

ASSESSMENT OF PATIENT FAMILY MEMBERS' KNOWLEDGE OF RISK FACTORS AND WARNING SIGNS OF STROKE AT PHU THO GENERAL HOSPITAL IN 2024

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ABSTRACT

Objectives: Assessment of Family Members' Knowledge of Risk Factors and Warning Signs of Stroke at the Stroke Center, Phu Tho General Hospital (2024).

Methods: Cross-sectional descriptive study.

Results: The study conducted on 196 family members of patients at the Stroke Center, Phu Tho General Hospital, revealed that their knowledge of the risk factors for stroke varied. Hypertension (92.3%) was the most commonly recognized risk factor. Other risk factors, such as smoking (62.7%) and lack of physical activity (63.8%), were less well-known. Weakness, paralysis of one side of the body, and dysphasia were the most recognized warning signs of stroke, with 94.9% and 91.3% awareness rates, respectively. Analysis of the correlation between knowledge of stroke risk factors showed that individuals aged ≤ 50 had a 5.53 times higher level of knowledge than those > 50 years old. Those with a profession had a 3.16 times higher level of knowledge than the unemployed, and residents of Viet Tri City had a 1.84 times higher level of knowledge compared to those living elsewhere, differences were statistically significant with $p < 0.05$. Regarding knowledge of stroke warning signs, individuals aged ≤ 50 had 11.68 times better knowledge than those > 50 years old, and residents of Viet Tri City had 2.44 times better knowledge compared to those living elsewhere ($p < 0.05$).

Conclusion: Knowledge about stroke risk factors and warning signs varies among family members of patients. The associated demographic characteristics include age ≤ 50 and residence in Viet Tri City.

Keywords: Knowledge, risk factors, warning signs, stroke.

1. INTRODUCTION

Stroke is the third leading cause of death globally, following cardiovascular disease and cancer. In developed countries such as the United States and the United Kingdom, the mortality rate due to stroke is relatively high, with an estimated 47,000 to 140,000 deaths annually [3]. In Vietnam, according to the report presented at the 7th National Stroke and Neurology Conference, stroke often occurs "unexpectedly" and results in severe consequences, with up to 90% of patients suffering from complications after a stroke. Among these, only 25%-30% of patients regain the ability to walk and perform daily activities independently, 20%-25% have difficulty walking and

require assistance with daily tasks, and 15%-25% become entirely dependent on others. This poses a significant financial burden not only on patients but also on society as a whole, placing considerable demands on family members and caregivers.

Stroke is a preventable and treatable condition through the management of risk factors and the early recognition of warning signs [4]. Therefore, reducing the burden of stroke relies heavily on identifying risk factors and promptly recognizing early warning signs, which are critical for stroke prevention. In Vietnam, awareness of stroke risk factors and warning signs remains limited. Consequently, this research team conducted a study

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with the objective of: Assessment of family members' knowledge of stroke risk factors and warning signs.

2. RESEARCH SUBJECTS AND METHODS

2.1. Study design: Descriptive cross-sectional study.

2.2. Study location and time of implementation

- Time: From February 2024 to August 2024

- Location: Stroke Center, Phu Tho General Hospital.

2.3. Study participants

A total of 196 family members of patients who were willing and able to participate in the study, including completing survey questionnaires and engaging in related activities.

2.4. Sample size: Convenience sampling.

2.5. The technique, tools, and data collection:

Survey Questionnaire on Knowledge of Stroke Risk Factors and Early Warning Signs Data Collection Process: A survey questionnaire was developed to evaluate knowledge related to stroke. Healthcare professionals selected family members currently caring for patients at the Stroke Center, Phu Tho Provincial General Hospital. Research Indicators: Knowledge of stroke risk factors. Knowledge of early warning signs of stroke.

2.6. Data analysis: Data were entered and analysed using IBM SPSS Statistics 20.0.

2.7. Study ethics

The study was approved by the Board of Directors of Phu Tho General Hospital. All collected information was used solely for research purposes and not for any other objectives.

3. RESULTS

Table 1. Demographic characteristics

Demographic characteristics		n = 196	Rate %
Gender	Male	80	40.8
	Female	116	59.2
Age groups	18 - 40	78	39.8
	41 - 50	86	43.9
	51 - 60	29	14.8
	> 60	3	1.5
Occupation	Employed	182	92.9
	Unemployed	14	7.1

Residential area	Viet Tri city	86	43.9
	Others	110	56.1

The proportion of females (59.2%) is higher than that of males (40.8%), with the age group under 50 years accounting for the highest proportion at 83.7%. The majority are employed, representing 92.9%, and the percentage from areas other than Viet Tri accounts for 56.1%.

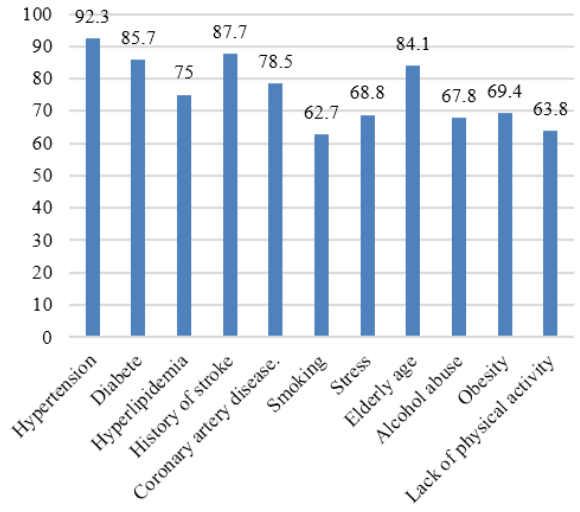


Chart 1. Knowledge of stroke risk factors

There is variation in the knowledge of family members regarding stroke risk factors, with hypertension (92.3%), diabetes (85.7%), and a history of stroke (87.7%) being the most recognized risk factors. Risk factors such as smoking (62.7%) and lack of physical activity (63.8%) are less well known.

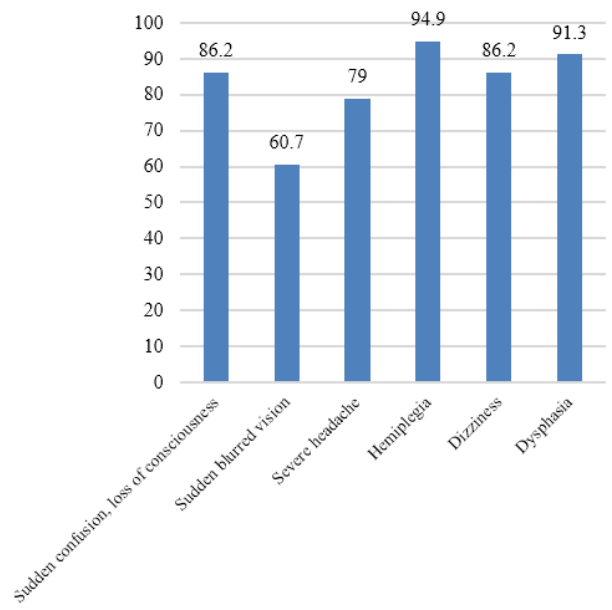


Chart 2. Knowledge of stroke warning signs

Knowledge of stroke warning signs also varies, with

weakness, hemiplegia, and dysphasia being the most recognized signs, at rates of 94.9% and 91.3%, respectively.

Table 2. The relationship between demographic characteristics and knowledge of stroke risk factors and warning signs

Demographic characteristics		Level of knowledge		OR	CI 95%	p
		Achieved	Not achieved			
Stroke risk factors						
Gender	Male	62	18	1.37	(0.71 – 2.65)	>0.05
	Female	83	33			
Age groups	≤ 50	126	38	5.53	(2.48 – 12.33)	<0.05
	> 50	12	20			
Occupation	Employed	128	54	3.16	(1.05 – 9.54)	<0.05
	Unemployed	6	8			
Residential area	Viet Tri city	52	34	1.84	(1.04 – 3.25)	<0.05
	Others	50	60			
Stroke warning signs						
Gender	Male	54	26	0.72	(0.39 – 1.35)	>0.05
	Female	86	30			
Age groups	≤ 50	138	26	11.68	(4.96 – 27.51)	<0.05
	> 50	10	22			
Occupation	Employed	105	77	1.82	(0.61 – 5.45)	>0.05
	Unemployed	6	8			
Residential area	Viet Tri city	54	32	2.44	(1.37 – 4.35)	<0.05
	Others	45	65			

Factors such as age ≤ 50, employment, and residence in Viet Tri City are associated with having satisfactory knowledge of stroke risk factors. Age ≤ 50 and residence in Viet Tri City are also associated with having satisfactory knowledge of stroke warning signs.

4. DISCUSSION

From chart 1, it is evident that hypertension is the most recognized risk factor, with 92.3% of family members identifying it. Our study is consistent with the findings of Xuan Thi Thu Huong [1], where 96.4% of participants were aware of hypertension as a risk factor, and similar to Nigat’s study [4], which reported a recognition rate of 96.8%. Hypertension is the leading risk factor for stroke, as it increases blood pressure on vessel walls, causing vascular damage and increasing the risk of blood vessel rupture. This awareness may result from years of health communication campaigns and health education on stroke prevention. In contrast, factors such as smoking and lack of physical activity showed the lowest levels of knowledge. There is a similarity with Xuan Thi Thu Huong’s study, which found smoking and lack of physical activity to have the lowest recognition rates. Although smoking and lack of physical activity are significant stroke risk factors, the low awareness rates indicate the need for greater emphasis on community education. Health programs and communication campaigns should highlight the impact of these factors to raise awareness and promote

effective preventive actions within the community.

In our study, knowledge of stroke warning signs ranged from 60.7% to 94.9%. Sudden numbness or weakness on one side of the body and sudden dysphasia were the most recognized signs, indicating that awareness of the typical stroke warning signs has been effectively disseminated. This reflects the differences in communication strategies across various populations, while the recognition of hemiplegia was only 49.8% in Nigat’s study [4], highlighting the effectiveness of local awareness campaigns. The BE.FAST tool is a simple and effective method for the public to quickly recognize stroke warning signs and has been widely promoted in our country. Therefore, early recognition and appropriate action enable patients to reach the hospital promptly, helping to minimize brain damage and improve treatment outcomes through the application of effective treatments such as intravenous thrombolysis and mechanical thrombectomy [5], which have been implemented in stroke centers nationwide.

The awareness of stroke risk factors was classified as either "achieved" or "not achieved," with "achieved"

defined as the ability to list at least two stroke risk factors. Similarly, awareness of stroke warning signs was considered "achieved" if at least two warning signs were listed in the data collection form. We assessed the relationship between demographic characteristics and the level of knowledge of the study participants. For gender, no differences were observed between males and females in either the risk factor or warning sign knowledge assessments. Regarding age, the group aged ≤ 50 demonstrated a knowledge level of risk factors 5.53 times higher and a knowledge level of warning signs 11.68 times higher, with statistical significance ($p < 0.05$). Similarly, the study by Vu Thi Phuong [2] showed that individuals aged 18–50 had 3.06 times higher knowledge of stroke compared to those over 50. Younger individuals tend to assimilate new information more easily and are more capable of recognizing stroke signs and risks effectively. Additionally, younger people tend to be more proactive in seeking information and preventing health risks, especially in the context of the increasing availability of public health information.

Residents of urban areas (in our study, Vietnam's Viet Tri city) have 1.84 times higher knowledge of stroke risk factors and 2.44 times higher knowledge of stroke warning signs compared to residents from other regions. This finding is similar to the study by Vu Thi Phuong, where people living in Ho Chi Minh City had 2.39 times higher knowledge of stroke compared to those from other provinces [2]. There were also differences in terms of occupation. In the assessment of knowledge of stroke risk factors, individuals with occupations demonstrated knowledge levels 3.16 times higher than those who were unemployed, with a statistically significant difference ($p < 0.05$). Similarly, individuals with occupations exhibited more knowledge about stroke warning signs than the unemployed. However, our study found no significant difference in this regard, which may be due to statistical factors as well as the different levels of access to information and the varying priorities of these two groups when it comes to learning about stroke.

5. CONCLUSION

Our study shows that the level of knowledge of family members regarding stroke risk factors and warning signs varies. Age ≤ 50 and residence in Viet Tri city are factors associated with a higher level of knowledge about both stroke risk factors and warning signs.

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