

**EFFECTIVENESS OF DRUMSTICK LEAVES TEA  
AMONG HYPERTENSIVE CLIENTS IN THANDALAM  
VILLAGE AT KANCHIPURAM DISTRICT**

**By  
Mrs. JAYASREE. C**



**A Dissertation submitted to  
THE TAMILNADU Dr.M.G.R MEDICAL UNIVERSITY,  
CHENNAI.**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE  
DEGREE OF MASTER OF SCIENCE IN NURSING**

**APRIL - 2012**

**CERTIFIED THAT THIS IS A BONAFIDE WORK OF**

**Mrs. JAYASREE. C**

**ADHIPARASAKTHI COLLEGE OF NURSING,  
MELMARUVATHUR-603 319.**

**SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS  
FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING  
FOR THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY,  
CHENNAI-600 032.**

**COLLEGE SEAL**

**SIGNATURE \_\_\_\_\_**

**Dr.N.KOKILAVANI, M.Sc.(N)., M.A., M.Phil., Ph.D.,**

**PRINCIPAL,**

Adhiparasakthi College Of Nursing,

Melmaruvathur – 603 319,

Kanchipuram District,

TamilNadu.



**EFFECTIVENESS OF DRUMSTICK LEAVES TEA  
AMONG HYPERTENSIVE CLIENTS IN THANDALAM  
VILLAGE AT KANCHIPURAM DISTRICT**



**By**

**Mrs. JAYASREE C**

M. Sc., (Nursing) Degree Examination,  
Branch – IV, Community Health Nursing,  
Adhiparasakthi College of Nursing,  
Melmaruvathur – 603 319.

**A Dissertation submitted to  
THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY,  
CHENNAI.**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE  
DEGREE OF MASTER OF SCIENCE IN NURSING**

**APRIL – 2012**

**EFFECTIVENESS OF DRUMSTICK LEAVES TEA  
AMONG HYPERTENSIVE CLIENTS IN THANDALAM  
VILLAGE AT KANCHIPURAM DISTRICT.**

**APPROVED BY DISSERTATION COMMITTEE**

**April – 2012**

**Signature .....**

**Dr. N. KOKILAVANI, M.SC.( N), Ph.D.,**  
PRINCIPAL AND HEAD OF THE DEPARTMENT – RESEARCH,  
ADHIPARASAKTHI COLLEGE OF NURSING,  
MELMARUVATHUR - 603 319.

**Signature .....**

**Dr. BANGINWAR ASHISH SHRINATH, M.B.B.S., M.D.,**  
DEPARTMENT OF COMMUNITY MEDICINE,  
MAPIMS,  
MELMARUVATHUR.

**Signature .....**

**Mrs. A. N. KALPANA., M.Sc(N).,**  
READER,  
ADHIPARASAKTHI COLLEGE OF NURSING,  
MELMARUVATHUR.

**A DISSERTATION SUBMITTED TO  
THE TAMILNADU DR.M.G.R.MEDICAL UNIVERSITY, CHENNAI.  
IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE  
DEGREE OF MASTER OF SCIENCE IN NURSING  
APRIL -2012**

**EFFECTIVENESS OF DRUMSTICK LEAVES TEA  
AMONG HYPERTENSIVE CLIENTS IN THANDALAM  
VILLAGE AT KANCHIPURAM DISTRICT.**

**By**

**Mrs. JAYASREE C**

M.SC., (Nursing) Degree examination,  
Branch – IV Community Health Nursing,  
Adhiparasakthi College Of Nursing,  
Melmaruvathur – 603 319.

A Dissertation submitted to **THE TAMIL NADU  
DR.M.G.R.MEDICAL UNIVERSITY, CHENNAI** in partial  
fulfilment of the requirement for the Degree Of **Master Of  
Science in Nursing, April-2012.**

---

**Internal Examiner**

---

**External Examiner**

## **ACKNOWLEDGEMENT**

I express my deep sense of gratitude to **HIS HOLINESS ARUL THIRUAMMA, Founder – President** for his blessings and guidance, which enabled me to reach up to this level and to complete my study.

I express my heartfelt thanks to **THIRUMATHI. LAKSHMI BANGARU ADIGALAR, Chief Executive Officer,** Adhiparasakthi College of Nursing, Melmaruvathur for given me an opportunity to pursue my study in this prestigious institution.

With great respect and honor, I extend my thanks to **SAKTHI Mrs. B. UMADEVI., M.Pharm., Ph.D, Correspondent.,** Adhiparasakthi College of Nursing, Melmaruvathur for her excellence in providing skillful and compassionate spirit of unstinted support throughout the study.

I feel pleasure to extend my gratitude and sincere thanks to **Dr. N. KOKILAVANI, M.SC.(N), M.A(Pub.Adm.), M.Phil., Ph.D., Principal, Head Of The Department-Research,** Adhiparasakthi College Of Nursing, Melmaruvathur for her patience and her excellent guidance, without whom this study would not have been moulded to this shape. Her rich professional experience and efficient guidance has helped me to step cautiously in the right direction.

I wish to express my sincere thanks to **Dr. BANGINWAR ASHISH SHRINATH., M.B.B.S., M.D.,** Head of the **Department of Community Medicine, MAPIMS, Melmaruvathur** for his valuable timely guidance and advice to complete the study.

I would like to express my sincere thanks to **Prof. LAKSHMI, M.Sc(N)., Ph.D.,** **Principal,** Chettinad College of Nursing, for her encouragement, nobility, motivation. I profusely thank her for valuable suggestions and content validity.

I feel pleasure to extend my gratitude and sincere thanks to **Prof. B.VARALAKSHMI , M.SC.,(N),M.Phil., Vice Principal , Head Of the Department – Paediatric Nursing,** Adhiparasakthi College Of Nursing, Melmaruvathur for her constant support ,guidance, suggestions, patience and encouragement to complete this study.

I feel pleasure to extend my gratitude and sincere thanks to **Prof. B. SHEEBA, M.SC(N)., M.Phil., Head Of The Department-Psychiatric Nursing,** Adhiparasakthi College Of Nursing, Melmaruvathur.

I wish to express my sincere thanks to **Mrs. A. N. KALPANA, M.Sc (N),** Reader in community health nursing, Adhiparasakthi College of Nursing, Melmaruvathur, for her suggestions and guidance throughout this study.

I wish to extend my thanks to **Ms. M. SUGUNA, M.Sc(N)**, lecturer in community health nursing, Adhiparasakthi College of Nursing, Melmaruvathur, for her guidance throughout this study

I feel pleasure to extend my gratitude and sincere thanks to **Mr. A.SURIYA NARAYANAN, M.A., M.Phil.**, Lecturer in English, Adhiparasakthi College of Nursing, Melmaruvathur for his constant support, patience, encouragement and guidance, which led to the completion of the study.

I feel pleasure to extend my gratitude and sincere thanks to **Mr. ASHOK. B, M.Sc., M.Phil.**, Lecturer in Bio-Statistics, Adhiparasakthi College of Nursing, Melmaruvathur for his constant support, patience, encouragement and guidance and support in statistical analysis for this study.

I wish to express my thanks to **Mr. A. CHANDRAN**, Librarian, Adhiparasakthi College of Nursing, Melmaruvathur for extending necessary library facilities.

I wish to express my thanks to all the **TEACHING FACULTY** of Adhiparasakthi College of Nursing, Melmaruvathur who encouraged me and provided support throughout my study.



I also sincerely thank all the **NON-TEACHING STAFF** of Adhiparasakthi College of Nursing, Melmaruvathur.

I would like to express my immense thanks to **THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY** Library which helped me to refer books and journals for my dissertation.

I am especially grateful thanks to president and people of thandalam village, thank for their sincere co-operation and interest which showered upon for the successful completion of the study.

Finally, I thank all of them, who contributed to complete my dissertation.

# LIST OF CONTENTS

CHAPTER NUMBER	CONTENTS	PAGE NUMBER
I.	<b>INTRODUCTION</b>	
	1	
	Need for the study	7
	Statement of the problem	10
	Objectives of the study	10
	Operational definitions	10
	Assumption	11
	Limitation	11
	Projected outcome	11
	Conceptual framework	12
II.	<b>REVIEW OF LITERATURE</b>	14
III.	<b>METHODOLOGY</b>	34
	Research approach	
	Research Design	34
	Setting	34
	Population	34
	Sample size	34
	Sampling technique	34
	Criteria for sample selection	35
IV.	<b>DATA ANALYSIS AND INTERPRETATION</b>	37
V.	<b>RESULTS AND DISCUSSION</b>	60
VI.	<b>SUMMARY AND CONCLUSION</b>	64
	<b>BIBLIOGRAPHY</b>	70
	<b>APPENDICES</b>	

## **LIST OF TABLES**

<b>TABLE. No.</b>	<b>TABLES</b>	<b>Page No.</b>
<b>4.1</b>	<b>Frequency and percentage distribution of demographic variables among hypertensive clients</b>	<b>44</b>
<b>4.2</b>	<b>Frequency and percentage distribution of demographic variables related to hypertension</b>	<b>50</b>
<b>4.3</b>	<b>Frequency and percentage distribution of assessment and evaluation day of health status among hypertensive clients.</b>	<b>52</b>
<b>4.4</b>	<b>Mean, standard deviation of assessment and evaluation among hypertensive clients.</b>	<b>53</b>
<b>4.5</b>	<b>Mean and standard deviation of improvement score for hypertensive clients.</b>	<b>54</b>
<b>4.6</b>	<b>Association between demographic variables and evaluation scores of health status of hypertensive clients</b>	<b>55</b>

## LIST OF FIGURES

FIGURE NUMBER	FIGURES	PAGE NUMBER
1.1	Conceptual framework	I
4.1	Percentage of Age distribution among hypertensive clients	II
4.2	Percentage of Sex distribution among hypertensive clients	III
4.3	Percentage of Religion distribution among hypertensive clients	IV
4.4	Percentage of marital status distribution among hypertensive clients	V
4.5	Percentage of type of family distribution among hypertensive clients	VI
4.6	Comparison of health status among hypertensive clients on assessment day and evaluation day	VII

## LIST OF APPENICES

<b>SI. NO</b>	<b>APPENDIX</b>	<b>PAGE.NO</b>
<b>I</b>	<b>Demographic variables</b>	<b>i</b>
<b>II</b>	<b>Demographic variables related hypertension</b>	<b>v</b>
<b>III</b>	<b>Self structured rating scale to assess the health status of hypertensive clients</b>	<b>vii</b>
<b>IV</b>	<b>Case analysis</b>	<b>xiii</b>

# CHAPTER - I

## INTRODUCTION

Health is a gift of god to mankind; we often take it for granted and realise only when we are ill. We watch with considerable consternation the emerging problem of a huge burden of lifestyle related diseases all over the world.

Urbanisation, industrialization and cultural changes have greatly influenced our way of living and we tend to drastically deviate from those seeking apparently comfortable living conditions.

Food habits have also changed on the other hand. Eating more artificially preserved and junk food items, life-style modifications and stressful life leads to so many disorders like High Blood Pressure, Diabetes, Cardiac Diseases and obesity. These disorders may be prevented by early identification and treatment to promote our physical and mental health.

About 15-37 percent of the global adult population have hypertension. In those older than age 60, as many as one-half in some populations are hypertensive. Women with hypertension have a risk of developing Chronic Heart Diseases that is 3.5 times that of females with normal blood pressure.

**Alok Mukhopadhyay N (2008)** reported that Non-communicable disease are expected to cause more than three-fourth of all deaths

**Potter J (2009)** suggested that blood flows throughout the circulatory system because of pressure changes, which help the blood to move from an area of high to an area of low pressure. The blood pressure is a good indicator of cardio-vascular health. Blood pressure is not a constant one many factors are continually influence blood pressure. Even, under the best conditions, blood pressure changes from heart beat to heart beat.

**Seltxers and Bare (2010)** reported that hypertension is defined as a systolic blood pressure greater than 140mm Hg and a diastolic blood pressure greater than 90mm Hg based on the average of two or more correct blood pressure measurements taken during two or more contacts with a health care providers.

**Joint National Committees (2010)** recommended that on prevention, detection and evaluation and treatment of blood pressure for adults aging from 18 years

**CLASSIFICATION OF BLOOD PRESSURE FOR PERSONS FROM 18 YRS:**

<b>Classification</b>	<b>Systolic blood pressure</b>	<b>Diastolic blood pressure</b>
Normal	Below 120 mm Hg	Below 80 mm Hg
Pre-hypertension	120-139 mm Hg	80-89 mm Hg
Stage-I hypertension	140-159 mm Hg	90-99 mm Hg
Stage-II hypertension	160 mm Hg	100 mm Hg

**Spring House (2001)** suggested that the adults with blood pressure above 140/90 mm Hg and hypertension studies have shown that some clients demonstrate higher recorded blood pressure in the physician’s office than in the home setting is referred as “**white coat effect**” some have occasional elevation in blood pressure and normal readings at other times, these findings are called isolated pressure elevations, isolated systolic blood pressure elevations of 160 mm Hg is more frequently occur in the elderly.



**Suzanne C Smelter (2008)** reported that the hypertension is classified as primary (essential) or secondary hypertension 90-95% of all cases have primary hypertension, remaining five to ten percentage have secondary hypertension, high blood pressure related to identify cause. It includes narrowing of the renal arteries, renal parenchymal diseases, hyperaldosteronism, certain medications and pregnancy.

Drumstick medical studies identified an extract from drumstick leaves has been shown to be effective in lowering blood pressure levels within 3 hours of ingestion of drumstick tea has been used for years with no reports of negative side effects. The powder made from drumstick leaves seems to provided a long-lasting energy boost when used regularly.

People frequently report having much more endurance in their work at home and at-play. Drumstick leaves powder of 10 gm is having many nutrients like

Vit -A	18.9mg
Calcium	2003 mg
Potassium	1324mg
Protein	27.1mg
Vit-c	17.3mg

**Source - HAJJAR (2008)**

**Melanine D. and Thirber et al., (2009)** explained the nutritional effect of drumstick leaf. The leaves are high in protein quality, leading to widespread use by doctors, healers and nutritionists and community leaders to treat undernutrition and variety of illness. The result of this study showed that the dietary option of drumstick leaves have high-scientific consensus on the nutritional benefits.

**Naveent B. and Gadge et al., (2009)** conducted a study to assess the effect of agonist such as adenosine diphosphate, collagen and epinephrine. The degree of inhibitory activity varied depending on the agonist used, concentration of extract and duration of incubating the extract with platelets. The extracts significantly ( $P < 0.05$ ) decreased the amount of melonaldehyde formed in agonist challenged platelets. Overall drumstick leaves have potential to protect platelets against aggregation.

**Kalyani Bhadalkar And Mehana Daxini (2010)** conducted a pilot study to assess the feasibility and acceptability of introducing dehydrated drumstick leaves for the nutritional level into salty recipes provided by supplementary food component of ICDS(Integrated Child Development Scheme) along with nutrition communication. The study was conducted under trial with 60

children of one to five years of age attending two anganwadi centers of ICDS(integrated child development scheme) from these 40 attending anganwadi were supplemented with pro-tested dehydrated drumstick leaves recipes is five to seven gm drumstick leaves 100gm product. The results indicated that the recipes were highly acceptable to the ICDS authorities as well as NGO'S.

Regular intake of drumstick leaves powder prevents 300 diseases. Drumstick leaves powder is believed to have **stabilising effect on blood pressure** and it is believed to control the glucose level in case of diabetes mellitus. The powder is extremely effective in treating anaemia because it has higher iron content.

In India, Juice from these leaves believe to have stabilizing effect of blood pressure and treats anxiety. It mixed with honey and followed by a drink of coconut milk two or three times a day, leaves are used as remedy for diarrhoea, dysentery and inflammation of the colon. Eating leaves are believed to increase a women's milk production and prescribed for anemia.

## **NEED FOR THE STUDY**

The global prevalence of Hypertension for the year 2011 was 26.4% adults worldwide. The national prevalence rate is similar at 28.7% of adults approximately 65 million persons. Epidemiological studies show a rising trend in the prevalence of hypertension in India in the last 3 decades.

Health and Nutrition National Survey (2010) shows overall prevalence in the age group 25-64 yrs as 25.6% and 45-65yrs as 33%. Report shows that the prevalence in Nation to be 11% among males and 12% among females in the urban areas and 4% and 3% respectively in rural areas.

One in every 5 person in Tamilnadu is hypertensive especially in Chennai. Overall was 20%, it was higher among men(23.2%) than women (17.1%).

**Park J (2011)** said that diet can be a powerful strategy to combat hypertension, consuming a diet which is rich in fibre, high in potassium, calcium and magnesium from vegetables, fruits, legumes, whole grains, low fat diet products, reduce the blood pressure. The diet is the backbone of any treatment plan for hypertension without dietary intervention. Good metabolic control usually cannot be achieved, dietary changes are of paramount important free reducing the risk of hypertension.

**Jeniffer Dungar G (2008)** stated that cardiovascular disease are responsible for around 20% of all deaths worldwide. They are the principal cause of death in developed countries accounting for about 50% of all deaths and also in developing countries, it ranks third and emerges as a prominent public health problem with approximately 16% of all deaths. The percentage of people who receive treatment for hypertension as increased from 31-55% and of those with controlled hypertension from 10-29%. The combined effects of these measures have contributed to a 60% decline in stroke and 53% decline in the mortality rate from coronary artery diseases.

**American Health Association (2007)** suggested that high blood pressure is the leading factor for mortality around the world. hypertension among Adults increased by 60% from 1995-2007.

**Pradeepa et al., (2006)** said that In India prevalence of hypertension was 32.2% and pre hypertension was 32.3%, pre-hypertension was highest (36%) in the age group of 30-39 years and prevalence of pre-hypertension in semi-urban areas is 22.2%. Pre-hypertension always associate with an increased prevalence of cardio-vascular risk factors.

### **National Heart Lung and Blood Institute (2003)**

showed that worldwide prevalence of high blood pressure is as high as one billion and approximately seven million deaths per year may be attributable to hypertension.

The **WHO** reports that sub-optimal Blood Pressure (greater 115mmHg Systolic Blood Pressure) is responsible for 60% of cardio vascular diseases and 50% Ischemic Heart Disease with little variation by sex. It is estimated that roughly 20-30% of the population in urban areas and to 10-12% of rural areas in India suffer from high blood pressure. It usually has other complications such as renal failure, atherosclerosis which leads to heart attack and death.

Even though patients know that they have hypertensive, most of the patients are unaware of complementary and alternative therapies to reduce blood pressure. Not many studies have been made to reveal what patients know about complementary and alternative therapies. The investigator believes that the alternative therapy would help to reduce blood pressure level. In turn these will help the health personnel to educate the public to bring and modify their dietary pattern in pre-hypertensive state at the primordial prevention and primary prevention level.

## **STATEMENT OF THE PROBLEM:**

### **EFFECTIVENESS OF DRUMSTICK LEAVES TEA AMONG HYPERTENSIVE CLIENTS IN THANDALAM VILLAGE AT KANCHIPURAM DISTRICT.**

#### **OBJECTIVES:**

- to assess the health condition of hypertensive clients.
- to evaluate the effectiveness of drumstick leaves tea among hypertensive clients.
- to find-out association between selected demographic variables with effectiveness of drumstick leaves tea among hypertensive clients.

#### **OPERATIONAL DEFINITIONS:**

##### **EFFECTIVENESS:**

The degree to which objectives are achieved and the extent to which targeted problems are solved.

##### **DRUMSTICK LEAVES TEA**

A juice prepared from eight to ten minutes boiled drumstick leaves powder (8gms) in water(200ml) is known as Drumstick Leaves Tea.

**HYPERTENSIVE CLIENTS:**

The person, who has a higher blood pressure of 140/90mmHg to 160/100mmHg between the age group of 30-65 years, who are under treatment or not.

**ASSUMPTION:**

- Specific and appropriate adjuvant therapies may reduce hypertension.
- There is a significant association between effectiveness of drumstick leaves tea with selected demographic variables.

**LIMITATION:**

1. Data collection period was limited to six weeks.
2. The study was limited to patients in Thandalam village, Kanchipuram district.
3. The age group of the participants was 30-64 years.

**PROJECTED OUTCOME:**

This study would help to evaluate the effectiveness of drumstick leaves tea among hypertensive clients.

The findings of the study will help the patients with hypertension in the community to practice the intake of drumstick leaves tea in reducing high blood pressure.



## **CONCEPTUAL FRAMEWORK**

It is a theoretical approach of the study of problems that are scientifically based and emphasize the selection, arrangement and classification of the concepts. The researcher had adopted Imogene Kings Goal Attainment Theory (2011) based on the personal and interpersonal systems including interaction, perception, judgement, communication and transaction.

The investigator had adopted goal attainment as basic theory conceptual framework, which is aimed to show effectiveness of drumstick leaves tea in reducing blood pressure in hypertensive clients.

Six Major Concepts describe these phenomena

### **1. PERCEPTION**

It refers to people's representation of reality. Here the researcher and clients have perceived the need of drumstick leaves tea to reduce blood pressure.

### **2. JUDGEMENT**

It is the decision which is made here. The researcher decides to provide drumstick leaves tea to reduce blood pressure in hypertensive clients and the clients decide to participate in the research study.

### **3. ACTION**

This refers to the changes that have to be achieved. The researcher's action is to provide drumstick leaves tea to reduce the blood pressure in hypertensive clients. Clients have decided to receive treatment.

### **4. REACTION**

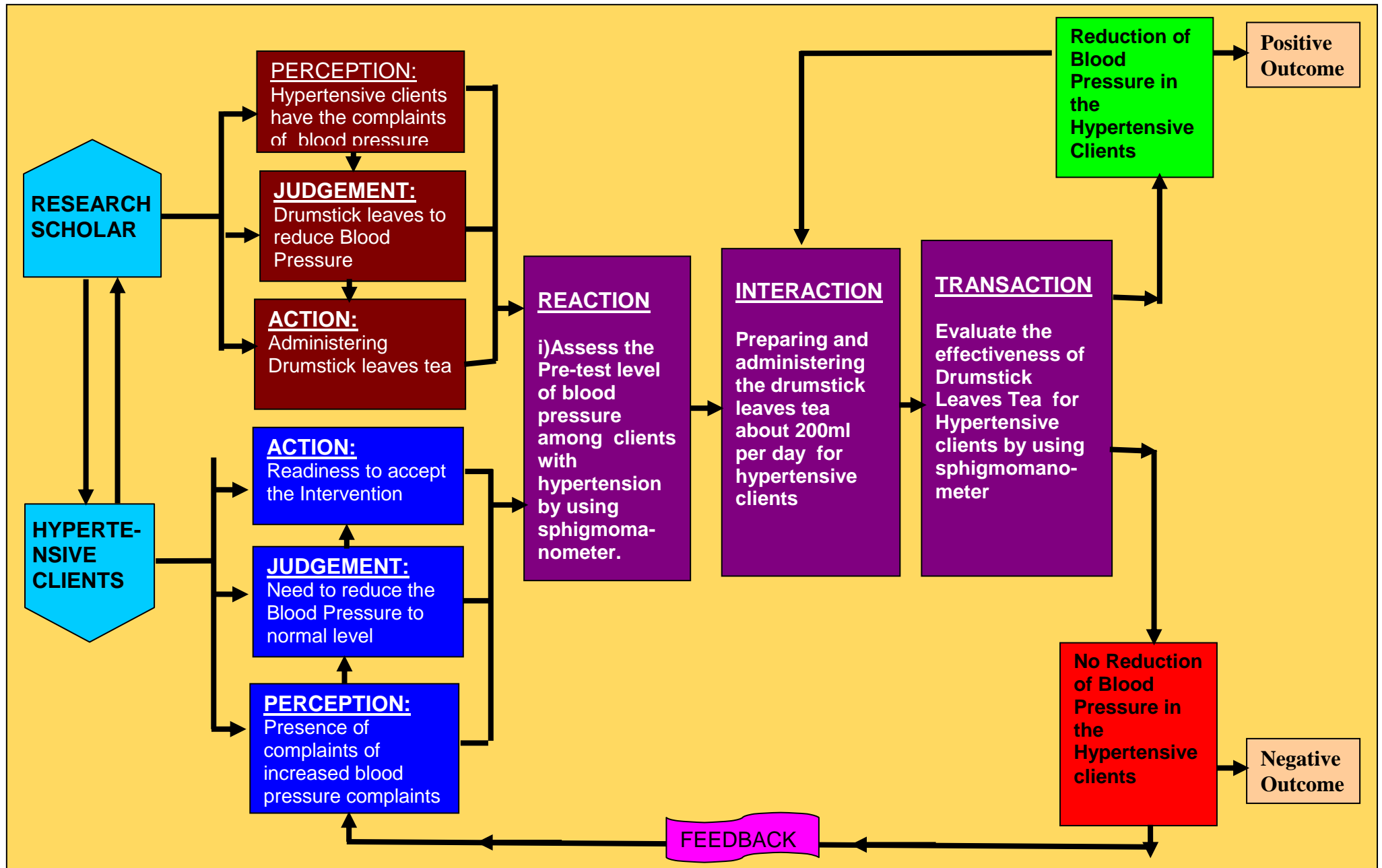
It helps in setting a mutual goal. In this study the researcher and hypertensive clients set a mutual goal. Here, The mutual goal is to reduce the blood pressure with drumstick leaves tea.

### **5. INTERACTION**

It refers to the verbal communication between one individual and environment or between two or more individual who involve goal-directed perception. Here researcher encourages the hypertensive clients to participate in taking drumstick leaves tea.

### **6. TRANSACTION**

This is the achievement of goal. Here, the researcher's goal is to reduce blood pressure and evaluate the effectiveness of drumstick leaves tea by using sphygmomanometer.



**MODIFIED KING'S GOAL ATTAINMENT THEORY (2011)**

# **CHAPTER- II**

## **REVIEW OF LITERATURE**

Reviewing the existing literature related to the study is a critical step in the research process.

**Polit Beck (2008)** cited that review of literature is a critical summary of research on a topic of interest, often prepared to put a research problem in context. This chapter deals with a review of published and unpublished research studies and thus forms related material for the present study. The review helped the researcher to develop an insight into the problem area and this helped the researcher in building a foundation of the study.

The review of literature related to the present study is organised under the following headings.

**PART – A: Literature Related To Prevalence Of Hypertension**

**PART – B: Literature Related To Pharmacological Management Of Hypertension**

**PART – C: Literature Related To Dietary Management Of Hypertension**

**PART – D : Literature Related To Alternative Therapies Of Hypertension**

**PART – E : Literature Related To Properties Of Drum Stick Leaves And Its Effectiveness Upon Hypertension**

## **PART – A: LITERATURE RELATED TO PREVALENCE OF HYPERTENSION:**

**Schlomann P et al., (2011)** conducted a study about hypertension among the uninsured: tensions and challenges with the focus groups of 16 clients in USA. Conclusion of this study is living with hypertension encompassed living with many tensions and challenges. It was described by five organizing themes, each of which involved two basic themes held in tension. The organizing themes were: (a) centrality of hypertension; (b) controllability of hypertension; (c) visibility of hypertension, (d) accessibility and quality of health care; and (e) existential reality.

**ZAMAN F A et al., (2011)** conducted a study on Glucose indices, frank and undetected diabetes in relation to hypertension and anthropometry in a south indian rural population. This was a population-based, cross-sectional study on 1370 participants conducted from april 2010 to march 2011. Hypertension observed among participants with diabetes and impaired glucose tolerance was 65.13 and 53.94%, respectively.

**Del Guidice (2010)** conducted a study on prevalence status of hypertension. He reported that the prevalence of hypertension is currently 60-80%, but it is estimated that it will

increase with the projected population growth of older people aged more than 65 years. Thus the result of this study found that isolated systolic hypertension and high blood pressure are more prevalent, and are important risk factors for stroke, coronary heart diseases and thus all cause mortality in the elderly.

**Rahul Malhotra et al., (2010)** studied about the prevalence, awareness, treatment and control of hypertension in the elderly population of Singapore and found out that nearly 73.9% of participants were found to have hypertension. Of this number 30.8% were unaware that they were found to have hypertension were not being treated for the disease and 75.9% had sub-optimal control of their blood pressure. Thus, the conclusion of this study is that there is a need to improve awareness, treatment and especially control of hypertension among elderly Singaporeans.

**Singh B and Dhiman P et al.,(2010)** conducted a study of prevalence, awareness and control of hypertension in rural communities of Himachal Pradesh. Total 1092 adults of > or =18 years of age were examined. 507 were males and 573 were females. 392 were found to have hypertension. Only 433 had their blood pressure in normal range. 84 of 392 hypertensive persons

were aware of their hypertensive status and only 17 of these 84 had their blood pressure under control. Prevalence of hypertension was higher than the national average. Only one fifth of hypertensive persons were aware of their disease and only fifth of these had their blood pressure under control.

**Ahaneku G et al.,(2009)** conducted a study about evaluation of blood pressure and indices of obesity in a typical rural community in Eastern Nigeria. A total of 218 participants from the rural community were recruited into the study. The prevalence of high blood pressure was higher in males (49.3%) compared with their female counterparts (42.3%), whereas the females had a higher prevalence of all forms of obesity (abdominal: 36.2%, global: 14.8%) compared with the males (abdominal: 14.5%, global: 10.1%). The conclusion of this study is that the prevalence of both hypertension and obesity seems to be increasing in rural communities in Nigeria.

**Frost and Sullivan Statistics (2008)** stated that approximately 1 billion people worldwide have high blood pressure and this number is expected to increase the 1.56 million people by the year 2025, that translated to about one out of every four adults being afflicted with hypertension. Thus, it was summarised that with the steadily aging population across the globe and fast-paced

life-styles leading to unhealthy diet and lack of exercise, the increasing trend for the past five yrs is expected to continue.

**Giday A and Tadesse B (2008)** conducted a cross sectional study with 979 participants about prevalence and determinants of hypertension in rural and urban areas of Southern Ethiopia. Out of 979 participating subjects, 485 were from urban and 494 were from rural. The prevalence of hypertension was 9.9% with 10.1% in urban and 9.7% in rural areas ranging from 4.2% in those below 30 years to 29.4% in those above 60 years. He suggested that Hypertension is common among those age over 30years. Drinking tea may have a protective effect for hypertension.

**Lancet et al.,(2007)** said that the incidence of hypertension i.e. blood pressure greater than 140/90mmHg or use of anti-hypertension drugs over four years period among individuals who initially had optimal (less than 120/80 mmHg). Normal (120-129 /80-84 mmHg) or high – normal (130-139/85-89 mmHg) blood pressure. Conclusion of this study was that there was a progressive increase in the frequent of development of hypertension in patients over age 65 i.e. 16, 26, and 50%



respectively. Similar findings were noted in younger individuals but the rates of progression were lower.

## **PART – B: PHARMACOLOGICAL MANAGEMENT OF HYPERTENSION:**

**Gupta R. et al., (2011)** conducted a study about strategies for initial management of hypertension. A number of pharmaceutical agents, well evidenced by large randomized clinical trials, are available for initial treatment of high blood pressure. In view of the recent clinical trials data, some international guidelines suggest that CCB (calcium channel blockers), ACE (angiotensin converting enzyme) inhibitors or ARB (angiotensin receptors blockers) and not beta-blockers or diuretics should be the initial in hypertension management.

**Ganesh J. and Viswanathan V. et al.,(2010)** conducted a study on management of diabetic hypertensive. Hypertension occurs twice as commonly in diabetics than in comparable nondiabetics. Thiazides can also be used as first line drugs, but are better used along with ACEI/ARBs(angiotensin converting enzyme inhibitors) and (angiotensin receptors blockers). Beta-blockers [especially if the patient has coronary artery disease] and calcium channel blockers are used as second

line add-on drugs. Multidrug regimens are commonly needed in diabetic hypertensives.

**Tocci G. and Volpe M. et al.,(2010)** studied on modern clinical management of arterial blood pressure. Blood pressure control is a key element in any cardiovascular prevention strategy. The benefits of using combination strategies based on drugs that antagonize the renin-angiotensin system and dihydropyridine calcium antagonists will also be discussed, with a particular focus on amlodipine besylate combination therapies.

**Smith J. S. (2009)** experimented a study on pulmonary arterial hypertension in the setting of pregnancy. Pregnancy with pulmonary arterial hypertension (PAH) is associated with a maternal mortality of 30-50% despite modern treatment modalities. In the United States, there is no consensus on the management of pulmonary arterial hypertension in pregnancy. Several case reports have been published describing improved maternal-fetal outcomes, likely due to new advanced pulmonary hypertension therapies, earlier diagnosis of pulmonary arterial hypertension, and an adoption of a multidisciplinary treatment approach.

## **PART – C: LITERATURE RELATED TO DIETARY MANAGEMENT OF HYPERTENSION**

**Fung T et al., (2011)**, studied a study on low-carbohydrate diets, dietary approaches to stop hypertension. A diet high in fruits and vegetables, such as one represented by the dietary approaches to stop hypertension diet score, was associated with a lower risk of estrogen receptor - breast cancer.

**Park T et al., (2011)** conducted a trial for the use of qigong exercises in the treatment of pre and mild essential hypertension: a study protocol for a randomized - controlled trial with 40 participants. Participants in the qigong group will conduct qigong exercises five times per week for eight weeks, and participants in the non-treated group will maintain their current lifestyle, including diet and exercise. The use of antihypertensive medication is not permitted. The results of this study may help to establish the optimal approach for the care of adults with pre- or mild hypertension.

**Teramukai Omega Study Group (2010)** explained that the study on sodium intake in men and potassium intake in women determine the prevalence of metabolic syndrome in Japanese hypertensive patients. Three dietary scores were calculated for

each patient: sodium intake, potassium intake and soybean/fish intake. A clear relation between dietary habits and blood pressure was found in Japanese hypertensive patients using a patient-administered questionnaire. Sodium and potassium intake affect metabolic syndrome prevalence. Dietary changes are warranted within hypertension treatment strategies.

**Dallalba V. et al.,(2009)** expressed that the role of dietary approaches to stop hypertension (DASH) diet food groups in blood pressure in type 2 diabetes. In the present cross-sectional study, 225 patients with type 2 diabetes are taken and patients were divided into two groups according to blood pressure tertiles: low blood pressure (first tertile) and high blood pressure (second plus third tertiles). In conclusion, fruit and vegetables were the food groups of the DASH diet associated with reduced blood pressure values in patients with type 2 diabetes, and their consumption might play a protective role against increased blood pressure values.

**Hojna S and Jordan M et al.,(2009)** conducted a study on high-fat diet induces emergence of brown-like adipocytes in white adipose tissue of spontaneously hypertensive rats. They studied adult males fed a high fat diet(HFD) or normal diet (ND) for

12 weeks. Result of this study suggest that spontaneously hypertensive rats may have the capacity to increase energy expenditure in response to a chronic high fat diet that may be linked to the emergence of brown-like adipocytes. Thus, the rats may be an important genetic model to uncover novel mechanisms of resistance to dietary obesity.

#### **PART – D: LITERATURE RELATED TO ALTERNATIVE THERAPIES OF HYPERTENSION:**

**Kerby T et al.,(2011)** conducted a study on alternative lifestyle methods to control hypertension in individuals entering a blood pressure. Multiple alternative therapy or lifestyle changes could be indicated. Results among the 296 participants who completed the baseline questionnaire. The conclusion of this study suggests that patients with uncontrolled blood pressure who volunteered for a clinical trial report using a variety of non-pharmacologic methods to control hypertension; however, many of the methods used have scanty or inconsistent evidence for efficacy in lowering blood pressure.

**Karpova E. S. and Liamina N. P. (2010)** expressed that the rehabilitative and prophylactic measures including physical

training for the correction of risk factors in patients presenting with ischemic heart disease following percutaneous coronary interventions. The authors report the results of rehabilitative and prophylactic measures undertaken at the outpatient treatment including long-term controlled physical training of moderate intensity in patients presenting with coronary heart disease following percutaneous coronary interventions. It was shown that the proposed approach allows a few risk factors (dyslipidemia, hypodynamia, arterial hypertension, smoking, and obesity) to be simultaneously corrected.

**Lenz T. and Monaghan M. et al., (2010)** explained that implementing lifestyle medicine with medication therapy management services to improve patient-centred health care. Pilot data for 15 participants showed improvements in all measurements, including blood cholesterol, low-density lipoprotein cholesterol, blood glucose , body weight, physical activity level, fruit and vegetable intake, risk for myocardial infarction, risk for any cardiovascular disease event, self-reported unhealthy days, and qualitative survey data. Pharmacists are in an ideal position to implement lifestyle medicine strategies in combination with medication therapy

management services to enhance patient-centred health care in a community pharmacy setting.

## **PART - E: LITERATURE RELATED TO PROPERTIES OF DRUM STICK LEAVES AND ITS EFFECTIVENESS UPON HYPERTENSION**

**Pilalipark K et al., (2011)**, conducted a study on the anti-oxidant properties, hypo lipidaemic and anti – atherosclerotic activities of water extract of moringa oleifera leaves. The study revealed that in hyper-cholesterol fed rabbits, at 12 weeks of treatment, the water extract of moringa oleifera leaves significantly ( $p<0.05$ ) lowered the cholesterol levels & reduced the atherosclerotic plaque formation to about 50% and 86%. Thus the results indicates that this plant posses antioxidant, hypolipidaemic and anti-atherosclerotic activities and has therapeutic potential for the prevention of cardiovascular diseases.

**Tamilnadu University Researchers (2011)** referring to the ancient texts of ayurveda, the researchers have proved that the moringa powder helps to boost energy and provides the required nutrition besides rebuild weak bones, enrich anaemic blood. It has calcium content of equivalent to 4 glasses of milk , the

vitamin C of 7 oranges and potassium of 3 bananas. Further daily consumption of the moringa leaf powder which is high in vitamin A can shield against eye diseases ,skin diseases ,heart ailments and diarrhoea. Its high calcium content is good for strong teeth and prevention of osteoporosis. Being a source of potassium and proteins it is recommended for brain & nerve function.

**Anwar J et al., (2010)**, cited that moringa oleifera is a highly valued plant, different parts of this plant contain a profile of important minerals, and are a good source of proteins, vitamins, b-carotene, amino acids and various phenolics. In addition to its compelling water purifying powers and high nutrition value, moringa oleifera is very important for its medicinal value and such as antitumor, antipyretic, antiepileptic, anti-inflammatory, antiulcer, antispasmodic, diuretic, antihypertensive, cholesterol lowering anti oxidant ,antidiabetic, hepato protective ,anti bacterial and antifungal activities , and are being employed for the treatment of different ailments in the indigenous system of medicine, particularly in south asia.

**Ping-Hsien J (2010)**, addressed a study on the anti fungal activity of crude extracts and essential oil of moringa olerifera. Investigation were carried out to evaluate the therapeutic properties of the seeds and leaves of moringa olerifera as herbal



medicines, ethanol extracts showed anti fungal activities in vitro against dermatophytes such as *Trichophyton rubrum*, *Trichophyton mentagrophytes*, *Epidermophyton floccosum*, and the *Microsporum canis* isolated extracts could be used for the future development of anti-skin disease agents.

**Perumal Siddhuraju T et al.,(2010)** stated that water, aqueous ethanol extracts of freeze-dried leaves of *Moringa oleifera* from different agro climatic regions had antioxidant activities among the three different *Moringa* samples, both methanol and ethanol extracts of Indian origins showed the highest antioxidant activities, 65.1% & 66.8 respectively, in the  $\beta$ -carotene-linoleic acid system nonetheless, increasing concentration of all the extracts had significantly increased reducing power, which may in part be responsible for their antioxidant activity, on the basis of the results obtained, *Moringa* leaves are found to be a potential source of natural antioxidants due to their marked antioxidant activity.

**Ghasi K et al., (2009)** said that the leaves of *Moringa oleifera* are found to be used by the Indians in their herbal medicine as a hypocholesterolemic agent in obese patients. The scientific basis for their use was therefore examined. It was found that administration of the crude leaf extract of *Moringa oleifera*

along with a high –fat diet decreased the high-fat diet induced increases in serum, liver, and kidney cholestral levels by 14.35% (115-103.2 mg /100ml of serum), 6.40% (9.4 -8.8 mg/g wet weight ) and 11.09% (1.09-0.97 mg/g wet weight ) respectively . the effect on the serum cholesterol was statistically significant. No significant effect on serum total protein was observed .it was concluded that the leaves of moringa olerifa have definite hypo cholesterolemic activity.

**Ghasi S et al., (2009)** conducted a study on hypocholesterolemic effects of crude extract of leaf of Moringa oleifera Lam in hh-fat diet fed rats. The leaves of Moringa oleifera Lam used by the Indians in their herbal medicine as a hypocholesterolemic agent in obese patients. No significant effect on serum total protein was observed. However, the crude extract increased serum albumin by 15.22% (46-53 g/l). This value was also found to be statistically significant. It was concluded that the leaves of Moringa oleifera have definite hypocholesterolemic activity and that there is valid pharmacological basis for employing them for this purpose in India.

**KUMAR N et al.,(2009)** conducted a study on hepatoprotective activity of Moringa oleifera on antitubercular drug-

induced liver damage in rats. *Moringa oleifera* Lam (Moringaceae), commonly known as "Drumstick," is used in Indian folk medicine for the treatment of various illness. They have evaluated the hepatoprotective effect of an ethanolic extract of *M. oleifera* leaves on liver damage induced by antitubercular drugs such as isoniazid (INH), rifampicin (RMP), and pyrazinamide (PZA) in rats. The results of this study showed that treatment with *M. oleifera* extracts or silymarin (as a reference) appears to enhance the recovery from hepatic damage induced by antitubercular drugs.

**Ashok Kumar N and Pari L et al., (2008),**

Antioxidant action of *moringa oleifera* lam against anti tubercular drug induced lipid peroxidation in rats. The protective effect of *moringa oleifera* lam on hepatic marker enzymes, lipid peroxidation, and antioxidants was investigated during antitubercular drug (isoniazid, rifampicin, and pyrazinamide)-induced toxicity in rats. Administration of *Moringa oleifera* extract and silymarin significantly decreased hepatic marker enzymes and lipid peroxidation with a simultaneous increase in the level of antioxidants.

**Murugan M et al., (2008)**, did a study about Anti-fungal activity of crude extracts and essential oil of *Moringa oleifera* Lam. Investigations were carried out to evaluate the therapeutic properties of the seeds and leaves of *Moringa oleifera* Lam as herbal medicines. Ethanol extracts showed anti-fungal activities in vitro against dermatophytes such as *trichophyton rubrum*, *trichophyton mentagrophytes*, *epidermophyton floccosum*, and *microsporum canis*. GC-MS analysis of the chemical composition of the essential oil from leaves showed a total of 44 compounds. Isolated extracts could be of use for the future development of anti-skin disease agents.

**Chuang P et al., (2007)**, conducted a study about *moringa oleifera* on cancer prevention. Since *Moringa* species have long been recognized by folk medicine practitioners as having value in tumor therapy, they examined compounds and for their cancer preventive potential. Recently, and the related compound were shown to be potent inhibitors of phorbol ester (TPA)-induced epstein-barr virus early antigen activation in lymphoblastoid (Burkitt's lymphoma) cells (57,104). In one of these studies, also inhibited tumor promotion in a mouse two-stage. In an even more recent study, Bharali and colleagues have examined

skin tumor prevention following ingestion of drumstick (Moringa seedpod) extracts . Modern scientific research is proving that Moringa leaves are one of the richest sources of such nutrients.

## **EFFECTIVENESS OF DRUMSTICK LEAVES UPON HYPERTENSION**

**Mehta K. and Balaraman R. (2010)** conducted a study about effect of fruits of moringa oleifera on the lipid profile of normal and hypercholesterolaemic rabbits. Rabbits were fed moringa oleifera (200mg/kg/day, p.o.) or lovastatin (6mg/kg/day, p.o.) in banana pulp along with standard laboratory diet and hypercholesterolaemic diet for 120 days. Treatment with moringa oleifera or lovastatin in normal rabbits decreased the high density lipid levels. Moringa oleifera was found to increase the excretion of faecal cholesterol. Thus, the study demonstrates that moringa oleifera possesses a hypolipidaemic effect.

**Krishnaiah et al., (2009)** studied on the phytochemical constituents of moringa oleifera and found that the leaves and drumstick pods of the plant are used for hypertension treatment. The presence of alkaloids in moringa olerifera together with saponions is the reason why moringa oleifera is used to treat hypertension because saponins prevent the excessive intestinal

absorption of this cholesterol and thus reduce the risk of cardiovascular diseases such as hypertension.

**Kajihara et al., (2008)** suggested on his study that the antihypertensive effect of water extracts from leaves of moringa oleifera. 10g of the dried leaves with 100 ml of water were given to them by a single oral administration at 3 ml/kg body weight or by repeated oral administration at 3 ml/kg body weight /day for 6 weeks. The water extracts contained 0.3mg/ml of gamma – aminobutyric acid. Although the single oral administration of the water extract could not reduce systolic blood pressure in hypertensive rats, repeated oral administration for 6 weeks resulted in significant decreases compared with the control. These results suggest that the daily intake of moringa oleifera lam was effectively for prevention against hypertension.

**Oliver Hill (2006)**, explained regarding the effect of moringa tea on treating various ailments and found out that the moringa tea has an effect to reduce hypertension and has said that intake of 1-2 tea bags a day i.e. 1500 mg/tea bag when dissolved in 300-500 ml of boiling water will cause dropping of the blood pressure within two hours after the intake of tea. Blood pressure will normalize when taken for a period of 2-4 weeks.

**Dangist A. L. (2002)** said that *moringa oleifera* leaves have traditionally been used in ayurvedic medicine for their antihypertension activity and the studies which were conducted revealed that a water extract of leaves of this tree is efficacious in reducing the chronotropic and inotropic effects on the isolated frog heart. The alkaloids obtained by the fractionation of the water extracts of the leaves of *moringa oleifera*, converted into their salt form, were tested for their activity on the isolated frog heart. The total alkaloid salts were found to have a negative inotropic effect on the frog heart. This activity was further characterized by testing it on the isolated guinea pig ileum.

# **CHAPTER III**

## **METHODOLOGY**

This chapter deals with research design, setting, population, sample size, sampling technique, criteria for selection of sample, description of tools and data collection.

### **RESEARCH DESIGN**

Quasi experimental design - One group pretest-posttest research design was adopted to evaluate the effectiveness of drumstick leaves tea among hypertensive clients.

### **SETTING**

The study was conducted in Thandalam village at Kanchipuram district

### **POPULATION**

The study population refers to the clients who are all having hypertension residing in thandalam village.

### **SAMPLE SIZE**

A Sample size of 30 clients group who have diagnosed as hypertension.

### **SAMPLING TECHNIQUE**

Simple random technique is used to select the samples for the study.



## **CRITERIA FOR SAMPLE SELECTION**

### **Inclusion Criteria**

1. The study included both men and women.
2. Clients who are willing to participate in the study.
3. The clients who can understand Tamil and English.
4. The clients who are diagnosed as hypertension.
5. The clients, who are present during data collection.

### **Exclusion Criteria**

1. Clients who are below 30 yrs.
2. Clients who are not cooperative.
3. Clients who are not understand Tamil/English
4. Clients who are having hypertension with other complications.

## **DESCRIPTION OF THE TOOL**

Details of the tool are given below.

### **Part – I**

Demographic variables such as age, sex, family history ,duration of illness, etc.

## **Part – II**

Self Structured rating scale is used to assess the effectiveness of drumstick leaves tea among hypertensive clients.

### **DATA COLLECTION PROCEDURE**

The study was conducted at Thandalam village, Kanchipuram district. The data was collected for a period of six weeks by using the prepared tools. The tools have been developed based on the objectives of the study and through review of literature. The investigator obtained the approval from the dissertation committee and from the president, Thandalam village, Cheyur Taluk, Kanchipuram District. Oral consent was taken from the study participants to conduct the study. The data collection was done for six weeks by using interview and observational method.

## **CHAPTER – IV**

### **DATA ANALYSIS AND INTERPRETATION**

This chapter deals with statistical analysis. It deals with description of tool, report of pilot study, informed consent, data collection procedure, score interpretation, method of data analysis plan, results and presentation of findings. Data analysis was done by using descriptive and inferential statistics procedure. The items have been scored after assessment and evaluation and the results have been tabulated. The statistical methods used for analysis were mean, standard deviation and paired 't'- test.

#### **DESCRIPTION OF THE TOOL**

**Details of the tools used in this study are given below**

#### **PART-I**

##### **A. Demographic variables**

Demographic variables include age, sex, family income, family history, duration of illness, type of treatment, source of health information.

## **B. Demographic variables relating to hypertension**

It consists of age, sex, type of treatment, duration of illness, previous hospitalization, family history of hypertension, etc,

### **PART- II**

#### **Self - structured rating scale**

Self - structured rating scale was used to identify the improvement in the health status of the hypertensive clients. This part consists of 15 numbers of questions regarding health condition of old age group with arthritis and each question carried maximum score of 3. It was indicated that the total number of score was 45. Minimum score was 1. Total number of minimum score was 15.

Based on the information, the data had been classified as follows.

16 - 25 - Mild Health Deterioration

26 - 35 - Moderate Health Deterioration.

36 - 45 - Severe Health Deterioration.

## **REPORT OF THE PILOT STUDY**

Prior permission from the authorities was obtained and individual consent taken from the three samples were selected for the study. The pilot study was conducted in Thandalam village, Kanchipuram district, for a period of two weeks. The tools had been used to find out the reliability, validity, feasibility and practicability of the tool and which was evaluated by experts of the Research committee. Content validity was obtained from community health nursing experts. According to simple random sampling technique ten samples had been taken and by using the checklist and Self structured rating scale the health condition of the hypertensive clients had been assessed and then nursing care was given and the data had been evaluated and analyzed by using paired t-test.

### **VALIDITY**

The tools had been prepared by the help of experts' guidance on the basis of objectives which had been assessed and evaluated, accepted by experts of Research committee. Content validity was obtained from community health nursing experts.

## **RELIABILITY**

The reliability was checked by inter rater method. The reliability score was 0.71. Reliability and practicability of tool was tested through the pilot study and used for main study.

## **INFORMED CONSENT**

The investigator obtained the approval from the dissertation committee and from the president, Thandalam village, Cheyur Taluk, Kanchipuram District. Oral consent was taken from the study participants to conduct the study. The data collection was done for six weeks by using interview and observational method.

## **DATA COLLECTION PROCEDURE**

The Researcher introduced herself and maintained a good rapport and made the people to cooperate and accept the participants for this study. The data was collected from Hypertensive Clients. The data collection was done for ten minutes with each client on the assessment day after getting the demographic data from the clients. Assessment was done with the help of Self structured Rating Scale. Intervention was carried out on all the days during study period. On the day of evaluation, health status was evaluated with the help of Self - structured rating scale.

## SCORE INTERPRETATION

$$\text{Scoring interpretation} = \frac{\text{Obtained score}}{\text{Total score}} \times 100$$

## SCORE DESCRIPTION

DESCRIPTION	PERCENTAGE
MILD	below 50%
MODERATE	51% - 75%
SEVERE	above 75%

## PLAN FOR DATA ANALYSIS:

The data were had been organized, tabulated and analyzed by using descriptive statistics.

Mean, standard deviation and paired't' test was carried out to assess the effectiveness of Drumstick leaves tea among hypertensive clients.

Chi-square test was used for the association of demographic variables with effectiveness of drumstick leaves tea among hypertensive clients.

## **STATISTICAL METHOD**

Descriptive statistical analysis and inferential statistical analysis methods had been used to find out the percentage, mean, standard deviation, Paired 't' test and "chi square" test.

<b>S.NO</b>	<b>DATA ANALYSIS</b>	<b>METHODS</b>	<b>REMARKS</b>
<b>1.</b>	<b>Descriptive analysis</b>	<b>The total number of score, percentage of score, mean and standard deviation.</b>	<b>To describe demographic variables of hypertensive clients</b>
<b>2.</b>	<b>Inferential analysis</b>	<b>Paired ' t ' test</b>	<b>Analyzing the effectiveness of drumstick leaves tea between pretest and post test</b>
<b>3</b>	<b>Inferential analysis</b>	<b>Chi square</b>	<b>Analyzing the association between demographic variables and effectiveness of drumstick leaves tea among hypertensive clients.</b>



## **DATA ANALYSIS AND INTERPRETATION HAVE BEEN DONE UNDER THE FOLLOWING HEADINGS**

### **SECTION –A**

Frequency and percentage distribution of demographic variables of hypertensive clients.

### **SECTION – B**

Comparison between assessment and evaluation scores of effectiveness of drumstick leaves tea among hypertensive clients.

### **SECTION – C**

Comparison between mean and standard deviation of assessment and evaluation of effectiveness of drumstick leaves tea among hypertensive clients.

### **SECTION – D**

Mean and standard deviation of improvement score for effectiveness of drumstick leaves tea among hypertensive clients.

### **SECTION – E**

Association between the demographic variables in relation to effectiveness of drumstick leaves tea among hypertensive clients.

## SECTION-A

**TABLE 4.1 FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES OF HYPERTENSIVE CLIENTS**

**N = 30**

<b>S.No</b>	<b>DEMOGRAPHIC VARIABLES</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
01.	Age		
	a) 31-40 years	4	13.3
	b) 41-50 years	12	40
	c) 51-60 years	10	33.3
	d) Above 61 years	4	13.3
02.	Sex		
	a) Male	23	76.7
	b) Female	7	23.3
03.	Religion		
	a) Hindu	16	53.3
	b) Christian	14	46.7
	c) Muslim	0	0
04.	Marital status		
	a) Married	21	70
	b) Unmarried	5	16.7
	c) Widower	4	13.3

05.	Type of Family		
	a) Nuclear Family	9	30
	b) Joint Family	16	53.3
	c) Joint Extended Family	5	16.7
06.	Educational status		
	a) Illiterate	6	20
	b) Primary Education	13	43.3
	c) Secondary Education	9	30
	d) Professional	2	6.7
07.	Occupational status		
	a) Sedentary work	4	13.3
	b) Moderate work	14	46.7
	c) Severe work	12	40
08.	Economical status		
	a) Lower Class	8	26.7
	b) Middle Class	14	46.7
	c) Upper Middle Class	7	23.3
	d) Upper Class	1	3.3

09.	Type of Treatment a) Allopathy b) Sidha c) Unani	18 12 0	60 40 0
10.	Duration of Illness a) below 1 year b) 1-3 years c) 3-5 years d) Above 5 years e)	5 7 9 9	16.7 23.3 30 30
11.	Associated Disease a) Nil b) Diabetes Mellitus c) Others	15 12 3	50 40 10
12.	Structure of Body a) Thin b) Moderate c) Obese	10 7 13	33.3 23.3 43.3

13.	Habit of Non-vegetarian food		
	a) No	3	10
	b) Once in a week	14	46.7
	c) Once in a Month	12	40
	d) Daily	1	3.3
14.	Treatment and follow-up		
	a) Regular	8	26.7
	b) Irregular	16	53.3
	c) No	6	20
15.	Source of Health Information		
	a) Mass media	19	63.33
	b) Health Professionals	11	36.7
	c) Relatives, neighbours and others	0	0

**Table 4.2** depicts the frequency and percentage distribution of the demographic variables includes age, sex, religion, marital status, type of family, educational status, occupational status, economical status, type of treatment, duration of illness, associated diseases, structure of body, habit of non-

vegetarian food, treatment and follow-up and source of health information.

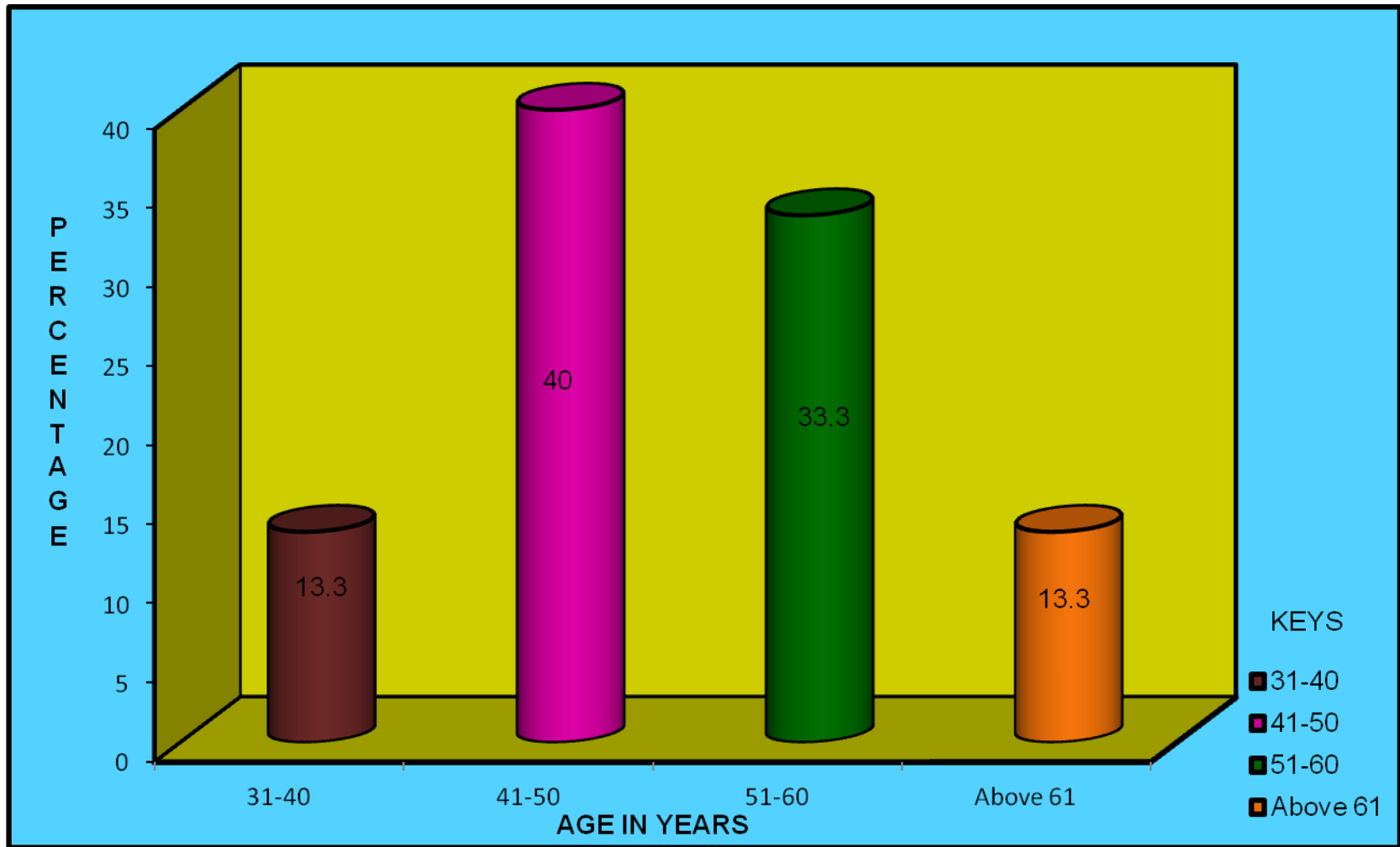
Out of 30 samples, four (13.3%) were in the age group of 31-40 yrs, 12(40%) were in 41-50yrs, ten(33.3%) in the age group of 51-60 yrs and four(13.33%)were above 61 yrs. Regarding sex, 23 male (76.7%), 7 females (23.3%), regarding religion, 16 Hindu (53.3%), 14 Christian (46.7%), others no. Regarding marital status 21(70%) married, 5(16.7%) were unmarried, 4(13.3%) widowed.

Analyzing the type of family 9(30%) in nuclear family, 16(53.3%) in joint family and 5(16.7%) in joint extended family. Regarding education 6 were illiterate (20%), 13 had primary education (43.33%), 9 had secondary education(30%), 2 were graduate (6.7%). Regarding occupational status 4(13.3%) under sedentary work, 14(46.7%) under moderate work and 12(40%) under heavy work.

In case of the economical status, 8(26.7%) were in lower class, 14(46.7%) were in middle class, 7(23.3%) were in upper middle class and 1(3.3%) was in upper class. Regarding the type of treatment, 18(60%) in allopathy, 12(40%) in sidha, no one in unani and others . Referring to the duration of illness 5(16.7%) in below one year, 7(23.3%) in 2-3 yrs, 9(30%) in 4-5

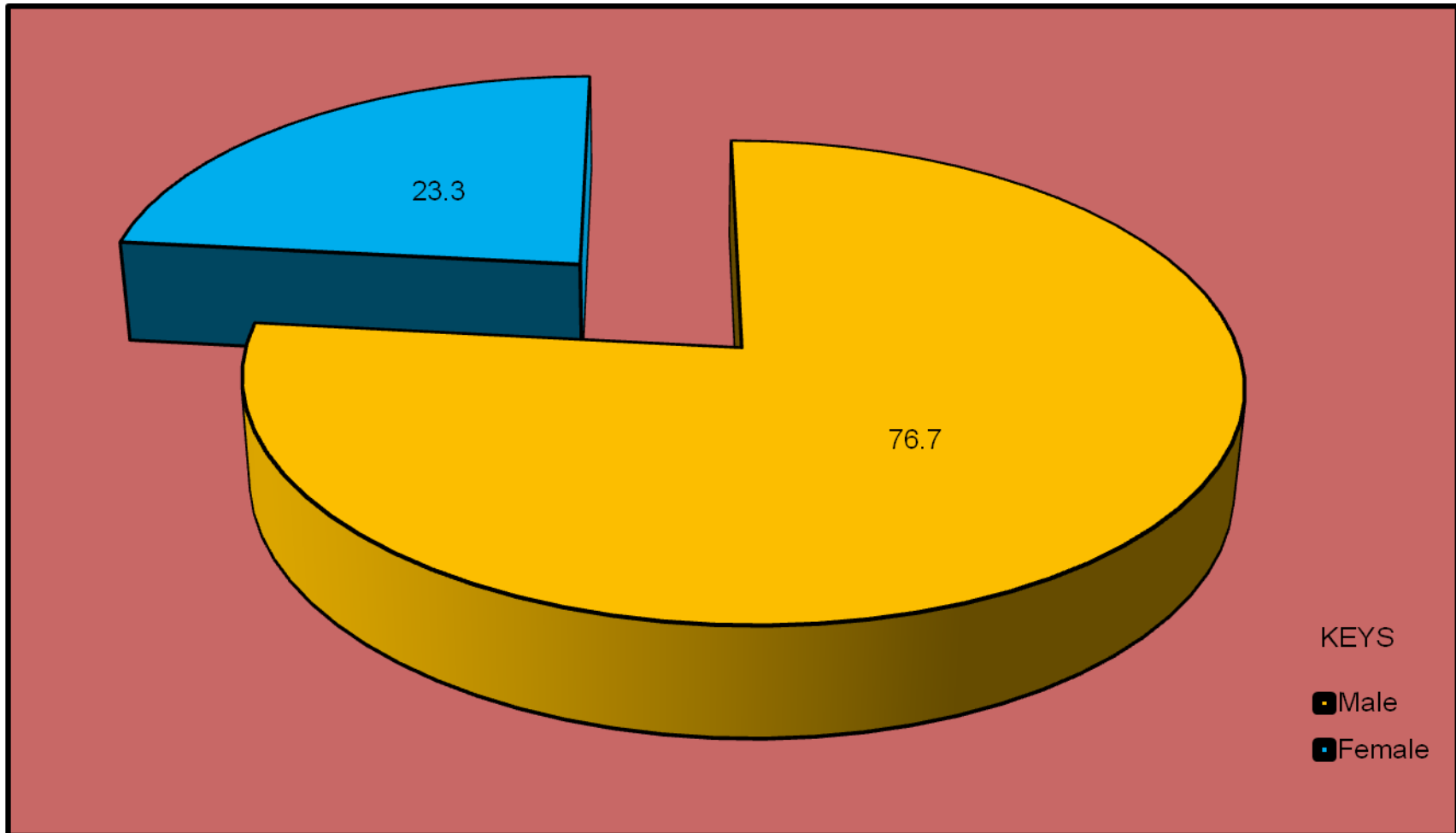
years and 9(30%) in above 5 yrs. About associated diseases, 15(50%) had nothing, 12(40%) had diabetes mellitus and 3(10%) had cardio vascular diseases. Regarding the structure of body 10(33.3%) were thin, 7(23.3%) were moderate and 13(43.3%) were obese.

About the habits of taking non-vegetarian food, 3(10%) didn't take, 14(46.7%) once in a week, 12(40%) once in a month and 1(3.3%) daily. About the treatment and follow-up 8(26.7%) under regular, 16(53.3%) under irregular and 6(20%) under nothing. Referring the source of health information 19 from mass media (63.3%), 11 from health personnel (36.7%), no one from friends and relatives.

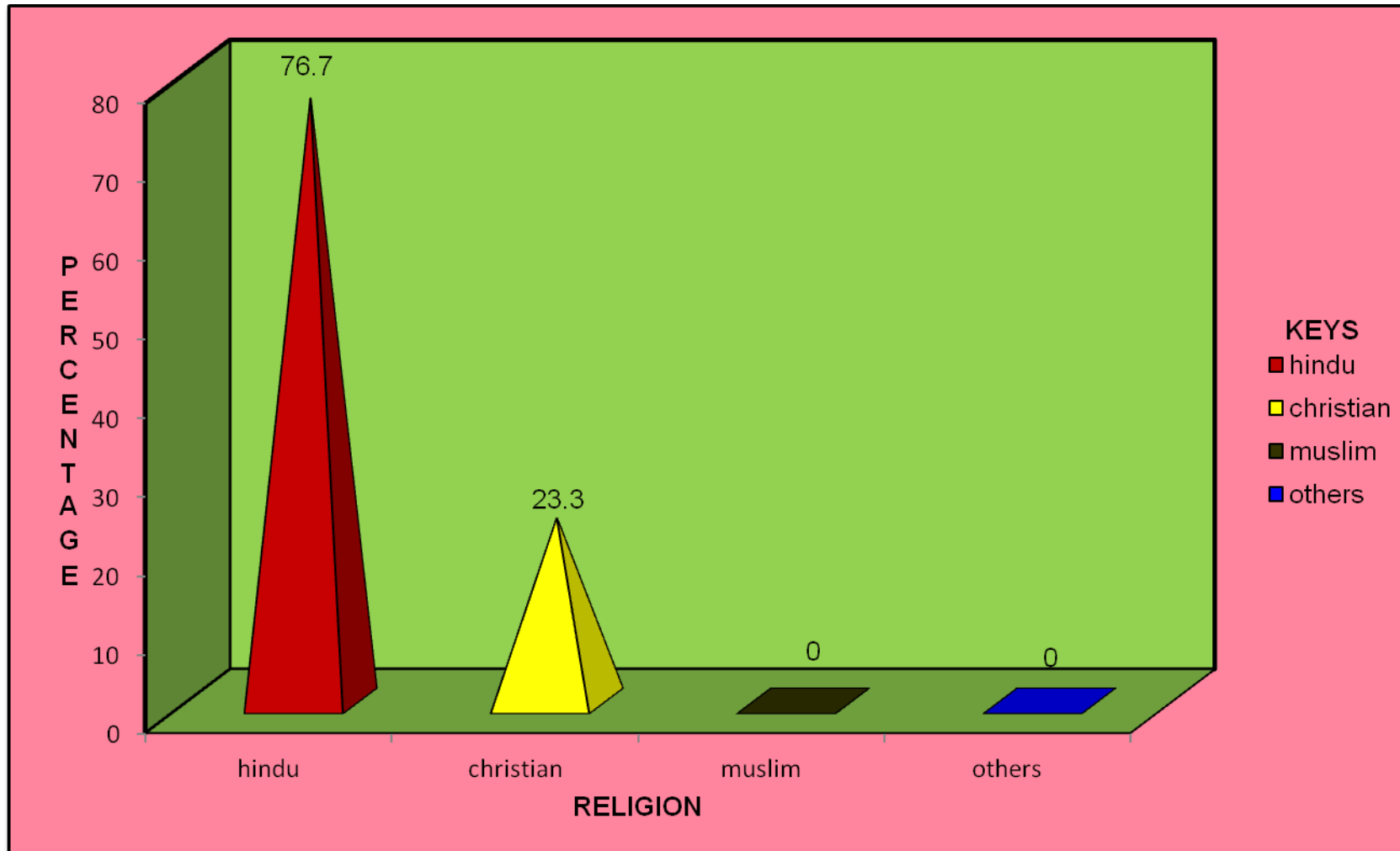


**FIG. 4.1 PERCENTAGE DISTRIBUTION OF AGE IN YEARS AMONG HYPERTENSIVE CLIENTS**

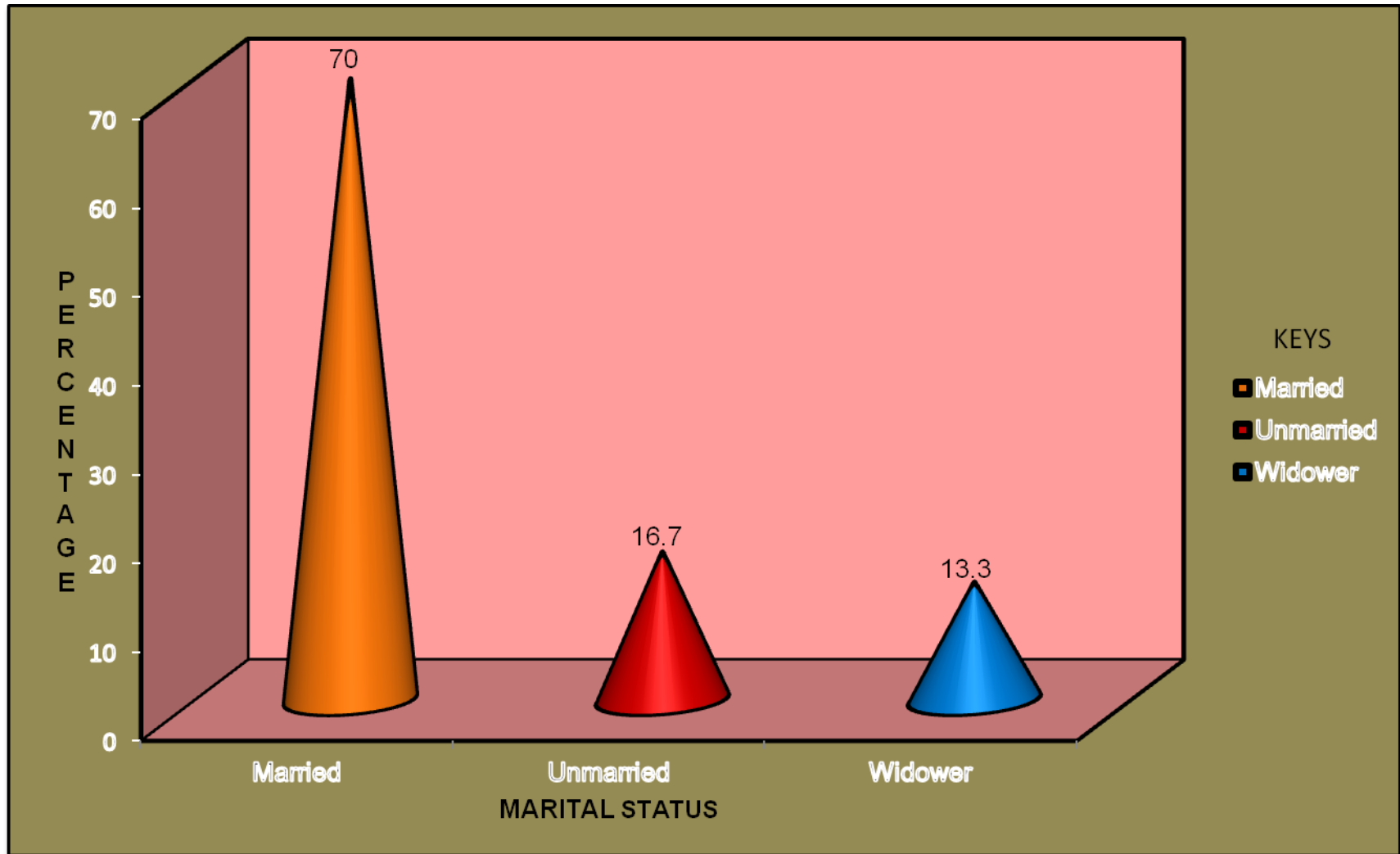




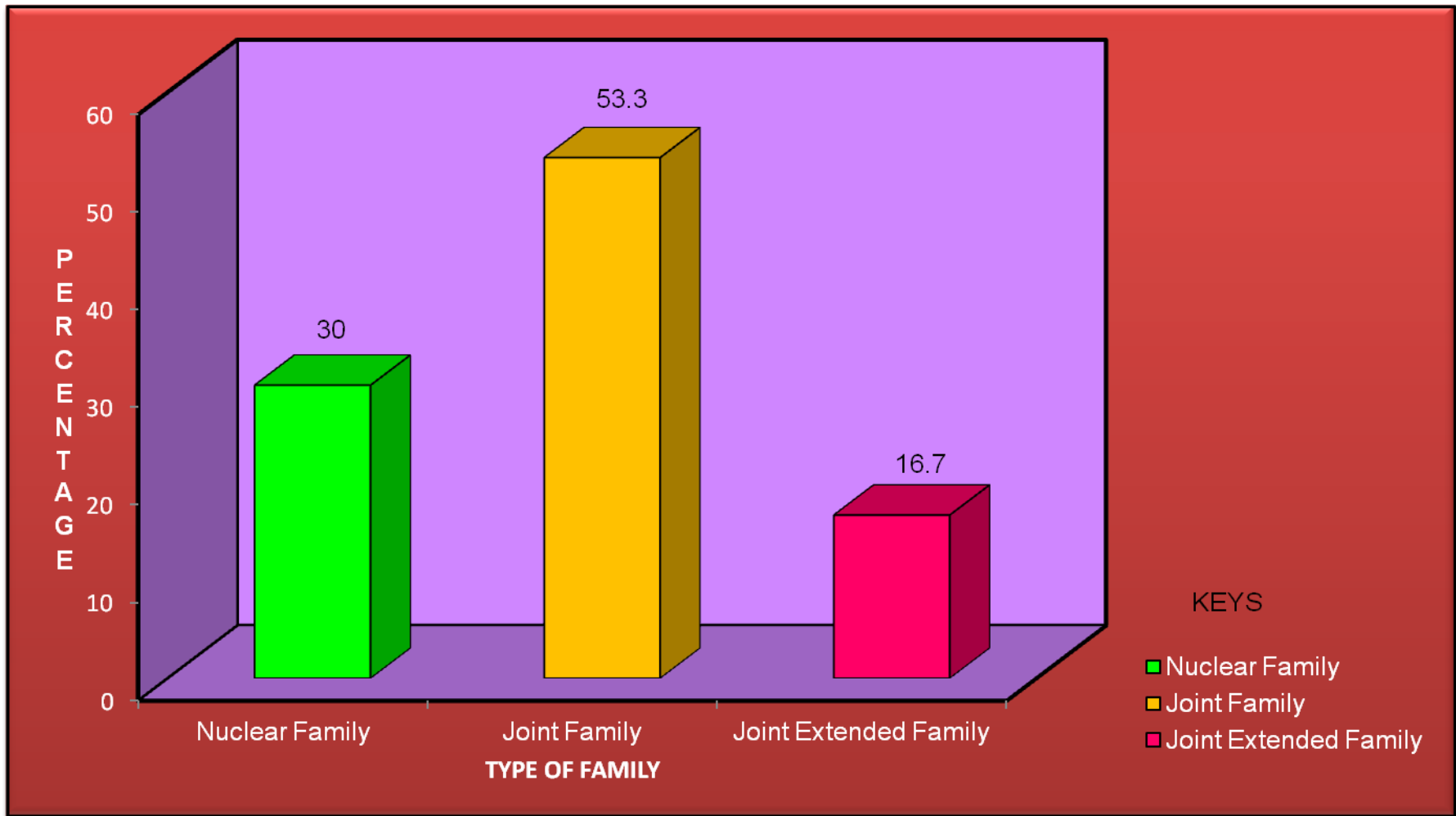
**FIG. 4.2. PERCENTAGE DISTRIBUTION OF GENDER AMONG HYPERTENSIVE CLIENTS**



**FIG. 4.3. PERCENTAGE DISTRIBUTION OF RELIGION AMONG HYPERTENSIVE CLIENTS**



**FIG 4.4. PERCENTAGE DISTRIBUTION OF MARITAL STATUS AMONG HYPERTENSIVE CLIENTS**



**FIG 4.5. PERCENTAGE DISTRIBUTION OF TYPE OF FAMILY AMONG HYPERTENSIVE CLIENTS**

**TABLE 4.2. DEMOGRAPHIC VARIABLES RELATED TO HYPERTENSION** **N=30**

<b>S.No</b>	<b>DEMOGRAPHIC VARIABLES</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
01.	Family History of Hypertension a) Yes b) No	12 18	40 60
02.	Previous Hospitalization a) Yes b) No	4 26	13.3 86.7
03.	Habit of smoking a) Yes b) No	5 25	16.7 83.3
04.	Habit of Alcoholism a) Yes b) No	8 22	26.7 73.3

05.	Habit of Tobacco chewing		
	a) Yes	4	13.33
	b) No	26	86.7
06.	Habit of doing exercise		
	a) Yes	6	20
	b) No	24	80

Table 4.3 shows frequency and percentage distribution of demographic variables related to hypertension. Out of 30 samples, 12(40%) had family history of hypertension, 18(60%) had not having family history of hypertension. With regards to the previous hospitalization 4(13.3%) had previous hospitalization and 26 had no previous hospitalization. About the habit of smoking 5(16.7%) had the smoking habit and 25 had no smoking habit. Regarding the habit of alcoholism, 8(26.7%) had the habit and 22 had no habit. About the habit of tobacco chewing 4(13.33%) had the habit and 26 had no habit. Regarding habit of doing exercise, 6(20%) were doing and 24(80%) were not doing.

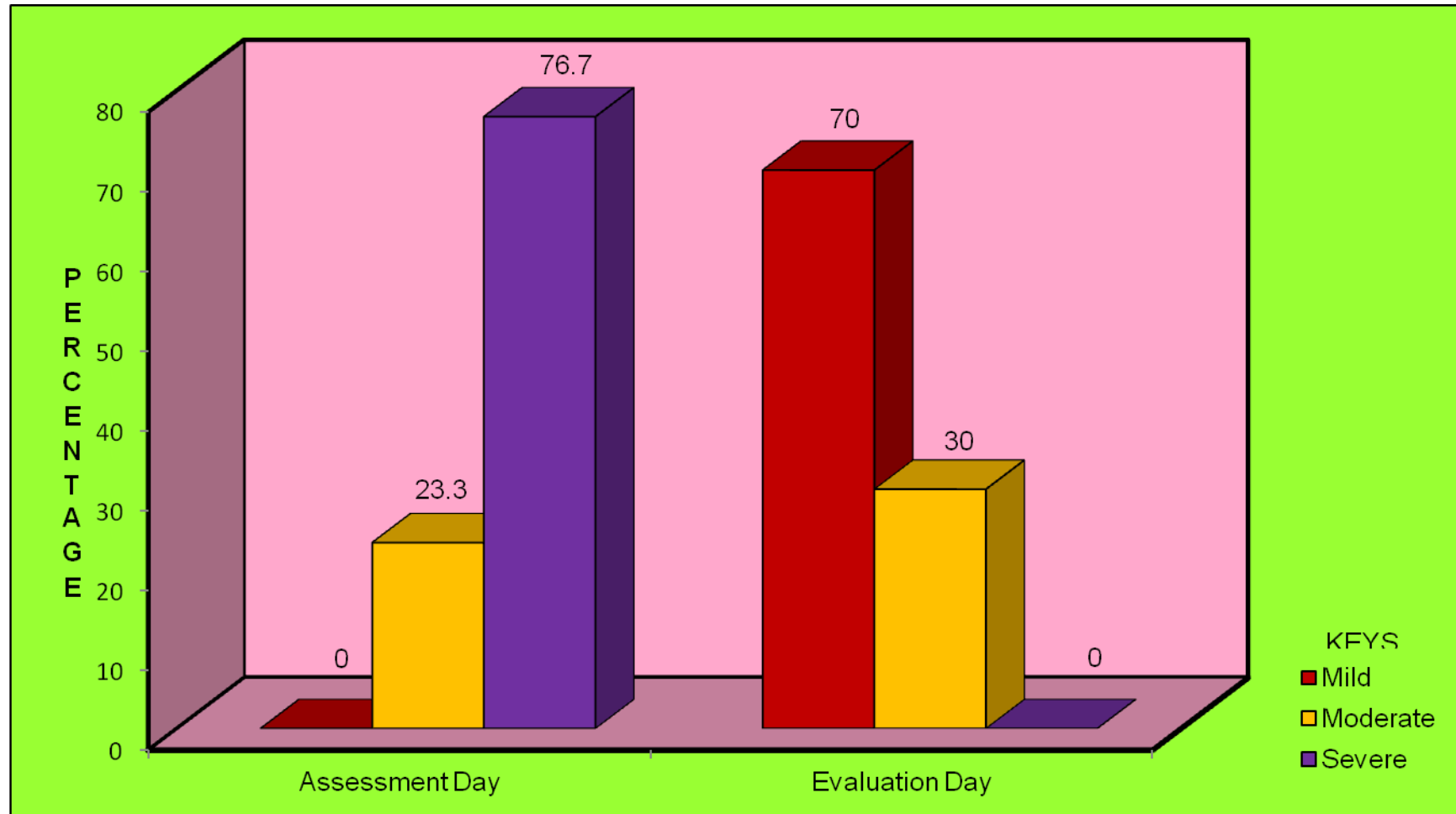
## SECTION – B

### ASSESSMENT SCORING ABOUT PROGRESS IN HEALTH CONDITION OF HYPERTENSIVE CLIENTS

**TABLE 4.3 - FREQUENCY AND PERCENTAGE DISTRIBUTION  
OF HEALTH STATUS OF HYPERTENSIVE CLIENTS      N=30**

HEALTH STATUS	MILD		MODERATE		SEVERE		TOTAL	
	No	%	No	%	No	%	No	%
Assessment Day	0	0	7	23.3	23	76.7	30	100
Evaluation Day	21	70	9	30	0	0	30	100

**Table 4.4** shows that the health status of hypertensive clients. On assessment and evaluation day, self - structured rating scale was used. On the assessment day, the health status of 7(23.3%) were in moderate health condition and 23(76.7%) were in severe health condition. On the evaluation day, 21(70%) were in mild health condition, 9(30%) were in moderate health condition and none of them in severe health condition.



**FIG 4.6. COMPARISON OF HEALTH STATUS ON ASSESSMENT AND EVALUATION DAY AMONG HYPERTENSIVE CLIENTS**



## SECTION – C

**TABLE – 4.4: COMPARISON BETWEEN MEAN AND STANDARD DEVIATION OF ASSESSMENT AND EVALUATION OF HYPERTENSIVE CLIENTS** **N=30**

S.NO	HEALTH STATUS	MEAN	STANDARD DEVIATION	STANDARD ERROR MEAN
1	ASSESSMENT DAY	35.47	2.52	0.46
2.	EVALUATION DAY	20.10	2.64	0.48

**Table 4.5** shows comparison between mean and standard deviation of assessment and evaluation on hypertensive clients. This table shows that during the assessment, the mean was 35.47 with standard deviation of 2.52 and on evaluation the mean was 20.10 with the standard deviation of 2.64.

## SECTION – D

**TABLE – 4.5: MEAN AND STANDARD DEVIATION OF IMPROVEMENT SCORE FOR HYPERTENSIVE CLIENTS. N=30**

Level Of Improvement	Paired Differences					't' value
	Mean	Standard Deviation	Standard Error Mean	95% Confidence Interval of the Difference		
				Lower	Upper	
Improvement Score	15.37	3.42	.62	14.09	16.64	24.62

Table 4.6 shows the mean and standard deviation of improvement score for effectiveness of drumstick leaves tea among hypertensive clients. The total number of samples taken were 30. The table also reveals the assessment of health status and the value of mean, standard deviation and 't' value of improvement score.

The improvement score of mean value was 15.37 and standard deviation was 3.42 and the 't' value was 24.62, which shows a significant improvement in the health status among hypertensive clients.

## SECTION – E

**TABLE – 4.6: ANALYZING THE ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND EFFECTIVENESS OF DRUMSTICK LEAVES TEA AMONG HYPERTENSIVE CLIENTS.**

**N = 30**

S.No	Demographic Variables	Evaluation Score						$\chi^2$
		Mild		Moderate		Severe		
		No	%	No	%	No	%	
01.	Age							<b>0.714 NS</b>
	a) 31-40 years	<b>3</b>	<b>10</b>	<b>1</b>	<b>3.3</b>	<b>0</b>	<b>0</b>	
	b) 41-50 years	<b>9</b>	<b>30</b>	<b>3</b>	<b>10</b>	<b>0</b>	<b>0</b>	
	c) 51-60 years	<b>6</b>	<b>20</b>	<b>4</b>	<b>13.3</b>	<b>0</b>	<b>0</b>	
	d) Above 61 years	<b>3</b>	<b>10</b>	<b>1</b>	<b>3.3</b>	<b>0</b>	<b>0</b>	
02.	Sex							<b>0.009 NS</b>
	a) Male	<b>16</b>	<b>53.3</b>	<b>7</b>	<b>23.3</b>	<b>0</b>	<b>0</b>	
	b) Female	<b>5</b>	<b>16.7</b>	<b>2</b>	<b>6.7</b>	<b>0</b>	<b>0</b>	
03.	Religion							<b>0.408 NS</b>
	a) Hindu	<b>12</b>	<b>40</b>	<b>4</b>	<b>13.3</b>	<b>0</b>	<b>0</b>	
	b) Christian	<b>9</b>	<b>30</b>	<b>5</b>	<b>16.7</b>	<b>0</b>	<b>0</b>	
	c) Muslim	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
04.	Marital status							<b>5.51 NS</b>
	a) Married	<b>12</b>	<b>40</b>	<b>9</b>	<b>30</b>	<b>0</b>	<b>0</b>	
	b) Unmarried	<b>5</b>	<b>16.7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
	c) Widower	<b>4</b>	<b>13.3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

05.	Type of Family							
	a) Nuclear Family	7	23.3	2	6.7	0	0	<b>0.509 NS</b>
	b) Joint Family	11	36.7	5	16.7	0	0	
	c) Joint Extended Family	3	10	2	6.7	0	0	
06.	Educational status							
	a) Illiterate	5	16.7	1	3.3	0	0	<b>4.033 NS</b>
	b) Primary Schooling	7	23.3	6	20	0	0	
	c) Secondary Schooling	8	26.7	1	3.3	0	0	
	d) Graduate	1	3.3	1	3.3	0	0	
07.	Occupational status							
	a) Sedentary work	4	13.3	0	0	0	0	<b>2.506 NS</b>
	b) Moderate work	10	33.3	4	13.3	0	0	
	c) Severe work	7	23.3	5	16.7	0	0	
08.	Economical status							
	a) Lower Class	6	20	2	6.7	0	0	<b>1.088 NS</b>
	b) Middle Class	10	33.3	4	13.3	0	0	
	c) Upper Middle Class	4	13.3	3	10	0	0	
	d) Upper Class	1	3.3	0	0	0	0	

09.	Type of Treatment							
	a) Allopathy	12	40	6	20	0	0	0.238 NS
	b) Sidha	9	30	3	10	0	0	
	c) Unani	0	0	0	0	0	0	
	d) Others	0	0	0	0	0	0	
10.	Duration of Illness							
	a) below 1 year	5	16.7	0	0	0	0	3.847 NS
	b) 1-3 years	4	13.3	3	10	0	0	
	c) 4-5 years	5	16.7	4	13.3	0	0	
	d) Above 5 years	7	23.3	2	6.7	0	0	
11.	Associated Disease							
	a) Nil	9	30	6	20	0	0	1.746 NS
	b) Diabetes Mellitus	10	33.3	2	6.7	0	0	
	c) Others	2	6.7	1	3.3	0	0	
12.	Structure of Body							
	a) Thin	7	23.3	3	10	0	0	0.848 NS
	b) Moderate	4	13.3	3	10	0	0	
	c) Obese	10	33.3	3	10	0	0	
13.	Habit of Non-vegetarian							
	a) No	3	10	0	0	0	0	2.959 NS
	b) Once in a week	8	26.7	6	20	0	0	
	c) Once in a Month	9	30	3	10	0	0	
	d) Daily	1	3.3	0	0	0	0	

14.	Treatment and follow-up							
	a) Regular	6	20	2	6.7	0	0	0.139 NS
	b) Irregular	11	36.7	5	16.7	0	0	
	c) No	4	13.3	2	6.7	0	0	
15.	Source of Health Information							
	a) Mass media	11	36.7	8	26.7	0	0	3.616 NS
	b) Health Professionals	10	33.3	1	3.3	0	0	
	c) Relatives, neighbours and others	0	0	0	0	0	0	
16	Family History of Hypertension							
	a) Yes	8	26.7	4	13.3	0	0	0.106 NS
	b) No	13	43.3	5	16.7	0	0	
17.	Previous Hospitalization							
	a) Yes	4	13.3	0	0	0	0	1.978 NS
	b) No	17	56.7	9	30	0	0	
18.	Habit of smoking							
	a) Yes	4	13.3	1	3.3	0	0	0.286 NS
	b) No	17	56.7	8	26.7	0	0	

19.	Habit of Alcoholism							
	a) Yes	6	20	2	6.7	0	0	0.13 NS
	b) No	15	50	7	23.3	0	0	
20.	Habit of Tobacco chewing							
	a) Yes	4	13.3	0	0	0	0	1.978 NS
	b) No	17	56.7	9	30	0	0	
21.	Habit of doing exercise							
	a) Yes	6	20	0	0	0	0	3.214 NS
	b) No	15	50	9	30	0	0	
<b>NS – NON-SIGNIFICANCE</b>								

**Table 4.7** reveals that all the demographic variables like age, sex religion, marital status, type of family, educational status, occupational status, economical status of the family, type of treatment, duration of illness, associated diseases, structure of the body of the client, habit of taking non-vegetarian diet, treatment and follow-up, source of health information, family history of hypertension, previous hospitalization, habit of smoking, habit of alcoholism, habit of tobacco chewing and habit of doing exercise are not significant with the hypertension.

## **CHAPTER –V**

### **RESULTS AND DISCUSSION**

The aim of the present study was to evaluate the effectiveness of drumstick leaves tea among hypertensive clients. A total number of 30 samples had been selected for the study. Assessment had been done by self structured rating scale. Seventh day after the consumption of drumstick leaves tea the evaluation was done by using self - structured rating scale.

The result of the study had been discussed according to the objectives of the study, conceptual framework and on related literature.

The study was conducted at Thandalam village at Kanchipuram district. Thirty hypertensive clients who met with the inclusion criteria had been included in the study. Each client was assessed with the questionnaire for demographic variables, questionnaire for demographic variables related to hypertension and self structured rating scale.



**The first objective was to assess the health status of the hypertensive clients.**

Table 4.3 On assessment day, twenty three(76.7%) clients were in severe health status, seven(23.3%) were in moderate health status with mean 35.47 and standard deviation 2.52. It reveals that most of the clients were in severe condition. They were in need of complementary therapies to promote health status.

**The second objective was to evaluate the effectiveness of drumstick leaves tea.**

**K. Venkataramaniah et al., (2010)** conducted a study on traditional elements of moringa oleifera. He concluded that Moringa oleifera is one of the commonly used medicinal plants in India for curing ailments ranging from common cold, skin diseases, and dental infections to major disorders like diabetes, hypertension, jaundice, rheumatism, etc. To understand and correlate their medicinal use, trace element studies on the aqueous extract of these medicinal plants have been carried out using particle-induced X-ray emission technique. Notable results include very high concentrations of Cl, K, and Ca in all the leaf

samples, appreciable levels of magnesium, and the aqueous extract of Moringa leaves compared to others and relative higher concentrations of Cr in all the plants.

The nursing care as per the protocol was provided to each client and observed by using self - structured rating scale. Comparison of assessment mean level of 35.47 and evaluation mean of 20.10 showed the improvement score mean of 15.37 with standard deviation of 3.42. The paired 't' value 24.62 shows the difference in health status between before and after the consumption of drumstick leaves tea. So there is a significant improvement between the assessment score and evaluation score. It shows drumstick leaves tea was very effective.

**The third objective was to associate demographic variables and effectiveness of drumstick leaves tea.**

**Table 4.6** revealed and proved that there was no significant association between the demographic variables (age, sex religion, marital status, type of family, educational status, occupational status, economical status of the family, type of treatment, duration of illness, associated diseases, structure of the body of the client, habit of taking non-vegetarian diet, treatment and follow-up, source of health information, family history of hypertension, previous hospitalization, habit of smoking, habit of

alcoholism, habit of tobacco chewing and habit of doing exercise) and effectiveness of drumstick leaves tea among hypertensive.

From the statistical analysis, the improvement score mean 15.37 with standard deviation of 3.42 the paired 't' value of 24.62 which had a significance at  $P < 0.05$  level and the calculated value was greater than table value at 0.05 level of significance. It implies that the drumstick leaves tea provided by the investigator was effective and showed improvement in health status of hypertensive clients.

# CHAPTER VI

## SUMMARY AND CONCLUSION

### SUMMARY

The present study was conducted to elicit the effectiveness of drumstick leaves tea among hypertensive clients. A total of 30 hypertensive clients, who met the inclusion criteria had been selected by using simple random sampling technique.

The objectives of the study was to assess the health status of hypertensive clients and to correlate the evaluation status with demographic variables.

The investigator first introduced her to the clients and developed a good rapport with them. After the selection of sample, the drumstick leaves tea was provided to the clients. Demographic variables, vital parameters and health status were assessed.

There are two part in this section.

PART – I: Interview technique was used to collect the demographic variables with hypertensive clients.

PART – II: Self-structured rating scale for assessment of health status of hypertensive clients.

## **CONCLUSION**

On the assessment day, out of 30 samples 23 (76.7%) clients were under severe health status. On evaluation day after the consumption drumstick leaves tea, the clients' signs and symptoms had minimized. Likewise 7 (23.3%) clients were under moderate health status and on the evaluation day after the consumption of drumstick leaves tea, the clients' health status had improved.

There was statistically ( $P < 0.05$ ) a significant increase in health status, In relation to effectiveness of drumstick leaves tea, there was remarkably maintained health status could be found after the consumption of drumstick leaves tea to the hypertensive clients.

The results of the study have got implications on nursing practice, nursing education, nursing administration and nursing research.

## **NURSING IMPLICATIONS**

This study would provide insight among the nurses to detect certain problems like headache, chest pain, dyspnoea and fatigue , and full assessment which would guide them to detect life support measures appropriately to prevent further complications.

It also meets the challenges among nurses for growing autonomy in decision making capacity to render priority based treatment to the clients at a given movement.

## **IMPLICATIONS FOR NURSING EDUCATION**

Interpretation of theory and practice are the vital needs and they are important for nursing education. This study would emphasize among learners to develop observational skills and develop systematic assessment to help them to detect the problem and motivate them to render care to the clients at acute stage.

Nurses working in community area should be expected to have thorough knowledge in management of hypertensive clients, and identification of existing problem needs and quick assessment skills.

Nursing students have to assess the hypertensive clients problems and to provide effective experience based care.

Nurse educators, when plan to instruct the students should be provided with adequate opportunities to develop skills in handling the hypertensive clients and should demonstrate how to tackle such clients in community and clinical settings.

## **IMPLICATIONS FOR NURSING ADMINISTRATION**

The administrator manages the hypertensive clients and the nursing leaders in nursing care should be confronted to undertake the health needs of the most vulnerable effective organization and management.

The nursing administrator should give attention in proper selection, placement of effective utilization of the nurses in all access with in the available resources giving importance for their creativity, internal ability in education.

The administrator should provide adequate in service education programme on latest management strategies in care of hypertension and handling of advanced technologies would motivate nurses to carryout nursing intervention and improve the standards of nursing.

## **IMPLICATIONS FOR NURSING RESEARCH**

Today, nursing is involved in every aspect of changes in health care delivery system and advanced technology, development of newer discipline in medicine. Nursing needs to be developed to study in specific areas of problems encountered by the hypertensive clients.

This is the time to formulate the nursing care policy. This study directs the nursing personnel to broaden and expand their knowledge and skill to elicit problems and to conduct various research to improve their power to implement prompt activities.

The Nursing discipline must follow the evidence based practice and this would provide quality of nursing care. This study would imply the nursing research to conduct and motivate the learners to adopt a relevant study with all dissemination, namely physical, mental, emotional, social and spiritual change, in the care of hypertension.

By conducting many research and utilization of their findings and disseminating knowledge would provide a vision for positive growth in nursing discipline.

## **RECOMMENDATIONS**

Based on the research findings the following recommendations have been made,

- ✓ Similar study can be conducted with large samples.
- ✓ This study can be conducted in urban area.
- ✓ Experimental study can be conducted by introducing structured teaching programme.
- ✓ A descriptive study can also be conducted to evaluate



problems and institute nursing care for hypertensive clients.

- ✓ Descriptive study on assessment of knowledge, attitude, and practice of hypertension and its advanced management can be initiated.

# BIBLIOGRAPHY

## BOOK REFERENCES

01. Black M J. et al., (1993), **“Medical Surgical Nursing - A Psycho Physiologic Approach”** 3<sup>rd</sup> Edition, Philadelphia, W.B.Sounders company.
02. Brawnwald (1992), **“Heart diseases - “A Text Book of Cardio-Vascular Medicine”** Vol No. : I, Philadelphia, W.B.Sounders company.
03. Brunner (2009) **“Text book of medical surgical nursing”** XI Edition, Lippincott publication.
04. Fitzpatrick Joice J A (1983) **“Conceptual Models of Nursing - Analysis and Application”** Maryland, Hall publication and Communication company.
05. Fawcet J (1984) **“Analysis and Evaluation of Conceptual Models of Nursing”** Philadelphia, T.A. Daves Company.
06. Grace I M (1997) **“Coronary Heart Diseases preventing of handbook for the health care team”** New Delhi.

07. Gupta S P (2000) **“Statistical methods”** 5<sup>th</sup> edition, New Delhi, Sultanchand and Sons.
08. Guzzeta C E (1992) - **Hypertension risk factors “Cardio-Vascular Nursing holistic practice”** M S O by year book.
09. Harrison M (1994) - Treatment Modalities **“Principles of Internal Medicine”** 13<sup>th</sup> edition, Newyork, health profession division.
10. Hungler B P (1997) - Research Design **”Nursing research”** 6<sup>th</sup> edition, Philadephia Lippincott company.
11. Julia (1999), **“Nursing theories, the base for Professional”** 7<sup>th</sup> Edition, Harper Collins publications, New York
12. Jonas J B, Nabgia V, Matin A., et al., **“Prevelance, Awarness Control and Associations of oriental hypertension in a rural central India population”** Sage publication
13. John W creswell (1995) **“Research design, Qualitative and Quantitative Approaches”** Sage Publication, New delhi.
14. Kalpan Norman M (1994) **“Clinical Hypertension”** Maryland, International Editor.

15. Kothari C R (2000) **“Research methodology methods & techniques”**, 2<sup>nd</sup> edition, Newdelhi.
16. Lewis C (1995) **“Medical Surgical Nursing” assessment & management of clinical problems”** 5<sup>th</sup> edition, Mosby Publications
17. Marcue A (1987) diagnosis of hypertension **“Current Medical Diagnosis and Treatment”** California, Appleton & lauge publications
18. Marcoux S. et al., (1999) **“Job Strain and Pregnancy induced Hypertension – Epidemiology”** 2<sup>nd</sup> edition, W.B. Saunders company publishers.
19. Park K (2011) **“Textbook of preventive and social medicine”** 21<sup>st</sup> edition, Jabalpur.
20. Polit F (2004) **“Nursing research principles and methods”** 7<sup>th</sup> edition, Lippincott publications
21. Peggyil (1994) **“Theroy and nursing”** 3<sup>rd</sup> edition, St. Louis C.V. Mosby company.
22. Phipps L (1994) **“Medical Surgical Niursing, concepts & clinical practice”** 15<sup>th</sup> edition, Missouri, Mosby year book.
23. Polit F (2004) **“Nursing research principles and methods”** 7<sup>th</sup> edition, Lippincott publications

24. Polit D F (1995) "**Nursing research principle & methods**" Philadelphia. J. B Lippincott company.
25. Robbins Stanly L et al (1995) "**Hypertension**" pocket companion to robbins pathologic basis of disease, Bangalore, W. B. Saunders company.
26. Schlant Robert C (1992) "**Hypertension Book of Cardiology**" Philadelphia, Mosby
27. Sundar Rao P S (1996) "**An introduction to bio-statistics**" manual for students in health sciences, New Delhi.
28. Suddarth B (1992) "**Textbook of Medical Surgical Nursing**" Philadelphia, J.B. Lippincott company.
29. Swaminathan M (1993) "**Principles Of Nutrition And Dietetics**" 5<sup>th</sup> edition, Jaypee brothers publications

## JOURNAL REFERENCE

- Am Fam Physician (2005), “**Antiplatelet Therapy & Anti – Coagulation In Patients With Hypertension**”, “current hypertension reports” march.
- Appel R J (1997) “**Dietary Sodium Restriction**” American Heart Association, Hypertension, Vol - 25, no.3
- Arroll B et al (1995) “**Salt Restriction & Physical Activity In Treated Hypertensive**” National Medical Journal.
- Biltein I J (1995) “**Alchol and Hypertension - Clinical Experimental Pharmacology and Physiology**” March, page no. 185-188.
- Boone .j.k (1991) Stress and Hypertension , “**Clinical Hypertension**” page no. 623-649.
- Compose E et al (1993) “**Sodium Intake and Hypertension - International Medicine**”.
- Elmer P J et al (1991) “**Dietary Sodium Reduction for Hypertension Prevention and Treatment**” Hypertension.
- Gold G F (1995) “**Special Concerns in Managing the Older Hypertensive Patients**” geriatrics.
- Huston M C (1992) “**Physical Activity Lowers The Risk Of Heart Diseases**” American journal of medicine, Vol - 1013a, Sep -20.

- Holwood C (2000) **“Obesity & Hypertension”**, American journal of medicine, vol -101, no-4.
- Kumar Y et al (2002) **“Hypertensive Encephalopathy”**, hypertension, Vol - 25, no-5.
- Laukannen J A et al (2004) **“Exercise And Blood Pressure” - Current Hypertension Reports**
- Miyai N et al (2002) **“Normotension”**, hypertension vol-25, no-4.
- Moots R D (1995) **“Lifestyle And Hypertension”**, American Heart Journal, vol -132, no-1.
- Pais P et al (1997) **“Smoking And Hypertension”** Nursing times vol-94.
- Poliklinik K et al (2004) **“Coffee Consumption And Coronary Heart Disease”** current hypertension reports
- Reddy K S et al (1996) **“Smoking And Preventive Rate”** clinical hypertension”
- Tanemoto M et.al (2003) **“Renin-Angiotensin-Aldosterone System”** hypertension vol - 26, no-10.
- Wash H S (1995) **“Prevalence Among Population”** American heart journal
- WHO reports (2000) **“Systolic & Diastolic Blood Pressure”** - current hypertension reports

- Williams (1996) “risk factor for hypertension” American journal of medicine Vol -14.
- Winslo E et al (1996) “exercise and blood pressure” clinical hypertension
- Zeng Wu Wang I et al (2001) **“Differences In Knowledge, Attitude And Behaviour With Respect To Hypertension”** vol - 24, no-5.
- Arroll and beatlchole (1995) **“Salt Restriction And Physical Activity In Hypertensivies”** National Medical Journal, page no. 266-268.

## **WEBSITES**

[http:// in wikipedia.org/wiki](http://in.wikipedia.org/wiki)

<http://www.google.com>

<http://search.yahoo.com>

<http://www.healthline.com>

<http://www.medline.com>

<http://www.pubmed.com>

<http://www.indiatimes.com>



# DEMOGRAPHIC VARIABLES

## SECTION - A

01) Age:

- a. 30-45 years ( )
- b. 45-60 years ( )
- c. 61-65 years ( )
- d. Above 65 years ( )

02) Sex:

- a. Male ( )
- b. Female ( )

03) Religion:

- a. Hindu ( )
- b. Christian ( )
- c. Muslims ( )
- d. Others ( )

04) Marital status:

- a. Married ( )
- b. Unmarried ( )
- c. Widower ( )

- 05) Type of family:
- a. Nuclear family ( )
  - b. Joint family ( )
  - c. Joint Extended Family ( )
- 06) Educational status:
- a. Illiterate ( )
  - b. Primary Education ( )
  - c. Secondary Education ( )
  - d. Professional ( )
- 07) Occupational status
- a. Sedentary work ( )
  - b. Moderate work ( )
  - c. Severe work ( )
- 08) Economical status of the family
- a. lower class ( )
  - b. middle class ( )
  - c. upper middle class ( )
  - d. upper class ( )

09) Type of treatment:

- a. Allopathy ( )
- b. Sidha ( )
- c. Unani ( )
- d. Others ( )

10) Duration of Illness:

- a. below one year ( )
- b. 2-3 years ( )
- c. 3-4 years ( )
- d. Above 4 yrs ( )

11) Associated diseases:

- a. Nil ( )
- b. Diabetes mellitus ( )
- c. Cardio-vascular diseases ( )
- d. Others ( )

12) Structure of the body

- a. Thin ( )
- b. Moderate ( )
- c. Obese ( )

13) Habit of taking Non-vegetarian food

a. No ( )

b. Once a week ( )

c. Once a month ( )

d. Daily ( )

14) Treatment & follow up:

a. Regular ( )

b. Irregular ( )

c. No ( )

15) Source of Health Information:

a. Mass Media ( )

b. Health personnel ( )

c. Neighbours ( )

d. Relatives and others ( )

## SECTION-B

### 16. Family history of Hypertension

a) Yes ( )

b) No ( )

### 17. Previous Hospitalisation

a) Yes ( )

b) No ( )

#### 17.a. If yes, duration of Hospitalisation

a) below 1 week ( )

b) 1-3 week ( )

c) above a month ( )

### 18. Habit of smoking

a) Yes ( )

b) No ( )

#### 18.a. If yes, number of cigarettes per day

a) 1-4 ( )

b) 4-8 ( )

c) above 8 ( )

19. Habit of Alcohol consuming

a) Yes ( )

b) No ( )

19.a. If yes, duration of the habit

a) below one year ( )

b) 1-3 yrs ( )

c) 3-5 yrs ( )

d) above 5 yrs ( )

20. Habit of Tobacco chewing

a) Yes ( )

b) No ( )

20.a. If yes, duration of the habit

a) below one year ( )

b) 1-3 yrs ( )

c) 3-5 yrs ( )

d) above 5 yrs ( )

21. Habit of doing exercise

a) Yes ( )

b) No ( )

21.a. If yes, type of exercises includes

a) walking and jogging ( )

b) weight lifting ( )

c) others ( )

## SELF STRUCTURED RATING SCALE

S. No	Assessment	Tasks	Score	No of days							
				0	1	2	3	4	5	6	7
01.	<b><u>SIGNS AND SYMPTOMS</u></b> Blood pressure	a)120/80mm/hg	1								
		b)140/90mm/hg	2								
		c)above 140/90mm/hg	3								
02.	Headache	a) Rare	1								
		b) Frequently	2								
		c) Always	3								
03.	Chest pain	a) Rare	1								
		b) Frequently	2								
		c) Always	3								



04.	Dyspnea	a) Rare	1							
		b) Frequently	2							
		c) Always	3							
05.	Activity of the client	a) Able to do DAL	1							
		b) Able to do some activity	2							
		c) Unable to do DAL	3							
	<b><u>ASSOCIATED SYMPTOMS</u></b>									
06.	Fatigue	a) Rare	1							
		b) Frequently	2							
		c) Always	3							
07.	Visual Disturbances	a) Rare	1							
		b) Frequently	2							
		c) Always	3							

08.	Ringing in the ears	a) Rare b) Frequently c) Always	1 2 3								
09.	Nausea	a) Rare b) Frequently c) Always	1 2 3								
10.	Nose bleed	a) Rare b) Frequently c) Always	1 2 3								
11.	Insomnia	a) Rare b) Frequently c) Always	1 2 3								

<b><u>OTHERS</u></b>										
12.	Irregular Heart beat	a) Rare	1							
		b) Frequently	2							
		c) Always	3							
13.	Confusion	a) Rare	1							
		b) Frequently	2							
		c) Always	3							
14.	Vomiting	a) Rare	1							
		b) Frequently	2							
		c) Always	3							
15.	Dietary pattern of the client	a) Salt restricted diet	1							
		b) Normal diet & adequate.	2							
		c) Inadequate	3							

**SCORE:**

16-25 - Mild

26-35 - Moderate

36-45 - Severe

## **CASE ANALYSIS**

### **SAMPLE 1:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. On the day of evaluation, the client pain was minimized and health status was improved.

### **SAMPLE 2:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health Education on Life style modification was provided. On the day of evaluation, the client health status was improved to some extent.

**SAMPLE 3:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on hypertension and its prevention was provided. On the day of evaluation, the client chest pain and dyspnea was moderately reduced.

**SAMPLE 4:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on preparation of Drumstick Leaves tea was given. On the day of evaluation, the client activity was improved.

**SAMPLE 5:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on life style modification and dietary pattern was given. On the day of evaluation, the client health status was improved.

**SAMPLE 6:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health Education on dietary modification and life style modification was given. On the day of valuation, the client headache and chest pain was reduced and the health status was improved.

**SAMPLE 7:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on lifestyle modification was provided. On the day of evaluation, the client health status was improved.

**SAMPLE 8:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Educate the patient about exercises, daily walking, dietary modification especially salt restricted diet was given. On the day of evaluation, the client pain was minimized to some extent.



**SAMPLE 9:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on prevention of hypertension was given. On the day of evaluation, the client pain was reduced to some extent and the health status was moderately improved.

**SAMPLE 10:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education regarding lifestyle modifications and dietary advices were provided. On the day of evaluation, the client health status was improved.

**SAMPLE 11:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. On the day of evaluation, the client pain was minimized and health status was improved.

**SAMPLE 12:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health Education on Life style modification was provided. On the day of evaluation, the client health status was improved to some extent.

**SAMPLE 13:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on hypertension and its prevention was provided. On the day of evaluation, the client chest pain and dyspnea was moderately reduced.

**SAMPLE 14:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on preparation of Drumstick Leaves tea was given. On the day of evaluation, the client activity was improved.

**SAMPLE 15:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on life style modification and dietary pattern was given. On the day of evaluation, the client health status was improved.

**SAMPLE 16:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health Education on dietary modification and life style modification was given. On the day of valuation, the client headache and chest pain was reduced and the health status was improved.

**SAMPLE 17:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on lifestyle modification was provided. On the day of evaluation, the client health status was improved.

**SAMPLE 18:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Educate the patient about exercises, daily walking, dietary modification especially salt restricted diet was given. On the day of evaluation, the client pain was minimized to some extent.

**SAMPLE 19:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on prevention of hypertension was given. On the day of evaluation, the client pain was reduced to some extent and the health status was moderately improved.

**SAMPLE 20:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education regarding lifestyle modifications and dietary advices were provided. On the day of evaluation, the client health status was improved.

**SAMPLE 21:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. On the day of evaluation, the client pain was minimized and health status was improved.

**SAMPLE 22:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health Education on Life style modification was provided. On the day of evaluation, the client health status was improved to some extent.

**SAMPLE 23:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on hypertension and its prevention was provided. On the day of evaluation, the client chest pain and dyspnea was moderately reduced.

**SAMPLE 24:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on preparation of Drumstick Leaves tea was given. On the day of evaluation, the client activity was improved.



**SAMPLE 25:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on life style modification and dietary pattern was given. On the day of evaluation, the client health status was improved.

**SAMPLE 26:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health Education on dietary modification and life style modification was given. On the day of valuation, the client headache and chest pain was reduced and the health status was improved.

**SAMPLE 27:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on lifestyle modification was provided. On the day of evaluation, the client health status was improved.

**SAMPLE 28:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Educate the patient about exercises, daily walking, dietary modification especially salt restricted diet was given. On the day of evaluation, the client pain was minimized to some extent.

**SAMPLE 29:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education on prevention of hypertension was given. On the day of evaluation, the client pain was reduced to some extent and the health status was moderately improved.

**SAMPLE 30:**

On the day of assessment, the client exhibited manifestations like severe headache, dyspnea, chest pain and fatigue. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as comfortable position, diet modification were provided. The Drumstick Leaves tea was provided for 7 days. Health education regarding lifestyle modifications and dietary advices were provided. On the day of evaluation, the client health status was improved.



**DRUMSTICK LEAVES POWDER**



**SCHOLAR OBTAIN DATA FROM THE CLIENT**



**SCHOLAR MONITORING VITAL SIGNS**



**SCHOLAR PREPARING DRUMSTICK LEAVES TEA**



**SCHOLAR ADMINISTERING DRUMSTICK LEAVES TEA**



**SCHOLAR GIVING HEALTH EDUCATION**