

A study to assess the effectiveness of nurse-led intervention on knowledge regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib

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CHAPTER- I INTRODUCTION

"The first principle is that you must not fool yourself – and you are the easiest person to fool."

Physicist Richard P. Feynman warned

Stroke is a major public health concern and one of the leading causes of death and long-term disability worldwide. Globally, hypertension has been identified as the most significant modifiable risk factor for both ischemic and hemorrhagic stroke, strongly influencing stroke incidence, recurrence, and outcomes (JCN, 2025). In individuals with elevated blood pressure, the risk of stroke increases continuously, and effective blood pressure management is essential for prevention (JCN, 2025; Kelly & Rothwell, 2015). Hypertension contributes substantially to the global burden of cerebrovascular disease, particularly in low- and middle-income countries, where awareness and preventive practices remain suboptimal (Melak et al., 2021).

Stroke is one of the most devastating non-communicable diseases and remains a leading cause of mortality, long-term disability, and reduced quality of life across the world. **According to the World Health Organization (WHO)**, stroke is the second leading cause of death globally and a major contributor to adult disability.

The burden of stroke is particularly high in low- and middle-income countries, including India, where rapid urbanization, lifestyle changes, and inadequate preventive health services have contributed to a rising incidence of cardiovascular and cerebrovascular diseases (Feigin et al., 2021).

Hypertensive patients often exhibit limited knowledge and inconsistent engagement in stroke prevention behaviors. Research conducted among hypertensive populations in India revealed that awareness of stroke risk factors and preventive measures varied considerably, with many participants lacking understanding of key predictors and emergency responses, despite moderate adherence to antihypertensive medication (Kashyap et al., 2023). These findings underscore a critical gap in knowledge and practice that may heighten stroke risk among high-risk communities (Kashyap et al., 2023).

Studies from diverse settings similarly show inadequate levels of recognition of stroke warning signs and lifestyle practices aimed at mitigating risk, suggesting that educational deficits contribute to persistent stroke susceptibility in hypertensive cohorts **(Melak et al., 2021; Frontiers, 2022)**.

Hypertension is recognized as the single most important modifiable risk factor for stroke. Persistent elevation of blood pressure damages blood vessels, accelerates atherosclerosis, and increases the likelihood of cerebral infarction or hemorrhage (Kelly & Rothwell, 2015). Evidence indicates that individuals with uncontrolled hypertension have a four-to-six-fold higher risk of developing stroke compared to normotensive individuals (O'Donnell et al., 2016). Despite the availability of effective antihypertensive therapies and well-established preventive guidelines, stroke incidence remains high due to poor awareness, inadequate lifestyle modification, and suboptimal adherence to preventive practices among hypertensive patients.

In India, hypertension has emerged as a significant public health challenge, affecting both urban and rural populations. Studies suggest that a large proportion of hypertensive individuals remain either undiagnosed or inadequately treated, and even among those receiving treatment, knowledge regarding stroke prevention is often insufficient (Gupta et al., 2019). Limited understanding of stroke warning signs, risk factors, and preventive strategies delays timely intervention and contributes to increased morbidity and mortality. Community-based studies have shown that many hypertensive patients lack awareness of the role of diet, physical activity, smoking cessation, stress management, and regular blood pressure monitoring in stroke prevention **(Kashyap et al., 2023)**.

The epidemiological transition toward non-communicable diseases has intensified the prevalence of stroke worldwide. Developing countries account for nearly 70% of stroke deaths and 87% of stroke-related disability-adjusted life years (DALYs) lost globally (WHO, 2021). In India, stroke has emerged as one of the leading causes of mortality and morbidity, with rising incidence among middle-aged and elderly populations. Rapid urbanization, sedentary lifestyles, unhealthy dietary patterns, tobacco use, and psychosocial stress have collectively contributed to the increasing burden of stroke and its risk factors **(Gupta et al., 2019)**.

Knowledge and practices related to stroke prevention are closely interrelated. Adequate knowledge empowers individuals to adopt healthy behaviors, adhere to treatment regimens, and seek prompt medical care when warning signs appear. Conversely, lack of knowledge and poor health practices can lead to uncontrolled hypertension and increased stroke risk. Therefore, improving knowledge and translating it into effective preventive practices is essential for reducing the burden of stroke, especially among high-risk groups such as hypertensive patients. **(Melak et al., 2021)**.

Nurses play a crucial role in health promotion, disease prevention, and chronic disease management, particularly at the community level. Nurse-led interventions are increasingly recognized as cost-effective and sustainable strategies for improving patient outcomes. These interventions typically include health education, counseling, lifestyle modification guidance, medication adherence support, and regular follow-up. Nurses, due to their close contact with patients and understanding of community health needs, are uniquely positioned to deliver structured educational programs that enhance patients' knowledge and encourage positive behavioral change. **(Downey et al., 2023)**

Several studies have demonstrated the effectiveness of nurse-led interventions in improving blood pressure control, cardiovascular risk reduction, and patient self-management skills. Educational interventions led by nurses have been shown to improve awareness of stroke risk factors and promote adoption of preventive practices such as dietary modification, physical activity, and smoking cessation. However, evidence regarding the effectiveness of

such interventions in community settings, particularly in rural and semi-urban areas of Punjab, remains limited. (García et al., 2022).

District Fatehgarh Sahib, like many other districts in Punjab, is witnessing a growing prevalence of hypertension and lifestyle-related diseases. Community-level health services often face challenges such as limited resources, inadequate health education programs, and poor follow-up of chronic disease patients. Hypertensive individuals residing in these areas may not receive systematic education regarding stroke prevention, resulting in poor knowledge and unsafe health practices. Addressing this gap through structured nurse-led interventions may significantly improve preventive outcomes and reduce stroke-related complications.

In this context, the present study seeks to assess the effectiveness of a nurse-led intervention on knowledge and practices regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib. By evaluating changes in knowledge and preventive practices following the intervention, this study aims to generate evidence that can support the integration of nurse-led educational programs into community health services. Such evidence is vital for strengthening preventive care, enhancing patient empowerment, and ultimately reducing the burden of stroke among hypertensive populations.

Nurses play a pivotal role in chronic disease management, including hypertension and stroke prevention, by offering education, counselling, follow-up care, and behavioural support. Nurse-led interventions have been identified as effective strategies to improve clinical outcomes, such as blood pressure control, lifestyle modification, and patient self-efficacy (Downey et al., 2023; García et al., 2022).

Systematic reviews indicate that nurse-led programs may lead to meaningful reductions in systolic and diastolic blood pressure and support adherence to healthy behaviours compared with usual care, although mixed findings exist regarding their impact on patient knowledge (Downey et al., 2023).

According to WHO Educational components of nurse-led interventions are especially critical in primary and secondary prevention of cardiovascular disease, as informed patients are likelier to adopt preventive actions and sustained behavioural changes.

Community-based nurse-led interventions are increasingly recognized as effective strategies for stroke prevention. Such interventions typically involve structured teaching sessions, individualized counseling, demonstration of self-care practices, and periodic follow-up to reinforce learning. Evidence suggests that nurse-led educational programs improve patients' understanding of disease processes, enhance self-management skills, and promote adherence to preventive practices (García et al., 2022). Additionally, nurses are often more accessible and trusted within community settings, making them ideal facilitators of preventive health programs.

NEED FOR THE STUDY

According to WHO Stroke remains a leading cause of death and long-term disability, yet a large proportion of strokes are preventable through effective management of modifiable risk factors, particularly hypertension. Despite the availability of evidence-based guidelines for blood pressure control and stroke prevention, the burden of stroke continues to rise, especially in developing countries such as India. This indicates a significant gap between recommended preventive measures and their actual implementation at the community level.

Hypertensive patients constitute a high-risk group for stroke, and their knowledge and practices regarding prevention play a crucial role in determining health outcomes. Several studies have reported inadequate awareness

of stroke risk factors, warning signs, and preventive strategies among hypertensive individuals, particularly in rural and semi-urban communities. Poor health literacy, lack of structured education, and limited follow-up services contribute to unsafe practices such as irregular medication intake, unhealthy diet, physical inactivity, and delayed health-seeking behaviour. (Melak et al., 2021).

In Punjab, lifestyle-related disorders such as hypertension are increasingly prevalent due to dietary habits, sedentary lifestyle, and stress. District Fatehgarh Sahib is no exception, with many hypertensive patients depending on primary and community health services for ongoing care. However, preventive education related to stroke is often insufficient and unstructured, resulting in missed opportunities for early prevention. Community health nurses, who are in regular contact with patients and families, are well-positioned to deliver targeted educational interventions to address these gaps.

Nurse-led interventions have shown promise in improving patient knowledge, self-care practices, and adherence to treatment in chronic diseases. However, there is limited empirical evidence assessing the effectiveness of such interventions specifically on stroke prevention among hypertensive patients in community settings of Punjab. Therefore, this study is needed to evaluate whether a structured nurse-led intervention can effectively improve knowledge and practices regarding stroke prevention. The findings may help strengthen community-based nursing practices and inform the development of effective preventive health programs.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of nurse-led intervention on knowledge regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib.

OBJECTIVES OF THE STUDY

1. To assess the pre- test and post – test level of knowledge regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib
2. To implement a nurse-led intervention on stroke prevention among hypertensive patients.
3. To evaluate the effectiveness of the nurse-led intervention by comparing pre- and post-intervention of knowledge scores.
4. To determine the association between post-intervention knowledge and selected demographic variables of hypertensive patients.

Hypotheses

(All hypotheses will be tested at the 0.05 level of significance.)

H₁: There will be a significant difference between the pre-test and post-test knowledge and practice scores regarding stroke prevention among hypertensive patients after the nurse-led intervention.

H₂: There will be a significant association between post-test knowledge and practice scores regarding stroke prevention and selected demographic variables of hypertensive patients.

ASSUMPTIONS

- Hypertensive patients may have varying levels of knowledge and practices regarding stroke prevention.
- Nurse-led interventions can improve knowledge and promote healthy practices.
- Improved knowledge will positively influence preventive practices related to stroke.

DELIMITATIONS

- The study was limited to hypertensive patients residing in selected community areas of District Fatehgarh Sahib.
- The study focuses only on knowledge and practices related to stroke prevention.

SUMMARY

This chapter the introduction of the study, need of the study, research problem, aim of study, objective, operational definitions, hypothesis, rationale, delimitations.

CHPATER-II

REVIEW OF LITERAURE

"Nothing has such power to broaden the mind as the ability to investigate systematically and truly all that comes under thy observation in life."

Roman Emperor Marcus Aurelius

A literature review is an evaluative report of information found in the literature related to selected area of study. The review describes, summaries, evaluates, clarifies this literature.it gives a theoretical base for the research and helps to determine the nature of research (**Queensland University, 2000**)

The purpose of review of literature is to obtain comprehensive knowledge base and in department of information from previous studies. The researcher normally has to review a literature to get idea and bring into the light them with the previous knowledge and finding of the study.

In this research study the research made an extension effort to bring document about perceived academic stress of students. Researcher have searched majority of database which includes PubMed, Google Scholar, Research articles, university libraries to identify the available work done in this regard and also to identify the gap, which can be bridge by the help of present study.

Sane (2024) conducted a community-based study on 100 hypertensive patients to assess nurse-led interventions on stroke prevention knowledge and practices. **Result:** Knowledge scores improved from 45% (pre-test) to 85% (post-test), and adherence to preventive practices increased by 30%.

Stephen et al. (2024) revealed that nurse-led interventions significantly reduced systolic and diastolic blood pressure and improved lifestyle behaviors such as diet, physical activity, and medication adherence. Nurse-led interventions have been proven effective in managing chronic diseases, particularly hypertension.

BMC Nursing (2022) reported that nurse-led telehealth and community-based interventions improved patients' self-management skills and knowledge regarding hypertension and stroke prevention. Nurses, through counseling, follow-up, and reinforcement, play a crucial role in promoting sustainable behavior change.

Reddy and Thomas (2022) studied 70 hypertensive patients receiving regular nurse follow-up. Result: Improved adherence to medication, increased self-monitoring of blood pressure, and better preventive behaviors were observed post-intervention.

Gupta and Kapoor (2021) assessed lifestyle modification practices among hypertensive patients and observed that nurse-guided counseling significantly improved dietary habits, physical activity, and medication adherence. Similarly, Lakshmi et al. (2021) reported that structured nurse-led teaching programmes resulted in sustained improvement in both knowledge and practices related to stroke prevention.

Mohammad Khalil et. al. (2020) conducted a survey on 390 participants to evaluate the knowledge, warning signs, risk factors, and response to stroke among Lebanese older adults in Beirut. The study showed that adequate response to stroke was positively associated with awareness of stroke symptoms but less aware about diabetes as a risk factor of stroke.

Pandey and Dubey (2020) evaluated a community-based educational intervention and found a marked improvement in awareness of stroke warning signs and preventive practices among hypertensive patients after structured teaching sessions. The authors concluded that repeated education is essential for sustaining preventive behaviors.

Sima Kurmi et. al. (2020) carried out a study to detect the awareness of warning symptoms, risk factors, and response to acute stroke, on 340 community-dwelling adults in Biswanath district of Assam. Awareness about stroke was significantly higher in males, those were educated, government employees, high-income, and who reported the receiving information from the relevant source, and knowledge about at least one risk factor and one correct answer about acute stroke. The study concluded that the awareness about acute stroke warning symptoms, risk factors, and response needs be raised focusing on women, those were low education groups, nongovernment sector, and low-income groups.

Sinha, Verma, and Rohilla (2020) conducted a descriptive study on 100 hypertensive patients to assess knowledge, attitude, and practices regarding stroke prevention. Result: 55% of participants had inadequate knowledge, while 40% followed irregular preventive practices, highlighting a knowledge-practice gap.

Williams et al. (2020) conducted a randomized controlled trial and found that nurse-led lifestyle modification programmes significantly improved dietary practices, physical activity, and blood pressure control among hypertensive patients.

Chaudhary and Sharma (2020) evaluated a structured teaching programme and reported a significant increase in post-test knowledge scores regarding stroke prevention among hypertensive patients. The study concluded that nurse-delivered education was effective in improving preventive practices.

Sureshkumar Kamalakannan et. al. (2019) carried out a systematic review to determine the magnitude of stroke. Cross-sectional and cohort studies published during 1960 to 2015 were included. A total of 3079 studies were identified, where only 10 population-based cross-sectional studies matched the inclusion criteria. Stroke incidence was 105 to 152/100,000 persons per year, and prevalence was 44.29 to 559/100,000 persons in high income countries indicating more cases of stroke as compared to low income countries.

Manik Chhabra, et. al. (2019) conducted a survey to determine the public awareness of risk factors, signs and symptoms, and the treatment options available for stroke with particular importance on thrombolysis, and its window period on 350 participants. Study results showed that, hypertension was found the most common risk factor in the participants and 28.85% participants were not aware about the risk factors and 46% participants were

not aware about warning signs of stroke. The window period of thrombolysis was compared with gender. Male participants were more aware than female participants about the right window of thrombolysis (0–4.5 hours).

Nayab Z. Dar et. al. (2019) conducted a study on 384 participants to assess awareness and practices regarding stroke among hypertensive patients in a tertiary care hospital of Islamabad. The study revealed that, 80.5% participants were aware about stroke, 71.6% know someone with stroke, and 76% know that the brain is affected organ. The common symptoms were numbness of limb (66.9%), hypertension (93.5%) and risk factors were also assessed. 87.5% stroke patients would go to hospital for treatment. 45.1% of the patients were taking medications regularly, and 38% checked blood pressure periodically. The hypertensive patients were knowing about stroke but less aware about risk factors and warning signs.

Meena K. S. Murthy et. al.(2019) conducted qualitative study on 12 ASHAs participants to assess the awareness about stroke in Karnataka, India. The ASHAs were not having adequate awareness about stroke, causes, and related treatment services. The study concluded that the level of awareness was inadequate about stroke among the ASHAs.

Oznur Usta Yesilbalkan et. al. (2019) conducted a study in the neurology clinic of Turkey, to compare the awareness of stroke among 203 caregivers of stroke and non-stroke patients. The caregivers of stroke patients had better awareness than caregivers of non-stroke patients like weakness as the most common warning sign (96.2%), whereas dyspnoea (39%), as the least common sign. The study concluded that the caregivers of stroke patients had a moderate knowledge with reference to warning signs and risk factors of stroke.

Kumar and Devi (2019) found that hypertensive patients who received health education demonstrated improved adherence to medication, dietary modifications, and regular blood pressure monitoring. These findings highlight the importance of educational strategies in enhancing preventive practices.

Jones et al. (2019) conducted an international study and found that nurse-led hypertension management programmes significantly reduced blood pressure levels and improved self-care practices, thereby lowering stroke risk. Whitehead et al. (2018) also emphasized that nurse-led health promotion interventions were effective in improving patient engagement and long-term adherence to preventive practices

Obaid Almalki et.al (2018) conducted a study on 20 healthcare staff to detect the awareness about post-stroke cognitive impairment in Ireland. Approximate 75% of participants felt that they had knowledge regarding post-stroke cognitive deficits. 70% participants agreed that cognitive function should be routinely observed and 85% participants discussed about the potential impact of post-stroke cognitive impairment with patients and their families. 15% participants need to be made aware about post-stroke cognitive deterioration. The study concluded that a small number of healthcare staff felt they did not have adequate awareness regarding post-stroke cognitive impairment.

Mohammad A. Farrag et. al. (2018) carried out a survey on 1154 participants to assess public stroke knowledge, awareness, and response to acute stroke among Egyptians. The study showed that the participants were found to have less awareness about stroke. Participants having any kind of source of information, high income, high level of education, knowledge about risk factors of stroke and knowing someone with stroke had high level of awareness about stroke.

Sumit Kumar Singh et. al. (2018) conducted a case control study on 189 participants to find out the knowledge, attitude and perception about risk factors and warning symptoms of Ischemic stroke among two groups, one of control and another of caregivers of stroke patient in a tertiary care centre. The study revealed that 69.84% of the caregivers whereas 48.67% in control group were aware about the risk factors of stroke. 65.6% of the caregiver whereas only 30% in control were aware about the warning signs of stroke. The participants believed that ischemic stroke is preventable, it can occur more than one time and affects the activities of daily routine.

Devika Adusumilli, Saba Syed et. al. (2018) carried out a population-based study to detect the stroke awareness, attitude, and specific health-seeking behavior among 396 adults in an urban slum Hyderabad. The participants were having knowledge about the term stroke (70.20%), the affected organ is brain (12.59%), at least one symptom of stroke (85.25%), at least one complication of stroke (93.52%), at least one risk factor of stroke (61.15%) and mode of prevention of stroke (12.94%). 21.34% participants were having periodic health check-up for screening of diabetes and hypertension. The study concluded that there was inadequate knowledge, attitude, and health-seeking behaviour about stroke among adults in an urban slum of Hyderabad.

Ananthabadmanaban (2017) evaluated the effectiveness of a structured teaching programme on stroke prevention among hypertensive patients and reported a significant improvement in post-test knowledge scores compared to pre-test scores. Knowledge and practice regarding stroke prevention play a vital role in reducing stroke incidence.

Kholoud Abdullah Aldebasi et. al. (2017) conducted a survey on 2021 participants to determine the knowledge, attitude and practice (KAP) for risk factors and warning symptoms of stroke in Saudi Arabia. Nine percent of the participants were suffering from stroke while 28% had relatives suffering from stroke. The majority of participants were having inadequate knowledge about the risk factors and warning symptoms of stroke, resulting in insufficient KAP in 63.8% of the participants and only 36.2% had good KAP. The good KAP was significantly related with younger age and high educational status. The study concluded that the level of KAP about stroke risk factors and warning symptoms was insufficient among participants.

SUMMARY

The review of literature is the ability of identifying research problem developed and refined research questions. It helps in the study to provide such data that most of the researcher used questionnaire and interview method to collect data assess the effectiveness of nurse-led intervention on knowledge and practices regarding stroke prevention among hypertensive patients.

CHAPTER-III

MATERIAL AND METHODS

Research methodology is the science dealing with the principles of procedure in research study. It is the most important part of research study which enables the researcher to project blue print for the research under taken. It is a systematic way to solve the research problem. This study aimed to a quasi-experimental study to assess the effectiveness of nurse-led intervention on regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib.

This chapter deals with the brief description of methodology adopted for study which includes -

- Research approach
- Research design
- Research setting
- Target population
- Sample and sampling technique
- Inclusion and Exclusion criteria
- Selection and Development of tool
- Description of tool
- Phases of research methodology
- Pilot study
- Validity of tool
- Criterion measurement
- Data collection procedure
- Ethical considerations
- Plan of data analysis
- Expected outcomes

Research Approach

The study adopted a quasi-experimental pre-test and post-test design to assess the effectiveness of a nurse-led intervention on knowledge and practices regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib. This design was chosen to measure the change in knowledge and practices before and after the intervention.

Research Design

Quasi experimental Research design was adopted for the present study.

For present study the research design was utilized to achieve the stated objectives. Pre-test and post-test design was used in this study.

Target population

A target population consists of the total number of people which are meeting the designated set of criteria. In other words, it is the aggregate of all the cases with a certain phenomenon about which the researcher would like to make a generalization. **(S.K Sharma)**

The target population included hypertensive patients aged 30 years and above residing in the village rurki, Fatehgarh Sahib.

SAMPLE

According to **Polit and Beck**, A sample is a small portion of population selected for observation and analysis. It is a subset of population elements, which are most basic units about which data are collected. It is used in research when it is not feasible to study the whole population from which it is drawn.

The sample for the present study was 60 hypertensive patients of village Rurki, District Fatehgarh Sahib, Punjab.

SAMPLING TECHNIQUE

According to Polit and Beck, It is the process of selecting cases to represents an entire population so that inferences about the population can be made. In purposive sampling technique selection of participants who are easily available is done.

The purposive sampling technique was used to select the sample who meets the inclusion criteria of the study.

Inclusion Criteria

- Patients diagnosed with hypertension for at least 6 months.
- Age 30 years and above.
- Patients who were willing to participate in the study and give informed consent.
- Patients who were able to understand and respond to the questions in the study.

Exclusion Criteria

- Patients with severe cognitive impairment or serious comorbidities that limit participation.
- Patients who refused to participate.
- Patients already participating in similar educational programs related to stroke prevention.

Development of the Tool

The study tool was developed by the researcher based on a thorough **review of literature** and validated by experts in the field of nursing and community health. The tool consisted of:

Section A: Demographic Data

- Age, gender, education, occupation, income, duration of hypertension, family history of stroke, etc.

Section B: Knowledge Questionnaire

- 30 multiple-choice questions covering risk factors, warning signs, and preventive measures for stroke.
- Each correct answer was scored as 1, and incorrect answers as 0. The total score ranged from 0 to 30.

Section C: Practice Assessment

- 15 items related to lifestyle, medication adherence, diet, and exercise.
- Scored on a 3-point scale: Always (2), Sometimes (1), Never (0). The total score ranged from 0 to 30.

Validity and Reliability of the Tool

Validity: The tool was validated by 5 nursing and community health experts to ensure content relevance and clarity.

Reliability: A pilot study was conducted on 10 hypertensive patients outside the study area. The Cronbach's alpha coefficient for the knowledge and practice sections was 0.82, indicating good reliability.

Pilot study

According to Polit and Beck (2011), a pilot (feasibility) study is a small-scale version or trial run conducted to test the methods and procedures intended for use in a larger, more rigorous study.

In the present research, a pilot study was conducted on 10 subjects at the community area of sounti, during the month of November 2025.

Data Collection Procedure

Pre-intervention Assessment:

- The researcher collected baseline data on participants' knowledge and practices using the structured tool.
- Each participant was interviewed individually in their household or community center.

Nurse-Led Intervention:

- The intervention consisted of educational sessions on stroke prevention, including:
 - Risk factors of stroke in hypertensive patients.
 - Early warning signs of stroke.
 - Lifestyle modifications: diet, exercise, stress management, and medication

Ethical considerations

Approval was taken from Principal and ethical committee of Desh Bhagat University School of Nursing, Mandi Gobindgarh for conduction of research. Administrative permission was obtained from Principal of selected community areas of Fatehgarh Sahib respectively. The students were also explained about the purpose of study and verbal consent was taken from them for their participation in the study. The students were assured that information was kept confidential and purely used for research purpose.

Plan for data analysis

The analysis of data was done in accordance with the objectives of study. The analysis was done by calculating mean, mean percentage, chi square, standard deviation, "t" test and ANOVA test etc.

Summary

This chapter dealt with the researcher approach and rationale, research design, selection and description of field of study, target population, selection of sample, sampling technique, development and description of tool, criteria measurement, content validity, pilot study, reliability of tool, ethical consideration, data collection procedure and plan of data analysis as methodology used in quasi-experimental study to assess the effectiveness of nurse-led intervention on knowledge and practices regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib.

CHAPTER- IV

RESULTS

This chapter dealt with analysis and interpretation of data obtained from a sample of 60 hypertensive patients i.e. 30 in control group and 30 in experimental group.

Analysis and interpretation was done in accordance with the objective laid down for study. The data was analyzed by calculating the score in the term of mean, mean percentage, standard deviations' value and ANOVA.

In descriptive statistics mean, mean percentage, standard deviation was used for analyzing the distribution of boys the hypertensive patients according to their demographic variables. In inferential statistics chi-square, 't' test and ANOVA were used. Results of the study were shown in the form of tables and figures. The level of significance selected for the study was $p \leq 0.05$ level.

Objectives of the study

- To assess the pre- test and post – test level of knowledge regarding stroke prevention among hypertensive patients.
- To implement a nurse-led intervention on stroke prevention among hypertensive patients.
- To evaluate the effectiveness of the nurse-led intervention by comparing pre- and post-intervention of knowledge scores.
- To determine the association between post-intervention knowledge and selected demographic variables of hypertensive patients.

Hypotheses

(All hypotheses will be tested at the 0.05 level of significance.)

H₁: There will be a significant difference between the pre-test and post-test knowledge regarding stroke prevention among hypertensive patients after the nurse-led intervention.

H₂: There will be a significant association between post-test knowledge regarding stroke prevention and selected demographic variables of hypertensive patients.

Organization of Data for Analysis

The analysis of the data is done on accordance with the objective of the study.

SECTION I: Demographic variables.

SECTION II: Findings related to pre test and post- test knowledge regarding stroke prevention among hypertensive patients in control and experimental group.

SECTION III: - Findings related to evaluate the effectiveness of the nurse-led intervention regarding stroke prevention among hypertensive patients.

SECTION IV: - Aspect-wise Pre-test Mean Knowledge Scores of Hypertensive Patients Regarding Stroke Prevention.

SECTION V: - Aspect-wise Post-test Mean Knowledge Scores of Hypertensive Patients Regarding Stroke Prevention.

SECTION VI: Findings related to relationship between post-intervention knowledge and selected demographic variables of hypertensive patients.

SECTION A

DESCRIPTION OF THE DEMOGRAPHIC VARIABLES.

Table 1: Frequency and percentage distribution of demographic variables

N=60

Demographic variables	Frequency (f)	%
Age in years		
20 -39 years	4	6.66
40 - 49 years	19	31.66
50 – 59 years	30	50
Above 60 years	7	11.66
Gender		
Male	10	16.66
Female	50	83.33
Educational status		
Graduate	10	16.66

Post graduate	50	83.33
Religion		
Sikh	40	66.66
Muslim	3	5
Hindu	17	28.33
Christian	0	0.00
Marital status		
Unmarried	25	41.66
Married	35	58.33
Widower	0	0.00

Demographical variables	No	%
Dietary habits		
Vegetarian	15	25
Non Vegetarian	45	75
Duration of Hypertension		
Less than 1 year	0	0.00
1-5 year	15	25
6-10 year	25	41.66
More than 10 years	20	33.33
Family History of stroke		
Yes	25	41.66
No	35	58.33
Regularity of antihypertensive medication intake:		
Regular	10	16.66
Irregular	50	83.33
Frequency of blood pressure monitoring:		
Weekly	6	10
Monthly	40	66.66
Occasionally	4	6.66
Never	10	16.66

Do you have family history of heart disease		
Yes	40	66.66
No	20	33.33
Do you diagnosed with high cholesterol		
Yes	20	33.33
No	40	66.66

The table 1 shows that Out of 60 hypertensive participants, the majority 30 (50%) belonged to the age group of 50–59 years, followed by 19 (31.66%) participants in the age group of 40–49 years. Only 4 (6.66%) participants were in the age group of 20–39 years, while 7 (11.66%) were aged above 60 years.

With regard to gender distribution, most of the participants were female 50 (83.33%), whereas only 10 (16.66%) were male. Regarding educational status, a large proportion of the participants were postgraduates 50 (83.33%), and the remaining 10 (16.66%) were graduates.

In terms of religion, the majority of the participants were Sikh 40 (66.66%), followed by Hindu 17 (28.33%) and Muslim 3 (5%). None of the participants belonged to the Christian religion. Concerning marital status, more than half of the participants were married 35 (58.33%), while 25 (41.66%) were unmarried. None of the participants were widowers. Regarding dietary habits, the majority of the participants 45 (75%) were non-vegetarians, whereas 15 (25%) followed a vegetarian diet.

With respect to the duration of hypertension, 25 (41.66%) participants had hypertension for 6–10 years, followed by 20 (33.33%) participants who had hypertension for more than 10 years. About 15 (25%) participants had hypertension for 1–5 years, and none of the participants had hypertension for less than one year. In relation to family history of stroke, 25 (41.66%) participants reported a positive family history, while 35 (58.33%) had no family history of stroke.

Regarding regularity of antihypertensive medication intake, a vast majority 50 (83.33%) reported irregular intake, whereas only 10 (16.66%) reported regular intake of antihypertensive medications. Concerning the frequency of blood pressure monitoring, most of the participants 40 (66.66%) monitored their blood pressure monthly, followed by 10 (16.66%) who never monitored it. Only 6 (10%) monitored their blood pressure weekly, and 4 (6.66%) did so occasionally.

With regard to family history of heart disease, 40 (66.66%) participants reported a positive family history, while 20 (33.33%) reported no such history. Finally, regarding diagnosis of high cholesterol levels, 20 (33.33%) participants reported being diagnosed with high cholesterol, whereas the majority 40 (66.66%) had no such diagnosis.

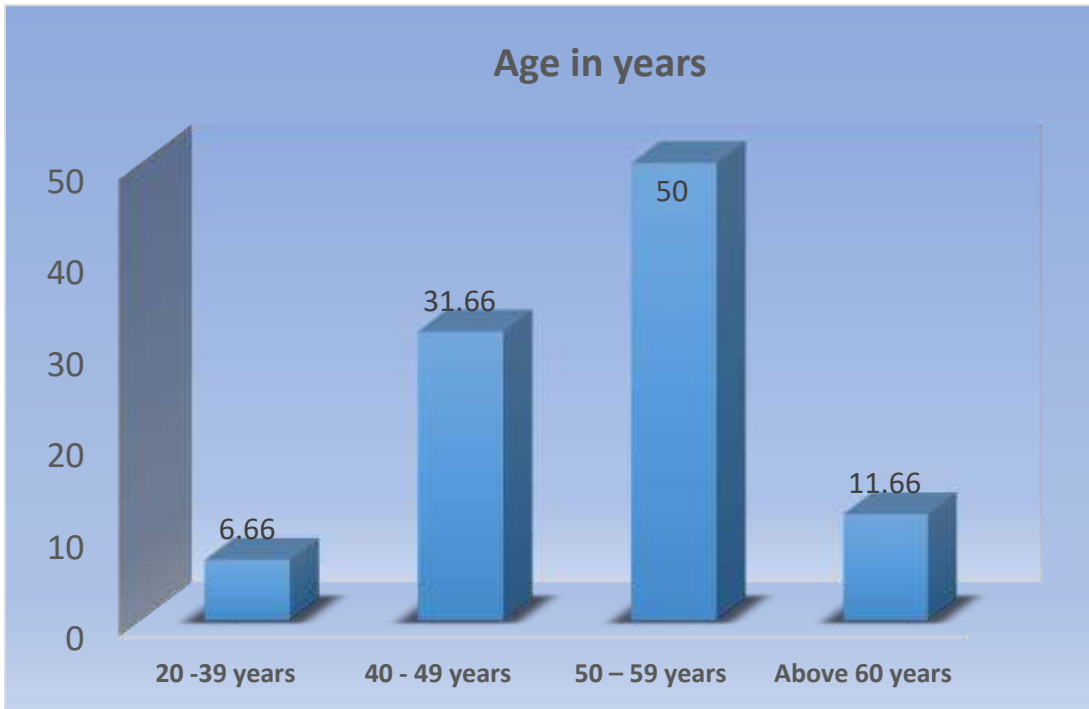


Figure No. 1 Bar Diagram showing the percentage distribution of the Age

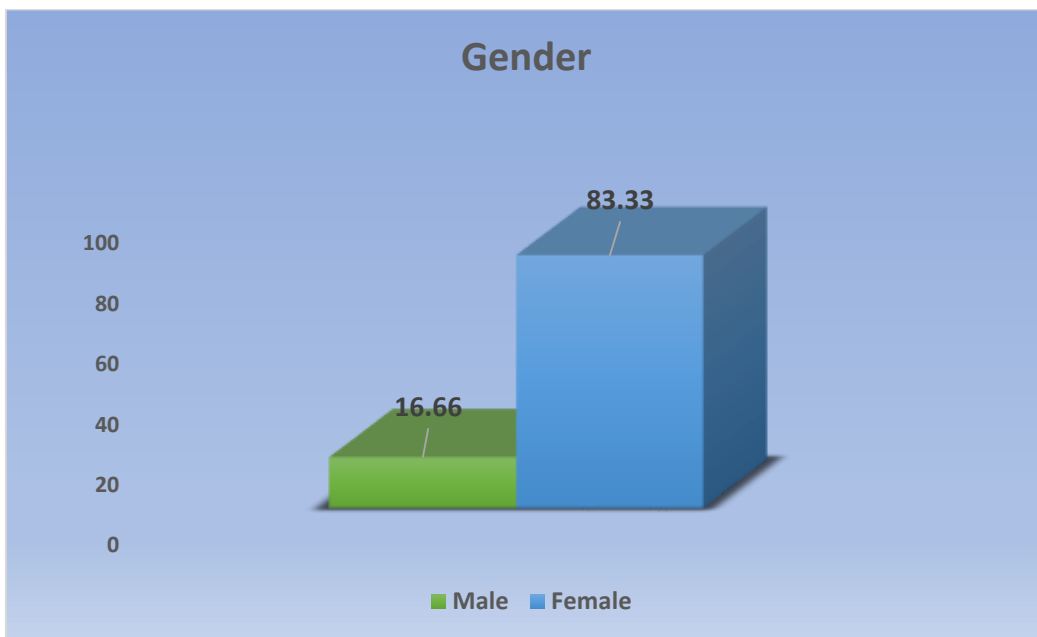


Figure No. 2 Bar Diagram showing the percentage distribution of the Gender

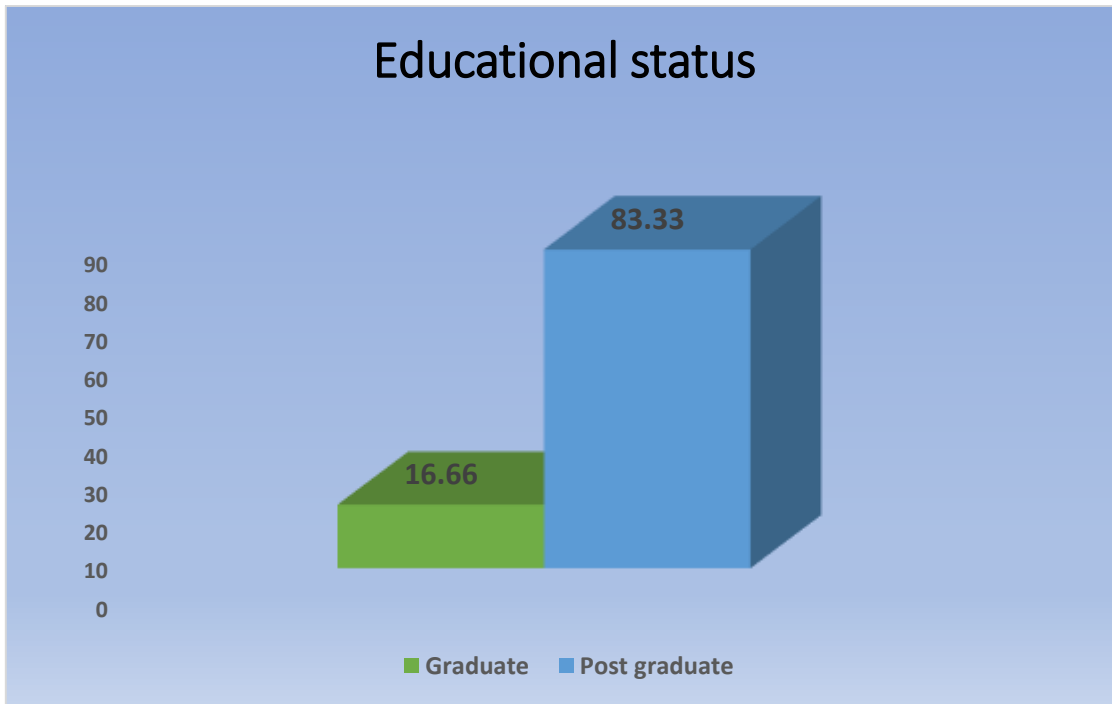


Figure No. 3 Bar Diagram showing the percentage distribution of the Educational Status

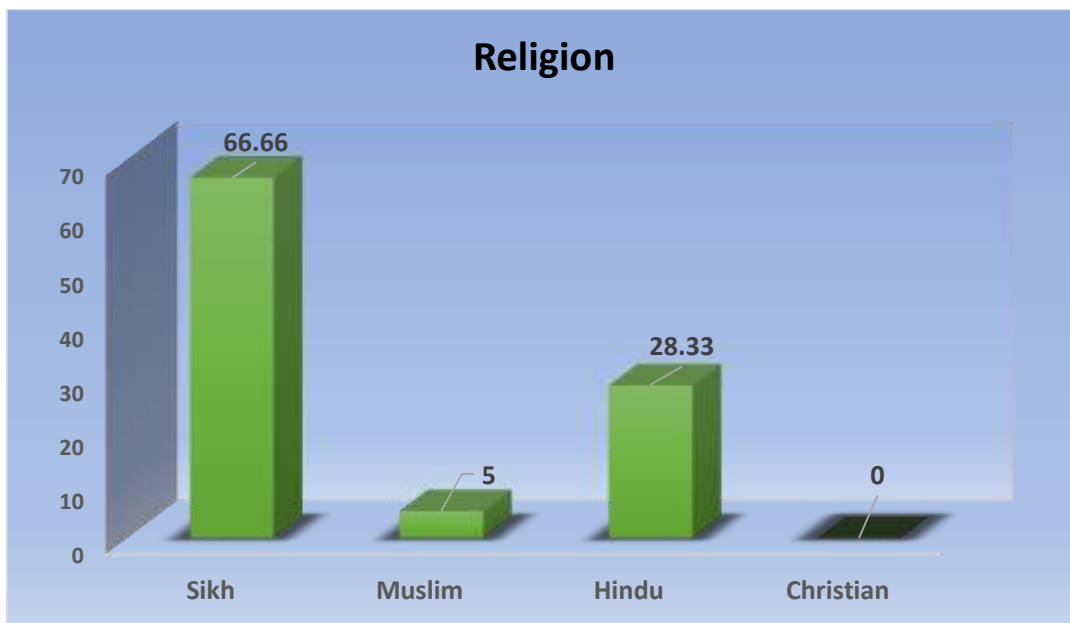


Figure No. 4 Bar Diagram showing the percentage distribution of the Religion

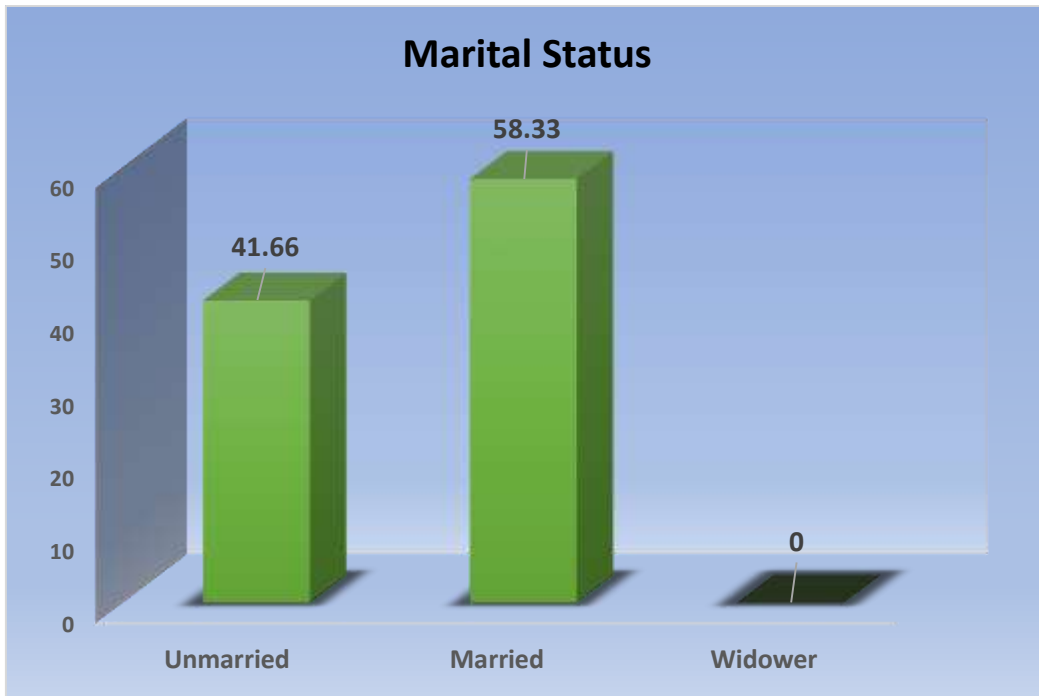


Figure No. 5 Bar Diagram showing the percentage distribution of the Marital status

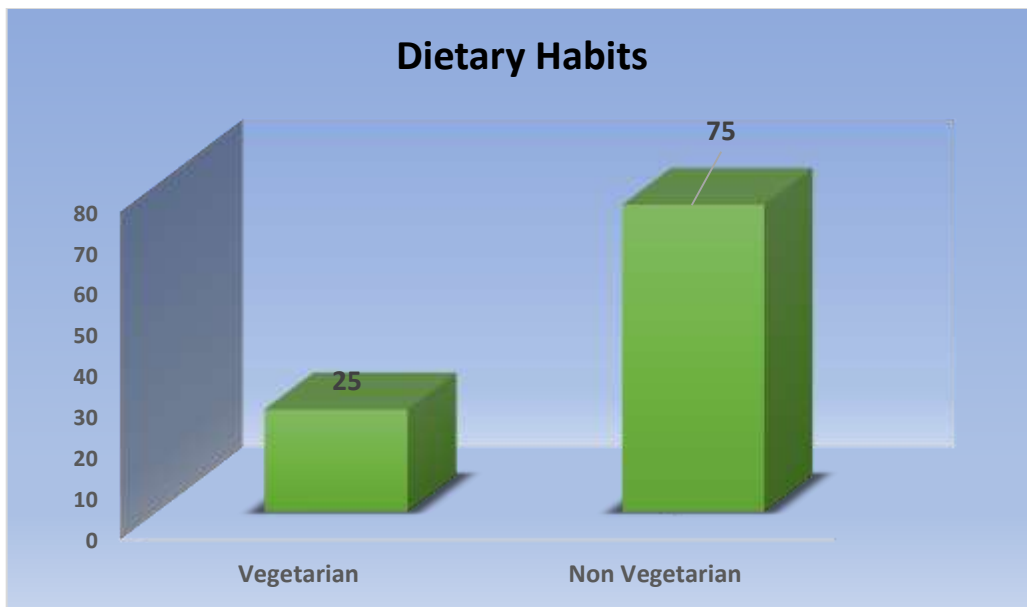


Figure No. 6 Bar Diagram showing the percentage distribution of the Dietary habits

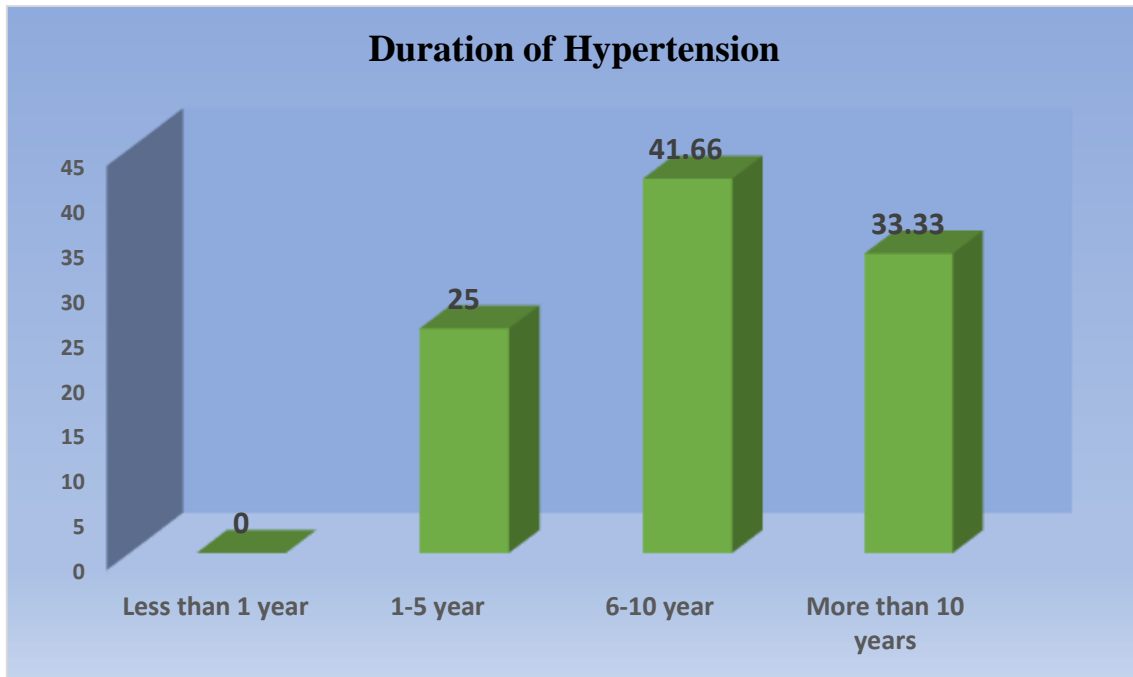


Figure No. 7 Bar Diagram showing the percentage distribution of the Duration of Hypertension

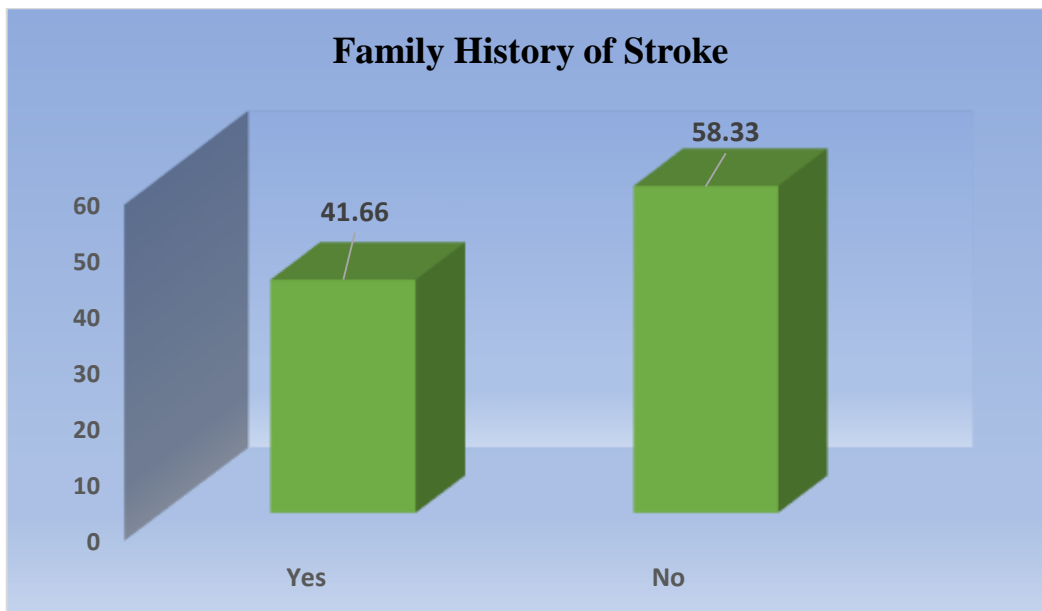


Figure No. 8 Bar Diagram showing the percentage distribution of the Family History of stroke

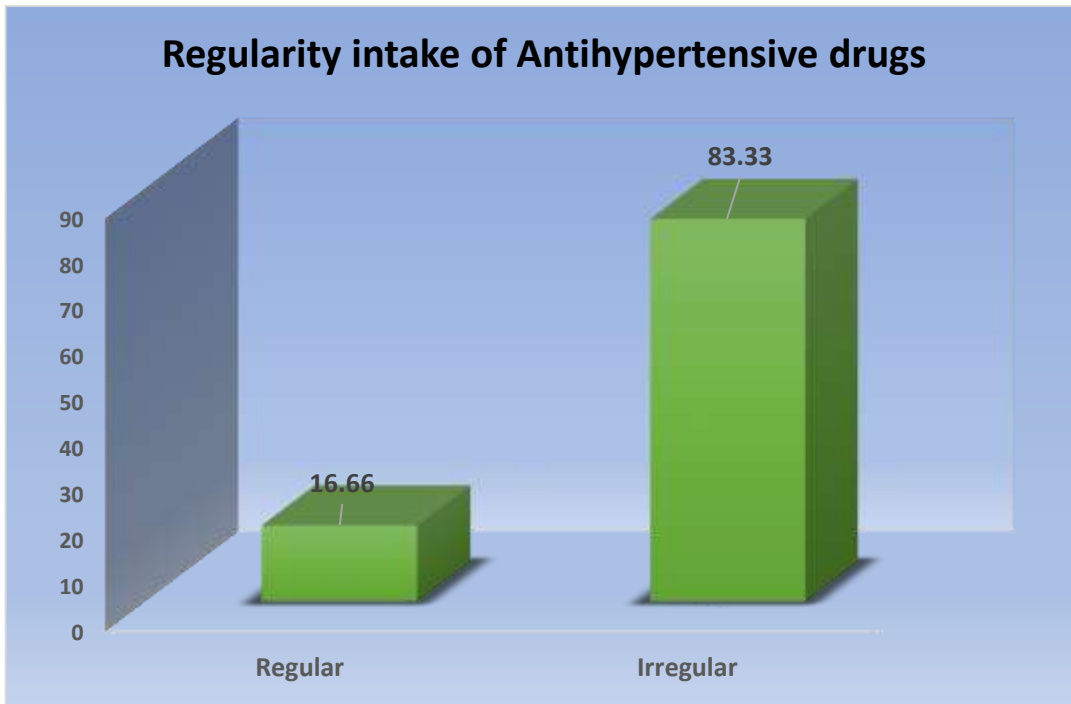


Figure No. 9 Bar Diagram showing the percentage distribution of the Regularity intake of Antihypertensive drugs

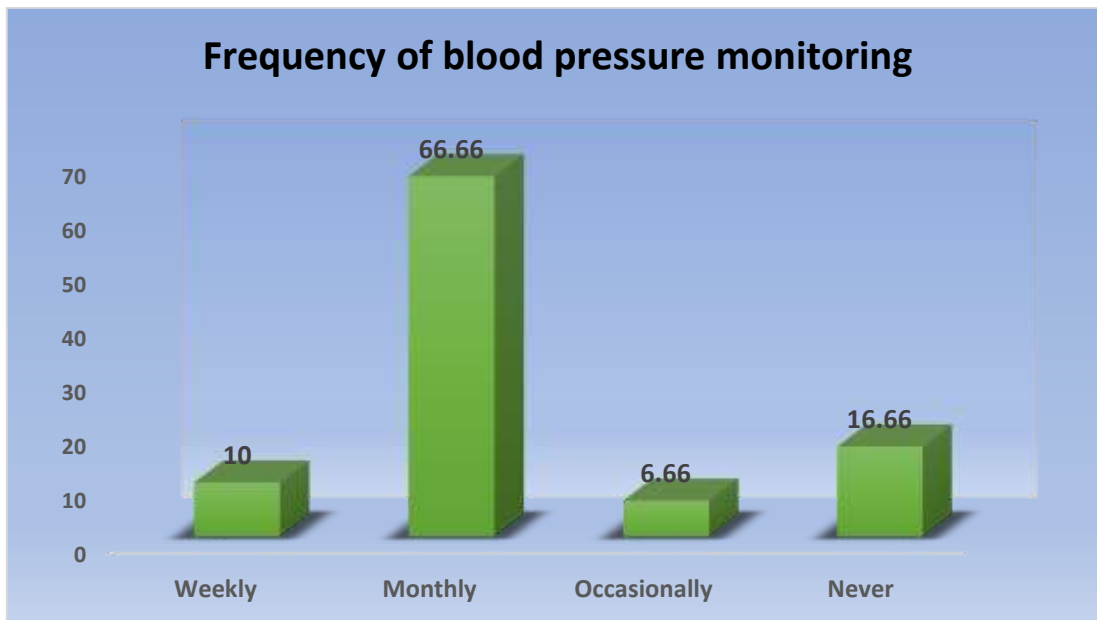


Figure No. 10 Bar Diagram showing the percentage distribution of the Frequency of blood pressure monitoring

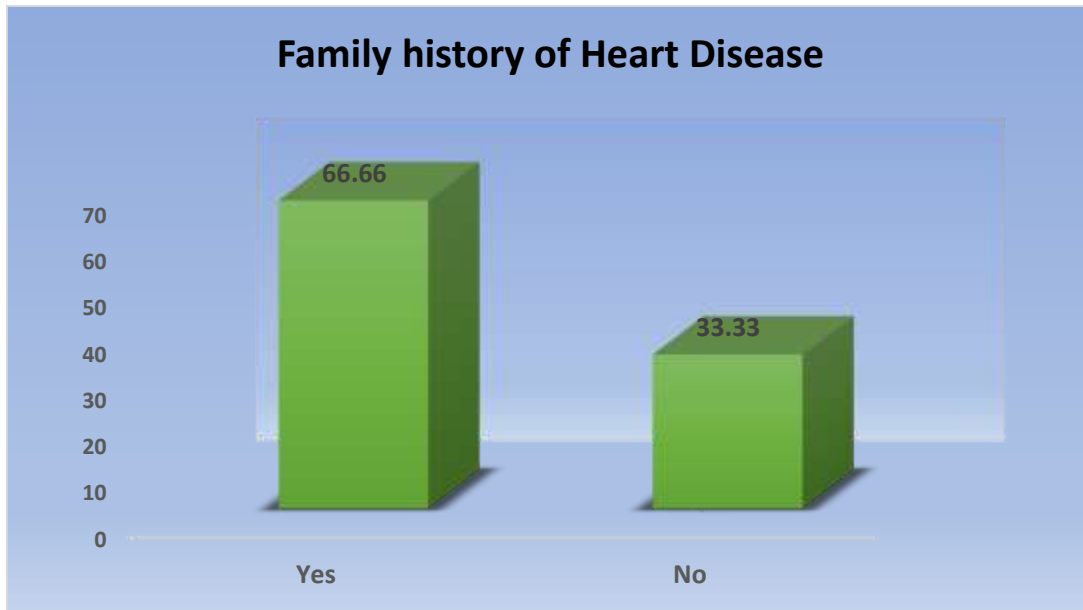


Figure No. 11 Bar Diagram showing the percentage distribution of the family history of heart disease

SECTION II

Findings related to pretest and post- test knowledge score regarding stroke prevention among hypertensive patients

Objective 1:- To assess the pre- test and post – test level of knowledge regarding stroke prevention among hypertensive patients

TABLE: 2

KNOWLEDGE LEVEL	INADEQUATE <50 % Score		MODERATELY ADEQUATE 51-75 % Score		ADEQUATE >75 % Score		TOTAL
	FREQUENCY	%	FREQUENCY	%	FREQUENCY	%	
PRE TEST	2	3.33	42	70	16	26.67	100
POST TEST	-	-	10	16.67	50	83.33	100

The Table 2 shows that in the pretest, majority 42(70%) had moderately adequate knowledge, 16(26.67%) had adequate knowledge and only 2 (3.33%) had inadequate knowledge. Whereas in the post test after the Nurse led intervention majority 50(83.33%) had adequate knowledge and only 10(16.67%) had moderately adequate knowledge regarding stroke prevention among hypertensive patients.

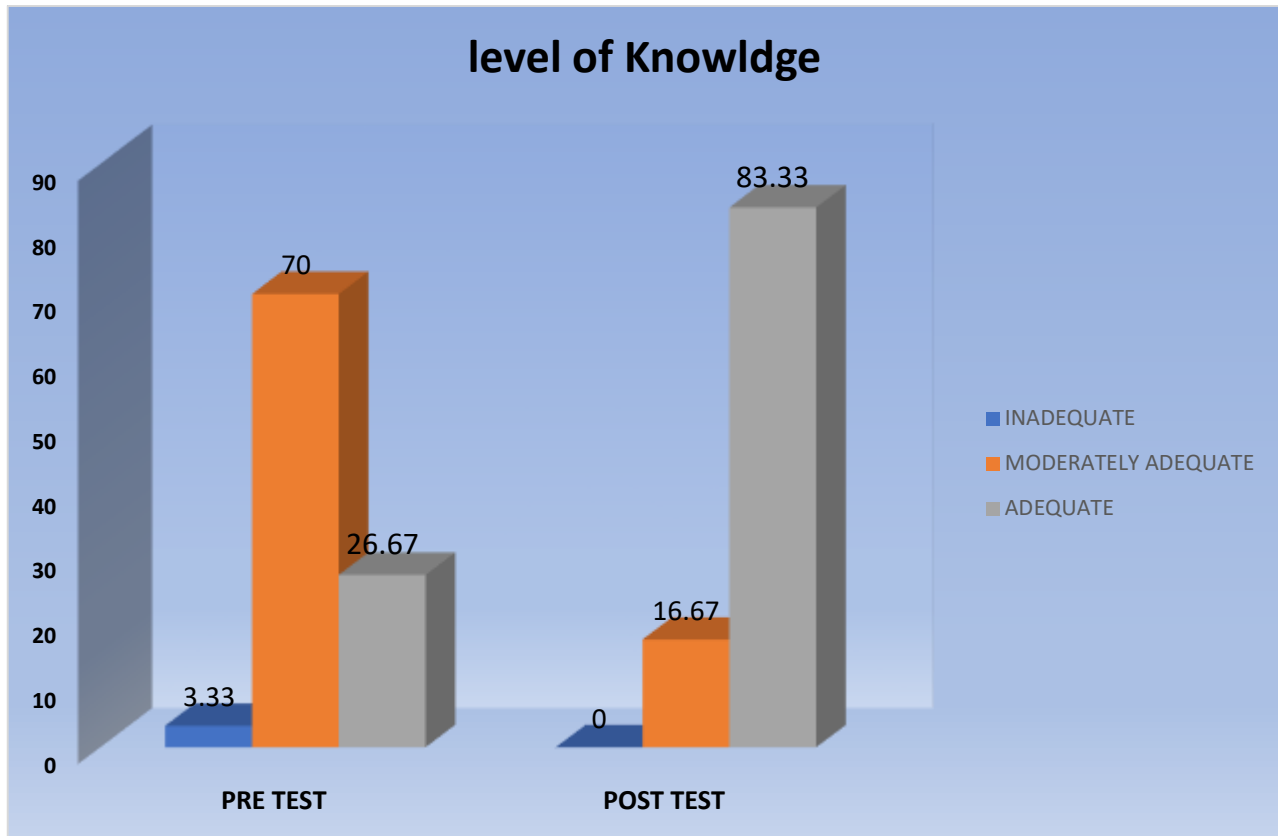


Figure No. 12 Percentage distribution of pre- test and post - test level of knowledge regarding stroke prevention among hypertensive patients

SECTION:-III

Findings related to evaluate the effectiveness of the nurse-led intervention regarding stroke prevention among hypertensive patients

Objective 3: To evaluate the effectiveness of the nurse-led intervention effectiveness of the nurse-led intervention regarding stroke prevention among hypertensive patients

Table3: Comparison of pretest and post test knowledge scores stroke prevention among hypertensive patients

Knowledge	Mean	Mean %	S.D	S.D %	Paired 't' Value
Pre test	14.40	48.0	10.29	14.40	24.671*
Post Test	25.53	85.10	5.67	25.53	
Enhancement	11.13	37.1	11.65	11.13	

***p<0.001, S – Significant t (0.05, 59df) =1.96

The table 3 shows that to evaluate the effectiveness of the nurse-led intervention regarding stroke prevention among hypertensive patients in the pretest, the mean score of knowledge was 48% whereas in the post test the mean score of knowledge was 85.10%. The calculated paired' value of $t = 24.671$ was found to statistically significant at $p < 0.001$ level. This clearly shows that the nurse-led intervention impaired regarding stroke prevention among hypertensive patients and had significant difference between the pre-test and post-test knowledge regarding stroke prevention among hypertensive patients after the nurse-led intervention.

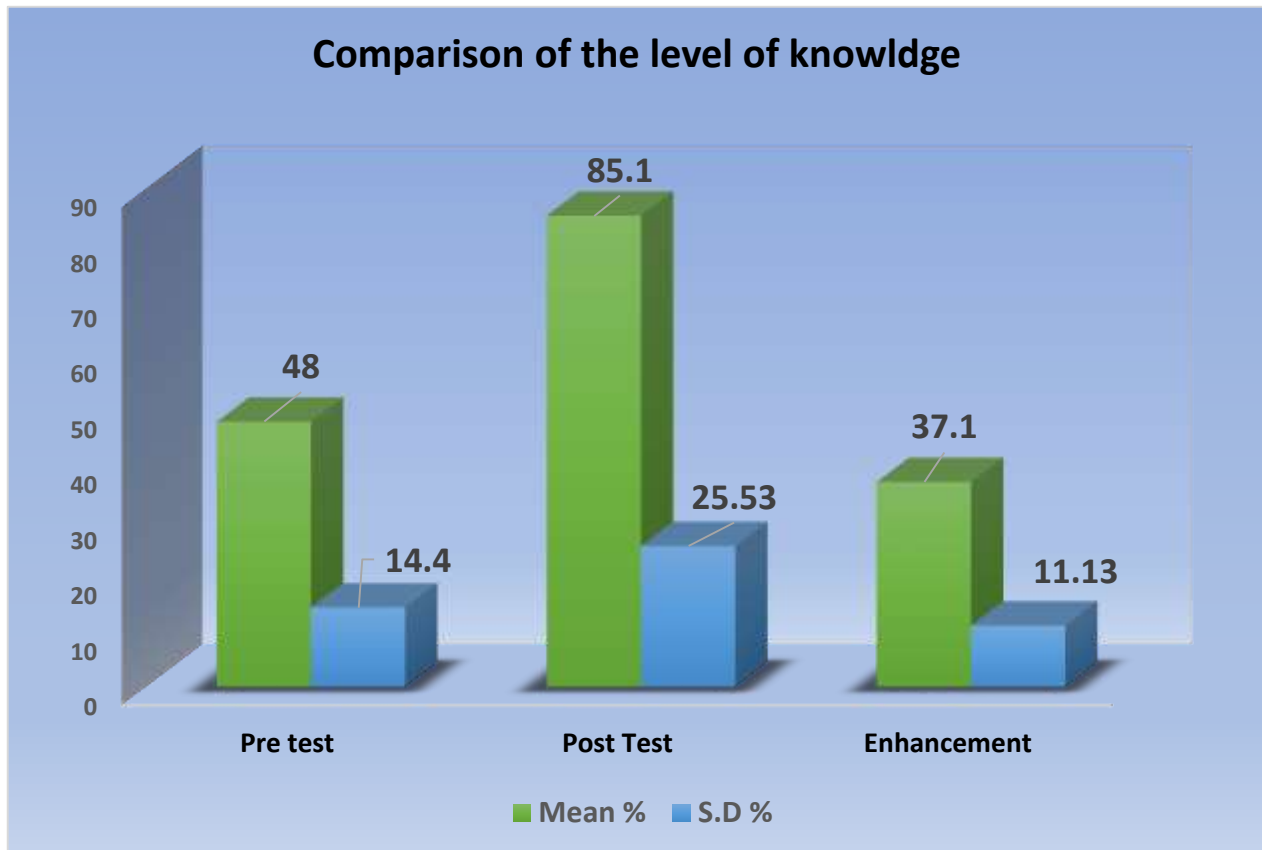


Figure 13: Bar diagram representing comparison of Pretest And Post Test mean knowledge scores regarding stroke prevention among hypertensive patients

SECTION - IV

Table:- 4 Aspect-wise Pre-test Mean Knowledge Scores of Hypertensive Patients Regarding Stroke Prevention

N = 60

Table 4

Sr. No.	Knowledge Aspects	Statements	Max. Score	Respondents' Knowledge	SD	Mean (%)
				Mean		
I	General information about stroke (meaning, types & causes)	8	8	3.12	1.214	39.00
II	Risk factors of stroke related to hypertension	10	10	4.58	1.673	45.80
III	Warning signs and symptoms of stroke	6	6	2.85	1.098	47.50
IV	Preventive measures and lifestyle modification for stroke prevention	6	6	3.02	1.102	50.33
Combined	Overall Knowledge	30	30	13.57	3.254	45.23

The aspect-wise analysis of pre-test knowledge scores reveals that hypertensive patients had below-average knowledge regarding stroke prevention. The lowest mean percentage score was observed in general information about stroke (39%), indicating poor baseline awareness. Knowledge related to preventive measures and lifestyle modification showed comparatively higher scores (50.33%), yet remained inadequate. The overall mean knowledge score (45.23%) suggests a clear need for a structured nurse-led educational intervention on stroke prevention among hypertensive patients.

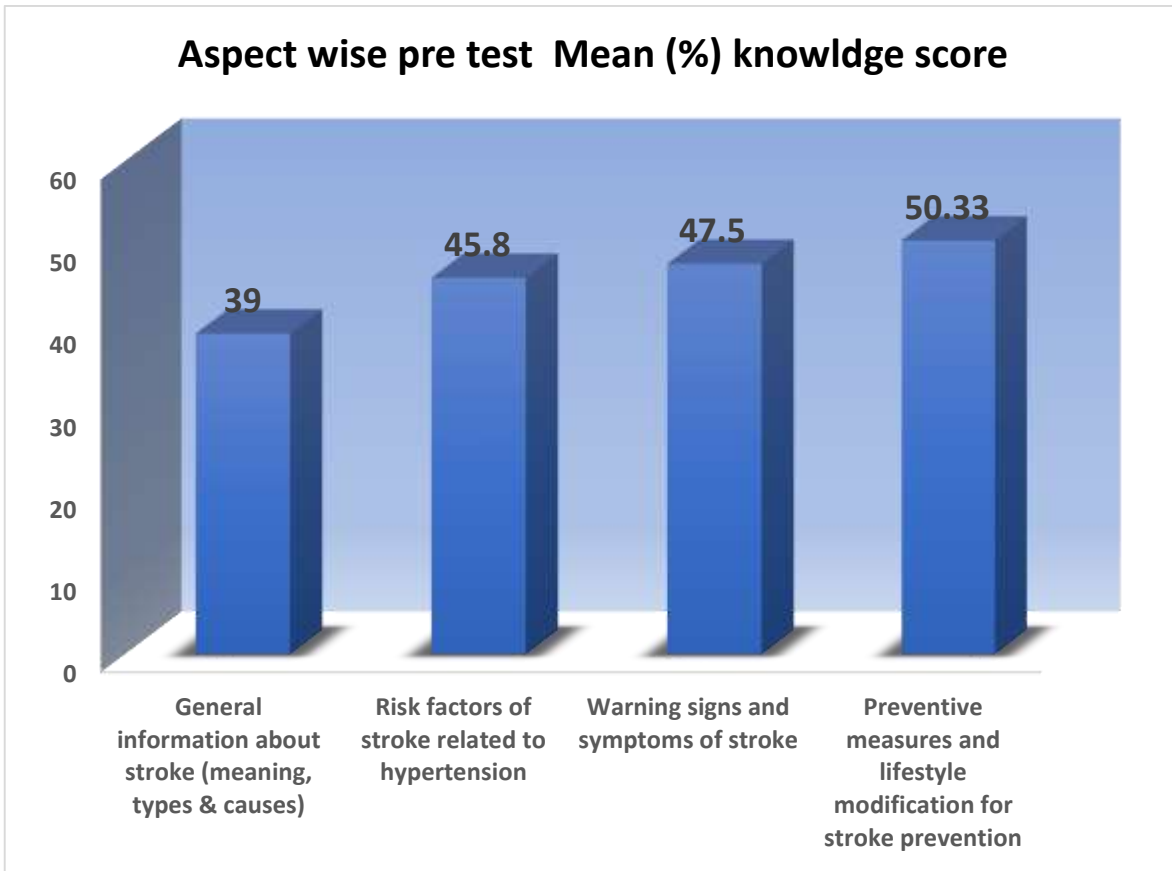


Figure 14: Bar diagram representing Aspect-wise Pre-test Mean Knowledge Scores of Hypertensive Patients Regarding Stroke Prevention.

SECTION - V

Aspect-wise Post-test Mean Knowledge Scores of Hypertensive Patients Regarding Stroke Prevention

N = 60

Table 5

No.	Knowledge Aspects	Statements	Max. Score	Respondents' Knowledge		
				Mean	SD	Mean (%)
I	General information about stroke (meaning, types & causes)	8	8	6.28	0.94	78.50
II	Risk factors of stroke related to hypertension	10	10	8.20	1.02	82.00
III	Warning signs and symptoms of stroke	6	6	5.12	0.88	85.33
IV	Preventive measures and lifestyle modification for stroke prevention	6	6	5.28	0.79	88.00
Combined	Overall Knowledge	30	30	24.88	2.63	82.93

The post-test results indicate a substantial improvement in knowledge across all aspects following the nurse-led intervention. The overall mean knowledge score increased to 82.93%, demonstrating the effectiveness of the intervention in enhancing knowledge regarding stroke prevention among hypertensive patients.

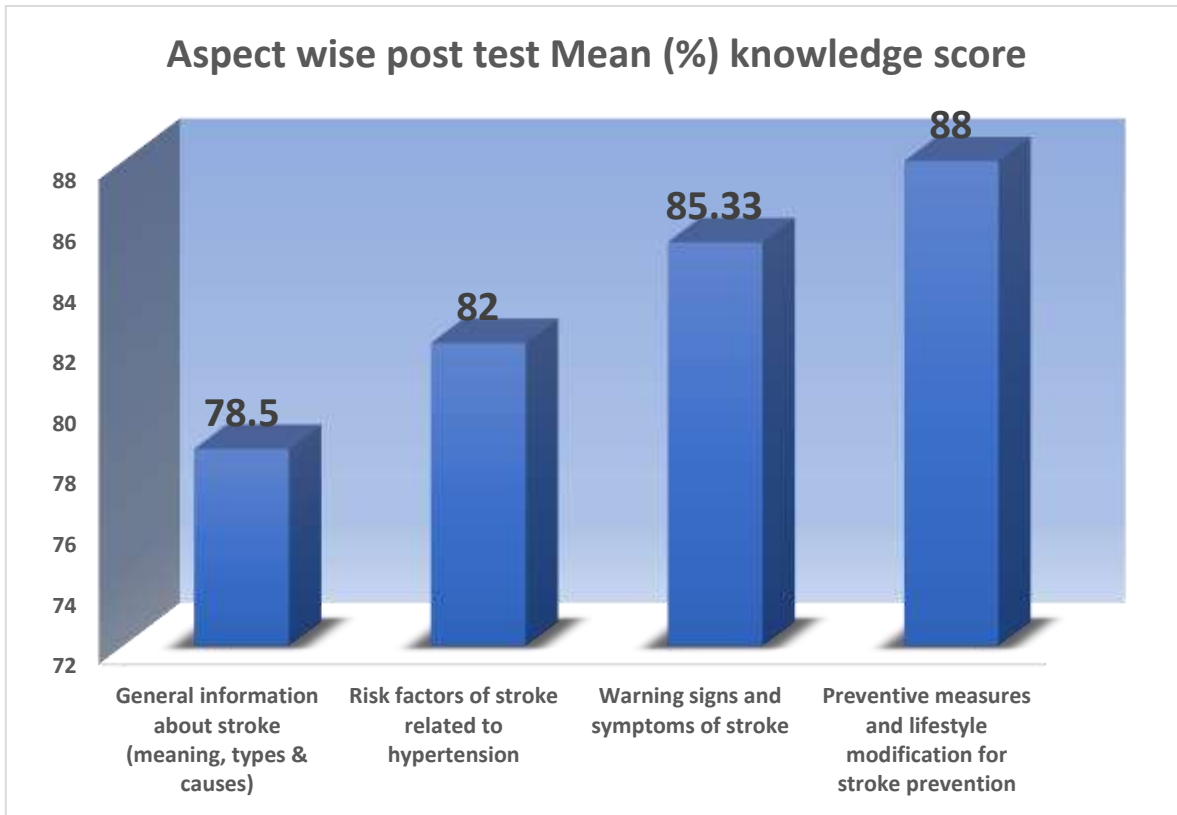


Figure 15: Bar diagram representing Aspect-wise Post -test Mean Knowledge Scores of Hypertensive Patients Regarding Stroke Prevention.

SECTION VI

Findings related to relationship between post-intervention knowledge and selected demographic variables of hypertensive patients

Objective 4:- To determine the association between post-intervention knowledge and selected demographic variables of hypertensive patients.

Table 6

Demographic Variables	Moderately adequate (51- 75%)		Adequate (>75%)		Chi- square value
	No.	%	No.	%	
Age in years					$\chi^2=6.000$ d.f=3 p=0.112 N.S
30 -39 years	0	0	4	6.66	
40 - 49 years	9	15	10	16.6	
50 - 59 years	10	16.66	20	33.3	
Above 60 years	3	5	5	8.3	
Gender					$\chi^2=2.160$ d.f=1 p=0.142
Male	5	8.3	5	8.3	

Female	10	16.6	30	50	N.S
Educational status					$\chi^2=0.600$ d.f=3 p=0.89 6 N.S
Graduate	5	8.3	5	8.3	
Post graduate	10	16.6	30	50	
Religion					$\chi^2=0.429$ d.f=2 p=0.807 N.S
Sikh	10	16.6	30	50	
Muslim	0	0	3	5	
Hindu	5	8.3	12	20	
Christan	0	0	0	0	
Know history of hypertension					$\chi^2=0.600$ d.f=2 p=0.014 S
yes	10	16.6	15	25	
no	10	16.6	25	41.6	
Do you have family history of heart disease					$\chi^2=0.429$ d.f=2 p=0.014 S*
Yes	10	16.6	30	50	
No	5	8.3	15	25	

**p<0.05, S* – Significant, N.S – Not Significant

The table 6 shows that the demographic variable family history of heart disease and history of hypertension had shown statistically significant association with pretest level of knowledge regarding stroke prevention among hypertensive patients at p<0.05 level and the other demographic variables had not shown statistically significant association with post test level of knowledge among hypertensive patients.

Summary:

This chapter dealt with analysis and interpretation of data collected from 60 samples (30 in control group and 30 in experimental group) of hypertensive patients in selected community area of District Fatehgarh Sahib, Punjab. Descriptive and inferential statistics were adopted for the analysis and interpretation. The tables and bar diagrams were used to present the data.

CHAPTER – V

DISCUSSION

This chapter discusses in detail the findings of the study derived from the statistical analysis and its pertinence to the objectives of the study and further discussion will exemplify these objectives were satisfied by the study. The purpose of the study was to assess the effectiveness of nurse-led intervention on knowledge regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib. The findings of the study discussed were based on the objectives as stated.

Finding I:- Description of the Baseline profile among the Hypertensive Patients

Out of 60 hypertensive participants, the majority 30 (50%) belonged to the age group of 50–59 years, followed by 19 (31.66%) participants in the age group of 40–49 years. Only 4 (6.66%) participants were in the age group of 20–39 years, while 7 (11.66%) were aged above 60 years. With regard to gender distribution, most of the participants were female 50 (83.33%), whereas only 10 (16.66%) were male. Regarding educational status, a large proportion of the participants were postgraduates 50 (83.33%), and the remaining 10 (16.66%) were graduates. In religion, the majority of the participants were Sikh 40 (66.66%), followed by Hindu 17 (28.33%) and Muslim 3 (5%). None of the participants belonged to the Christian religion. Concerning marital status, more than half of the participants were married 35 (58.33%), while 25 (41.66%) were unmarried. None of the participants were widowers. Regarding dietary habits, the majority of the participants 45 (75%) were non-vegetarians, whereas 15 (25%) followed a vegetarian diet.

With respect to the duration of hypertension, 25 (41.66%) participants had hypertension for 6–10 years, followed by 20 (33.33%) participants who had hypertension for more than 10 years. About 15 (25%) participants had hypertension for 1–5 years, and none of the participants had hypertension for less than one year. In relation to family history of stroke, 25 (41.66%) participants reported a positive family history, while 35 (58.33%) had no family history of stroke. Regarding regularity of antihypertensive medication intake, a vast majority 50 (83.33%) reported irregular intake, whereas only 10 (16.66%) reported regular intake of antihypertensive medications. Concerning the frequency of blood pressure monitoring, most of the participants 40 (66.66%) monitored their blood pressure monthly, followed by 10 (16.66%) who never monitored it. Only 6 (10%) monitored their blood pressure weekly, and 4 (6.66%) did so occasionally. With regard to family history of heart disease, 40 (66.66%) participants reported a positive family history, while 20 (33.33%) reported no such history. Finally, regarding diagnosis of high cholesterol levels, 20 (33.33%) participants reported being diagnosed with high cholesterol, whereas the majority 40 (66.66%) had no such diagnosis.

Finding II:- Findings related to pre test and post- test mean knowledge regarding stroke prevention among hypertensive patients in control and experimental group.

Objective 1:- To assess the pre- test and post – test level of knowledge regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib.

- During the pretest, 42 (70%) had somewhat adequate knowledge, 16 (26.67%) had adequate knowledge, and only 2 (3.33%) had poor knowledge.

Finding III:- Objective 2:- To implement a nurse-led intervention on stroke prevention among hypertensive patients.

- In the post-test following the Nurse-led intervention, the majority of 50 (83.33%) had adequate knowledge,

while only 10 (16.67%) had moderately adequate knowledge on stroke prevention among hypertensive patients.

The findings of the present study are consistent with those of a study conducted by **Sharma et al. (2022)**, who assessed the effectiveness of a nurse-led educational intervention on knowledge regarding stroke prevention among hypertensive patients. The results revealed that during the pre-test, the majority of participants had moderately adequate knowledge, with a smaller proportion having adequate knowledge and very few demonstrating inadequate knowledge. Following the nurse-led intervention, a significant improvement was observed, with most participants attaining adequate knowledge, while only a few remained in the moderately adequate category. The study concluded that structured nurse-led education was effective in improving knowledge related to stroke prevention among hypertensive patients.

Findings IV:- Findings related to evaluate the effectiveness of the nurse-led intervention by comparing pre- and post-intervention of knowledge scores.

Objective 3: To evaluate the effectiveness of the nurse-led intervention by comparing pre- and post-intervention of knowledge scores.

The study findings demonstrated the efficiency of the nurse-led intervention in increasing hypertension patients' understanding of stroke preventive measures. The mean knowledge score was 48% pre-test, but climbed dramatically to 85.10% post-intervention. The estimated paired *t* value ($t = 24.671$) was statistically significant ($p < 0.001$). This finding clearly shows that the nurse-led intervention was extremely effective in enhancing knowledge, with a substantial difference between pre-test and post-test knowledge scores for stroke prevention among hypertensive patients.

The findings of the present study are supported by a study conducted by **Rani et al. (2021)**, who evaluated the effectiveness of a nurse-led educational intervention on knowledge regarding stroke prevention among hypertensive patients. The study revealed that the mean pre-test knowledge score was low to moderate, which showed a significant improvement in the post-test following the intervention. The paired *t* test demonstrated a statistically significant difference ($p < 0.001$) between pre-test and post-test knowledge scores. The authors concluded that nurse-led interventions play a vital role in enhancing knowledge and awareness regarding stroke prevention among hypertensive patients.

Findings V:- Aspect-wise Pre – test and Post-test Mean Knowledge Scores of Hypertensive Patients Regarding Stroke Prevention

The aspect-wise analysis of pre-test knowledge scores showed that hypertensive patients possessed inadequate knowledge regarding stroke prevention. The lowest mean percentage score was noted in general information about stroke (39%), reflecting poor baseline awareness. Although knowledge related to preventive measures and lifestyle modification was comparatively higher (50.33%), it remained insufficient. The overall mean knowledge score of 45.23% highlights the need for a structured nurse-led educational intervention to improve knowledge regarding stroke prevention among hypertensive patients.

In contrast, the post-test findings revealed a marked improvement in knowledge across all aspects following the nurse-led intervention. The overall mean knowledge score increased to 82.93%, clearly demonstrating the effectiveness of the nurse-led intervention in enhancing knowledge regarding stroke prevention among hypertensive patients.

The findings of the present study are supported by a study conducted by **Kaur and Verma (2021)** reported that hypertensive patients had insufficient baseline knowledge regarding stroke warning signs, risk factors, and preventive measures. After the implementation of a planned teaching programme, the post-test findings demonstrated a substantial improvement in knowledge levels, confirming the effectiveness of nurse-led interventions in enhancing awareness and preventive practices related to stroke.

Findings VI: - Findings related to relationship between post-intervention knowledge and selected demographic variables of hypertensive patients.

Objective 4:- To determine the association between post-intervention knowledge and selected demographic variables of hypertensive patients

The demographic variable family history of heart disease and history of hypertension had shown statistically significant association with pretest level of knowledge regarding stroke prevention among hypertensive patients at $p < 0.05$ level and the other demographic variables had not shown statistically significant association with post test level of knowledge among hypertensive patients.

Similarly, **Kaur and Gill (2021)** found that hypertensive patients with a positive family history of heart disease demonstrated comparatively higher baseline knowledge regarding stroke prevention. After a structured nurse-led intervention, no significant association was observed between post-test knowledge levels and most demographic variables, indicating the effectiveness of educational interventions in bridging knowledge gaps across different demographic groups.

CHAPTER- VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter dealt with brief account of the study including the conclusion drawn from findings, implications of the study for nursing education, nursing administration, nursing practice, nursing research, limitations and recommendations for future research.

Summary

This chapter discusses in detail the findings of the study derived from the statistical analysis and its pertinence to the objectives of the study and further discussion will exemplify these objectives were satisfied by the study. The purpose of the study was to assess the effectiveness of nurse-led intervention on knowledge regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib. The findings of the study discussed were based on the objectives as stated.

The study was quasi experimental in nature with a sample size of 60 hypertensive patients. Purposive sampling technique was used and 60 hypertensive patients were selected i.e. 30 in control and 30 in experimental group.

Analysis and interpretation was done according to the objectives of the study. Descriptive and inferential statistics were used in data analysis. Bar diagrams were used to depict the findings.

Statement of the problem

A quasi experimental study to assess the effectiveness of nurse-led intervention on knowledge and practices regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib

Objectives of the study

- To assess the pre- test and post – test level of knowledge regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib
- To implement a nurse-led intervention on stroke prevention among hypertensive patients.
- To evaluate the effectiveness of the nurse-led intervention by comparing pre- and post-intervention of knowledge scores.
- To determine the association between post-intervention knowledge and selected demographic variables of hypertensive patients.

MAJOR FINDINGS

Finding related to Baseline profile among the Hypertensive Patients

- Out of 60 hypertensive participants, the majority 30 (50%) belonged to the age group of 50–59 years, followed by 19 (31.66%) participants in the age group of 40–49 years. Only 4 (6.66%) participants were in the age group of 20–39 years, while 7 (11.66%) were aged above 60 years.
- With regard to gender distribution, most of the participants were female 50 (83.33%), whereas only 10 (16.66%) were male. Regarding educational status, a large proportion of the participants were postgraduates 50 (83.33%), and the remaining 10 (16.66%) were graduates.
- In religion, the majority of the participants were Sikh 40 (66.66%), followed by Hindu 17 (28.33%) and Muslim 3 (5%). None of the participants belonged to the Christian religion.
- Concerning marital status, more than half of the participants were married 35 (58.33%), while 25 (41.66%) were unmarried. None of the participants were widowers. Regarding dietary habits, the majority of the participants 45 (75%) were non-vegetarians, whereas 15 (25%) followed a vegetarian diet.
- With respect to the duration of hypertension, 25 (41.66%) participants had hypertension for 6–10 years, followed by 20 (33.33%) participants who had hypertension for more than 10 years. About 15 (25%) participants had hypertension for 1–5 years, and none of the participants had hypertension for less than one year. In relation to family history of stroke, 25 (41.66%) participants reported a positive family history, while 35 (58.33%) had no family history of stroke.
- Regarding regularity of antihypertensive medication intake, a vast majority 50 (83.33%) reported irregular intake, whereas only 10 (16.66%) reported regular intake of antihypertensive medications.
- Concerning the frequency of blood pressure monitoring, most of the participants 40 (66.66%) monitored their blood pressure monthly, followed by 10 (16.66%) who never monitored it. Only 6 (10%) monitored their blood pressure weekly, and 4 (6.66%) did so occasionally.

- With regard to family history of heart disease, 40 (66.66%) participants reported a positive family history, while 20 (33.33%) reported no such history.
- Finally, regarding diagnosis of high cholesterol levels, 20 (33.33%) participants reported being diagnosed with high cholesterol, whereas the majority 40 (66.66%) had no such diagnosis.

Findings related to pre-test and post- test mean knowledge regarding stroke prevention among hypertensive patients in control and experimental group

- During the pretest, 42 (70%) had somewhat adequate knowledge, 16 (26.67%) had adequate knowledge, and only 2 (3.33%) had poor knowledge.
- In the post-test following the Nurse-led intervention, the majority of 50 (83.33%) had adequate knowledge, while only 10 (16.67%) had moderately adequate knowledge on stroke prevention among hypertensive patients.

Findings related to evaluate the effectiveness of the nurse-led intervention by comparing pre- and post-intervention of knowledge scores.

- The study findings demonstrated the efficiency of the nurse-led intervention in increasing hypertension patients' understanding of stroke preventive measures.
- The mean knowledge score was 48% pre-test, but climbed dramatically to 85.10% post-intervention. The estimated paired t value ($t = 24.671$) was statistically significant ($p < 0.001$).
- This finding clearly shows that the nurse-led intervention was extremely effective in enhancing knowledge, with a substantial difference between pre-test and post-test knowledge scores for stroke prevention among hypertensive patients.

Findings related to relationship between post-intervention knowledge and selected demographic variables of hypertensive patients

- The demographic variable family history of heart disease and history of hypertension had shown statistically significant association with pretest level of knowledge regarding stroke prevention among hypertensive patients at $p < 0.05$ level and the other demographic variables had not shown statistically significant association with post test level of knowledge among hypertensive patients.

Implications

The implications drawn from the study are of importance to the field of nursing including nursing service, administration, education and research.

Nursing Practice

- Community health nurses play a pivotal role in the early identification of stroke risk factors among hypertensive patients.
- The study highlights the importance of nurse-led educational interventions in improving patients' knowledge and adoption of healthy practices related to stroke prevention.

- Nurses should routinely provide health education on lifestyle modification, medication adherence, blood pressure monitoring, diet (low salt and fat), physical activity, smoking cessation, and alcohol moderation.
- Regular follow-up visits and home-based counselling by nurses can reinforce preventive practices and reduce the risk of stroke.
- Nurses can act as change agents, motivating hypertensive patients to recognize warning signs of stroke and seek immediate medical care.

Nursing Education

- The results emphasize the need to strengthen stroke prevention and hypertension management content in nursing curricula.
- Nursing students should be trained in health teaching methods, counseling skills, and behaviour-change communication relevant to non-communicable disease prevention.
- Incorporation of community-based learning experiences will help students understand the role of nurses in stroke prevention at the grassroots level.
- Continuing Nursing Education (CNE) programs should be organized to update nurses' knowledge on evidence-based stroke prevention strategies.

Nursing Administration

- Nurse administrators should encourage the implementation of structured nurse-led intervention programs in community and primary health care settings.
- Adequate manpower, time, and resources should be allocated for health education activities targeting hypertensive patients.
- Development of standardized protocols, teaching modules, and IEC materials on stroke prevention can enhance the quality of nursing care.
- Administrators can support nurses by organizing training workshops and monitoring the effectiveness of preventive programs.

Nursing Research

- The study provides a basis for further research on long-term effectiveness of nurse-led interventions in preventing stroke.
- Similar studies can be conducted with larger samples and different settings to enhance generalizability.
- Comparative studies may be undertaken to evaluate different teaching strategies or intervention models.
- Research can also explore the impact of nurse-led interventions on clinical outcomes, such as blood pressure control and reduction in stroke incidence.

Recommendations

- Nurse-led educational interventions should be implemented regularly to improve knowledge and practices regarding stroke prevention among hypertensive patients.
- Community health nurses should strengthen health education on lifestyle modification, medication adherence, and early recognition of stroke warning signs.
- Regular screening and awareness programs should be conducted at the community level.

- Continuing Nursing Education programs should be organized to update nurses on stroke prevention strategies.
- Further studies with larger samples and longer duration are recommended to assess long-term effectiveness.

Limitations

- The study was conducted in selected community areas, limiting generalization of the findings.
- A quasi-experimental design without randomization may have introduced bias.
- The study duration was short; long-term effects could not be assessed.
- Data were based on self-reported responses, which may affect accuracy.

SUMMARY

This chapter briefed the objective of study, conclusion of study. It gives the implication for the nursing practice, nursing administration, nursing education and nursing research. It clarifies the recommendation for the further research.

CHAPTER VII

SUMMARY

This chapter deals with the summary of the study, its findings and conclusion. The implications for the nursing practice, nursing education, nursing administration and nursing research have been stated. These chapter ends with suggestions and recommendation for research in future.

A quasi experimental study to assess the effectiveness of nurse-led intervention on knowledge regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib

Objectives of the study

- To assess the pre- test and post – test level of knowledge regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib
- To implement a nurse-led intervention on stroke prevention among hypertensive patients.
- To evaluate the effectiveness of the nurse-led intervention by comparing pre- and post-intervention of knowledge scores.
- To determine the association between post-intervention knowledge and selected demographic variables of hypertensive patients.

MATERIAL AND METHOD

In this study methodological research design (quasi experimental research design) was used for assess the to assess the effectiveness of nurse-led intervention on knowledge and practices regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib . The total sample for the study used were 60 hypertensive patients were drawn by purpose sampling technique. Two tools were used to collect the data in study i.e., demographic variables and structured questions. Validity of research tool was established under the guidance of various experts from the field of community Health Nursing. The pilot study was conducted for the feasibility of study. Permission to conduct the study was taken from ethical committee and directors or principles of institutions. Analysis of the data was done by using both descriptive and inferential statistics.

Results

The demographic variable family history of heart disease and history of hypertension had shown statistically significant association with pretest level of knowledge regarding stroke prevention among hypertensive patients at $p < 0.05$ level and the other demographic variables had not shown statistically significant association with post test level of knowledge among hypertensive patients. During the pretest, 42 (70%) had somewhat adequate knowledge, 16 (26.67%) had adequate knowledge, and only 2 (3.33%) had poor knowledge. In the post-test following the Nurse-led intervention, the majority of 50 (83.33%) had adequate knowledge, while only 10 (16.67%) had moderately adequate knowledge on stroke prevention among hypertensive patients. The mean knowledge score was 48% pre-test, but climbed dramatically to 85.10% post-intervention. The estimated paired t value ($t = 24.671$) was statistically significant ($p < 0.001$).

Conclusion

The present quasi-experimental study was conducted to assess the effectiveness of a nurse-led intervention on knowledge and practices regarding stroke prevention among hypertensive patients in selected community areas of District Fatehgarh Sahib. Pre-test and post-test assessments were carried out using structured tools. The nurse-led intervention included education on stroke risk factors, warning signs, lifestyle modification, and medication adherence. The findings revealed a significant improvement in post-test knowledge and practices, indicating that nurse-led interventions are effective in promoting stroke prevention among hypertensive patients.

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