

**ASSESS THE KNOWLEDGE AND PRACTICE REGARDING
HYPERTENSION AND ITS ASSOCIATION WITH THE LEVEL OF
BLOOD PRESSURE AMONG ADULTS IN NANCHIYAMPALAYAM
AT DHARAPURAM WITH A VIEW OF CONDUCTING AN
AWARENESS PROGRAMME**

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

2010 – 2012

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APPROVED BY DISSERTATION COMMITTEE ON 18.11.2010

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ACKNOWLEDGEMENT

With deep sense of gratitude I thank the lord God Almighty for his grace and close presence, which strengthened and sustained me through his endeavour.

I extend my heartfelt thanks and gratitude to the **management**, Bishop's College of Nursing for providing an opportunity to undergo this course to up lift my professional life.

My genuine gratitude to our **Prof. Mrs. Vijayarani Prince, M.Sc (N)., M.A., M.A., M.Phil (N).**, principal of Bishop's College of Nursing, Dharapuram for her ceaseless guidance, thoughtful comments, invaluable suggestions, and constant encouragement throughout the period of study.

I am highly obligated to **Mr. John Wesley, Administrator**, Bishop's College of Nursing, Dharapuram for giving me an opportunity undergo this project.

I owe my profound gratitude to the Clinical Guide **Mrs. Sheela Rani, M.Sc (N).**, Department of community Health Nursing for her enlightening ideas, constant guidance and encouragement throughout the study.

I am indebted to our class – coordinator **Mrs. Glory suramajari M.Sc (N).**, for her expert guidance, Constant support and untiring efforts in the area of research, kindled my spirit and enthusiasm to go ahead and to accomplish this study successfully.

I express my genuine gratitude and obligation to **Mr.K.Duraisamy.M.Sc.,M.Phil.,(stat).**, for his suggestion in analysis presentation of data.

I extend my gratitude to **Mr. P. Sampath, M.A., M.Ed., (English)** for his valuable English editing.

I extend my thanks to **Mrs. D.Siranjivi Mary, M.A., M.Ed, M.Phil., (Tamil)** for her valuable Tamil editing.

My immense thanks to **librarians of Bishop's College of Nursing** for their Co-operation in procuring books when needed.

I extend my heartfelt thanks to **Mr. Vijay Kumar, Vijay Xerox,** and Dharapuram for their kind co-operation in typing my thesis.

I continue to be indebted to all for their support, guidance and care who directly and indirectly involved in my progress of work and for the successful completion of this thesis.

ABSTRACT

Hypertension is one of the leading causes of death and disability among the adults globally. The increasing incidence of hypertension will exert a devastating price on the physical and economic health of the global community. It remains an important health challenge and it is as “iceberg” disease. It is called as a silent killer because people who have it are often symptoms free.

Many of us are living a life that leads to high blood pressure or Hypertension. As people age, the situation gets even worse. However according to experts, Hypertension is not predestined, reducing salt intake, adopting a desirable dietary pattern, losing weight and exercising can all help prevent Hypertension.

This study was aimed to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme.

The research approach used for the study was descriptive approach. The conceptual framework used for the study was based on the revised Rosenstock’s Health Belief Model (1988). The design used for the study was descriptive survey design. Non probability Purposive sampling technique was used to collect 100 samples of adults for this study. Structured interview schedule was used to assess the knowledge and practice. Level of blood pressure was checked by using Sphygmomanometer daily for three days in the morning. Data gathered were analyzed by using descriptive and inferential statistics.

The study findings revealed that majority 76% of the adults had moderately adequate knowledge, and majority 78% of the adults had moderately adequate practice. Majority 53% of the adults had grade 3 level blood pressure. Mean score of knowledge and practice regarding hypertension was 18.45(SD± 3.59) and 8.7(SD± 2.09). And there was a positive correlation between (r=0.4) of knowledge and practice. There was no significant association between knowledge scores regarding hypertension and level of blood pressure ($\chi^2=10.84$) at (P<0.05) level. There was significant association between practice scores regarding hypertension and level of blood pressure ($\chi^2=22.44$) at (P<0.05) level.

There was association between knowledge scores and marital status ($\chi^2=15.13$), education ($\chi^2=18.48$) and occupation ($\chi^2=22.29$). And there was no association between practice scores among adults with their demographic variables except for marital status ($\chi^2=12.49$).

The study findings revealed that there was a significant correlation between knowledge and practice scores regarding hypertension among adults and there was a significant association between practice scores regarding hypertension and level of blood pressure. Knowledge and practice influences hypertension among adults and adequate practice may help the individual to maintain normal blood pressure.

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CHAPTER - I

INTRODUCTION

“A man too busy to take care of his health is like a mechanic too busy to take care of his tools”.

-Spanish proverb.

BACKGROUND OF THE STUDY

Health is a state of complete physical, mental, and social well being and not merely an absence of disease or infirmity.

WHO, (1948)

Many changes occur as the adult approaches the adulthood. Career changes and transfers to other cities may make home life and intimacy less stable. Divorces may occur and related adjustments must be made. Sometimes, adults entering midlife feel panicky. Some people at this stage are unable to accept aging and may feel frustrated and unfulfilled. Theorists call these circumstances “midlife crisis” or midlife transition. Problems that may ensue if individuals fail to resolve this stage include brooding, physical illness, suicide, chemical dependency, and depression.

Bunker.C, (1999)

Adulthood of a person can be determined on the basis of his age and level of maturity. Adulthood can be divided in 3 parts (i) Young adults: 18-40; (ii) Middle aged adults: 40-60; (iii) Elderly adults: above 60 years of age.

Keshav.S., (2005)

During adulthood individuals may confront their physical vulnerability. A healthy lifestyle contributes to continued health in the middle years. Health problems common to the middle adulthood group include hypertension, adult-onset diabetes, elevated serum cholesterol concentration and serious illness e.g., cancer, cardiac disease. Along with normal ageing, diet, stress, smoking and several other lifestyle factors may contribute to the process of calcification, fatty

degeneration and diminished elasticity of the blood vessels. These processes are likely to account for increases in blood pressure as adults grow older.

Craven.F.et.al., (2003)

Chronic disease is an impairment of bodily structure and / or function that necessitates a modification of the patients normal life and has persisted even an extend period of time. The problem of chronic non-communicable disease is assuming increasing importance among the adult population in both developed and developing countries.

Tamilenthi.S.et.al (2011)

Blood pressure is the force applied against the walls of the arteries as the heart pumps blood through the body. Hypertension is a chronic medical condition in which the average blood pressure is elevated.

Talvadekar.S., (2010)

Hypertension commonly referred to as high blood pressure is a condition in which the pressure at which the blood flows in the body is chronically elevated, beyond normal. The normal blood pressure level in human is said to be 120/80 mmHg. Here, 120mmHg is the systolic blood pressure that is, the peak pressure in the arteries at the end of a cardiac cycle when the ventricles contract. And 75mmHg is the diastolic pressure that is, the peak pressure in the arteries at the beginning of a cardiac cycle when the atria contract and, the ventricles get filled with the blood.

Prabhu.A.,(2010)

Risk factors for hypertension include age, gender (male > female), ethnic origin, diet (especially foods rich in fats, cholesterol, carbohydrates, salt), stress, sedentary lifestyle, degree of urbanization, family history, blood cholesterol, diabetes mellitus, pre-existing vascular diseases. Hypertension can be either

primary ('essential') or secondary. Over 90% of cases are primary. Essential hypertension has a multi factorial aetiology such as genetic factors, fetal factors, environmental factors, humoral mechanisms and insulin resistance. Secondary hypertension may be due to renal causes, endocrine causes, cardiovascular causes, drugs and there might be hypertension in pregnancy.

Linda.M.,(2007)

Various conditions and medications can lead to secondary hypertension, including: Kidney abnormalities, Tumours of the adrenal gland Certain congenital heart defects Certain medications, such as birth control pills, cold remedies, decongestants, over-the-counter pain relievers and some prescription drugs Illegal drugs, such as cocaine and amphetamines.

Peter.A.,(2008)

High blood pressure typically develops over many years, and it affects nearly everyone eventually. Fortunately, high blood pressure can be easily detected. Most people with high blood pressure have no signs or symptoms, even if blood pressure readings reach dangerously high levels. Although a few people with early-stage high blood pressure may have dull headaches, dizzy spells or a few more nosebleeds than normal, these signs and symptoms typically don't occur until high blood pressure has reached an advanced - even life threatening - stage.

Peter.A., (2008)

Management of hypertension includes weight reduction, dietary restriction of sodium, adequate intake of potassium and calcium, regular exercise, cessation of smoking and drug therapy. A lower cardiovascular risk and lower decline in renal functions when the systolic pressure is kept below 130 mm Hg and diastolic pressure below 80 mm Hg.

Linda.M.,(2007)

Although diet and exercise are the best tactics to lower the blood pressure, some supplements also may help to decrease it. These include: Alpha-linolenic acid (ALA), Blond psyllium, Calcium, Cocoa, Cod-liver oil, Coenzyme Q-10, Omega-3 fatty acids, and Garlic. While it's best to incorporate these supplements in diet as foods, also take supplement pills or capsules. Client can also practice relaxation techniques, such as yoga or deep breathing to help relax and reduce stress level. These practices can temporarily reduce blood pressure.

Linda.M.,(2007)

The higher blood pressure and the longer it goes uncontrolled, the greater the damage. Uncontrolled high blood pressure can lead to: Damage to arteries, Aneurysm, Heart failure, a blocked or ruptured blood vessel in brain, stroke and metabolic syndrome. Weakened and narrowed blood vessels in kidneys. Thickened, narrowed or torn blood vessels in the eyes can result in vision loss. Uncontrolled high blood pressure also may affect the ability to think, remember and learn. Trouble with memory or understanding concepts is more common in people who have high blood pressure.

Peter.A., (2008)

Hypertension is the most important modifiable risk factor for coronary heart disease (the leading cause of death in North America), stroke (the third leading cause), congestive heart failure, end-stage renal disease, and peripheral vascular disease. Therefore, health care professionals must not only identify and treat patients with hypertension but also promote a healthy lifestyle and preventive strategies to decrease the prevalence of hypertension in the general population.

Sambhaji.S.T., (2009)

In countries with limited healthcare resources such as India, the use of trained primary care health workers for screening for hypertension and monitoring treatment would, believe, improve the detection and compliance to treatment. The

WHO's Cardio vascular disease risk management package provides for screening for hypertension using primary care workers.

John.et.al., (2010)

Lifestyle changes can help to control and prevent high blood pressure. Dietary Approaches to Stop Hypertension (DASH) diet, which emphasizes fruits, vegetables, whole grains and low-fat dairy foods. Get plenty of potassium, which can help prevent and control high blood pressure. Eat less saturated fat and total fat. Decrease the salt in diet (1,500 mg). Maintain a healthy weight. If a person is overweight, losing even 5 pounds (2.3 kilograms) can lower the blood pressure. Regular physical activity can help lower blood pressure and keep weight under control. Limit alcohol. Even a healthy person can get hypertension if he takes. Don't smoke. Reduce stress as much as possible. Practice healthy coping techniques, such as muscle relaxation and deep breathing. Getting plenty of sleep can help, too. Monitor the blood pressure at home.

Peter.A., (2008)

NEED FOR THE STUDY

Globally, 7 million people die and 1.5 billion suffer every year because of high blood pressure or hypertension. Incidence of cases of high blood pressure had reached 26.1% in 2007.

World Health League,(2010)

One-quarter of the world's adult population has hypertension, and this is likely to increase to 29% by 2025. The absolute prevalence of hypertension in economically developed countries is 37.3% compared with 22.9% in developing countries.

Wang.X.,(2010)

There is variability in the global prevalence of hypertension; hypertension is present in 35% of the Latin American population, 20%-30% of the Chinese, and 14% in Sub-Saharan African countries.

Wang.X.,(2010)

In developed countries, the prevalence of disease is up to 25 percent in adults. The prevalence seems to be similar in all developed societies. As many as 65 million adults in the United States have high blood pressure.

Cheng.S., (2005)

Over 90% of Canadians will develop hypertension during their lifetime. In total Western Population prevalence was 26% in general population and 36% in adult. Even recent cross sectional Canadian heart health survey from 1986 to 1992 non institutionalized respondents between 18-74 years, 22% showed hypertension (26% men and 18% women).

Canadian Nurse, (2004)

In Poland, the hypertension prevalence is high, that is (68.9% in men and 72.5% in women).

Kearney.P.M.,et.al.,(2004)

In Australia, the Health Survey report showed that, 67% of males and 76% of females with a cardiovascular condition having hypertension.

Australian Bureau of Statistics,(2000)

The prevalence of hypertension according to new criteria (>140/90 mm Hg) varies between 15-35% in urban adult populations of Asia. In rural populations, the prevalence is two to three times lower than in urban subjects.

Singh.R.B.,(2009)

In SriLanka, hypertension which is a lifelong illness made a Disability adjusted living year of 242.3 per 100, 000 populations.

Wijewardene.K., (2000)

In Pakistan, the prevalence of hypertension was 17 percentages.

Akatsu.H., (2000)

In Tibet, the prevalence of Hypertension in the Tibetan population was 11.02%.

Tripathy.V., (2006)

India is experiencing a rapid health transition with large and rising burden of chronic non-communicable diseases. (NCDs) especially cardiovascular disease, diabetes mellitus, cancer, stroke, and chronic lung diseases. It is estimated that in 2005 NCDs accounted for 53% of deaths. Considering the fact that NCDs are surpassing the burden of communicable diseases in India and the existing health system is mainly focussed on communicable diseases, need for National Programme on Prevention and Control of Diabetes, cardiovascular diseases, and stroke was envisaged.

Park.K., (2009)

Hypertension is the most common cardiovascular disorder all over the world including India, where about 6-15% of the adults in different surveys have been shown to be suffering from hypertension. In most countries, at least 8% population is estimated to be hypertensive. The prevalence of hypertension is not much different in developing and developed countries.

Gupta.M.C.et.al., (2003)

In India, a very large, populous and typical developing country, community surveys have documented that between three and six decades, prevalence of

hypertension has increased by about 30 times among urban dwellers and by about 10 times among the rural inhabitants.

Kumar.S.et.al., (2004)

In India, 196 million adults are affected with hypertension.

WHO., (2009)

In India, studies shown that the prevalence of hypertension was 59.9/1000 in males, and 69.9/1000 in females respectively in the urban communities and 35.5/1000 in males and 35.9/1000 in females in rural communities. The incidence is found usually between the age group of 20-60 years of age.

Patney.S., (2005)

In North India Town, the prevalence of hypertension was founded to be 33.2%.

Anmol.K., (2000)

Cardiovascular diseases caused 2.3 million deaths in India in the year 1990; this is projected to double by the year 2020. Hypertension prevalence is lower in the rural Indian population, although there has been steady increases overtime here as well. Recent studies showed a high prevalence of hypertension among adults; men 30%, women 33% in Jaipur (1995), men 44%, women 45% in Mumbai (1999), men 31%, women 36% in Tiruvananthapuram (2000), 14% in Chennai (2001), and men 36% women 37% in Jaipur (2002).

Gupta.R., (2004)

In India, researches and multi-site studies from 1994 to 2009 showed hypertension prevalence ranging from 21% to 44% among adults, and there was an obvious gap between urban and rural population. The average prevalence of hypertension in India is 25% in urban and 10% in rural population.

Wang.X.,(2010)

In South Delhi, the prevalence of hypertension has increased by 30 times among the urban population over a period of 55 years and about 10 times among the rural population over a period of 36 years.

Vimala.A.et.al., (2009)

In Gujarat, the prevalence of hypertension was (7.82%) in rural population.

Patel.J.C., (2000)

The prevalence of 7.77% hypertension in urban population in Mumbai (10-79 yrs) is lower than those under similar conditions from North India (23.7%). In rural area, prevalence of hypertension was found to be 7.82%. Compared to rural India 4% in Nagpur and 3.57% from Haryana values are almost double (7.77%). Prevalence of HT increased with age from 3.5% in 30-34 yrs. to 22.22% in 60+ age group; Similar findings in rural population were reported up to the age of 50 years however it increases with age in urban population, 21.30% (51-60) years and 22.22% (60+), compared to 11.54% (51-60 years) and 19.21% (60+) in rural population.

Joshi.S.V,et.al.,(2000)

The prevalence of hypertension in Tamil Nadu was 14.8%, male 1, 44,024 and females 179,230.

Ramya.K., (2011)

Subburam et al found that the overall prevalence of hypertension in rural Tamil Nadu was 33% and higher among secondary types (41%) among 45-60.

Todkar.SS.et.al., (2009)

In Chennai the overall prevalence of hypertension was 20 per cent, it was higher among men (23.2 per cent) than women (17.1 per cent).

Ramya.K., (2011)

In Salem the prevalence of hypertension was a total of 155 (58.94%) patients were hypertensive. Out of these, 63.2% were males and 36.8% were females.

Gupta.M., (2011)

Ranjit Unnikrishnan, vice-chairman and consultant diabetologist, said that ICMR-INDIAB study provides data on the prevalence of hypertension and obesity in urban and rural areas of Coimbatore. This means 11.3 lakh individuals have hypertension in the district, with 3.6 lakh men and 4.7 lakh women being obese.

Report of The Hindu, (2011)

Increase in diabetic population and those living with hypertension in rural areas are always a concern to the medical fraternity. To ensure timely detection of diabetes and hypertension, the Directorate of Public Health and Preventive Medicine has launched a series of 1,500 screening camps in rural areas of Tirupur Health Unit District (HUD). Indian Medical Association (Tirupur branch) president P. Ravichandran told The Hindu that about 10 per cent of the rural adult population (over 30 years age) in the State was diabetic and about 17 per cent of the adult population suffering from hypertension.

Report of The Hindu, (2010)

Each year, May 17th is designated **World Hypertension Day**, which promotes awareness of the prevention, detection, control, treatment and complications of hypertension. As hypertension has either direct or indirect effect on heart disease, stroke, kidney disease and diabetes. The theme for 2012 is '**Healthy Lifestyle-Healthy Blood Pressure**'. The day was initiated to increase the awareness of hypertension. This was especially important because of the lack of appropriate knowledge among hypertensive patients.

World Health League,(2010)

There is an urgent need now to focus our attention on non-communicable diseases like diabetes, hypertension, cardiovascular diseases and cancer which are emerging as major causes of morbidity and mortality in our society. These diseases can be tackled only by a two pronged strategy which includes creating awareness for prevention through life style changes as well as early detection and treatment. The second phase of the World Bank funded Tamil Nadu Health Systems Project, in co-ordination with the National Rural Health Mission, is now focusing on the prevention and treatment programmes for the above diseases besides taking up IEC activities for creating awareness regarding the risk factors and need for life style modifications. Infrastructure strengthening of Government facilities with modern medical equipments for the detection and early treatment of patients affected with cardiovascular diseases, complications of diabetes and hypertension and cancer of the cervix and breast are being taken up under the project.

Vijay.V.S., (2011)

The pilot programme for prevention and control of cardiovascular disease, diabetes mellitus, & stroke, has been planned with the objectives of providing integrated action plan for prevention & control of these chronic diseases. The pilot programme was launched on 4th January 2008 in 7 states with one district each from Assam, Punjab, Rajasthan, Karnataka, Tamil Nadu (Kancheepuram district), and Kerala and Andhra Pradesh. Financial outlay for the pilot phase is Rs.5 crore. Intervention- promotion, prevention, and prevalence of risk factors.

Park.K, (2009)

Subburam.R.et.al., (2009) conducted a study on the prevalence of hypertension and its associated risk factors are scarce in Tamil Nadu. A cross sectional study was undertaken among a sample of 406 individuals (45-60 years) selected by a sample 30 cluster systematic random sampling technique to find out prevalence of

hypertension and its associated risk factors in a rural area of Tamil Nadu. The overall prevalence of hypertension was 33% and higher among sedentary type (41%). In bivariate analysis many of the independent variables correlated with hypertension, but in multi variate analysis, only body mass index, family history and age remained significant.

Mary.P.et.al,(2009) conducted a study on knowledge regarding diet among hypertensive patients in Puducherry. The aim of the study was to assess the knowledge of patients regarding hypertension and dietary modification among hypertension patients and to associate the level of knowledge with their selected demographic variables. The study was conducted in hypertensive outpatient clinic. Samples of 100 patients above the age of 30 years were selected conveniently. A structured interview schedule was applied and data regarding knowledge on diet was collected. The findings of the study revealed that 9% of subjects had inadequate knowledge, 47% had moderately adequate knowledge and 44% had adequate knowledge.

Radhika.G.et.al(2007) conducted a study on Dietary salt intake and hypertension in an urban south Indian population, Chennai. The study numbers were 1902 subjects. Dietary salt, energy, macronutrients and micronutrients intake were measured using a validated semi-quantitative food frequency questionnaire. Logistic regression analysis was used to look at the association of dietary salt with hypertension. Mean dietary salt intake (8.5 g/d) in the population was higher than the recommended by the world health organization (< 5g/d). Higher salt intake was associated with older age and higher income (p for trend < 0.0001). Subjects in the highest quintile of salt intake had significantly higher prevalence of hypertension than did those in the lowest quintile (48.4 vs. 16.6%, p < 0.0001). Both systolic and diastolic blood pressure significantly increased with increase in quintiles of total dietary salt both among hypertensive and normotensive subjects

(p for trend $p < 0.0001$). Addition of salt > 1 teaspoon/day at the dining table was associated with a higher prevalence for hypertension compared to zero added salt (38.5% vs. 23.3%, chi-square = 18.95; $p < 0.0001$). Multiple logistic regression analysis revealed that even after adjusting for age, gender, body mass index, total energy intake and dietary fat, total dietary salt intake was positively associated with hypertension. [Odds ratio (or): 1.161, 95% confidence interval (ci): 1.115-1.209, $p < 0.0001$].

The researcher during her community health nursing postings in primary health centre observed many adults are affected with hypertension. Nearly 150-200 cases come for check-up per month with hypertension. Of them 12 were new cases. During the health check up many of their blood pressure level were found to be increased. So, the researcher felt the need to assess the knowledge and practice of adults regarding hypertension. Conducting an awareness programme regarding hypertension will reinforce the knowledge and practice of adult which in turn will help them in modifying their lifestyle and in reducing the level of blood pressure.

STATEMENT OF THE PROBLEM

A study to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme.

OBJECTIVES

1. To assess the knowledge and practice regarding hypertension among adults.
2. To assess the level of blood pressure among adults.
3. To correlate the knowledge and practice regarding hypertension among adults

4. To find the association between the knowledge scores regarding hypertension among adults with their level of blood pressure.
5. To find the association between the practice scores regarding hypertension among adults with their level of blood pressure.
6. To find the association between the knowledge scores regarding hypertension among adults with their selected demographic variables.
7. To find the association between the practice scores regarding hypertension among adults with their selected demographic variables

OPERATIONAL DEFINITIONS

KNOWLEDGE

Information gained through experience or education.

Kirpatric.B., (2004)

In this study it refers to the level of understanding of adults regarding hypertension which is measured by structured interview schedule and its scores.

PRACTICE

It means way of doing something.

Kirpatric.B., (2004)

In this study it refers to the knowledge on practice in terms of response of the adults regarding hypertension which is measured by structured interview schedule and its scores.

BLOOD PRESSURE

Blood pressure is the force exerted by the blood against the walls of the blood vessels as it flows through them.

Thresyamma.CP., (2003)

HYPERTENSION

It means the blood pressure level is greater than 140/90mmHg.

Suddarth.B.et.al, (2000)

ADULTS

It is the period which state the person matured and more balanced “the physical, mental, characteristics are fully developed. The age group of adult will be divided into three forms:

- Young adults : 18-40 years
- Middle aged adults : 40-60 years
- Elderly adults : above 60 years of age

Keshav.S., (2005)

In this study, adults who are in between the age group of 40-60 years and who are diagnosed as hypertension are included as samples.

AWARENESS PROGRAMME

A plan of future events or things to be done.

Elliott.J., (2002)

In this study it refers to the planned and systematic way of importing information regarding hypertension. This programme was conducted in Nanchiyampalayam community centre. The health education regarding hypertension was explained to group members with the use of food display, posters, models and charts which includes meaning, causes, types, clinical manifestations, management, complications, and preventive measures such as exercise, diet, and life style modification behaviour from 9.00am to 6.00pm for one day. 8 sessions were conducted with the duration of 45 minutes for each session. 10-15 members had attended each session.

HYPOTHESES

- H₁: There will be a significant correlation between mean knowledge and practice scores regarding hypertension.
- H₂: There will be a significant association between mean knowledge scores regarding hypertension among adults with their level of blood pressure.
- H₃: There will be a significant association between mean practice scores regarding hypertension among adults with their level of blood pressure.
- H₄: There will be a significant association between knowledge scores regarding hypertension among adults with their selected demographic variables.
- H₅: There will be a significant association between practice scores regarding hypertension among adults with their selected demographic variables.

ASSUMPTIONS

- The adults may have some knowledge regarding hypertension.
- Knowledge influences practice regarding hypertension.
- Nurses have an important role in creating awareness among adults regarding hypertension.

DELIMITATIONS

- Sample size is limited to 100.
- Data collection period is limited to 5 weeks.

PROJECTED OUTCOME

Assessing the knowledge and practice regarding hypertension and conducting an awareness programme regarding hypertension will reinforce the knowledge and practice among adults with hypertension which will help the adults with hypertension to maintain normal blood pressure and there by complications of hypertension were prevented.

CONCEPTUAL FRAMEWORK

The conceptual framework for this study was the health belief model. Rosenstock (1974) and Becker (1988) address the relationship between a person's beliefs and behaviours. It provides a way of understanding and predicting how clients will behave in relation to their health and how they will comply with health care therapies. It is concerned with what people perceive, or believe to be true about themselves in relation to their health.

Health belief model has 3 components

- ❖ Background
- ❖ Perception
- ❖ Action

BACKGROUND

According to theorist, background for one's health beliefs include demographic variables such as age or race and socio psychological variables such as personality, peer group pressure and socio economic factors.

In this study it refers to age, sex, marital status, education, type of family, duration of treatment, occupation, income, religion, and family history of hypertension and source of health information of the adults.

INDIVIDUAL PERCEPTION

Perceived susceptibility

According to theorist, perceived susceptibility to a disease is the belief that one either will or not contracts a disease. Perceived susceptibility ranges from being afraid of contracting a disease to completely denying that certain behaviours will result in illness.

In this study it refers to developing awareness regarding their level of hypertension and its associated factors. Blood pressure was monitored for three

days and graded as grade 1, 2, 3, 4, and 5. Knowledge and practice were assessed by using structured interview schedule and graded as adequate, moderately adequate, and inadequate. The adults accept that they were having hypertension.

Perceived severity of ill-health

According to theorist, perceived seriousness of a disease concern the perception of the seriousness of the disease and its effect on the person's life. This component is related to how much the person known about the disease and can result in a change in health behaviour.

In this study it refers to the adults with hypertension realize that the inadequate practice may end up in stroke, heart disease, nephropathy and retinopathy.

EXPECTATIONS

Perceived benefits

According to theorist, a perceived benefit of preventive action is concerned with how effective the individual believes preventive measures will be in preventing illness. This factor is influenced by the person's conviction that carrying out a recommended action will prevent or modify the disease and by the person's perception of the cost and unpleasant effect of performing the behaviour.

In this study it refers to the adults with hypertension accepts to practice periodic health check-up, restricted intake of salt, and life-style modification which would prevent them from getting complications of hypertension.

Perceived barriers

According to theorist, a perceived barriers is concerned with one of the major reasons people don't change their health behaviours is that they think that doing so is going to be hard.

In this study it refers to illiteracy, inadequate knowledge and inadequate practice, and inappropriate use of health facilities.

Self efficacy

According to theorist, self efficacy is concerned with a person's belief in his/her ability to make a health related change. An individual's self assessment of ability to successfully adopt the desired behaviour.

In this study it refers to confidence in modifying the lifestyle practices like weight reduction, sodium restriction, dietary fat restriction, exercise, alcohol restriction, and smoking cessation.

Cues to action

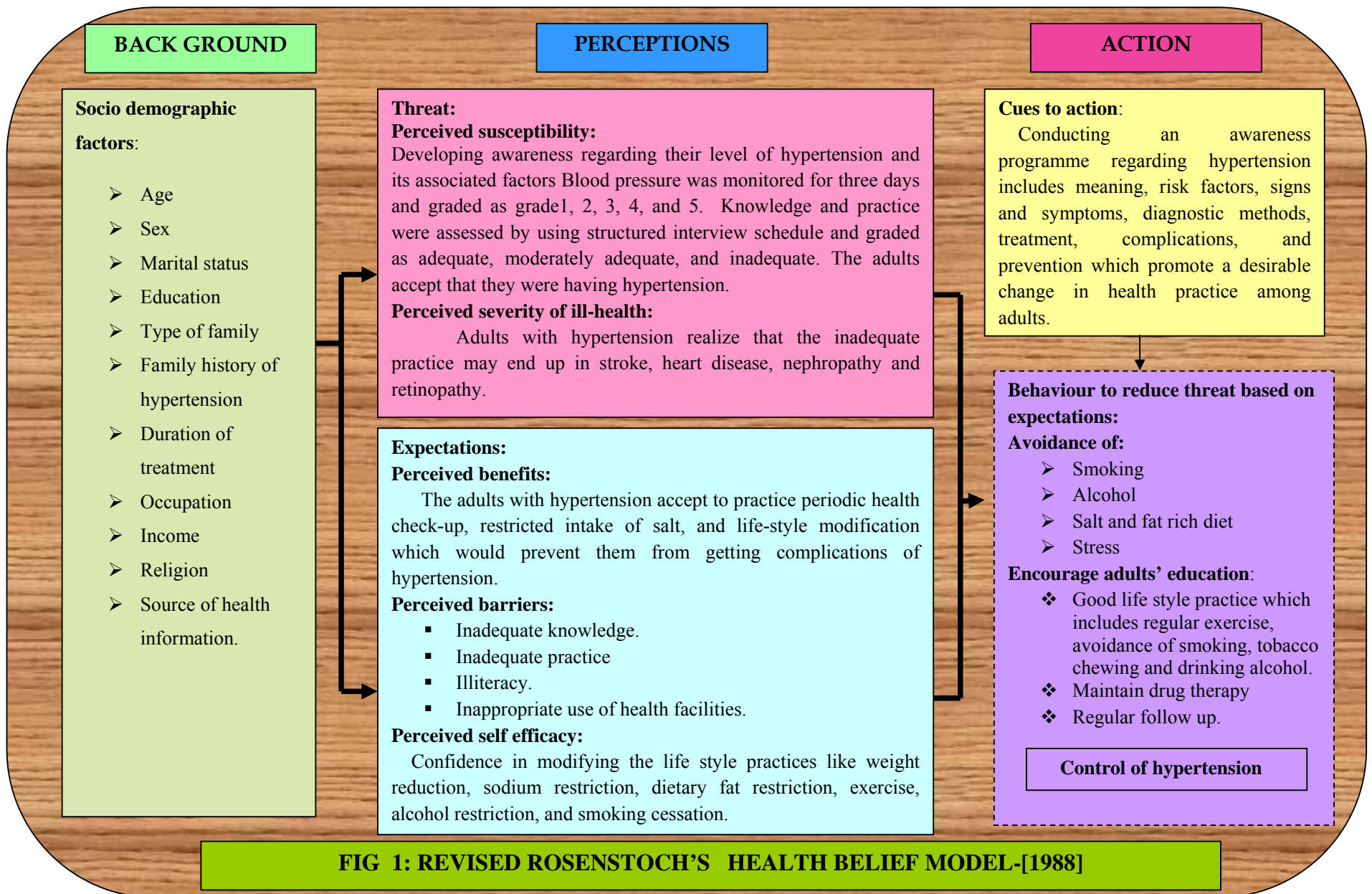
According to theorist, these are external events that prompt a desire to make a health change. External influences promoting the desired behaviour, may include information provided, others advice, mass media campaign, literature, appointments, remainder telephone calls or post cards and illness of a significant others.

In this study it refers to conducting an awareness programme regarding hypertension, includes meaning, incidence, risk factors, signs and symptoms, diagnostic methods, treatment, complications, and prevention which promotes a desirable change in health practice among adults with hypertension.

BEHAVIOUR

According to theorist, it refers to likelihood of taking recommended preventive health action to reduce the threat based on expectations.

In this study it refers to avoidance of smoking, alcohol, salt and fat rich diet, and stress and encourages adults' education to good life style practices which includes regular exercises, avoidance of smoking, tobacco chewing and drinking alcohol; maintain drug therapy and regular follow up may control the hypertension



CHAPTER-II

REVIEW OF LITERATURE

Review of literature consists of two parts namely overview of hypertension and studies related to hypertension.

PART:-I: OVERVIEW OF HYPERTENSION

PART-II:

SECTION A: Studies related to prevalence of hypertension

SECTION B: Studies related to risk factors and management of hypertension

SECTION C: Studies related to knowledge and practice regarding hypertension.

SECTION D: Studies related to nurses role in control of hypertension.

Part:-I: OVERVIEW OF HYPERTENSION

Blood pressure is the product of cardiac output multiplied by peripheral resistance. In normal circulation, pressure is exerted by the flow of blood through the heart & blood vessels. High blood pressure, known as hypertension, can result from a change in peripheral resistance, or both.

Meaning

Hypertension is a systolic blood pressure greater than 140 mm hg and a diastolic pressure greater than 90 mm Hg over a sustained period.

Suddarth.B.et.al., (2000)

Types

Primary

High blood pressure related to specific cause, such as narrowing of the renal arteries, renal paranchymal disease, hyper aldosteronism (mineralocorticoid hypertension) certain medications of the aorta.

Secondary

It is the term used to signify high blood pressure from an identified cause.

Suddarth.B.et.al., (2000)

Incidence

The incidence of hypertension is higher in the south eastern in United States, particularly among African Americans.

Suddarth.B.et.al.,(2000)

Classification of blood pressure

Category	Systolic(mmHg)		Diastolic (mmHg)
Optimal	<120	And	80
Normal	<130	And	<85
High normal hypertension	130-139	Or	85-89
Stage-I	140-159	Or	90-99
Stage-II	160-179	Or	100-109
Stage-III	>180	Or	>110

Suddarth.B.et.al.,(2000)

Major risk factors

- Smoking
- Dyslipidemia
- Diabetes mellitus
- Age older than 60 years
- Gender (men and post menopausal women)
- Family history of cardiovascular disease

Lewis.et.al., (2009)

Pathophysiology

Hypertension is a multi factorial condition. Because hypertension is a sign, it is most likely to have many causes. For hypertension to occur there must be a change in one or more factor affecting peripheral resistance or cardiac output. Structural and functional changes in the heart and blood vessels contribute to increase in blood pressure that occurs with age. The changes include accumulation of atherosclerotic plaque, fragmentation of arterial elastins, increased collagen deposits, and impaired vasodilatation. The result of these changes is a disease in the elasticity of the major blood vessels. Consequently the aorta and large arteries are less able to accommodate the volume of blood pumped out by the heart (stroke volume), and the energy that would have stretched the vessels instead elevates the systolic blood pressure. Isolated systolic hypertension is more common in older adults.

Suddarth.B.et.al.,(2000)

Clinical manifestations

- Retinal changes such as haemorrhages, exudates, arteriolar narrowing, cotton wool spots (small infarction)
- Pappiledema
- Left ventricular hypertrophy
- Pathogenic changes in the kidneys (indicated by increased blood urea nitrogen [BUN] and creatinine levels) may manifest nocturia.
- Cerebro vascular involvement may lead to a stroke or transient ischemic attack (TIA), a sudden fall, or temporary paralysis on one side (hemiplegia)
- Morning head ache
- Dizziness
- Fatigue
- Nausea & vomiting
- Oedema
- In severe condition, epistaxis is there.

Black.J.M., (2004)

Assessment and diagnostic evaluation

- Health history
- Physical examination
- Retinal examination
- Laboratory studies
 - * Urinalysis
 - * Blood chemistry
- 12 lead electro cardiogram
- BUN and creatinine levels
- Rennin level
- Urine tests
- 24-hour urine protein

Medical management

Goal

To prevent death and complication by achieving and maintaining the arterial blood at 140/90 mm hg or lower.

The optimal plan is inexpensive, single, and causes the least possible disruption in the patient's life. Research findings demonstrate that weight loss reduces alcohol and sodium intake, and regular physical activity are effective life style adoptions to reduce blood pressure. Studies show that diets high in fruits, vegetables, and low fat dairy products can prevent the development of hypertension and can lower elevated pressure.

Dietary management

The DASH (dietary approaches to stop hypertension diet)

Diet food group	No of serving per day
Grains and grain products	7-8
Vegetables	4-5
Fruits	4-5
Low fat free dairy foods	2-3
Meat, fish and poultry	2 or fewer
Nuts, seeds and dry beans	4-5 weekly

Pharmacologic therapy

The recommended initial medications include diuretics, beta – blockers or both.

- Diuretics
- Adrenergic agents
- Angiotension-converting enzyme inhibitors
- Angiotension II receptors blockers
- Calcium antagonists

Complication

- Heart disease, [left ventricular hypertrophy, angina or previous myocardial infarction, heart failure]
- Stroke [cardio vascular accident, brain attack] or TIA
- Nephropathy
- Peripheral arterial disease
- Retinopathy

Suddarth.B.et.al.,(2000)

Promoting home and community based care

Blood pressure screening with the purpose of case finding are recommended by national high blood pressure education program because approximately 10% of persons with hypertension are already aware of their

blood pressure levels. Adequate time should also be allowed to teach people what the blood pressure numbers mean. Each person should be given written record of his or blood pressure at the screening.

Teaching patients self care

The therapeutic regimen is the responsibility of the patient in collaboration with the health care provider. Education about high blood pressure and how to manage it, including medications, lifestyle changes of diet, weight control and assistance with social support, can help the patient achieve blood pressure control.

The nurse can encourage and teach patients to measure to measure their blood pressure at home. Patients need to know that blood pressure varies should be monitored.

Suddarth.B.et.al.,(2000)

PART-II

SECTION A: STUDIES RELATED TO PREVALENCE OF HYPERTENSION

Kalavathy.M.C.et.al., (2000) conducted a study on Prevalence, awareness, treatment and control of hypertension in an elderly community-based sample in Kerala, India. A cross-sectional survey of a random sample of 357 community-dwelling elderly individuals (191 women, 166 men; mean age 70 years) in Kerala. Blood pressure was measured on all study participants using a standardized technique to assess the prevalence of hypertension. Prevalence, awareness, treatment and control of hypertension according to age, sex and place of residence of the subjects, and examined the socio-demographic correlates of hypertension using sex-specific multiple logistic regression. The overall prevalence of hypertension was 51.8% (95% CI: 46.8%-56.8%), which did not vary with sex but increased with age. Fewer than half of the hypertensive subjects were aware of their condition or were on treatment, and only a quarter of the treated hypertensives achieved adequate

control of blood pressure. Smoking status and rural residence (in men) and marital status (in women) were important correlates of hypertension.

Kumar.S.et.al(2005) conducted a study the prevalence of hypertension in an urban community of India West Bengal an eastern state of India. A total of 1609 respondents out of 1662 individuals participated in the cross-sectional survey of validated and structured questionnaire followed by blood pressure measurement. Results showed pre-hypertensive levels of blood pressures among 35.8% of the participants in systolic group (120-139mm of Hg) and 47.7% in diastolic group (80-89 mm of Hg). Systolic hypertension (140 mm of Hg) was present in 40.9% and diastolic hypertension (90 mm of Hg) in 29.3% of the participants. Age and sex-specific prevalence of hypertension showed progressive rise of systolic and diastolic hypertension in women when compared to men. Men showed progressive rise in systolic hypertension beyond fifth decade of life. Bivariate analysis showed significant relationship of hypertension with age, sedentary occupation, body mass index (BMI), diet, ischemic heart disease, and smoking. Multivariate analysis revealed age and BMI as risk factors, and non-vegetarian diet as protective factor with respect to hypertension.

Mohan.V.et.al., (2007) conducted a study to assess the prevalence, awareness and control of hypertension in Chennai representing Urban South India. The Chennai Urban Rural Epidemiology Study (CURES) is one of the largest epidemiological studies on diabetes carried out in India, where 26,001 individuals aged \geq 20 years were screened using systematic random sampling method. Every tenth subject recruited in Phase 1 of CURES was requested to participate in Phase 3 of CURES and the response rate was 2,350/26,001 or 90.4%. An oral glucose tolerance test was performed in all individuals except self-reported diabetic subjects. Hypertension was present in 20% men: 23.2% vs. women: 17.1%, $p = 0.140$ and Diastolic BP ≥ 90 and SBP ≥ 140 (or ≥ 60 years), 25.2% had isolated systolic hypertension. Age, body mass index, smoking, serum cholesterol and triglycerides were found to be strongly

associated with hypertension. Among the total hypertensive subjects, only 32.8% were aware of their blood pressure, of these, 70.8% were under treatment and 45.9% had their blood pressure under control.

Vimala.A.et.al., (2009) conducted a study on the prevalence, risk factors and awareness of hypertension in an urban population of Kerala (South India) . A team of trained fourth year medical students conducted a 10% random household survey in certain wards of the City. Households were selected using a random start and interval and all the members above the age of 10 years were interviewed using a standard questionnaire. A total of 482 individuals (212 males and 270 females) were interviewed in the survey. Overall prevalence of hypertension was 47% (n = 226) with equal sex ratio; 109 (21.6%) had stage-I hypertension, 45 (9.34%) had stage-II hypertension and 72 were taking drug treatment. Only 55 (11.4%) individuals had normal BP, while 201 (41.7%) were pre hypertensives. Only 81 (16.8%) hypertensive patients were aware of their disease. Among the parameters such as dietary habits, physical activity, educational standards, salt intake, and diabetes mellitus, only high salt diet (P= 0.03) and diabetes mellitus (P= 0.004) had a significant association with hypertensive state.

Sambhaji.S.et.al., (2009) conducted a study to find out prevalence of hypertension in rural area in Maharashtra. A community based cross sectional study was conducted. 1297 persons aged 19 years and above samples were selected by systematic random sampling method. A house to house survey was conducted by the author himself, using pretested structured standard questionnaire. Overall prevalence of hypertension in the study subjects was 7.24%. Multiple logistic regression analysis identified various factors significantly associated with hypertension were age, sex, BMI, additional salt intake, smoking, DM, alcohol consumption and higher socio economic status.

Stewart.S.et.al., (2010) conducted a study on prevalence and correlates of hypertension among rural populations in sub-Saharan Africa. A cross-sectional study to investigate the magnitude and correlation of Hypertension. Study

participants (N¼1485), 18 years and above, were selected using a stratified random sampling technique from three villages (in Malawi, Rwanda and Tanzania). Information on socio-demographic characteristics, risk factors and blood pressure measures was collected using standardized protocols. Prevalence of HTN and pre-HTN were 22 and 44%, respectively. Older age (P_{0.001}), higher body mass index (BMI) (P¼0.07), television ownership (P¼0.01) and less work-related vigorous physical activity (P¼0.02) were associated with higher prevalence of HTN and higher blood pressure measures (all P_{0.05}). Frequent meat and fat intake were associated with higher HTN prevalence (trend P¼0.02 and 0.07, respectively). Frequent fruit and vegetable intake was significantly associated with lower blood pressure measures (all P_{0.05}).

Yuvaraj.B.Y., (2010) conducted study on prevalence, awareness, treatment, and control of hypertension in the rural areas of Davanagere, Karnataka. Cross-sectional community-based study. Setting of the study was Villages belonging to six sectors of the Davanagere Taluk. Population for the study was general population above 18 years. A community-based sample was chosen by a multistage sampling technique. The prevalence rate of hypertension in the study population was 18.3% (95% CI, 16.7-19.9%). Prevalence of hypertension was more in males 19.1% (95% CI, 16.7-21.5%) than in females 17.5% (95% CI, 14.9-20.1%); 11.6%, 5.6%, and 1.2% of the total subjects had Grade I, Grade II, and Grade III, respectively. Only 33.8% of them were aware of their hypertensive status. Hypertensives of 32.1% were on treatment, and 12.5% adequately controlled their BP. About 6.9% of the total hypertensives had severe hypertension. Proportions, One way Analysis of Variance, Chi-square test.

Gupta.M.et.al.,(2011) conducted a study on prevalence of obesity and hypertension in an urban adult population of Salem, Tamilnadu. An observational cross-sectional study was carried out by using a predesigned and

a pretested schedule. 10 hospitals of the Salem town were selected randomly, after making a list of all the hospitals. Every 10th adult patient was selected in the hospital OPD clinic, till the number reached 30 during 2 week duration. 263 respondents (94 females and 169 males) were selected for the analysis out of 300 adults. The Epi Info software was used for the analysis. The Chi-square test, t test and the Pearson's correlation tests were used for studying the significance. The age range was 18 to 85 years; the majority (79.8%) was above 35 years of age. The waist circumference (WC) was positively correlated with the body mass index (BMI) and the systolic blood pressure. Females had a significantly higher BMI value than the males. Based on the internationally recommended BMI cut-off points, 44.9% respondents were found to be pre-obese and 19.0% were obese. The estimated risk for the females to have an increased metabolic risk was 9.4 times that of the males. 60.8% persons had abdominal fat accumulation, based on the waist to hip ratio. 43.3% persons were hypertensive. A significantly higher proportion of males were severely hypertensive than the females.

Kaur.P.et.al., (2011) conducted a study on High prevalence of tobacco use, alcohol use and overweight in a rural population in Tamil Nadu, India. A cross-sectional survey was conducted in 11 villages in Kancheepuram/Thiruvallur districts, Tamil Nadu. Study population included 10,500 subjects aged 25-64 years. Data were collected on behavioural risk factors and anthropometric measurements. Body mass index (BMI) was categorized using the classification recommended for Asians. Central obesity was defined as waist circumference ≥ 90 cm for men and ≥ 80 cm for women. And computed proportions for all risk factors and used trend chi-square to examine trend. Among the 10,500 subjects, 4927 (47%) were males. Among males, 1852 (37.6%) were current smokers and 3073 (62.4%) were current alcohol users. Among females, 840 (15.1%) were smokeless tobacco users. BMI was ≥ 23.0 kg/m² for 1618 (32.8%) males and 2126 (38.2%) females. 867 (17.6%)

males and 1323 (23.7%) females were centrally obese. Most commonly used edible oil was palm oil followed by sunflower oil and groundnut oil.

SECTION B: STUDIES RELATED TO RISK FACTORS AND MANAGEMENT OF HYPERTENSION

Kumar.S.et.al., (2005) conducted a study to identify the risk factors and suggesting intervention strategies in India. A total of 1606 respondents out of 1662 individuals were selected. A cross sectional survey was conducted. Pre hypertensive levels of blood pressure among 35.8% of the participants in systolic group (120-139mmhg) and 47.7% in diastolic group (80-89mmhg). Systolic hypertension (140mmhg) was present in 40.9% and diastolic hypertension (90mmhg) in 29.3% of the participants. Age and sex-specific prevalence of hypertension has progressive rise of systolic and diastolic hypertension in women when compared men. Bivariate analysis has significant relationship of hypertension with age, secondary occupation, body mass index, diet, ischemic heart disease, and smoking. Multivariate analysis revealed age and BMI as risk factors, and non-vegetarian diet as protective factor with respect to hypertension.

Kaur.J.et.al.,(2007) conducted a study on home based blood pressure monitoring facilitates hypertension management among the human resource – developed in Dadu Majra Colony, in Chandigarh. Purposive sampling was the method adopted to choose a sample of 40 trained subjects. The findings revealed that 50% subjects possess BP apparatus. 17.5% subjects regularly practice HBPM while 5% maintain logbook. Regarding reasons for non compliance, 39.40% attributed it to non availability of BP apparatus, 30.30% felt that shortage of time was the reason while 15.15% attributed it to lack of supervision. Non availability of hypertensive client was the reason of non compliance for 9.09% of subjects. Nearly half (55%) of the subjects follow 9-12 steps of monitoring accurately while nearly two-third (60%) of subjects have average knowledge regarding important aspects related to BP monitoring.

Thus periodic follow ups need to be undertaken to increase the compliance with HBPM

Saptharishi.LG.et.al., (2009) conducted a study to measure the efficacy of physical exercise, reduction in salt intake, and yoga, in lowering BP among young pre-hypertensive's and hypertensive's and to compare their relative efficacies in JIPMER, Puducherry. The participants were randomized into one control and three interventional groups. Efficacy was assessed using paired t test and ANOVA with games Howell post hoc test. A total of 102 participants completed the study 68 were males and 34 females. The mean systolic BP in the four groups ranged between 123 and 128mm Hg and the diastolic blood pressure between 82 and 87 mmHg. All three intervention groups showed a significant reduction in BP (SBP/DBP: 5.3/6.0 in group II, 2.6/3.7 in III, 2.0/2.6 mmHg in IV respectively). There were 0 significant changes (SBP/DBP:0.2/0.5 mmHg) of BP in control group (I). Physical exercise was most effective (considered individually); salt intake reduction and yoga were also effective.

John.J.et.al., (2010)Screening for hypertension among older adults: A primary care "High Risk" approach in Christian Medical College, Vellore. Sixteen Health Aides (trained primary care workers) were trained to measure blood pressure using a standardized training procedure. Six of those assessed competent in initial evaluation were allotted a stratified random sample of about 150 persons each, 50 years or over, in the village under their care to measure blood pressures during their regular scheduled visits. 14/16 of the health aides (83%) met the stipulated criteria for the simulation study using a module from British Hypertension Society. In the field survey of 920 individuals where 20% of the population was evaluated by a blinded investigator, the weighted Kappa for agreement, using normal, pre-hypertension and hypertension as categories, ranged between 62% and 89%. Only 75/286 (25%) of those detected to be hypertensive knew their status prior to the study. All those detected with hypertension were referred to a physician

at a referral facility. 70% of those referred were evaluated at the referral facility and 64% of them initiated on treatment for hypertension within 3 months.

Kumar.P.et.al.,(2011) conducted a study on Bio-social factors associated with hypertension in hilly population of tehri Garhwali in India. A clinic based study was conducted in Rural Health Training Centre, Block Kirtinagar, and District Garhwali of Uttarakhand. All the patients attending the OPD were interviewed using pretested structured standard questionnaire. Two independent blood pressure reading were taken in sitting position. A total 1250 rural inhabitant; 19 year and above were screened. Out of which 562 were male and 688 were female. Age, Sex, Socio-economic status, Smoking, Alcoholism, BMI, Salt-Intake, Type of Family, Marital status, Literacy, Diabetes Mellitus, Family History, Occupation are the study variables. Chi-Square test, Standard error of difference between two mean. Prevalence of Hypertension in rural population was 21.2%. Prevalence of Hypertension in male was 23.1% and in female it was 19.2%. Age, BMI, Salt-Intake, Smoking, Alcoholism, Diabetes Mellitus, Parental history were found to be significantly associated with hypertension

Sujatha.T.,(2012) conducted a study on role of nutritional intervention in reducing blood pressure in Karanaipuducher. Setting of the study was Nandhivaram PHC. 100 samples were selected by simple random technique (lottery method). The 100 subjects were divided into one control and one experimental group of 50 each. Nutritional intervention which has low salt, low fat and rich in potassium and magnesium as 3 chapattis for dinner was administered for 12 weeks. The findings revealed the mean systolic blood pressure in experimental group differed significantly. As regards Systolic Blood Pressure in the pre and post intervention setting the Systolic Blood Pressure was reduced from 144.2-135.4 (8.8) mm of hg, and for control group, 143.2-142.6 (0.6) mm of hg. This fall in Systolic BP in intervention group was statistically significant ($p < 0.05$) level. Compared to the control group, where in the fall was not significant. Likewise for diastolic BP, it is reduced from

99.3-95.6 (3.7) mm of hg where as the changes in control group was not significant.

SECTION B: STUDIES RELATED TO KNOWLEDGE AND PRACTICE OF HYPERTENSION

Aubert.et.al., (2000) conducted a study on assessment of knowledge attitudes, and practice is a crucial element of hypertension control in Seychelles and Islands. By random sampling technique the samples were selected of 1067 adults aged 25 to 64 years from the Indian Ocean. Knowledge attitude and practice were assessed from an administered prevalence of hypertension (screening blood pressure $\geq 160/90$ mmhg or taking anti hypertensive drugs) was 36% in men and 25% in women aged 25-64 years. Among hypertensive persons, 50% were aware of the condition, 34% were treated, and 10% had controlled BP (i.e., BP 160/95mmhg).

Edwards.et.al.,(2002) conducted a study on Knowledge of Diet- and blood pressure-related knowledge, attitudes, and hypertension prevalence among African Americans in North Carolina. 196 adults were randomly selected from 6 churches in an urban area of North Carolina. After study criteria and missing data exclusions, the study sample comprised 179 individuals. (Score range: 0-100, 100 = most knowledgeable). Health attitudes were assessed primarily through Likert-type questions. The mean SBP and DBP were 135.4 +/- 21.6 mm Hg and 78.8 +/- 15.7 mm Hg, respectively, and 55.9% of participants had HTN. The mean knowledge score was 76.1 (+/- 10.6). There was no statistically significant difference in mean knowledge score by HTN status (known HTN: 76.9 [+/- 11.31); unknown HTN (ie, the participant was unaware of the presence of HTN): 76.1 (+/- 9.3); no HTN: 75.3 (+/- 10.4), P = .665). Attitudes were not significantly related to knowledge and HTN prevalence, despite apparent trends. However, logistic regression analyses revealed that age, occupation, and church site were significant correlates of this relationship.

Becker.H.et.al., (2004) conducted a study to determine nutrition knowledge and dietary practices of hypertension adults in cape metro pole. Ten day hospitals were randomly selected from a total of 31 day hospitals and the first participants attending the hypertension clinics per day were recruited. A total of 85 participants were evaluated. Knowledge regarding salt usage indicated that a large percentage (4.1) of participants believed that flavour enhancers like Armat or Fondor could safely be used instead of table salt. Furthermore, 23.5% reported that tinned and smoke meat or fish have low sodium content. Fruit and vegetables were perceived is having a positive on hypertension b7.1% of participants. However only 15% of the group knew that the recommendation for their usage was five or more servings per day. Only 12.9% of the study had a normal weight (BMI<25). 25.9% were overweight (BMI=25-29.9) and 61.2% were obese (BMI=30); 84.7% recognized the association between obesity and hypertension. Uncontrolled blood pressure readings (>14/90mmHg) were used in 61.2% of these patients at the hypertension.

Linda.M., (2007) conducted a study to assess the people's knowledge, attitudes and practices towards risk factors for hypertension in Kinondoni Municipality, Salem. Study design was Cross sectional descriptive study. Subjects: Adults aged 18 years and above, residents of Kinondoni Municipality at Kimara or Mbezi Luisi were selected as samples. The number of people included in the study was 318. More than half of the study population (66.80%) had knowledge on hypertension but only 19.75% had knowledge on risk factors for hypertension. The common risk factors known were consumption of fatty food and stress. People who reported to be doing physical exercises were 52.35%, smoking 9.54% and drinking alcohol 29.56%.

Atallah.A.et.al., (2010) conducted a study on Knowledge of hypertension among hypertensive patients in general practice, and its relation to achieving therapeutic goals in French West Indies. 100 French Caribbean practitioners

participated in this observational survey. Identification of independent factors of BP normalization and awareness was performed using logistic regression. 509 hypertensive's (57% women) were recruited. 69 percent (n = 328) were less than 65 years, 75% (n = 341) had an educational level less than high school. The normalization rate was 39% (n = 185) within the whole population. 63.4% had a high cardiovascular risk. BP normalization appeared to be closely associated to BP awareness.

Katibi.IA.et.al., (2010) conducted a study on Knowledge and practice of hypertensive patients as seen in a tertiary hospital in Nigeria. 224 consecutive hypertensive patients were prospectively studied using a pre-tested questionnaire. Majority of the hypertensive patients were either traders or business men/women (44.5%). Only 35.8% had their blood pressure well controlled and about 61% were diagnosed for the first time to be hypertensive in the teaching hospital. 34% of the patients commuted a distance of more than 5 km to the hospital to receive antihypertensive care. 52% and 25% of the patients checked their blood pressure monthly and three-monthly respectively. One patient volunteered history of smoking. 48% and 51.8% knew that smoking increases the propensity to develop complications and that exercise is beneficial for the control of blood pressure respectively. Knowledge of the possible complications of hypertension was very poor as 58.9% of the patients scored less than average. Only 41.1% and 1.8% of the patients were aware that excessive salt and fat intake could adversely affect the control of hypertension respectively.

Malhotra.R.et.al., (2010) conducted a study on prevalence, awareness, treatment and control of hypertension in the elderly population in Singapore. 4494 elderly Singaporeans (≥ 60 years) participating in a recent representative survey. The weighted prevalence's of hypertension (systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg or current use of anti hypertension medication) and of awareness, treatment and control of hypertension were assessed. And assessed the extent of association of these

outcomes with socio-demographic (age, gender, ethnicity, education, housing type, living arrangement and social participation) and health (body mass, diabetes and cognitive status) variables using multivariable logistic regression. Nearly three-fourths (73.9%) of participants were found to have hypertension. Of this number, 30.8% were unaware that they had hypertension, 32.0% were not being treated for the disease and 75.9% had suboptimal control of their blood pressure. Among those aware of their hypertension, only 1.9% was untreated. However, nearly two-thirds (64.5%) of treated hypertensive's had suboptimal control. Age, gender, ethnicity, education, housing type, body mass and diabetes were significantly correlated with lack of awareness, treatment and control of hypertension.

SECTION D: STUDIES RELATED TO NURSES ROLE IN CONTROL OF HYPERTENSION

Kanchana.G.et.al., (2005) conducted a study on effectiveness of structured teaching programme on life style modifications of patients with hypertension attending Cardiology Outpatient Department, SVIMS, in Tirupati, A.P. Quasi experimental approach was used. The design used for this study was pre-test and post-test design. 50 hypertensive patients were selected by non probability convenient sampling. The overall knowledge on life style modifications among hypertensive patients shows 84% of the hypertensive patients had inadequate knowledge and 16% had moderate knowledge with the mean a score of 13.02 with SD 3.63 in the pre test and 42% had moderate knowledge and 58% had adequate knowledge with a mean score of 25.32 with SD 2.83 in the post test. The overall calculated t-value was 18.855, which is statistically significant at 0.01 levels and shows that structured teaching had an impact on the knowledge of the patients.

Kanchana.S.et.al., (2011) conducted a study on effectiveness of exhibition on level of knowledge regarding hypertension among clients with hypertension at selected setting in Chennai. Pre experimental one group pre-test and post test

design was used for this study. 30 adults with hypertension were selected by non-probability convenient sampling technique. In pre-test the overall level of knowledge in the pre-test revealed that 7(23.33%) had inadequate level of knowledge, 17(56.67%) had moderately adequate knowledge and 6(20.0%) had adequate level of knowledge on hypertension. In post test the overall level of knowledge showed that 20 (66.67%) had adequate level of knowledge, 10(33.33%) had moderately adequate level of knowledge and no one had inadequate level of knowledge. The comparison of pre and post test level of knowledge revealed that the calculated “t” value of 6.238 was greater than the table value. It showed a high statistical significant difference at $p < 0.001$ level. No significant association of mean improved level of knowledge with selected demographic variables was noted.

Paul.R.et.al., (2011) conducted a study to assess the effectiveness of a self instructional module on knowledge of risk factors and home management of hypertension among hypertensive patients in Mangalore. 50 samples were selected by purposive sampling technique. The tool used in the study was a structured knowledge questionnaire. After collecting the pre test data, the SIM was administered on the same day. On the 4th day a post test with the same closed ended structured questionnaire was given. Distribution of hypertensive patients according to their age shows that majority (38%) were in the age group of 51-60 years, according to their gender shows that majority (62%) were males and the rest (38%) were females. 70% of the hypertensive patients had an average level of knowledge regarding risk factors and home management of hypertension. The mean post test score of hypertensive patients were significantly higher than their mean pre test score. The calculated ‘t’ value was greater than the table value at 0.5%.

CHAPTER-III

METHODOLOGY

This chapter includes research approach, research design, settings of the study, population, sample, criteria for sample selection, sample size and sampling technique, scoring procedure, instrument, validity, reliability, pilot study, data collection procedure and plan for data analysis.

RESEARCH APPROACH

Descriptive approach was used to conduct the present study.

RESEARCH DESIGN

Descriptive survey design was used to conduct the study.

SETTING

The study was conducted in Urban (Nanchiyampalayam) area at Dharapuram.

Nanchiyampalayam is an urban area which is 3kms away from Dharapuram. It comes under Municipality control. There are 820 houses and 6770 population. Total adult population is 4250 in which 2050 are males and 2200 are females. Total adults with hypertension in this area are 135 in which 50 are males and 85 are females. Medical facilities in their area are one government hospital and private clinics. Most of the people in these areas are Hindu and Christians and few families are Muslims. The main occupation is farmer, and daily wages, and some of them are having small own shops.

POPULATION

The population of the study was adults residing in Nanchiyampalayam, Dharapuram.

SAMPLE

Sample of this study was adults with age group between 40-60 who are residing in Nanchiyampalayam, Dharapuram.

CRITERIA FOR THE SAMPLE SELECTION

INCLUSION CRITERIA

- Adults who are diagnosed as hypertension.
- Adults who are available at the time of data collection.
- Both male and female adults.

EXCLUSION CRITERIA

- Adults who are not willing to participate in the study.
- Adults who are associated with any other illness.

SAMPLE SIZE

The study consists of 100 adults who are diagnosed as hypertension.

SAMPLING TECHNIQUE

Non probability Purposive sampling technique was used to select the sample.

A) THE DESCRIPTION OF THE TOOL

The instrument consists of 4 parts:

PART-I

It consists of selected demographic variables of adults such as age, sex, marital status, education, religion, occupation, family income, type of family, family history of hypertension, duration of treatment, and source of health information.

PART-II

Structured interview schedule was used to assess the knowledge regarding hypertension among adults with hypertension. It consists of 35 multiple choice questions. Each question has 4 options among which one was the correct answer.

PART-III

Structured interview schedule was used to assess the practice which consists of 15 dichotomous questions regarding hypertension among the adults with hypertension. It has 9 positive and 6 negative questions.

PART-IV

It includes checking the level of blood pressure among adults by using Sphygmomanometer.

SCORING PROCEDURES

PART-II

Structured interview schedule consists of 35 multiple choice questions. Each correct answer was given a score one (1) and wrong answer was scored as (0) zero. The total score was 35. Score was interpreted as;

Level of knowledge	Score	Percentage (%)
Adequate	23-35	63-100%
Moderately adequate	15-22	43-62%
Inadequate	1-14	0-42%

PART-III

Structured interview schedule to assess the practice consists of 15 dichotomous questions. It has 9 positive and 6 negative questions. Each correct answer was scored as one (1) and wrong answer was scored as zero (0). The total score was 15. The score was interpreted as follows;

Level of practice	Score	Percentage (%)
Adequate	12-15	73-100%
Moderately adequate	7-11	47-72%
In adequate	1-6	0-46%

PART-IV

The level of blood pressure was interpreted as

Grades	Systolic(mmHg)		Diastolic(mmHg)
Grade 1(normal)	<130	And	< 85
Grade 2(high normal hypertension)	130-139	Or	85-89
Grade 3 (stage-1)	140-159	Or	90-99
Grade 4 (stage-2)	160-179	Or	100-109
Grade 5 (stage-3)	>180	Or	>110

Suddarth.B.et.al.,(2000)

VALIDITY

The validity of the tool was established in consultation with the four nursing experts in the field of community health nursing and one medical expert in the field at community medicine. The tool was modified according to the suggestions and recommendation of the experts.

The accuracy of the sphygmomanometer was assessed Karl Pearson formula was used. The value was found to be reliable systolic blood pressure($r=0.87$) and diastolic blood pressure($r=0.85$).

RELIABILITY

The reliability of the sphygmomanometer was established by using interrater method and Karl Pearson formula was used systolic blood pressure($r=0.76$) and diastolic blood pressure($r=0.84$).

The reliability of the structured interview schedule on knowledge questionnaire was assessed by testing the stability and internal consistency. Stability was assessed by test retest method using Karl Pearson's co-efficient formula. The value was found to be reliable ($r=0.94$). Internal consistency was assessed by spilt half technique using spearman's brown prophecy formula. The value was found to be reliable ($R=0.95$).

The reliability of the structured practice questionnaire regarding hypertension was computed by test retest method. Karl Pearson's co-efficient formula was used and the value was found to be reliable ($r=0.98$). The spilt half method where the Spearman's brown prophecy formula was used to find out the Internal consistency of the tool and found to be reliable ($R=0.9$).

PILOT STUDY

The pilot study was conducted on 10 samples for a period of one week in Nehru Nagar, Dharapuram. Written permission was obtained from the Municipal health officer. Oral consent was obtained from the samples after explaining the purpose of the study. Samples who met inclusion criteria were selected by using Non probability purposive sampling technique. Demographic variables, knowledge and practice regarding hypertension among adults were assessed by structured interview schedule. The level of blood pressure was checked by using sphygmomanometer daily for three days. 50-60 minutes was spent for each study participants. The data was analyzed by using descriptive and inferential statistics. The results of the pilot study showed that 80% of the adults with hypertension were having moderate knowledge regarding hypertension and 70% of the adults were having moderate level of practice regarding hypertension. There was no significant correlation($r=0.4$) between

knowledge and practice. And there was no significant association between knowledge scores and level of blood pressure ($\chi^2=1.14$) at ($P<0.05$) level. There was no significant association between practice scores and level of blood pressure ($\chi^2=1.14$) at ($P<0.05$) level. After the pilot study it was found that it is feasible and practicable to conduct the main study.

DATA COLLECTION PROCEDURE

The data was collected in Nanchiyampalayam at Dharapuram. Written permission was obtained from the Municipal health officer in Dharapuram and oral consent was obtained from the study subjects after explaining the purpose of the study. 100 samples who met the inclusion criteria were selected by using Non probability purposive sampling technique. Demographic variables, knowledge and practice regarding hypertension among adults with hypertension were assessed by using structured interview schedule. Blood pressure was assessed by using Sphygmomanometer daily for three days. The average value of blood pressure was taken for three consecutive days. 50-60 minutes was spent for each study samples. 3-4 samples were interviewed per day. After collecting the data from the entire 100 samples awareness programme was conducted regarding hypertension in the health centre, Nanchiyampalayam. 8 sessions were conducted with the duration of 45 minutes for each session. 10-15 members had attended each session.

PLAN FOR DATA ANALYSIS

The data related to assessment of knowledge and practice of adults in Nanchiyampalayam, regarding hypertension was analyzed in terms of descriptive statistics and inferential statistics.

STATISTICAL METHOD

The statistical methods used for analysis are both descriptive and inferential methods.

S.No	Data analysis	Method	Objectives
1.	Descriptive statistics	Frequency percentage distribution	<ul style="list-style-type: none">• To describe the demographic variables of adults.
		Mean and standard deviation	<ul style="list-style-type: none">▪ To assess the knowledge and practice regarding hypertension among adults.
2.	Inferential statistics	Karl Pearson co-relation coefficient formula	<ul style="list-style-type: none">➤ To correlate the knowledge and practice regarding hypertension among adults.
		Chi-square	<ul style="list-style-type: none">❖ To find the association between the knowledge scores regarding hypertension among adults with their level of blood pressure.❖ To find the association between the practice scores regarding hypertension among adults with their level of blood pressure.❖ To find the association of knowledge scores regarding hypertension among adults with their selected demographic variables.❖ To find the association of practice scores regarding hypertension among adults with their selected demographic variables.

PROTECTION OF HUMAN SUBJECT

The study was conducted after the approval of dissertation committee prior to conduct the pilot study and the main study. The written permission was obtained from the Municipal Health Officer, at Dharapuram. The verbal consent of each study subject was obtained by explaining the purpose of the study.

CHAPTER –IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the description of sample characteristics and analysis and interpretation of data collected from adults in Nanchiyampalayam at Dharapuram.

Data were collected from 100 adults with hypertension in Nanchiyampalayam by using structured interview schedule & dichotomous practice questionnaire. The data were obtained, analyzed and presented under the following headings.

ORGANIZATION OF DATA

The data has been tabulated and organized as follows.

- SECTION -A** : Distribution of demographic variables of adults.
- SECTION -B** : Assess the level of knowledge and practice regarding hypertension among adults.
- SECTION -C** : Assess the level of blood pressure among adults.
- SECTION -D** : Correlation between knowledge and practice regarding hypertension among adults.
- SECTION -E** : Association between the knowledge scores regarding hypertension among adults with their level of blood pressure.
- SECTION -F** : Association between the practice scores regarding hypertension among adults level of blood pressure.
- SECTION -G** : Association between the knowledge scores regarding hypertension among adults with their selected demographic variables.
- SECTION -H** : Association between the practice scores regarding hypertension among adults with their selected demographic variables.

SECTION-A: DESCRIPTION OF DEMOGRAPHIC VARIABLES

Table 1 : Frequency and percentage distribution of demographic variables of adults.

n =100

S. No	Demographic variables	Frequency	Percentage (%)
1	Age		
1.1	40-45 years	17	17
1.2	46-50 years	31	31
1.3	51-55years	30	30
1.4	56-60 years	22	22
2	Sex		
2.1	Male	36	36
2.2	Female	64	64
3	Marital status		
3.1	Married	82	82
3.2	Unmarried	4	4
3.3	Widow	14	14
3.4	Divorced	0	0
4	Education		
4.1	No formal education	51	51
4.2	Primary education	39	39
4.3	Secondary education	8	8
4.4	Collegiate education	2	2
5	Religion		
5.1	Hindu	74	74
5.2	Christian	17	17
5.3	Muslim	9	9

6	Occupation		
6.1	House wife	15	15
6.2	Self employee	79	79
6.3	Government job	5	5
6.4	Private	1	1
7	Monthly income		
7.1	Rs.2000-3000	34	34
7.2	Rs.3001-4000	18	18
7.3	Rs.4001-5000	24	24
7.4	Above Rs.5000	24	24
8	Type of family		
8.1	Nuclear	68	68
8.2	Joint	32	32
9	Family history of hypertension		
9.1	Yes	50	50
9.2	No	50	50
10	Duration of treatment		
10.1	1month-6months	9	9
10.2	6months-1year	23	23
10.3	1year -5 years	45	45
10.4	Above 5 years	23	23
11	Source of health information		
11.1	Books	0	0
11.2	Friends and relations	12	12
11.3	Radio and television	37	37
11.4	Health workers	51	51

Table 1 depicts that description of demographic variables among adults such as age, sex, marital status, education, religion, occupation, monthly

income, type of family, family history of hypertension, duration of treatment, and source of health information.

Regarding age, the majority 31(31%) of the adults were belonged to the age group of 46-50 years and 30 (30%) belonged to the age group of 51-55years and 22(22%) belonged to the age group of 56-60 years and 17(17%) belonged to the age group of 40-45 years (fig.2).

Regarding sex, majority 64 (64%) of the adults were females and 36(36%) were males (fig.3).

Regard to marital status, majority 82(82%) of adults were married, few 14 (14%) were widows, very few 4 (4%) were unmarried, 0 (0%) were divorced (fig.4).

Regarding education, majority 51 (51%) of the adults had no formal education, 39(39%) had primary education, 8(8%) had secondary education, and very few 2 (2%) had collegiate education (fig.5).

With regard to religion, majority 74 (74%) of adults were Hindus, 17 (17%) were Christian, and few 9(9%) were Muslims (fig.6).

Regarding to occupation, majority 79 (79%) of the adults were self employees, 15 (15%) were housewife, few 5(5%) were government employees, and very few 1(1%) were private employee (fig.7).

Regard to monthly income, majority 34(34%) of the adults were belongs to Rs.2000-3000, 24 (24%) were belongs to Rs.4001-5000, 24 (24%) were belongs to above Rs.5000 monthly income, and 18 (18%) were belongs to Rs.3001-4000 monthly income (fig.8).

Regarding to type of family, majority 68 (68%) of the adults belonged to nuclear family, few 32 (32%) were belongs to joint family (fig.9).

With regard to family history of hypertension, half 50 (50%) of the adults had a family history of hypertension, and 50(50%) had no family history of hypertension (fig.10).

Regard to duration of treatment, majority 45 (45%) of the adults were taking treatment for 1year -5 years, 23 (23%) were taking treatment for 6months -1year, 23 (23%) were taking treatment for above 5 years, and few 9(9%) were taking treatment for 1 month- 6 months (fig.11).

Regarding to source of health information, the majority 51 (51%) of the adults had health information from health workers, 37 (37%) had health information from radio and television, few 12 (12%) had health information from friends and relatives, and 0 (0%) had health information from books (fig.12).

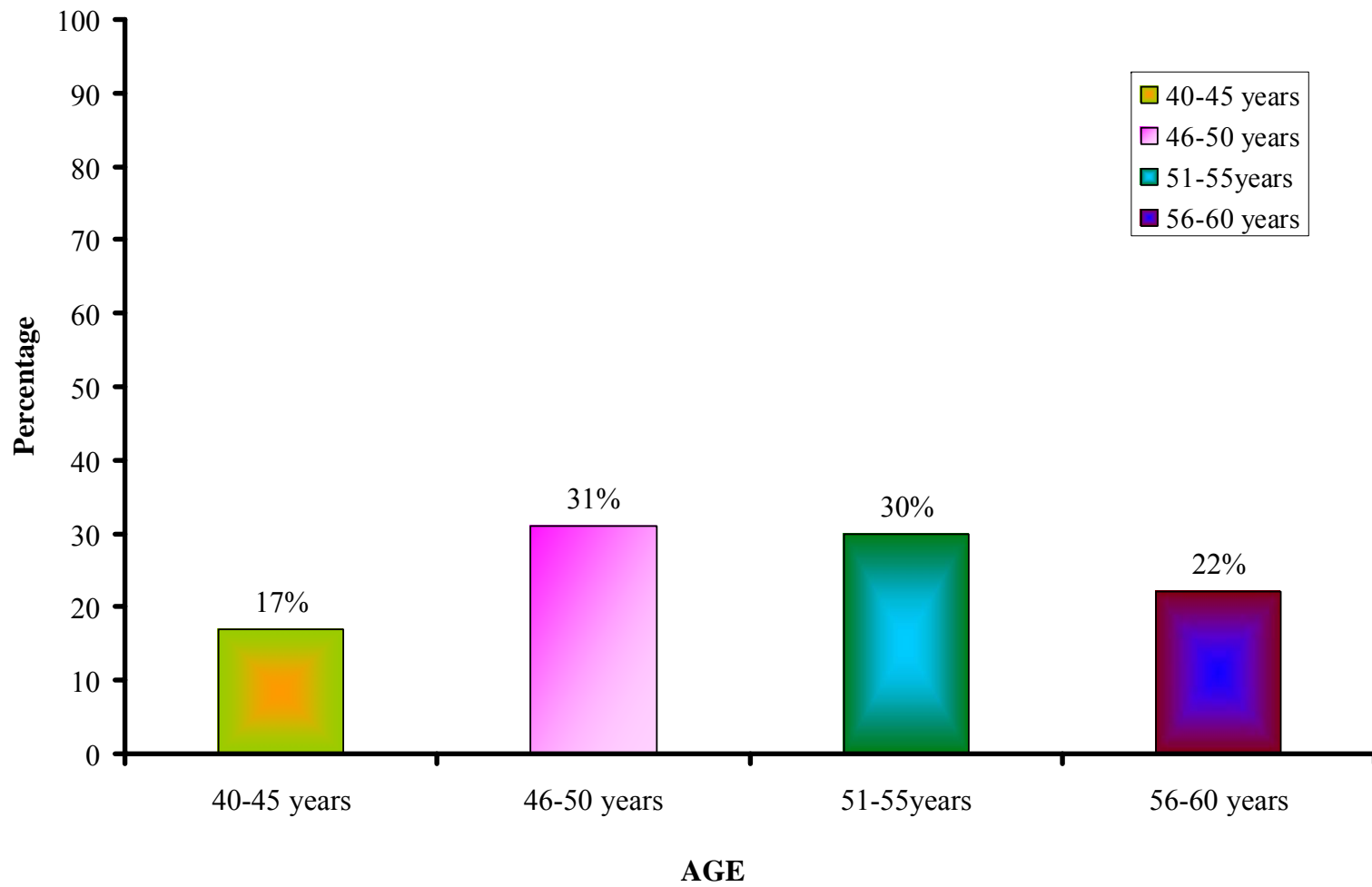
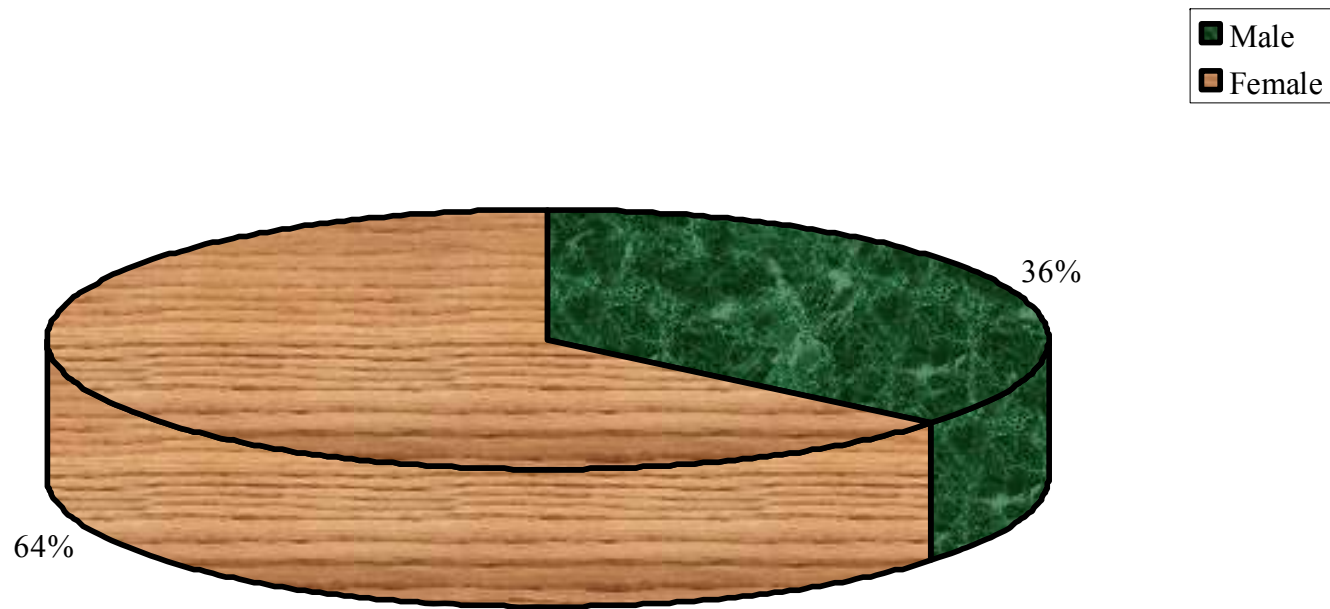


Fig: 2 Percentage distribution of adults according to their age.



SEX

Fig: 3 Percentage distribution of adults according to their sex.

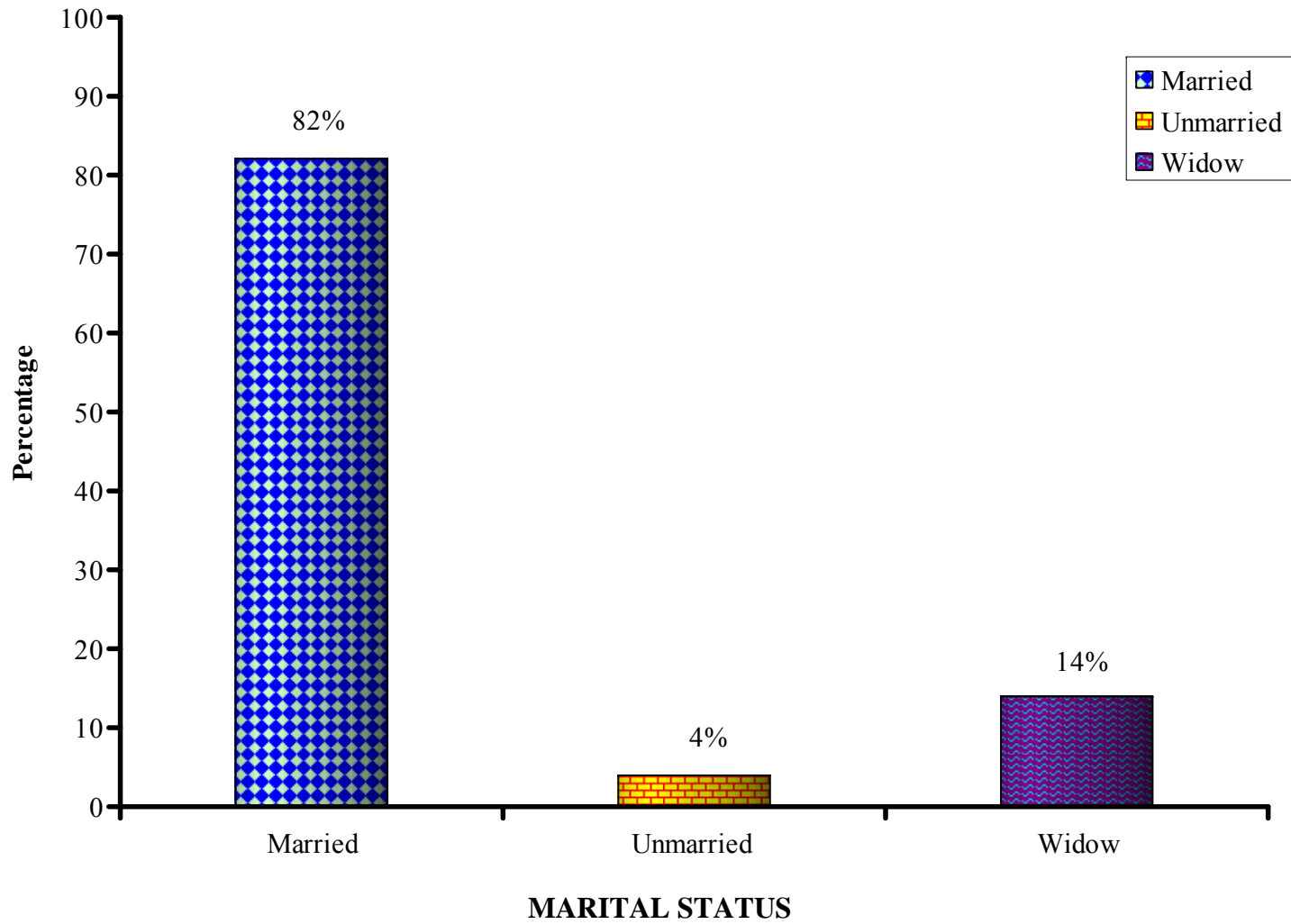


Fig: 4 Percentage distribution of adults according to their marital status

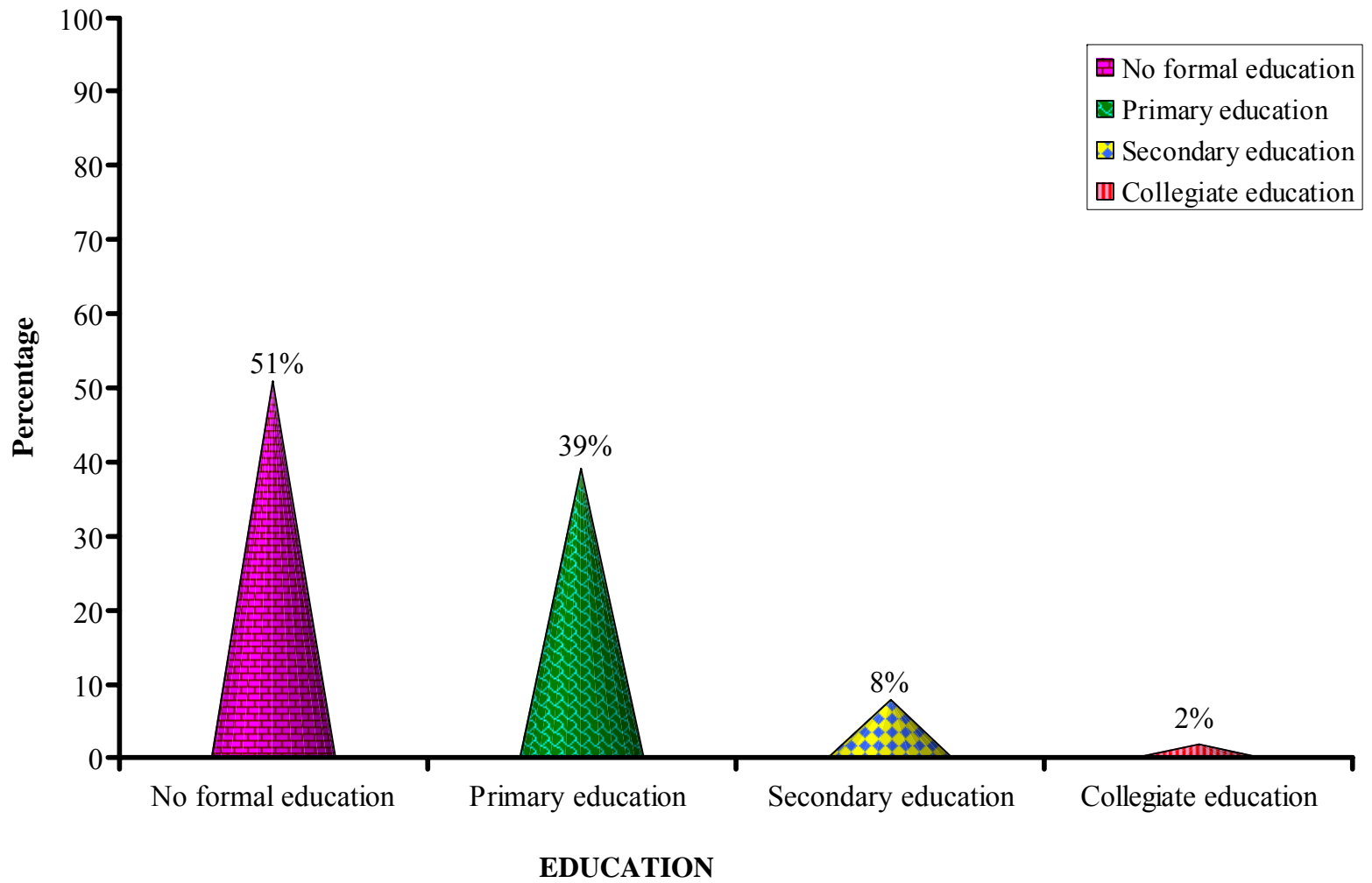


Fig: 5 Percentage distribution of adults according to their education.

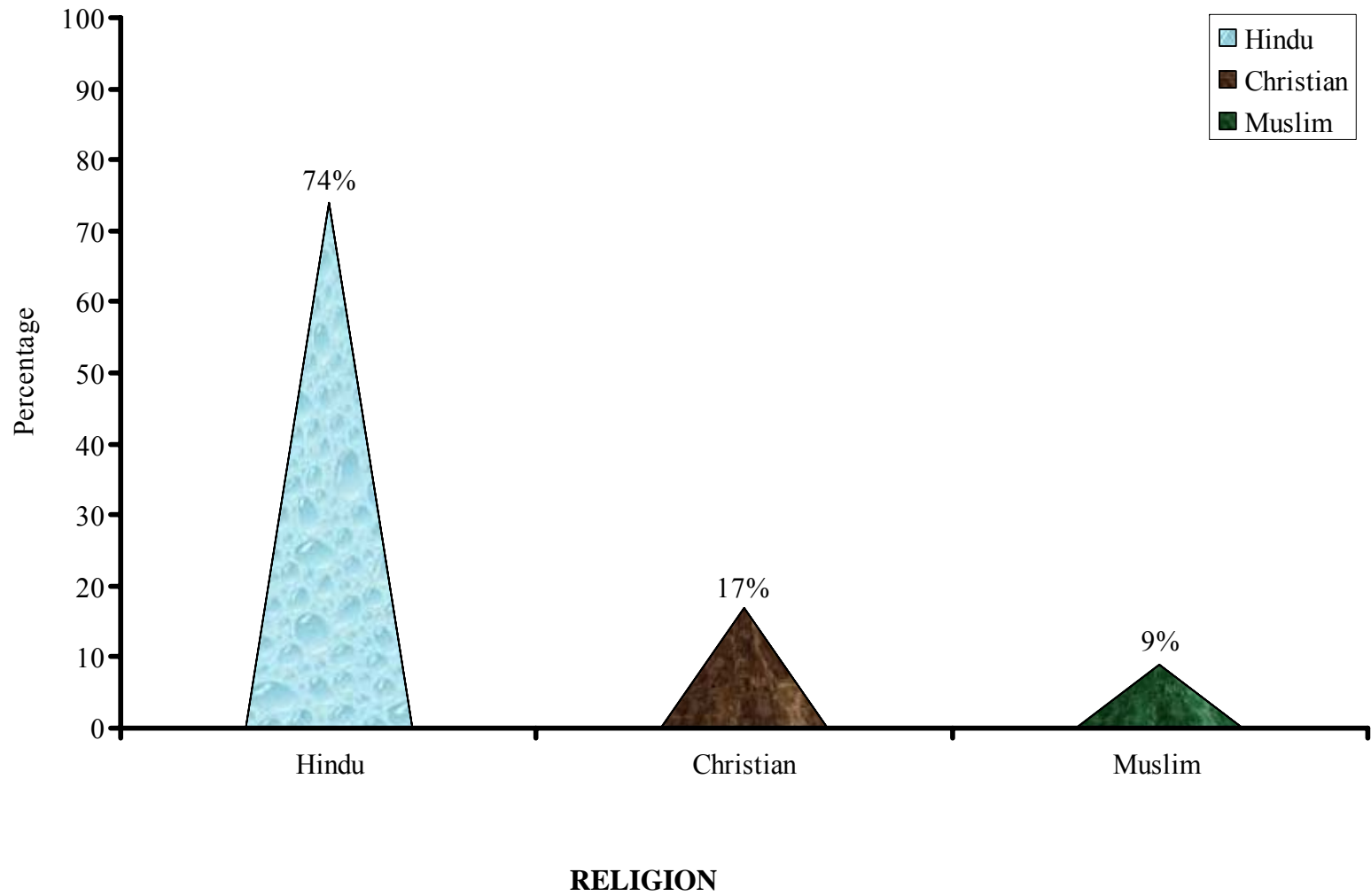


Fig: 6 Percentage distribution of adults according to their religion.

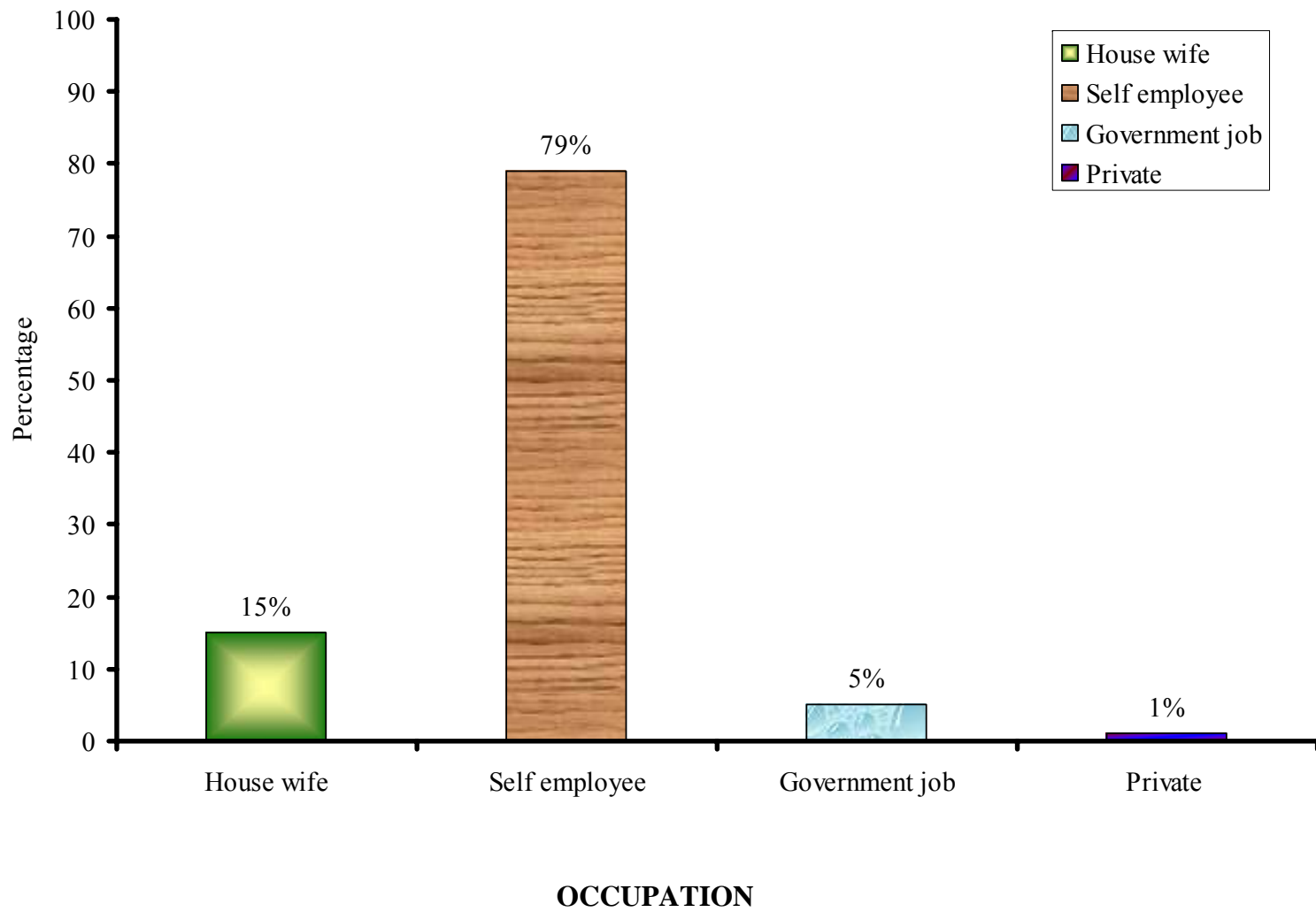


Fig: 7 Percentage distribution of adults according to their occupation.

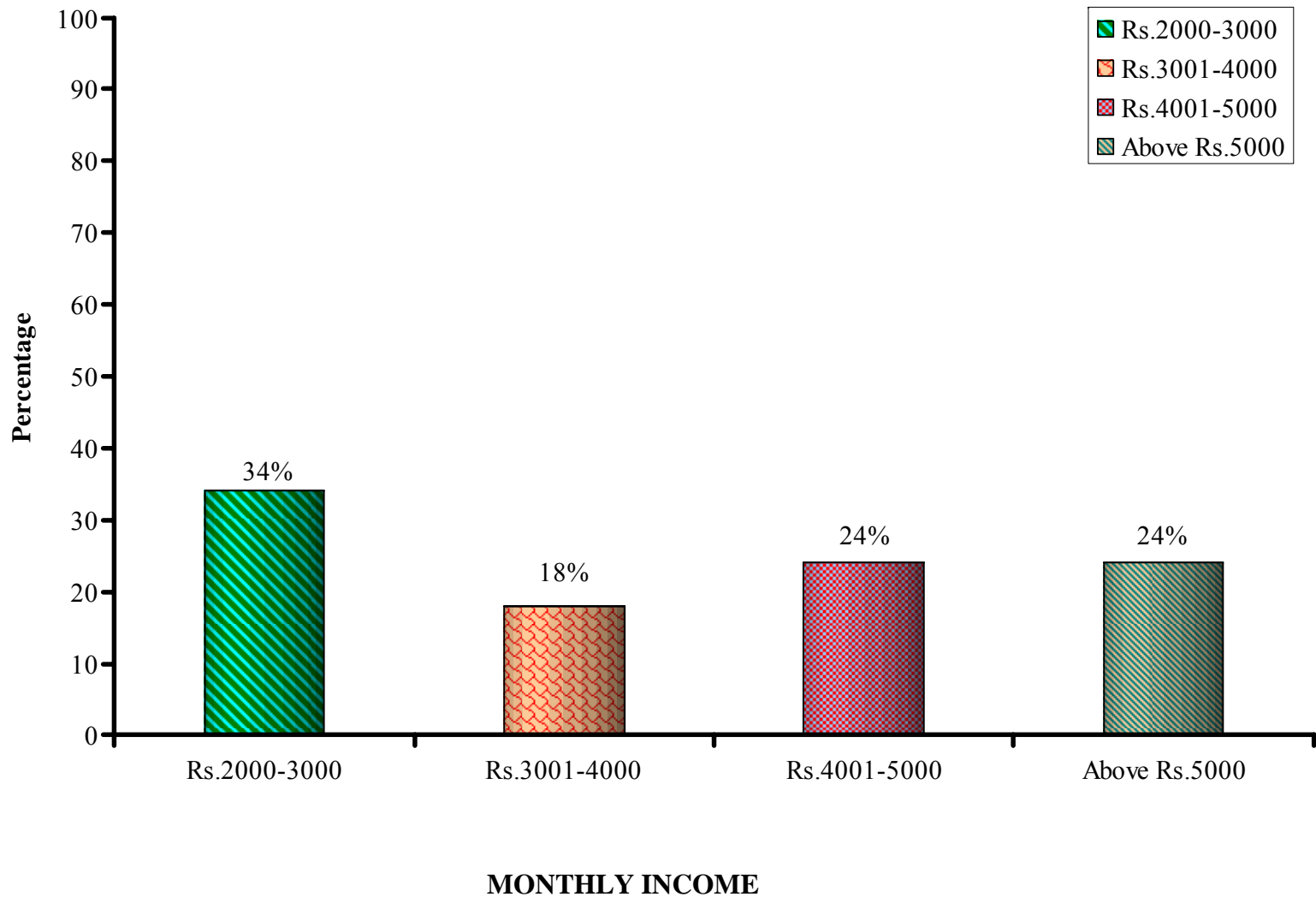
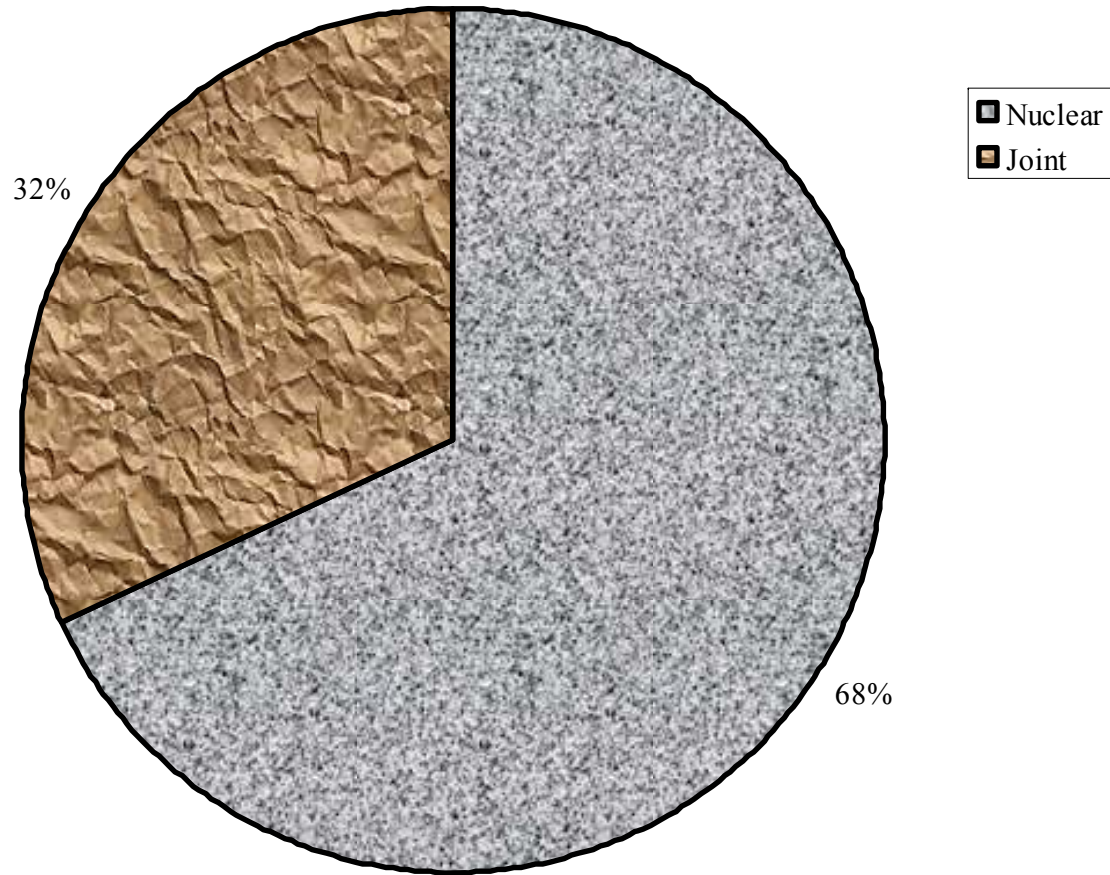
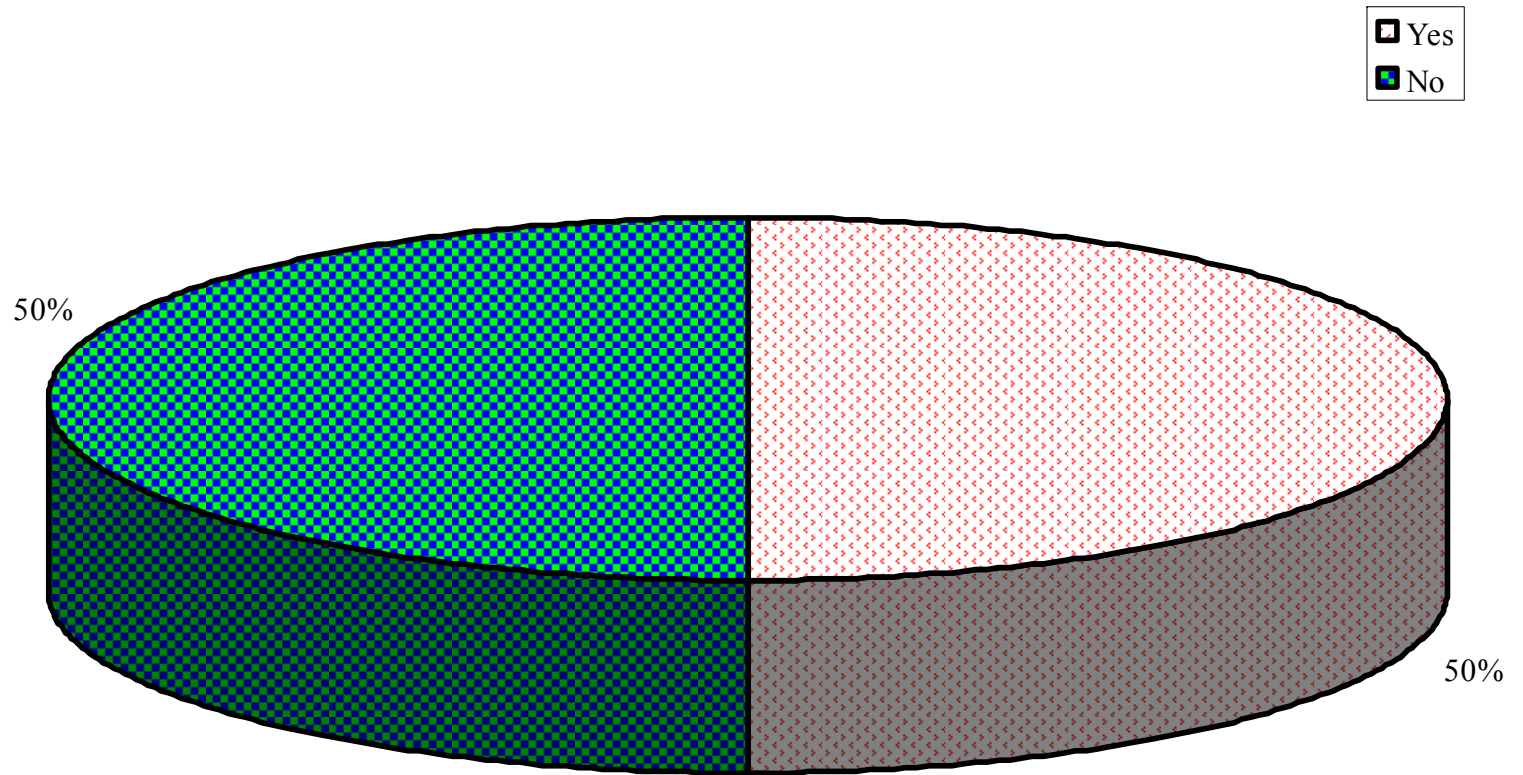


Fig: 8 Percentage distribution of adults according to their monthly income.



TYPE OF FAMILY

Fig: 9 Percentage distribution of adults according to their type of family.



FAMILY HISTORY OF HYPERTENSION

Fig: 10 Percentage distribution of adults according to their family history of hypertension.

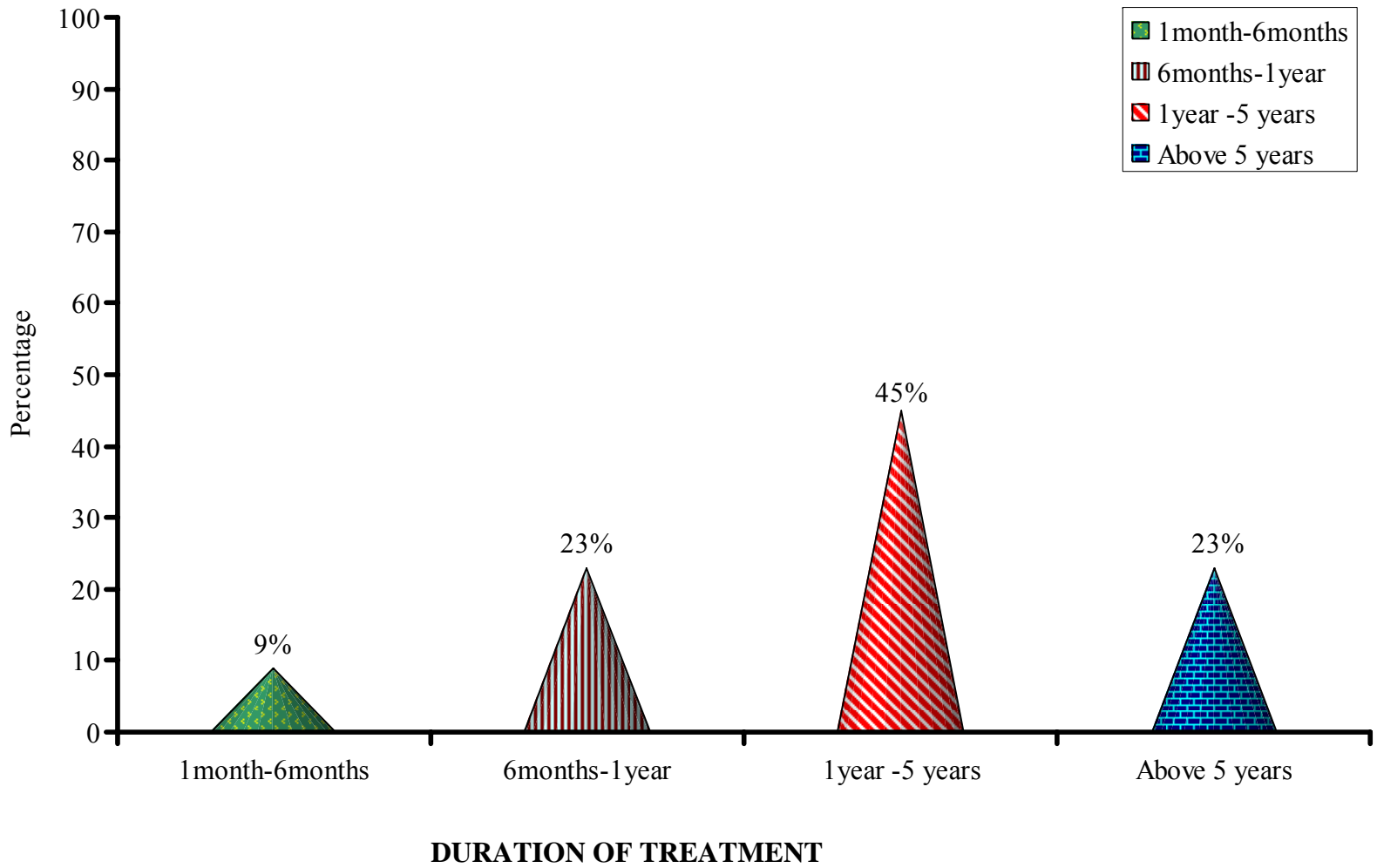


Fig: 11 Percentage distribution of adults according to their duration of treatment

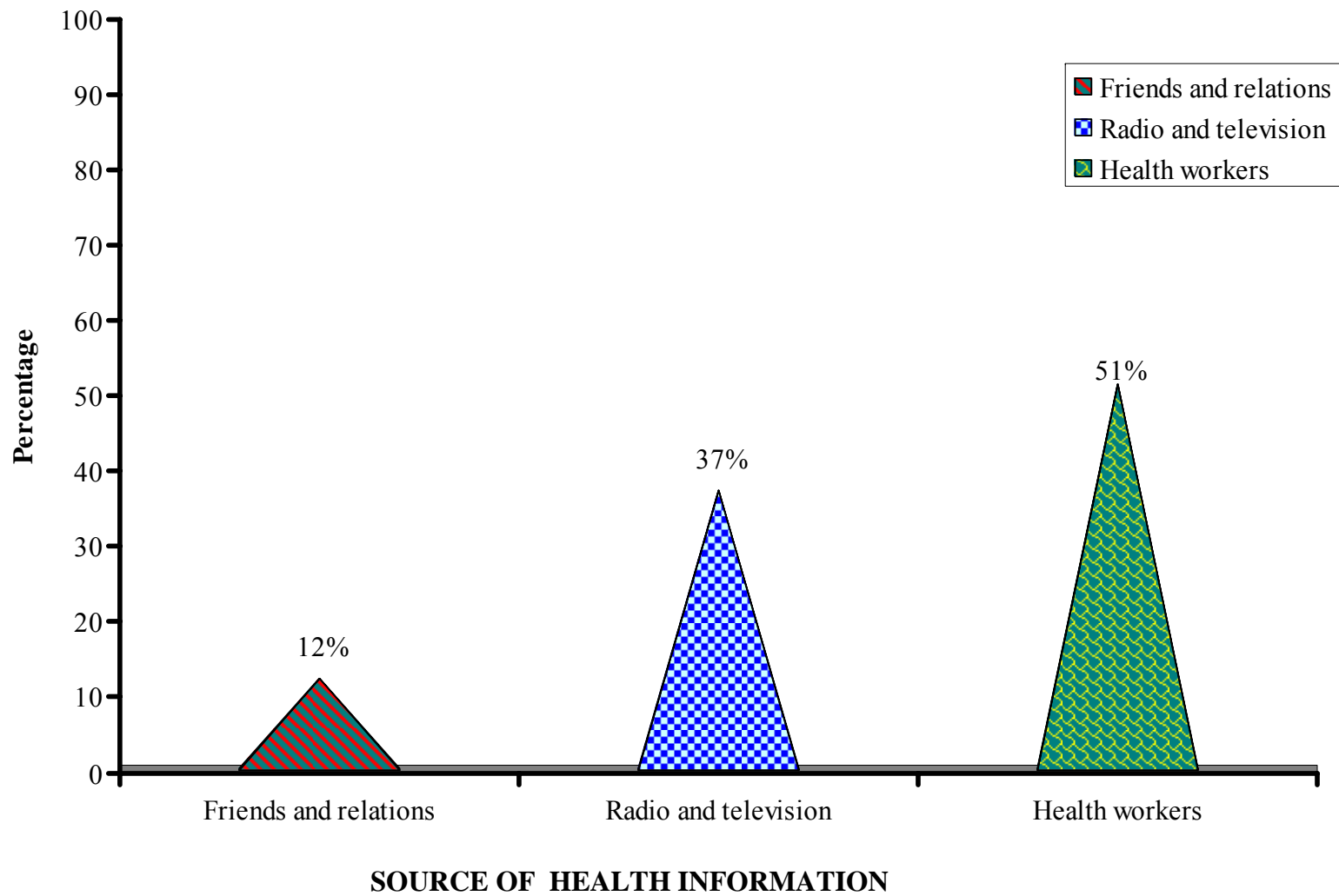


Fig: 12 Percentage distribution of adults according to their source of health information.

**SECTION –B : ASSESSING THE LEVEL OF KNOWLEDGE
AND PRACTICE REGARDING HYPERTENSION
AMONG ADULTS.**

Table 2 : Assessing the level of knowledge regarding hypertension among adults.

n=100

S. No	Level of knowledge	Frequency	Percentage (%)
1	Adequate knowledge	12	12
2	Moderately adequate knowledge	76	76
3	Inadequate knowledge	12	12
	Total	100	100

Table 2 depicts that 12 (12%) adults had adequate knowledge, 76 (76%) had moderately adequate knowledge, and 12(12%) had inadequate knowledge regarding hypertension (fig.13).

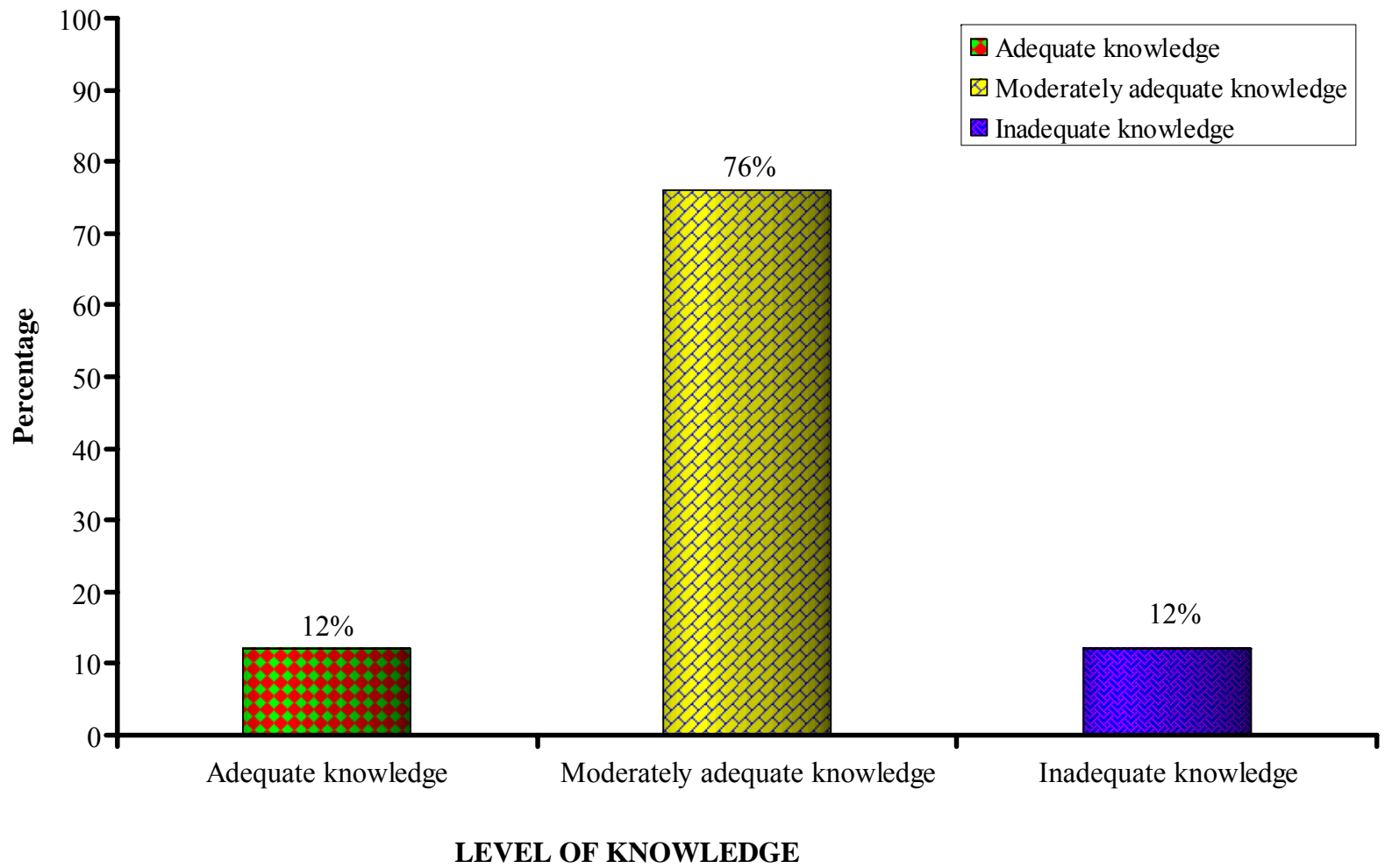


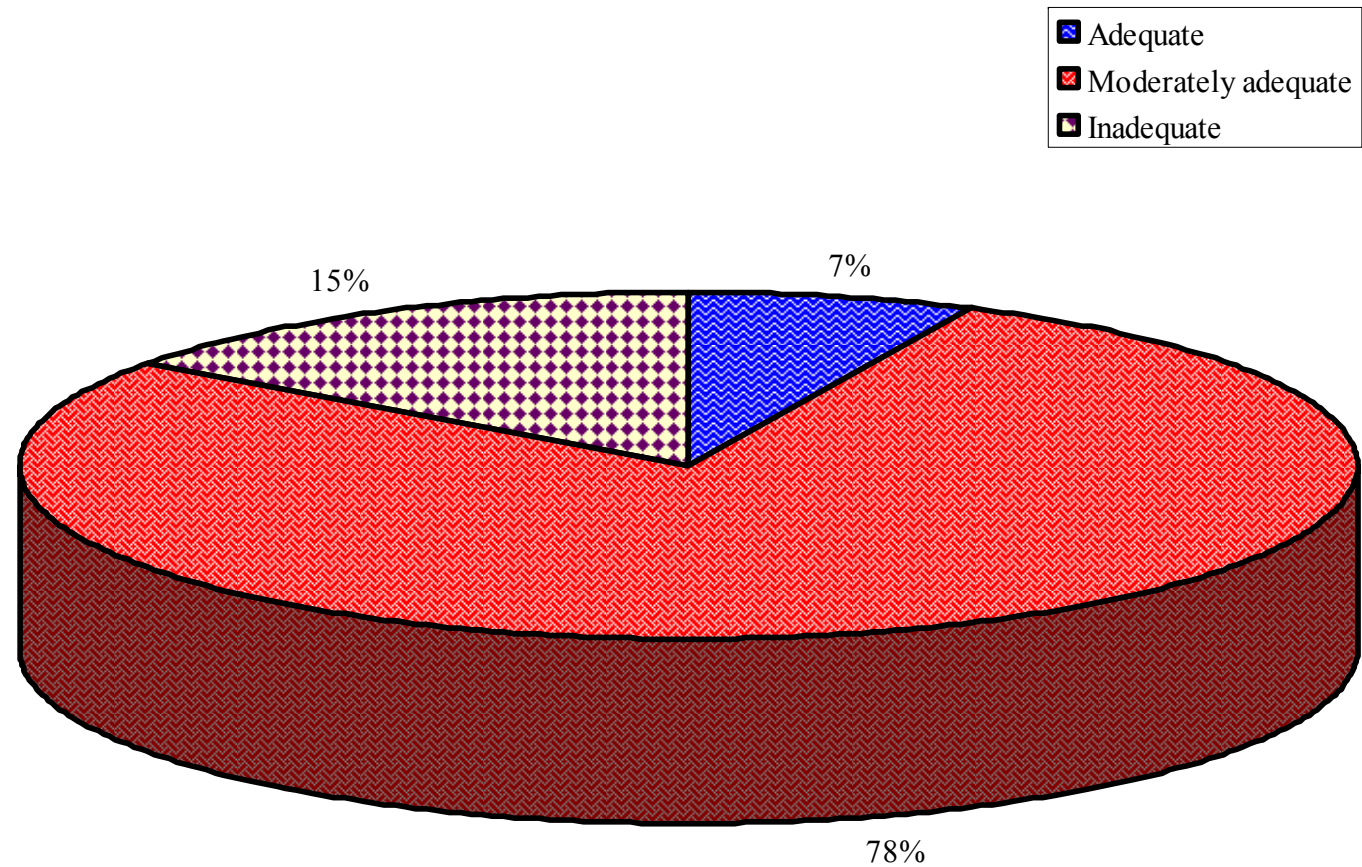
Fig: 13 Percentage distribution of level of knowledge regarding hypertension among adults.

Table 3: Assessing the level of practice regarding hypertension among adults.

n=100

S. No	Level of practice	Frequency	Percentage (%)
1	Adequate	7	7
2	Moderately adequate	78	78
3	Inadequate	15	15
	Total	100	100

Table 3 depicts that 7(7%) adults had adequate practice, 78(78%) had moderately adequate practice, 15(15%) had inadequate practice, regarding hypertension (fig.14).



LEVEL OF PRACTICE

Fig: 14 Percentage distribution of level of practice regarding hypertension among adults.

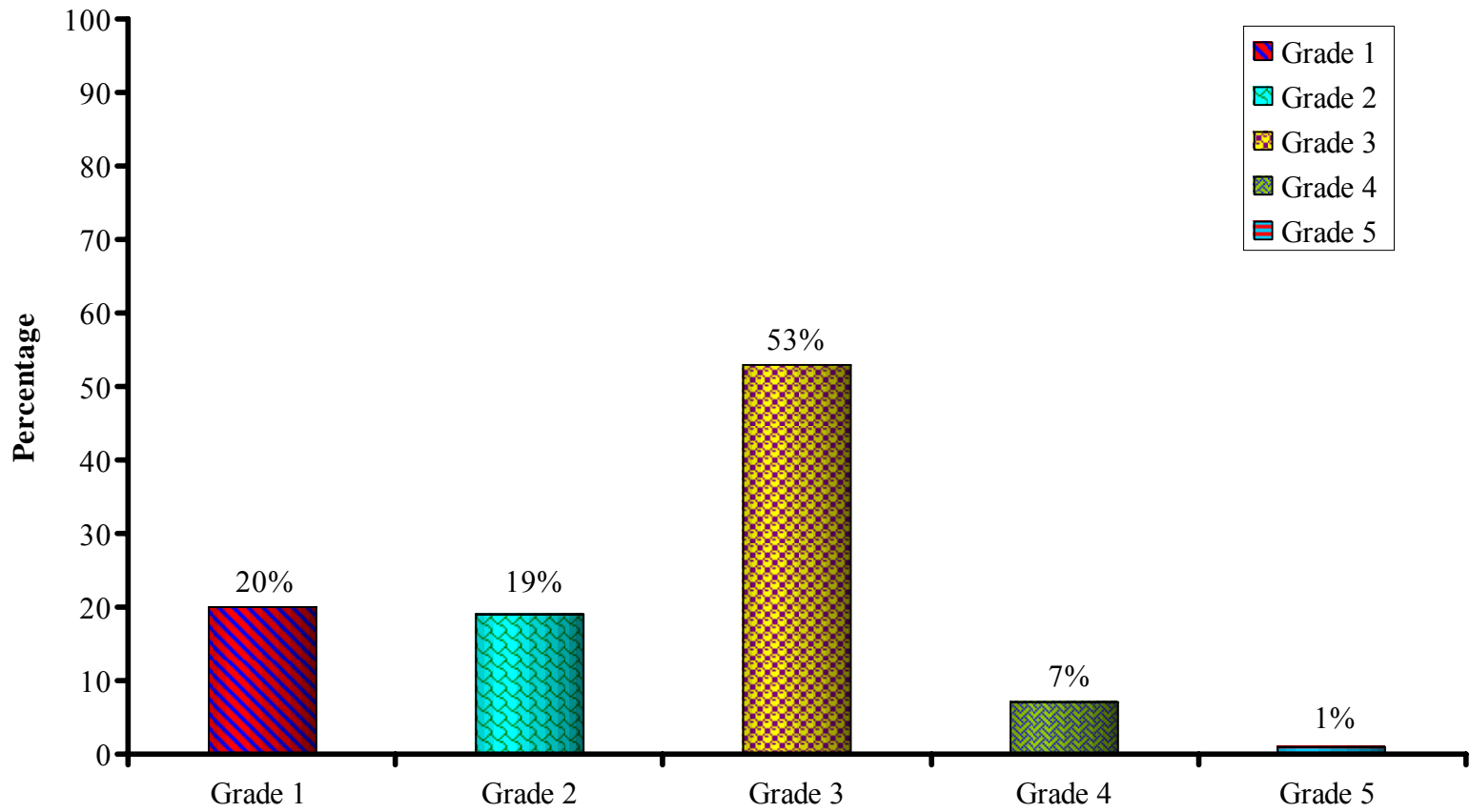
SECTION-C: ASSESSING THE LEVEL OF BLOOD PRESSURE AMONG ADULTS.

Table 4: Assessing the level of blood pressure among adults.

n=100

S. No	Grades	Frequency	Percentage (%)
1	Grade 1 (normal)	20	20
2	Grade 2 (high normal hypertension)	19	19
3	Grade 3 (stage-1)	53	53
4	Grade 4 (stage-2)	7	7
5	Grade 5 (stage-3)	1	1

Table 4 depicts that 20(20%) adults had grade 1(normal), 19(19%) had grade 2(high normal hypertension), 53(53%) had grade 3(stage-1), 7(7%) had grade 4(stage-2), and 1(1%) of had grade 5(stage-3) level of blood pressure (fig.15).



LEVEL OF BLOOD PRESSURE

Fig: 15 Percentage distribution of level of blood pressure among adults.

SECTION –D: CORRELATION BETWEEN KNOWLEDGE AND PRACTICE REGARDING HYPERTENSION AMONG ADULTS.

Table 5: Correlation between knowledge and practice regarding hypertension among adults.

n=100

S. No	Variable	Mean scores	Standard deviation	Coefficient of correlation	Table value
1	Knowledge	18.45	3.59	0.4	0.195
2	Practice	8.7	2.09		

df=98

P<0.05

Table 5 depicts that there was positive correlation between (r=0.4) knowledge and practice regarding hypertension among adults at 0.05 level.

SECTION-E: ASSOCIATION BETWEEN THE KNOWLEDGE SCORES REGARDING HYPERTENSION AMONG ADULTS WITH THEIR LEVEL OF BLOOD PRESSURE.

Table 6: Association between the knowledge scores regarding hypertension among adults with their level of blood pressure.

n=100

S. No	Grades	Level of knowledge						χ^2	Table value	Inference
		Adequate		Moderately adequate		Inadequate				
		No	%	No	%	No	%			
1	Grade1 (normal)	4	4	13	13	3	3	10.84	15.51 (df=8)	NS
2	Grade2 (high normal hypertension)	2	2	14	14	3	3			
3	Grade 3 (stage-1)	5	5	43	43	5	5			
4	Grade 4 (stage-2)	0	0	6	6	1	1			
5	Grade 5 (stage-3)	1	1	0	0	0	0			

p<0.05

N.S= Non significant

S=Significant

Chi Square values were calculated to find the association between the knowledge scores regarding hypertension among adults with their level of blood pressure. There was no significant association between the knowledge scores and level of blood pressure ($\chi^2=10.84$) at (P<0.05) level.

SECTION-F: ASSOCIATION BETWEEN THE PRACTICE SCORES REGARDING HYPERTENSION AMONG ADULTS WITH THEIR LEVEL OF BLOOD PRESSURE.

Table 7: Association between the practice scores regarding hypertension among adults with their level of blood pressure.

n=100

S. No	Grades	Level of practice						χ^2	Table value	Inference
		Adequate		Moderately adequate		Inadequate				
		No	%	No	%	No	%			
1.	Grade1(normal)	3	3	16	16	1	1	22.44	(df=8)	S
2.	Grade2 (high normal hypertension)	3	3	16	16	0	0			
3.	Grade 3 (stage-1)	1	1	42	42	10	10			
4.	Grade 4 (stage-2)	0	0	3	3	4	4			
5.	Grade 5 (stage-3)	0	0	1	1	0	0			

p<0.05

N.S= Non significant

S=Significant

Chi Square values were calculated to find the association between the practice scores regarding hypertension among adults with their level of blood pressure. There was a significant association between practice scores and level of blood pressure ($\chi^2=22.44$) at (P<0.05) level.

SECTION-G: ASSOCIATION BETWEEN THE KNOWLEDGE SCORES REGARDING HYPERTENSION AMONG ADULTS WITH THEIR SELECTED DEMOGRAPHIC VARIABLES

Table 8: Association between the knowledge scores regarding hypertension among adults with their selected demographic variables.

n=100

S. No	Demographic variables	Level of knowledge						χ^2	Table value	Inference
		Adequate		Moderately adequate		Inadequate				
		No	%	No	%	No	%			
1	Age									
1.1	40-45 years	2	2	12	12	3	3	3.29	12.59	NS
1.2	46-50 years	3	3	25	25	3	3			
1.3	51-55years	3	3	22	22	5	5			
1.4	56-60 years	4	4	17	17	1	1			
2	Sex									
2.1	Male	7	7	26	26	3	3	3.34	5.99	NS
2.2	Female	5	5	50	50	9	9			
3	Marital status									
3.1	Married	9	9	66	66	7	7	15.13	9.49	S
3.2	Unmarried	2	2	0	0	2	2			
3.3	Widow	1	1	10	10	3	3			
3.4	Divorced	0	0	0	0	0	0			
4	Education									
4.1	No formal education	3	3	44	44	4	4	18.48	12.59	S
4.2	Primary education	6	6	29	29	4	4			
4.3	Secondary education	2	2	3	3	3	3			
4.4	Collegiate education	1	1	0	0	1	1			

5	Religion									
5.1	Hindu	8	8	61	61	5	5	9.08	9.49 (df=4)	NS
5.2	Christian	3	3	10	10	4	4			
5.3	Muslim	1	1	5	5	3	3			
6	Occupation									
6.1	House wife	1	1	14	14	0	0	22.29	12.59 (df=6)	S
6.2	Self employee	10	10	61	61	8	8			
6.3	Government	1	1	1	1	3	3			
6.4	Private	0	0	0	0	1	1			
7	Monthly income									
7.1	Rs.2000-3000	5	5	27	27	2	2	6.43	12.59 (df=6)	NS
7.2	Rs.3001-4000	4	4	12	12	2	2			
7.3	Rs.4001-5000	2	2	17	17	5	5			
7.4	AboveRs.5000	1	1	20	20	3	3			
8	Type of family									
8.1	Nuclear	9	9	54	54	5	5	4.41	5.99 (df=2)	NS
8.2	Joint	3	3	22	22	7	7			
9	Family history of hypertension									
9.1	Yes	5	5	42	42	3	3	4.18	5.99 (df=2)	NS
9.2	No	7	7	34	34	9	9			
10	Duration of treatment									
10.1	1month-6months	2	2	7	7	0	0	4.32	12.59 (df=6)	NS
10.2	6months-1year	4	4	15	15	4	4			
10.3	1year -5 years	4	4	35	35	6	6			
10.4	Above 5 years	2	2	19	19	2	2			

11	Source of health information									
11.1	Books	0	0	0	0	0	0			
11.2	Friends and relations	1	1	10	10	1	1	7.51	9.49	NS (df=4)
11.3	Radio and television	2	2	27	27	8	8			
11.4	Health workers	9	9	39	39	3	3			

p<0.05

N.S= Non significant

S=Significant

Chi Square values were calculated to find the association between the knowledge scores regarding hypertension among adults with their demographic variables. There was a significant association between knowledge scores and marital status ($\chi^2=15.13$), education ($\chi^2=18.48$) and occupation ($\chi^2=22.29$) at (P<0.05) level.

SECTION-H: ASSOCIATION BETWEEN THE PRACTICE SCORES REGARDING HYPERTENSION AMONG ADULTS WITH THEIR SELECTED DEMOGRAPHIC VARIABLES

Table 9: Association between the practice scores regarding hypertension among adults with their selected demographic variables.

n=100

S. No	Demographic variables	Level of practice						χ^2	Table value	Inference
		Adequate		Moderately adequate		Inadequate				
		No	%	No	%	No	%			
1	Age									
1.1	40-45 years	0	0	15	15	2	2	10.46	12.59	NS
1.2	46-50 years	2	2	28	28	1	1			
1.3	51-55years	4	4	20	20	6	6			
1.4	56-60 years	1	1	15	15	6	6			
2	Sex									
2.1	Male	2	2	28	28	6	6	0.28	5.99	NS
2.2	Female	5	5	50	50	9	9			
3	Marital status									
3.1	Married	6	6	67	67	9	9	12.49	9.49	S
3.2	Unmarried	1	1	3	3	0	0			
3.3	Widow	0	0	8	8	6	6			
3.4	Divorced	0	0	0	0	0	0			
4	Education									
4.1	No formal education	3	3	39	39	9	9	11.23	12.59	NS
4.2	Primary education	3	3	31	31	5	5			
4.3	Secondary education	0	0	8	8	0	0			
4.4	Collegiate education	1	1	0	0	1	1			
5	Religion									
5.1	Hindu	5	5	57	57	12	12	0.59	9.49	NS
5.2	Christian	1	1	14	14	2	2			
5.3	Muslim	1	1	7	7	1	1			

6	Occupation									
6.1	House wife	0	0	12	12	3	3	3.19	12.59 (df=6)	NS
6.2	Self employee	6	6	62	62	11	11			
6.3	Government	1	1	3	3	1	1			
6.4	Private	0	0	1	1	0	0			
7	Monthly income									
7.1	Rs.2000-3000	1	1	26	26	7	7	5.98	12.59 (df=6)	NS
7.2	Rs.3001-4000	2	2	13	13	3	3			
7.3	Rs.4001-5000	1	1	22	22	1	1			
7.4	AboveRs.5000	3	3	17	17	4	4			
8	Type of family									
8.1	Nuclear	5	5	56	56	7	7	3.69	5.99 (df=2)	NS
8.2	Joint	2	2	22	22	8	8			
9	Family history of hypertension									
9.1	Yes	5	5	38	38	7	7	1.4	5.99 (df=2)	NS
9.2	No	2	2	40	40	8	8			
10	Duration of treatment									
10.1	1month-6months	0	0	8	8	1	1	3.19	12.59 (df=6)	NS
10.2	6months-1year	1	1	19	19	3	3			
10.3	1year -5 years	5	5	35	35	5	5			
10.4	Above 5 years	1	1	16	16	6	6			
11	Source of health information									
11.1	Books	0	0	0	0	0	0	1.83	9.49 (df=4)	NS
11.2	Friends and relations	1	1	8	8	3	3			
11.3	Radio and television	2	2	31	31	4	4			
11.4	Health workers	4	4	39	39	8	8			

P<0.05 S-Significant N.S-Non significant

Chi Square values were calculated to find the association between the practice scores regarding hypertension among adults with their demographic variables. There was no significant association between the practice scores with demographic variables except for marital status ($\chi^2=12.49$) at (P<0.05) level.

CHAPTER-V

DISCUSSION

This discussion deals with sample characteristics and objectives of the study. The aim of this present study was to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nachiyampalayam at Dharapuram. 100 adults were selected for the study by using non probability purposive sampling technique; the data were collected by using structured interview schedule and collected data was statistically assessed. This chapter attempts to discuss the findings of the study as per objective.

Distribution of demographic variables of adults

Regarding age, the majority 31(31%) of the adults were belonged to the age group of 46-50 years and 30 (30%) belonged to the age group of 51-55years and 22(22%) belonged to the age group of 56-60 years and 17(17%) belonged to the age group of 40-45 years.

Regarding sex majority 64 (64%) of the adults were females and 36(36%) were males.

Regard to marital status, majority 82(82%) of adults were married, few 14 (14%) were widows, very few 4 (4%) were unmarried, 0 (0%) were divorced.

Regarding education, majority 51 (51%) of the adults had no formal education, 39(39%) had primary education, 8(8%) had secondary education, and very few 2 (2%) had collegiate education.

With regard to religion, majority 74 (74%) of adults were Hindus, 17 (17%) were Christian, and few 9(9%) were Muslims.

Regarding to occupation, majority 79 (79%) of the adults were self employees, 15 (15%) were housewife, few 5(5%) were government employees, and very few 1(1%) were private employee.

Regard to monthly income, majority 34(34%) of the adults were belongs to Rs.2000-3000, 24 (24%) were belongs to Rs.4001-5000, 24 (24%) were belongs to above Rs.5000 monthly income, and 18 (18%) were belongs to Rs.3001-4000 monthly income.

Regarding to type of family, majority 68 (68%) of the adults belonged to nuclear family, few 32 (32%) were belongs to joint family.

With regard to family history of hypertension, half 50 (50%) of the adults had a family history of hypertension, and 50(50%) had no family history of hypertension.

Regard to duration of treatment, majority 45 (45%) of the adults were taking treatment for 1year -5 years, 23 (23%) were taking treatment for 6months -1year, 23 (23%) were taking treatment for above 5 years, and few 9(9%) were taking treatment for 1 month- 6 months.

Regarding to source of health information, the majority 51 (51%) of the adults had health information from health workers, 37 (37%) had health information from radio and television, few 12 (12%) had health information from friends and relatives, and 0 (0%) had health information from books.

The findings of the study are discussed according to the objectives as follows;

1. To assess the knowledge and practice regarding hypertension among adults.
2. To assess the level of blood pressure among adults.
3. To correlate the knowledge and practice regarding hypertension among adults.

4. To find the association between the knowledge scores regarding hypertension among adults with their level of blood pressure.
5. To find the association between the practice scores regarding hypertension among adults with their level of blood pressure.
6. To find the association between the knowledge scores regarding hypertension among adults with their selected demographic variables.
7. To find the association between the practice scores regarding hypertension among adults with their selected demographic variables.

FIRST OBJECTIVE

Assess the knowledge and practice regarding hypertension among adults.

With regard to knowledge, majority 76(76%) of adults had moderately adequate knowledge, 12 (12%) had adequate knowledge, 12(12%) had inadequate knowledge regarding hypertension. With regard to practice, majority 78(78%) of adults had moderately adequate practice, 15(15%) had inadequate practice, 7(7%) had adequate practice regarding hypertension. It revealed that there was a need for creating awareness regarding hypertension.

The study findings were consistent with the findings of **Mary.P., (2009)** performed to assess the knowledge regarding diet among hypertensive patients. The findings of the study showed that 9% had inadequate knowledge, 47% had moderately adequate and 44% had adequate knowledge.

SECOND OBJECTIVE

Assess the level of blood pressure among adults.

Regarding level of blood pressure majority 53(53%) of adults had grade 3(stage-1), 20(20%) had grade 1(normal), 19(19%) had grade 2(high normal hypertension), 7(7%) had grade 4(stage-2), and 1(1%) of had grade 5(stage-3) level of blood pressure.

The study findings were consistent with the findings of **Wizner.B,et.al.,(2000)** on knowledge about hypertension and blood pressure. The findings of the study shows that 24.1% of participants had blood pressure values exceeding 140/90 mmHg (stage-1).

The study findings were consistent with the findings of **Gupta.R,et.al., (2004)** on trends in hypertension epidemiology in India. The findings of the study shows that a total of 70% of these would be Stage I hypertension (systolic BP 140-159 and/or diastolic BP 90-99 mmHg).

THIRD OBJECTIVE

Correlate the knowledge and practice regarding hypertension among adults

The data analysis showed that there was positive correlation between ($r=0.4$) knowledge and practice regarding hypertension among adults at 0.05 level.

The study findings were consistent with the findings of **Katibi.I.A, et.al., (2010)** on Knowledge and practice of hypertensive patients as seen in a tertiary hospital in the middle belt of Nigeria. The findings of the study showed that 41.1% and 1.8% of the patients were aware that excessive salt and fat intake could adversely affect the control of hypertension respectively.

The study findings were consistent with the findings of **Wizner.B,et.al.,(2000)** on correlation between the environmental factors and knowledge about hypertension in Cracow. The findings of the study showed that the mean age was 37.1 +/- 17.8 years. Participants were well educated (75.9% had finished college or high school), and there were more women than men in the study group (57.5% vs 42.5%). 24.1% of participants had blood pressure values exceeding 140/90 mmHg. Multiple linear regression demonstrated that age, body mass index and knowledge about hypertension significantly influenced the level of systolic blood pressure.

Hence the research hypothesis H₁: There will be a significant correlation between knowledge and practice scores regarding hypertension among adults was accepted.

FOURTH OBJECTIVE

To find the association between the knowledge scores regarding hypertension among adults with their level of blood pressure.

The findings of the study shows that there was no statistically association between knowledge scores and level of blood pressure ($\chi^2=10.84$) at (P<0.05) level.

The study findings were consistent with the findings of **Edwards.L.et.al., (2002)** on Diet- and blood pressure-related knowledge, attitudes, and hypertension prevalence among African Americans. The findings of the study shows that the mean SBP and DBP were 135.4±21.6 mmHg, 78.8±15.7mmHg, respectively and 55.9% of participants had hypertension. The mean knowledge score was 76.1 (±10.6). There was no statistically significant difference in mean knowledge score by hypertension status (known hypertension: 76.9 (±10.4), P=0.665. Attitudes were not significantly related to knowledge and HTN prevalence, despite apparent trends. However, logistic regression analyses revealed that age, occupation, and church site were significant correlates of this relationship.

Hence the research hypothesis H₂: There will be a significant association between the knowledge scores regarding hypertension among adults with their level of blood pressure was rejected.

FIFTH OBJECTIVE

To find the association between the practice scores regarding hypertension among adults with their level of blood pressure.

The data analysis showed that there was statistically significant association between practice scores and level of blood pressure ($\chi^2=22.44$) at (P<0.05) level.

The study findings were consistent with the findings of **Gupta.R,et.al., (2004)** on trends in hypertension epidemiology in India. The findings of the study shows Hypertension diagnosed by multiple examinations has been reported in 27% male and 28% female executives in Mumbai and 4.5% rural subjects in Haryana. The study results revealed that there is a strong correlation between changing lifestyle factors and increase in hypertension in India.

Hence the research hypothesis H₃: There will be a significant association between the practice scores regarding hypertension among adults with their level of blood pressure was accepted.

SIXTH OBJECTIVE

Find the association between the knowledge scores regarding hypertension among adults with their selected demographic variables.

The findings of the study shows that there was statistically significant association between level of knowledge scores with marital status ($\chi^2=15.13$), education ($\chi^2=18.48$) and occupation ($\chi^2=22.29$).

The study findings were consistent with the findings of **Malhotra.R.et.al., (2010)** on Prevalence, awareness, treatment and control of hypertension in the elderly population of Singapore. The findings of the study showed that 30.8% were unaware that they had hypertension, 32.0% were not being treated for the disease and 75.9% had suboptimal control of their blood pressure. Among those aware of their hypertension, only 1.9% was untreated. And age, gender, ethnicity, education, housing type, body mass were significantly correlated with lack of awareness, treatment and control of hypertension.

Therefore the research H₄ there will be significant association between the knowledge scores regarding hypertension among adults with their selected

demographic variables was rejected except for marital status, education, occupation.

SEVENTH OBJECTIVE

Find the association between the practice scores regarding hypertension among adults with their selected demographic variables.

The finding of the study shows that there was statistically no significant association between the levels of practice with demographic variables except marital status ($\chi^2=12.49$).

Therefore the research H₅ there will be significant association between the practice scores regarding hypertension among adults with their selected demographic variables was rejected except for marital status.

CHAPTER-VI
SUMMARY, CONCLUSION, IMPLICATION,
RECOMMENDATIONS AND LIMITATIONS

This chapter is divided into five aspects

- Summary of the study
- Conclusion
- Implication
- Recommendations
- Limitations

SUMMARY OF THE STUDY

This study was done to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults.

The research approach and design used for the study was descriptive approach and descriptive survey design. This study was conducted in urban area in Nachiyampalayam at Dharapuram. The conceptual framework was based on the revised Rosenstoch's health belief model (1988). The sample size was 100 adults with hypertension who met the inclusion criteria were selected by non probability purposive sampling method. The instruments used for data collection were structured interview schedule, dichotomous questionnaire, and Sphygmomanometer.

The investigator gave brief introduction and the demographic data and the knowledge and practice regarding hypertension was assessed by using structured interview schedule. The level of blood pressure was assessed by using Sphygmomanometer. 50-60 minutes was spent for each study samples. 3-4 adults were interviewed per day and blood pressure was checked for the following 3 days. Next day along with the new 3-4 samples, the old samples

blood pressure also checked. After collecting the data from 100 samples, the awareness programme regarding hypertension was conducted. The data were analyzed and interpreted by using descriptive and inferential statistics.

The major findings of the study

- Majority (31%) of the adults was in the age group of 46-50 years.
- Highest percentages (64%) of adults were females.
- Highest percentages (82%) of adults were married.
- Majority (51%) of the adults had no formal education.
- Highest percentages (74%) of adults were Hindus.
- Majority (79%) of the adults were self employees.
- Highest percentages (34%) of adults were belonging to Rs.2000-3000 monthly income.
- Majority (68%) of the adults were belonged to nuclear family.
- The half (50%) of the adults had a family history of hypertension.
- Majority (45%) of the adults were taking the treatment for 1year -5 years.
- Majority (51%) of the adults had health information from health workers.
- Majority (76%) of the adults had moderately adequate knowledge regarding hypertension
- Highest percentages (78%) of adults had moderately adequate practice regarding hypertension.
- Highest percentages (53%) of adults had grade 3 level of blood pressure.
- There was a positive correlation between ($r=0.4$) of knowledge and practice regarding hypertension among adults.
- There was no significant association between the knowledge scores regarding hypertension among adults with their level of blood pressure ($\chi^2=10.84$) at ($P<0.05$) level.

- There was significant association between the practice scores regarding hypertension among adults with their level of blood pressure ($\chi^2=22.44$) which is significant at ($P<0.05$) level.
- There was significant association between the knowledge scores regarding hypertension among adults with their selected demographic variables such as marital status ($\chi^2=15.13$), education ($\chi^2=18.48$) and occupation ($\chi^2=22.29$).
- There was no significant association between the practice scores regarding hypertension among adults with their demographic variables except for marital status ($\chi^2=12.49$).

CONCLUSION

The present study assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults. The results showed that (76%) of adults had moderately adequate knowledge, (12%) had inadequate knowledge, (12%) had adequate knowledge regarding hypertension. In practice 78(78%) of adults had moderately adequate practice, (15%) had inadequate practice, 7(7%) had adequate practice regarding hypertension. The mean score of knowledge and practice regarding hypertension were 18.45(SD± 3.59) and 8.7(SD± 2.09). There was a positive correlation between ($r=0.4$) of knowledge and practice regarding hypertension. There was no significant association between knowledge scores regarding hypertension and level of blood pressure ($\chi^2=10.84$) at ($P<0.05$) level. There was significant association between knowledge scores regarding hypertension and level of blood pressure ($\chi^2=22.44$) at ($P<0.05$) level. This study finding concluded that the adults in the community had moderate knowledge regarding hypertension. The awareness programme will play an important role in improving the knowledge and good practices of adults with hypertension regarding hypertension.

NURSING IMPLICATIONS

Nursing service

- ❖ Community health nurse can conduct screening programme in the community area.
- ❖ The awareness programme can be conducted by community health nurse to making awareness regarding hypertension in the community.
- ❖ Nurses as the change agent can introduce various preventive measures to prevent the complications of hypertension.
- ❖ Community health nurse can conduct in service education, organize workshop, seminars and conference at PHC and sub centres regarding prevention of hypertension.

Nursing education

- Students can conduct various health education programme in community regarding prevention of hypertension.
- Teachers can motivate the students to do mini project among various age groups on hypertension.

Nursing administration

- Nurse administrators have more responsibility as supervisors on creating awareness among various age groups regarding hypertension by facilitating free distribution of booklets, handouts, and charts regularly to various age groups in urban and rural areas.
- The nurse administrator can organize in service education for the VHN, ANM regarding hypertension and early detection, control and preventive measures and prevention of complications.
- The nurse administrator can organize a screening programme to screen the cases for hypertension and refer for treatment.

Nursing research

- The findings may be utilized by the emerging researchers for their reference purpose.

RECOMMENDATIONS

- A correlation study can be conducted among adults with hypertension with various lifestyle modifications for control of hypertension.
- A comparative study can be done in urban and rural areas to assess the difference in their knowledge level and blood pressure.
- Similar study can be conducted with larger samples.

LIMITATIONS

- ❖ The study was time consuming to make the adults to understand as there is an individual difference in their understanding level.

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APPENDIX- A

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

அனுப்புநர்
திரு.சா.துரை.எம்.ஏ.,
ஆணையர்
தாராபுரம் நகராட்சி

பெறுநர்
முதல்வர்,
பிடிப் நர்சிங் கல்லூரி,
சி.எஸ்.ஐ.மிஷன் காம்பவுண்டு,
தாராபுரம்

ந.க.எண் 3352 /2009/எச்1 நாள் 11-5-2011

அய்யா,

பொருள்: தாராபுரம் நகராட்சி - நகராட்சி பகுதிகளில் கல்லூரி மாணவிகள் கள ஆய்வு கட்டுரை (Project Report) தயார் செய்ய அனுமதித்தல் - தொடர்பாக.

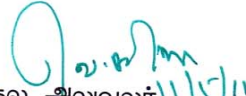
பார்வை: முதல்வர் பிடிப் நர்சிங் கல்லூரி அவர்களின் கடிதம் நாள்.3.5.11

தாராபுரம் நகராட்சி எல்லை பகுதிகளில் பார்வையில் கண்டுள்ள கடிதத்தில் அனுமதி கோரியபடி MSc (N) பயிலும் கீழ்க்கண்ட மாணவிகள் கீழ்க்கண்ட தலைப்புகளில் கள ஆய்வுக்கட்டுரை (Project Report) செய்ய இதன்மூலம் அனுமதி வழங்கப்படுகிறது.

1.	செல்வி.என்.மகேஸ்வரி	குடல் புழு தாக்கம்
2.	செல்வி.ஜே.ரீட்டா ரோஸ்லீன்	இளம் குழந்தைகளின் உடல் நலத்திற்கும் அவர்களின் உணவு பழக்க வழக்கத்திற்கும் இடையே உள்ள தொடர்பு.
3✓	திருமதி.பா.லிட்டில் பிளவர்	உயர் இரத்த அழுத்தம் உள்ளவர்களின் அறிவுத்திறன் மற்றும் பழக்கவழக்கத்திற்கும் இடையே உள்ள தொடர்பு
4	திருமதி.டி.நான்சி ரீட்டாடேவிலஸ்	வயது முதிர்ந்தோர் தனிமைப்படுத்துவதால் ஏற்படும் மன உளைச்சல்

(ஓம்.)சா.துரை
ஆணையர்

.... உண்மை நகல் உத்திரவுப்படி


நகர்நல அலுவலர் 11/5/11
தாராபுரம் நகராட்சி
11-5-11

APPENDIX-B
LETTER SEEKING EXPERT'S OPINION FOR
VALIDITY OF TOOLS

From

Mrs. P.Little Flower,
M.Sc. (Nursing) II year,
Bishop's College of Nursing,
Dharapuram.

To

Respected Madam/Sir,

SUB: Requisition for content validity of tool

I am M.Sc. (Nursing) second year student of Bishop's College of Nursing, Dharapuram, under Dr. M.G.R Medical University, Chennai. As a partial fulfilment of my M.Sc. (N) Degree Programme, I am conducting a research on "**A study to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme**". One of the initial steps of the research study is to develop a tool. I am sending the above stated for content validity and for your expert and valuable opinion.

I will be very thankful to return it to the undersigned.

Yours sincerely,
(P. Little Flower)

Encl;

Certificate of content validity

1. Statement of problem, objectives, operational definition, hypotheses
2. Description of the tool and tool for data collection
3. Self addressed envelope

APPENDIX - C
COMMUNITY HEALTH NURSING
LIST OF EXPERTS OF VALIDATION

- 1) **Prof. Mrs. Sophia Christopher, M.Sc (N).**
HOD,
Department of Community Health Nursing,
K.G. College of Nursing,
Coimbatore.
- 2) **Mrs.Jaeny Kemp, M.Sc(N).,**
Principal,
Department of Community Health Nursing,
GKNM Institute of nursing
Coimbatore.
- 3) **Mrs. Amudha, M.Sc(N).,**
Associate Professor,
HOD of Community Health Nursing,
Dhanvanthri College Of Nursing,
Namakkal.
- 4) **Mr. Kandaswamy, M.Sc(N).,**
HOD,
Department of Community Health Nursing,
Sri Gokulam College of Nursing,
Salem.
- 5) **Prof.Dr.S.L. Ravishanker,**
Department of Community Medicine
PSG Institute of Medical sciences & Research
Coimbatore

APPENDIX - D
CERTIFICATE FOR VALIDITY

This is to certify that the project tool on **“A study to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme,”** has been validated by me and found appropriate with mentioned suggestions.

Signature :



Name :

Mrs. SORIA CHRISTOPHER M.Sc (N) Ph.D

Designation :

PROFESSOR

College :

K. G. CON.

CERTIFICATE FOR VALIDITY

This is to certify that the project tool on **“A study to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme,”** has been validated by me and found appropriate with mentioned suggestions.

Signature :



Name :

JAENY KEMP
PRINCIPAL
INSTITUTE OF NURSING
G.K.N.M. HOSPITAL
COIMBATORE- 641 037.

Designation :

College :

CERTIFICATE FOR VALIDITY

This is to certify that the project tool on “A study to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme,” has been validated by me and found appropriate with mentioned suggestions.

Signature : 

Name : Mrs. M. Amudha, M.Sc. N,

Designation: Associate Professor,
VMAON, Salem.

College : VMAON, Salem.

CERTIFICATE FOR VALIDITY

This is to certify that the project tool on “A study to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme,” has been validated by me and found appropriate with mentioned suggestions.

Signature : 

Name : Kandasamy M.

Designation: Professor & HOD
Dept. of Community Health Nursing

College : Jubilee Mission College of Nursing
Thiruvannamalai.

CERTIFICATE FOR VALIDITY

This is to certify that the project tool on “**A study to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme,**” has been validated by me and found appropriate with mentioned suggestions.

Signature : S. L. Rani Shankar

Name : Dr. S. L. RANI SHANKAR

Designation : PROFESSOR
DEPARTMENT OF COMMUNITY
MEDICINE

College : PSG INSTITUTE OF MEDICAL
SCIENCES & RESEARCH
COIMBATORE

APPENDIX-E
CERTIFICATE OF ENGLISH EDITING
TO WHOM SO EVER IT MAY CONCERN

This is certify that the dissertation work, **“A study to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme,”** done by Mrs. P. Little Flower, II Year M.Sc (Nursing) student of Bishop’s College of Nursing , Dharapuram is edited for English Language appropriateness by **Mr.P.Sampath, M.A., M.Ed.,**

Date :

Address :



Signature

(P.SAMPATH)

P. SAMPATH, M.A., M.Phil., M.Ed.,
Lecturer in English,
Maharani Teacher Training Institute,
Dharapuram.

**CERTIFICATE OF TAMIL EDITING
TO WHOM SO EVER IT MAY CONCERN**

This is certify that the dissertation work, "A study to assess the knowledge and practice regarding hypertension and its association with the level of blood pressure among adults in Nanchiyampalayam at Dharapuram with a view of conducting an awareness programme," done by Mrs. P. Little Flower, II Year M.Sc (Nursing) student of Bishop's College of Nursing, Dharapuram is edited for Tamil Language appropriateness by Mrs. D. Siranjivi Mary, M.A., M.Ed.,

Date :

Address :

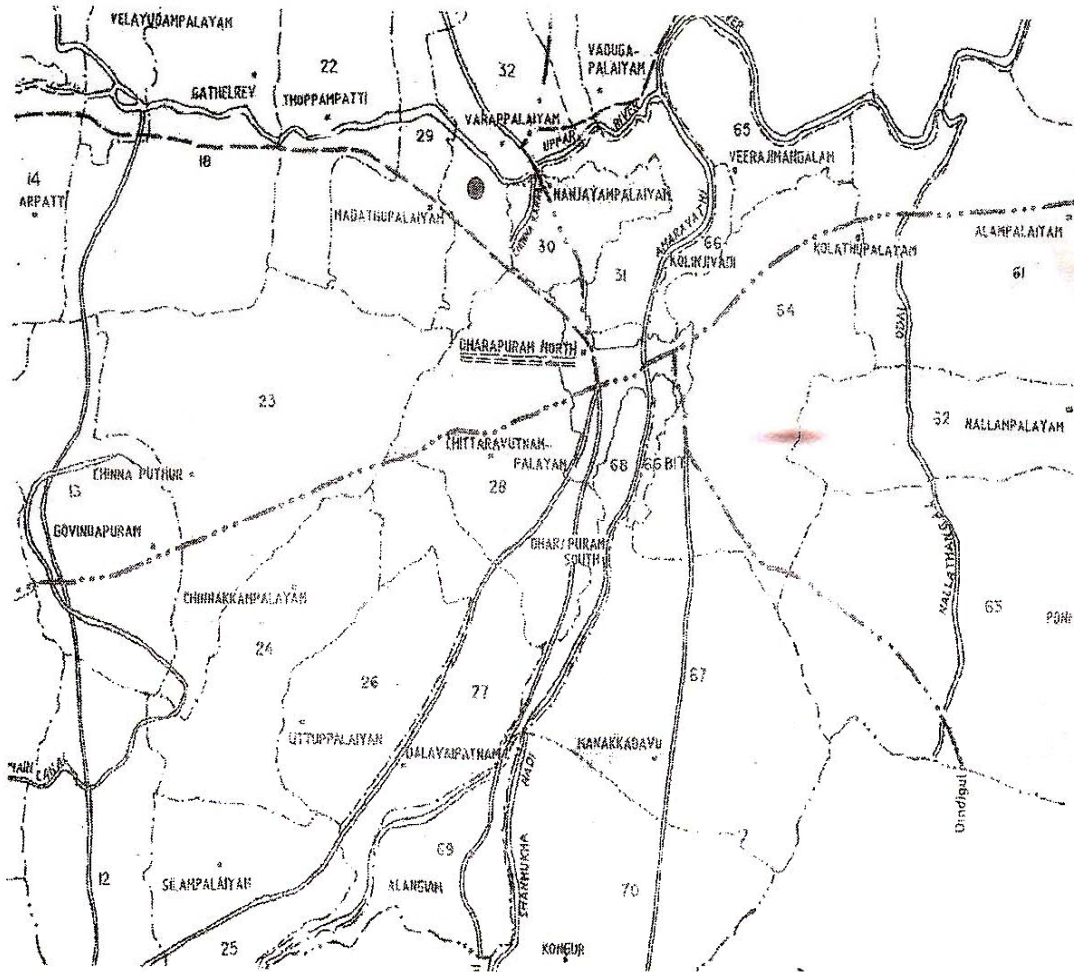


Signature

த. சிரஞ்சீவிமேரி, எம்.ஏ., எம்.எட்.,
முதுகலை தமிழாசிரியை,
சி.எஸ்.ஐ. பெண்கள் பேலாநிலைப்பள்ளி,
தாராபுரம் - 638 656.

APPENDIX-F

NANCHIYAMPALAYAM AREA MAP



● Setting of the study

APPENDIX - G
PART - I
DEMOGRAPHIC VARIABLES OF ADULTS

1. Age
 - a) 40 - 45 yrs
 - b) 46 - 50 yrs
 - c) 51 - 55 yrs
 - d) 56 - 60 yrs

2. Sex
 - a) Male
 - b) Female

3. Marital status
 - a) Married
 - b) Unmarried
 - c) Widow
 - d) Divorce

4. Education
 - a) No formal education
 - b) Primary education
 - c) Secondary education
 - d) Collegiate education

5. Religion
 - a) Christian
 - b) Hindu
 - c) Muslim

6. Occupation

- a) House wife
- b) Self employment
- c) Government employee
- d) Private worker

7. Monthly income

- a) ` 2000 - 3000/-
- b) ` 3001 - 4000/-
- c) ` 4001 - 5000/-
- d) Above ` 5000/-

8. Type of family

- a) Nuclear
- b) Joint

9. Family history of hypertension

- a) Yes
- b) No

10. Duration of treatment

- a) 1 month - 6 months
- b) 6 months - 1 year
- c) 1 year - 5 years
- d) Above 5 years

11. Source of health information

- a) Books/ magazine
- b) Friends/ relatives
- c) Radio/ TV
- d) Health professional

PART - II
STRUCTURED INTERVIEW SCHEDULE
KNOWLEDGE QUESTIONNAIRE REGARDING HYPERTENSION

1. What is the meaning of blood pressure?
 - a) Pressure of the blood within the brain
 - b) Pressure of the blood within the arteries
 - c) Pressure of the blood within the eye
 - d) Pressure of the blood within the heart

2. What is the normal blood pressure?
 - a) 180/90mmHg
 - b) 140/70 mmHg
 - c) 120/60 mmHg
 - d) 120/80 mmHg

3. What is the normal heart rate?
 - a) 82 beats/minute
 - b) 72 beats/minute
 - c) 62 beats/minute
 - d) 92 beats/minute

4. What is hypertension?
 - a) Blood pressure above 120/80 mmHg
 - b) Blood pressure above 120/90 mmHg
 - c) Blood pressure above 140/90 mmHg
 - d) Blood pressure above 110/80 mmHg

5. What is the reason for high blood pressure?
 - a) Heart is working less than normal
 - b) Heart is working harder than normal
 - c) Heart is working normal
 - d) Heart has not received blood supply

6. Which age group the onset of increased Blood pressure occurs?
 - a) 30 - 50 yrs
 - b) 20 - 30 yrs
 - c) 50 - 60 yrs
 - d) 18 - 35 yrs

7. Which is the common risk factor for high blood pressure?
 - a) Obesity & family history
 - b) Less fat & less protein diet
 - c) Less intake of vitamins and minerals
 - d) less body weight & less activity

8. Which mental status will increase the level of Blood pressure?
 - a) Happy
 - b) worry
 - c) Excitement
 - d) Anger

9. Which is the most common cause for hypertension in males?
 - a) Improper food intake
 - b) Eating spicy foods
 - c) Smoking
 - d) Eating more sweets

10. Which is the other cause of hypertension?
- a) Consumption of more alcohol
 - b) Consumption of soft drinks
 - c) Consumption of tea
 - d) Consumption of tender coconut
11. Which drug induces hypertension in women?
- a) Antipyretic tablets
 - b) Analgesic tablets
 - c) Deworming tablets
 - d) Oral contraceptives
12. In which dietary habit, the incidence of hypertension is less common?
- a) Consumes less sugar
 - b) Consumes less salt
 - c) Consumes meat
 - d) Consumes more oil
13. What are the main signs & symptoms seen in hypertension?
- a) Abdominal pain & vomiting
 - b) Headache & giddiness
 - c) Pain & burning micturation
 - d) Back pain & leg pain
14. What is the other symptom of Hypertension?
- a) Palpitation
 - b) Loss of appetite
 - c) Increased Thirst
 - d) Increased salivation

15. How the Hypertension is diagnosed initially?
- a) Urine test
 - b) Blood test
 - c) Two or more elevated blood pressure readings
 - d) First blood pressure reading.
16. What is the main treatment for Hypertension?
- a) Surgical treatment
 - b) Taking rest
 - c) Drug therapy
 - d) Weight control measures.
17. What is the side effect of Antihypertensive Drugs?
- a) Feeling sleepy
 - b) Dizziness when getting up
 - c) Increased thirst
 - d) Nausea & vomiting
18. How often the hypertension client should have follow-up?
- a) Once a week
 - b) Once in 1-2 Months
 - c) Once in 2-3 Months
 - d) Once in 3-6 Months
19. What is the duration of treatment for hypertension?
- a) 6 Months
 - b) 1 year
 - c) 5 years
 - d) Life long

20. When a person with hypertension should consult the doctor immediately?

- a) Morning giddiness
- b) Severe headache
- c) Severe body pain
- d) Sleeplessness

21. Which one of the following is a relaxation technique?

- a) Staying at home only
- b) Not interacting with others
- c) Only taking rest
- d) Meditation

22. What is the most common complication of Hypertension?

- a) Digestive problem
- b) Back ache.
- c) Heart disease
- d) Edema in leg

23. What is the long term complication of hypertension?

- a) Giddiness
- b) Stroke
- c) Gastrointestinal problems
- d) Generalized body pain.

24. What is the earliest manifestation of renal dysfunction in Hypertensive patients?

- a) Unable to control the urination
- b) Edema in leg
- c) Absence of urine
- d) Passing urine more times during night

25. What are the signs and symptoms of eye problems in hypertension?

- a) Itching in the eye
- b) Blurring of vision
- c) Watery eyes
- d) Loss of vision

26. What are the essential modifications to be taken by all hypertensive clients?

- a) Change the environment
- b) Taking vitamin supplements
- c) Changing the type of work.
- d) Lifestyle modification

27. Which one of the following is a measure of lifestyle modification?

- a) Over sleeping & taking rest
- b) Fat rich & fibre rich diet
- c) Eating more food & drinking more fluids
- d) Avoidance of smoking & alcohol.

28. Which type of diet is preferable to prevent hypertension?

- a) High fat diet with less salt
- b) High protein diet with less salt
- c) Carbohydrate rich diet with less salt
- d) Low cholesterol and less salt.

29. What is the recommended daily intake of salt for hypertensive clients?

- a) Less than 1500mg (1/2 teaspoon)
- b) Less than 2300mg (1 teaspoon)
- c) Less than 3450 mg (1/2 tablespoon)
- d) Less than 6900mg (1 tablespoon)

30. Which food is rich in cholesterol?

- a) Fruits and vegetables
- b) Meat and oil
- c) Pulses and cereals
- d) Tea and cool drinks

31. Which food is low in sodium?

- a) Pickle
- b) Dried fish
- c) Papad
- d) Green leafy vegetables

32. Which food is rich in fibre?

- a) Rice
- b) Wheat
- c) Oats
- d) Maida

33. Which one of the following reduces the risk of Hypertension?

- a) Avoid heavy work
- b) Reduce the weight
- c) Drink more fluids
- d) Vitamin supplementation

34. Which measure is useful in reducing the weight?

- a) Day time sleep.
- b) Frequent meals.
- c) Regular exercise.
- d) Drug therapy.

35. What is the home remedy for hypertension?

- a) Drinking milk
- b) Taking garlic daily
- c) Adding ginger in diet
- d) Adding turmeric in diet

PART - III
PRACTICE QUESTIONNAIRES

Structured interview schedule knowledge on practice regarding hypertension.

Please listen the following questions carefully and answer for each question with yes or no.

S. No	Content	Yes	No
1.+	Do you check your Blood pressure once in 3 months?		
2.+	Do you go for walking daily?		
3.*	Do you take tea or coffee often?		
4.+	Do you take green leafy vegetables?		
5.*	Do you add more salt in your diet?		
6.*	Do you take oily foods daily?		
7.+	Do you take fruit daily?		
8.*	Do you add pickle in your diet daily?		
9.+	Do you check your weight frequently?		
10.*	Do you take self medication for your health problems?		
11.+	Do you listen music often?		
12.+	Do you practice yoga daily?		
13.*	Do you have the habit of tobacco chewing?		
14.+	Do you take your medicine properly?		
15.+	Do you go for regular follow up?		

+ Positive * Negative

gFjp: 1

Raf;Fwpg;NgLfs;:

1. taJ (tUlj;jpy;)
m) 40-45

M) 46-50
,) 51-55

<) 56-60
2. ghypdk;
m) Mz;

M) ngz;
3. jpUkzj; jFjp
m) jpUkzkhdtH
M) jpUkzkhfhjtH
,) tpjit
<) tpthfuj;jhdtH
4. fy;tpj;jFjp
m) gbf;fhjtH
M) Muk;gf;fy;tp
,) ,ilepiyf;fy;tp
<) gl;lg;gbg;G
5. kjk;
m) ,e;J
M) fpwpj;Jtk;
,) K];yPk;
6. njhopy;
m) FLk;g epHthfp
M) Ra njhopy;
,) muR Ntiy

<) jdpahH Ntiy

7. khj tUkhdk;

m) &. 2000-3000

M) &. 3001-4000

,) &. 4001-5000

<) &. 5000 f;F Nky;

8. FLk;g tif

m) jdpf; FLk;gk;

M) \$l;Lf;FLk;gk;

9. caH ,uj;j mOj;jk; FLk;gj;jpy; NtW ahWf;Fk; cs;sjh?

m) Mk;

M) ,y;iy

10. ,uj;j mOj;jj;jpw;fhd rpfpr;ir ngw;w fhyk;

m) 1 khjk; Kjy; 6 khjk; tiu

M) 6 khjk; Kjy; 1 tUlK; tiu

,) 1 tUlK; Kjy; 5 tUlK; tiu

<) 5 tUlJ;jpw;F Nky;

11. cly;eyj;jfty;fis ngWk; Kiw

m) Gj;jfk;

M) ez;gHfs; kw;Wk; cwtpdHfs;

,) thndhyp kw;Wk; njhiyf;fhl;rp

<) Rfhjhug;gzpahsHfs;

,uj;j mOj;jj;ijg; gw;wpa mwpTj;jpwid mwpAk; Nfs;tpfs;:

1. ,uj;j mOj;jk; vd;why; vd;d?

m) %isf;Fs; ,Uf;Fk; ,uj;jj;jpd; mOj;jk;

M) ,uj;j Foha;f;Fs; ,Uf;Fk; ,uj;jj;jpd; mOj;jk;

,) fz;fSf;Fs; ,Uf;Fk; ,uj;jj;jpd; mOj;jk;

<) ,Ujaj;jpy; ,Uf;Fk; ,uj;jj;jpd; mOj;jk;

2. ,uj;j mOj;jj;jpd; rhpahd msT vd;d?

m) 180/ 90 kp.kP /ghjurk;

- M) 140/ 70 kp.kP. /ghjurk;
 ,) 120/ 60 kp.kP. /ghjurk;
 <) 120/ 80 kp.kP. /ghjurk;
3. ,Ujaj;Jbg;gpd; rhpahd msT vd;d?
 m) 82 Jbg;G/epkplk;
 M) 72 Jbg;G/epkplk;
 ,) 62 Jbg;G/epkplk;
 <) 92 Jbg;G/epkplk;
4. caH ,uj;j mOj;jk; vd;why; vd;d?
 m) ,uj;j mOj;jk; 120/80 kp.kP /ghjurk;
 M) ,uj;j mOj;jk; 120/90 kp.kP /ghjurk;
 ,) ,uj;j mOj;jk; 140/90 kp.kP /ghjurk;
 <) ,uj;j mOj;jk; 110/80 kp.kP /ghjurk;
5. caH ,uj;j mOj;jj;jpw;fhd fhuzk; vd;d?
 m) ,Ujak; rhpahd msit tpl Fiwthf nray;gLjy;
 M) ,Ujak; rhpahd msit tpl fbdkhf nray;gLjy;
 ,) ,Ujak; rhpahd mstpy; nray;gLjy;
 <) ,Ujaj;jpw;F Nghjpa ,uj;j Xl;lk; nry;yhky; ,Uj;jy;
6. caH ,uj;j mOj;jk; ve;j tajpy; mjpfkhf Vw;gLk;?
 m) 30-50 tajpy;
 M) 20-30 tajpy;
 ,) 50-60 tajpy;
 <) 18-35 tajpy;
7. caH ,uj;j mOj;jj;jpw;fhd nghJthd fhuzk; vd;d?
 m) mjpf cly; gUkd; kw;Wk; guk;giu
 M) Fiwthd nfhOg;G kw;Wk; Fiwthd Gujk; epiwe;j czT
 ,) itl;lkpd;fs; kw;Wk; jhJ cg;Gf;fs; Fiwthf vLj;jy;
 <) Fiwthd cly; vil kw;Wk; Fiwthd Ntiy
8. ,uj;j mOj;jk; ve;j tpjkhd kdepiyapy; mjpfkhFk;?
 m) kfpo;r;rp
 M) ftiy

- ,) Mr;rh;a epiy
<) Nfhgk;
9. caH ,uj;j mOj;jk; Mz;fSf;F ,Ug;gjw;F nghJthd fhuzk;?
m) rPuhf czT vLj;Jf;nfhs;shik
M) fhukhd czT rhg;gpLjy;
,) Gif gpbj;jy;
<) mjpfkhd ,dpg;G epiwe;j czT rhg;gpLjy;
10. caH ,uj;j mOj;jj;jpw;fhd NtW fhuzk; vd;d?
m) mjpfkhf kJ mUe;Jjy;
M) FspHghdq;fs; mUe;Jjy;
,) NjdPH mUe;Jjy;
<) ,sePH mUe;Jjy;
11. ngz;fSf;F caH ,uj;j mOj;jj;ij cUthf;Fk; khj;jpiuf; vJ?
m) fha;r;ry; khj;jpiuf;f;
M) typ khj;jpiuf;f;
,) tapw;Wg;G+r;rp khj;jpiuf;f;
<) fUj;jil khj;jpiuf;f;
12. ve;j tpjkhd czTg;gof;fj;jpy; caH ,uj;j mOj;jk; Fiwthf ,Uf;Fk;?
m) Fiwthf ,dpg;G rhg;gpLjy;
M) Fiwthf cg;G rhg;gpLjy;
,) ,iwr;rp rhg;gpLjy;
<) mjpfkhf vz;nza; rhg;gpLjy;
13. caH ,uj;j mOj;jj;jpy; fhzg;gLk; Kf;fpa mwpFwpfs; ahit?
m) tapw;W typ kw;Wk; the;jp
M) jiy typ kw;Wk; kaf;fk;
,) rpWePH fopf;Fk;NghJ typ kw;Wk; vhpr;ry;
<) KJF typ kw;Wk; fhy; typ
14. caH ,uj;j mOj;jj;jpw;fhd NtW mwpFwp vd;d?
m) glglg;G
M) grpapd;ik
,) mjpfkhd jhfk;

- <) mjpgkfhf vr; rpy; Ruj;jy;
15. Kjypy; caH ,uj;j mOj;jk; vg;gb fz;Lgpbf;fg;gLfpwJ?
 m) rpWePH ghpNrhjid
 M) ,uj;jg; ghpNrhjid
 ,) ,uz;L my;yJ mjw;F Nkw;gl;l caHthd ,uj;j mOj;j msTfs;
 <) Kjy; ,uj;j mOj;j msT
16. caH ,uj;j mOj;jj;jpw;fhd Kf;fpa rpfpr;ir Kiw vJ?
 m) mWit rpfpr;ir
 M)Xa;T vLj;jy;
 ,) kUe;J rpfpr;ir
 <) vilia Fiwf;Fk; Kiwfs;
17. caH ,uj;j mOj;jj;jpw;F nfhLf;Fk; khj;jpiufshy; Vw;gLk;
 gpd;tpisT vd;d?
 m) cwf;fk; tUtJ Nghd;w czHT
 M) vOe;jpUf;Fk;NghJ kaf;fk; tUjy;
 ,) mjpgkhd jhfk;
 <) the;jp czHT kw;Wk; the;jp vLj;jy;
18. vj;jid ehl;fSf;F xU Kiw caH ,uj;j mOj;jk; cs;stHfs; kUj;Jtiu mZf
 Ntz;Lk;?
 m) thuj;jpw;F xU Kiw
 M) 1 Kjy; 2 khjj;jpw;F xU Kiw
 ,) 2 Kjy; 3 khjj;jpw;F xU Kiw
 <) 3 Kjy; 6 khjj;jpw;F xU Kiw
19. caH ,uj;j mOj;jj;jpw;fhd rpfpr;ir fhyk; vd;d?
 m) 6 khjq;fs;
 M) 1 tUlK;
 ,) 5 tUlq;fs;
 <) tho;ehs; KOtJk;
20. caH ,uj;j mOj;jk; cs;stHfs; vg;ngHOJ kUj;Jtiu mZf Ntz;Lk;?
 m) fhiyapy; kaf;fk;
 M) jhq;f Kbajh jiytyp

- ,) jhq;f Kbahj clk;Gtyp
<) J}f;fkpd;ik
21. gpd;tUtdtw;wpy; kd xOq;F mikjpepiy rpfpr;ir Kiw vJ?
m) tPl;by; ,Uj;jy;
M) kw;wtHfSld; gofhik
,) Xa;T kl;Lk; vLj;jy;
<); jpahdk;
22. caH ,uj;j mOj;jj;jpdhy; Vw;gLk; nghJthd gpd;tpisT vd;d?
m) [Puzf; NfhshW
M) KJF typ
,) ,Ujaf;NfhshW
<) fhy; tPf;fk;
23. caH ,uj;j mOj;jk; Fiwahky; ePba ehl;fs; ,Ug;gjhy; Vw;gLk;
gpd;tpisT vd;d?
m) kaf;fk;
M) gf;fthjk;
,) czTg;ghijapy; Vw;gLk; gpur;rpids;
<) cly; typ
24. caH ,uj;j mOj;jj;jpdhy; rpWePufj;jpy; Vw;gLk; Kjy;epiy
mwpFwp vd;d?
m) rpWePiu mlf;f Kbahik
M) fhy; tPf;fk;
,) rpWePhpd; msT Fiwjy;
<) ,uT Neuq;fs; mjpg msT rpWePH fopj;jy;
25. caH ,uj;j mOj;jj;jpdhy; fz;fs; Vw;gLk; mwpFwp vd;d?
m) fz; mhpj;jy;
M) fz; ghHit kq;Fjy;
,) fz;zpy; ePH tby;
<) ghHit ,oj;jy;
26. caH ,uj;j mOj;j Nehahspfs; Nkw;nfhs;s Ntz;ba Kf;fpa
khw;wq;fs; vd;d?

- m) Rw;Wg;Gw #o;epiyia khw;Wjy;
M) rj;J khj;jpiufs; vLj;jy;
.) Ntiyia khw;Wjy;
<) tho;f;if Kiwia khw;Wjy;
27. gpd;tUtdtw;wpy; tho;f;if Kiwia khw;Wk; nray; Kiw vJ?
m) mjpfkhf J}q;Fjy; kw;Wk; Xa;T vLj;jy;
M) nfhOg;G kw;Wk; ehHr;rj;J epiwe;j czT vLj;jy;
.) mjpfk; rhg;gpLjy; kw;Wk; jz;zPH mUe;Jjy;
<) Gifgpbj;jy; kw;Wk; kJ mUe;Jjiy jtphj;jy;
28. caH ,uj;j mOj;jj;ijj; jtpHf;f Kj d;ikahd czT tif vJ?
m) mjpf nfhOg;G kw;Wk; Fiwthd cg;G cs;s czT
M) mjpf Gujk; kw;Wk; Fiwthd cg;G cs;s czT
.) mjpf khTr;rj;J kw;Wk; Fiwthd cg;G cs;s czT
<) Fiwthd nfhOg;G kw;Wk; Fiwthd cg;G cs;s czT
29. caH ,uj;j mOj;j Nehahspfs; jpdKk; vLj;Jf;nfhs;s Ntz;ba
ruhrhp cg;gpd; msT vd;d?
m) 1500 kp.fp- f;F Fiwthf (½ Njf;fuz;b)
M) 2300 kp.fp- f;F Fiwthf (1 Njf;fuz;b)
.) 3450 kp.fp- f;F Fiwthf (½ fuz;b)
<) 6900 kp.fp- f;F Fiwthf (1;fuz;b)
30. nfhOg;G mjpfKs;s czTfs; vJ?
m) goq;fs; kw;Wk; fha;fwpfs;
M) ,iwr;rp kw;Wk; vz;nza; tiffs;
.) gapWfs; kw;Wk; jhdpaq;fs;
<) NjdPH kw;Wk; FspHghdq;fs;
31. cg;G Fiwthf cs;s czT vJ?
m) CWfha;
M) cyHe;j kPd;
.) mg;gsk;
<) gr;irf;fha;fwpfs;
32. ehHr;rj;J mjpfk; cs;s czT vJ?

m) mhprp

M) NfhJik

,) Xl;];

<) ikjh

33. gpd;tUtdtw;wpy; caGH ,uj;j mOj;jf; fhuzpiaf; Fiwg;gJ vJ?

m) fbd ciog;igj; jtpHj;jy;

M) cly; viliaf; Fiwj;jy;

,) mjpf msT jz;zPH Fbj;jy;

<) itl;lkpd;fs; khj;jpiufs; vLj;jy;

34. cly; viliaf; Fiwf;f gad;gLtJ vJ?

m) gfy; NeuJ}f;fk;

M) mbf;fb czT cl;nfhs;Sjy;

,) rPuhd clw;gapw;rp

<) khj;jpiu cl;nfhs;Sjy;

35. caH ,uj;j mOj;jj;jpw;fhd tPl;L rpfpr;ir Kiw vd;d?

m) ghy; mUe;Jjy;

M) jpdKk; G+z;L rhg;gpLjy;

,) jpdKk; ,Q;rpia cztpy; NrHj;jy;

<) kQ;ris cztpy; NrHj;jy;

gFjp: 3: caH ,uj;j mOj;jj;ijg; gw;wpa gof;ftof;fj;ij mwpAk; Nfs;tpfs;:

t.		Mk;	,y;iy
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vz;	Nfs;tpfs;		
1. +	ePq;fs; khjj;jpw;F xU Kiw ,uj;j mOj;jj;jpd; msit ghpNrhjid nra;fpwPHfsh?		
2. +	ePq;fs; jpdKk; eilgapw;rp nra;fpwPHfsh?		
3. *	ePq;fs; mbf;fb NjdPH kw;Wk; fhgp mUe;JfpwPHfsh?		
4. +	ePq;fs; gr;irf; fha;fwpfs; vLj;Jf; nfhs;fpwPHfsh?		
5. *	ePq;fs; cztpy; mjpf cg;G NrHj;Jf; nfhs;fpwPHfsh?		
6. *	ePq;fs; jpdKk; vz;nza; epiwe;j czT rhg;gpLfpwPHfsh?		
7. +	ePq;fs; jpdKk; goq;fs; rhg;gpLfpwPHfsh?		
8. *	ePq;fs; jpdKk; CWfha; NrHj;Jf; nfhs;fpwPHfsh?		
9. +	cq;fs; cly; vilia mbf;fb ghpNrhjpf;fpwP Hfsh?		
10. *	cq;fs; cly; eyg; gpur;rpidf;F ePq;fNs kUe;J vLj;Jf; nfhs;tPHfsh?		
11. +	ePq;fs; ,iria mbf;fb Nfl;gPHfsh?		
12. +	ePq;fs; jpdKk; Nahfh nra;fpwPHfsh?		
13. *	cq;fSf;F Gifapiy nky;Yk; gof;fk; cs;sjh?		
14. +	ePq;fs; kUe;Jfis xOq;fhf vLj;Jf;nfhs;fpwPHfsh?		
15. +	ePq;fs; Fwpg;gpl;lfhy ,ilntspapy; kUj;Jtiu mZFfpwPHfsh?		

+ NeHkiw
* vjph; kiw

ANSWER KEY
PART-A
SCORES RELATED TO KNOWLEDGE REGARDING
HYPERTENSION AMONG ADULTS

S.NO	A	B	C	D
1	0	1	0	0
2	0	0	0	1
3	0	1	0	0
4	0	0	1	0
5	0	1	0	0
6	1	0	0	0
7	1	0	0	0
8	0	0	0	1
9	0	0	1	0
10	1	0	0	0
11	0	0	0	1
12	0	1	0	0
13	0	1	0	0
14	1	0	0	0
15	0	0	1	0
16	0	0	1	0
17	0	1	0	0
18	0	0	0	1
19	0	0	0	1
20	0	1	0	0
21	0	0	0	1
22	0	0	1	0
23	0	1	0	0
24	0	0	0	1
25	0	1	0	0
26	0	0	0	1
27	0	0	0	1

28	0	0	0	1
29	1	0	0	0
30	0	1	0	0
31	0	0	0	1
32	0	0	1	0
33	0	1	0	0
34	0	0	1	0
35	0	1	0	0

PART-B
SCORES RELATED TO KNOWLEDGE ON PRACTICE
REGARDING HYPERTENSION AMONG ADULTS

S.NO	YES	NO
1	1	0
2	1	0
3	0	1
4	1	0
5	0	1
6	0	1
7	1	0
8	0	1
9	1	0
10	0	1
11	1	0
12	1	0
13	0	1
14	1	0
15	1	0

APPENDIX - H
AWARENESS PROGRAMME ON HYPERTENSION

Topic	:	Hypertension
Number of audience	:	100
Teaching method	:	Lecture cum discussion
Audio visual aids	:	Chart, flex, pamphlets, models, food display.
Date	:	16.08.11
Time	:	9.00 a.m-5.00 p.m
Place	:	Community Health Centre, Nanchiyampalayam.
Name of the researcher	:	P. Little flower



CENTRAL OBJECTIVE:


The audience will require knowledge regarding hypertension, develop positive attitude and skills in managing hypertension.




SPECIFIC OBJECTIVES:

At the end of the awareness programme audience will be able to,

- state the meaning of blood pressure
- define high blood pressure
- state the incidence of hypertension
- list down the major risk factors
- draw the classification of hypertension
- explain the pathophysiology of hypertension
- list down the clinical manifestations
- enlist the assessment and diagnostic evaluation
- enumerate the medical management
- describe about lifestyle modification
- list down the complications of hypertension

Time	Specific objectives audience will be able to	Content	Audio visual aids	Evaluation
	<p>introduce the topic</p> <p>state the meaning of blood pressure</p>	<p>Introduction:</p> <p>Hypertension is a sustained elevation of systemic blood pressure to a level that places the patient at increased risk for target organ damage. Hypertension has been called the silent disease, because there may be no initial symptoms. Patients may not be aware of their hypertension until it is identified on a routine assessment.</p> <p>Meaning of blood pressure:</p> <p>Blood pressure is the pressure of blood in your arteries (blood vessels). Blood pressure is measured in millimeters of mercury (mmHg). Your blood pressure is recorded as two figures. For example, 120/80 mmHg. This is said as '120 over 80'.</p> <ul style="list-style-type: none"> The top (first) number is the systolic pressure. This is the pressure in the arteries when the heart contracts. 	 	<p>What is meant by blood pressure?</p>

	<p>define high blood pressure</p>	<ul style="list-style-type: none"> • The bottom (second) number is the diastolic pressure. This is the pressure in the arteries when the heart rests between each heartbeat. <p>Definition of high blood pressure?</p> <p>High blood pressure is a blood pressure that is 140/90 mmHg or above each time it is taken. That is, it is 'sustained' at 140/90 mmHg or above. High blood pressure can be:</p> <ul style="list-style-type: none"> • Just a high systolic pressure, for example, 170/70 mmHg. • Just a high diastolic pressure, for example, 120/104 mmHg. • Or both, for example, 170/110 mmHg. <p>However, it is not quite as simple as this. Depending on various factors, the level at which blood pressure is considered high enough to be treated with medication can vary from person to person?</p>		<p>What is the meaning of high blood pressure?</p>
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	<p>state the incidence of hypertension</p> <p>list down the causes for hypertension</p>	<p>Incidence:</p> <p>The incidence of hypertension is higher in the south eastern in United States, particularly among African Americans.</p> <p>Causes :</p> <ul style="list-style-type: none"> ➤ Smoking ➤ Dyslipidemia ➤ Diabetes mellitus ➤ Age older 30-50 years ➤ Gender (men & post menopausal women) ➤ Family history of cardiovascular disease ➤ Family history of hypertension ➤ Stress ➤ Obesity ➤ Nutrients: high intake of sodium & fat; Low intake of calcium, potassium, and magnesium ➤ Substance abuse. 	  	<p>What is the incidence of hypertension?</p> <p>What are the causes for hypertension?</p>
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draw the classification of hypertension

Classification of blood pressure:

category	Systolic (mm hg)		Diastolic (mm hg)
Optimal	<120	And	80
Normal	<130	And	<85
High normal hypertension	130-139	Or	85-89
Stage-I	140-159	Or	90-99
Stage-II	160-179	Or	100-109
Stage-III	>180	Or	>110



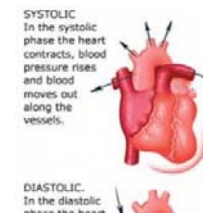
How the hypertension has classified?

explain the pathophysiology of hypertension


Pathophysiology:



Hypertension is a multi factorial condition. Because hypertension is a sign, it is most likely to have many causes. For hypertension to occur there must be a change in one or more factor affecting peripheral resistance or cardiac output.


Structural and functional changes in the heart and blood vessels contribute to increase in blood pressure that occurs with age. The



What is the pathophysiology of hypertension?

	list down the clinical manifestations	<p>changes include accumulation of atherosclerotic plaque, fragmentation of arterial elastins, increased collagen deposits, and impaired vasodilatation. The result of these changes is a disease in the elasticity of the major blood vessels. Consequently the aorta and large arteries are less able to accommodate the volume of blood pumped out by the heart (stroke volume), and the energy that would have stretched the vessels instead elevates the systolic blood pressure. Isolated systolic hypertension is more common in older adults.</p> <p>Clinical manifestations:</p> <ul style="list-style-type: none"> ➤ Retinal changes such as haemorrhages, exudates, arteriolar narrowing, cotton wool spots (small infarction) ➤ Pappiledema ➤ Left ventricular hypertrophy ➤ Pathogenic changes in the kidneys (indicated by increased blood urea nitrogen [BUN] and creatinine levels) may manifest nocturia. ➤ Cerebro vascular involvement may lead to a stroke or 		What are the clinical manifestations?
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	<p>enlist the assessment & diagnostic evaluation</p>	<p>transient ischemic attach (TIA), a sudden fall, or temporary paralysis on one side (hemiplegia)</p> <ul style="list-style-type: none"> ➤ Morning head ache & palpitation ➤ Dizziness & angina ➤ Fatigue ➤ Nausea & vomiting ➤ Oedema ➤ In severe condition, epistaxis is there. <p>Assessment and diagnostic evaluation:</p> <ul style="list-style-type: none"> ▪ Health history ▪ Physical examination ▪ Retinal examination ▪ Laboratory studies <ul style="list-style-type: none"> * Urinalysis * Blood chemistry ▪ 12 lead electro cardiogram ▪ BUN & creatinine levels 	 	<p>What are the diagnostic measures for hypertension?</p>
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	<p>enumerate the medical management</p>	<ul style="list-style-type: none"> ▪ Rennin level ▪ Urine tests ▪ 24-hour urine protein <p>MANAGEMENT:</p> <p>MEDICAL MANAGEMENT:</p> <p>Goal:</p> <p>To prevent death and complication by achieving and maintaining the arterial blood at 140/90 mm hg or lower.</p> <p>The optimal plan is inexpensive, single, and causes the least possible disruption in the patient's life.</p> <p>Research findings demonstrate that weight loss reduces alcohol and sodium intake, and regular physical activity are effective life style adoptions to reduce blood pressure. Studies show that diets high in fruits, vegetables, and low fat dairy products can prevent the development of hypertension and can lower elevated pressure.</p>		<p>What are the treatment measures available for hypertension?</p>
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Dietary management:

Diet food group	No of serving per day
Grains & gain products	7-8
Vegetables	4-5
Fruits	4-5
Low fat free dairy foods	2-3
Meat, fish & poultry	2 or fewer
Nuts, seeds & dry beans	4-5 weekly

The DASH (dietary approaches to stop hypertension diet)

TIPS ON SWITCHING TO THE DASH EATING PLAN:

- Change gradually. Add a vegetable or fruit serving at lunch and dinner.
- Get added nutrients such as the B vitamins by choosing whole grain foods, including whole wheat bread or whole grain cereals.
- Spread out the servings. Have two servings of fruits and/or vegetables at each meal, or add fruits as snacks.
- Use fruits or low fat foods as desserts and snacks.



TO CONTROL HYPERTENSION:

Maintain a healthy weight

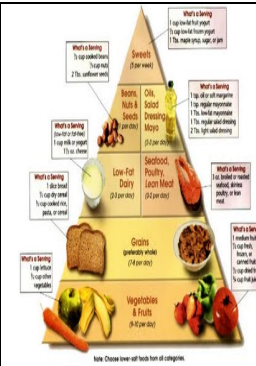
- Check with your health care provider to see if you need to lose weight.
- If you do, lose weight slowly using a healthy eating plan and engaging in physical activity.

Be physically active

- Engage in physical activity for a total of 30 minutes on most days of the week.
- Combine everyday chores with moderate-level sporting activities, such as walking, to achieve your physical activity goals.

Follow a healthy eating plan

- Set up a healthy eating plan with foods low in saturated fat, total fat, and cholesterol, and high in fruits, vegetables, and low fat dairy foods such as the DASH eating plan.
- Write down everything that you eat and drink in a food diary. Note areas that are successful or need improvement.
- If you are trying to lose weight, choose an eating plan that is



lower in calories.

Reduce sodium in your diet

- Choose foods that are low in salt and other forms of sodium.
- Use spices, garlic, and onions to add flavour to your meals without adding more Sodium.

Take prescribed drugs as directed


- If you need drugs to help lower your blood pressure, you still must follow the lifestyle changes mentioned above.
- Use notes and other reminders to help you remember to take your drugs. Ask your family to help you with reminder phone calls and messages.


LIFESTYLE MODIFICATION:


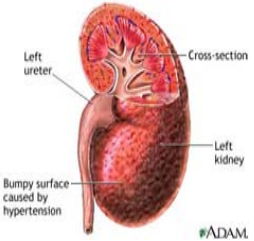
Advice on lifestyle modification in a newly diagnosed hypertensive patient should follow a proper understanding of the patient's lifestyle by the clinician.

Clinicians should introduce lifestyle modifications in a gradual and graded manner so as to improve compliance to our advice. A plan should be charted out for the initial 4 weeks after properly



	<p>describe about lifestyle modification</p>	<p>discussing the practical feasibility of the advice given. It is better to achieve a moderate success on the long run than a transient success followed by total failure.</p> <p>LIFESTYLE MODIFICATION MAY BE DIVIDED INTO:</p> <ol style="list-style-type: none"> 1. <i>Salt restriction and other dietary modifications</i> 2. <i>Exercise</i> 3. <i>Modification in habits like smoking, alcohol intake, etc</i> <p>Salt restriction and other dietary modifications:</p> <p>Salt restriction:</p> <ul style="list-style-type: none"> Avoid salt in diet. Avoid salt rich diet <p>Other dietary modifications:</p> <p><i>Diets should be included:</i></p> <p>Cereals, grains, green leafy vegetables, oats, wheat, garlic, fruits, nuts & seeds, milk, egg.</p> <p><i>Diet should be excluded:</i></p> <p>Dry fish, papad, meat, pickle, other salt rich diet.</p> <p>Exercise:</p> <p>A regular program of aerobic exercise adequate to achieve at least</p>		<p>What is the meaning of lifestyle modification?</p>
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		<p>a moderate level of physical fitness facilitates cardiovascular conditioning and can aid the risk for cardio vascular disease and all cause mortality.</p> <p>Modification in habits:</p> <p>Avoidance of smoking and limiting alcohol intake is strongly encouraged for all hypertensive patients. There is overwhelming evidence that they benefit individuals irrespective of the underlying disease process.</p> <p>Complementary therapy:</p> <p>Meditation can put your body into a state of deep rest, which can lower your blood pressure. Yoga, tai chi, and deep breathing also help. These relaxation techniques should be combined with other lifestyle changes, such as diet and exercise. Be aware that herbal therapies may conflict with other medications you take, and some herbs actually raise blood pressure.</p> <p>Pharmacological management:</p> <p>Antihypertensive medications have to take regularly.</p>		
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	<p>list down the complications of hypertension</p>	<p>COMPLICATION:</p> <ul style="list-style-type: none"> • Heart disease, [left ventricular hypertrophy, angina or previous myocardial infarction, heart failure] • Stroke [cardio vascular accident, brain attack] or TIA • Nephropathy • Peripheral arterial disease • Retinopathy <p>SUMMARY:</p> <p>Till now we have discussed about hypertension includes, meaning, blood pressure, high blood pressure, major risk factors, classification, pathophysiology, clinical manifestations, assessment and diagnostic evaluation, medical management, dietary management, to control hypertension, lifestyle modification and complications.</p>	 	<p>What are the complications of hypertension?</p>
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		<p>CONCLUSION:</p> <p>Hypertension is an important contribution to mortality and morbidity from cardiovascular diseases, when present especially in combination with other cardiovascular diseases. There appears a steady increase in prevalence over the last 50 years, more in urban than rural areas. In addition to its wide prevalence, the complication of uncontrolled hypertension such as cardiac, renal and cerebro vascular disease, and the fact that only 10%-15% of those affected are adequately treated contribute to the magnitude of the problem.</p>		
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caH ,uj;j mOj;jk; gw;wpa tpopg;GzHT Kfhk;

Kd;Diu

mrhjuzkhd mjpf ,uj;j mOj;jk; vd;gJ ,Ujar; RUf;f ,uj;j mOj;jk;
njhlHe;J mjpfkhf ,Ug;gJ MFk;. ,e;epiy cly; cWg;Gfis ghjpf;fpwJ.
mrhjuzkhd mjpf ,uj;j mOj;jk;, mikjpahd capHf;nfh;yp vd;W
miof;fg;gLfpwJ. Vnddpy; Kjypy; ve;j tpjkhd mwpFwpAk; njhptjpy;iy.
njhlHe;J cly; epiy ghpNrhjid nra;tJ tiu mjpf ,uj;j mOj;jj;ijg; gw;wp czu
Kbtjpy;iy.

,uj;j mOj;jj;jpw;fhd tpsf;fk;

,uj;j mOj;jk; vd;gJ ,uj;jf; Foha;fspd; topahf ,uj;jk; ghAk; NghJ me;jf;
Foha;fspd; Rthfspy; ,uj;jk; Vw;gLj;Jk; tpir my;yJ mOj;jk; MFk;. Kjy; msT
,Ujar; RUf;f ,uj;j mOj;jk;, ,Ujak; RUq;Ftjhy; Vw;gLk;. ,uz;lhk; msT ,Uja
tphpepiy mOj;jk;, kpff;Fiwe;j ,uj;j mOj;jk; ,J ,Ujaj;jpd; ,U Jbg;GfSf;F ,ilNa
Vw;gLtJ.

tiuaiw

caH ,uj;j mOj;jk; vd;gJ ,uj;j mOj;jk; 140/90 kp.kp.ghjurk;-f;F mjpfkhf
,Uj;jy;.

fhuzpfs;

- Gif gpbj;jy;
- rHf;fiu Neha;
- ,uj;jj;jpy; nfhOg;gpd; msT mjpfhpj;jy;
- 30-50 taJ
- nghJthf Mz;fSf;F mjpfkhf ,Uf;Fk;
- khjtplha; epd;w gpwF ngz;fSf;F mjpf tha;g;G
- FLk;gj;jpy; ahUf;fhtJ ,Uja Neha; ,Uj;jy;
- FLk;gj;jpy; ahUf;fhtJ mrhjuzkhd mjpf ,uj;j mOj;jk; ,Uj;jy;
- kd mOj;jk;
- mjpf cly; vil

- nfhOg;G kw;Wk; cg;G mjpfk; epiwe;j czT
- cztpy; Rz;zhk;Gr; rj;J, nghl;lhrpak; kw;Wk; kf;dPrpak; Fiwthf vLj;jy;
- Nghij kUe;Jfs; vLj;jy;
- fUj;jil khj;jpiufs;

mwpFwpfs;

- fz; ghHit kq;Fjy;
- fz;iz Rw;wp tPq;Fjy;
- fhiyapy; jiytyp
- maHr;rp, jiy Rw;wy;
- ,Ujaj;jpd; Jbg;G khHgpy; mjpfkhf njhpjy;
- rpwpjsT clw;gapw;rp nra;jhYk; ,Ujak; ,bg;gJ Nghd;Wk; Rthrj;jpd; ePs msT Fiwe;Jk; ,Uj;jy;.
- the;jp kw;Wk; the;jp tUtJ Nghd;w czHT
- fhy; tPf;fk;
- Kw;wpa epiyapy; *f;fpy; ,Ue;J ,uj;jk; tbjy;

ghpNrhjid Kiwfs;

- KO cly; ghpNrhjid
- fz; ghpNrhjid
- rpWePH ghpNrhjid
- ,uj;jg; ghpNrhjid
- RUs; glk;

rpfpr;ir Kiwfs;

mjpf ,uj;j mOj;jk; cs;sJ vd;W Neha; mwpFwp Nrhjidahy; fhzg;gl;ltH cly; eyk; fhf;fj; njhIHe;J jtwHJ khj;jpiufs; cl;nfhs;s Ntz;Lk;.

mjpf ,uj;j mOj;jj;jpw;fhd czTfis vLj;Jf; nfhs;Sk; Kiw

- goq;fs; kw;Wk; fha;fwpfis kjpg; kw;Wk; ,uT Neu cztpy; NrHj;Jf; nfhs;s Ntz;Lk;
- KO jhdpaq;fs; vLj;Jf; nfhs;s Ntz;Lk;
- mbf;fb goq;fs; rhg;gpl Ntz;Lk;

mrjhuzkhd mjpg ,uj;j mOj;jj;ijf; fl;Lg;gLj;Jk; topKiwfs;

1. cly; vilia rhpahd mstpy; itj;jy;
2. rPuhd clw;gapw;rp nra;a Ntz;Lk;
3. MNuhf;fpakhd czT gof;fk;
4. ghpe;Jiuf;fg;gl;l khj;jpiufis xOq;fhf vLj;Jf; nfhs;s Ntz;Lk;.
5. tho;f;if Kiwia khw;Wjy;
 - cztpy; nra;a Ntz;ba khw;wq;fs;
 - **NrHf;f Ntz;bait**
 - goq;fs;
 - fha;fwpfs;
 - kPd; thuj;jpw;F 1 Kiw
 - Xl;];
 - mjpg msT jz;zPH
 - jpdhrp NrHf;f Ntz;ba cg;gpd; msT 1500 kp.kp (1/2 Njf;fuz;b)
 - NfhJik nuhl;b
 - jhdpa tiffs;
 - nfhOg;G ePf;fpa ghy;
 - jpdKk; G+z;L rhg;gpl Ntz;Lk;
 - Njhy; kw;Wk; nfhOg;G ePf;fpa ,iwr;rp
 - fliy kw;Wk; nfhl;il tiffs;
 - **jtpHf;f Ntz;bait**
 - cg;G epiwe;j czT (mg;gsk;, CWfha;, fUthL)
 - nfhOg;G epiwe;j czT (,iwr;rp, vz;nza;)
 - fhgp, NjePH
 - kJ mUe;Jjiy jtpHj;jy;

- Gif gpbj;jy; kw;Wk; Gifapiy nky;Yjiy jtpHj;jy;
- ✓ rPuhd clw;gapw;rp
- ✓ cly; vilia mbf;fb ghpNrhjid nra;jy;
- ✓ kd xOq;F Kiwfs;
- ✓ Nahfhrdk;
- ✓ jpahdk;
- ✓ ,iriaf; Nfl;ly;
- ✓ ez;gHfSld; ciuahLjy;
- ✓ viliaf; Fiwj;jy;
- ✓ nfhOg;G ,y;yhj czT
- ✓ ehHr;rj;J epiwe;j czT
- ✓ rj;J khj;jpiufs; rhg;gpLjy;
- ✓ caH ,uj;j mOj;jj;jpw;fhd kUe;Jfs; rhg;gpLjy;
- ✓ ghpe;Jiuf;fg;gl;l khj;jpiufis jpdKk; rhg;gpl Ntz;Lk;
- ✓ 3-6 khjq;fSf;F xU Kiw kUj;Jtg; ghpNrhjid nra;J nfhs;s Ntz;Lk;

gpd;tpisTfs;

,Uja Neha;> gf;fthjk;> rpWePuf ghjpg;G> fz; ghjpg;G.

APPENDIX - I

**CHECKING THE LEVEL OF BLOOD PRESSURE FOR THE ADULTS
WITH HYPERTENSION**



**CONDUCTING AN AWARENESS PROGRAMME REGARDING
HYPERTENSION**



EXPLAINING ABOUT HYPERTENSION



FOOD DISPLAY



DISTRIBUTING THE PAMPHLET



CLEARING THEIR DOUBTS

