Original Research Article

Knowledge about stroke among adults in Sharjah, United Arab Emirates

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ABSTRACT

Background: In UAE, stroke is the second leading cause of disability after RTA, where annually 8,000 to 10,000 patients get a stroke. Our aim is to identify the knowledge levels of stroke among Sharjah's adult citizens.
Methods: Using self-administered questionnaires, in a cross-sectional design, a non-probability convenience sampling method was used to enrol subjects. Eligible subjects were above 18 years of age, comprehended Arabic or English, and are currently residing in Sharjah. The questionnaire was 17 questions structured in 5 sections which included: demographics, general knowledge, knowledge of signs and symptoms, risk factors, and appropriate response towards stroke. SPSS V.22 was used to analyse the data. Percentages, means, and ANOVA were used. A P-value less than 0.05 was considered to be statistically significant.
Results: The study included 426 subjects, mean age was 35.1 years, 65.2% were females. 51.8% of the subjects claimed they know what stroke is, out of whom 24.3% provided incorrect descriptions. The mean knowledge level of signs and symptoms was 55.4%, and of risk factors was 40.6%. Visual disturbance was the least identified of the five signs and symptoms (38.0%). Female gender, African American race, and age above 60, were the least identified of the 8 risk factors (4.7%, 3.5%, 19.8% respectively). Better knowledge was associated with increased age and higher education.
Conclusion: The majority of the sample showed an average to low level of knowledge. Such results indicate the importance of implementing more awareness programs that target younger age groups in the community.

Keywords: Knowledge, Stroke

INTRODUCTION

A stroke is a form of cerebrovascular disease caused by the interruption of the blood supply to the brain. There are two types of stroke; hemorrhagic and ischemic.[1]

Due to ageing populations worldwide, it has been estimated that by 2020 stroke will be the leading cause of lost healthy life-years.[2]

Recent studies suggest that prompt recognition of stroke early symptoms and responding rapidly are both crucial in lowering mortality and disability rates.[3] Poor recognition of symptoms is suggested to be partially responsible for the delay in contacting the emergency medical services.[4,5]

In UAE, there is limited data available about the level of knowledge of stroke in the community. Therefore, this study aims to assess the awareness levels within Sharjah

population about stroke. This will provide the basis and direction for achieving effective educational programs.

Authors aim to assess baseline knowledge regarding stroke in general, it's symptoms, the possible risk factors associated with it and the appropriate responses. As well as, to determine if there is a need to implement a health education program that aims to increase awareness of Sharjah citizens. Measurement of the knowledge of stroke and stroke related symptoms and risks can provide information to health care providers about the various behaviour that members of the community could adopt for prevention of stroke.

METHODS

The study follows a descriptive cross-sectional design. A non-probability convenience sampling method was used to collect data from individuals who were available at the place and time of data collection. Individuals were selected in public areas (shopping malls and public libraries) in the city of Sharjah, UAE. The inclusion criteria involves any person who is currently residing in Sharjah, who is above the age of 18 and can comprehend either English or Arabic. Any individuals with a history of stroke, any medical personnel working in health care facilities, and people who suffer from severe mental, visual or hearing disabilities that may interfere with answering the questions were excluded from the study. Data collection was done during the period of February to March 2016.

A self-administered anonymous questionnaire was distributed to a random sample (n= 426) of Sharjah residents. It was devised by the research team conducting this study and approved by the research committee of University of Sharjah. It contained a total of 17 questions (majority were close-ended) distributed among 5 sections: demographics, general knowledge, knowledge of signs and symptoms, risk factors and appropriate responses toward stroke.

Prior to the formal data collection, a pilot study was conducted with 12 questionnaires distributed and according to it, modifications and adjustments were done. A standardization meeting was held as well, ensuring that the researchers collecting the data receive the same questions, in the same order and are given the same amount of time and resources.

Data were entered, cleaned and analyzed using the SPSS version 22 software. Results obtained were presented in the form of frequencies, percentages or in graphs and other graphical forms. Bivariate analysis was performed. A p-value ≤0.05 was considered to be statistically significant.

A written consent form was signed by all participants, ensuring their privacy and confidentiality when handling the obtained data.

RESULTS

Out of 426 participants 65.2% were females, 43.0% belonged to the early adulthood group (18-30 years), 43.4% mid-adulthood group (31-50 years) and 13.6% late adulthood. 36.4% completed precollege education, 53.5% completed college, and 10.1% completed post graduate education. The participants of the study were asked whether they know what stroke is. Around half of the study population (51.8%, n=221) said they knew what stroke is, out of which 24.3% (n=54) provided wrong definitions. Around 20.0% (n=85) said they do not know what stoke is.

Table 1: Correctly identified signs, symptoms and risk factors of stroke.

Variable	Percent	n
Knowledge of signs and symptoms		
Severe Headache	49.1%	209
Dizziness/Loss of Balance	61.1%	260
Visual Problems	38.0%	162
Confusion/Trouble Speaking	60.2%	256
Numbness	70.0%	298
Knowledge of Risk Factors		
Obesity	62.3%	265
Family History	56.8%	242
Hypertension	87.0%	371
Hypercholesterolemia	72.6%	309
Hyperglycemia	59.2%	252
African American Race	3.5%	15
Female Gender	4.7%	20
Age >60	19.8%	84

The participants were provided with multiple statements that measure their general knowledge of stroke, including its signs, symptoms and risk factors. Points were awarded for each correctly identified statement, and scores were calculated as a percentage. Table 1 provides the participants' responses to the signs, symptoms and risk factors of Stroke.
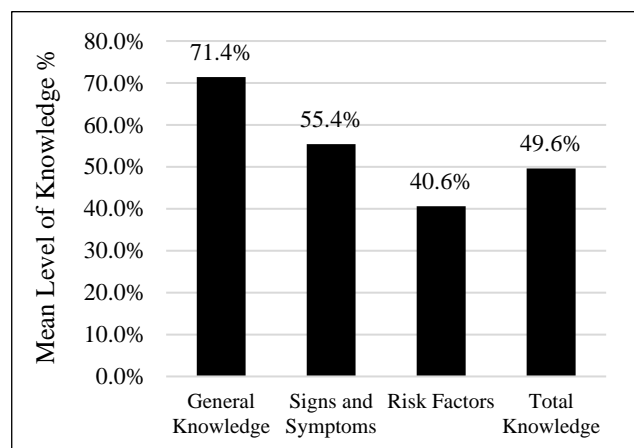
Figure 1: Mean levels of knowledge about stroke.

Figure 1 shows the participants' calculated mean levels of knowledge about stroke. Mean levels of knowledge about risk factors, signs and symptoms, and general knowledge of stroke were 40.6%, 55.4% and 71.4% respectively. The total mean level of knowledge about stroke was 49.6%.

Table 2 provides a comparison between the means of level of knowledge about stroke across different age groups and educational groups. It can be seen that participants above the age of 50 showed the highest stroke knowledge scores across other age groups with a mean of 55.5% (p-value = 0.002).

Table 2: Mean knowledge levels across age and educational groups.

Variable	Mean	p-value
Age groups		
Early Adulthood	47.3%	
Mid Adulthood	49.7%	0.002
Late Adulthood	55.5%	
Educational Groups		
Pre-college	47.8%	
College	49.5%	0.015
Post-graduate	55.4%	

Moreover, participants who completed their post graduate education, showed the highest stroke knowledge scores across other educational groups, with a mean of 55.4% (p-value=0.015).

Only 14.4% of the population correctly identified the ambulance number (998) in UAE.

DISCUSSION

Our study found out that almost half of the respondents don't know what stroke is. Quarter of those who said they know what stroke is, provided false descriptions. This reveals both a lack of knowledge and the existence of huge misconceptions in the population. Those daunting results are consistent with other studies around the world.[6]

Consistent with other studies our study identified visual problems as the least identified symptoms.[5]

When presented with a list of warning signs, only three were identified by more than half of the respondents. The findings confirm previous studies in which hypertension as a risk factor was identified most frequently.[2] However, gender, race, and age were very poorly identified as risk factors. The mean total level of knowledge was found to be poor. This alarming result is not only confined to UAE, but also was confirmed in studies conducted in other parts of the world.[3,7]

The early and mid-adulthood age groups in our study shows a significantly lower knowledge level than the late adulthood group which contradicts other studies that found the mid adulthood had higher levels of knowledge.[8]

This high level of knowledge in the late adulthood group might be because this age group has more risk factors and have regular visits to the hospital and thus receive more information from their physicians.[9]

Also, those with a higher education level showed significantly higher knowledge, due to their possible encounter of stroke related topics during their education period this result was reported in many similar previous studies.[10]

Choosing the correct emergency number could make a difference between life and death. The first 60 minutes after a patient suffers, is a critical window in not just saving a person's life but preventing permanent disability. Unfortunately, very few of the sample subjects knew the correct number to call to get an ambulance.

Limitations of the study may have suffered from some limitations including a relatively small sample size.

CONCLUSION

Critical gaps in knowledge of stroke exist within adults in Sharjah, in particular the risk factors and the responses. The majority of the participants chose the wrong ambulance number. Late adulthood group and post-college group showed better knowledge. We recommend that future educational efforts need to focus not only on the general public, but also among high-risk individuals in the community of Sharjah. Recognizing knowledge gaps can effectively aid in the planning of future awareness campaigns; improving the prognosis of stroke through the encouragement of adoption of many preventative behaviors as well as allowing people to assess whether they lie within the high-risk groups.

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