



A descriptive study to assess the knowledge of stroke among adults of selected rural community of Gurugram with view to develop a pamphlet on stroke.

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Abstract: Stroke mortality had decreased in the US over the past two decades, recent trends in mortality indicate that these decreases may have levelled off, and that stroke mortality may even be rising again. While stroke mortality had decreased in the US over the past two decades, recent trends in mortality indicate that these decreases may have levelled off, and that stroke mortality may even be rising again. **Objectives:** The objective of the study was to assess the knowledge of stroke among adults of selected rural community of Gurugram with a view to develop a pamphlet on stroke. **Material & method:** A descriptive survey was used to assess the knowledge of stroke among adults of selected rural community of Gurugram with a view to develop a pamphlet on stroke. The present study was conducted on 100 samples. **Result:** 84% of adults of selected rural community had moderate knowledge regarding stroke and 16% of adults of selected rural community had adequate knowledge regarding stroke. **Conclusion:** Samples were collected from 100 participants from the Nawada village area Gurugram Haryana. The mean score of knowledge regarding stroke among adults is 14.10 with the standard deviation of 3.10. The following conclusion was drawn based on the study. It was found that the majority of samples had moderate knowledge about stroke, that was 84% of the total samples. While 16% of individuals have inadequate knowledge and only 0.0% of people had adequate information. There was a total of 30 questions in the structured questionnaire, with a minimum score of 0 and maximum score of 30. The inadequate knowledge on stroke among adult indicates the importance of implementing stroke education and the awareness program in the community which will focus on lifestyle preventive behavior along with appropriate and urgent action regarding the warning sign of stroke.

Keywords: *knowledge, Stroke, Rural and pamphlet.*

Introduction

It is generally accepted that a cerebrovascular event, also known as a "stroke," can be either ischemic or hemorrhagic. In either case, an area of the blood flow, nutrients, and oxygen, which causes neuronal damage and ensuing neurological impairments. A stroke is a medical emergency and treatment must be sought as quickly as possible. According to The Hindu Newspaper Stroke caused 6,99,000 deaths in India in 2019, which is 7.4% of the total fatalities. Stroke is a major health problem. Indian council of medical research claims that stroke contributes 91% of deaths and 72% of disability. According to Nation Commission on Macroeconomics and Health estimation number of strokes have increased from 1.08million in 2000 to 1.67 million 2015. A stroke is an illness in which part of the brain loses its blood supply. This can happen if an artery that feeds blood to the brain gets clogged, or if it tears and leaks. A stroke is the rapid loss of brain function(s) due to disturbance in the blood supply to the brain the risk of stroke increases with age and doubles over the age of 55 years in both men and women. Risk is increased further when an individual has an existing medical condition like hypertension, coronary artery disease or hyperlipidemia.

Need of study

Stroke is one of the top causes of death in the globe. Implementing preventive measures and lowering mortality rates require research on stroke and its risk factors, including hypertension, diabetes, smoking, and obesity. Studying stroke aids in recognizing early warning signs, enhancing treatment options, and enhancing emergency medical interventions. Stroke causes a substantial financial strain on people, families, and healthcare systems. Acute care, long-term care, rehabilitation, and lost productivity.

Statement of the problem:

A descriptive study to assess the knowledge of stroke among adults of selected rural community of Gurugram with view to develop a pamphlet on stroke.

Objectives of the study:

- To assess the level of knowledge regarding stroke among adults of selected rural community of Gurugram.
- To determine the association of knowledge regarding stroke with selected demographic variables.
- To develop and prepare the pamphlet.

Hypotheses:

There may be a significant association between knowledge regarding stroke with selected demographic variables.

Research methodology.

Research methodology is a way of designing and carrying out a study to obtain valid and reliable results that meet the aims and objectives of the research. It involves explaining the techniques or procedures used to identify and analyse information on a specific topic. The present study was carried out as a descriptive study to assess the knowledge of stroke among adults of selected rural community. This chapter includes the research approach, design, the setting, sample, and the sampling technique. Its further deals with the development and description of the tool, validity, pilot study, reliability of the tool, data collection, procedure, and plan of the data analysis.

Research approach & design:

Descriptive research approach and non-experimental research design

Research setting:

Research setting is the physical, social, or experimental context within which research is conducted.

Target population

Adolescents 20 – 60years

Sample and sampling technique.

100 sample size selected by non- probability purposive sampling technique

Inclusive criteria

- People who were able read and write English or Hindi language.
- People who were between the age of 20-60 Years.
- People who were willing to Participate in the study.

Exclusive criteria

- People who were not willing and unavailable at the time of data collection.
- People who were diagnosed with stroke.

Selection and development of tool.

The participants' level of knowledge about stroke was measured using the adult stroke knowledge questionnaire.

- General information of stroke.
- Risk factor of stroke.
- Early warning sign regarding stroke.
- Precaution to prevent stroke.
- Diet Management to reduce symptoms of stroke.

Description of tool:

➤ Section-A: Socio- demographic profile

Investigators constructed the tool to collect the sociodemographic data of the study subjects. It consisted of demographic variables Age (in years), Gender, Marital status, Education status, Family type, Occupation, Previous knowledge, Source of information, Family history.

➤ Section - B: Introduction & Risk factor of stroke

The introduction & Risk factor of stroke -Q has 14 questions, each scored on a 1-point.

➤ Section - C: Early warning sign

The early warning sign -Q has 5 questions, each scored on a 1-point .

➤ Section -D: Emergency management & prevention

The Emergency management & prevention-Q has 10 questions, each scored on a 1-point .

Data analysis plan

The analysis of data requires several closely related operations such as establishment of categories, application of this category to raw data through coding, tabulation and drawing statistical inferences. The data obtained was analyzed in terms of achieving the objectives of the study using descriptive and inferential statistics.

Statistical analysis of the data

The analysis of the data was done as follows,

- Organization of data in the master sheet.
- Frequency and percentage used for data analysis of demographic variables.
- Calculation of mean, mean percentage, and standard deviation of level of knowledge of stroke and the selected demographic variables. Application of the **Fisher's Exact test & Chi – square** to find out the association between demographic variables and assess the knowledge of stroke.

Ethical considerations

In the current study in order to consider ethical principles the purpose of the study was explained to all the research participants and informed consent was obtained from them. The participants were assured of the confidentiality of the data.

Review of literature: -

Hussein Mohammad Khalil, (2020) conduct a study on Knowledge of Stroke Warning Signs, Risk Factors, and Response to Stroke among Lebanese Older Adults in Beiru. A community-based survey targeting adults aged 50 and above was conducted, 390 participants completed the questionnaire. In case of stroke suspicion 57.69% would call an ambulance. Adequate response to stroke was positively associated with identification of more stroke symptoms but inversely associated with having diabetes.

Manik Chhabra (2019) conduct a study on A cross-sectional telephonic interview-based survey was conducted in the states of Punjab, Haryana, and Himachal Pradesh, 350 respondents those participated in the survey with a mean age $\pm$ standard deviation of 39.93 ± 13.41 years, hypertension was found to be the most common risk factor among the study participants ($n = 205$, 58.57%) and 28.85% of the study participants were not aware of the risk factors, whereas 46% of the participants were not aware of warning signs of stroke.

Adebimpe O Obembe, (2020) conduct a study on Awareness of risk factors and warning signs of stroke in a Nigeria university This as a cross sectional survey involving 994 (500 students and 494 staff) respondents. All the participants complete the questionnaire and results are weakness (66.2%) was the most commonly identified warning sign of stroke with more staff (69.8%) identifying correctly than students (62.6%). Hypertension (83.4%) was the most commonly identified stroke risk factor, with more staff (91.7%) Identifying correctly than students (83.2%). Predictors for adequate awareness of both stroke risk factors and warning signs were younger age, smoking history, and higher educational level.

Ginenus Fekadu (2019) conduct a study on Prospective observational study design, was carried out at stroke , on total of 116 eligible stroke patients were recruited during the study period. The mean age of the patients was 55.1 ± 14.0 years and males comprised 62.9%. According to the world health organization (WHO) criteria of stroke diagnosis, 51.7% of patients had ischemic while 48.3% had hemorrhagic stroke.

George Lameck chimatiro, (2019) conduct a study on Scoping review of acute stroke care management and rehabilitation in low and middle-income countries, A total of 177 references were identified. Twenty of them, published between 2010 and 2017, were included in the review. Applying the Donabedian Model of quality of care, seven dimensions of stroke-care structure, six dimensions of stroke care processes, and six dimensions of stroke care outcomes were identified. Structure of stroke care included availability of a stroke unit, an accident and emergency department, a multidisciplinary team, stroke specialists, neuroimaging, medication, and health care policies. Stroke care processes that emerged were assessment and diagnosis, referrals, intravenous thrombolysis, rehabilitation, and primary and secondary prevention strategies. Stroke-care outcomes included quality of stroke-care practice, functional independence level, length of stay, mortality, living at home, and institutionalization.

Analysis and interpretation of data

Analysis and interpretation was done in accordance with the objectives laid down for the study. The purpose of analysis is to reduce the data into an interpretable and meaningful form so that the result can be compared, and significance can be identified.

This chapter deals with the analysis and interpretation of data collected. The data was analysed by calculating the score in terms of frequency, percentage, mean, standard deviation, chi- square, fisher's exact and paired T- test.

Objectives of the study: -

1. To assess the level of knowledge regarding stroke among adults of selected rural community of Gurugram.
2. To determine the association of knowledge regarding stroke with selected demographic variables.
3. To develop and prepare the pamphlet.

Plan of analysis:

Analysis and interpretation of data was done according to the objectives using descriptive and inferential statistics. The level of significance chosen was at $p \leq 0.05$.

Organization of analyzed data: -

The data obtained was organized in a master sheet for tabulation & statistical processing to analyse statistically and interpreted by using descriptive statistics. Data and findings were organized and presented under the following headings.

SECTION-A

This section describes the demographic characteristics of the sample under study. The data obtained describes the characteristics pertaining Age, Gender, Marital Status, Level of education, Family type, Occupation, Previous knowledge about stroke, If yes, then the source of information, Family history of stroke.

Table 1- Frequency and percentage distribution according to socio- demographic variables of adult**N=100**

Variables	Category	Frequency(f)	Percentage(%)
Age	20-30yrs	39	39%
	31-40yrs	35	35%
	41-50yrs	18	18%
	50 above	8	8%
Gender	Male	53	53%
	Female	47	47%
Marital status	Married	46	46%
	Unmarried	51	51%
	Divorce	3	3%
Level of education	Primary	17	17%
	Secondary	45	45%
	Undergraduate	24	24%
	Postgraduate & above	14	14%
Family type	Nuclear	26	26%
	Joint	56	56%
	Extended	18	18%
Occupation	Student	30	30%
	Government Employee	9	9%
	Self-employee	42	42%
	Un- employed	19	19%
Previous knowledge about stroke	Yes	42	42%
	No	58	58%
If yes, then the source of information	Books	17	17%
	Doctor/health care worker	7	7%
	Family member & friends with stroke	10	10%
	Mass media / T V /NGO	8	8%
Family history of stroke	Yes	20	20%
	No	80	80%

SECTION – B**Table – 2: Frequency and percentage distribution of adults based on level of knowledge regarding stroke.****N=100**

CRITERIA MEASURE OF KNOWLEDGE SCORE			
LEVEL OF SCORES	RANGE	FREQUENCY	PERCENTAGE
INADEQUATE KNOWLEDGE.	1-10	16	16.0%
MODERATE KNOWLEDGE.	11-20	84	84.0%
ADEQUATE KNOWLEDGE.	21-30	0	0.0%

Maximum =30 Minimum=0

Table 2a: level of knowledge regarding stroke among adults.

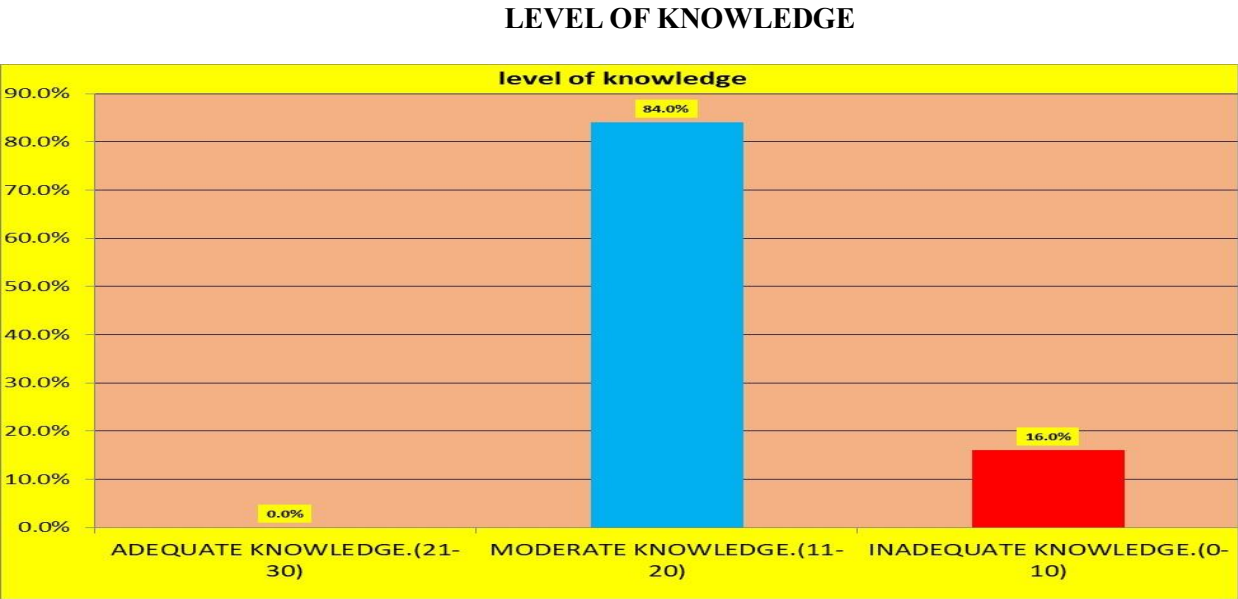


Figure no. 1: Bar graph diagram showing frequency and percentage distribution of adults according to their level of knowledge.

The majority 84% (84) of adults had moderate knowledge, 16% (16) had inadequate knowledge followed by 0.0% (0) had good knowledge.

Table – 3: Descriptive Statistics of Knowledge Score

N=100

DESCRIPTIVE STATISTICS	Mean	Median	S.D.	Maximum	Minimum	Range	Mean %
KNOWLEDGE SCORE	14.10	15	3.10	20	6	14	47.00

Maximum=30 Minimum=0

Table 3 shows the descriptive statistic of knowledge score of adults of selected rural community of Gurugram and that are:

- The mean score was 14.10.
- The median was 15.
- The SD was 3.10.

The mean % was 47.00.

Table No. 4: Showing association level of knowledge of adults of selected rural community regarding strokes with their demographic variables.

DEMOGRAPHIC DATA		LEVELS OF KNOWLEDGE (N=100)		ASSOCIATION WITH KNOWLEDGE SCORE				
Variables	Category	MODERATE KNOWLEDGE	INMODERATE KNOWLEDGE	Fisher's Exact & Chi-square	P Value	df	Table Value	Result
Age	20-40yrs	60	14	1.880	0.598	1	3.84	Not Significant
	41-50yrs and above	24	2					
Gender	Male	40	13	6.102	0.013	1	3.841	Significant*
	Female	44	3					
Marital status	Married	34	12	5.945	0.051	2	5.991	Not Significant
	Unmarried	50	4					
Level of education	Primary & Secondary	52	10	0.858	0.835	3	7.815	Not Significant
	Undergraduate & above	32	6					
Family type	Nuclear & Extended	37	7	3.193	0.203	2	5.991	Not Significant
	Joint	47	9					
Occupation	Student / Self employee	76	15	1.609	0.657	3	7.815	Not Significant
	Government Employee	8	1					
Previous knowledge about stroke	Yes	35	7	0.024	0.877	1	3.841	Not Significant
	No	49	9					
If yes, then the source of information	Books Mass media / T V / NGO / Doctor/ health care worker	26	6	2.345	0.504	3	7.815	Not Significant
	Family member & friends with stroke	9	1					
Family history of stroke	Yes	16	4	0.702	0.402	1	3.841	Not Significant
	No	68	12					

Table 4 shows association of level of knowledge of adults of selected rural community regarding stroke with their demographic variable. The Fisher's exact test & Chi-square test was used to determine the association between the level of knowledge and demographic variables. Data in table no 4 depicts that there is significant association found between gender and level of knowledge as calculated value of 6.102 is larger than tabulated value of 3.841 which project p value of 0.013 which is statistically significant at $p < 0.05$ level.

Discussion

The findings of the present study have been discussed in accordance with the objectives of the study.

According to the first objective: to assess the knowledge regarding stroke among adults of selected rural community of Gurugram.

Findings of our study: -

- Majority of adults moderate knowledge 84% (84) had inadequate knowledge followed by 16% (16) had adequate knowledge and 0.0% (0) had good knowledge.
- The overall knowledge score of strokes was in range of Mean $\pm$ SD (14.10 $\pm$ 3.10).

Suggestions

Future research can be done on a large sample for improving generalizability of the finding to a large population.

Conclusion

The present study helped us to understand the level of stroke and its relationship among adults of Haryana. It gives clear information about the stroke and its relationship with demographic variables such as Age, Gender, Educational Marital status, Family type, Occupation, Previous knowledge about stroke, source of information, Family history of stroke This research study intends to contribute to the existing body of knowledge, ultimately guiding the development of intervention and preventive measures to promote healthy among adults.

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