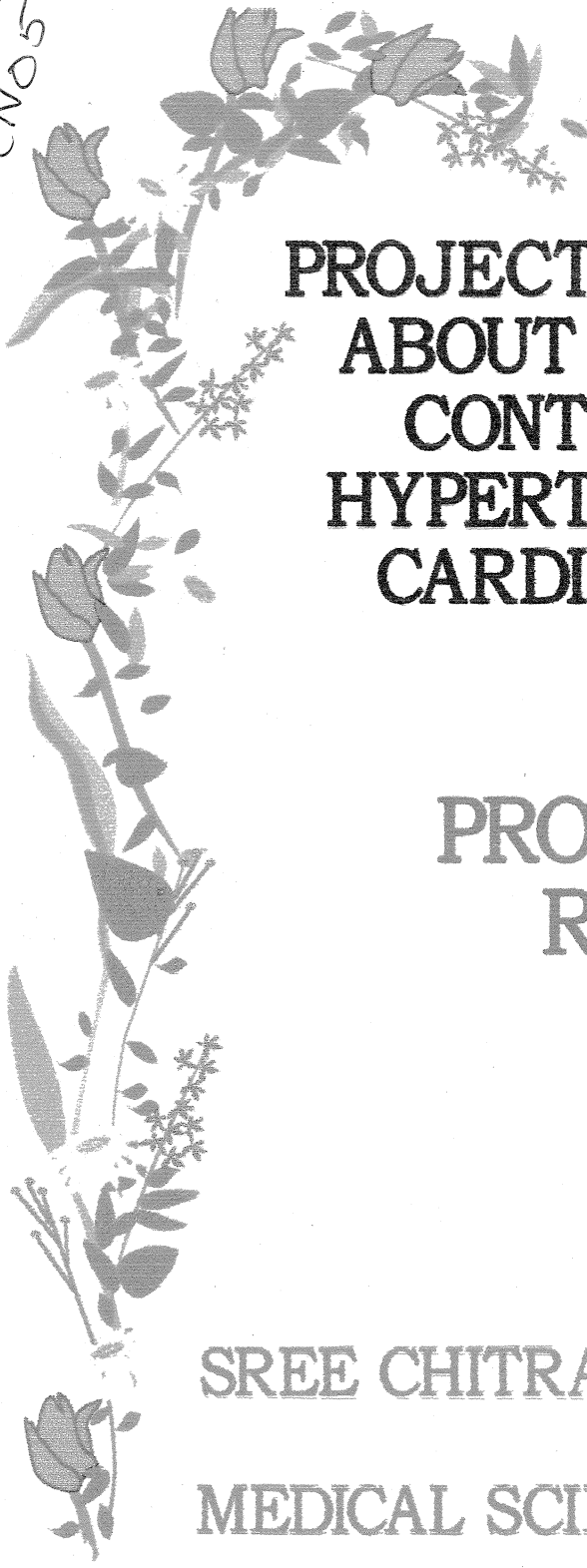


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# PROJECT ON THE KNOWLEDGE ABOUT HYPERTENSION AND CONTROL MEASURES IN HYPERTENSIVE PATIENTS OF CARDIAC SURGERY WARD

## PROJECT REPORT RUGMINI.M.D.



SREE CHITRA TIRUNAL INSTITUTE FOR  
MEDICAL SCIENCES AND TECHNOLOGY

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OCTOBER 2005

**A STUDY TO ASSESS THE KNOWLEDGE ABOUT  
HYPERTENSION AND CONTROL MEASURES  
AMONG HYPERTENSIVE PATIENTS ADMITTED IN  
CARDIAC SURGERY WARD, SREE CHITRA  
TIRUNAL INSTITUTE FOR MEDICAL SCIENCES  
AND TECHNOLOGY, AFTER CARDIO VASCULAR  
AND THORACIC SURGERY**

**PROJECT REPORT**

**RUGMINI. M. D**

**SREE CHITRA TIRUNAL INSTITUTE FOR  
MEDICAL SCIENCES AND TECHNOLOGY  
OCTOBER 2005**

**Certified that this is the bonafide work of Rugmini M.D at  
Sree Chitra Tirunal Institute for Medical Sciences and  
Technology**

**Submitted in the partial fullfilments of the requirements for  
the diploma in Cardio Vascular and Thoracic Nursing from  
the Sree Chitra Tirunal Institute for Medical Science and  
Technology.**

**October 2005**

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## **ACKNOWLEDGEMENT**

This study has been under taken and completed under the inspiring guidance of Mrs. Saramma P.P. M.N, Lecturer in Nursing, Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram. The investigator expresses sincere gratitude for their enlightening and sustained guidance.

With profound sentiments and gratitude the investigator acknowledge the encouragement and help they have received from the following persons for successful completion of this study.

It is investigator's first duty to express, at the outset, heartiest gratitude to our 'ALMIGHTY GOD' for her guidance, strength, wisdom, care and support in completing the study successfully.

Investigator also takes the opportunity to express her sincere thanks to Mrs.Vijayamma Harikrishna R.N, R.M BSC (N), Nursing Superintendent SCTIMST, Thiruvananthapuram.

The investigator is grateful to Mrs.Sudha Mani Amma MSC (N), PGDHRM Deputy Nursing Superintendent, SCTIMIST, Thiruvananthapuram. .

**The investigator is grateful to Dr.K.Jayakumar MS MCH, Professor and Head of the Department of Cardio Vascular and Thoracic Surgery, SCTIMST, Thiruvananthapuram.**

**The investigator is grateful to Dr. A.V. George MA, B.Ed, Ph.D, Register SCTIMST, Thiruvananthapuram.**

**The investigator is grateful to express sincere thanks to CS Ward sister, all staffs in CS Ward for their co-operation and help.**

**The investigator is grateful to patients and their care givers for their co-operation in conducting the study.**

**The investigator sincerely records special thanks to the library staff of Achuthamenon Centre, SCTIMIST, Thiruvananthapuram, for their co-operation and help.**

**The Investigator expresses thanks to all persons who helped directly on indirectly throughout the research work.**

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## **CHAPTER I**

### **INTRODUCTION**

Raised blood pressure is a storage independent risk factor for cardiovascular disease, the leading cause of morbidity and mortality in the society (BMJ Vol16 1990-P-456 Poulter etal). Prospective clinical studies have shown a correlation between change in weight and blood pressure in severally obese patients treated with diet (Peter Scharon etal BMJ 1990 Vol 5 P-956). The Cross sectional data available suggest specific factors responsible for changes in blood pressure associated with environmental changes. The public should know the detailed knowledge about hypertension and control measurers and prevention of complications.

#### **Background of the study**

Many studies have been carried out which recognise education as an effective methodology of improving health and reducing mortality. Most of the patients admitted in Sree Chitra Tirunal Institute for Medical Science and Technology with coronary artery disease, the major risk factors is hypertension. In the last 6 months 800 surgeries were done in SCTIMST of which 240 cases were CABG. In about 70% of cases the major risk factor is hypertension.

#### **Need and significance of the study**

Hypertension is the major risk factor of coronary artery disease.

This study aimed assessment of knowledge level for providing appropriate health education. Most of the time major complications occur before the patients reaching the hospital. Not only that but also the patients who were already detected to have hypertensive feel that when symptoms are controlled, there is no need for the continuation of the drugs which again leads to emergency condition. Patients are unaware of the relation between diet, smoking, alcohol consumption, body weight, physical inactivity to hypertension. So health education is important. Health education will help the patients to early detection of the problems, timely decision and get medical aid and prevent complications.

### **Statement**

A study to assess the knowledge about hypertension and control measures among Hypertensive patients admitted in CS Ward SCTIMST Thiruvananthapuram after cardiovascular and thoracic surgery.

### **Operational definitions**

Hypertensive patient means postoperative patients having Blood Pressure more than 140/90mm Hg. and / or on antihypertensive medications.

### **Objectives**

- To identify knowledge level of patients related to hypertension.
- To appraise the control measures followed by them.

### **Assumptions**

1. Modification of risk factors which can be controlled by the individual is assumed to be an important strategy in the prevention of hypertension.
2. The patients will have some knowledge about risk factors of hypertension.

### **Organisation of the Report**

Chapter II presents a summary of related studies reviewed. Chapter III deals with methodology of the study. Chapter IV analyses and interprets the findings and chapter V presents a summary of the study, conclusions, implications, limitations and recommendations. The report also includes a selected bibliography and appendices.

### **Delimitations**

- Post Operative patients admitted CS Ward SCTIMIST both Males and Females.
- Patients who all are willing for the study
- Patients who can understand Malayalam.

### **Summary**

These chapters has included the background of the study, frame work used for the study, need for the study, statement of the problem, objectives of the study, definition of terms, assumptions and delimitations.

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

#### **1) Prezellek (2000)**

Conducted a study on assess correlation between environmental factors and knowledge about hypertension. The study was conducted at Ktedra Geronotologi Medycyng rodzing collegium Medium.

The study variables were knowledge about hypertension and practice of the patient's education depends on determination of the hypertensive risk factors. The study group consisted of 485 subjects who voluntary participated in the street based hypertension screening programme Carcow. All subjects were asked to fill out questionnaires concerned their health behaviour and test to evaluate their knowledge about hypertension and its risk factors. The blood pressure (BP) measurements were taken by using semiautomatic device in the sitting position after 5 minutes rest. The study group consisted of persons with negative history of hypertension (n=440) untreated (n=45). In order to assess the influence of different factors on BP level subject were divided in to two groups according to the presence or absence of some particular risk factors.

Results – The mean age was 37.1 +/- 17.8 years. Participants are well educated and there are more women than in men in the study group 24.1% of participants had BP value exceeds 140/90 mmHg. Multi linear regression demonstrated that age, body mass index and

knowledge about hypertension had significant influence on the level of systolic BP. Conclusion of the study confirms that there was influence of the age, body mass index, male gender, alcohol consumption and stress on the BP level.

## **2) Donald 2005**

Conducted a study to determine the prevalence of hypertension stages, treatment control and cardiovascular risk among older patients with hypertension.

A community based Cohort study in which data were collected during all Framingham Heart Study examinations attended in 1990-5 participants pooled according to age, younger than 60 years, 60 – 70 years or 80 years older. There were 5296 participants who contributed, 14458 persons examinations of observation, including 7185 hypertensive person examination 4919 was treated.

The results were prevalence of hypertension and drug treatment, increased with advancing age, where as controlled rate is markedly low in older women.

Conclusions – Relative to current national guideline ratio of hypertension control in the community are low, especially among older women with hypertension short trial risk for cardio vascular disease are substed indicating the need for grater effort at safe, effective risk reduction among older patients with hypertension.

**3) Whetton searmus 2005**

Conducted a study to determine the effect of aerobic exercise on Blood Pressure (BP) the study was conducted in international control groups in epidemiologic studies in individual clinical trials. 54 randomized control trials, in which interventional and control groups differed only in aerobic exercise. Using a standardized protocol and data extraction, from three of the investigator independently abstracted data on study design, sample size, participants characteristics, type of treatment, follow up duration and treatment outcomes. Tools, techniques used in English language articles published before September 2001.

The results in a random effects model, data from each trial were pooled and weighted by the inverse of the total variance. Aerobic exercise was associated with significant reduction in blood pressure.

Conclusions – Aerobic exercise reduced Blood Pressure in both hypertensive and normo tensive persons.

**4) Caryl A Nowso 2005**

Conducted a study to assess the effect on Blood Pressure of weight reduction diet. The study was conducted a centre for physical activity and nutrition school of exercise and nutrition sciences, Deak in University. After baseline measurements, 63 men were randomly assigned to either WELL Diet (moderate sodium, High – Potassium, Calcium and low fat diet) or LF diet (low fat diet) for 12 weeks and both diet groups undertook 0.5 hours of moderate physical activity on most days of the week.

Results – there were a grate decrease in Blood Pressure the WELL Groups than in LF Group. Conclusion for a comparable 5 Kg weight loss diet high in low fat diary products, vegetables, fruits (WELL) Resulted in greater decrease in Blood Pressure than LF groups. The dietary approach to achieve weight reduction may comfort and additional benefit in the reducing Blood Pressure in those who are over weight.

#### **5) Baker Bester 2004**

Conducted a study to determine nutritional knowledge and dietary practices in hypertensive adults. The study was conducted in Day Hospital Clinics, overview of 10 day hospital clinics were randomly selected about 85 patients were evaluated for hypertensive clinics at day hospitals.

The height, weist, hip circumference of each participant was measured as well as their Blood Pressure knowledge of dietary intake was obtained by completing a questionnaire during interview with patient's knowledge regarding salt usage.

Results the study shows that only 15% of the groups knew that the recommendation of their usage of salt and diet control.

Conclusions – the evidence shows that only 15% of the groups knew that their usage of salt and weight management. In this study group only 12.9% of participants had normal weight (BMI < 25) 25.9% of over weight (BMI 25-29.9) 61.21% were obese (BMI > 30). 84.7% recognized the association between obesity and hypertension.

## **6 Stardling John 1990**

Conducted a study to establish whether a history of snoring or the degree of overnight hypoxemia is an important independent predictor of systemic Blood Pressure (SBP). The study was conducted in small town outside oxford, served by one group general practices of four partners. All measurements was made at home prospective community based study of Blood Pressure in relation to overnight oxygen saturation, height, weight, and questionnaire assessment of night snoring, smoking, alcohol consumption. Analysis was by multiple linear regression techniques and analysis of variance. 836 men aged 35 – 65 were randomly were drawn at random from the several practitioners. Age and sex registered and the men were asked to participate. 752 (90%) agreed. The main out come measurers systolic, mean and diastolic blood pressure and their association with age, sex, obesity, alcohol consumption, cigarette smoking, snoring and overnight hypoxemia.

Results –the systolic blood pressure correlated significantly with overnight hypoxemia. This was due to cross correlation with age, obesity and alcohol consumption. Conclusions – it is unlikely that snoring and sleep hypoxemia from occult sleep apnoea are important causes of diurnal systemic hypertension when compared with age, obesity and alcohol consumption.

## **7) Whelton 2002**

Conducted a study to assess the effect of aerobic exercise from reducing blood pressure in adults. Studies were identified by searching Medline and SPORT, discussion and by reviewing bibliography of

relevant articles. Question in people more than 18 years of age are interventions that include aerobic exercise more effective than intervention without aerobic exercise for reducing Blood Pressure.

Three reviewers independently extracted data on sample size, participant's characteristics, study design, details of intervention, study duration and outcomes. Outcome included changes in Blood pressure from baseline to follow-up.

Results: 54 RCTS were pooled in a random effects model with each study weighted by the reciprocal variance of blood pressure changes.

Conclusion – in adults, aerobic exercise is effective for lowering systolic and diastolic blood pressure.

#### **8) Sarwail Chauchry 2004**

Conducted a study systematically. Review of the literature on clinical management on systolic hypertension in older person. We performed a midline scanner of English Language literature from 1996 – 2004 to identify reports about SH in older person with particularly emphasis on data from randomized clinical trails. Selected 1064 studies by using search times hypertension combined with the systolic and aged. There is a strong evidence that the clinical trials to support the treatment of the old with SBP of at least 160 mm Hg. Large scale trials to asses the value of antihypertensive therapy for older persons with SBP 140-159 mm Hg have not been performed and race normal actions to treatment 3 patients are based on observation studies that showed gradual relationship of cardio vascular risk in SBP.

Conclusions – treatment of SH in older patients with SBP of atleast 160 mmHg is supported by strong evidence. The evidences available to support treatment of patients to be 140 – 159 mmHg is less strongly the home treatment disease and should be measured to patient's preference and tolerance to therapy.

### **9) Parker 1990**

Conducted as study to determine whether moderate restriction of dietary salt in take and alcohol consumption leads to an additional fall in blood pressure in treated hypertensive men. The study was done in Droyal Perth Hospital, Western Australia. 63 subjects entered an initial 2 week familiarisation period. During which they continue their alcoholic intake and commenced a low sodium diet supplement with 100 mmol sodium chloride per day as enteric – coated tablets. Subjects were then randomly assigned to either drink a low calorie beer alone for a 4 week period. Low or normal alcohol group subjects were assigned to either a low or normal sodium intake. The low sodium group continue the sodium restricted diet but were switched to placebo sodium chloride tablets for the four weeks. This results in a fall in 24 hrs urinary sodium excretion from 142 to 69 mmol / day. The normal sodium group continue to low sodium diet but kept at 100 mmol sodium chloride tablet / day and their urinary sodium excretion remained unchanged (125 Vs 142 mm day) Regular anti hypertensive therapy was continued throughout 59 subjects completed the trial. In those who reduced their alcohol intake there was a fall in blood pressure. In this study concluded the salt intake and alcohol consumption is directly related to Blood Pressure.

**10) Noriyuki Nkanishi 2005**

Conducted a study to determine whether physical activity will reduce the Blood Pressure. The study was conducted in Japan. The study population include 2458 Japanese male office worker aged 35 – 59 years who were without hypertension < 140/90 mm Hg and no medication for hypertension. Daily life energy expenditure was estimated by a one day activity recorded during an ordinary week day at the study entry. Blood pressure was measured at periodic annual health examination over 7 successive years. The results of the study was after controlling for potential Predictors of hypertension mean, SBP and DBP and each follow up year decreased as daily life energy expenditure increased. A meta analysis of randomized controlled trials was performed to estimate the effect of weight reduction on blood pressure over all the in population subgroups. 25 randomized trials published between 1966 and 2002 with a total of 4874 participants were included. A random effects model was used to accounts for heterogeneity among trail. A net weight reduction of 5.1 Kg by means of energy increased by physical activity or both reduced systolic and diastolic blood pressure. As expected significantly larger Blood Pressure reduction were observed in population with on average weightless more than 5 Kg then in population with less weight loss. Conclusions the meta analysis clearly shows that weight loss is important for the prevention and treatment of hypertension.

## **CHAPTER III**

### **METHODOLOGY**

This chapter deals with research approach, research design, setting sampling, development of tools, procedure for data collection and the plan of analysis.

#### **Research approach**

Descriptive survey approach was conducted in the study the main objectives are

- To identify the knowledge level of patients related to hypertension.
- To appraise the control of measures followed by them.

#### **Research Design**

Research design was concerned with overall frame work for conducting the study. For fulfilling the objectives of the study, the following design was utilized for collection and analysis of data as shown in figure. (a)

### Schematic Design of the study

Demographic variables	Study population and sample	Tool	Table Criteria measures
Knowledge } Practice }	Study population 20 patients submitted in SCTIMT CSM Ward after Cardio Vascular and Thoracic Surgery	Interview with the help of self prepared questionnaire	Cholesterol control, Salt Restrictions Smoking cessation Regular exercise.
	Study sample 20		

### **Setting**

The study was conducted in SCTIMST, Thiruvananthapuram. The rationale for setting SCTIMST for the study, the investigator was interested in finding out of the knowledge level about hypertension and practice measures followed by the patients in CS ward after cardiovascular and thoracic surgery.

### **Population**

The population for the study was post operative cardiovascular and thoracic patients admitted in CS Ward SCTIMST. The sample size is 20 patients.

### **Sampling**

Sampling convenience sampling was used for the study.

## **Sample Size**

The sample size consists of 20 patients.

## **Development of Tool**

An extensive review and study of literature helped in preparing items for the tool as multiple choice questionnaires. The questionnaires were shown to experts for conduct validity the step taken for development of tool are presented below.

### **Steps 1**

A knowledge test of 15 multiple choice question was need based on the literature reviewed expert opinion it was administered on 5 persons. Average time taken for completion of the test was 20 to 30 minutes the tool was reviewed by the expert for content validity of the items.

### **Steps 2**

With the necessary modification of the tool was pilot tested on five patients; pilot group was similar to the population sampled in the main study. The time taken for the completion of the test varied from 20 to 30 minutes. The pilot study also gave information regarding the appropriateness language level of the items for the age group, item difficulty, discrimination index and reliability.

**Description of tools**

The tool used in the present study consists of 3 parts.

**Part I**

For obtaining personal data and general information.

**Part II**

For obtaining data on knowledge level hypertension.

**Part III**

For obtaining Preventive measures followed by them.

**Part I**

The tool contained items for obtaining information about, age, sex, education, socio economic status, occupation, income.

**Part II**

The tools contained items of the knowledge tests consists of 15 multiple choice questions.

**Part III**

The tool consists of 16 multiple choice questions for obtaining information about the practice followed by them.

**Data collection**

The data were collected from CS Ward SCTIMST, Thiruvananthapuram.

- Formal permission was obtained from the HOD of concerned department of SCTIMST, Thiruvananthapuram.
- Period of data collection 2 months September to October 2005.

The investigator was introduced to the patients by self introduction. The purpose of the study and confidentiality of their responses were assured. The investigator interviewed the patients with the help of questionnaire and the time taken for the completion of the interview was 20 – 30 minutes.

### **Plan of Analysis**

The data obtained from the knowledge test would be analysed by manual methods, percentages would be used for describing the sample table and figures would be utilized to represent the distribution of total knowledge score and sub scores in the different content areas.

The knowledge score would also be analysed to determine the significance of difference between categories defined for sex, age, education, occupation and income based.

The data obtained from the practice about prevention hypertension and its complications also would be analysed by manual method to determine the significance of difference between age, sex, education, occupation and income.

### **Summary**

This chapter presented research approach used for the study, design of the study, setting of the study and sampling technique. A description of the development of knowledge test and practice test also given, along with plan for data collection and analysis.

## **CHAPTER IV**

### **ANALYSIS INTERPRETATION**

This chapter analyses and interprets the data obtained from the knowledge test and practice test to 20 post operative patients admitted in CS Ward SCTIMST, Thiruvananthapuram.

The purpose of the study was to determine the knowledge level assessment of hypertensive patients and preventive measures followed by them at home.

#### **Sample Characteristics**

Sample size 20 patients.

The demographic data included were age, sex, education, occupation and income of the patients.

This part of the analysis shown the distribution of total sample of according to their demographic data base number and percentage represented in Table I.

**Table 1**  
**SAMPLE CHARACTERISTICS**

<b>Demographic data</b>	<b>Total number</b>	<b>Percentage</b>
<b>Age &lt; 40</b>	3	15%
<b>40 – 60 yrs</b>	12	60%
<b>&gt; 60 yrs</b>	5	25%
<b>Sex Male</b>	14	70%
<b>Female</b>	6	30%
<b>Education Illiterate</b>	3	15%
<b>High School</b>	13	65%
<b>Pre-Degree</b>	2	10%
<b>Degree</b>	2	10%
<b>Occupation House wife</b>	6	30
<b>Coolie</b>	1	5%
<b>Private Sect.</b>	7	35%
<b>Govt. Sect.</b>	6	30%
<b>Income &lt;300 Rs. / month</b>	3	15%
<b>300 – 500 Rs/ month</b>	2	10%
<b>500 = 750 Rs / month</b>	4	20%
<b>&gt; 1000 Rs / Month</b>	11	55%

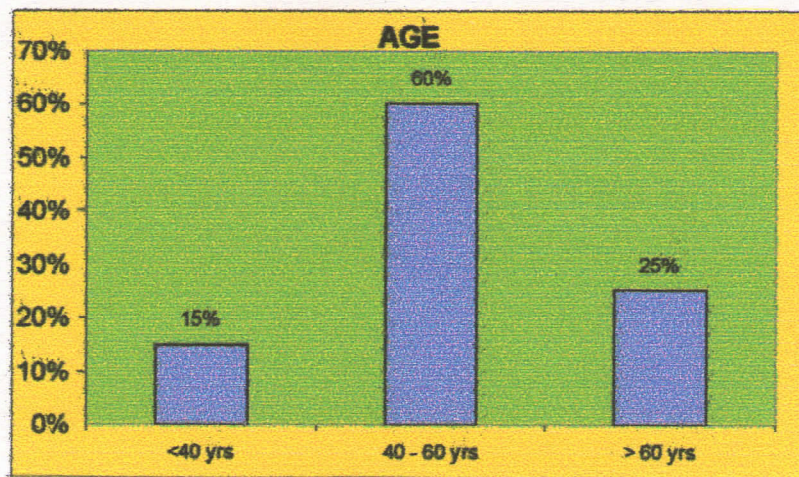


Fig. 1

The findings as presented in table 1 are shown in figure 1 as a bar diagram representing distribution of sample according to their age group. Total sample No. 20. The bar diagram represents age in 'x' axis and % in y axis. (Most number of patients came under 40 to 60 years of age group of patient 12, 60%)

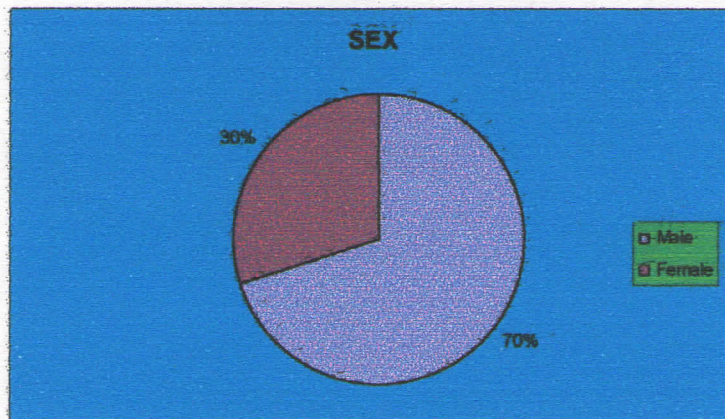


Fig. 2

The findings are presented in table 1 are shown in figure 2 as a pie diagram represented by distribution of sample according to their sex.

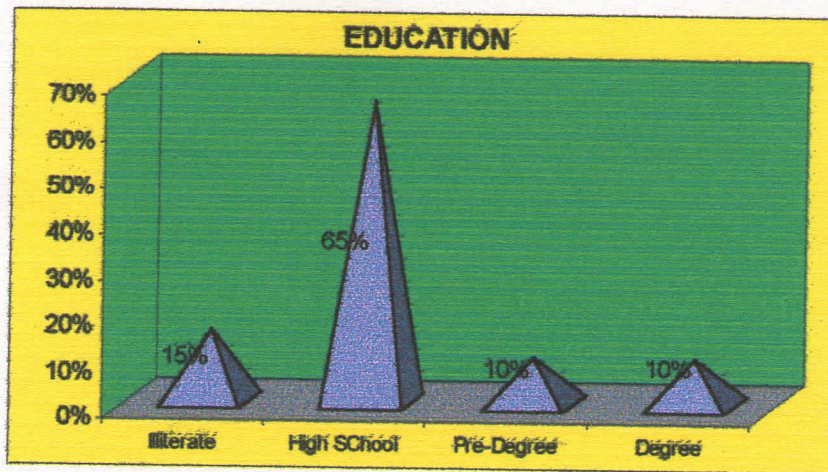


Fig. 3

The sample findings are presented in the table 1 are shown in figure 3 represents according to their educational status.

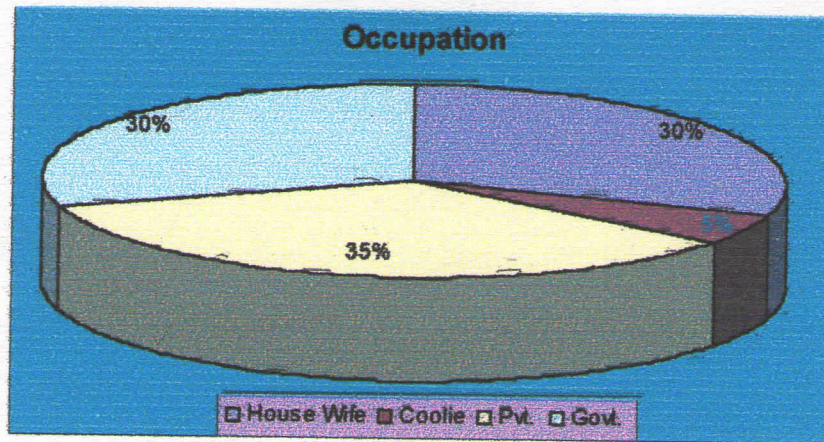


Fig. 4

The same findings are represented in table 1 are shown in figure 4 as a pie diagram representing sample according to their occupation.

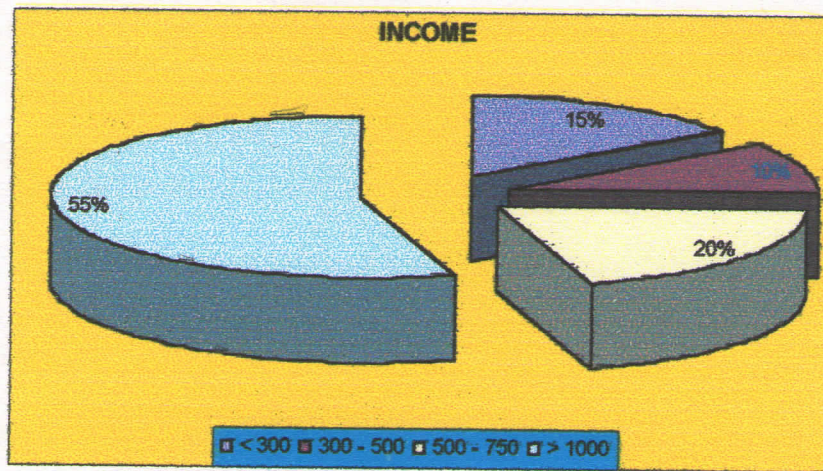


Fig. 5

The same findings are represented in Table 1 are shown in figure 5 as a pie diagram representing sample according to their income status.

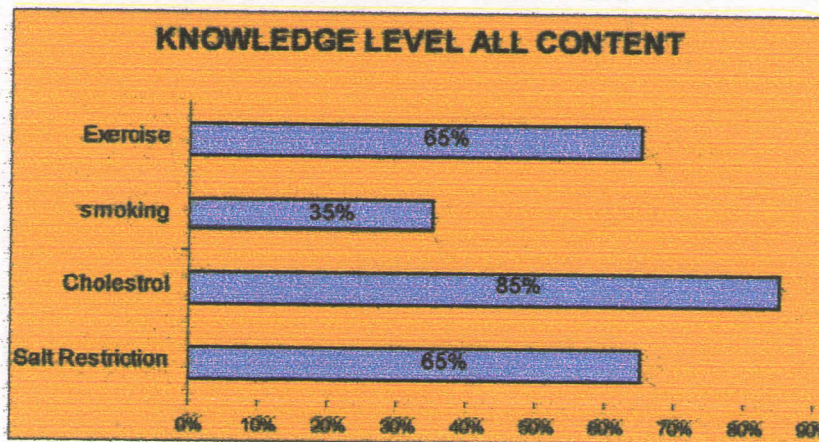
## II. A. Data on knowledge level assessment

This part of analysis shown in the distribution of total sample of 20 patients and their knowledge about hypertension and activities, their practices towards prevention of hypertension and its complications.

Table II shows the findings of knowledge level on all content area such as salt restriction, Cholesterol Control, Smoking Cessation, regular exercise.

**Table 2 Knowledge level of all content areas**

Categories	Total Number	Percentage
Salt Restriction	13	65%
Cholesterol control	17	85%
Smoking	7	35%
Exercise	13	65%

**Fig. 6**

II. B. Data on assessment of practices followed by the stations in these study groups. Table 3 shows the findings on the practices followed by the patient in all content area Such as salt restriction, smoking cessation, regular excise and cholesterol control.

**Table 3**

Category	Total number	Percentage
Salt restriction	3	15%
Cholesterol control	13	65%
Smoking	4	20%
Exercise	8	40%

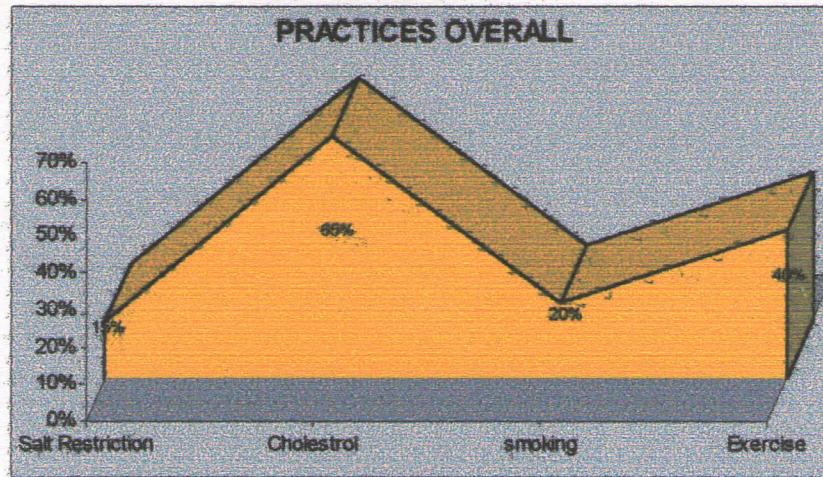


Fig. 7

The findings that presented in the table III are shown in figure 7 diagram presenting the distribution of sample according to the practice in all content areas.

**TABLE 4**

Distribution of knowledge level about hypertension all content areas based on their age, sex, education, occupation and income. Table IV shown according to scope below average (<50%) average (50 to 80%) and above average more than 80%.

Table IV

Demographic Data	Total number	Percentage
Age	1	33.33% (Below average)
	2	66.66% (Average)
> 40 yrs	3	25% (below average)
	7	58.33% (Average)
	2	16.66 (above average)
40 – 60 yrs	1	20% (Below average)
	3	60% (Average)
	1	20% (above average)
More than 60 yrs		

<b>Based on their sex</b>	1	7.14% (below average)
	11	78.57% (average)
<b>Male</b>	2	14.28% (above average)
<b>Female</b>	4	66.66% (below average)
	1	16.66% (average)
<b>Based on Education</b>		
<b>Illiterate</b>	3	100 % (below average)
	2	15.38 % (below average)
<b>High School</b>	8	61.53% (average)
	3	23.07% (above average)
<b>Pre Degree</b>	2	100% (average)
<b>Degree</b>	2	100% (average)
<b>Occupation</b>	4	66.66% (below average)
	1	16.66% (average)
<b>House Wife</b>	1	16.66% (above average)
<b>Coolie</b>	1	100% (average)
<b>Private Sector</b>	6	85.7% (Average)
	1	14.2% (below average)
<b>Govt. Sector</b>	4	66.66% (Average)
	2	33.33 (above average)
<b>Income</b>	2	66.66% (below average)
<b>&lt;300</b>	1	33.33% (average)
<b>300 to 500</b>	2	100% (average)
	1	25% (below average)
<b>500 to 750</b>	2	50% (average)
	1	25% (above average)
<b>More than 1000</b>	2	18.18% (below average)
	7	63.63% (average)
	2	18.18% (above average)

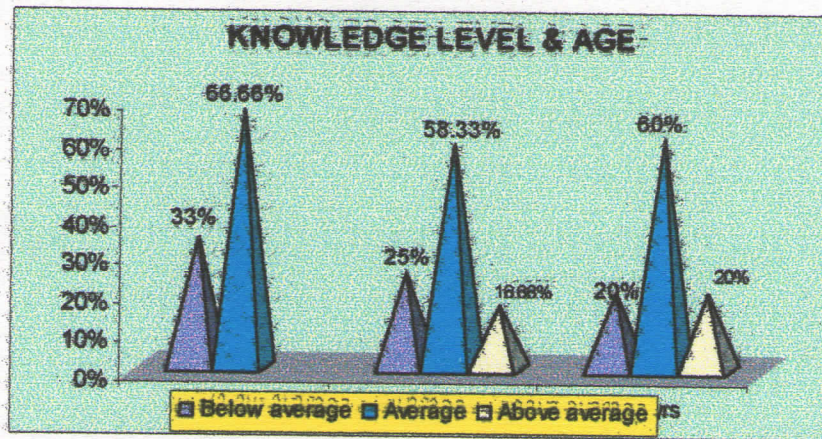


Fig. 8

The findings are presented in table 4 are shown in figure 8 represented by the distribution of sample according to their age.

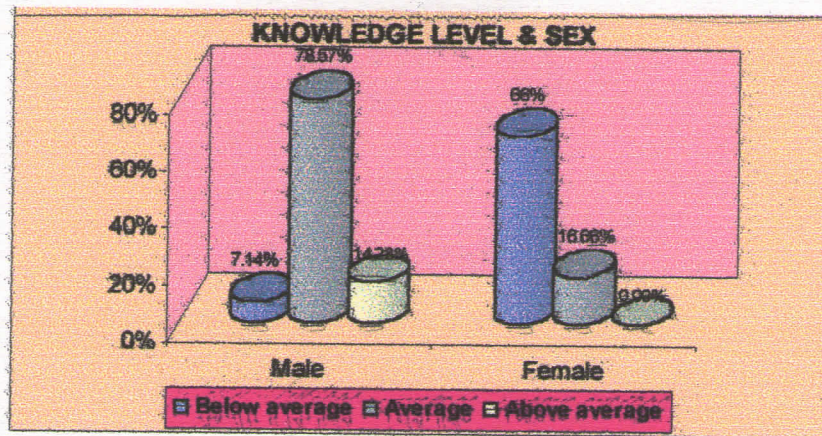


Fig. 9

The findings are presented in table 4 are shown in figure 9 represented by the distribution of sample according to their sex.

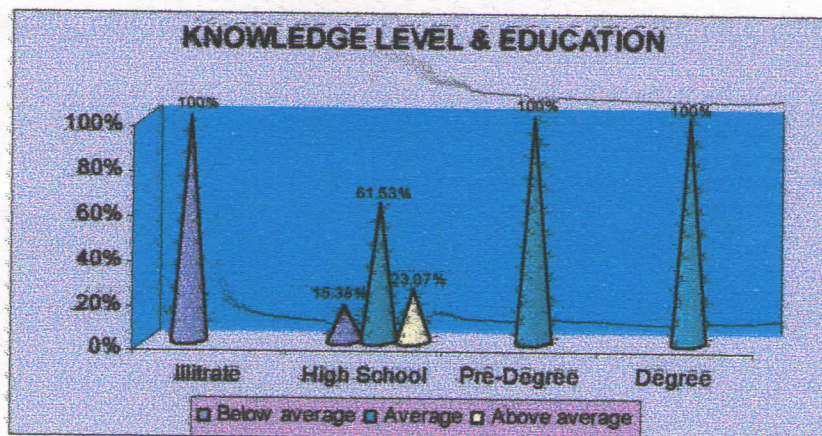


Fig. 10

The findings are presented in table 4 are shown in figure 10 represented by the distribution of sample according to their education.

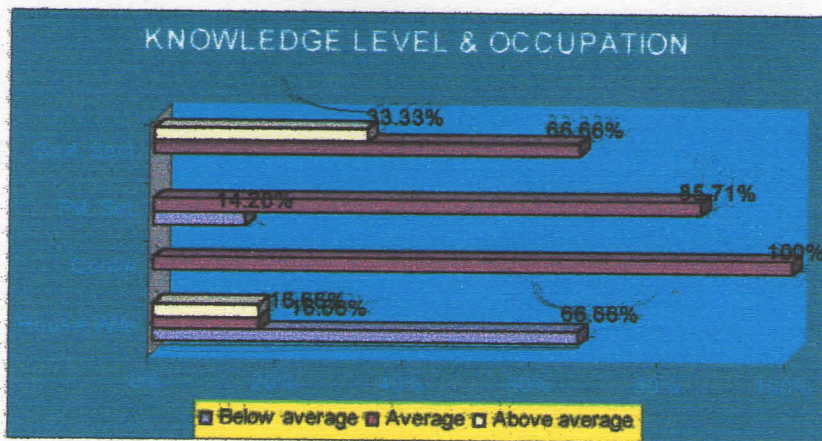


Fig 11

The findings are presented in table 4 are shown in figure 11 represented by the distribution of sample according to their occupation.

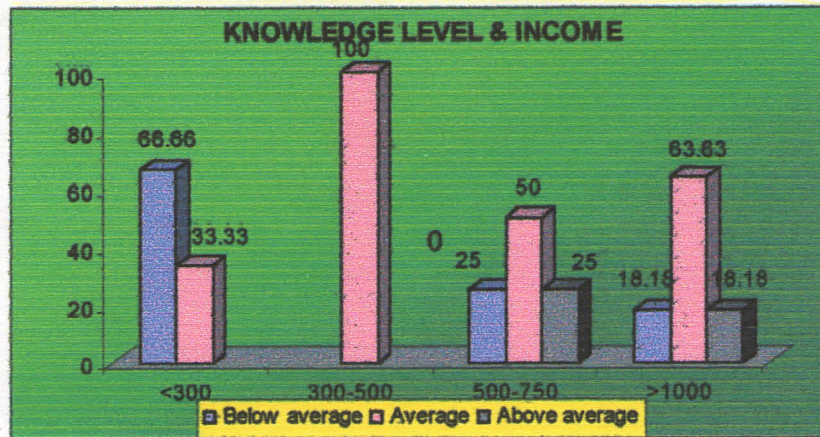


Fig. 12

The findings are presented in table 4 are shown in figure 12 represented by the distribution of sample according to their income

Table V Presented distribution of knowledge about practice of all content area based on their age, sex, education, occupation and income.

Table 5

Demographic variables	Categories	Total No.	Percentage
Age	Cholesterol	3	100
	Salt restriction	2	66.66%
	Exercise	2	66.66%
	Smoking	1	33.33%
40 – 60 yrs	Cholesterol	10	83.33%
	Salt restriction	9	75%
	Exercise	9	75%
	Smoking	5	41.66%
60 yrs	Cholesterol	5	100%
	Salt restriction	3	60%
	Exercise	3	60%
	Smoking	2	40%

<b>Sex</b>  <b>Male</b>	Cholesterol	12	85.71%
	Salt restriction	10	71.4%
	Exercise	10	71.4%
	Smoking	7	50%
<b>Female</b>	Cholesterol	4	66.66
	Salt restriction	2	33.33
	Exercise	2	33.33
	Smoking	0	0%
<b>Education</b>  <b>Illiterate</b>	Cholesterol	2	66.66
	Salt restriction	0	0
	Exercise	0	0
	Smoking	0	0
<b>High School</b>	Cholesterol	12	92.30
	Salt restriction	11	84.61
	Exercise	11	84.61
	Smoking	8	61.5
<b>Pre-Degree</b>	Cholesterol	2	100%
	Salt restriction	2	100%
	Exercise	2	100%
	Smoking	2	100%
<b>Degree</b>	Cholesterol	2	100%
	Salt restriction	2	100%
	Exercise	2	100%
	Smoking	1	50%
<b>Occupation</b>  <b>House Wife</b>	Cholesterol	4	66.66%
	Salt restriction	2	33.33%
	Exercise	2	33.33%
	Smoking	0	0
<b>Coolie</b>	Cholesterol	1	100%
	Salt restriction	1	100%
	Exercise	1	100%

	Smoking	1	100%
Private Sector	Cholesterol	7	100%
	Salt restriction	5	71.42%
	Exercise	5	71.42%
	Smoking	2	28.57%
Govt. Sector	Cholesterol	6	100%
	Salt restriction	6	100%
	Exercise	6	100%
	Smoking	5	83.33%
Income <300	Cholesterol	2	100%
	Salt restriction	2	66.66%
	Exercise	2	66.66%
	Smoking	2	33.33%
300 to 500	Cholesterol	2	100%
	Salt restriction	1	50%
	Exercise	1	50%
	Smoking	0	0%
500 - 750	Cholesterol	3	75%
	Salt restriction	2	50%
	Exercise	2	50%
	Smoking	0	0%
>1000	Cholesterol	11	100%
	Salt restriction	9	81.8%
	Exercise	0	81.8%
	Smoking	7	63.63%

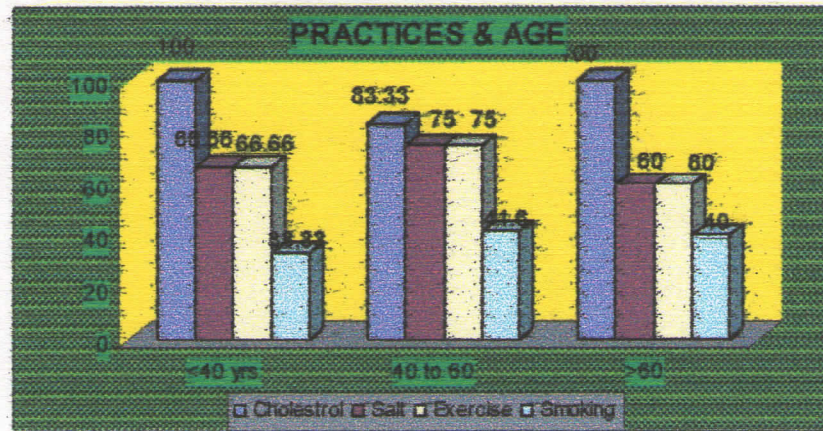


Fig. 13

The findings are presented in table 5 are shown in figure 13 as a bar diagram represented by distribution of samples according to their age.

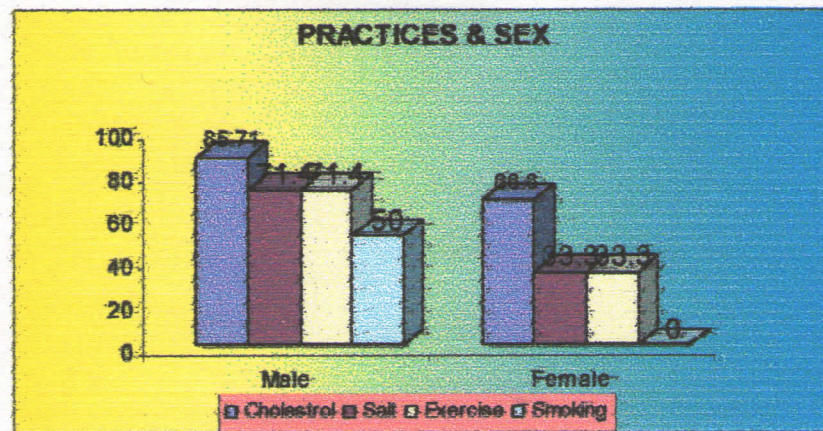


Fig. 14

The findings are presented in table 5 are shown in figure 14 as a bar diagram represented by distribution of samples according to their Sex.

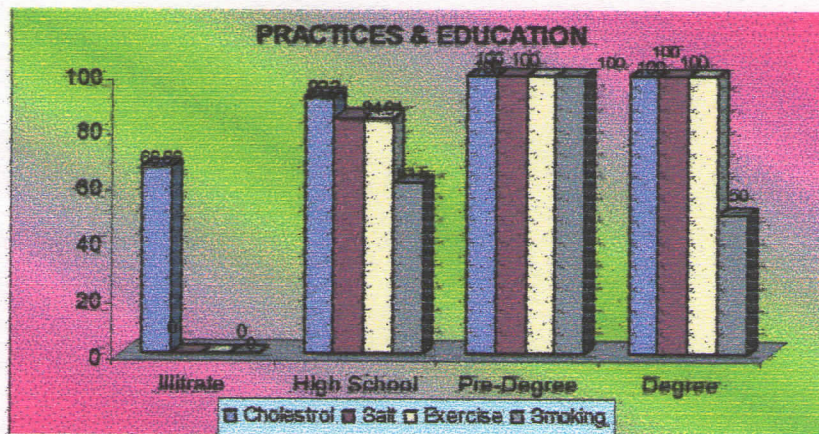


Fig. 15

The findings are presented in table 5 are shown in figure 15 as a bar diagram represented by distribution of samples according to their Education.

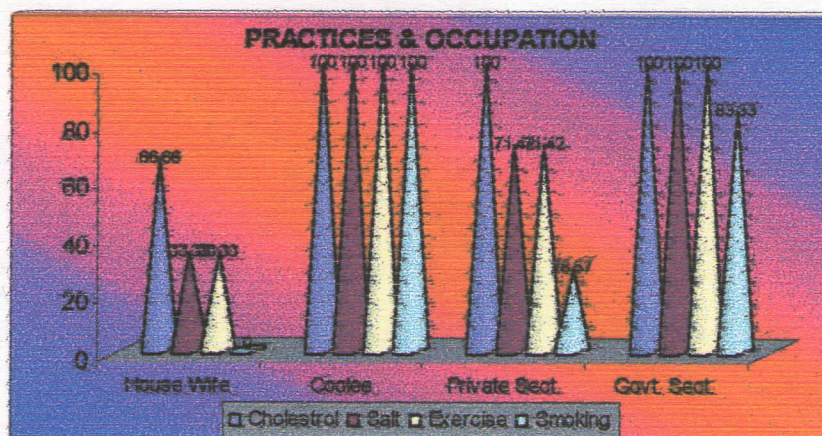


Fig. 16

The findings are presented in table 5 are shown in figure 16 as a bar diagram represented by distribution of samples according to their occupation.

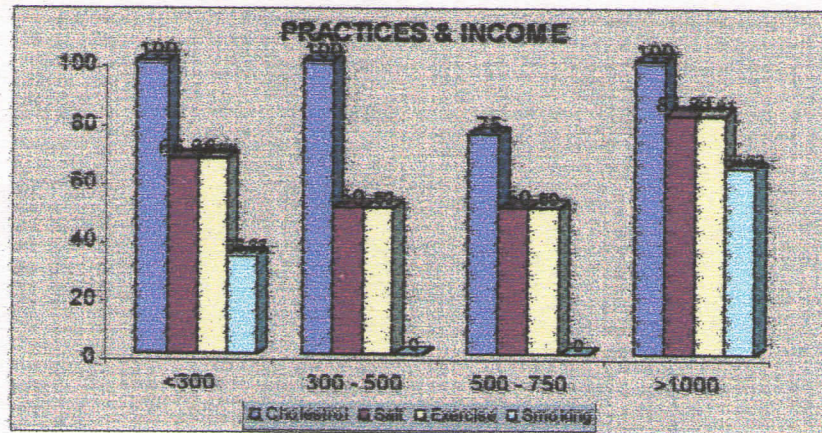


Fig. 17

The findings are presented in table-5 are shown in figure-17 as a bar diagram represented by distribution of samples according to their income.

Table 6

Demographic variables	Categories	Total No.	Percentage
Age	Cholesterol	2	66.66
	Salt restriction	0	0
	Exercise	0	0
	Smoking	0	0
< 40 years	Cholesterol	7	58.30
	Salt restriction	1	8.33
	Exercise	4	33.32
	Smoking	3	24.99
40 to 60 years	Cholesterol	4	80
	Salt restriction	2	40
	Exercise	2	40
	Smoking	2	40
> 60 yrs	Cholesterol	12	85.71
	Salt restriction	2	14.28
	Exercise	6	42.85
	Smoking	10	71.42
Sex	Cholesterol	3	80
	Salt restriction	2	33.33
	Exercise	2	33.33
	Smoking	6	100
Male	Cholesterol	3	80
	Salt restriction	2	33.33
	Exercise	2	33.33
	Smoking	6	100
Female	Cholesterol	3	80
	Salt restriction	2	33.33
	Exercise	2	33.33
	Smoking	6	100

<b>Education</b> Illiterate	Cholesterol	2	66.66
	Salt restriction	0	0
	Exercise	0	0
	Smoking	3	100%
High School	Cholesterol	10	76.90
	Salt restriction	2	15.38
	Exercise	4	30.76
	Smoking	12	92.30
Pre-Degree	Cholesterol	2	100
	Salt restriction	0	0
	Exercise	2	50
	Smoking	2	50
Degree	Cholesterol	2	100
	Salt restriction	0	0
	Exercise	2	100
	Smoking	1	50
<b>Occupation</b> House Wife	Cholesterol	3	50
	Salt restriction	1	16.66
	Exercise	1	16.66
	Smoking	6	100
Coolie	Cholesterol	1	100
	Salt restriction	0	0
	Exercise	0	0
	Smoking	1	100
Private Sector	Cholesterol	5	71.42
	Salt restriction	0	0
	Exercise	3	42.85
	Smoking	5	71.42
Govt. Sector	Cholesterol	3	100
	Salt restriction	1	16.66
	Exercise	5	83.33
	Smoking	5	83.33
<b>Income</b> <300	Cholesterol	1	33.33
	Salt restriction	0	0
	Exercise	0	0
	Smoking	3	100
300 - 500	Cholesterol	1	50
	Salt restriction	0	0
	Exercise	0	0
	Smoking	1	50

500 – 750	Cholesterol	3	75
	Salt restriction	1	25
	Exercise	2	50
	Smoking	1	75
> 1000	Cholesterol	10	90.90
	Salt restriction	2	18.18
	Exercise	6	54.54
	Smoking	9	81.81

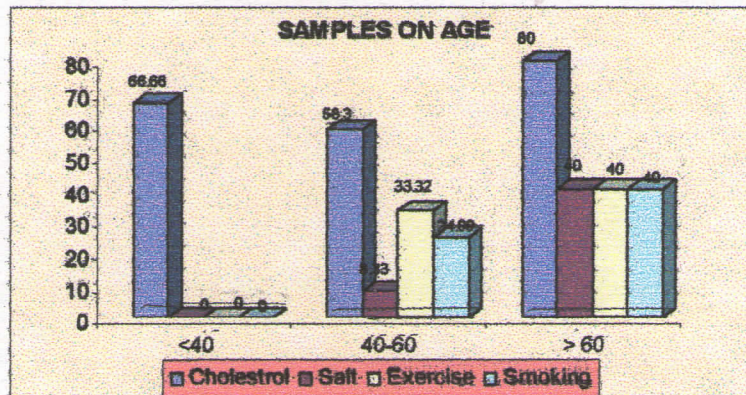


Fig. 18

The figure showing the finding presented table 6 are shown in figure 18 as a bar diagram distribution representation of samples on their age.

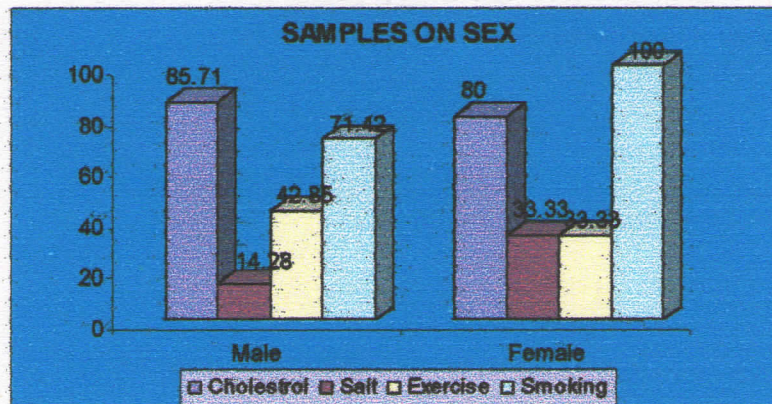


Fig. 19

The figure showing the finding presented table 6 are shown in figure 19 as a bar diagram distribution samples on their sex.

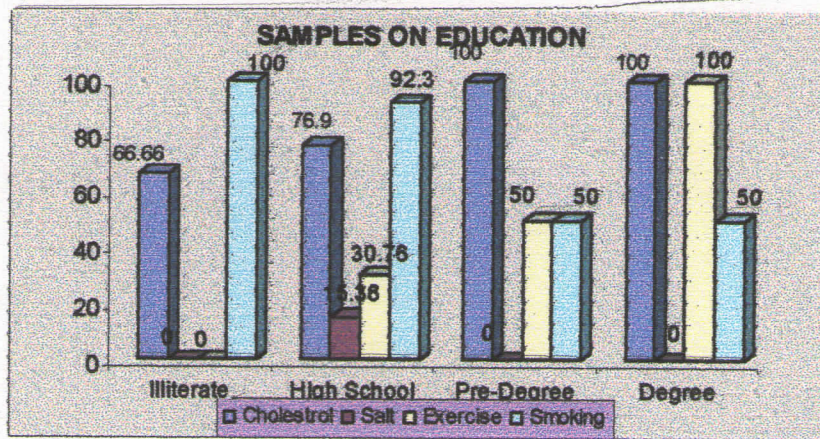


Fig. 20

The figure showing the finding presented table 6 are shown in figure 20 as a bar diagram distribution representation of samples on their education.

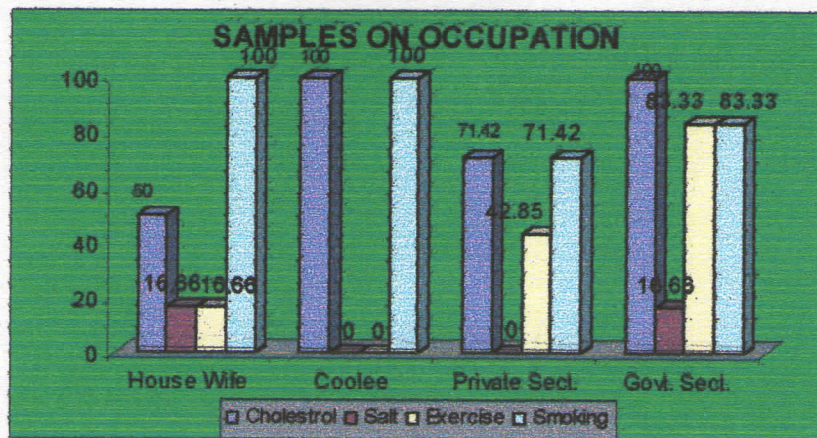


Fig. 21

The figure showing the finding presented table 6 are shown in figure 21 as a bar diagram distribution representation of samples on their occupation.

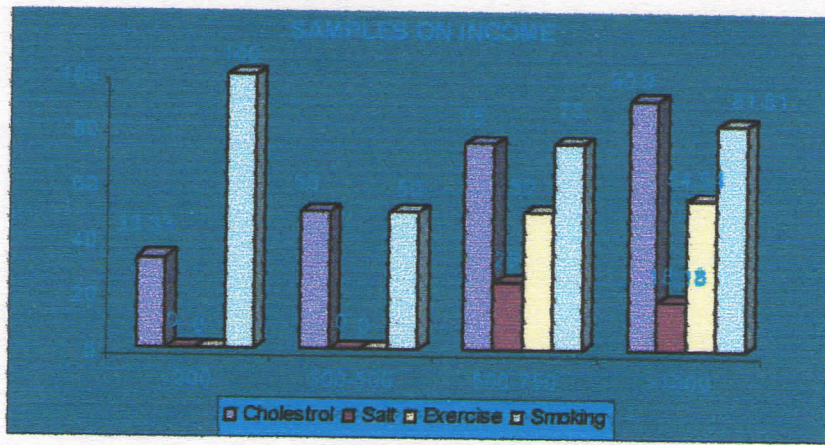


Fig. 22

The figure showing the finding presented table 6 are shown in figure 22 as a bar diagram distribution representation of samples on their income.

## CHAPTER V

### SUMMARY, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

The chapter gives brief account of the present study including summary, limitation and recommendation.

#### Summary

- This study was conducted with the objectives to assess the knowledge level about hypertension of Hypertensive patients admitted CS Ward SCTIMST, Thiruvananthapuram after cardiovascular and thoracic surgery.
- To apprise the practice followed by them at home.
- The descriptive interview scheduled was used for collecting data come 20 samples.
- A review of related research literature helped the investigator to get a clear concept about the research topic undertaken as well as to develop tools, methodology of the study and design the plan for data analysis.
- Research approach adopted for the study was descriptive approach.
- This study was conducted at CS Ward SCTIMIST, Thiruvananthapuram

- Convenient sampling techniques was used to obtain sample.
- Tool used for data collection was interviewed with the help of self prepared questionnaire.
- The questionnaire consists of three section one deals with the demographic data section II deals with the knowledge level assessment of all content area consists of 15 questions. Section III deals with the knowledge about practices consists of 16 questions.
- The self prepared tool was shown to experts for content validity the pilot study was conducted among 5 patients and the pilot study findings revealed that the tool was feasible and practicable.
- The data collection was done on September 20<sup>th</sup> to 25<sup>th</sup> October 2005. And was analysed and interpreted by using descriptive method.

#### **Objectives of the study**

- To assess the knowledge level about hypertension of patients admitted CS Ward SCTIMST, Trivandrum after cardio vascular and thoracic surgery.
- To appraise the practice followed by the at home.

## **Implications**

Several implications can be drawn from the findings of the study. These informations can be used by the public health nurses, school health nurses and group involved, and health involved and in health promotion programme groups. Health professional should emphasise the danger of smoking, excessive intake of salt, high intake of cholesterol, and physical inactivity. Regular exercise is an effort to develop health habit at an early age. Preventive and promotive health care systems are fertilized field for the nurses to show the seeds of healthy live stage. Patients can be encouraged to practice healthy life style health education needs differ in different age groups among the patients the needs differ in both sex group and different individual. The study groups says that heir own words the study was effective for them.

## **Findings of the study**

The study group consists of 70% males and 30% females. The study group had more knowledge above cholesterol (85%) and minimum knowledge about salt restriction and regular exercise (65% respectively) and less knowledge about smoking (35%). The study groups practicing only 65% cholesterol and 20% smoking cessation, and 45% regular exercise and 15% of the salt restriction.

The study shows males had more knowledge than females.

Illiterate group had 100% had below average knowledge pre-degree and degree holders 100% average knowledge.

The findings of these study has special relevant during the post operative hypertensive patient.

### **Limitations**

- The sample size was limited to 20
- Only Malayalam knowing patients are included in the study.
- The convenient sampling technique was used for study.
- Only those who are willing to participate are included in the study.
- Post operative cardio vascular and thoracic patients having more than 140/90 mm hg of BP only included in the study.
- The tool has been developed by the investigator as no standard tool was available.
- Generalisation is limited to post operative hypertensive patient admitted CS ward SCTIMST, Thiruvananthapuram.

### **Conclusion**

Based on the findings of the study the following conclusions were drawn.

- The knowledge level of patients about hypertension is average but most of them are not practicing.
- The patients in general have more knowledge about cholesterol control than other risk factors.
- Males are have more knowledge about hypertension than female.
- The patients have some knowledge about preventive measures but not practicing it.
- The study concluded that 20% of the sample are below average knowledge, 60% of the average knowledge and 15% of them are above average knowledge about hypertension.

**Recommendation**

- 1) Similarly study can be done by using a large sample size.
- 2) A similar study may be undertaken to find out knowledge level about hypertension of post operative hypertensive patients and preventive measurers followed by them in other hospital also.
- 3) A similar study can be done in other hospital having cardio vascular and thoracic surgery unit.

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**APPENDIX - A**

**സമ്മതപത്രം**

രോഗിയുടെ അസുഖവുമായി ബന്ധപ്പെടുത്തിയും അറിവുപരിശോധിക്കുന്നതിനായും നോടു കറച്ചു ചോദ്യങ്ങൾ ചോദിക്കുന്നതിനും അതിലെ പോരാത്തവർ എന്നെ പറഞ്ഞു മസ്തിലാക്കുകയ്ക്കിനും പൂർണ്ണമായി സമ്മതിക്കുന്നു.

ഇത് ഒരു പഠനത്തിന്റെ ഭാഗമായാണ് അതായത് രക്തമർദ്ദത്തെക്കുറിച്ചുള്ള അറിവു പരിശോധിക്കുന്നതിനും രക്താദിമർദ്ദം ക്രമീകരിക്കുന്നതിനും വേണ്ട പ്രതിവിധിയെക്കുറിച്ച് മസ്തിലാക്കാനും ഉള്ള ഈ പഠനത്തിനുവേണ്ടി ഞാൻ സഹരിച്ചുകൊള്ളാമെന്ന് സമ്മതിക്കുന്നു.

എന്ന്

രോഗി

സ്വമലം  
തീയതി

ഒപ്പ്

**APPENDIX - B**

പേര് :

ആശുപത്രി നമ്പർ

വയസ്സ് :

ലിംഗം: സ്ത്രീ / പുരുഷൻ

സ്ഥലം :

വിദ്യാഭ്യാസം :

തൊഴിൽ :

സാമ്പത്തിക നിലവാരം

കുടുംബത്തിൽ ആർക്കെങ്കിലും രക്താദിമർദ്ദം ഉണ്ടോ?

1. എന്താണ് രക്താദി മർദ്ദം

- മ) 120/80 ഒഴ
- യ) > 140/90 ടാ ഒഴ
- ര) >150/180 ടാ ഒഴ

2. ഭക്ഷണരീതി ക്രമീകരിക്കേണ്ട കാര്യമുണ്ടോ?

- മ) ഉണ്ട്
- യ) ഇല്ല
- ര) അറിയില്ല

3. ഭക്ഷണം എങ്ങനെ കേരമീകരിക്കണമെന്ന് നിങ്ങൾക്ക് അറിയാമോ?

- മ) അറിയാം
- യ) അറിയില്ല

4. മാനസിക പിരിമുറുക്കം നിങ്ങളുടെ രക്താതിമർദ്ദത്തെ കുടുതലാക്കുമെന്ന് നിങ്ങൾ വിചാരിക്കുന്നുണ്ടോ?

- മ) ഉണ്ട്
- യ) ഇല്ല
- ര) അറിയില്ല

5. ക്രമവും ചിട്ടയോടുകൂടിയുള്ളതുമായ വ്യായാമത്തിന്റെ ആവശ്യമുണ്ടോ?

- മ) ഉണ്ട്
- യ) ഇല്ല
- ര) അറിയില്ല

6. പുകവലി രക്താദിമർദ്ദത്തെ കുട്ടുന്നു

- മ) ശരി
- യ) തെറ്റ്

7. കൊളസ്ട്രോൾ രക്താദിമർദ്ദത്തെ കുട്ടുന്നു.

- മ) ശരി
- യ) തെറ്റ്

8. രക്താദിമർദ്ദം ഏതു തരക്കാരിലാണ് കൂടുതലായി കാണപ്പെടുന്നത്.

- മ) സ്ത്രീ
- യ) പുരുഷൻ
- ര) അറിയില്ല

9. കുടുംബപാരമ്പര്യ ഹൃദ്രോഗം ഉണ്ടെങ്കിൽ രക്താദിമർദ്ദത്തിന് സാധ്യതയുണ്ടോ?

- മ) ഉണ്ട്
- യ) ഇല്ല
- ര) അറിയില്ല

10. കുടുംബപാരമ്പര്യം രക്താദിമർദ്ദത്തിന് സാധ്യതയുണ്ടോ?

- മ) ഉണ്ട്
- യ) ഇല്ല
- ര) അറിയില്ല

11. കുടുംബ പാരമ്പര്യം പ്രമേഹ രക്താദിമർദ്ദത്തിന് സാധ്യതയുണ്ടോ?

- മ) ഉണ്ട്
- യ) ഇല്ല
- ര) അറിയില്ല

12. അമിത ഉപ്പിന്റെ ഉപയോഗം രക്താദിമർദ്ദം കുട്ടുന്നതിന് കാണമാകുമോ?

- മ) ഉണ്ട്
- യ) ഇല്ല
- ര) അറിയില്ല

13. കുടുംബത്തിലെ ആർക്കെങ്കിലും വൃക്ക തകരാർ ഉണ്ടായിരുന്നെങ്കിൽ രക്താദിമർദ്ദത്തിന് സാധ്യതയുണ്ടോ?

- മ) ഉണ്ട്
- യ) ഇല്ല
- ര) അറിയില്ല

14. രക്താദിമർദ്ദം കൊണ്ടുള്ള ബുദ്ധിമുട്ടുകൾ എന്തെല്ലാമെന്ന് നിങ്ങൾക്ക് അറിയാമോ?

- മ) അറിയാം
- യ) അറിയില്ല



24. താഴെ കൊടുത്തിരിക്കുന്നവയിൽ നിങ്ങൾക്ക് കഴിക്കാവുന്ന ആഹാരം ഏതൊക്കെയാണെന്ന് അടയാളപ്പെടുത്തുക.

- മ) അച്ചാർ                      യ) പപ്പടം                      ര) ബ്രഡ്                      ര) ടിന്നിലടച്ച ആഹാരം

റ) ഉപ്പിലിടാത്ത കറി, പഴവർഗ്ഗങ്ങൾ, ഉപ്പ് ചേർക്കാത്ത ആഹാരം.

25. മദ്യം ഉപയോഗിക്കാറുണ്ടോ

- മ) ഉണ്ട്                                      യ) ഇല്ല

ദിവസേന ഉപയോഗിക്കാറുണ്ടോ

- മ) ഉണ്ട്                                      യ) ഇല്ല

ഉണ്ടെങ്കിൽ ദിവസേന ഉപയോഗിക്കുന്ന അളവ്

26. പുകവലിക്കാറുണ്ടോ?

- മ) ഉണ്ട്                                      യ) ഇല്ല

ഉണ്ടെങ്കിൽ എത്ര നാൾ തൊട്ട് ഉപയോഗിക്കുന്നു.

ദിവസേന ഉപയോഗിക്കാറുണ്ടോ?

- മ) ഉണ്ട്                                      യ) ഇല്ല

ഉണ്ടെങ്കിൽ ദിവസേന ഉപയോഗിക്കുന്ന എണ്ണം

ഏതു തരം

- മ) സിഗാർ                                      യ) ബീഡി                                      ര) സിഗാറ്റ്

27. വ്യായാമ രീതി

- മ) ചിട്ടയോട് കൂടി                                      യ) ചിട്ടയോട്കൂടി

- മ) ജോഗിംഗ്                                      യ) സൈക്കിൾ സവാരി                                      ര) നീന്തൽ

റ) മറ്റുള്ളവ

28. ആഹാര ക്രമീകരണം

മ) ഭക്ഷണം കുറയ്ക്കുക

യ) കൊഴുപ്പുള്ള ആഹാരം കഴിക്കുക.

ര) കാത്സ്യം, പൊട്ടാസ്യം, മൈഗ്നീഷ്യ മുതലായവയുടെ ഉപയോഗം

റ) ഉപ്പ് കലർന്ന ആഹാര പദാർത്ഥങ്ങളുടെ നിയന്ത്രണം

29. എന്ത് ചികിത്സാരീതിയാണ് നിങ്ങൾ പിന്തുടരുന്നത്

ചിട്ട ആഹാരം

മ) ചിട്ടയോട് കൂടിയ

യ) ചിട്ടയില്ലാതെ

ഏത് തരം ഔഷധം

ര) ഒന്ന്

റ) ഒന്നിൽ കൂടുതൽ

ചികിത്സയുടെ ദൈർഘ്യം

മ) ഒരു വർഷം

യ) 2 -3 വർഷം

ര) 3-5 വർഷം

റ) അഞ്ച് വർഷത്തിൽ ഒരിക്കൽ

30. രക്താടിമർദ്ദത്തിന്റെ സങ്കീർണ്ണാവസ്ഥയെ എങ്ങനെ തടയാം?

മ) കൃത്യമായ ഔഷധ സസേവ

യ) ആഹാര ക്രമീകരണം

ര) ചിട്ടയോട് കൂടിയ വ്യായാമം

റ) മദ്യപാനവും പുകവലിയും ഉപേക്ഷിക്കുക

ല) ചിട്ടയോട് കൂടിയ പരിശോധനാ രീതി.

31. രക്താടി മർദ്ദത്തെ നിങ്ങൾ വീട്ടിൽ ഏതെങ്കിലും രീതികളാണ് അനുകരിക്കുന്നത്.

**APPENDIX - C****Bio-Data**

Name :

Hospital No. :

Age :

Sex :

Place :

Education :

Occupation :

Family History of hypertension :

1. What is hyper tension

- a) > 120 mm.Hg      b) >140/90m.Hg      c). 150/100 mm.Hg  
 d) Any other mm of Hg      e) Don't know

2. Is it necessary to control your diet?

- a) Yes      b) No

3. Do you know how to make dietary regulation?

- a) Yes      b) No.

4. Do you think stress will increase BP?

- a) Yes      b) No      c) Don't know

5. It is necessary to do gradual regular exercise?

- a) Yes      b) No      c) Don't Know

6. Cigarettes smoking will increase BP?

- a) True      b) False

7. Cholesterol will increase BP?
  - a) True
  - b) False
8. Do you know in which sex more commonly affect BP?
  - a) Male
  - b) Female
  - d) Don't know
9. Do you think family history of cardiac disease will cause hypertension?
  - a) Yes
  - b) No
  - d) Don't know
10. If there any family history runs of hypertension
  - a) Yes
  - b) No
  - d) Don't know
11. Do you think family history of diabetes will cause hypertension?
  - a) Yes
  - b) No
  - d) Don't know
12. Do you think family history of renal disease will cause hypertension?
  - a) Yes
  - b) No
  - d) Don't know
13. Do you think excess salt will increase BP?
  - a) Yes
  - b) No
  - d) Don't know
14. Do you know the complication of hypertension?
  - a) Yes
  - b) No
  - d) Don't know
15. Do you know importance of regular medication and follow up?
  - a) Yes
  - b) No
16. Do you take additional table salt?
  - a) Yes
  - b) No
17. Duration of hypertension diagnosed
  - a) < 1 year
  - b) 2-3 years
  - c) 3-5 year
  - d) >5 years
18. How frequently you are checking BP
  - a) Daily
  - b) Weekly
  - c) Once in front right
  - d) Monthly
  - e) Any other



## 28. Dietary regulations.

- a) reduce the amount of food
- b) Reduce the amount of fat
- c) Provide calcium, magnesium and potassium
- d) Salt reduction Avoid added table salt, pickles, preserved foods and pappads.

## 29. Which treatment regimen you are following?

- |           |                |                   |
|-----------|----------------|-------------------|
| Regularly | a) Regular     | b) Irregular      |
|           | a) Single Drug | b) Combined drugs |
|           | a) < 1 year    | b) 2 -3 years     |
|           | a) 3-5 years   | b) > 5 years.     |

## 30. How to prevent complications?

- a) Regular medication
- b) Dietary control
- c) Regular exercise
- d) Stop smoking and alcohol intake
- e) Regular follow-up

## 31. What all measures you are practicing in your home to control hypertension?

**APPENDIX - D****ANSWER KEY ENGLISH**

<b>Items</b>	<b>Best answer</b>
1.	b
2.	a
3.	a
4.	a
5.	a
6.	a
7.	a
8.	a
9.	a
10.	a
11.	a
12.	a
13.	a
14.	a
15.	a
16.	b
17.	All
18.	d
19.	a
20.	a
21.	a
22.	c
23.	b
24.	d, c, f
25.	b
26.	b
27.	a
28.	All
29.	a
30.	All

**ANSWER KEY MALAYALAM**

Items	Best answer
1.	b
2.	a
3.	a
4.	a
5.	a
6.	a
7.	a
8.	b
9.	a
10.	a
11.	a
12.	b
13.	a
14.	a
15.	a
16.	b
17.	All
18.	d
19.	All
20.	a
21.	a
22.	c
23.	b
24.	e, f, g
25.	b
26.	b
27.	a
28.	All
29.	a
30.	All