



Knowledge regarding stroke among hypertensive clients in selected coastal areas of Trivandrum

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Abstract

A study conducted on knowledge regarding stroke among hypertensive clients in selected coastal areas of Trivandrum, the objective included to assess the level of knowledge regarding stroke among hypertensive clients in selected coastal areas, to compare knowledge score regarding stroke among male and female hypertensive clients in selected coastal areas, to find association between knowledge scores and selected demographic variables. A descriptive design was selected for the study; structured knowledge questionnaire was used to collect data from 30 hypertensive clients from selected coastal areas of Trivandrum. The frequency and percentage distribution of hypertensive patients according to level of knowledge, data shows that 66.66 % (20) samples had below average knowledge regarding stroke whereas only 33.33 % (10) samples had above average knowledge regarding stroke. Calculating the mean females had more knowledge regarding stroke (8) than males (5.6) regarding definition of hypertension and stroke, whereas males (5.6) had more knowledge regarding causes and risk factors than females (4.6). It further shows that males have more knowledge regarding stroke warning signs and clinical manifestations, diagnosis and treatment and complications and prevention with a mean of 7.6, 8.4, 6 in males and 6.2, 6.2, 4.8 in females respectively. Data shows that males have more knowledge than females regarding stroke. Findings of the study showed no association between monthly income and knowledge scores and association was found between age, sex, education and occupation at 0.05 level of significance. Study concludes that providing knowledge to hypertensive clients is essential for the prevention of stroke.

Keywords: Knowledge, stroke, hypertension, Self Instructional Module, descriptive research, inferential statistics.

Introduction

Globalization and industrialization witnessed over the last two decades have influenced life-styles of people particularly in developing countries. In addition, demographic transitions have added non-communicable diseases with existing communicable ones, thus causing double burden of diseases. Stroke is a major non-communicable disease.¹⁰ Stroke is third most common cause of death in the world after heart diseases and cancer, annually 15 million people worldwide suffer from a stroke. Out of these five million attain optimal recovery, 5 million die and 5 million suffer from long lasting disability, placing a huge burden on families and communities. Morbidity and mortality rate in India during 2007 is 90 - 222 per 1, 00,000 population aged < 45 yrs.¹³



The risk factor for stroke are out of control, however it can be kept under control through proper nutrition and medical care. Risk factors for stroke include age over 55, family history of stroke, high blood pressure, high cholesterol, cigarette smoking, African American, Hispanic or Asian obesity and overweight.⁴ Stroke prevention is based on living a healthy life style.¹¹

Background of the problem

Stroke is one of the leading causes of disability, morbidity and mortality worldwide. In global burden, merely 20 million people suffer from acute stroke every year. About 15-30% of survivors are permanently disabled. About 12% of stroke occurs among people below 40 yrs of age. India has reported 1.6 million stroke cases during 2015, at least one thirds of whom will be disabled. However this data has limitations due to incomplete death certification and incorrect death identification and uncertainty of etiology in cases of sudden death. WHO estimate suggest that by 2050, 80% stroke cases worldwide occurring in low and middle income countries will be mainly from India and China.³

The major cause and risk factor of the stroke is hypertension. It is a condition characterized by increase in the arterial pressure of the individual. It is most common cardiovascular disease all over the world and constitutes an important risk factor for the cardiovascular death. Higher the blood pressure, higher the risk of complications like stroke, myocardial infarction, and renal failure. Hypertension is a global problem in India it is expected to range from 4-8 percent and the trend is increasing due to changes in life style. A recent report indicates a predicted increase in hypertensive cases about 1.56 billion by 2025.³

Need and significance of the study

Studies have shown knowledge on stroke to be poor in urbanized countries. Practical understanding on stroke among the observant/family members could improve early recognition and facilitation of medical care in stroke. Stroke being a medical emergency requires early diagnosis and interventions. Patients require extended individualized care in rehabilitation programs. Despite the advances in imaging and the novel management options in the last decade; the stroke survival rates have remained low.¹⁵

Assessing the knowledge of the hypertensive patients regarding stroke will help in finding out their educational needs and further help in developing a Self Instructional Module, which the researcher thought was important.

Materials and methods

Research approach

A descriptive approach was adopted to assess the knowledge regarding stroke among hypertensive clients in selected coastal areas of Trivandrum.

Research design

A quantitative research design to assess the knowledge regarding stroke among hypertensive clients.

Target population

In the present study population consist of hypertensive clients residing in coastal areas of Trivandrum.



Sample and sampling technique

30 samples having hypertension and fulfilling the sampling criteria were selected from coastal areas of Trivandrum. Quota sampling technique was adopted for selecting the samples.

Tool/instruments

Development/selection of the tool

For this study the research tool used was structured knowledge questionnaire.

Description of the tool

The tool consists of two sections

Section A :- Socio demographic performa is used to collect socio demographic variables like age, sex, income, food habits, family history of hypertension, education, occupation and knowledge about stroke.

Section B :- Structured knowledge questionnaire on stroke

Data collection process

After obtaining formal permission from the parish priests of 6 selected coastal areas i.e 6 quotas 30 samples having hypertension and fulfilling the selection criteria and who were present at the time of data collection were selected, written consent was taken from the samples before data collection and the purpose of the study was explained, from each quota 10 samples were selected 5 male and 5 female using convenient sampling technique.

The data collection was done between 23.2.2018 to 26.2.2018

No problems were faced during the data collection period. All the people concerned with the study cooperated with the researchers.

Statistical methods/data analysis

The following plans of analysis were developed; the analysis was divided into 4 parts.

Section – A - Findings related to sample characteristics using tables and graphs

Section - B - Findings related to level of knowledge regarding stroke among hypertensive clients in selected coastal areas of Trivandrum

Section - C- Findings related to comparison of knowledge scores regarding stroke among male and female hypertensive clients in selected coastal areas of Trivandrum.

Section - D- Findings related to association between knowledge scores and selected demographic variables using chi – square .



Findings related to sample characteristics

- Out of 30 samples 33.33 % (10) of the samples were in the age group 45-55 yrs and 43.33 % (13) were in the age group 56 - 66 yrs whereas 23.34 % (7) had age above 67yrs.
- Most of the samples belonged to Christian religion i.e., 86.67 % (26) and only 13.33 % (4) belonged to Hindu religion.
- Majority of the samples were taking mixed diet 86.66 % (26) and only 6.67 percentage (2) reported to be vegetarian and the remaining 6.6 percentage (2) were Non-vegetarian.
- 66.67 % (20) samples were having family history of hypertension and 33.33 % (10) samples did not have a family history of hypertension.
- Majority of the samples 60 % (18) have completed primary education on the other hand about 30 % (9) had completed higher education only 6.67 percentage (2) were illiterate.
- 36.67 % (11) were unemployed and 30 % (9) samples had fishing as their main occupation, 6.67% (2) were working as coolie, 6.67% (2) were working abroad and only 3.33% (1) sample was working in government sector.
- Most of the samples were 73.33 % (22) had monthly income \leq 10,000 and 20 % (6) had monthly income between 10001 - 20000 and 6.67 percentage (2) had monthly income > 20000.

Findings related to level of knowledge regarding stroke among hypertensive clients in selected coastal areas of Trivandrum

Table 1

Frequency and distribution of sample according to the level of knowledge regarding stroke

N=30

Level of knowledge	Criteria measures	Male		Females		Total	
		Frequ ency	%	Frequ ency	%	Frequ ency	%
Above Average	16 - 30	6	40%	4	26.66 %	10	33.33 %
Below Average	< 15	9	60%	11	73.32 %	20	66.66 %

Maximum score = 30

Minimum score = 0

Findings related to comparison of knowledge scores regarding stroke among male and female hypertensive clients in selected coastal areas of Trivandrum



Table 2
Mean of knowledge scores regarding stroke among male and female samples

N= 30

Sl. No	Area	Male	Female
1.	Definition of hypertension and stroke	5.6	8
2.	Causes and risk factors	5.6	4.6
3.	Warning signs Clinical manifestations	7.6	6.2
4.	Diagnosis and treatment	8.4	6.2
5.	Complications and prevention	6	4.8

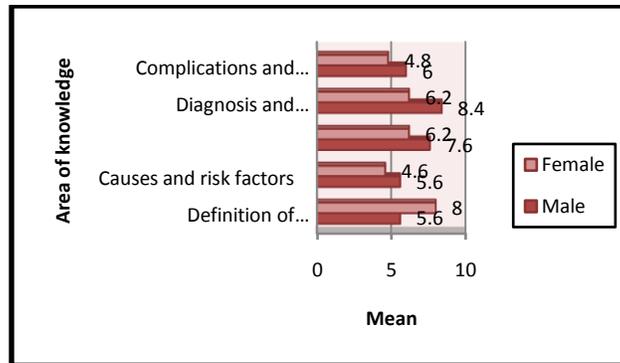


Figure 1 – Bar graph showing mean of females and males based on area of knowledge

Findings related to association between knowledge scores and selected demographic variables

H1 - There is significant association between level of knowledge regarding stroke and selected demographic variables at 0.05 level of significance as evident from structured knowledge questionnaire.



Table 3
Association between knowledge scores and selected demographic variables

N=30

Demographic variables	Critical value	Chi square value	Df	Inference
Age	5.99	0.37	2	A
Sex	3.84	0.7	1	A
Education	3.84	0.067	1	A
Occupation	5.99	0.613	2	A
Income	3.84	5.33	1	NA

NA – No Association

A – Association

Df – Degree of freedom

Results

- 33.33 % (10) of the samples were in the age group 45-55 yrs and 43.33 % (13) were in the age group 56 - 66 yrs whereas 23.34 % (7) had age above 67yrs.
- Most of the samples belonged to Christian religion i.e., 86.67 % (26) and only 13.33 % (4) belonged to Hindu religion.
- Majority of the samples were taking mixed diet 86.66 % (26) and only 6.67 percentage (2) reported to be vegetarian and the remaining 6.6 percentage (2) were Non-vegetarian.
- 66.67 % (20) samples were having family history of hypertension and 33.33 % (10) samples did not have a family history of hypertension.
- Majority of the samples 60 % (18) have completed primary education on the other hand about 30 % (9) had completed higher education only 6.67 percentage (2) were illiterate.
- 36.67 % (11) were unemployed and 30 % (9) samples had fishing as their main occupation, 6.67% (2) were working as coolie, 6.67% (2) were working abroad and only 3.33% (1) sample was working in government sector.
- Most of the samples were 73.33 % (22) had monthly income \leq 10,000 and 20 % (6) had monthly income between 10001 - 20000 and 6.67 percentage (2) had monthly income $>$ 20000.
- The frequency and percentage distribution of hypertensive patients according to level of knowledge data shows that 66.66 % (20) samples had below average knowledge regarding stroke whereas only 33.33 % (10) samples had above average knowledge regarding stroke.
- Calculating mean of scores shows, females had more knowledge regarding stroke (8) than males (5.6) regarding definition of Hypertension and stroke, whereas males (5.6) had more knowledge regarding causes and risk factors than females (4.6). It further shows that males have more knowledge regarding stroke warning signs and clinical manifestations, Diagnosis and treatment and complications and



prevention with a mean of 7.6, 8.4, 6 in males and 6.2, 6.2, 4.8 in females respectively. Data shows that males have more knowledge than females regarding stroke.

- Association was found between knowledge scores regarding stroke and selected demographic variables like age, sex, education and occupation and data shows no significant association between knowledge scores regarding stroke and monthly income among hypertensive patients.

Discussion

1. To assess the level of knowledge regarding stroke among hypertensive clients in selected coastal areas of Trivandrum

In a similar study the rate of recognition of the clinical symptoms of stroke shown in the video was higher among the participants with a neighbor ($p < 0.05$) or relative ($p < 0.01$) who had had a stroke in the univariate analysis. Contact with a relative remained significant in the multivariate analyses. The risk factors for stroke most frequently identified by the participants were inadequate diet (42.3%), hypertension (33.7%), physical inactivity (28.3%), emotional stress (24%), alcohol use (21.6%), and smoking (21%). Hypertension, diabetes mellitus, physical inactivity, obesity, and smoking ($p < 0.05$) were more frequently identified as risk factors for stroke by the participants²⁶

The present study findings reveal that hypertensive patients have poor knowledge regarding stroke. The study shows that 33.36 % of hypertensive patients have adequate knowledge and 66.64 % of hypertensive patients have below average knowledge.

2. To compare the knowledge score regarding stroke among male and female hypertensive clients in selected coastal areas of Trivandrum

In comparison between the knowledge of male and female, calculating females had more knowledge regarding stroke (8) than males (5.6) regarding definition of Hypertension and stroke, whereas males (5.6) had more knowledge regarding causes and risk factors than females (4.6). It further shows that males have more knowledge regarding stroke warning signs and clinical manifestations, diagnosis and treatment and complications and prevention with a mean of 7.6, 8.4, 6 in males and 6.2, 6.2, 4.8 in females respectively. Data shows that males have more knowledge than females regarding stroke.

3. To find out the association between knowledge scores and selected demographic variables.

In a similar study There was a significant relationship between participants' level of knowledge of stroke and occupation ($p = 0.037$) and marital status ($p = 50.011$). The remaining socio-demographic characteristics including age, level of education and employment displayed a highly significant association ($p = 0.000$) with participants' level of knowledge of stroke.²⁷

In the present study among result shows there is no significant association between knowledge scores regarding stroke and monthly income. There was association between knowledge scores regarding stroke and selected demographic variables like age, sex, education and occupation.



Nursing implication

Nursing service

- Nursing professionals working in hospital settings should teach and improve knowledge of stroke among hypertensive clients.
- The Self Instructional Module prepared by the investigator can be used by nurses to educate hypertensive clients regarding stroke.

Nursing education

- The nursing curriculum should be updated to enable nursing student to identify the knowledge of stroke among hypertensive clients and educate patients for prevention of stroke.
- Nurses should give knowledge regarding stroke through health education along with care.

Nursing administration

- The nurse administrator should supervise the nurses while they are teaching hypertensive patients.
- Pamphlets, handouts, booklets regarding stroke should be readily accessible to the clients.

Nursing research

- This study will help the nurse researcher to develop insight into the development of stroke booklet regarding stroke for hypertensive patients use in future.
- This research on knowledge regarding stroke should involve interdisciplinary research teams and the findings should be communicated through journals and other media.

Limitations

- This study was limited to thirty samples
- This study was limited to the patient having hypertension
- This study was limited to selected coastal areas of Trivandrum
- The data collection period was thirty minutes per subjects so it was time consuming
- The data was collected only on selected aspects
- This study does not include the patients having stroke or other diseases

Recommendation

The following recommendations are made on the basis of findings of the study

- A similar study can be replicated on a large sample to validate and generalize the findings.
- Longitudinal study can be undertaken to assess the effectiveness of different aspects of stroke.
- An exploratory study may be carried out to assess knowledge regarding stroke among hypertensive clients.
- The course content of the curriculum should include new views about knowledge of stroke among hypertensive clients.



Conclusion

In this study thirty samples were selected to assess the knowledge regarding stroke among hypertensive clients in selected coastal areas of Trivandrum. The study was conducted with a view to develop a Self Instructional Module, to assess the level of knowledge, to compare the knowledge score regarding stroke among male and female hypertensive clients and to find association between knowledge scores regarding stroke and selected demographic variables. The result shows that 33.36 % patients have good knowledge and 66.64 % have poor knowledge. In comparison between the knowledge scores of male and female, females had more knowledge regarding stroke (8) than males (5.6) regarding definition of hypertension and stroke, whereas males (5.6) had more knowledge regarding causes and risk factors than females (4.6). It further shows that males have more knowledge regarding stroke warning signs and clinical manifestations, diagnosis and treatment and complications and prevention with a mean of 7.6, 8.4, 6 in males and 6.2, 6.2, 4.8 in females respectively. There was no association between knowledge scores and monthly income and significance association was found between age, sex, education, occupation and knowledge scores.

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