

Assessment of Knowledge Regarding Risk Factors and Warning Signs of Stroke Among the Adults in Selected Areas of Kamrup District, Assam

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Abstract: *Stroke is a leading cause of mortality and disability worldwide and the economic cost of treatment and post stroke care are substantial. Effective stroke intervention and risk reduction depend on general public's awareness and knowledge of stroke. The knowledge and awareness of its warning symptoms and risk factors is deficient among the general population in the developing countries. A study was conducted to assess knowledge on risk factors and warning signs of stroke among the adults in selected areas of Kamrup District, Assam. This descriptive study was conducted among 270 adults selected by using multistage sampling on the basis of set inclusion and exclusion criteria. Majority of adults (64.8%) had moderately adequate knowledge regarding risk factors and warning signs (68.5%) of stroke. Gender, food habits and consumption of alcohol were significantly associated with knowledge regarding risk factors of stroke and knowledge regarding warning signs of stroke at the level of $p < 0.05$. The study findings concluded that health education and information regarding stroke risk factors and warning signs can prevent the severity of illness and disability from stroke.*

Keywords: knowledge, risk factors, warning sign, stroke

1. Introduction

Towards the later part of 20th century, world has undergone phenomenon of "epidemiological transition". This refers to gross changes in the disease causing morbidity and mortality from communicable to non communicable in nature.¹

According World Health Organization, Non-communicable diseases (NCD) kill 41 million people each year, equivalent to 71% of all deaths globally. Each year, more than 15 million people die from a NCD between the ages of 30 and 69 years; 85% of these "premature" deaths occur in low-and middle-income countries. Cardiovascular diseases account for most NCD deaths, or 17.9 million people annually, followed by cancers (9.3 million), respiratory diseases (4.1 million) and diabetes (1.5 million).²

In India studies estimates that incidence of stroke population varies from 116 to 163 per 100,000 population. ICMR (Indian Council of Medical Research) has come with a report entitled "India: Health of the Nations States" according to which stroke is 4th leading cause of death and 5th leading cause of Disability Adjusted life years (DALYs).³

In Assam 54890 persons are afflicted by stroke every year and more than a lakh in the Northeast. According to a study conducted in Assam Medical College and Hospital on September (2017), regarding clinic-epidemiological profile of acute stroke, majority of cases were average ages 54.3 ±13 years and majority presented with hemorrhagic cerebrovascular accident (63.6%) while 36.4% had ischemic CVA.⁴

Stroke is a leading cause of mortality and disability worldwide and the economic cost of treatment and post stroke care are substantial.⁵ The knowledge and awareness

of its warning symptoms and risk factors is deficient among the general population in the developing countries.⁶ The inability to identify stroke warning signs accurately is an important cause of delay in seeking medical attention, leading to potential ineligibility for prompt intervention.⁵

Effective stroke intervention and risk reduction depend on 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 depends on the level of knowledge of stroke among general population.⁷

Realizing this, the investigator felt need of conducting a study to assess knowledge regarding risk factors and warning signs of stroke. Hence, to assess the knowledge regarding risk factors and warning signs of stroke the investigator was motivated to conduct this study.

2. Review of Literature

Kurmi S, Mathews E, Kodali P B, Thankappan K.R (2020) conducted a community based cross-sectional study to assess awareness of stroke warning signs, risk factors and response to acute stroke in Biswanath District, Assam, India. Total 340 adults selected by using multistage cluster sampling. The results revealed that awareness of stroke was significantly high among males ($p < .01$), better educated ($p < .05$), high income group ($p < .01$), government employees ($p < .05$) and those who had received information from a professional source ($p < .01$) compare to their counterparts.⁸

Sapna, Bhatia R.Sharma G, L.G (2016) conducted a comparative study to assess the knowledge on risk factors, warning signs and immediate treatment of stroke among survivors and patients of cardiovascular disease who are at

risk of stroke. A descriptive, comparative cross sectional survey was conducted on adult (≥ 18 years). The data was collected from 201 stroke survivor and 201 patients of cardiovascular disorders with high risk of stroke. Only 16% of the patients with stroke and 14% of the patients who are at high risk were aware that stroke could be due to cerebral hemorrhage. Only 12% of the patients with stroke and 11% of the patient who are at high risk knew that stroke patients should be given immediate treatment with three hours. High risk patient had significantly higher knowledge compared to stroke patients. 36.3% of stroke patients and 19.4% of high risk patients did not know any warning signs of stroke.⁹

Problem Definition

“Assessment of knowledge regarding risk factors and warning signs of stroke among the adults in selected areas of Kamrup District, Assam”.

Objectives of the Study

- 1) To assess the knowledge regarding risk factors of stroke among the adults in selected areas of Kamrup District.
- 2) To assess the knowledge regarding warning signs of stroke among the adults in selected areas of Kamrup District.
- 3) To find out the association between knowledge regarding risk factors of stroke among the adults with their selected demographic variables.
- 4) To find out the association between knowledge regarding warning signs of stroke among the adults with their selected demographic variables.

3. Methodology

A community based descriptive survey among 270 adults was conducted in Mahajanpara and Balikuchi village under Bihdia Block PHC, Kamrup District, Assam after obtaining formal permission from the Joint Directors of Health services, Kamrup District and Sub-divisional medical and health officer, Bihdia Block PHC. Samples who met inclusion criteria were selected by using systematic random sampling technique. Adults, age group between 30-60 years residing at Mahajanpara and Balikuchi village and willing to participated and present during data collection were included. The informed consent was obtained from the participants. The data were collected by interview method using self structured multiple choice questionnaire on demographic variables, risk factors and warning signs of stroke. The responses made by the adults were interpreted in terms of adequate, moderately adequate and inadequate

knowledge. Data were analyzed by using both descriptive and inferential statistics.

4. Results

Majority of adults (36.3%) were in age group of 41-50 years. Majority (51.9%) were male majority of adults (21.8%) studied till middle school followed by 20.4% till high school. Majority of adults (33.7%) were unemployed followed by 21.1% o adults were doing business. Majority of adults (30%) had monthly income of Rs 10,002 - 29,972. Majority (85.2%) were non vegetarian. Majority of adults (65.2%) did not take alcohol but majority (92.6%) consumed tobacco products.

The present study observed that out of 270 adults majority, i.e. 175(64.8%) of adults had moderately adequate knowledge, 61(22.6%) of adults had inadequate knowledge and 34(12.6%) of adults had adequate knowledge regarding risk factors of stroke as mentioned in the figure 1. Regarding knowledge on warning signs of stroke majority i.e.185 (68.5%) of adults had moderately adequate knowledge, 55(20.4%) of adults had inadequate knowledge and 30(11.1%) of adults had adequate knowledge as mentioned in the figure 2. The overall mean and standard deviation of knowledge on risk factors and warning signs of stroke was 10.97 ± 2.887 and 9.78 ± 2.519 respectively.

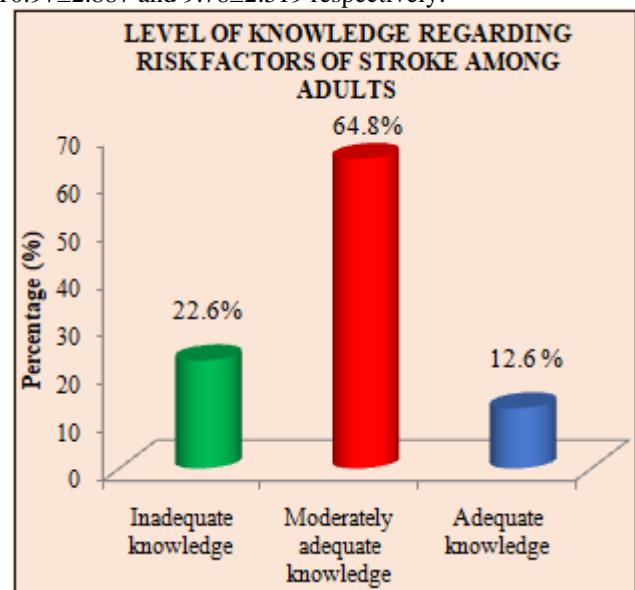


Figure 1: Percentage distribution of knowledge regarding risk factors of stroke among the adults

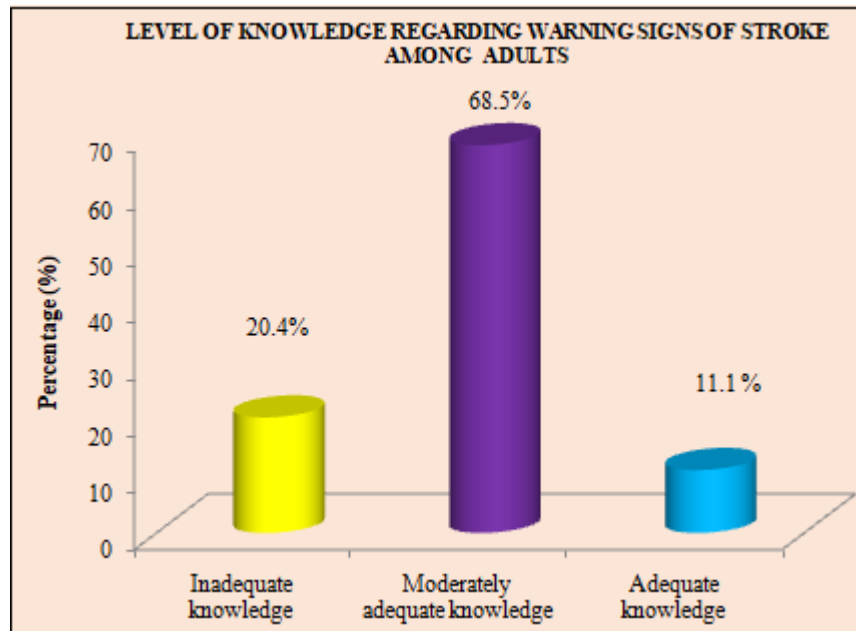


Figure 2: Percentage distribution of knowledge regarding warning signs of stroke among the adults

The study associated the level of knowledge on warning signs of stroke and risk factors of stroke with the selected demographic variables such as age, sex, educational status, occupational status, monthly income of family, food habits, sources of information, consumption of alcohol and consumption of tobacco products at the level of $P < 0.05$.

Significant association was found between knowledge of the adults regarding risk factors of stroke with gender, food habits and consumption of alcohol as depicts in the table 1

Table 1: Association between knowledge regarding risk factors of stroke among the adults with selected demographic variables

Demographic variables	level of knowledge			Chi square	Df	p value
	Inadequate knowledge	Moderately adequate knowledge	Adequate knowledge			
Gender						
a) Male	32	97	11	6.084	2	0.048
b) Female	29	78	23			
Food habits						
a) Vegetarian	20	17	3	20.18	2	0.001
b) Non vegetarian	41	158	31			
Consumption of alcohol						
a) Yes	31	57	6	11.68	2	0.003
b) No	30	118	28			

Similarly in case of knowledge regarding warning signs of stroke significant association was found with gender, food habits and consumption of alcohol as shown in the table 2

Table 2: Association between knowledge regarding warning signs of stroke among the adults with selected demographic variables

Demographic variables	level of knowledge			Chi value	Df	p value
	Inadequate	Moderate	Adequate			
Gender						
c) Male	29	103	8	8.722	2	0.013
d) Female	26	82	22			
Food habits						
c) Vegetarian	20	17	3	25.42	2	0.001
d) Non vegetarian	35	168	27			
Consumption of alcohol						
c) Yes	30	61	3	17.85	2	0.001
d) No	25	124	27			

5. Discussion

The study finding reveals that majority of adults had moderately adequate knowledge regarding risk factors and warning signs of stroke. The findings of the present study is supported by Yesilbalkan O.U et al. concluded that majority of adults had moderate knowledge regarding risk factors and warning signs of stroke¹⁰. The findings of present study are supported by Sapna, Bhatia R, Sharma G, L.G study. The study was a comparative study to assess the knowledge on risk factors, warning signs and immediate treatment of stroke among survivors and patients of cardiovascular disease who were at risk of stroke, where out of 201 high risk patients 21.9% had poor knowledge, 35.8% had fair knowledge 37.3% had good knowledge and only 5% had the excellent knowledge regarding stroke.⁹ Whereas, in a study conducted by Thenmozi P, Prasanta P, it was found that majority of the adults had adequate knowledge about risk

factors but very limited knowledge about warning signs of stroke.⁷ The findings of the present study revealed that gender, food habits and consumption of alcohol were significantly associated with knowledge regarding risk factors of stroke and knowledge regarding warning signs of stroke at the level of $p < 0.05$. The present study findings are supported by a study of **Soto-Camara R et al. study, where** being male ($p=0.005$), personal history of high alcohol consumption ($p=0.003$) were individually related to correct identification of risk factors of stroke.¹¹ whearer in a study conducted by **Thapa L et al.** it was showed that there was no significant association of gender with knowledge of students regarding risk factors of stroke.¹² The findings of present study is also contradictory to a study conducted by **Dar N Z**, where the result showed that there was no significant association of gender with identifying at least one warning signs of stroke.¹³

6. Conclusion

The findings of present study revealed that majority of adults had moderately adequate knowledge regarding risk factors and warning signs of stroke. Further health education and campaign can provides with accurate and appropriate information regarding the warning signs of stroke and highlight the importance of early hospital presentation which prevents the severity of illness and disability associated with the stroke.

7. Future Scope

Similar study can be conducted in different group such as high risk population such as patients with diabetes mellitus, hypertension, and previous history of TIA or stroke to assess their knowledge regarding the risk factors and warning signs of stroke. Study can also be conducted to correlate the knowledge and practices of normal individuals or high risk populations regarding the risk factors and warning signs of stroke. The limitation of the present study was descriptive in nature; there was no cause and effect relationship. Intervention may be focused to increase knowledge on risk factors and warning signs of stroke by various teaching programme in future.

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