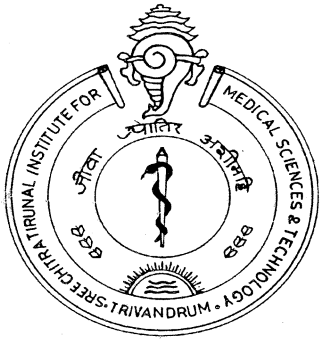
A STUDY TO ASSESS KNOWLEDGE OF CARE TAKERS AND GENERAL PUBLIC ABOUT RISK FACTORS AND WARNING SIGNS OF STROKE



PROJECT REPORT

Submitted in partial fulfillment of the requirements

for the

DIPLOMA IN NEURO NURSING

Submitted by

SHANKAR.M.G

Code No: 6095

SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY
TRIVANDRUM
OCTOBER 2011

CERTIFICATE FROM SUPERVISORY GUIDE

This is to certify that **Mr.SHANKAR.M.G** has completed the project work on **"A STUDY TO ASSESS KNOWLEDGE OF CARE TAKERS AND GENERAL PUBLIC ABOUT RISK FACTORS AND WARNING SIGNS OF STROKE"** under my direct supervision and guidance for the partial fulfillment for the Diploma in Neuro Nursing in the university of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum. It is also certified that no part of this report has been included in any other thesis for procuring any other degree by the candidate.

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October 2011.

CERTIFICATE FROM CANDIDATE

This is to certify that the project report on **"A STUDY TO ASSESS THE KNOWLEDGE OF CARE TAKERS AND GENERAL PUBLIC ABOUT RISK FACTORS AND WARNING SIGNS OF STROKE"** is a genuine work done by me at Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum under the guidance of Dr. Saramma. P.P, MN, PhD, Senior Lecturer in Nursing, SCTIMST, Trivandrum. It is also certified that this work has not been presented previously to any university for award of degree, diploma, fellowship or other recognition.

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APPROVAL SHEET

This is to certify that Mr.SHANKAR.M.G bearing Roll No: 6095 has been admitted to the Diploma in Neuro Nursing in January 2010 and he has undertaken the project entitled **"A STUDY TO ASSESS THE KNOWLEDGE OF CARE TAKERS AND GENERAL PUBLIC ABOUT RISK FACTORS AND WARNING SIGNS OF STROKE"** which is approved for the Diploma in Neuro Nursing awarded by the Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, as it is found satisfactory.

EXAMINERS:

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ACKNOWLEDGEMENT

First of all let me thank God Almighty, who accompanied and provided unending love, care, blessing and directed me to achieve success throughout the tenure of this study.

The present study has been completed under the expert guidance of Dr.Saramma P.P, Senior Lecturer in Nursing, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum. I express my sincere gratitude for the valuable guidance and encouragement given from the inception to the completion of the study. Her advices regarding the concept, basic guidelines and analysis of data were very much encouraging. Her contributions and suggestions have been of great help for which I am extremely grateful.

The researcher expresses her sincere thanks to Dr.K.Radhakrishnan, Director and Dr.A.V.George, Registrar, SCTIMST, Trivandrum, for giving this opportunity for conducting this study.

The researcher greatly values the favor extended by Prof. Muraleedharan Nair, Head of the Department, Neurology, SCTIMST, Trivandrum.

With profound sentiments and gratitude I acknowledge the encouragement and help received from the following persons for the successful completion of the study.

I am thankful to Dr.Sylaja P.N, Dr.Sajith Sukumaran, Mr. Unni Krishnan and Ms.Ann Mary for the constant support and encouragement. All the staff in the neuromedical unit, helped for completion of this study I am indebted to them.

I thank all my friends and colleagues who directly or indirectly supported me in completing this study.

Special thanks to computer division and library staff of SCTIMST for granting permission to utilize the computer and library.

I would also like to acknowledge the contribution of all participants who kindly agreed to take part in the study and generously gave their time and attention to the research. This study would have been impossible without such generosity.

Shankar M.G

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ABSTRACT

A study to assess knowledge of care takers and general public about risk factors and warning signs of stroke

Stroke is a neuro medical emergency, which needs immediate medical attention and definitive care for survival and better outcome. The main challenge in stroke treatment is the early detection of stroke symptoms and warning signs by the relatives and seeking medical care at the earliest. Most of the stroke victims were admitted in the stroke centers after the window period, which is very short (4.30 hrs). This is the main contraindication for Thrombolysis therapy. A study was conducted among the general public and care takers of stroke patients in SCTIMST, Trivandrum using a prevalidated Questionnaire regarding the knowledge of risk factors and warning signs of stroke.. A convenient sampling technique was used. A sample size of 70 subjects was taken. The major findings of the study was majority of the participants had poor awareness regarding risk factors, warning signs, window period and treatment modalities. The investigator recommends more public awareness program to improve the knowledge and attitude of general population towards stroke.

CHAPTER – 1

INTRODUCTION

1.1. INTRODUCTION

A stroke, previously known as cerebrovascular accident (CVA) is a medical emergency and can cause permanent neurological damage,, complications, and even death. It is the leading cause of adult disability in the United States and Europe and it is the number two cause of death worldwide (Fayyaz,1999). A stroke or brain attack occurs when a blood clot blocks an artery or blood vessel breaks, interrupting blood flow to an area of brain. When either of these things happens, brain cells begin to die and brain damage occurs. When brain cells die during a stroke, abilities controlled by that area of the brain are lost. How a stroke patient is affected depends on where stroke occurs in the brain and how much brain is damaged (Ayanniyi, 2006).

Stroke is an acute neurological deficit lasting more than twenty-four hours. Cerebral infarction accounts for 80 to 85% of cases of stroke (Warlow, et al., 2000). Stroke kills about five million people each year making this the

second major cause of death worldwide. At least fifteen million others have non-fatal stroke annually, and about a third are disabled as a consequence. (Fayyaz, 1999) Non-modifiable risk factors for cerebral infarction include age, sex, family history, race and ethnicity. Modifiable risk factors for cerebral infarction include hypertension, diabetes mellitus, cardiac disease (particularly atrial fibrillation), hyperlipidemia, smoking, transient ischemic attacks, asymptomatic carotid artery stenosis, alcohol abuse and physical inactivity (Schneider 2003).

Stroke can happen to anyone at any time, regardless of race, sex or age. In US, stroke is the third leading cause of death, killing 160,000 people each year and leading cause of adult disability. Two million brain cells die every minute during stroke, increasing the risk of permanent brain damage, disability or death. Recognizing symptoms and acting fast to get medical attention can save a life and limit disabilities. Although CVA is one of the leading causes for death and disability, parameters for predicting long-term outcome in such patients have not been clearly identified especially in the Indian context (Panicker, 2003).

1.2. Background of the study

Stroke: Stroke is the sudden death of brain cells due to lack of oxygen. A stroke occurs when blood flow to the brain is damaged resulting in abnormal function of brain. It is caused by blockage or rupture of an artery in the brain.

A stroke, or "brain attack," occurs when blood circulation to the brain fails. Brain cells can die from decreased blood flow and the resulting lack of oxygen. There are two broad categories of stroke: those caused by a blockage of blood flow and those caused by bleeding. While not usually fatal, a blockage of a blood vessel in the brain or neck, called an ischemic stroke, is the most frequent cause of stroke and is responsible for about 80 percent of strokes. These blockages stem from three conditions: the formation of a clot within a blood vessel of the brain or neck, called thrombosis; the movement of a clot from another part of the body such as the heart to the neck or brain, called embolism; or a severe narrowing of an artery in or leading to the brain, called stenosis. Bleeding into the brain or the spaces surrounding the brain causes the second type of stroke, called hemorrhagic stroke.

Warning signs of stroke include sudden numbness or weakness of face, arm or leg, especially on one side of the body, sudden confusion, trouble speaking or understanding, sudden trouble seeing in one or both eyes, sudden trouble walking, dizziness, loss of balance or coordination and sudden severe headache with no known cause. Other danger signs that may occur include double vision, drowsiness, and nausea or vomiting. Sometimes the warning signs may last only a few moments and then disappear. These brief episodes, known as transient ischemic attacks or TIAs, are sometimes called "mini-strokes."

There are 2 types of risk factors for stroke: controllable and uncontrollable. Controllable risk factors generally categorized into two, lifestyle risk factors and medical risk factors. Lifestyle risk factors can often be changed, while medical risk factors can usually be treated. Both types can be managed best by a doctor, who can prescribe medications and advise on how to adopt a healthy lifestyle. Uncontrollable risk factors include being over age 55, being male, being African American, Hispanic or Asian/Pacific Islander, or having a family history of stroke or transient ischemic attack (TIA).

Modifiable Risk Factors	**Non-modifiable Risk Factors**
• High Blood Pressure • Atrial Fibrillation • High Cholesterol • Diabetes Mellitus • Tobacco Use and Smoking • Alcohol Use • Obesity	• Age • Gender • Race • Family History • Previous Stroke or TIA • Fibro muscular Dysplasia • Patent Foramen Ovale

Stroke is a leading cause of death and functional impairment. While older people are particularly vulnerable to stroke, research suggests that they have the poorest awareness of stroke warning signs and risk factors (Hickey, 2009).

Increasing the public's awareness of stroke is a public health priority. The objective was to assess changes in the public's knowledge of stroke risk factors and warning signs in Michigan during a 5-year period characterized by a sustained statewide public education effort (Reeves, 2008).

In other words, says National stroke Association, "Time is Brain" The more the dead cells, greater the effect of stroke on the victim. These effects can include paralysis, problems with balance and coordination, numbness, diminished memory, thinking, attention, and learning abilities, impaired mental activities, difficulty in speaking or understanding speech, incontinence and depression.

Effective stroke intervention and risk reduction depend on general public's awareness and knowledge of stroke (Park 2006). Reduction in the risk of stroke and increase in the speed of hospital presentation after onset of stroke both depend on level of knowledge of stroke in general population. The aim of present study is to assess baseline knowledge regarding risk factors and warning signs identified by the general public and their information resources.

1.3. Need and significance of the study

Stroke is the second most common cause of death worldwide and a significant cause of chronic disability. Delay in seeking medical attention after stroke symptom onset is the most important reason for low rates of thrombolytic use for ischemic stroke. This may be related to poor recognition of stroke symptoms or to lack of awareness of time sensitive stroke treatment. Poor awareness of the significance of time in stroke treatment is the reason for delay in the arrival of patients in hospital emergency department for immediate effective treatment. Reduction in the risk of stroke and increase in the speed of hospital presentation after onset of stroke both depend on level of knowledge of stroke in general population (Sug Yoon, 2001).

Effective implementation of early treatment strategies for stroke requires prompt admission to hospital, which could be delayed for several reasons such as poor awareness of population (Neau, 2009). Being alert to the signs of stroke is important because the longer the stroke continues without treatment, the greater the number of brain cells that will die.

Poor public knowledge of stroke warning signs and risk factors limits effective stroke intervention and prevention (Schneider 2003). Awareness among general population about risk factors and warning signs of stroke is essential for preventive purposes and for immediate medical treatment.

Stroke and its long-term neurological disabilities can be prevented by management of risk factors and seeking medical care as early as possible following onset of stroke symptoms. There are modifiable and non-modifiable stroke risks, proper management of some of these risks could significantly reduce the risk of stroke incidence Effective stroke intervention, and risk reductions depend on general public's awareness regarding knowledge of risk factors and warning signs of stroke.

1.4. Statement of the problem

A study to assess the knowledge of general public and caretakers about risk factors and warning signs of stroke, at SCTIMST Trivandrum.

1.5. Objectives of the study

1. To assess the knowledge of public about the risk factors and warning signs of stroke.
2. To assess the knowledge of care takers of affected patients about the risk factors and warning signs of stroke.

1.6. Operational definition

Knowledge: It refers to the score obtained by the research subjects in the knowledge test on risk factors and warning signs of stroke.

Caretaker: It means By-stander of a stroke patient in Neuro Medical Intensive Care Unit or Neuro Medical Ward or Stroke clinic in Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum.

General Public: It means By-standers accompanying patients in cardiology OPD and cardiac surgery OPD in SCTIMST who do not have a history of stroke.

Risk factors: In this study, it refers to factors, presence of which predisposes an individual to develop stroke. Risk factors include hypertension, smoking, diabetes mellitus, hyperlipidemia, cardiac abnormalities and obesity.

Warning signs: In this study, these are the signs, which are exhibited by stroke patients in the early stage of the disease. Warning signs of stroke includes sudden numbness or weakness of face, arm or leg, especially on one side of the body, sudden confusion, trouble speaking or understanding, sudden trouble seeing in one or both eyes, sudden trouble walking, dizziness, loss of balance or coordination and sudden severe headache with no known cause. Other danger signs that may occur include double vision, drowsiness, and nausea or vomiting. Sometimes the warning signs may last only a few moments and then disappear.

Stroke: Stroke is the sudden death of a brain cells due to lack of oxygen. A stroke occurs when blood flow to the brain is damaged resulting in abnormal function of brain. It is caused by blockage or rupture of an artery in the brain.

1.7. Methodology

This is a descriptive survey of the care takers and general public. The investigator first assess the knowledge of risk factors & warning signs of stroke with prevalidated questionnaire. The total duration of assessment is 10 minutes and the subjects are conveniently selected for the study, the duration of the study is from September to November 2010.

1.8. Delimitations

This study is limited to the Caretakers of stroke patients in NMICU,NM Ward and in Stroke clinic and By-standers attending Cardiology and Cardiac Surgery OPDs of Sree Chitra Tirunal Institute for Medical Sciences & Technology, Trivandrum.

1.9. Summary

This chapter deals with introduction, background of the study, need and significance of study, statement of problem, objectives, operational definition, methodology and delimitation.

1.10. Organization of the report

Chapter II deals with the review of literature, Chapter III deals with the methodology of this study, Chapter IV consists of analysis and interpretation of the findings, Chapter V consists of summary, conclusion, implication and limitation of the study and recommendations. This report also includes a selected bibliography and appendices.

CHAPTER-2

REVIEW OF LITERTURE

2.1 Introduction

Review of literature is an important aspect of any research project. It gives character insight into the problem and helps in selecting methodology, tool, and analyzing data. With these in view, an intensive review of literature has been done. Related literatures were reviewed and studied in depth, so as to broaden the understanding of selected problem. The studies are categorized under the following subsections.

2.2 Studies related to risk factors and warning signs of stroke done in different parts of world.

2.3 Studies related to risk factors and warning signs of stroke done in India

2.2 Studies related to risk factors and warning signs of stroke done in different parts of world.

Bestehorn, et al. (2008) performed a study to assess the risk factor profile of Hypertensive patients in primary care in various age groups, and to calculate their corresponding risk of stroke. A total of 2482 primary-care practices throughout Germany included 47,394 consecutive unselected patients with diagnosed hypertension in a cross-sectional prospective observational study. In addition to demographic characteristics, participating primary-care physicians documented known risk factors for stroke using standardized questionnaires. The 10-year prospective risk of first stroke was then calculated according to the Framingham Stroke Risk Score. Patients were evenly balanced for sex (females 51%), and the mean age was 66.5 years. The most prevalent risk factors were a positive family history of cardiovascular disease (46.1%) diabetes mellitus (36.1%), coronary artery disease (34.4%), and left ventricular hypertrophy (33.3%). They concluded Co-morbidities relevant for total stroke risk are very prevalent among typical primary-care patients, confirming a substantial burden of disease in this setting. The resulting risk of stroke is substantial. The need for more

aggressive BP control and treatment of modifiable risk factors is indicated in the study results.

McNamara, et al. (2008) conducted a study to assess stroke knowledge and practice between frontier and urban emergency medical services (EMS) providers and to evaluate the need for additional pre-hospital stroke training opportunities in Montana. In 2006, a telephone survey of a representative sample of EMS providers was conducted in Montana. Respondents were stratified into 2 groups: those working in urban and frontier counties. There were no significant differences between frontier and urban EMS respondents' ability to correctly identify 4 or more stroke warning signs (58% vs. 61%), 4 or more stroke risk factors (46% vs. 43%), or the 3-hour recombinant tissue plasminogen activator (rt-PA) treatment window (56% vs. 57%). Approximately two thirds of respondents from urban and frontier counties believed they had adequate stroke knowledge, but 90% indicated they were interested in additional stroke-related training. Although stroke knowledge did not differ between urban and frontier groups, stroke screens and stroke protocols were less likely to be used in the frontier areas. Training opportunities and the implementation of stroke protocols and screening tools are needed for EMS providers, particularly in frontier counties.

Haley, et al. (2009) studied the prevalence and stressfulness of stroke-related problems, and perceived benefits of care giving, as reported by an epidemiologically derived sample of caregivers of stroke survivors from a prospective epidemiological study of stroke, the REasons for Geographic and Racial Differences in Stroke (REGARDS). Caregivers were given a comprehensive telephone interview 8 to 12 months after the stroke, using measures of stroke patient problems, caregiver appraisals of the stressfulness of these problems, and perceived benefits of care giving. Caregivers rated patient problems with mood (depression, loneliness and anxiety), memory, and physical care (bowel control), as the most stressful, but reported prevalence of these problems was lower than those reported previously in studies using clinical samples. Caregivers also reported many benefits from care giving, with over 90% reporting that care giving enabled them to appreciate life more. Epidemiologically based studies of stroke care giving provided a unique picture of caregiver strains and benefits compared with clinical studies, which tend to over-represent more impaired patients. Support for caregivers should include interventions to aid their coping with highly stressful mood, physical care, and cognitive problems of stroke patients, but should also attend to perceived benefits of care giving

Koenig, et al, (2007) performed a study to measure stroke knowledge and prestroke personal health behaviors of stroke patients undergoing inpatient rehabilitation and their caregivers. A total of 130 stroke patients and 85 caregivers were interviewed after ischemic stroke at Academic rehabilitation hospital. Large deficiencies in patient and caregiver stroke knowledge were found. Fifty-two percent of patients could not name any stroke risk factors, 52% were unable to name a stroke warning sign, and 35% were unable to identify appropriate actions to take in a stroke emergency. Older patients were less knowledgeable than younger patients. Caregivers were more knowledgeable than patients. The authors concluded that Stroke patients participating in inpatient rehabilitation and their caregivers have large gaps in stroke knowledge and have sub optimal personal health behaviors, thereby putting patients at high risk for recurrent stroke. The finding highlighted the need to develop stroke-education programs for rehabilitating patients that are effective in closing these gaps in knowledge and personal health behaviors.

Kraywinkel, et al. (2007) conducted a study among 1483 participants of a prior public stroke campaign in Germany by using a mailed questionnaire. Participants had been informed about their individual stroke risk based on the Framingham stroke risk score. Stroke risk factor knowledge, perception

of lifetime stroke risk and risk factor status were included in the questionnaire. Results showed that overall stroke risk factor knowledge was good with 67-96% of participants recognizing established risk factors. All major risk factors contributed significantly to the perception of being at high stroke risk, but effects of age, sex, and education were non-significant. The authors concluded that stroke risk factor knowledge was high in this study. The self-perception of an increased stroke risk was associated with established risk factors as well as low perception of general health.

Nicol, et al. (2005) summarized the findings of fifteen studies about knowledge of stroke warning signs and risk factors in both high and low risk populations. In general, there appeared to be low levels of knowledge of both risk factors and warning signs among communities studied. Using free recall, 20% to 30% of respondents could not name a single risk factor. Respondents in older age group and lower levels of educational attainment tended to have less knowledge of risk factors and warning signs of stroke than those in younger age groups and with more education.

Blades, et al. (2005) conducted a study to assess awareness of stroke warning signs and risk factors among residents in rural communities. Eight

Hundred adults aged 45 years and older from two Montana counties participated in a telephone survey using unaided questions to assess awareness of stroke warning signs and risk factors. The survey also asked respondents if they had a history of atrial fibrillation, diabetes, high blood pressure, high cholesterol, smoking, heart disease, or stroke. More than 70% of survey participants were able to correctly report two or more warning signs for stroke. The investigators concluded that residents of two rural counties were generally aware of stroke warning signs, but their knowledge of stroke risk factors was limited.

Schneider, et al. (2003) performed a study to examine temporal trends in public knowledge of stroke warning signs and risk factors among individuals in the greater Cincinnati, with a population-based random–digit telephone survey conducted in July-November 2000. The researchers found that public knowledge of stroke warning signs within greater Cincinnati region has significantly improved from 1995 to 2000. Although knowledge of stroke risk factors did not improve significantly during the same time period. They recommended that public education efforts must continue and should focus on groups at highest risk for stroke.

2.3 Studies related to risk factors and warning signs, done in India.

Community-based longitudinal study on stroke is rare in India. It has been predicted that the stroke incidence will be higher in developing countries than developed countries. Bhattacharya (2005), conducted a five years prospective study in rural Bengal, India based on WHO protocol to determine the incidence rate, risk factors, morbidity and mortality profile of stroke. Twelve villages were surveyed by house-to-house method and screened cases were examined by a team of neurologists including post stroke surveillance for one year. The study had shown that hypertension, heart diseases and smoking were significant risk factors. This study indicated a higher age adjusted incidence rate of stroke in India as compared to that of developed country.

Das K, (2007) conducted a study to assess the awareness among the general population and stroke survivors of the risk factors and warning signs of stroke in West Bengal, India. 4000 people from the general population who accompanied the patients were interviewed, using three sets of questionnaire on risk factors and warning symptoms of stroke. Poor knowledge or the

awareness of risk factors and warning symptoms of stroke was found in both the groups. Both groups suggested educational programs for stroke using printed information, audiovisual programs and community survey programs using simple and understandable information for the prevention and immediate effective treatment of stroke.

Pandian, et al. (2005) assessed public awareness of warning symptoms, risk factors and treatment of stroke in Ludhiana, Punjab and North West India. A hospital -based survey was conducted between February 2002 and September 2002. The study subjects were relatives of patients without history of stroke attending outpatient department of the hospital. Trained medical students, interns and nurses interviewed subjects. This hospital-based survey revealed a better awareness of stroke warning signs and risk factors. However knowledge regarding the organ involved, etiology and treatment of stroke was lacking. Considerable education is needed to increase public awareness in modern concepts of stroke treatment.

Limited information is available from India and other developing countries regarding the various factors that contribute to a delay in hospital admission after stroke. Pandian, (2006) prospectively studied the various factors

contributing to delay in hospital admission during a 15-month period ending September 2003. Patients or their relatives were interviewed within 48 hours of admission using a structured questionnaire. The authors found a considerable delay in the early arrival of patients to their stroke department. The authors concluded that the local physicians and the public should be educated about the importance of an early referrals and presentations to the stroke centers.

The promise of brain attack concept is that early intervention may salvage ischemic neurons. Early intervention depends on adequate knowledge of stroke so that patients seek urgent medical attention. Chaturvedi, (1997) conducted a study to assess knowledge of stroke risk factors and warning signs in an urban, Indian community. A 20- item questionnaire was administered to two patient groups. Group one had a diagnosis of first ever stroke or TIA. Group two was without history of cerebral ischemia. Thirty patients in-group one answered 57% of the questions correctly. Patients showed misperceptions regarding warning signs of stroke and were unfamiliar with concept of TIA. Results from the urban medical center suggested that knowledge of stroke is deficient among high-risk individuals who developed cerebral ischemia. This would mean that opportunities for

effective prevention and treatment of stroke are being missed in minority patients. Recruitment of a massive educational effort is needed.

Table 2.1 Key words

Key terms used for searching articles

Key words
Risk factors and warning signs of stroke
Caregivers' knowledge about stroke
Stroke in India
Public perception of stroke
Risk factors and warning signs

CHAPTER - 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a brief description of the method adopted by the investigator to conduct this study. This chapter includes the research approach, research design, setting of the study and sampling technique .It further deals with the development of the tool, procedure for the data collection and plan for data analysis.

3.2 Research approach

The survey approach was selected. The objectives of the study were (1) To assess the knowledge about risk factors and warning signs of stroke in general public. (2) To assess the knowledge about risk factors and warning signs of stroke in care takers of stroke patient. More over survey approach is suitable for educational fact finding in a relatively small sample.

3.3 Setting of the study

This study was conducted in Neuro Medical ICU, Neuro Medical Ward, Stroke Clinic and Cardiology and Cardiac Surgery OPDs of Sree Chitra Tirunal Institute for Medical sciences and Technology. This is a 239-bedded hospital for tertiary care of cardiovascular and neurological diseases This is an institution of national importance where there is a separate department for Neurology, Neurosurgery, Neuro Radiology, Cardiology and Cardio Thoracic and Vascular Surgery.

3.4 Study population

The target population of this hospital based study was the caretakers of stroke patients in NMICU, NMWard, Stroke Clinic and By-standers coming in Cardiology and Cardiac Surgery OPDs.

3.5 Sample and sampling techniques

This is a descriptive survey of public. The investigator first assesses the knowledge of risk factors and warning signs of stroke with a prevalidated questionnaire. The total duration of assessment is 10 minutes. Seventy

subjects were conveniently selected for the study and the duration of the study is from September to November 2010.

3.6 Criteria for sample selection

The samples selected were based on the following criteria.

Inclusion criteria

- Care takers of Stroke patients in NMICU, NMW and Stroke clinic.
- Care takers those who are willing to participate.
- General public (By-standers) came in Cardiology and Cardiac Surgery OPDs
- By-standers those who are willing to participate.

Exclusion criteria

- General public who had a family history of stroke.
- Care takers of non-stroke patients in NMICU and NMW.

3.7 Data Collection Tool

Data collection tool refers to the instrument, which was used by the investigator to obtain relevant data. An extensive review and study of literature helped in preparing the tool. A self- reporting questionnaire is used as tool for the study to collect data. Experts of Sree Chitra Tirunal Institute For Medical Sciences and Technology validated the tool. The research tool was finalized according to expert's opinion.

3.9 Description of the tool

The structured questionnaire consisted of two sections

Section-1: Demographic and Identification data. It includes personal profile, educational status, family income and relationship with the patient.

Section-2: It consisted of 5 questions regarding general awareness of stroke, 10 questions regarding warning signs of stroke, 14 questions to assess knowledge of risk factors, 8 questions regarding rehabilitation knowledge, 6 questions about physiotherapy and 8 questions to assess their information resources.

3.10 Pilot study

After obtaining permission from the authorities the pilot study was conducted among 10 caretakers of stroke patients who accompanied the patients for follow-up in stroke clinic. The aim of the pilot study was to find out the practicability and feasibility of the tool. The pilot study gave more information about research study. The total time period required was 10 minutes. The pilot study samples were excluded from the main study. The finalized tool was used to assess knowledge about risk factors and warning signs of stroke among caretakers and general public. The pilot study findings revealed that the study was feasible and practicable.

3.11 Data collection procedure

For data collection formal permission was obtained from the authorities. The investigator first introduced and explained the need and purpose of the study. Confidentiality of their responses was assured. The caretakers of stroke patients and general public were given the self reported questionnaire or interviewed with the structured tool. The time taken for the assessment was 10 minutes.

3.12 Plan of analysis

The data will be coded, entered in excel sheet for analysis. Descriptive and inferential statistics will be used and present them in the form of tables and bar, cone, and pie diagram.

3.13 Summary

This chapter presented the research approach used for the study, research design of the study, setting of the study, sample and sampling techniques, development of description of tool, pilot study, data collection procedure and plan for analysis.

CHAPTER – 4

ANALYSIS AND INTERPRETATION OF DATA

4.1 Introduction

Analysis is a process of organizing and synthesizing data in such a way that, research questions can be answered. The overall objective of analysis is to organize, structure and to elucidate meaning from the collected data. Interpretation is the process of making sense of the result and examining the implication of findings within the broad context. This chapter represents analysis and interpretation of data collected from thirty-five care takers of stroke patients and thirty-five public. The questionnaire was to assess the knowledge about risk factors and warning sings of stroke. The data were coded and entered in Microsoft Excel sheet and were analyzed using Epi Info. Version 3.5.1.

The finding of study were arranged and analyzed under the following sections.

4.2 Section I – Distribution of sample according to demographic data

4.3 Section II – Relationship of knowledge between Caregivers and general

public regarding risk factors and warning signs of stroke and selected variables.

4.2 Section I – Distribution of sample according to demographic data

In this section an attempt is made to study the demographic characteristics of sample's information collected on age, gender and education.

4.2 a) Distribution of samples according to age category among general public and care takers

Age	General public Frequency (percentage)	Care takers Frequency (percentage
Less than 42 years	13 (37.14%)	23 (65.72%)
42 years & above	22 (62.86%)	12 (34.28%)
Total	35 (100%)	35 (100%)

Table 4.1

The age of the general public ranged from 19 to 73 with a mean of 21 and standard deviation 11.23 and the age of the care takers ranged from 22 t0 75 with a mean of 23.34 and standard deviation 9.12. The distribution is given in table 4.1.

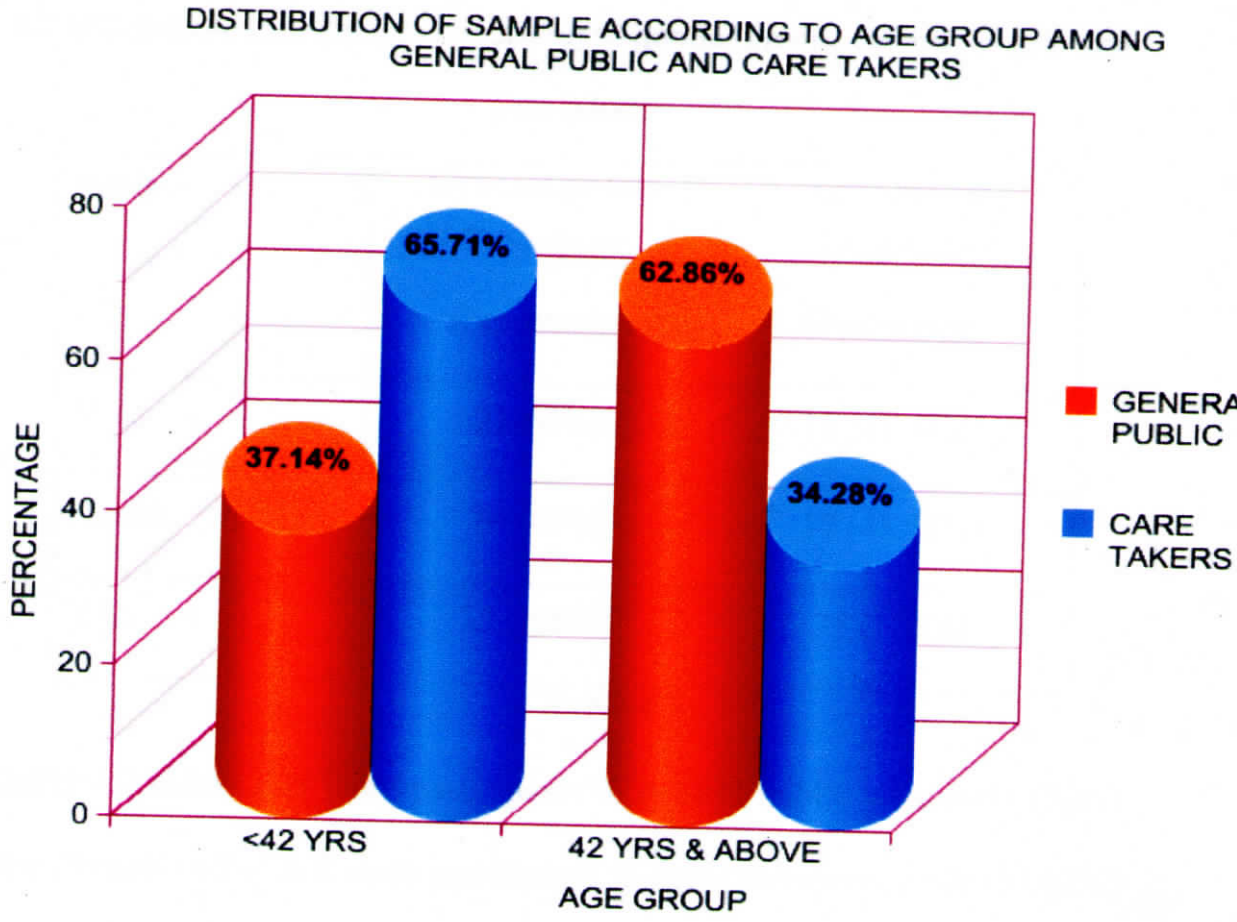

Figure 4.1

Bar Diagram showing distribution of samples according to age category among general public and care takers

4.2 b)Distribution of sample according to gender among general public and care takers

Gender	General public Frequency (Percentage)	Care takers Frequency (Percentage)
Male	21(60%)	18 (51.42%)
Female	14 (40%)	17 (48.57%)
Total	35 (100%)	35 (100%)

Table 4.2

Table 4.2 shows that more participants in general public were male (60%) than female (40%) and more participants in care takers were male (51.42%) than female (48.57%). Same data is shown as bar diagram in the figure 4.2.

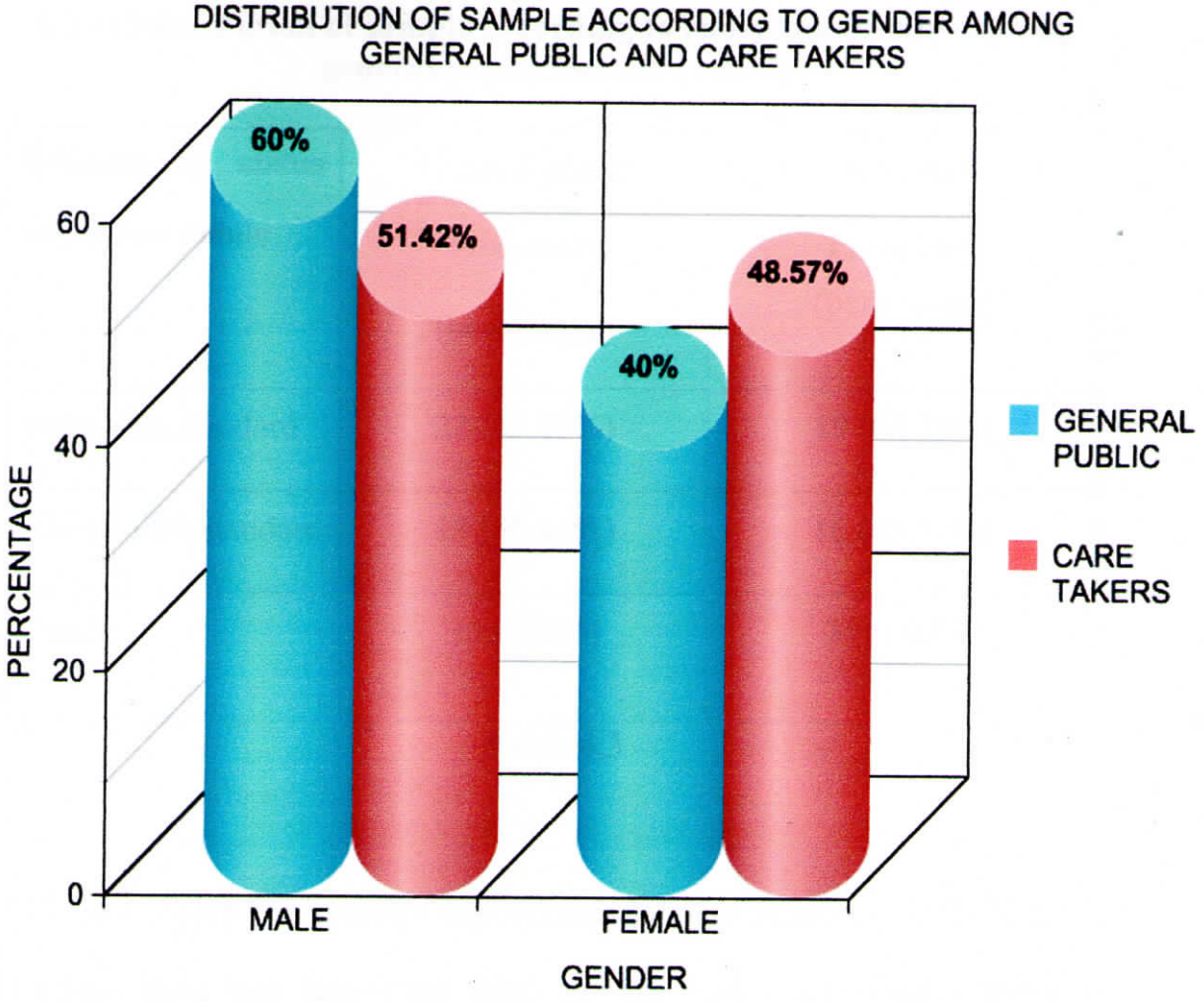

Figure 4.2

Fig 4.2 Bar diagram showing distribution of samples according to gender among general public and care takers

4.2 c) Distribution of sample according to educational status among general public and care takers

Educational status of general public	General public Frequency (percentage)	Care takers Frequency (percentage)
Upto 10th standard	22 (62.85%)	19 (64.28%)
Above 10th standard	13 (37.14%)	16 (45.71%)
Total	35 (100%)	35 (100%)

Table 4.3

Table 4.3 shows that primary educational status in general public (62.85%) is higher than care takers (54.25%) and the higher educational status in general public (37.14%) is less than care takers (45.71%). Same data is shown as bar diagram in the figure 4.3.

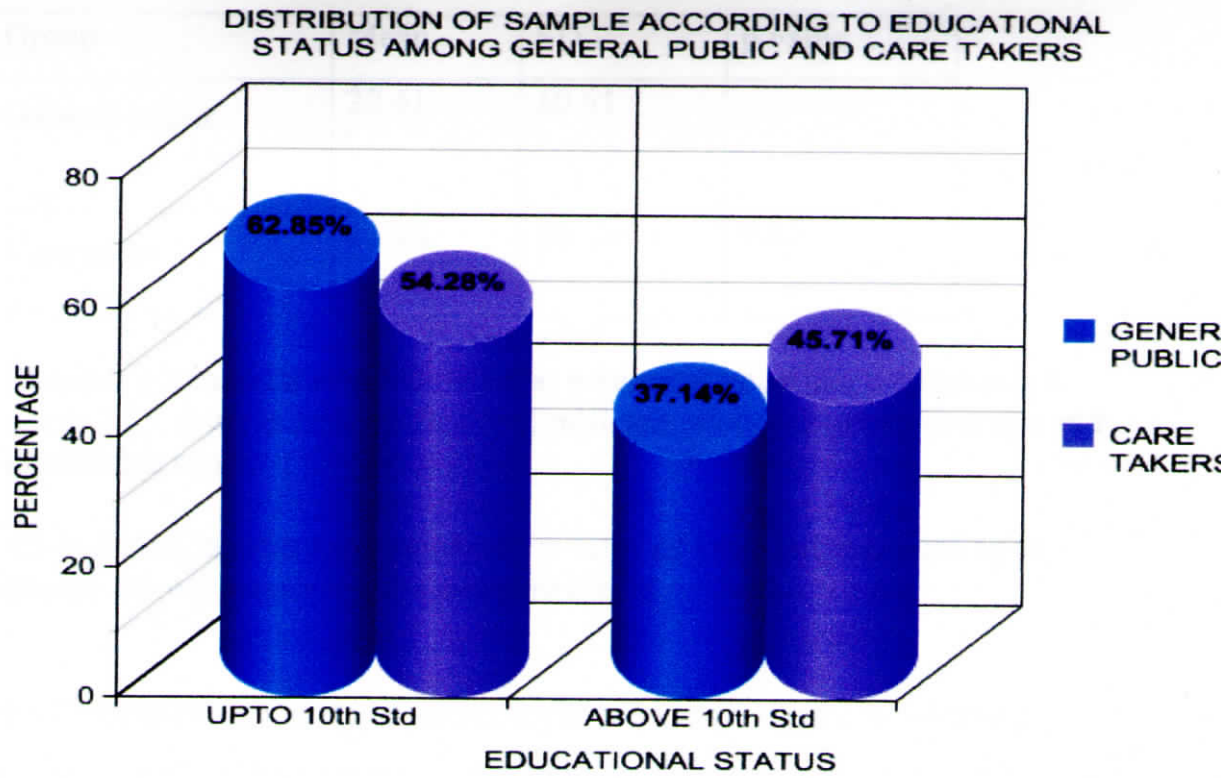

Figure 4.3

Fig 4.3 Bar Diagram showing distribution of samples according to educational status among general public and care takers.

4.3 Section II Relationship between caregivers and general public's knowledge regarding risk factors and warning signs of stroke and selected variables.

4.3 a) Mean, standard deviation and p value of knowledge according to age among general public and care takers.

Group	Mean	SD	p value
General public	22.41	10.51	0.85
Care taker	21.94	10.09	

Table 4.4

The data given in table 4.4 shows that p value of knowledge according to age is 0.85, there is no statistically significant relationship between age and knowledge score.

4.3 b) Mean, standard deviation and p value of knowledge according to gender among general public and care takers

4.4 Distribution of samples according to the knowledge score of group

Group	**Mean**	Standard Deviation	p value
General public	19	54.28	0.34
Care takers	16	45.71	

Table 4.5

The data given in table 4.5 shows that the minimum knowledge score obtained by the general public is 2 and maximum is 36.The minimum marks obtained by the care taker is 3 and maximum is 37. The p value is not

significant, there fore no statistical difference in knowledge level is noted between general public and care takers. The observed difference may be by chance.

CHAPTER-5

SUMMARY, CONCLUSION, DISCUSSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a brief account of the present study including conclusions drawn from the findings and possible applications of the result. Recommendations for future research and suggestions for improving the present study are also included.

5.2 Summary

This study was under taken to assess the knowledge about the risk factors and warning signs of stroke among general public and care takers of stroke patients. Convenient sampling technique is used. Pilot study was done prior to the main investigation. After pilot study modifications of tool was done. The study was conducted in the neuro medical intensive care unit, neuro medical ward, stroke clinic, cardiology and cardiac surgery OPDs of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum during the period of September 2010 to October 2010. The sample size for the study was 70. The data obtained from the study were analyzed by using

descriptive and inferential statistics. Both bar and pie diagram were utilized to illustrate the findings of the study.

5.3 Objectives of the study

The specific objectives of the study were

- To assess the knowledge about risk factors and warning signs of stroke among general public.
- To assess the knowledge about risk factors and warning signs of stroke among care takers of stroke patients.
- To assess the knowledge about risk factors and warning signs of stroke and selected variables.

5.4 Limitations

- The study was limited to the general public who came to the cardiology and cardiac surgery OPDs of SCTIMST in the month of September to October 2010.

This study was limited to neuro medical intensive care unit, neuro medical ward, stroke clinic, cardiology and cardiac surgery OPDs of Sree Chitra Tirunal Institute for Medical Sciences and Technology,Trivandrum.

5.5 Major findings of the study

- ✓ The knowledge score of general public ranged from 2 – 36 and care takers 3 – 37 marks.
- ✓ There is a wide range in score.
- ✓ The sample was less to found out the significant difference between the study participants and selected variables.
- ✓ Majority of the participants among general public and care takers have inadequate knowledge regarding the risk factors, warning signs, window period, and treatment modality.

5.6 Discussion

There were many studies undertaken to assess the knowledge about risk factors and warning signs of stroke. This study was an attempt to find out whether any relationship existing between the knowledge level about stroke among general public and care takers of affected patients. This study was conducted in Neuro Medical ICU, Neuro Medical Ward, Stroke Clinic and Cardiology and Cardiac Surgery OPDs of Sree Chitra Tirunal Institute for Medical sciences and Technology. General public considered are

by-standers accompanying patients in cardiology OPD and cardiac surgery OPD in SCTIMST who do not have a history of stroke and care takers are by-stander of a stroke patient in Neuro Medical Intensive Care Unit, Neuro Medical Ward or Stroke Clinic in Sree Chitra Tirunal Institute of Medical Sciences and Technology, Trivandrum. The relationship between caregivers and general public's knowledge regarding risk factors and warning signs of stroke and selected variables were analysed and it was found that no statistical difference in knowledge level existing between these two groups and both have inadequate knowledge regarding stroke.

5.7 Recommendations

- Poor awareness about the warning signs delay medical treatment and increases the risk of developing complication. Therefore increase the knowledge level about stroke among the public through health education, documentaries, pamphlets 3and public awareness programs through mass medias.
- Using a large sample, the same study can be repeated.
- Comparative study can be done in another setting.

5.8 Conclusion

This study shows that the knowledge of risk factors and warning signs of stroke among general public and care takers of affected patients are inadequate. By using the public media and health education programs, it is possible to promote the level of the population's knowledge and attitude towards stroke.

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APPENDIX

INFORMED CONSENT

I, ... hereby agree to participate in the research study, to assess the knowledge regarding risk factors and warning signs of stroke, among affected patients caretakers and general public conducted by Mr. SHANKAR .M.G., 1st year Diploma Neuro Nursing student of Sree Chitra Tirunal Institute for Medical Sciences & Technology, Trivandrum. I understand that there will not be any change in the nature of care getting now and the data given by me will be kept confidential and will be used only for research purpose.

Signature of the participant

Place :

Date:

Questionnaire to assess the knowledge regarding risk factors & warning signs of stroke

Socio demographic data

Age :

Sex : Male ☐ Female ☐

Educational Qualification : Illi☐ate Primary Edu☐ion

Upper primary education ☐ High school ☐ Plus two/ Pre-degree ☐

Degree Professional education ☐

Family income per month:

Low income group Rs. < Rs. 4000/- ☐

Middle income group Rs. 4000/- to Rs. 10,000/- ☐

High income group > 10,000/- ☐

Relationship with the patient

Husband ☐ Wife ☐ Father ☐ Mother ☐ Son ☐

Daughter ☐ Brother ☐ Sister ☐ Neighbour ☐ Friend ☐

Relative ☐

Put (✓) mark to your answers

1. Whether you or any of your family member has a stroke ?

Yes ☐ No ☐

2. Stroke affects which organ in human body?

Heart ☐ Liver ☐ Kidney ☐ Brain ☐ Don't know ☐

3. Could stroke preventable?

Yes ☐ No ☐ Don't know ☐

4. Could stroke treatable ?

Yes ☐ No ☐ Don't know ☐

5. The window period within which thrombolysis can be done after an acute stroke?

(i) within 2 – 3 days ☐ (ii) within 10 – 12 hrs ☐ (iii) with in 3 – 4 ½ hrs ☐

(iv) within 12 – 24 hrs ☐ (v) Don't know ☐

6. Which among the following are the warning signs of stroke?

Signs	yes	No	Don't know
1. Numbness of face, arm & leg	☐	☐	☐
2. Sudden paralysis/ weakness of one side of the body\	☐	☐	☐
3. Fever with rigor & chills	☐	☐	☐
4. Deviation of face to one side	☐	☐	☐
5. Sudden & severe headache with no apparent cause	☐	☐	☐
6. Sudden onset of chest pain	☐	☐	☐
7. Sudden blurry or decreased eyesight	☐	☐	☐

8. Difficulty in speaking or understanding simple sentences ☐ ☐ ☐

9. Unexplained loss of balance/ difficulty in walking ☐ ☐ ☐

10. Excessive sweating ☐ ☐ ☐

7. What among the following are the risk factors of stroke ?

Risk factors	Yes	No	Don't know
(i) Increased Age	☐	☐	☐
(ii) Diabetes Mellitus	☐	☐	☐
(iii) Communicability	☐	☐	☐
(iv) Smoking	☐	☐	☐
(v) Heredity	☐	☐	☐
(vi) Excessive alcohol consumption	☐	☐	☐
(vii) Mental stress	☐	☐	☐
(viii) Obesity	☐	☐	☐
(ix) Hyper somnia	☐	☐	☐
(x) Hyper blood cholesterol	☐	☐	☐
(xi) Hypertension	☐	☐	☐
(xii) Lack of exercise	☐	☐	☐
(xiii) Heart disease	☐	☐	☐

(xiv) Asthma ☐ ☐ ☐

8. What are the factors helpful in improving the physical disabilities happened due to stroke?

	Yes	No	Don't know
(i) Physiotherapy	☐	☐	☐
(ii) Regular care	☐	☐	☐
(iii) Timely Medication	☐	☐	☐
(iv) Drinking more water	☐	☐	☐
(v) Increasing self confidence of the patient	☐	☐	☐
(vi) Increase in hospital stay	☐	☐	☐
(vii) Occupational therapy	☐	☐	☐
(viii) Speech therapy	☐	☐	☐

9. What is the importance of physiotherapy in stroke treatment?

Importance	Yes	No	Don' know
(i) Improves the strength & growth of muscles	☐	☐	☐
(ii) It prevents contractures & spasticity of joints	☐	☐	☐
(iii) Helps to walk with support	☐	☐	☐
(iv) Helps to restore social life	☐	☐	☐
(v) Physiotherapy exercises can be done any times on a day	☐	☐	☐
(vi) Physiotherapy could be discontinues after discharge	☐	☐	☐

10. From where did you gain the knowledge regarding stroke?

- From doctor ☐
- From Nurse ☐
- From a stroke patient ☐
- Health magazines ☐
- Television ☐
- Medical text books ☐
- From relatives ☐
- From friends ☐

സമ്മതപത്രം

"പക്ഷാഘാതത്തിന്റെ സാധ്യത വർദ്ധിപ്പിക്കുന്ന ഘടകങ്ങൾ, രോഗ ലക്ഷണങ്ങൾ എന്നിവയെ സംബന്ധിച്ച് രോഗികളുടെ പരിചാരകർക്കും പൊതുജനങ്ങൾക്കുമുള്ള അറിവ്" എന്ന വിഷയത്തെക്കുറിച്ച് പഠിക്കുന്നതിന് തിരുവനന്തപുരം എസ്.സി.റ്റി. ഹോസ്പിറ്റലിലെ ന്യൂറോ നഴ്സിംഗ് വിദ്യാർത്ഥിയായ ശങ്കർ എം.ജി. നടത്തുന്ന പഠനത്തിൽ സഹകരിക്കാൻ ഞാൻ സമ്മതിക്കുന്നു. എപ്പോൾ വേണമെങ്കിലും എനിക്ക് ഇതിൽ നിന്ന് പിന്മാറാമെന്നും എന്റെ സഹകരണമോ നിസ്സഹ കരണമോ എനിക്ക് ലഭിക്കുന്ന ശുശ്രൂഷയെ ബാധിക്കില്ലെന്നും ഞാൻ മനസ്സിലാക്കുന്നു. എല്ലാ വിവരങ്ങളും തികച്ചും രഹസ്യമായി സൂക്ഷിക്കുമെന്നും അവ പഠനത്തിനുമാത്രമേ ഉപയോഗിക്കുകയുള്ളൂ എന്നും ഞാൻ മനസ്സിലാക്കുന്നു. ആയതിനാൽ ഞാൻ സ്വമനസ്സാലെ ഈ പഠനത്തിന്റെ ഭാഗമാകാമെന്ന് സമ്മതിക്കുന്നു.

വിവരം നൽകുന്ന വ്യക്തിയുടെ പേര്

ഒപ്പ്

സ്ഥലം :

തീയതി:

I. വ്യക്തിപര വിവരം

പേര് :

വയസ്സ് :

പുരുഷൻ ☐ സ്ത്രീ ☐

വിദ്യാഭ്യാസ യോഗ്യത

നിരക്ഷരൻ ☐ പ്രൈമറി വിദ്യാഭ്യാസം ☐ അപ്പർ പ്രൈമറി വിദ്യാഭ്യാസം ☐

ഹൈസ്കൂൾ ☐ പ്ലസ്ടു/പ്രീഡിഗ്രി ☐ ബിരുദം ☐

പ്രൊഫഷണൽ വിദ്യാഭ്യാസം ☐

കുടുംബത്തിലെ മാസവരുമാനം

താഴ്ന്ന വരുമാനം < 4000/- ☐

ഇടത്തരം വരുമാനം (4000/- 10,000/-) ☐

ഉയർന്ന വരുമാനം (> 10,000) ☐

രോഗിയുമായുള്ള ബന്ധം:

ഭർത്താവ് ☐ ഭാര്യ ☐ അച്ഛൻ ☐ അമ്മ ☐

മകൻ ☐ മകൾ ☐ സഹോദരൻ ☐ സഹോദരി ☐

അയൽവാസി ☐ സുഹൃത്ത് ☐ ബന്ധു ☐

II. ശരിയെന്നു തോന്നുന്ന ഉത്തരങ്ങൾക്കുനേരെ (✓) അടയാളപ്പെടുത്തുക

1. നിങ്ങൾക്കോ നിങ്ങളുടെ കുടുംബത്തിലെ ഏതെങ്കിലും അംഗത്തിനോ പക്ഷാഘാത (സ്ട്രോക്ക്) വന്നിട്ടുണ്ടോ?

ഉണ്ട് ☐ ഇല്ല ☐

2. പക്ഷാഘാതം ശരീരത്തിലെ ഏത് അവയവത്തെയാണ് ബാധിക്കുന്നത ?

(i) ഹൃദയം ☐ (ii) കരൾ ☐ (iii) വൃക്ക ☐

(iv) തലച്ചോർ ☐ (v) അറിയില്ല ☐

3. പക്ഷാഘാതം തടയാൻ സാധിക്കുമോ?

സാധിക്കും ☐ സാധിക്കില്ല ☐ അറിയില്ല ☐

4. പക്ഷാഘാതം ചികിത്സിച്ച് ഭേദമാക്കാൻ സാധിക്കുമോ?

സാധിക്കും ☐ പൂർണ്ണമായി സാധിക്കില്ല ☐ അറിയില്ല ☐

5. പക്ഷാഘാതമുണ്ടായാൽ എത്ര സമയത്തിനുള്ളിലാണ് ഞരമ്പിലൂടെ മരുന്ന് നൽകി രക്തക്കട്ട അലിയിപ്പിക്കാൻ (Thrombolysis) സാധിക്കുന്നത്?

(i) 2 - 3 ദിവസത്തിനകം ☐ (ii) 12 - 12 മണിക്കൂറിനകം ☐

(iii) 3 - 4 1/2 മണിക്കൂറിനകം ☐ (iv) 12 - 24 മണിക്കൂറിനകം ☐

(v) അറിയില്ല ☐

6. പക്ഷാഘാതത്തിന്റെ ലക്ഷണങ്ങൾ ഇവയിൽ ഏതെല്ലാം?

ലക്ഷണങ്ങൾ	അതെ	അല്ല	അറിയില്ല
(i) കൈയ്ക്ക്, കാലിന്, മുഖത്തിന് മരവിപ്പുണ്ടാകുക	☐	☐	☐
(ii) ശരീരത്തിന്റെ ഒരു വശം പെട്ടെന്ന് തളർന്നു പോകുക	☐	☐	☐
(iii) കടുത്ത പനിയും വിറയലും ഉണ്ടാവുക	☐	☐	☐
(iv) മുഖം ഒരുവശത്തേയ്ക്ക് കോടുക	☐	☐	☐
(v) പെട്ടെന്ന് കഠിനമായ തലവേദന ഉണ്ടാകുക	☐	☐	☐
(vi) കടുത്ത നെഞ്ചുവേദന അനുഭവപ്പെടുക	☐	☐	☐

(vii) കാഴ്ച പെട്ടെന്ന് മങ്ങിപ്പോകുക/രണ്ടായി കാണുക ☐ ☐ ☐

(viii) സംസാരിക്കാനുള്ള ബുദ്ധിമുട്ട് പെട്ടെന്ന് അനുഭവപ്പെടുക ☐ ☐ ☐

(ix) നടക്കുമ്പോൾ ബാലൻസ് കിട്ടാതിരിക്കുക ☐ ☐ ☐

(x) അകാരണമായി ശരീരം അമിതമായി വിയർക്കുക ☐ ☐ ☐

7. പക്ഷാഘാതം സംഭവിക്കാനുള്ള സാദ്ധ്യത കൂട്ടുന്ന ഘടകങ്ങൾ ഏതെല്ലാം?

ഘടകം	അതെ	അല്ല	അറിയില്ല
(i) പ്രായാധിക്യം	☐	☐	☐
(ii) പ്രമേഹം	☐	☐	☐
(iii) പകർച്ചവ്യാധി	☐	☐	☐
(iv) പുകവലി	☐	☐	☐
(v) പാരമ്പര്യം	☐	☐	☐
(vi) അമിത മദ്യപാനം	☐	☐	☐
(vii) മാനസിക പിരിമുറുക്കം	☐	☐	☐
(viii) പൊണ്ണത്തടി	☐	☐	☐
(ix) അമിതമായ ഉറക്കം	☐	☐	☐
(x) രക്തത്തിലെ ഉയർന്ന കൊളസ്ട്രാൾ	☐	☐	☐
(xi) ഉയർന്ന രക്തസമ്മർദ്ദം	☐	☐	☐
(xii) വ്യായാമക്കുറവ്	☐	☐	☐
(xiii) ഹൃദ്രോഗം	☐	☐	☐
(xiv) ആസ്ത്മ	☐	☐	☐

8. സ്ട്രോക്ക് മൂലമുണ്ടാകുന്ന ശാരീരിക ന്യൂനതകൾ പരിഹരിക്കാൻ സഹായിക്കുന്ന ഘടകങ്ങൾ ഏവ?

ഘടകം	അതെ	അല്ല	അറിയില്ല
(i) ഫിസിയോ തെറാപ്പി	☐	☐	☐
(ii) ചിട്ടയായ പരിചരണം	☐	☐	☐
(iii) കൃത്യമായി മരുന്ന് കഴിക്കുന്നത്	☐	☐	☐
(iv) ധാരാളം വെള്ളം കുടിക്കുന്നത്	☐	☐	☐
(v) രോഗിയുടെ ആത്മവിശ്വാസം വർദ്ധിപ്പിക്കുന്നത്	☐	☐	☐
(vi) കൂടുതൽ നാൾ ആശുപത്രിയിൽ ചിലവഴിക്കുന്നത്	☐	☐	☐
(vii) ഒക്കുപ്പേഷണൽ തെറാപ്പി	☐	☐	☐
(viii) സ്പീച്ച് തെറാപ്പി	☐	☐	☐

9. പക്ഷാഘാത ചികിത്സയിൽ ഫിസിയോതെറാപ്പിയുടെ പ്രാധാന്യം എന്ത്?

ധർമ്മം	അതെ	അല്ല	അറിയില്ല
(i) പേശികളുടെ ചലനം ശക്തി എന്നിവ മെച്ചപ്പെടുത്തുന്നു	☐	☐	☐
(ii) സന്ധികളിൽ ഉണ്ടായേക്കാവുന്ന വലിവ്, ചുരുക്കം ഇവ തടയുന്നു	☐	☐	☐
(iii) പരസഹായം കൂടാതെ നടക്കാൻ സഹായിക്കുന്നു	☐	☐	☐
(iv) സാമൂഹിക ജീവിതത്തിലേയ്ക്ക് തിരിച്ചുവരാൻ സഹായിക്കുന്നു	☐	☐	☐
(v) ഒരു ദിവസം എത്ര പ്രാവശ്യം വേണമെങ്കിലും			

ഫിസിയോതെറാപ്പി വ്യായാമങ്ങൾ ചെയ്യാവുന്നതാണ് ☐ ☐ ☐

(vi) ആശുപത്രിയിൽ നിന്ന് വീട്ടിലെത്തിയാൽ പക്ഷാഘാതം

വന്ന രോഗി ഫിസിയോതെറാപ്പി ചികിത്സ നിർത്തേണ്ടതാണ് ☐ ☐ ☐

10. പക്ഷാഘാതത്തെക്കുറിച്ചുള്ള അറിവ് നിങ്ങൾക്ക് ലഭിച്ചതെങ്ങനെ?

(i) ഡോക്ടറിൽ നിന്ന് ☐

(ii) നഴ്സുമാരിൽ നിന്ന് ☐

(iii) പക്ഷാഘാതമുണ്ടായ വ്യക്തിയിൽ നിന്ന് ☐

(iv) മാസികയിലൂടെ ☐

(v) ടിവി ☐

(vi) അമെഡിക്കൽ പുസ്തകങ്ങൾ വഴി ☐

(vii) ബന്ധുക്കളിൽ നിന്ന് ☐

(viii) സുഹൃത്തുക്കളിലൂടെ ☐