that around 50% of the samples had adequate knowledge on risk factors of stroke whereas only six (10%) of them had adequate knowledge on warning signs of stroke. Level of knowledge on warning signs of stroke is associated with the demographic variables such as age, education and health information obtained through mass media at the level of P<0.05.
Conclusions: The study findings concluded that health education and health campaigns can provide with accurate and appropriate information regarding the warning signs of stroke and highlight the importance of early hospital presentation which prevents the severity illness and the disability associated with the stroke.

Keywords: stroke, risk factors, warning signs, disability

INTRODUCTION

Stroke is the number two cause of death worldwide. It is the leading cause of disability and a global health problem. [1] It is not known whether patients who are most at risk of stroke have enough knowledge of stroke risk factors and warning signs. [2] 1 out of 769 populations is affected by stroke. Males are more affected then females, and hypertension was predominant cause of stroke. [3] The incidence of stroke ranged from 105 to 152 per 100,000 persons per year, and the crude prevalence of stroke ranged from 44.29 to 559 per 100,000 persons in different parts of the country during the past decade. These values were higher than those of high-income countries.

[4] The lack of correct medical information and poor control of stroke risk factors contributes significantly to the rising incidence of stroke amongst Africans. [5-6] It is expected that patients would have more knowledge of stroke risk factors and symptoms after a stroke. However, studies showed that this is not the case. [7] Most patients and many caregivers did not recognize the onset of stroke and their knowledge of risk factors was poor. [8] Framingham heart study and other international prospective epidemiological studies identified the major risk factors for stroke such as hypertension, diabetes mellitus, hyperlipidemia, and smoking. [9] In India a hospital based case control study in

the west central region revealed that diabetes mellitus, hypertension, tobacco and low hemoglobin rather than the cholesterol are the most important risk factors of ischemic stroke. [10] Another community based cross sectional study showed that heart disease, hypertension, and smoking are significantly associated with stroke. [11] Stroke knowledge was poorest among groups that had the highest risk of stroke. It has been demonstrated by studies that previous stroke had no impact on knowledge of stroke. As a consequence of limited knowledge; may not be able to recognize stroke warning signs if it happens. This may lead to the problem of delayed hospital arrival and loss of getting proper treatment.

The knowledge on risk factors and prevention of stroke could have the first role. Early visit in the hospital emergencies after the onset of stroke symptoms will depend partly on the degree of knowledge. To reduce the period of time from stroke onset to admission to hospital emergencies and to reduce the risk depends on the knowledge of patients, family members and the general population. But most patients due to lack of information about stroke, visit the hospital emergencies latter. Effective stroke intervention and risk reduction depend on the general public's awareness and knowledge of stroke. Reduction in the risk of stroke and increase in the speed of hospital presentation after onset of stroke both depend on level of knowledge of stroke in general population. Hence the investigators conducted the study with the aim to assess baseline knowledge regarding risk factors and warning signs among the older adults.

MATERIALS AND METHODS

Non experimental community based cross sectional research design adopted to conduct the study with hundred at samples at Othikkadu village in Thiruvallur District after obtaining formal permission from the Panchayat office Othikkadu. Samples who met inclusion criteria were selected by using convenience sampling technique. Older adult with the age group of 60-75 years of both male and female were residing at Othikkadu village and willing to participate in the study were included. The informed consent was obtained from the participants and after explained the study in detail. The data were collected by interview method using a structured multiple choice questionnaire and checklist on risk factors and warning signs of stroke. The risk factors included modifiable and non-modifiable risk factors and the warning signs focused on FAST (Face, Arm, Speech and Time). Confidentiality was maintained throughout the procedure. Data were analyzed using both descriptive and inferential statistics.

RESULTS

Table 1 depicts that out of 60 samples, 25 (41.67%) of them were in the age group of 61 – 65 years, 32(53.33%) were males, 38(63.34%) of were educated and married, and more than 50% of them were got the information from the television.

Table: 1: Frequency and percentage distribution of demographical variables among older adults.

Demographical Variables	Frequency	Percentage
Age		
61- 65	25	41.67%
66-70	22	36.66%
Above 70	13	21.67%
Gender		
Male	32	53.33%
Female	28	46.67%
Education		
Educated	38	63.34%
Illiterate	22	36.66%
Marital Status		
Married	38	63.34%
Widow	22	36.66%
Health Information Obtained through		
Newspaper	13	21.67%
Television	34	56.66%
Radio	4	6.67%
Health Care Personnel	9	15%

The present study observed that out of 60 samples, 29(48.33%) of them had adequate knowledge, 20(34%) had moderately adequate knowledge and 11(18.33%) of them had inadequate knowledge on risk factors of stroke. Regarding knowledge on warning signs of

stroke majority of them 44(73.33%) had inadequate knowledge and 10(16.66%) of them had moderately adequate knowledge and only six (10%) of them had adequate knowledge as shown in Figure I. The overall mean and standard deviation of knowledge on risk factors and warning signs of stroke was 7 ± 2.13 and 5 ± 1.23 respectively.

This study associated the level of knowledge on warning signs of stroke with the selected demographic variables such as age, education and health information obtained through mass at the level of P<0.05 as depicted in Table 2.
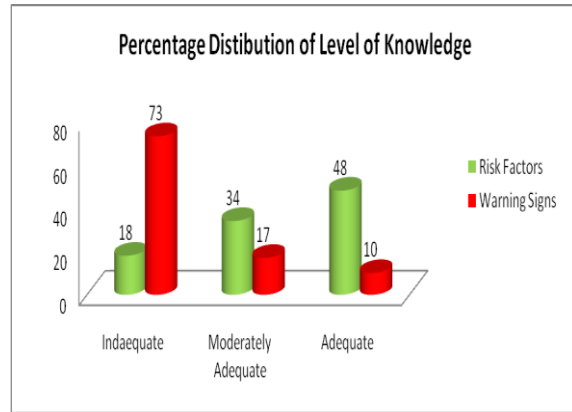

Table 2: Association between the knowledge on warning signs of stroke with selected demographical variables.

Sl.No	Demographical Variables	Inadequate		Moderately adequate		Adequate		Chi-Square
		N	%	N	%	N	%	
1	Age: 61-65 66-70 Above 70	4 5 2	6.7% 8.3% 3.3%	13 10 6	21.7% 16.% 10%	8 7 5	13.3% 11.7% 8.3%	X²=0.57 Df=4 P=9.49 Significant
2	Education: Educated Uneducated	1 10	1.7% 16.7%	6 23	10% 38.3%	6 14	10% 23%	X²=1.79 Df=2 P=5.99 Significant
3	Health Information: News paper Television Radio Health educator	1 8 2 0	1.7% 13.4% 3.3% 0	6 15 2 6	0 25% 3.3% 10%	6 11 0 3	10% 18.3% 0 53%	X²=3.68 Df=2 P=5.99 Significant

DISCUSSION

The study findings revealed that majority of the older adults had adequate knowledge about the risk factors but very limited knowledge on warning signs of stroke. The finding of the present study is supported by Mathew. J who concluded that majority of the adults had moderate knowledge about the risk factors and warning signs of stroke. [12] Whereas, in a study conducted by Pancioli AM, it was found that the population at greatest risk for stroke, the very elderly were least knowledgeable about stroke warning signs and risk factors. [13] In another study findings revealed that respondents in older age groups and having lower levels of educational attainment tended to have less knowledge of risk factors and warning signs of stroke than those in younger age groups and those with more education. [14] In present study also highly associated with the educational status of the older adults.

Similarly the same study conducted according to gender perspective and found that women tended to know more evidence-based stroke risk factors than men. [15] In another cross sectional survey on awareness on risk factors and warning signs of stroke at the educational institution reported that weakness was the most commonly identified warning sign of stroke and hypertension was the most commonly identified stroke risk factor, with more staff identifying correctly than students. [16] The present study also educational status was highly associated with the knowledge on risk factors and warning signs of stroke. Though there is reasonable stroke-related knowledge, it is insufficient particularly concerning awareness of three main warning signs and behavior to acute stroke. [17] The limitation of the present was descriptive in nature and there is no causal effect relationship. Intervention may be focused to increase the knowledge on

warning signs of stroke by video assisted teaching programme or any other prevention strategies or teaching program in future.

CONCLUSION

The study concluded that majority of the older adults had adequate knowledge regarding the risk factors but had inadequate on warning signs of stroke. Further health education and campaigns can provide with accurate and appropriate information regarding the warning signs of stroke and highlight the importance of early hospital presentation which prevents the severity illness and the disability associated with the stroke.

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Conflict of Interest: The authors declared none.

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