EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING CARE OF PATIENT WITH CEREBRO VASCULAR ACCIDENT AMONG CARE GIVERS

Dissertation Submitted To

THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY CHENNAI

IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE AWARD OF

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A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING CARE OF PATIENT WITH CEREBRO VASCULAR ACCIDENT AMONG CARE GIVERS IN DR. KAMAKSHI MEMORIAL HOSPITAL CHENNAI 2011-2012.

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ABSTRACT

A sound health leads to a sound life. Nowadays, Cerebro Vascular Accident is becoming a challenging disease to the world. One in six people worldwide will have a stroke in their lifetime. Every six seconds on regardless of age or gender someone, somewhere will die from Cerebro Vascular Accident but 90% of disability can be prevented. As it has a residual disability, the patient needs others for their Activities of Daily Living like nurses, family members and etc. In order to improve the care, the caregivers should be educated regarding the care of patient with Cerebro Vascular Accident.

A study was conducted to evaluate the effectiveness of structured teaching programme regarding care of patient with Cerebro Vascular Accident among care givers in Dr. Kamakshi Memorial Hospital at Chennai 2011-2012. The objective of the study was to determine the effectiveness of structured teaching programme regarding care of patient with Cerebro Vascular Accident among care givers.

A pre experimental one group pre test post test design was selected for this study. It was carried out with 30 care givers of patient with Cerebro Vascular Accident who fulfilled the inclusion criteria selected by purposive sampling technique. An interview schedule was conducted to the participants to assess the pre test level of knowledge. After that structured programme for 20 -30 minutes was given to the care givers. The post test was conducted to the participants after 3 days by using same tool.

The Analysis revealed that there was marked increase in the mean value from 12.42 in the pre test to 24.17 in post test and the standard deviation is decreased from 3.19 in pre test to 1.9 in the post test, the calculated 't' value was 20.54 at $p<0.001$ which showed the statistically high significant difference between the pre and post test level of knowledge regarding care of patient with Cerebro Vascular Accident. Hence it indicates the effectiveness of structured teaching programme.

CHAPTER-I

INTRODUCTION

"Life is not merely to be alive, but to be well".

~Marcus Valerius Martial

Health is the level of functional and/or metabolic efficiency of a living being. In human, it is the general condition of a person in mind, body and spirit, usually mean to being free from illness, injury or pain. The World Health Organization defined health in its broader sense in 1946 as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Generally, the context in which an individual lives is of great importance on health status and quality of life. It is increasingly recognized that health is maintained and improved not only through the advancement and application of health science, but also through the efforts and intelligent lifestyle choices of the individual and society.

According to the World Health Organization, the main determinants of health include the social and economic environment, the physical environment and the person's individual characteristics and behaviors. Health damaging behaviors particularly tobacco use, lack of physical activity and poor eating habits are major contributors to the leading chronic diseases. A disease is an abnormal condition affecting the body of an organism. It is often considered to be a medical condition associated with specific symptoms and signs. Chronic diseases generally cannot be prevented by vaccines or cured by medication, nor do they just disappear.

Chronic diseases are diseases of long duration that is 3 months or more and generally slow progression. Chronic diseases, such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes are by far the leading cause of mortality in the world, representing 60% of all deaths. Out of the 35 million people who died from chronic disease in 2005, half were under 70 and half were women.

Among the chronic diseases, Cerebro Vascular Accident is the 2nd leading disease. Cerbro Vascular Accident is sudden death of some brain cells due to lack of oxygen when the blood flow to the brain is impaired by blockage or rupture of an artery to the brain. A CVA is also referred as stroke.

Jusko (2008), estimates indicated that 58 million people died and in them chronic diseases accounted for 35 million deaths. After heart disease, CVA is the second leading single cause of death, with 5.8 million fatal cases per year, 40% are reported as younger than 70 years. About 15 million new acute CVA events arise every year and about 55 million people had a CVA at some time in the past, either with or without residual disability. And two-thirds of these individuals live in low income and middle-income countries.

Demographic changes, urbanization and increased exposure to major CVA risk factors will fuel the CVA burden in the future. The prevalence of stroke in India varies in different regions of the country and ranges from 40 to 270 per 100000 population. Approximately 12% of all CVA occur in the population <40 years of age. Major risk factors to CVA identified in India are hypertension hyperglycemia, tobacco use and low hemoglobin levels CVA accounts for 2 percent of hospital registrations, 1.5 percent of medical registrations and 9 to 30 percent of neurological admissions in major hospitals. The National Commission on Macroeconomics and Health has projected that cases of stroke would increase from 1,081,480 in 2000 to 1,667,372 in 2015. The ICMR study on Burden of Disease has estimated that there has been an increase in the number of CVA cases in India during the last one and a half decades by 17.5 %. Mortality due to CVA has increased by 7.8% from 1998 to 2004. CVA is the third commonest cause of death worldwide. Among the Asians, the number who died from CVA was more than three times that for CHD.

There were limited data available on CVA related mortality in India. Although medical certification of the cause of death is a legal requirement, only 13.5% of all deaths in India were medically certified in 1994. Therefore ascertainment of the cause of death was grossly inadequate in India.

It was estimated that CVA represented 1.2 % of the total deaths in the country, when all ages were included. The proportion of CVA death increased with age and in the oldest group CVA contributed to 2.4% of all deaths. The gender ratio of death due to CVA was 1.

CVA is a Non-communicable disease of increasing socioeconomic importance in aging populations. According to WHO, CVA was the second commonest cause of worldwide mortality in 1990 and the third commonest cause of mortality in more

developed countries. It was responsible for about 4·4 million deaths worldwide. In the recent estimates made in 1999, the number of deaths due to CVA reached 5·54 million worldwide, with two-thirds of these deaths occurring in less developed countries. CVA is also a major cause of long-term disability and has potentially enormous emotional and socioeconomic consequences for patients, their families and health services.

NEED FOR THE STUDY

The neurological problem is the leading cause of death next to cardiac disease. Among all the neurological disease of adult life, the CVA is the one clearly rank first in frequency and importance. CVA holds the destination of being of the leading cause of death in India. In the verses more than 700000 people suffer CVA each year an approximately 2/3 of these individual survive and require rehabilitation.

CVA prevention patient outcome research team recognized that increased risk for CVA is more likely to engage in CVA prevention practice than those who do not yet, over half of patient at increased risk for CVA or unaware of their CVA risk. American Heart Association (2000) had reported that CVA is the third leading cause to death and the major cause of disability.

The "World Health Organization." (2010) estimates that fifteen million individuals suffer from a stroke on an annual basis worldwide. Five million of these individuals will have a permanent disability caused by their stroke while another five million of these individuals will die. Stroke is one of the leading cause of mortality and morbidity worldwide. Gupta, et al., (2008) reported that developing countries account for 85% of global deaths from stroke and it is also a leading cause of functional impairments, with 20% of survivors requiring institutional care after 3 months and 15% - 30% being permanently disabled.

Stroke is a life-changing event that affects not only the person who may be disabled, but their family and caregivers. Utility analyses show that a major stroke is viewed by more than half of those at risk as being worse than death. Effective screening, evaluation and management strategies for stroke are well established in high-income countries but these strategies have not been fully implemented in India.

The leading cause of stroke worldwide is hypertension however, the WHO reports a decline in the instances of stroke within developed countries largely due to progress being made in controlling blood pressure and a decline in smoking. Therefore, in order to reduce your chances of having a stroke significantly. It is essential to have regular checkups to monitor blood pressure and make every effort to quit if you are a smoker.

The primary goals of CVA management are to reduce brain injury and promote maximum patient recovery. Rapid detection and appropriate emergency medical care are essential for optimizing health outcomes when available; patients are admitted to an acute CVA unit for treatment. These units specialize in providing medical and surgical care aimed at stabilizing the patient's medical status. Standardized assessments are also performed to aid in the development of an appropriate care plan. Current research suggests that CVA units may be effective in reducing in-hospital fatality rates and the length of hospital stays.

Once a patient is medically stable, the focus of their recovery shifts to rehabilitation. Some patients are transferred to in-patient rehabilitation programs, while others may be referred to out-patient services or home-based care. In-patient programs are usually facilitated by an interdisciplinary team that may include a physician, nurse, physical therapist, occupational therapist, speech and language pathologist, psychologist and recreation therapist. The patient and their family or caregivers also play an integral role on this team. The primary goals of this sub-acute phase of recovery include preventing secondary health complications, minimizing impairments and achieving functional goals that promote independence in activities of daily living.

In the later phases of CVA recovery, patients are encouraged to participate in secondary prevention programs for CVA. Follow-up is usually facilitated by the patient's primary care provider.

The initial severity of impairments and individual characteristics, such as motivation, social support and learning ability, are key predictors of CVA recovery outcomes. Responses to treatment and overall recovery of function are highly dependent on the individual. Current evidence indicates that most significant recovery gains will occur within the first 12 weeks following a CVA.

Family caregivers and friends play a critical role in the recovery from CVA, particularly as length of stay in hospitals and rehabilitation settings continue to decrease. CVA recovery continues for at least two years after CVA onset, so most of the support during this period comes from informal sources including friends and family members.

Providing care for a CVA patient can be an extremely rewarding experience. At the same time it can be very stressful and frustrating to be suddenly thrust into the position of caregiver with little or no warning. It is crucial therefore, to remember to cater to their own needs, in addition to those of the patient. Some of those needs may include the need for information, the need for skills in the physical aspects of care and the need for support in the "case management" aspects of care.

In terms of emotional reactions, caregivers often feel one or more of the following: anxiety, guilt, depression, frustration, resentment, impatience and fear. Fear that a CVA may happen again, fear that the CVA survivor may be unable to accept the disabilities, fear that the survivor may require nursing home placement, fear that the caregiver may make mistakes and fear that families and friends will abandon them. Coping with these reactions is paramount to a healthier caregiver and ultimately, to a healthier patient.

To help informal care providers assume the caregiver role, nurses must have an understanding of the common needs and experiences of caregivers of CVA patients. By more fully understanding the caregiving experience from the perspectives of actual caregivers, nurses can help potential informal caregivers become more competent in the caregiving role and promote optimum outcomes for both CVA patient and caregivers.

Hafsteinsdóttir. TB, et al., (2011) did a study to review the research on stroke patients' and caregivers' educational needs. Stroke patients and caregivers reported many and diverse educational needs, which are often not met. The most commonly reported needs of caregivers involved patient's moving and lifting, exercises, psychological changes and nutritional issues. Patients and caregivers have many unmet educational needs. There were 959 samples collected and 21 studies were included in the review. Patients and caregivers wanted information that was tailored to their situation included in the review. The findings call for improved education of

patients and caregivers on various issues that are specific to the various recovery phases after stroke

When the investigator posted in Dr. Kamakshi Memorial Hospital at Chennai she provided nursing care to the patient with Cerebro Vascular Accident. While caring the patient with the caregivers asked so many questions about care of the patient and they did not know how to assist the patient in maintaining personal hygiene, feeding, exercising and communicating. So the investigator found that the caregiver's inadequacy of knowledge on caring of patient with Cerebro Vascular Accident. Hence the investigator interested to assess the level of knowledge and to impart education on care of patient with CVA.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching programme on knowledge regarding care of patient with Cerebro Vascular Accident among caregivers in Dr. Kamakshi Memorial Hospital at Chennai.

OBJECTIVES

1. To assess the pre test level of knowledge regarding care of patient with Cerebro Vascular Accident among care givers.

2. To assess the post test level of knowledge regarding care of patient with Cerebro Vascular Accident among care givers.

3. To evaluate the effectiveness of the structured teaching programme on knowledge regarding care of patient with Cerebro Vascular Accident among care givers.

4. To associate the pre test and post test level of knowledge regarding care of patient with Cerebro Vascular Accident among care givers with their selected demographic variable.

OPERATIONAL DEFINITIONS

Effectiveness: Refers to the positive outcome of structured teaching programme regarding care of patient with Cerebro Vascular Accident among caregivers.

Structured teaching programme: Refers to the systematically developed information and visual aids regarding physiological and psychological care of patient with Cerebro Vascular Accident among caregivers.

Knowledge: Refers to the facts and information gained by caregivers regarding nutrition, personal hygiene, mobility and exercise, communication and psychological care of the patient with Cerebro Vascular Accident.

Care Giver: Refers to a person who is taking care of the patient with Cerebro Vascular Accident.

Cerebro Vascular Accident: Refers to a condition in which neurological deficits result from a sudden decrease in blood flow to localized area of the brain.

HYPOTHESIS

There is no significant relationship between the Structured Teaching Programme and level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers.

DELIMITATIONS

- The study sample was delimited to 30.

- The study was delimited to Tamil and English speaking caregivers only.

CHAPTER-II

REVIEW OF LITERATURE

The review of literature is an essential aspect of the scientific research. It is a systematic identification of location, scrutiny and summary of written material that contains information about the problem under study. The investigator gained insight in selected problem from an extensive research review.

This chapter is designed to include the reviews of related literature and the conceptual framework adopted for the study.

PART-I REVIEW OF RELATED LITERATURE

A Stroke happens when a part of brain dies from lack of blood. Early treatment can help to prevent a stroke. The World Health Organization recommends that countries take care of their population and adopt urgent measures to compact the silent epidemic caused by stroke. The goal is to make this fight as a central theme in the global health agenda.

This chapter is organized systematically and classified in the following manner.

- Literature related to nutritional aspects in care of patient with Cerebro Vascular Accident

- Literature related to personal hygiene in care of patient with Cerebro Vascular Accident

- Literature related to mobility and communication in care of patient with Cerebro Vascular Accident

- Literature related to psychological aspects in care of patient with Cerebro Vascular Accident

- Literature related to structured teaching programme in care of patient with Cerebro Vascular Accident

PART- II CONCEPTUAL FRAMEWORK

PART-I

REVIEW OF RELATED LITERATURE

On October 29, all counties in the world reinforce the fight against stroke. "Cerebral ischemia" - a disease that affects 16 million people and causes 6 million deaths worldwide per year. On 2009 more than 68 thousand Brazilians lost their lives victim of stroke that is the leading cause of death and disability but 90% of strokes can be prevented and if it occurs is possible to treat the patient appropriately. The essential is that he gets to the hospital quickly and that the hospital to prepare to give appropriate and immediate assistance.

The ministry of health truly celebrates this October 29 investigating in the formulation of the system of assistance for uses of the public system of health with an integrated approach to the patient providing the best strategy for diagnosis and treatment to decrease the impact of stroke. Stroke awareness foundation educates the public about warning signs of Cerebro Vascular Accident and seeks proper medical services immediately.

Studies from geographically diverse populations might have used different definitions and sampling methods to those applied in high-income areas and local needs, which will affect the development of protocols for stroke data collection, thereby limiting comparisons between and within populations over time. Clinical trials and epidemiological studies have shown that stroke is largely preventable through preventive measures.

Literature related to nutritional aspects in care of patient with Cerebro Vascular Accident

Maeshima.S, et al., (2011) did a study to determine whether dysphagia present at initial swallowing evaluation is associated with the type of diet eaten at the time of discharge and the location to which the patient is transferred after discharge. The sample size was 409 newly diagnosed acute stroke patients. They found that after their hospital discharge, 140 patients returned home, 250 were transferred to another hospital for rehabilitation and 7 were admitted to a nursing home. Twelve patients had died. A total of 205 patients were on a regular diet, 96 were receiving a dysphagia diet and 96 were on enteral feeding at discharge. A total of 90.7% of patients who were discharged to home were on a regular diet. Most of the patients on a dysphagia diet or enteral feeding could not return home. The scores of the functional independence measure were higher in the patients who returned to their homes than in other groups.

Medin.J, et al., (2011) conducted a study comparing eating difficulties among patients 3 months after stroke in relation to the acute phase from March 2007 to June 2008. Thirty six stroke patients with 2-7 eating difficulties or problems with reduced alertness or swallowing in the acute phase were included. Eating difficulties were detected using a structured protocol of observation of meals. The proportion of eating difficulties had decreased significantly from the acute phase to the 3-month follow-up in 'sitting position', 'managing food on the plate' and 'manipulating food in the mouth' and increased regarding inadequate food consumption. Improvements were shown at 3 months in stroke severity, functional status, nutritional status and neglect. Oral status and psychological well-being remains unchanged. They found that the majority of eating problems persisted 3 months after stroke despite a marked improvement in most of the physical functions.

Miah.MT, et al., (2010) conducted observational study to know the practice of feeding oral & nasogastric tube feeding, different types of food used and their caloric value in stroke patients from June 2010 to November 2010, among 100 acute stroke patients. They found out of 100 cases, 22% took their feeding orally and 78% cases through nasogastric tube. Artificial milk powder 66%, cases juice 18%, Horlicks, juice & soup 10%, khichury 2% orally, bread, egg & sooji 4% cases orally.

Thus the cases had concluded in 100 cases studied, none of them fulfilled the calorie requirement up to the standard level according to the guideline of Nutrition & Food Science Institute.

Leder.SB, et al., (2009) did a study on dysphagia among 4070 acute care setting patients with altered mental status to determine, there was a difference in odds for aspiration based upon correctly answering specific orientation questions. The study finding revealed that a protocol for dysphagia testing was developed that begun with verbal stimuli to determine patient orientation status and ability to follow single step verbal commands. A protocol for dysphagia testing was developed that begun with verbal stimuli to determine patient orientation status and ability to follow single-step verbal commands. The odds of liquid aspiration were 31% greater for patients not oriented to person, place and time, the odds of liquid aspiration puree aspiration and being deemed unsafe for any oral intake were respectively, 57, 48 and 69% greater for patients unable to follow single-step verbal commands. They concluded that the knowledge of potential increased odds of aspiration allows for individualization of dysphagia testing there by optimizing swallowing success.

Westergren.A, et al., (2008) conducted a study to describe meal time preparation, eating, fatigue, mood and nutritional status among stroke survivors, six months after discharge from hospital. Standardized questions and methods were used. Difficulties with swallowing, ingestion and energy to eat occurred among 27%, 20% and respectively. Difficulties with cooking and buying food occurred among 57% and 56% respectively and 41% were at nutritional risk. Feeling full of energy less than 61% while 15% had felt gloomy and sad at least four weeks. Considering the activities of daily living, having a less favorable nutritional status was significantly predicted by difficulties with buying food, difficulties with ingestion and being a woman. Considering psychological state, having a less favourable nutritional status was significantly predicted by a lack of energy and high age. Thus the study supports the occurrence of a nutritionally related fatigue by means of "lack of energy".

Gariballa.SE, et al., (2007) conducted a observational prospective study to assess the nutritional status of 201 hospitalized stroke patients. On admission, sixty-two stroke patients had BMI < 20 ninety-nine had a triceps skin folds thickness below the 25th centile, twenty-five had a mid-arm circumference below the 25th centile and

thirty-eight had a serum albumin concentration below 35 gram/litre. Baseline nutritional status was worse among those who had died later than those who had remained in the hospital, compared with those who got discharged and most patients who remained in hospital showed marked and significant deterioration in all the measures of nutritional status within 4 weeks of hospitalization.

Kumlien.S, & Axelsson.K, (2002) conducted a study to explore eating, feeding and nutrition among 40 patients with CVA in nursing home as described by their nurses and by assessment. A comprehensive instrument, the resident assessment Instrument were used to asses these patient's state of health. The result showed that more than 80% of the CVA patients in nursing home, were assisted as having some sort of dependence in eating. Dysphagia was reported in almost one fourth of the patient and 30% were described and assisted as having poor intake of poor appetite. The finding highlighted the important of making careful observation and assessment of maintaining documentation about eating and nutrition early after a patient's arrival in the nursing home to enable appropriate care and promotion of health.

Westergren.A, et al., (2001) conducted a study to describe the types and extent of eating difficulties, the need for assistance when eating, the nutritional status and pressure ulcers in consecutive patients (n = 162) admitted for stroke rehabilitation over a period of 1 year. Difficulties in eating were found in 80%, 52.5% were unable to eat without assistance and 32% were undernourished. The study concluded that all patients with stroke admitted for rehabilitation need to be systematically assessed for eating difficulties and action needs to be taken to facilitate eating, especially as patients with eating difficulties risk becoming undernourished and in turn developing pressure ulcers.

Literature related to personal hygiene in care of patient with Cerebro Vascular Accident

Pow EHN, et al., (2011) conducted a longitudinal study to investigate the oral health of elderly CVA patient on discharge from hospital into the community after the rehabilitation and six months later compared with community dwelling elderly people without stroke. The sample size was 43 elderly people. The study revealed that CVA patient had significantly have higher plaque formation and bleeding scores on hospital discharge after 6 months compared with control group. Despite significant

objective improvement in functional ability after CVA, they had significantly poorer to periodontal health compared with community dwelling elderly without CVA.

Tsang.MH, et al., (2009) did a randomized controlled trial to investigate the efficiency of conventional treatment with right half-field eye patching in treating 35 sub-acute CVA patients. The patients were randomized into intervention and control group. The patients in the intervention group received 4 weeks of conventional occupational therapy with modified eye patching and control group received only 4 weeks conventional treatment. Both the groups were assessed using Behavioral Inattention Test (BIT) and Functional Independence Measure (FIM) on admission and at 4 weeks. The results showed that there is a significant difference in BIT gain, but no difference in FIM in both the groups.

Brady.M, et al., (2006) reviewed eight randomized controlled trials to compare the effectiveness of staff-led oral care interventions with standard care for ensuring oral hygiene for individuals after a CVA. The sample size was 67 individuals with a CVA which was obtained from the larger cluster randomized controlled trials. The study showed that denture plaque scores were significantly reduced up to six months and providing oral care training for carers had improved their knowledge and attitudes towards the provision of oral care.

Literature related to mobility and communication in care of patient with Cerebro Vascular Accident

Hedberg.B, et al., (2008) conducted a study regarding communicating stroke survivors health and further needs for support in care-planning meetings. A qualitative and a quantitative design were adopted with a sample size was 14 authentic audio-recorded care-planning meetings. The transcribed meetings were together with observational notes, analyzed from a data-driven approach. They found that the importance of strengthening stroke survivors participation in care-planning meetings is highlighted. This study showed the necessity for professionals to involve relatively when negotiating these patients' need for further care and to learn more about, how to advocate stroke survivors.

DuBard.CA, et al., (2006) did a study to find the effect of language on heart attack and stroke awareness among U.S. Hispanics. The sample size was

698 English-speaking Hispanics, 527 Spanish-speaking Hispanics and 24, 201non-Hispanics. Cross-sectional analysis showed that Spanish-speaking Hispanics remain significantly less likely than all other groups to correctly identify symptoms after adjustment for socio demographic characteristics, healthcare access and cardiovascular risk factors (p<0.05). The study revealed that lack of English proficiency was strongly associated with lack of heart attack and stroke knowledge among Hispanics. That was highlighted the need for educational intervention about cardiovascular emergencies targeted to Spanish-speaking communities.

Greenland.KJ, et al., (2002) did a study on physician advice, patient actions and health-related quality of life in secondary prevention of stroke through diet and exercise. Out of 51193 participants in the 1999, Behavioral Risk Factor Surveillance System, a state-based telephone survey were assessed using HRQOL Questionnaire Overall, 2.4% of the participants reported a history of stroke. Sixty-one percent of those who reported a history of stroke had been advised to eat fewer high fat or high cholesterol foods and 85.4% of those who had received such advice reported a dietary change compared with 56.0% of those who did not receive such advice. Almost 64% of those who reported a stroke had been advised to exercise more and 76.5% of those who received such advice reported exercising more versus 38.5% of those who did not receive such advice. The study revealed that person with stroke who reported exercising had fewer limited activity days and days when physical health was not good and more healthy days than did persons who did not exercise. Dietary actions were not associated with differences in HRQOL.

Sundin.K, et al., (2002) did a study to illuminate the understanding in communication between formal care providers and patients with stroke and aphasia. Five care providers and three such patients participated in the study. Video recordings were made during conversations about pictures (n =15) and the care providers were also interviewed (n=15) after the video-recorded conversations. A phenomenological hermeneutic method of interpretation of the interview text was used. The findings showed that a range of conditions for 'understanding and being understood' in the communication on the part of the care providers exists. The condition 'being in understanding' appears in connection with the care providers' creating of a 'calm liturgy of caring' by mediating humility and calm vitality affects to the patients

and further, when needed, being present on the level of mystery, i.e. caring communion.

Dowswell.G, et al., (2001) conducted a observational study to examine the positioning, handling and mobilizing of stroke patients in hospital. Poor position was observed to end 158 times in 380 patient hours of observation. The most frequent causes of positional improvement were activities whose primary intention was unrelated to position correction. The deliberate adjustment of patients' position by nurses was a rare event which occupied a small part of nurses time.

Literature related to psychological aspects in care of patient with Cerebro Vascular Accident

Baseman.S, et al., (2010) conducted a descriptive, correlational survey to examine the relationships of functional status, depression and overall stroke recovery to social integration in a convenience sample of ischemic stroke survivors. The survey response rate was 21.4%. Results showed that functional status, overall stroke recovery and depression are highly significant predictors of social integration, explaining 62% of the variance. Comorbid depression was negatively and significantly correlated to social integration, such that higher levels of depression are associated with lower levels of social integration. They found that social integration is an important and understudied aspect of stroke recovery that warrants further research.

Haley.WEJ, (2009) did a prospective study to determine the prevalence and stressfulness of stroke-related problems and perceived benefits of caregiving, as reported by an epidemiologically derived sample of caregivers of stroke survivors. The sample size was 84 patients 8 to 12 months after the stroke, using measures of stroke patient problems, caregiver appraisals of the stressfulness of these problems and received benefits of caregiving. The study 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 caregiving.

Greenop.KR, et al., (2009) did a prospective study to investigate the relationship between post- stroke depressive symptoms and premorbid personality between May 2003 to January 2005. The pre-stroke personality of stroke survivors was assessed by interviewing a close family number within four weeks of the index stroke using the NEO Personality Inventory-Revised. Three months after the stroke patient were followed up and assessed with the Cambridge cognitive examination and hospital anxiety and depression scale and their informants completed neuropsychiatric inventory carer distress version and instrumental activities of daily living scale. The result showed that depressive symptoms were the most commonly reported post- stroke symptom. Spearman correlation showed that high neuroticisms were positively correlated with NPI total scores. NPI total distress scores and specifically with agitation and irritability NPI composite scores. Agreeableness was inversely correlated with agitation and irritability composite scores.

Moroni.L, (2008) conducted a study to analyze the psychometric validity and reliability of the Caregiver Needs Assessment questionnaire. The sample size to 226 family caregivers of 197 patients hospitalized for neuromotor rehabilitation after a stroke, head injury, Lateral Amyotrophic Sclerosis, Parkinson or other severely impairing diseases. They found that the statistical analysis confirms the good psychometric properties of the Caregiver Needs Assessment questionnaire. For its brevity and ease in compilation the Caregiver Needs Assessment is promising practical tool aimed at assessing caregivers' needs in order to personalize a programme of psychological support to measure it's outcome and to provide comparison of the different needs in different diseases.

Kitko.L & Hupcey.JE, (2008) did a study to discover factors that influence patient's decision-making process when seeking treatment for acute-stroke symptoms. Qualitative inquiry using grounded-theory methods was used to elicit descriptions. There was a purposive sample of 10 clinically stable patients or their caregivers were interviewed after acute ischemic stroke. Five themes emerged for patients who presented late for treatment. The theme that emerged from the group that presented early for treatment was previous history or knowledge of stroke. The most significant implication for practice identified in this study was that nurses must take a leading role in educating the public regarding symptoms, risk factors and available treatments for stroke.

Carlsson. E, et al., (2004) did a qualitative case study to explore how people affected by stroke experience living with eating difficulties, during a prolonged period. The group size was with the three persons, 1.5 to 2 years who had their last stroke repeated interviews and through participant observations. Data were analyzed using qualitative analysis. The informants experienced a loss of functional eating ability and the ability to perform activities related to food and meals. Feelings of dependence were experienced in mealtime situations. The study revealed that living with eating difficulties after stroke is a complex phenomenon. The study indicated a need for nurses to develop and use evidence-based guidelines for eating training during the continuum of care.

Man-Son-Hing.M, et al., (2002) did a study to compare the effect of quantitative versus qualitative presentation of probability estimated in patient decision making. The study design was randomized trial with a 2 x 2 factorial design. The total of 198 volunteers aged 60-80 years. Participants were asked to imagine that they had atrial fibrillation and using a decision aid, were then randomized to two ways of receiving pertinent risk information regarding the probability of stroke and major bleeding when taking warfarin, aspirin or no therapy. Quantitatively, in which the 2-year probabilities of stroke and major haemorrhage were presented both numerically and graphically with 100 faces and qualitatively in which these probabilities were presented with the use of verbal phrases. Participants reviewing quantitative risk information scored better on the informed subscale of the decisional conflict scale. There were no significant difference between the quantitative and qualitative groups in their ability to the rank-order with their stroke risk in spite of taking warfarin, aspirin and no treatment. Overall knowledge about atrial fibrillation and its treatment and other dimensions of decisional conflict (all P-values >0.05).

Literature related to structured teaching programme in care of patient with Cerebro Vascular Accident

Marx.JJ, et al., (2010) conducted a study to identify gender-specific differences in stroke knowledge, stroke risk perception and the effects of educational multimedia campaign. Even before the intervention, more women than men were able to name at least one stroke warning sign, to name the correct emergency call number or to cite the correct action in acute stroke. The perception of different educational

media varied between the sexes. They concluded that educational programs do have gender-specific effects and future campaigns should be tailored economically and should focus on different media and educational messages on the two sexes accordingly.

MacKay-Lyons.M, et al., (2010) conducted a single blind, randomized controlled trial to compare the effectiveness of a program of rehabilitative exercise and education versus usual care in modifying vascular risk factors in adults after Non-Disabling Stroke or Transient Ischemic Attack. The sample size was 250 adults within 90 days of being diagnosed with Non-Disabling Stroke or Transient Ischemic Attack was randomly allocated to a 12-week program of exercise and education or to an outpatient clinic assessment and discussion of secondary prevention recommendations with return clinic visits as indicated. They anticipated that the findings of this trial would make a meaningful contribution to the knowledge base regarding secondary stroke prevention.

Norris.M, et al., (2010) did a review on the findings of a qualitative study informed by both hermeneutic phenomenology and ethnography. The sample size with 11 persons with stroke and 18 of their carers. The study had examined the lay concepts of stroke, described as a condition resulting from a local blockage in blood from multiple causes, many of which are not recognized within the biomedical frame. The blockage is understood to be reversible and therefore the condition curable. The results illustrated that the similarities and differences with other cross-cultural studies and suggested areas of future research and points of consideration for stroke education strategies.

Pérez-Lázaro, (2009) did a study to analyze what the population knows about strokes and vascular risk factors, as well as their attitude towards it. Sample size was 386 with 158 females and 228 males and a mean age of 52 years. The most widely recognized symptom 86% is paralysis in one side of the body. Almost a third 32% of the interviewees would not take a correct symptom of a stroke and if it were a transient ischemic attack, 25% would not think it was serious. One hundred and ninety-eight 51% did not know any vascular risk factors. Of those who answered correctly, the most frequently named factor was arterial hypertension. The factors related independently with a better knowledge of the disease are a high educational

level and being young. Information campaigns are needed to improve the population's attitude towards this disease.

Schlote.A, et al., (2008) did a survey of knowledge of and acquaintance with institutions and organizations offering support after stroke and actual use of these resources. 84 patients and their nearest others were questioned concerning their acquaintance with and use of professional and institutional resources for support and also with respect to social support and self-efficacy. The study revealed that six and twelve months after stroke, actual use of the various resources for support varied between 0 and 13%. Only part of the patients 11-65% and relatives up to 78% knew about the professional and institutional resource available.

Dahlin.FN, et al., (2008) conducted a study to determine whether a nurse-led support and education programme for spouses of patients affected by stroke improved the psychological health of the spouses. The study design was a longitudinal, open randomized controlled trial. The sample size was one hundred spouses of stroke patients who were randomly assigned to either an intervention or a control group. No significant difference was found between the intervention and control groups concerning overall psychological health. Encouraging participation in the group meetings of a support programme might have a positive effect on psychological health.

Koenig. KL, (2007) conducted a prospective cohort study to measure stroke knowledge and pre stroke personal health behaviors of stroke patients undergoing inpatient rehabilitation and their caregivers. The participants were a total of 130 stroke patients and 85 caregivers interviewed after ischemic stroke. They 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. Stroke patients participating in inpatient rehabilitation and their caregivers have large gaps in stroke knowledge and have suboptimal personal health behaviors, thereby putting patients at high risk for recurrent stroke. The finding highlights the need to develop stroke-education programs for rehabilitating patients that are effective in closing these gaps in knowledge and personal health behaviors.

Williams.LS, (2002) conducted a study to highlight the need for greater public education regarding recognition of risk factors and symptoms of stroke. They surveyed 39 patients with recent cerebral infarction without cognitive or language difficulties and 16 carers. Only 14 of the patients and 10 of the carers recognized the onset of stroke and when presented with some common scenarios a third did not recognize half the common presenting symptoms of stroke. When asked about risk factors for cerebral infarction the 55 people interviewed could only name 1.5 risk factors on average 17 could not name any. After an information booklet on stroke was provided they could name 2.5 risk factors on average and only nine could not identify any. Thirty six of the participants read the booklet. The audit suggests that most patients and many carers do not recognize the onset of stroke and hence the knowledge of risk factors are poor.

All the above literatures showed that most of the care givers do not recognize the onset of the stroke and its management. Information and teaching are needed to improve the care givers attitude towards the disease and taking care of patient with Cerebro Vascular Accident. Regular follow ups and education on various aspect of care of patient Cerebro Vascular Accident including nutrition, personal hygiene, mobility and psychological care improve the level of knowledge and relieves the fear and stress of the care giver.

PART-II

CONCEPTUAL FRAMEWORK

The researcher adapted Kenny's Open System model for conceptual framework. This theory was introduced by Jennet. W. Kenny. He was born in the year 1946 at Scotland. The open system model was formulated in the year 1999. The open system enumerates various aspects of system and interaction. She formulated various theories based on management.

The researcher applied Kenny's Open system model aimed to assess the effectiveness of structured teaching programme regarding care of patient with Cerebro Vascular Accident among caregivers. This involves interaction between the researcher and the caregiver of patient with Cerebro Vascular Accident.

An open system is a system which continuously interacts with its environment. The interaction can take the form of information, energy or material transfers into or out of the system boundary, depending on the discipline which defines the concept. An open system should be contrasted with the concept of an isolated system which exchanges neither energy and matter nor information with its environment.

Open system theory is useful in breaking the whole process into sequential tasks to ensure goal realization.

The three major aspects of the systems are:

     a) Input

     b) Throughput

     c) Output

Input is any type of information, energy and material that enters the systems from environment through its boundaries. In this study it refers to pre assessment level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers by using structured questionnaire and providing structured teaching

programme in selected aspects like nutrition, personal hygiene, mobility, communication and psychological care.

Throughput is any information, energy or material that is processed through the system boundaries. In this study the throughput is the process of transformation of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers.

Output is information that leave the system, enters the environment through system. In this study it refers to the improved level of knowledge either adequate, moderately adequate or inadequate level of knowledge after structured teaching program among caregivers on care of patient with Cerebro Vascular Accident. In this study, output is measured with the structured tool.

The improved score gained by the caregiver indicates adequate knowledge regarding care of patient with Cerebro Vascular Accident. If the knowledge is inadequate a feedback can be given to the system and again the process can be done to improve the knowledge on various aspects of care of patient with Cerebro Vascular Accident among caregivers through structured teaching programme.
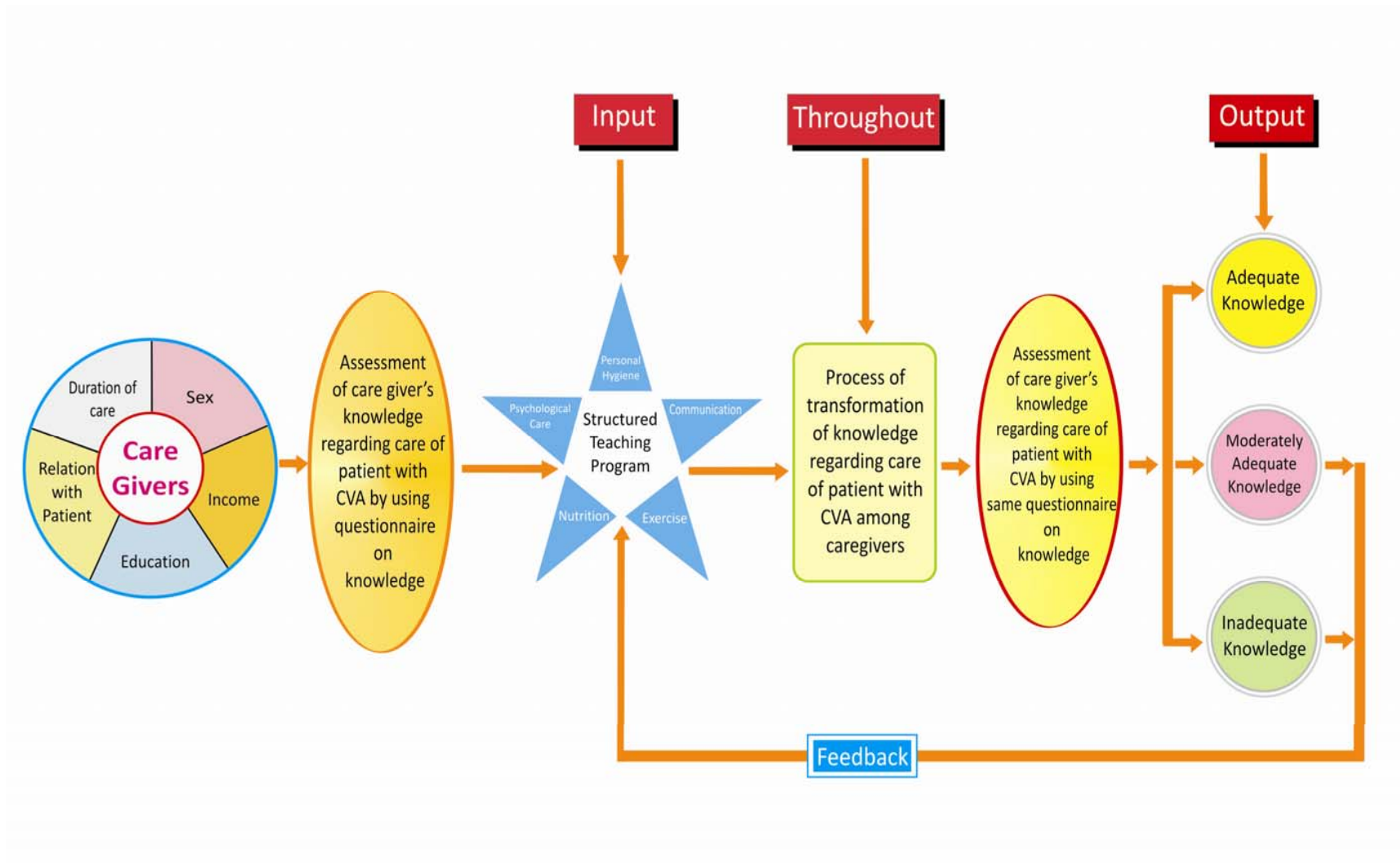
Fig.1: MODIFIED J.W. KENNY'S OPEN SYSTEM MODEL (1999)

CHAPTER - III

METHODOLOGY

The study was conducted to assess the effectiveness of structured teaching programme on knowledge regarding care of patient with Cerebro Vascular Accident among caregivers in Dr. Kamakshi Memorial Hospital at Chennai. It includes aspects like research design, setting of the study, population, sample, sample size, sampling technique, criteria of the sample selection, description of instrument, scoring interpretation, data collection procedure and data analysis.

RESEARCH DESIGN

Pre experimental one group pre test post test research design was used for the study.

```
┌───────────┐      ┌─────────────────────┐      ┌───────────┐
│  Pre test │ ───▶ │ Structured teaching │ ───▶ │ Post test │
└───────────┘      │   programme on      │      └───────────┘
                   │  Cerebro Vascular   │
                   │      Accident       │
                   └─────────────────────┘
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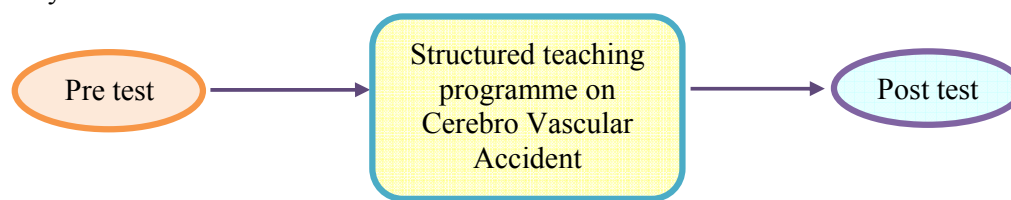
SETTING OF THE STUDY

This study was conducted in Dr. Kamakshi Memorial Hospital, Chennai. This is 200 bedded multi specialty hospital, which is equipped with all facilities. This hospital has all the specialty departments like Cardiovascular, Neurology, Nephrology, Gastroenterology, Diabetology, Critical Care and Emergency units. In Neurology department all types of patients are admitted. The monthly statistics of Neurology department is 100 patients. Among this, the average monthly statistics of patient with CVA is 35.

POPULATION

The population consists of caregivers of patient with Cerebro Vascular Accident who were admitted in Dr. Kamakshi Memorial Hospital, Chennai.

SAMPLE

The caregivers of patient with Cerebro Vascular Accident, who fulfilled the inclusion criteria, were selected as samples for the study.

SAMPLE SIZE

The sample size was 30 caregivers of patient with Cerebro Vascular Accident.

SAMPLING TECHNIQUE

Purposive sampling technique was used to select the samples among the population.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria

- The caregivers within the age group of 21-60 yrs.

- Care givers who were willing to participate in this study.

- Care givers who understand Tamil or English.

Exclusion criteria

- Care givers of patients with other Neurological abnormalities.

- Care givers who were deaf and dumb.

DESCRIPTION OF THE INSTRUMENT

The instrument was developed after the literature review and guidance from the experts. The instrument for the data collection consists of 3 parts,

Part-I

The demographic variables consists of Patient's age, sex, duration of illness, associated disease and Care givers age, sex, duration of care giving, relationship with the patient, education, occupation, income and marital status.

Part II

Assessment of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers was developed by the investigator. It consists of 30 multiple choice questions related to general information about Cerebro Vascular

Accident, knowledge regarding physiological aspect of care and knowledge regarding psychological aspect of care.

Each correct answer carries one mark. The total score was 30 marks.

Scoring Interpretation

- >75% = Adequate knowledge.

- 51-75% = Moderately adequate knowledge.

- ≤50% = Inadequate knowledge.

Part III

Instructional module for structured teaching program regarding care of patient with Cerebro Vascular Accident consist of general information about Cerebro Vascular Accident, physiological care includes nutrition, personal hygiene, mobility and communication and psychological care. Audio visual aids like chart, flip chart, pamphlet and booklet were used for this structured teaching programme.

VALIDITY

The content of the instrument was validated by nursing and medical experts from the field of neurology. The tool was modified based on the suggestion given by the experts.

RELIABILITY

Reliability of the tool was established by using test, retest method. The reliability score obtained was r= 0.81 which showed that the tool was reliable for conducting the study.

ETHICAL CONSIDERATION

The study was conducted after the approval of dissertation committee. Formal permission was obtained from the Medical Director of Dr. Kamakshi Memorial Hospital, Chennai. Caregivers were clearly explained about the study purpose and procedures. The formal written consent was obtained from the samples. The usual assurance of the anonymity and confidentiality were obtained.

PILOT STUDY

The refined tool was used for pilot study to test the feasibility, appropriateness and practicability. The pilot study was conducted in Dr. Kamakshi Memorial Hospital at Chennai from 18-04-2011 to 24-04-2011. A formal permission was obtained from the concerned authorities and the written consent from the caregivers also obtained. It was carried out with 3 caregivers who fulfilled the inclusion by purposive sampling method.

A brief introduction and the purpose of the study were explained to the caregivers to get their co-operation. A structured questionnaire was conducted to the participants to assess the pretest level of knowledge regarding care of patient with Cerebro Vascular Accident for 15-20 minutes. After that, structured teaching programme was given to the caregiver with the duration of 20-30 minutes regarding care of patient with Cerebro Vascular Accident. Post test was assessed by using the same tool.

The result of the study showed that structured teaching was effective to improve the knowledge regarding the patient with Cerebro Vascular Accident.

The investigator got the caregivers adequately. The investigator found difficulty in obtaining the data from the illiterates, as they need explanation. The study was feasible. The tool used in pilot study was used for main study.

DATA COLLECTION PROCEDURE

The investigator used interview schedule to assess the knowledge regarding care of patient with Cerebro Vascular Accident among caregivers. A formal written permission was obtained from the Medical Director in Dr. Kamakshi Memorial Hospital, Chennai. The collection procedure was scheduled from 1-6-2011 to 30-6-2011. The study was carried out with total of 30 caregivers, who were fulfilling the inclusion criteria. The investigator introduced herself to the caregiver of patient with Cerebro Vascular Accident and the purpose of the study was explained to ensure better co-operation. Purposive sampling technique was used to select the sample.

Every week 7 to 8 samples were assessed on the knowledge regarding care of patient with Cerebro Vascular Accident. An interview schedule was used to assess the

knowledge regarding care of patient with Cerebro Vascular Accident. After 30 minutes the tool was recollected. Then the structured teaching program was given to the patient about 20 to 30 minutes. After 3 days Post Test was conducted by using the same interview schedule.

DATA ANALYSIS

The data obtained was analyzed using both descriptive and inferential statistics. Frequency and percentage distribution was used to determine the demographic variables. Paired 't' test was used to evaluate the effectiveness of structured teaching programme on knowledge regarding care of patient with Cerebro Vascular Accident among caregivers.

Pearson Chi-Square test was used to analyze the association of demographic variables of caregivers of patient with Cerebro Vascular Accident and post test knowledge.

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING CEREBRO VASCULARE ACCIDENT AMONG CAREGIVERS IN DR.KAMAKSHI MEMORIAL HOSPITAL, CHENNAI.

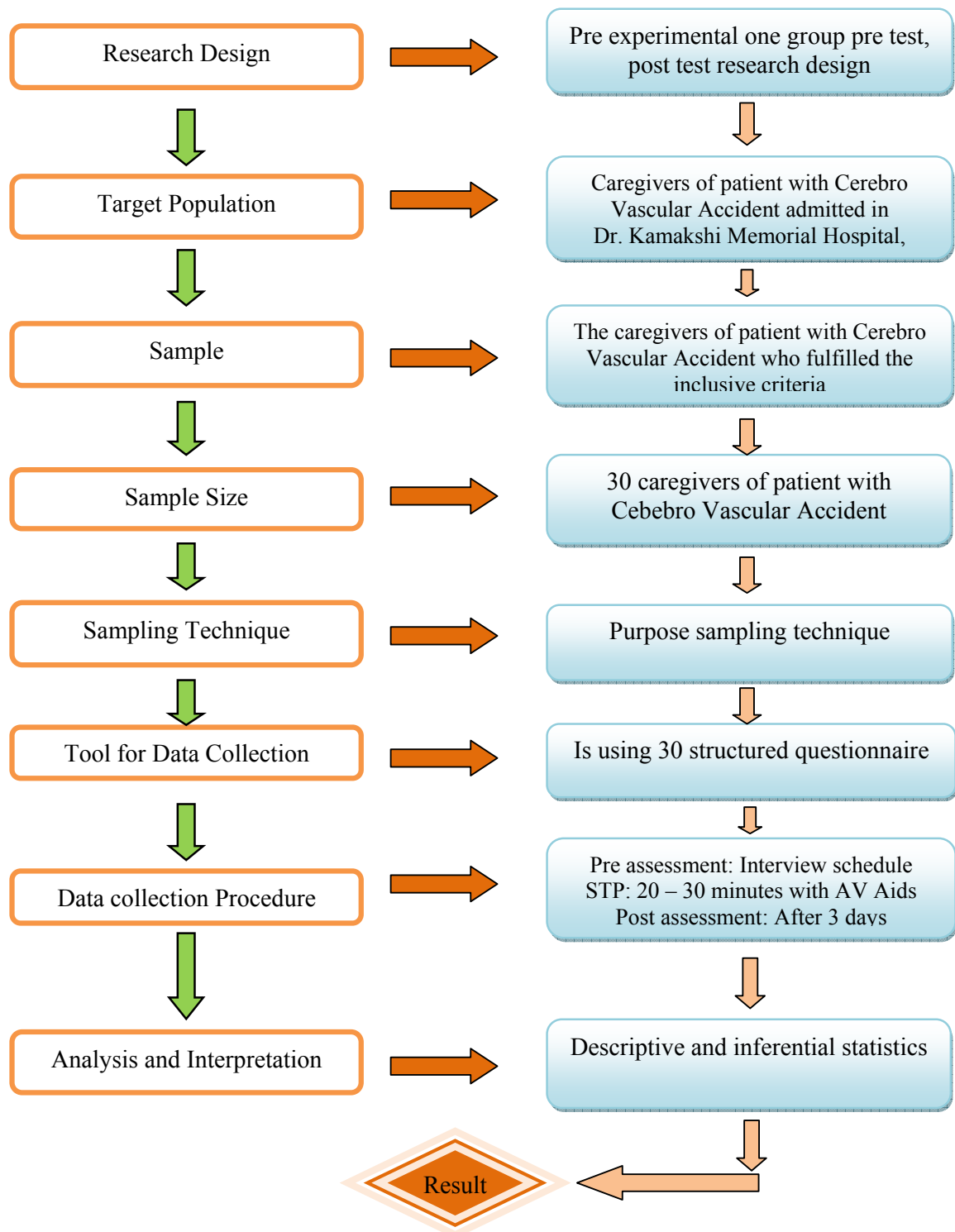|	
Research Design	Pre experimental one group pre test, post test research design
Target Population	Caregivers of patient with Cerebro Vascular Accident admitted in Dr. Kamakshi Memorial Hospital,
Sample	The caregivers of patient with Cerebro Vascular Accident who fulfilled the inclusive criteria
Sample Size	30 caregivers of patient with Cebebro Vascular Accident
Sampling Technique	Purpose sampling technique
Tool for Data Collection	Is using 30 structured questionnaire
Data collection Procedure	Pre assessment: Interview schedule STP: 20 – 30 minutes with AV Aids Post assessment: After 3 days
Analysis and Interpretation	Descriptive and inferential statistics

Result

Fig. 2: Schematic representation of methodology

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

Data analysis is the systemic organization of research and synthesis of research data. The purpose of data analysis is to organize, provide structure and elicit meaning from research data. The analysis of research data provides the results of the study. These results need to be evaluated and interpreted giving thought to the aims of the study. The interpretative task involves attending to their credibility, their meaning, their importance, the extent to which they can be generalized and their implication.

The data findings have been analyzed and tabulated in accordance to the plan for data analysis and are interpreted under the following headings.

Section A: Frequency and percentage distribution of the demographic variables of patient with Cerebro Vascular Accident.

Section B: Frequency and percentage distribution of pre test level of knowledge regarding care of patient with Cerebro Vascular Accident among care givers.

Section C: Frequency and percentage distribution of post test level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers.

Section D: Comparison of mean and standard deviation between pre test and post test level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers.

Section E: Association of pre test and post test level of knowledge among caregivers of patient with Cerebro Vascular Accident with their selected demographic variables.

SECTION-A

Table 1: Frequency and percentage distribution of the demographic variables of patient with Cerebro Vascular Accident

N=30

Sl. No.	Demographic variables	Frequency	Percentage
1	**Age**		
	21- 40 years	8	26.7
	41- 60 years	14	46.6
	> 60 years	8	26.7
2	**Sex**		
	Female	16	53.3
	Male	14	46.7
3	**Duration of illness**		
	> 6 months	11	36.7
	≤ 6 months	19	63.3
4	**Associated Disease**		
	Diabetes mellitus	10	33.3
	Hypertension	12	40.0
	Nil	8	26.7

Table 1 shows the distribution of the demographic variables of patients with Cerebro Vascular Accident who were participated in the study. With respect to age, the majority of the patients 14 (46.7%) were in the age between 41-60 years and 8 (26.7%) patients were in the age group between 21-40 years and above 60 years respectively. With respect to the gender, the majority of the patients 16 (53.3%) were female and 14 (46.7%) patients were male.

With regard to duration of illness of the patient with Cerebro Vascular Accident, the majority 19 (63.3%) below 6 months and 11 (36.7%) above 6 months. Considering the associated disease in the patient with Cerebro Vascular Accident, the majority 12 (40%) had hypertension, 10 (33.3%) had diabetes mellitus and 8 (26.7%) had no associated disease.

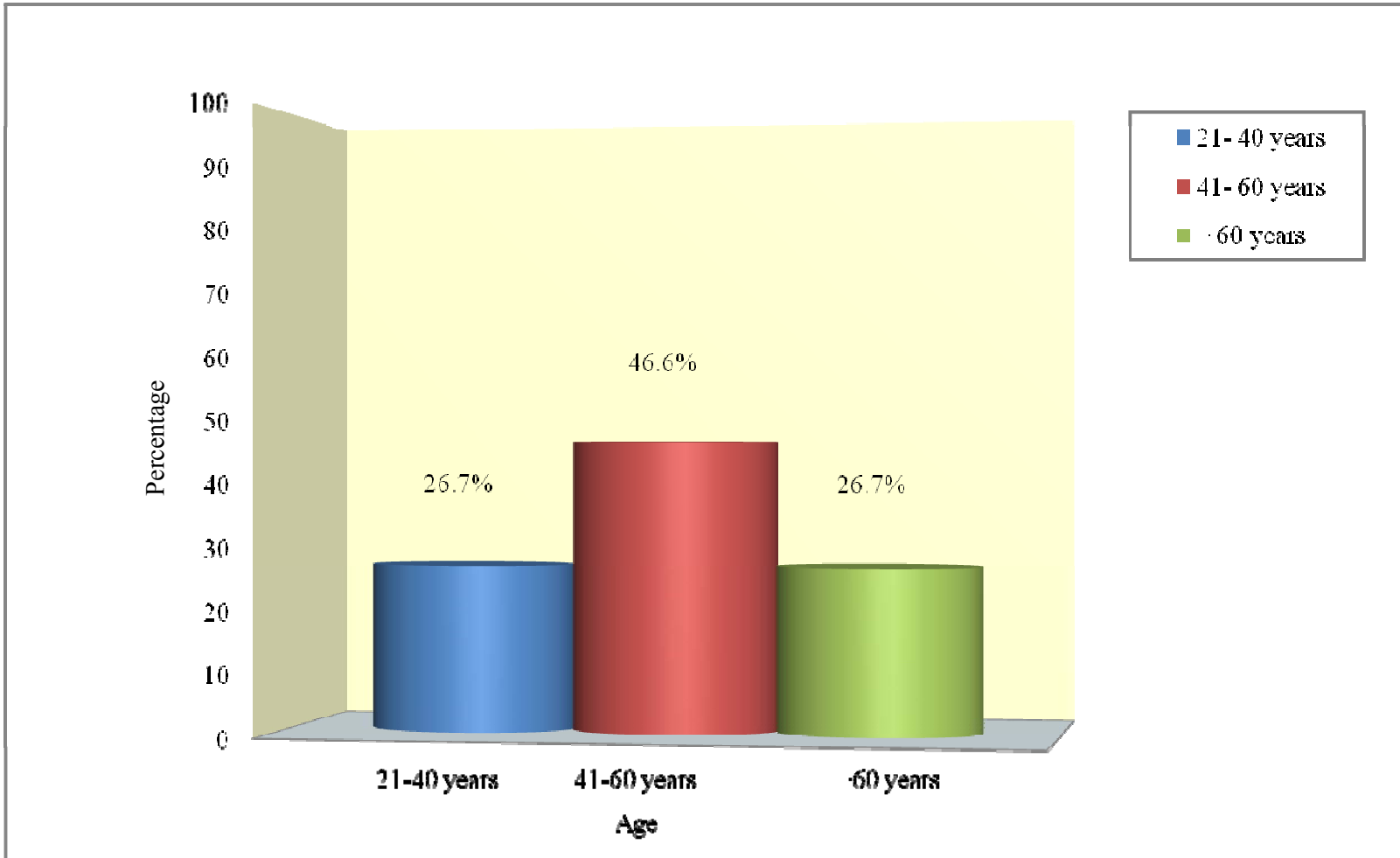**Fig. 3:** Percentage distribution of age among the patient with Cerebro Vascular Accident
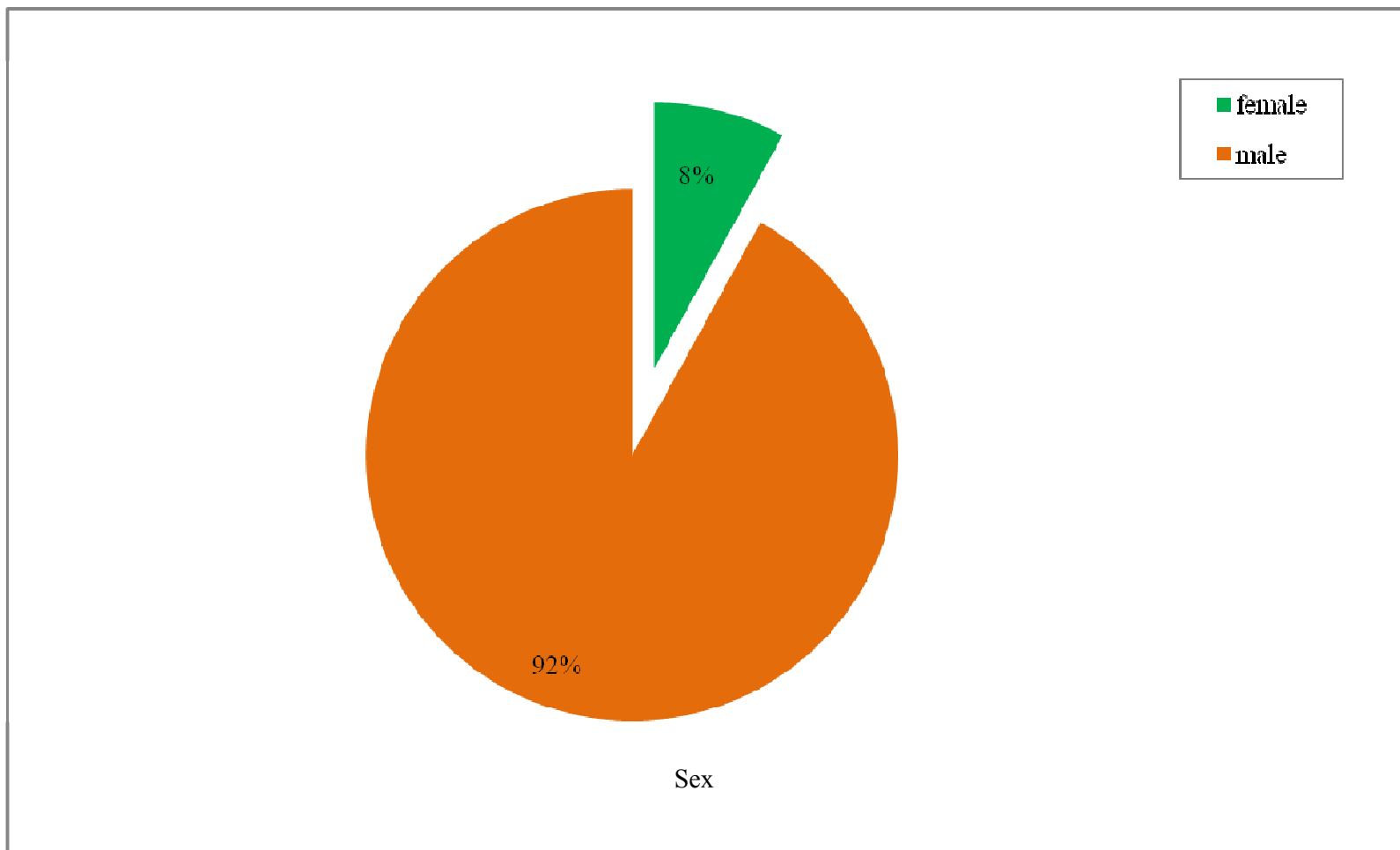
Fig. 4: Percentage distribution of sex among the patient with Cerebro Vascular Accident

Fig. 5: Percentage distribution of duration of illness among the patient with Cerebro Vascular Accident
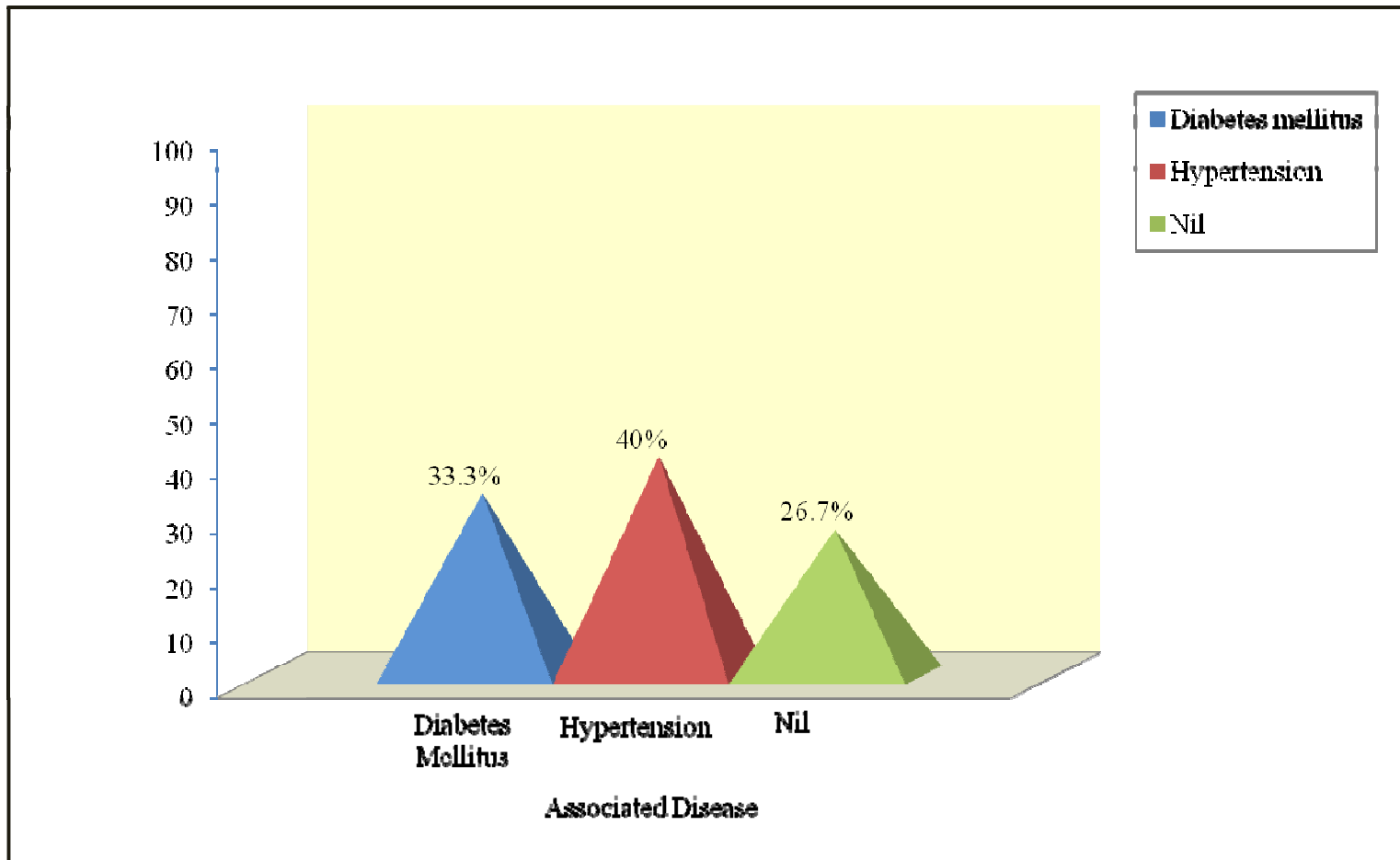
Fig. 6: Percentage distribution of associated disease among the patient with Cerebro Vascular Accident

Table 2: Frequency and percentage distribution of demographic variables of caregivers of patient with Cerebro Vascular Accident.

N=30

Sl.No.	Demographic variables	Frequency	Percentage
1	**Age**		
	21 - 30 years	5	16.7
	31 - 40 years	10	33.3
	41 - 50 years	10	33.3
	> 50 years	5	16.7
2	**Sex**		
	Male	14	46.7
	Female	16	53.3
3	**Relationship with the patient**		
	Spouse	12	40.0
	Children	10	33.3
	Others	8	26.7
4	**Duration of Care giving**		
	> 6 months	11	36.7
	≤ 6months	19	63.3
5	**Education**		
	Illiterate	3	10.0
	Primary Education	9	30.0
	Secondary Education	14	46.7
	Graduate	4	13.3
6	**Occupation**		
	Employed	22	73.3
	Unemployed	8	26.7
7	**Income**		
	< Rs.10,000	18	60.0
	Rs. 10,001 - Rs. 20,000	11	36.7
	> Rs. 20,000	1	3.3
8	**Marital Status**		
	Married	26	86.7
	Unmarried	4	13.3

Table 2 shows the demographic variables of caregivers of patients with Cerebro Vascular Accident.

With respect to age, the majority of the caregivers 10 (33.3%) were in the age between 41-50 years, 10 (33.3%) were between 31-40 years, 5 (16.7%) were between 21-30 years and 5 (16.7%) were in the age group of above 50 years. With respect to the gender, the majority of the patients 16 (53.3%) were female and 14 (46.7%) patients were male.

In regard to caregivers relationship with the patient, the majority 12 (40%) were spouse, 10 (33.3%) were children and 8 (26.7%) were others. Considering duration of care giving, the majority 19 (63.3%) were giving care for less than 6 months and 11 (36.7%) more than 6 months.

With respect to education, the majority 14 (46.7) were got secondary education, 9 (30%) were primary educated and 4 (13.3%) were graduated and 3 (10%) were illiterate. In account with occupation, the majority of the caregivers 22 (73.3%) were employed and 8 (26.7%) were unemployed.

Regarding income of the caregivers, 18 (60%) were less than Rs.10,000, 11 (36.7%) were getting Rs.10,001 to Rs.20,000 and 1 (3.5%) was getting above Rs. 20,000. With regard to marital status, the majority of caregivers 26 (86.7) were married and 4 (13.3%) were unmarried.
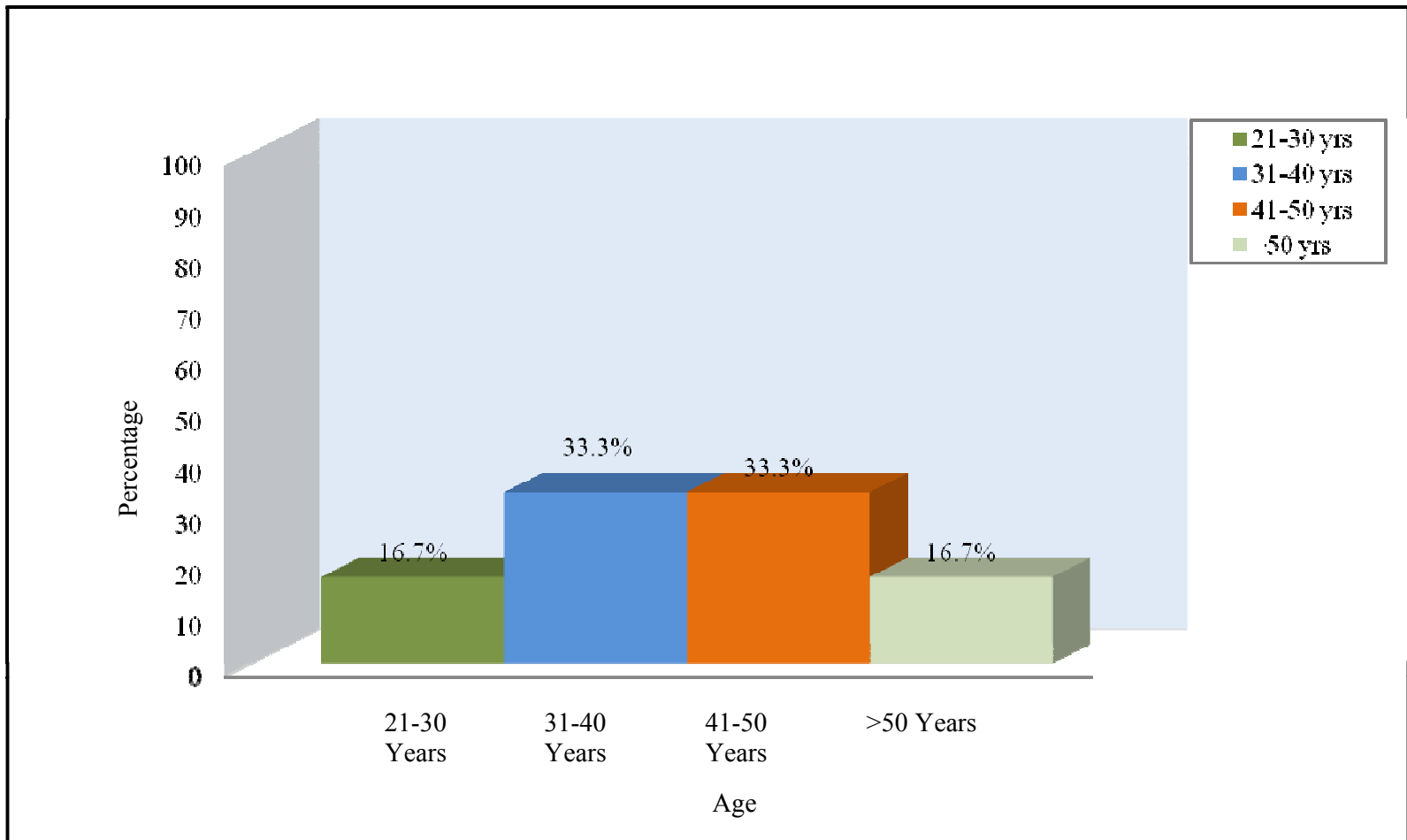
Fig.7: Percentage distribution age among the care givers of patient with Cerebro Vascular Accident

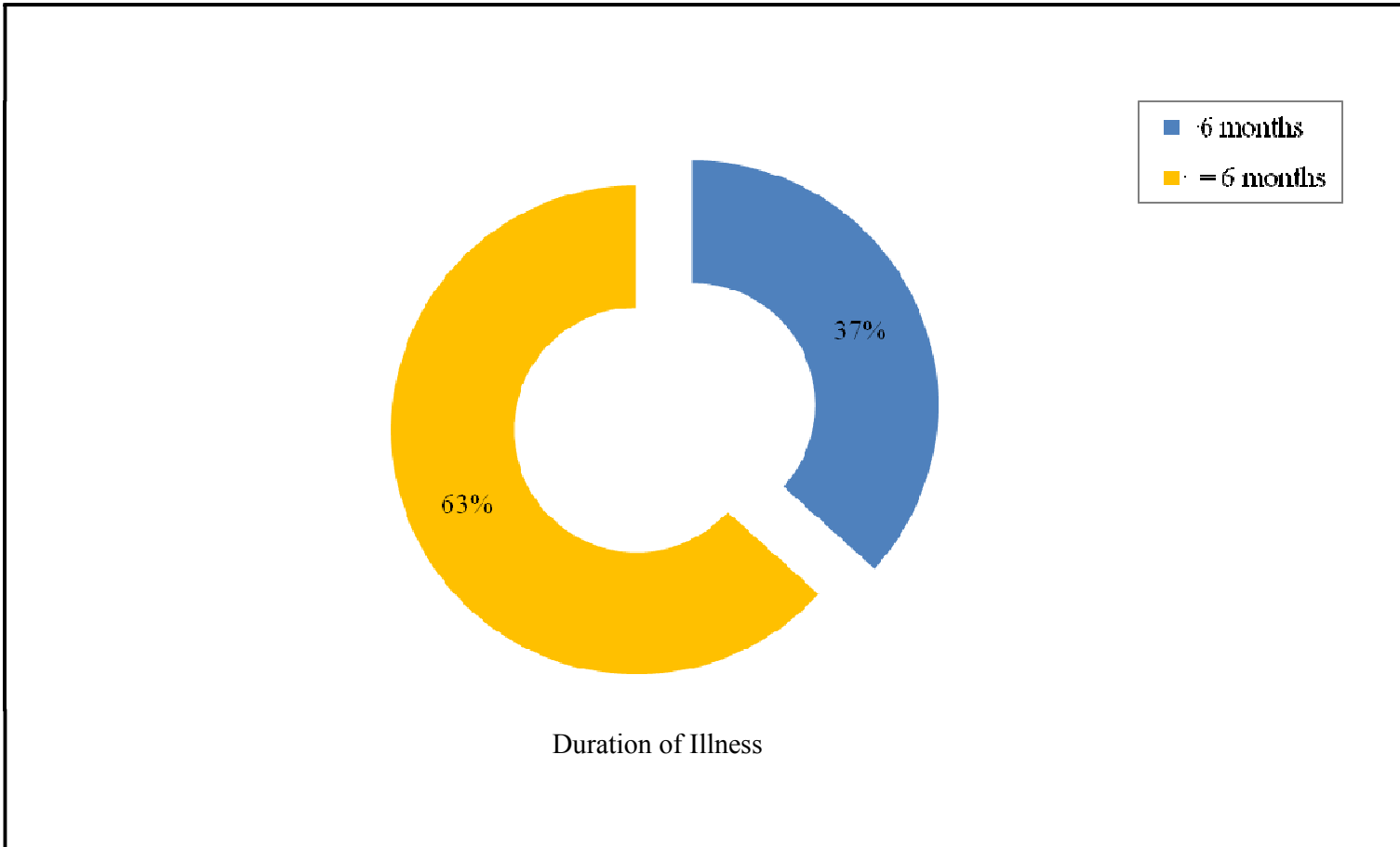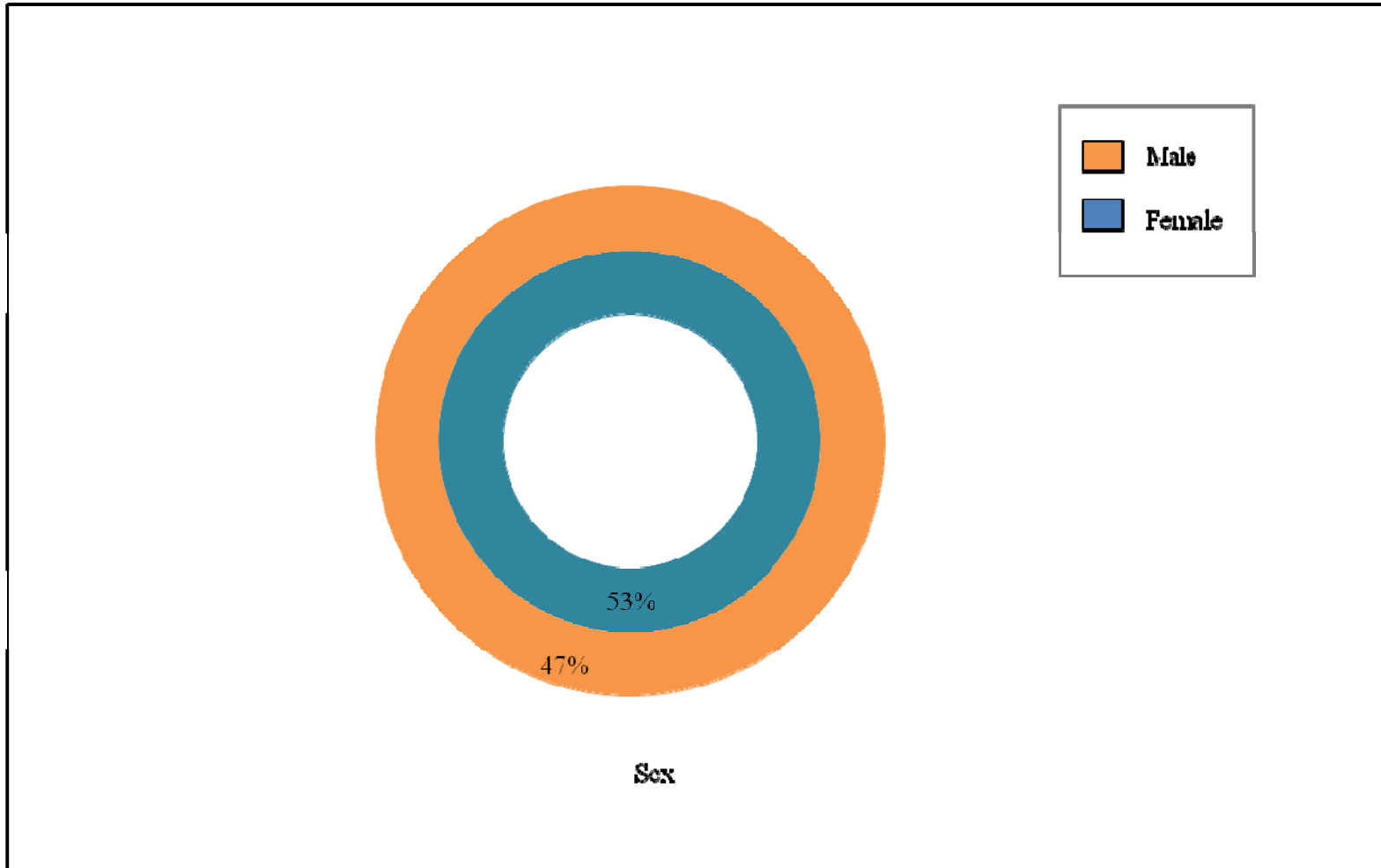**Fig.8:** Percentage distribution of sex among the care givers of patient with Cerebro Vascular Accident
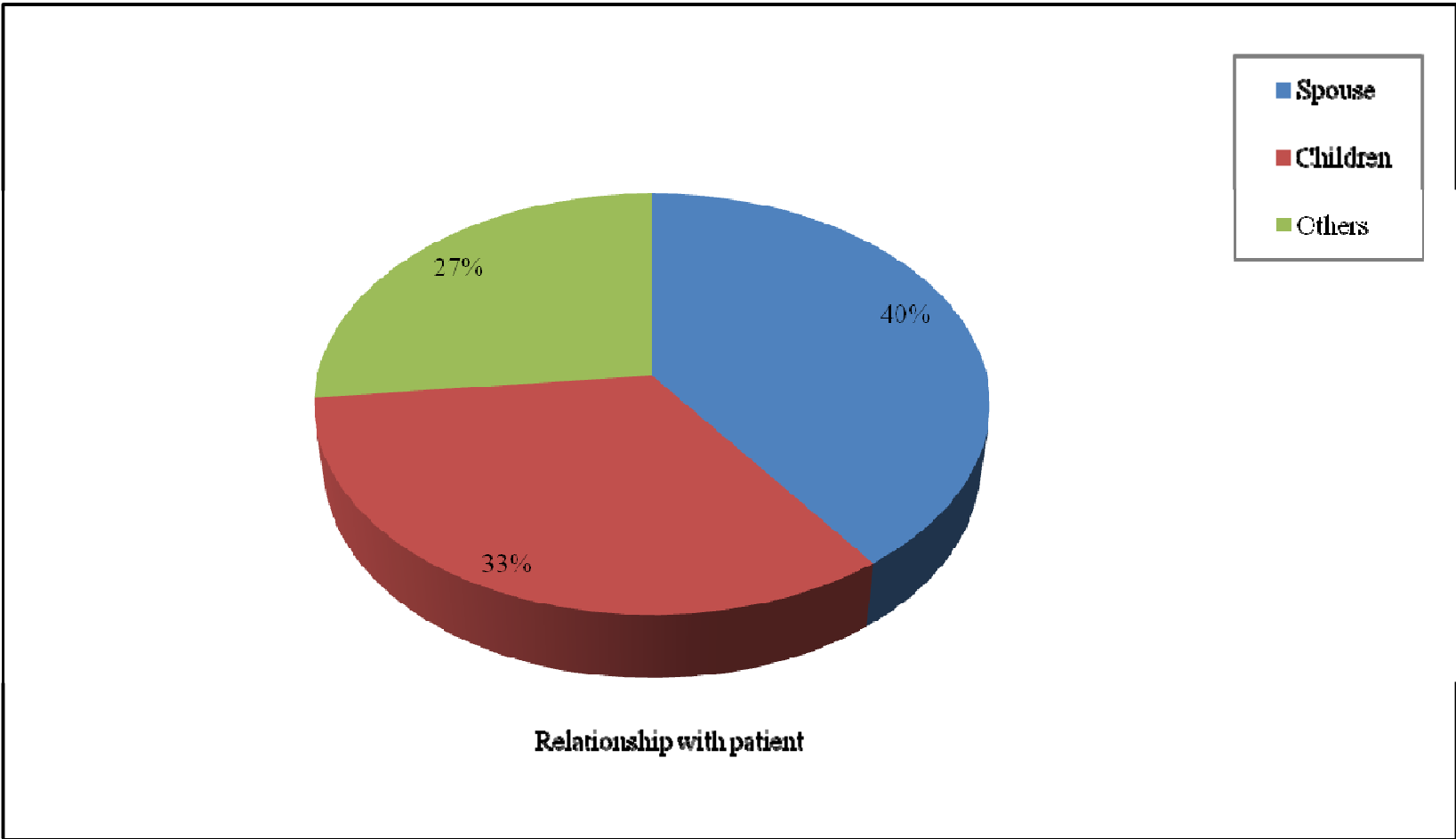
Fig.9: Percentage distribution of relationship with patient among the care givers of patient with Cerebro Vascular Accident
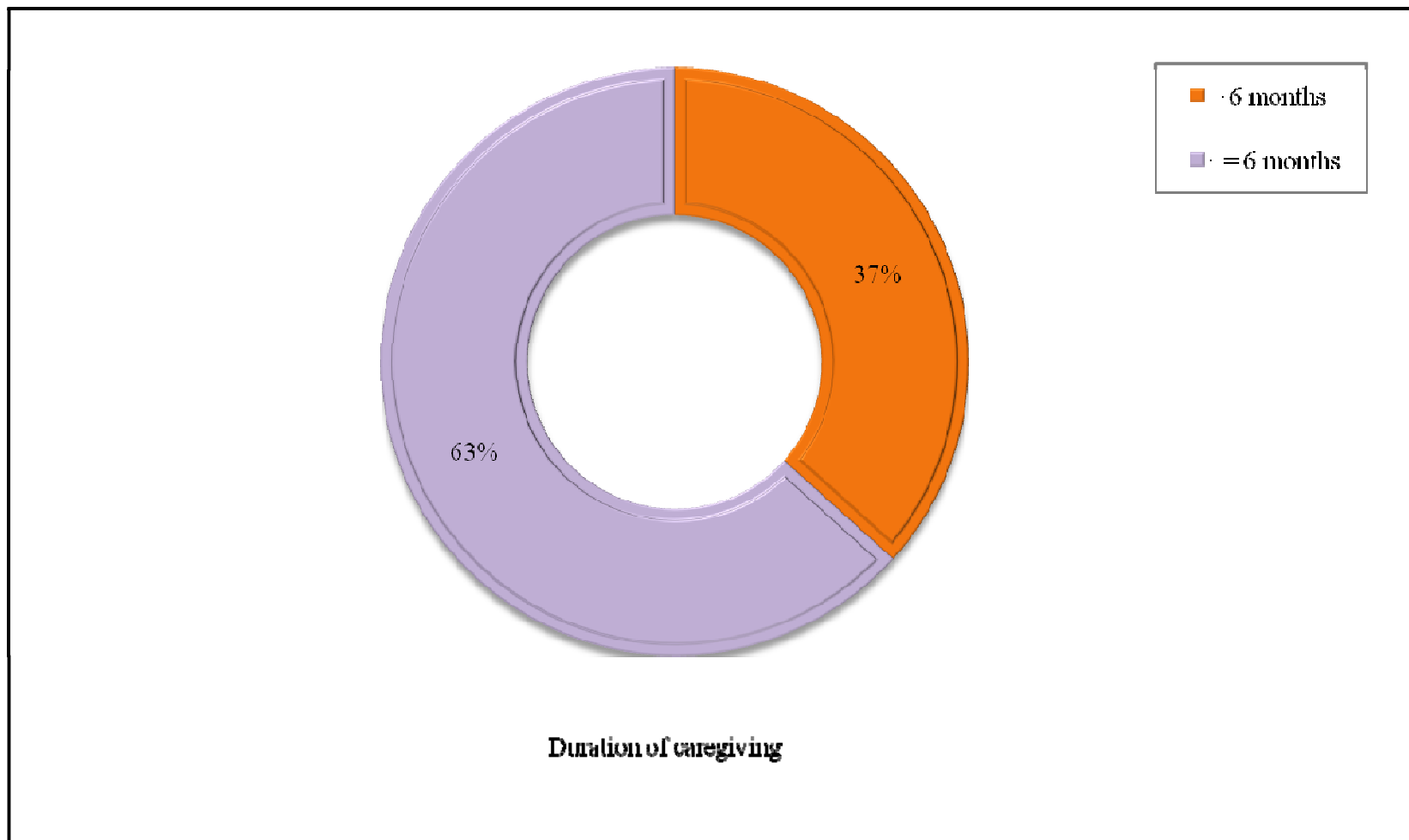
Fig.10: Percentage distribution of duration of care giving among the care givers of patient with Cerebro Vascular Accident
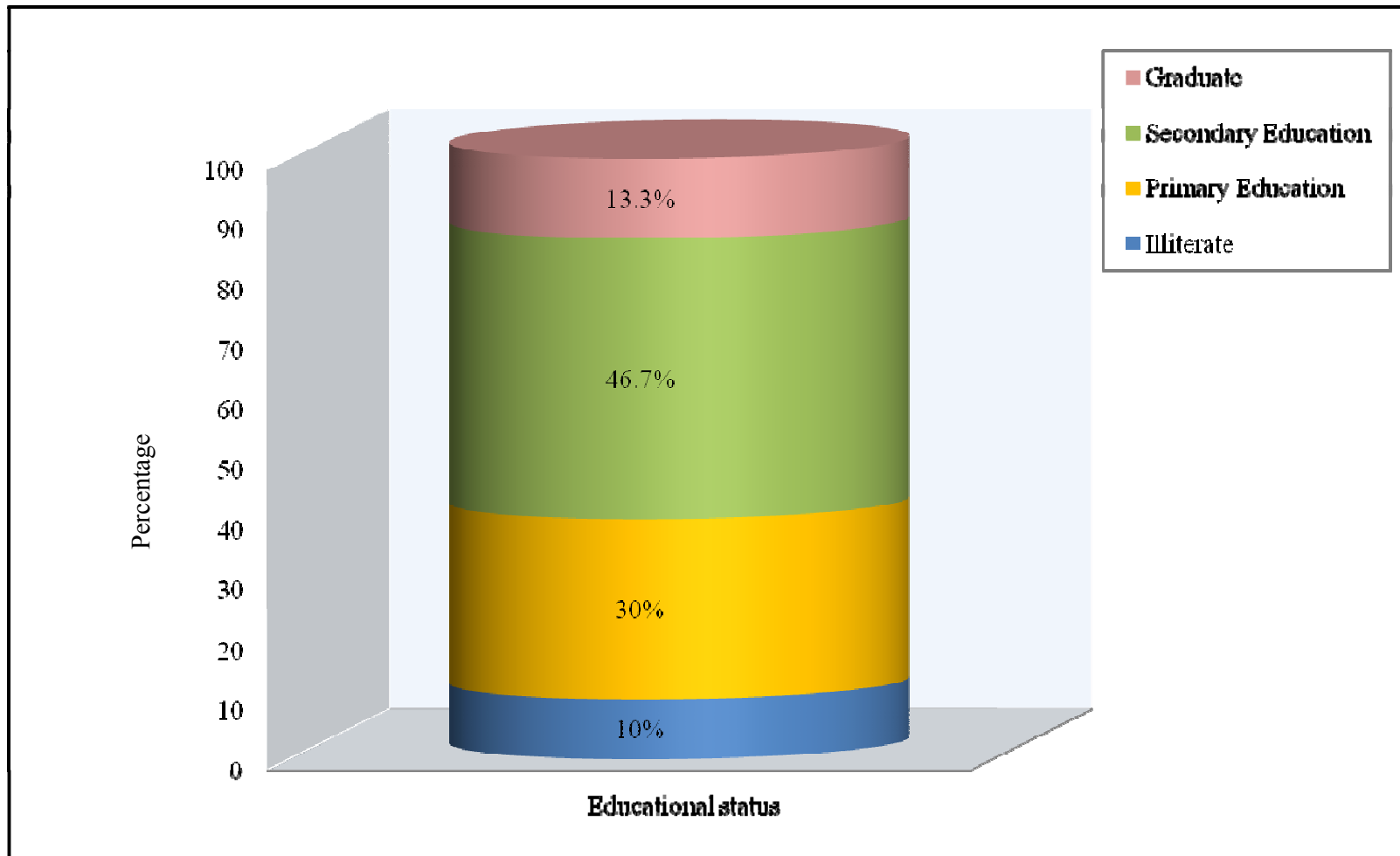
Fig.11: Percentage distribution of educational status among the care givers of patient with Cerebro Vascular Accident
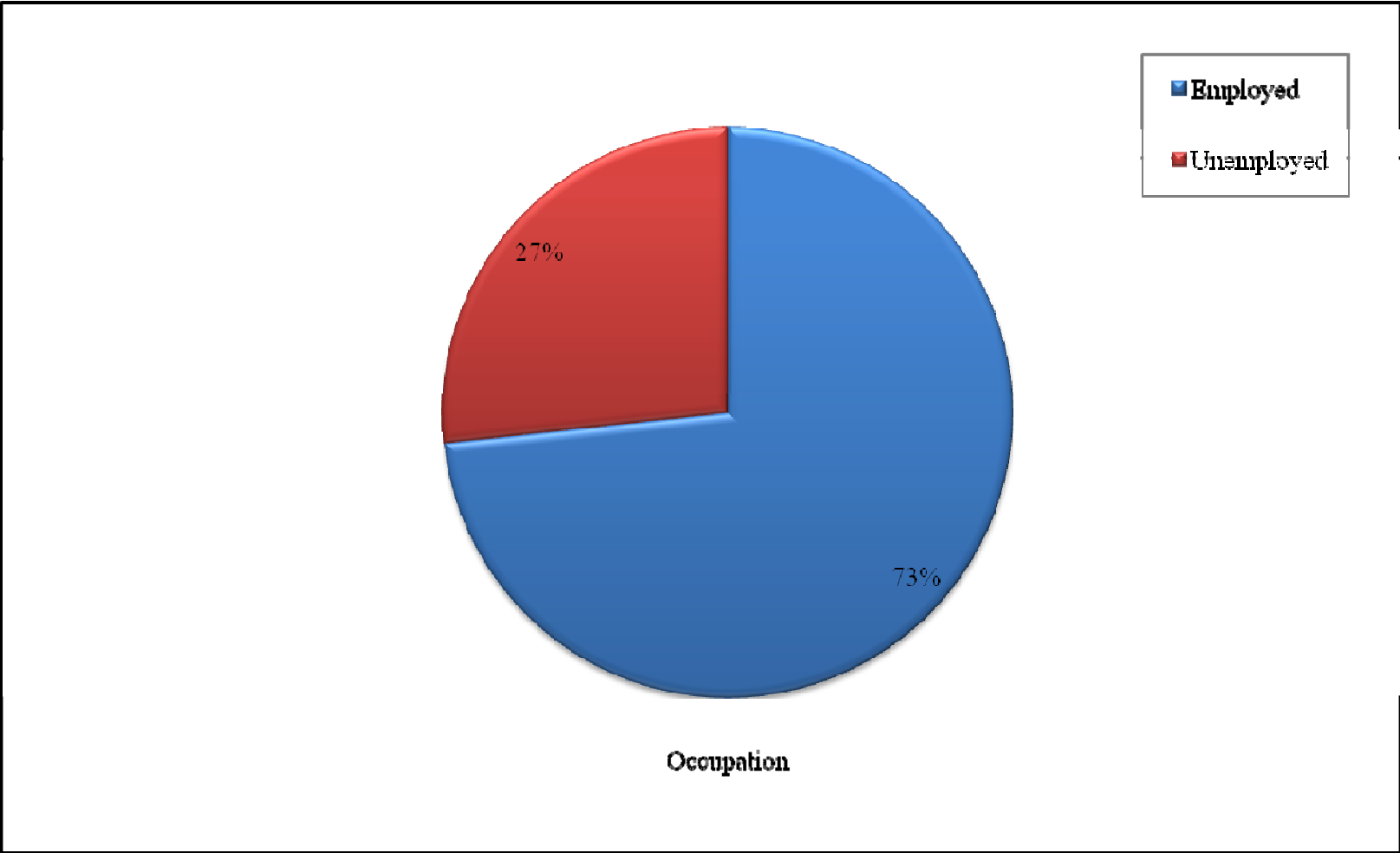
Fig.12: Percentage distribution of occupational status among the care givers of patient with Cerebro Vascular Accident.
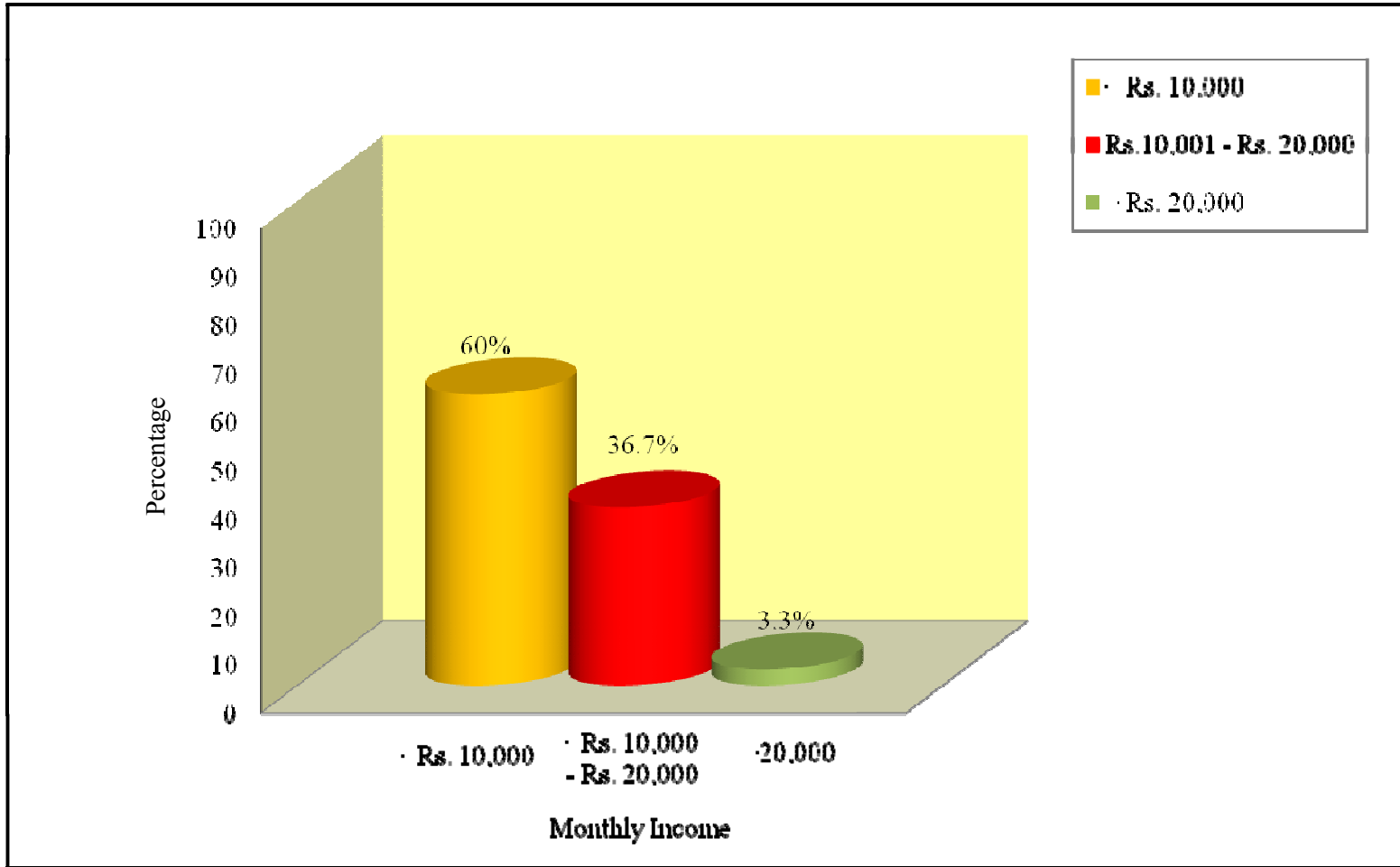
Fig.13: Percentage distribution of monthly income among the care givers of patient with Cerebro Vascular Accident
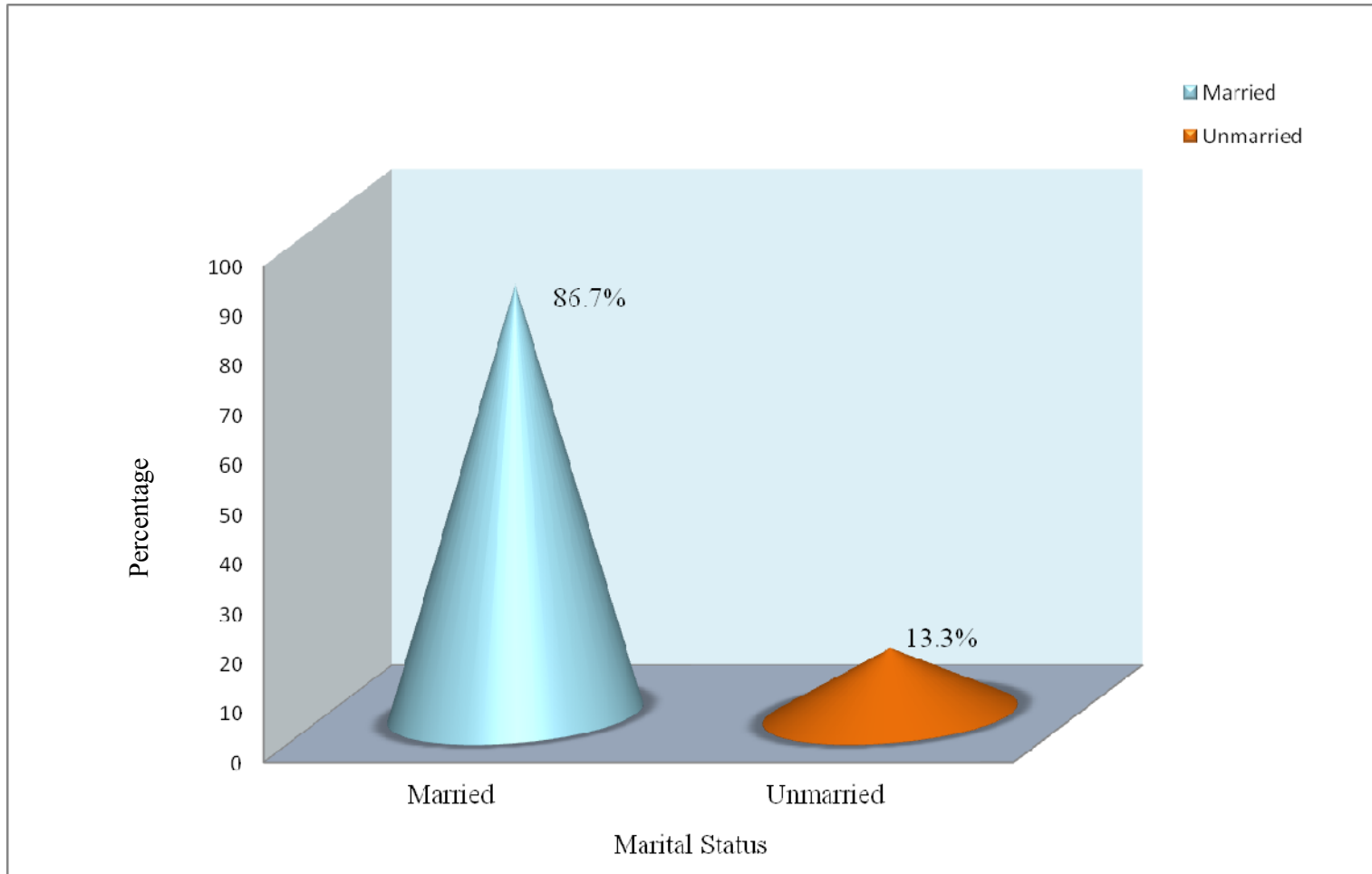
Fig.14: Percentage distribution of marital status among the care givers of patient with Cerebro Vascular Accident

SECTION-B

Table 3: Frequency and percentage distribution of pretest level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers

N=30

Level of knowledge	Pre test	
	Frequency	**Percentage**
Inadequate	24	80.0
Moderately adequate	5	16.7
Adequate	1	3.3

Table 3 shows, the frequency and percentage distribution of pretest level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers. The majority of 24 (80%) caregivers had inadequate knowledge, 5 (16.7%) had moderately adequate knowledge and 1 (3.3%) caregiver had adequate knowledge.
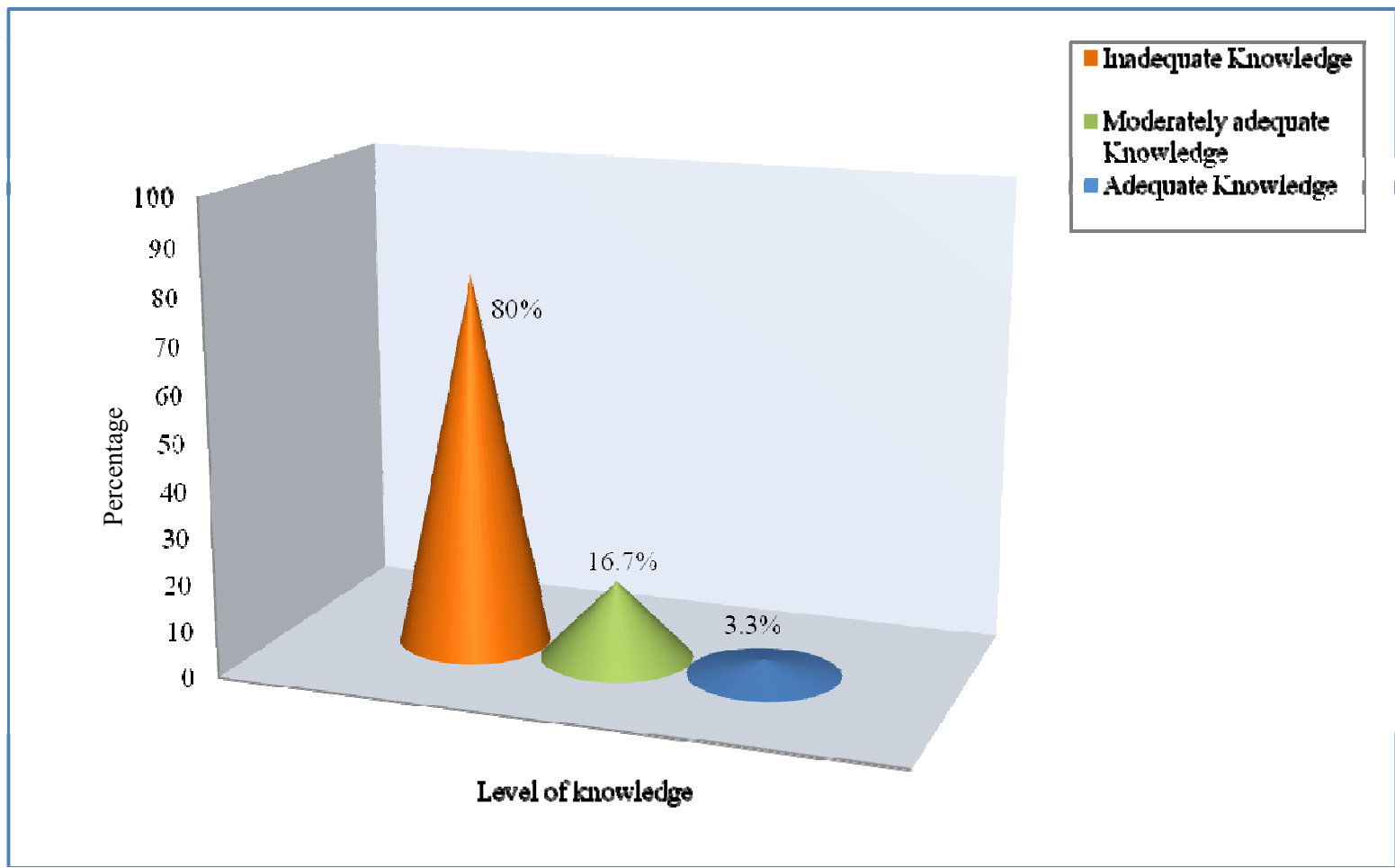
Fig. 15: The percentage distribution of pre test among caregivers of patient with Cerebro Vascular Accident

SECTION-C

Table 4: Frequency and percentage distribution of posttest level of knowledge regarding care of patient with Cerebro Vascular Accident among care givers.

N=30

Level of knowledge	Post Test	
	Frequency	Percentage
Inadequate	1	3.3
Moderately adequate	6	20.0
Adequate	23	76.7

Table 4 shows the frequency and percentage distribution of posttest level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers. In post test level of knowledge, majority of care givers 23 (76.7%) had adequate knowledge, 6 (20%) had moderate knowledge and only one (3.3%) had inadequate knowledge.
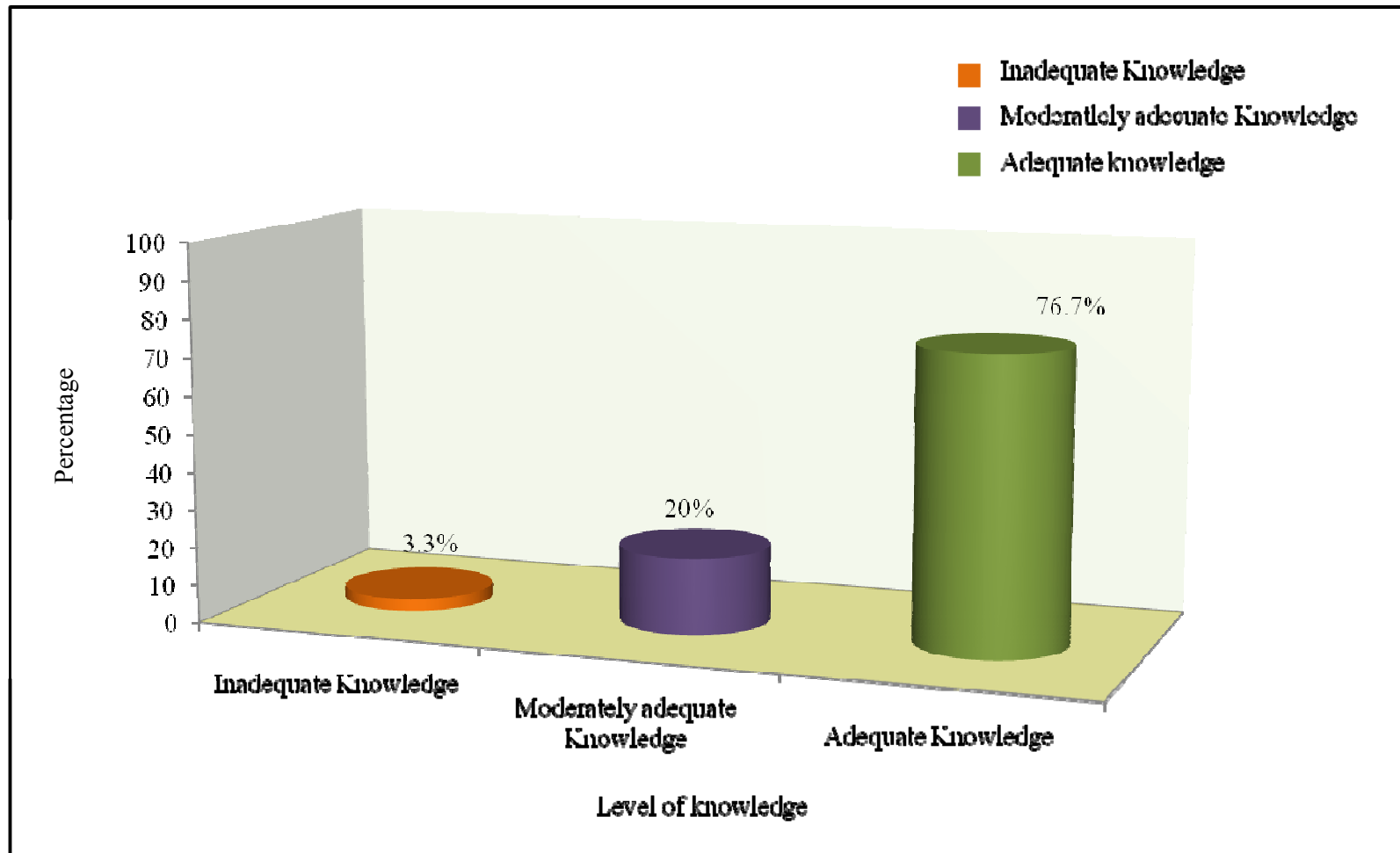
Fig. 16: The percentage distribution of post test level of knowledge among care givers of patient with Cerebro Vascular Accident

SECTION-D

Table 5: Comparison of mean and standard deviation between pre test and post test level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers.

N=30

Level of Knowledge	Mean	Standard Deviation	Paired 't' test
Pre test	12.4	3.19	20.54***
Post test	24.17	1.9	

*** P<0.001

Table 5 shows the comparison of mean and standard deviation between pre test and post test level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers. It revealed that the pre test mean score was 12.40 with the standard deviation 3.19 and post test mean score was 24.17 with standard deviation 1.9. The paired't' test value of 20.54 was statistically significant at p<0.001 level. The difference between the pre test and post test level of knowledge was very high and it was statistically significant. Thus it indicates the effectiveness of structured teaching programme.
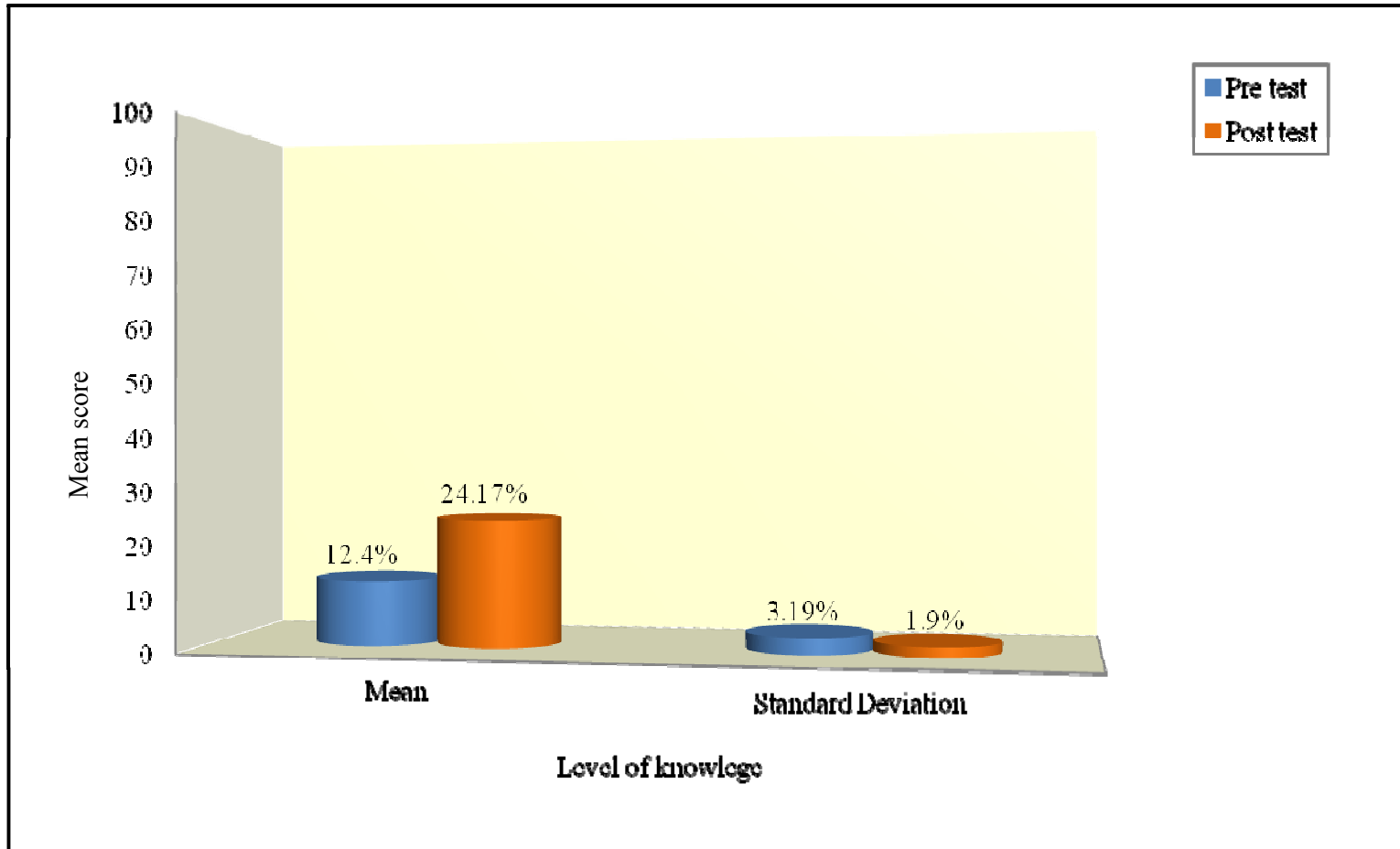
Fig. 17: Comparison of mean and standard deviation of pre and post test level of knowledge among care givers of patient with Cerebro Vascular Accident

SECTION-E

Table 6: Association between pre test level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers with their demographic variables.

Sl. No.	Demographic variables	Pretest level of knowledge				Pearson chisquare test
		Inadequate		Moderate/ Adequate		
		n	%	n	%	
1	**Age** < 40 yrs > 40 yrs	11 13	73.3% 86.7%	4 2	26.7% 13.3%	$\chi2=0.83$ df=1 NS
2	**Sex** Male Female	10 14	71.4% 87.5%	4 2	28.6% 12.5%	$\chi2=1.21$ df=1 NS
3	**Relationship with the patient** Spouse/children Others	17 7	77.3% 87.5%	5 1	22.7% 12.5%	$\chi2=0.38$ df=1 NS
4	**Duration of Care giving** > 6 months < 6months	10 14	90.9% 73.7%	1 5	9.1% 26.3%	$\chi2=1.29$ df=1 NS
5	**Education** Primary Education Secondary Education/Graduate	11 13	91.7% 72.2%	1 5	8.3% 27.8%	$\chi2=1.70$ df=1 NS
6	**Occupation** Employed Unemployed	18 6	81.8% 75.0%	4 2	18.2% 25.0%	$\chi2=0.17$ df=1 NS
7	**Income** < Rs.10,000 Rs. 10,001 - Rs. 20,000	15 9	83.3% 75.0%	3 3	16.7% 25.0%	$\chi2=0.31$ df=1 NS
8	**Marital Status** Married Unmarried	22 2	84.6% 50.0%	4 2	15.4% 50.0%	$\chi2=2.60$ df=1 NS

NS= Non Significant

Table 6, shows the association between pre test level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers with their demographic variables. The analysis revealed that there was no statistically significant association could be established with the demographic variables like age, sex, relationship with the patient and duration of care giving, education, occupation, income and marital status.

Table 7: Association between posttest levels of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers with their demographic variables.

Sl. No.	Demographic variables	Pretest level of knowledge				Total	Pearson chisquare test/Yates corrected Chi square test
		Inadequate		Moderate /Adequate			
		n	Percentage	N	Percentage		
1.	**Age**						χ2=9.33
	<40 yrs	6	40.0	9	60.0	15	df=1
	>40 yrs	1	6.7	14	93.3	15	S*
2.	**Sex**						χ2=0
	Male	3	21.4	11	78.6	14	df=1
	Female	4	25.0	12	75.0	16	NS
3.	**Relationship with the patient**						χ2=4.34
	Spouse/children	3	13.6	19	86.4	22	df=1
	Others	4	50.0	4	50.0	8	S*
4.	**Duration of Care giving**						χ2=0.15
	> 6 months	3	27.3	8	72.7	11	df=1
	< 6months	4	21.1	15	78.9	19	NS
5.	**Education**						χ2=7.95
	Primary Education	6	50.0	6	50.0	12	df=1
	Secondary Education/Graduate	1	5.6	17	94.4	18	S**
6.	**Occupation**						χ2=0.02
	Employed	5	22.7	17	77.3	22	df=1
	Unemployed	2	25.0	6	75.0	8	NS
7.	**Income**						χ2=0
	< Rs.10,000	5	27.8	13	72.2	18	df=1
	Rs.10,001 - Rs.20,000	2	16.7	10	83.3	12	NS
8.	**Marital Status**						χ2=0.01
	Married	6	23.1	20	76.9	26	df=1
	Unmarried	1	25.0	3	75.0	4	NS

* P<0.05   **P<0.01   NS= Non Significant   S= Significant

Table 7 shows, the association between posttest level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers with their demographic variables.

The analysis revealed that there was a statistically significant association could be established with the demographic variables like age, relationship with the patient and education. There was no statistically significant association could be established with the other demographic variables like sex, duration of care giving, occupation, income and marital status.

CHAPTER V

DISCUSSION

This chapter deals with the discussion of the results obtained from the statistical analysis. This study aimed to assess the effectiveness of the structured teaching program on knowledge regarding care of patient with CVA among care givers in Dr. Kamakshi Memorial Hospital at Chennai.

The hypothesis formulated that there was no significant relationship between the structured teaching programme and level of knowledge regarding care of patient with CVA among caregivers. The review of literature included the related studies which provide a strong foundation for the study including the basis for conceptual framework and formation of tool.

The conceptual framework for this study was developed based on Kenny's open system model. The research design used in this study was pre experimental one group pre test and post test design. It was carried out with 30 samples those were fulfilled the inclusion criteria. Purposive sampling technique was used to select the samples among the target population.

The investigator used interview schedule to assess the knowledge regarding care of patient with Cerebro Vascular Accident among caregivers. A formal written permission was obtained from the Medical Director in Dr. Kamakshi Memorial Hospital, Chennai. The collection procedure was scheduled from 1-6-2011 to 30-6-2011. The study was carried out with total of 30 caregivers, who were fulfilling the inclusion criteria. The investigator introduced herself to the caregiver of patient with Cerebro Vascular Accident and the purpose of the study was explained to ensure better co-operation. Purposive sampling technique was used to select the sample.

Every week 7 to 8 samples were assessed on the knowledge regarding care of patient with Cerebro Vascular Accident. An interview schedule was used to assess the knowledge regarding care of patient with Cerebro Vascular Accident. After 30 minutes the tool was recollected. Then the structured teaching program was given to the patient about 20 to 30 minutes. After 3 days Post Test was conducted by using the same interview schedule.

The data collected was analyzed using descriptive and inferential statistics. The distribution of demographic variables of patients with Cerebro Vascular Accident who were participated in the study showed that the majority of the patients 14 (46.7%) were in the age between 41-60 years. Regarding gender, the majority of the patients 16 (53.3%) were females.

Considering duration of illness, the majority 19 (63.3%) below 6 months. Considering the associated disease, the majority 12 (40%) had hypertension.

With respect to age, the majority of the caregivers 10 (33.3%) were in the age between 41-50 years. With respect to the gender, the majority of the caregivers 16 (53.3%) were female. In regard to caregivers relationship with the patient, the majority 12 (40%) were spouse.

Considering duration of care giving, the majority 19 (63.3%) were giving care for less than 6 months. With respect to education, the majority 14 (46.7) were got secondary education.

In account with occupation, the majority of the caregivers 22 (73.3%) were employed regarding income of the caregivers, 18 (60%) were less than Rs.10,000. With regard to marital status, the majority of caregivers 26 (86.7) were married.

The first objective was to assess the pre test level of knowledge regarding care of patient with Cerebro Vascular Accident among care givers.

In pre test 1 (3.3%) caregiver had adequate knowledge. 5 (16.7%) had moderately adequate knowledge and 24 (80%) caregivers had inadequate knowledge regarding care of patient with Cerebro Vascular Accident.

The study finding correlated with the study of Koenig KL, (2007) who did a prospective cohort study to measure stroke knowledge and pre stroke personal health behaviors of stroke patients undergoing inpatient rehabilitation and their caregivers. The participants were a total of 130 stroke patients and 85 caregivers interviewed after ischemic stroke. They 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. Stroke patients participating in

inpatient rehabilitation and their caregivers have large gaps in stroke knowledge and have suboptimal personal health behaviors, thereby putting patients at high risk for recurrent stroke. The finding highlights the need to develop stroke-education programs for rehabilitating patients that are effective in closing these gaps in knowledge and personal health behaviors.

The second objective was to assess the post test level of knowledge regarding care of patient with Cerebro Vascular Accident among care givers.

In post test 23 (76.7%) had adequate knowledge, 6 (20%) had moderately adequate knowledge and only one (3.3%) had inadequate knowledge.

The study result correlated the study of Anne Jones, et al., (1998) who did a quasi-experimental study to evaluate a teaching intervention regarding the knowledge and practice in positioning stroke patients among nurses. 38 stroke patients and 59 nursing staff members from 6 wards were randomly allocated to experimental or control status. Using 2 questionnaires, the nurses knowledge of the terminology used to denote posture and of issues relating to the moving and positioning of stroke patients was assessed before, immediately after and 3 months after a package of formal teaching was implemented on the experimental wards. The results showed that immediately after teaching, nurses in the experimental group scored significantly higher than those in the control group on the terminology questionnaire (P<0.05) and the moving and positioning questionnaire (P<0.001). Three months later, the experimental group scored higher on the latter questionnaire only (P<0.005). The positioning of patients in the experimental group was improved overall after the teaching (P<0.0005) and improvements to specific parts of the body were noted.

The third objective was to assess the effectiveness of structured teaching program on knowledge regarding care of patient with Cerebro Vascular Accident among care givers.

In comparison of mean and standard deviation between pre test and post test level of knowledge, there was marked increase in the mean value from 12.40 in pre test to 24.17 in post test. The standard deviation was decreased from 3.19 in pre test to 1.9.in the post test. The calculated 't' value was 20.54 at p<0.001 showed the statistically significant difference between the pre test and post test level of

knowledge regarding care of patient with Cerebro Vascular Accident. Hence it indicates the effectiveness of structured teaching program.

The study findings correlate with study of Smith. J, et al., (2008) conducted a meta analysis to assess the effectiveness of information provision strategies in improving the outcome for stroke patients and/or their identified caregivers. Finding revealed that there were significant effects in favor of the intervention on patient knowledge caregiver knowledge, patient depression scores and one aspect of patient satisfaction. Post-hoc subgroup analyses showed that strategies which actively involved patient and caregivers had a significantly greater effect on patient anxiety and depression than passive strategies.

The study finding correlated with the study of Choi JS et al., (2006) conducted a study to evaluate the effects of CVA patient care education on the knowledge and practice of care givers of CVA patients. The research design was non-equivalent control group non-synchronized design. The sample size was forty primary care givers of CVA patient who were hospitalized in a neurology unit of a university hospital were assigned to experimental and control group. The experimental group participated two times in an education class given by the researchers. They found that the stroke patient care education developed in this study shows a significant promotion of knowledge and practice of caregivers.

The fourth objective was to associate pre test and post test level of knowledge regarding care of patient with Cerebro Vascular Accident among care givers.

In the association between pre test level of knowledge and the demographic variable, there was no statically significant association could be established with age, sex and relationship with the patient, duration of care giving, education, occupation, income and marital status. There was a significant association was found between demographic variable like with the post test level of knowledge , the age, relationship with the patient and education at p<0.05 level.

The study finding is concluded that the caregivers of the patient with Cerebro Vascular Accident had more level of knowledge after the structured teaching programme when compared with the pre test level of knowledge. Hence the

hypothesis was rejected which was stated that there was no significant association between the level of knowledge and structured teaching programme regarding care of patient with Cerebro Vascular Accident among caregivers. So, structured teaching program was an effective method to increase the level of knowledge regarding care of patient with Cerebro Vascular Accident among caregivers.

CHAPTER VI

SUMMARY, CONCLUSION, NURSING IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS

A report is a textual work. Report is generally an analysis or description of a problem or incident. This chapter gives a brief account of the present study including the conclusion drawn from the findings, recommendations, limitations of the study, suggestions for the study and nursing implication. The present study was intended to know the level of the knowledge among caregivers of patient with Cerebero Vascular Accident.

SUMMARY

Nurses as health care professionals have dual responsibility of being health care providers as well as health educators. Caregivers of patients with Cerebro Vascular Accident have lack of knowledge and practice regarding the care. By keeping this in view the researcher in the study has aimed at educating the caregivers of patient with Cerebero Vascular Accident

This study was done to assess the effectiveness of structured teaching program on knowledge regarding care of patient among caregivers in Dr.Kamakshi Memorial Hospital at Chennai. The study showed that care givers knowledge were not enough in the pre test. After giving Structured Teaching Programme by assessing post test the researcher found that there was marked improvement of knowledge on care of patient with Cerebro Vascular Accident.

The objectives of the study were,

1. To assess the pre test level of knowledge regarding care of patient with Cerbero Vascular Accident among caregivers.

2. To assess the post test level of knowledge regarding care of patient with Cerbero Vascular Accident among the caregivers

3. To evaluate the effectiveness of the Structured Teaching Program on knowledge regarding care of patient with Cerbero Vascular Accident among caregivers.

4. To associate the pre test and post test level of knowledge with selected demographic variables of caregivers.

The hypothesis formulated was that there was no significant relationship between the structured teaching program and knowledge regarding care of patient with Cerebro Vascular Accident among caregivers. The review of literature included the related studies, which provide a strong foundation for the study including the basis for conceptual framework and formation of tool.

The conceptual framework for this study was derived from Kenney's Open System Model (1999). The study was conducted by adopting a pre experimental one group pretest posttest research design. The sample consists of caregivers of the patient with Cerebero Vascular Accident, those were admitted in the neurological unit at Dr. Kamakshi Memorial Hospital in Chennai and who fulfilled the inclusive criteria. Purposive sampling technique was used to select the samples among the target population. The investigator prepared the instrument used for data collection.

An interview schedule tool was used to the sample to assess the pre test level of knowledge. The structured teaching was given for 20 to 30 minutes. The post test was conducted after three days by using the same tool.

The data collected was analyzed using descriptive and inferential statistics. The distribution of demographic variables of study showed that majority of patients 11 (55%) were male. 13 (65%) were in the age between 21-40 years. The majority of the patients 14 (70%) were living in urban and 18 (90%) were non-vegetarian.

Related to gender of the caregiver of patients with Cerebro Vascular Accident, the majority of the caregivers 13 (65%) were female.

Considering age of the caregiver of the patient with Cerebro Vascular Accident, the majority of the care givers 14 (70%) was in the age group between 30 and 45. Regarding care givers income, the majority of the caregivers 10 (50%) were getting less than 5000. In accordance with occupation of the caregivers of the

patients with Cerebero Vascular Accident, the majority of the caregivers 12 (60%) were employed.

The analysis revealed that there was a marked increase in the mean value from 12.4 in pre test to 24.17 in post test and the standard deviation is decreased from 3.19 in pre test to 1.9 in post test. The paired 't' value of 20.54 at $p<0.001$ showed the statistically significant difference between the pre test and post test level of knowledge regarding Care of the patient with Cerebro Vascular Accident among care givers. Hence it indicates the effectiveness of structured teaching program.

CONCLUSION

The present study assessed the effectiveness of structured teaching program. The study findings revealed that there was a significant improvement in the level of knowledge after providing structured teaching program. Based on the statistical findings, it was evident that provision of such kind of structured teaching program would motivate the care givers and help them to acquire knowledge regarding care of the patient with Cerebero Vascular Accident. Therefore structured teaching program was very important to provide quality-nursing care which helps to meet the needs of the patients for their well being. So the study was rejected null hypothesis.

NURSING IMPLICATIONS

The findings of the study have implications in various areas of nursing service, nursing education, community and home care services.

Nursing service

Nurses working in neurological department can utilize technique such as individual and group teaching to manage the patient with Cerebero Vascular Accident. Teaching programme can be conducted for all those are caring the patient with Cerebro Vascular Accident. Nurses can participate in the management of daily living and the psychological care to the patient and caregivers of the patient with Cerebro Vascular Accident. It is important role of nurse to render information through health education in simple ways to enhance the patient's knowledge.

Nurses in the neurological setting should be instructed to assess the level of knowledge regarding care of patient with Cerebro Vascular Accident. In-service

education can be produced to all nurses to update their knowledge in symptom management with regard to recent advances. In community, the community health nurse can utilize this structured teaching programme for educating care of patient Cerebro Vascular Accident among care givers. More knowledge regarding care of patient with Cerebro Vascular Accident can reduces further complication.

Nursing Education

Students can utilize the structured teaching program to up lift their knowledge regarding care of patient with Cerebro Vascular Accident. Nurses can enrich the knowledge regarding the care of patient with Cerebro Vascular Accident. Periodic seminars and group discussion can be arranged on new strategies regarding care of the patient with Cerebero Vascular Accident.

Nursing Administration

Cerebro Vascular Accident is a complex disease that requires the efforts and skills of all members of the multidisciplinary team. Rapid recognition and treatment for the patient with acute stroke can improve clinical outcomes. A coordinated multidisciplinary effort is necessary to accomplish this goal.

The establishment of a stroke team and adherence to the recommendations for a Primary Stroke Center can provide a clear framework for development of a successful program. Nurses are often responsible for the coordination of care throughout the continuum.

Nursing Research

The findings of the study help to expand scientific body of professional knowledge upon which further researches can be conducted. Training care givers reduces costs and caregiver's burden while improving psychosocial outcomes in care givers and patients at one year. It is estimated that 25-74% of stroke survivors require help with activities for daily living from informal care givers, often family members.

Interventions to support care givers by providing education, counseling, emotional support or help with accessing services by using information packages, social workers, specialist nurses or family support workers have shown little impact on patients and only modest improvements in psychological and social measures in

care givers. Training care givers in skills essential for the day to day management of disabled stroke survivors is likely to have a role in reducing the burden of care.

The effectiveness of caregiver's training in reducing stroke costs and improving patient and caregiver outcomes. Hence more studies can be conducted in this area in order to strengthen the expanded role of nurses.

RECOMMENDATIONS

- An information booklet can be prepared as a teaching aid in the hospital and health clinics.

- A longitudinal study can be done using post test after one month, six months and after one year to see the retention of the knowledge.

- A comparative study can be done between urban and rural areas.

- A similar study can be replicated on a large sample.

LIMITATIONS

Since the caregivers were in emotionally upset, it was difficult to conduct study in hospital.

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APPENDIX-B

Letter seeking consent of the subjects for the participation in the research study

I am voluntarily willing to participate in the study conducted by Ms.Agnes. J, on "A Study to assess the effectiveness of structured teaching programme on knowledge regarding care of patient with Cerebro Vascular Accident among care givers in Dr. Kamakshi Memorial Hospital at Pallikaranai". I will also co-operate with the researcher in providing necessary information. I was explained that the information provided would be kept in confidential and used only for above mentioned study purpose.

Signature of the investigator   Signature of the patient

Place: Place:

Date: Date:

APPENDIX-D

LIST OF EXPERTS FOR CONTENT VALIDITY

DR. C. KANNIAMMAL, R.N., R.M.,M.Sc(N)., PH.D.,
Principal,
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MR. HEMA SURESH, R.N.,R.M.,M.Sc(N).,
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Dr. CHANDRAMOULEESWARAN
Consultant in Neurology,
Dr. Kamakshi Memorial Hospital,
Pallikaranai, Chennai-600100.

APPENDIX-E

CERTIFICATE FOR ENGLISH EDITING

This is to certify that dissertation, **"A study to assess the effectiveness of structured teaching programme regarding care of patient with Cerebro Vascular Accident among care givers in Dr. Kamakshi Memorial Hospital at Pallikaranai, Chennai, 2011-2012,"** prepared by Miss. AGNES. J. II year M.Sc(N)., student of Madha College Of Nursing, Kundrathur, Chennai, for the dissertations edited for English language appropriateness .

Name: _____

Signature: _____

.

CERTIFICATE FOR TAMIL EDITING

This is to certify that dissertation, **"A study to assess the effectiveness of structured teaching programme regarding care of patient with Cerebro Vascular Accident among care givers in Dr. Kamakshi Memorial Hospital at Pallikaranai, Chennai, 2011-2012,"** prepared by Miss. AGNES. J. II year M.Sc(N)., student of Madha College Of Nursing, Kundrathur, Chennai, for the dissertations edited for Tamil language appropriateness .

Name: _____

Signature: _____

CONTENT VALIDITY

This is to certify that the content and the tool to the statement of the problem, **"A study to assess the effectiveness of structured teaching programme regarding care of patient with Cerebro Vascular Accident among care givers"** prepared by Ms. Agnes M.Sc (N) II year student currently pursuing her M.Sc(N) degree program for the partial fulfilment of her dissertation at Madha college of Nursing, Kundrathur, Chennai – 600069 is found to be valid to the best of my knowledge.

Name: _____

Signature: _____