"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING LIFESTYLE MODIFICATION AMONG HYPERTENSIVE PATIENTS AT GOVERNMENT HEAD QUARTERS HOSPITAL, ERODE."

By

Register No: 301212052

Dissertation Submitted to

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In partial fulfillment

Of the requirements for the degree of

Master of Science

In

Medical Surgical Nursing

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1. INTERNAL EXAMINER : _____

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ENDORSEMENT BY HEAD OF THE INSTITUTION

This is to certify that the dissertation entitled **"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING LIFESTYLE MODIFICATION AMONG HYPERTENSIVE PATIENTS AT GOVERNMENT HEAD QUARTERS HOSPITAL, ERODE."** is a bonafide research work by: **301212052, Nandha College of Nursing , Erode** in partial fulfillment of the University rules and regulation for award of M.Sc., in **Medical Surgical Nursing** under my Guidance and Supervision, during the academic year 2013-2014.

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"Give me a spirit of thankfulness, Lord,

For number less blessing given,

grace that daily come to me

Like dewdrops falling from heaven"

"***Man's effort is always crowned by God's grace and blessings***." Express my deep sense of gratitude to the ***Lord*** for the blessings and mercy which enabled me to reach up to this step and complete my study.

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Researcher

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ANNEXURES

ABSTRACT

PROBLEM STATEMENT

"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING LIFESTYLE MODIFICATION AMONG HYPERTENSIVE PATIENTS AT GOVERNMENT HEAD QUARTERS HOSPITAL, ERODE."

OBJECTIVES OF THE STUDY

- To assess the level of knowledge and practice regarding life style modification among hypertensive patients before and after the structured teaching programme.
- To implement and evaluate the effectiveness of structured teaching programme on the knowledge and practice regarding lifestyle modification among hypertensive patients.
- To find out the relationship between knowledge and practice regarding life style modification among hypertensive patients.
- To find out the association between knowledge and practice among hypertensive patients with selected demographic variables such as age, gender, marital status etc,.

HYPOTHESIS

H_1 – There will be significant enhancement in the level of knowledge and practice regarding lifestyle modification among hypertensive patients after structured teaching programme.

H_2 – There will be significant relationship between knowledge and practice regarding lifestyle modification among hypertensive patients.

H_3 – There will be significant association between the level of knowledge and practice regarding lifestyle modification with selected demographic variables like age, gender, religion, marital status, education status, type of occupation, monthly income, type of family, dietary pattern, personal habits, residential area, family history of hypertension, when hypertension was diagnosed, and Body Mass Index.

METHODOLOGY

The research approach used for this study was Quantitative educative and evaluative approach and the research design was **Quasi experimental - Non equalent control group before-after design**. 60 patients who are recently diagnosed with hypertension were selected for this study by using purposive sampling technique. Data were collected with the help of self structured questionnaire for assessing knowledge and practice. Descriptive statistics (frequency , percentage, mean and standard deviation) and inferential statistics (chi-square, paired 't' test, unpaired 't' test and correlation coefficient) were used to analyze the data and to test hypothesis.

RESULT AND INTERPRETATION

- As per the demographic characteristics in control group 17 (57%) were in the age group between 46 -60 years, 17 (57%) were female, majority of 25 (83%) were Hindus, majority of 28 (93%) were married, 15 (50%) had no formal education, 13 (43%) were unemployed, 11 (37%) were receiving the family income between 2,501 – 5,000 rupees, majority of 21 (70%) were residing in urban area, majority of 22 (73%) had no family history of hypertension, majority of 25 (83%) were non-vegetarian, 18 (60%) were not having any bad habit, majority of 25 (84%) has no associated illness, 17 (57%) were diagnosed as hypertensives after appearance of signs and symptoms

and 16 (53%) were having normal B.M.I. In experimental group 15 (50%) of clients were between the age group of 46 – 60 years, both male and female contributes 50%, majority of 24 (80%) were Hindus, 27 (90%) were married, 20 (67%) were educated up to primary level, 17 (57%) were moderately heavy workers, 9 (30%) receives a family income between 2,501 – 5,000 rupees, 9 (30%) receives a family income between Rs.5001 – 10,000, majority of 28 (93%) lives in urban area, 15 (50%) of clients had the family history of hypertension and other 15 (50%) had no history of hypertension, majority of 25 (83%) were non-vegetarian, 17 (57%) had no bad habits, 27 (90%) doesn't had any associated illness, 17 (57%) were diagnosed with hypertension after appearance of signs and symptoms, and 19 (63%) had normal B.M.I.

- The frequency and percentage of pre-test and post-test level of knowledge regarding lifestyle modification for hypertension in experimental group. In pre – test majority of 90% of clients had inadequate knowledge and 10% moderately adequate knowledge, whereas in post – test majority of 90% of clients had moderately adequate knowledge and 10% adequate knowledge.
- The frequency and percentage of pre-test and post-test level of practice regarding lifestyle modification for hypertension in experimental group. In pre – test 53% of clients had poor practice, 43% had moderate practice and 4% had good practice. In post – test 50% had moderate practice and 50% had good practice.
- The comparison of pre – test and post – test scores of knowledge in experimental group. The mean pre – test score is 9.33 and mean post – test score is 19.5. the Paired "t" test value was 18.09 when compared to table value (1.69) is high. It seems that

structured teaching programme makes significant difference between pre – test and post – test scores of knowledge in experimental group.

- That the comparison of pre – test and post – test scores of practice in experimental group. The mean pre – test score is 18.73 and mean post – test score is 29.43. the Paired "t" test value was 12.47 when compared to table value (1.69) is high. It seems that structured teaching programme makes significant difference between pre – test and post – test scores of practice in experimental group.
- Analysis of the difference between the mean post-test score of knowledge in control and experimental group. The mean post-test value of control group was 10.7 which is lesser than the post-test value 19.5 of experimental group. The Unpaired t value was *7.27 when compared to table value (2) is high. The findings show there is significant increase in the level of knowledge in experimental group than control group. It indicates the effectiveness of structured teaching programme in increasing knowledge level regarding life style modification
- Analysis of the difference between the mean post-test score of practice in control and experimental group. The mean post-test value of control group was 18.6 which is lesser than the post-test value 29.43 of experimental group. The Unpaired t value was *3.35 when compared to table value (2) is high. The findings show there is significant increase in the level of practice in experimental group than control group. It indicates the effectiveness of structured teaching programme in increasing practice level regarding life style modification.
- The relationship between the mean post-test knowledge score and mean post- test practice score of experimental group, the correlation co-efficient was obtained. The post-test mean knowledge value 19.5 was higher than the pre-test mean value 10.7

and the post-test mean practice value 29.43 was higher than the pre-test mean value 9.33. The obtained r value 0.45 was significant at 0.05 level. The findings shows when the post-test knowledge score was increased along with that the post-test practice score. It indicates there was a positive relationship between post-test score of knowledge and practice in experimental group.

- There was significant association between the post-test score of knowledge in control group and marital status. **($p<0.05$)**
- There was a significant association between the post-test score of knowledge in experimental group and B.M.I. **($P< 0.05$)**

CONCLUSION

This study proved to be very essential as structured teaching programme play an important role in enhancing knowledge and practice regarding lifestyle modification among hypertensive patients.

RECOMMENDATIONS:

- A similar study can be conducted on a larger sample.
- A similar study can be done using true experimental design.
- A similar study can be conducted with a post-test after 4 weeks, 6 weeks interval to evaluate the retention of knowledge.
- A similar study can be compared with other alternative programmes like video assisted teaching programme, self instructional module etc,.

KEYWORDS:

Structured teaching programme, lifestyle modification, hypertension, hypertensive patients.

CHAPTER 1

INTRODUCTION

"Eat healthily, sleep passionately, breathe deeply, move harmoniously."

— Jean-Pierre Barral

Good health is a boon. It is the real jewel of life, the most precious possession of man. Next to life, good health is the most precious gift and is necessary for a purposeful existence. If a man losses his health, the world losses all it charms for him.

"Healthy citizens are the greatest asset any country can have." **- (Winston Churchill)**

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. **(W.H.O.)**

A disease is a condition that impairs the proper function of the body or of one of its parts. Every living thing, both plants and animals, can succumb to disease. Hundreds of different diseases exist. A disease is a particular abnormal, pathological condition that affects part or all of an organism. It is often construed as a medical condition associated with specific symptoms and signs. (Dorland's Medical Dictionary). Each disease has its own particular set of symptoms and signs, clues that enable a physician to diagnose the problem. Every disease has a cause, although the accuses of some remain to be discovered. Every disease also displays a cycle of onset, or beginning, course, or time span of affection, and end, when it disappears or it partially disables or kills its victim. An acute disease has a quick onset and runs a short course. A chronic disease has a slow onset and runs a sometimes years-long course. Infectious, or communicable, diseases are those that can be passed between persons such as by means of airborne droplets from a cough or

sneeze. Non-infectious, or non-communicable diseases are caused by malfunctions of the body.

"A healthy body is the guest-chamber of the soul, a sick body is a prison."

- (Francis Bacon)

We live in a rapidly changing environment. Throughout the world, human health is being shaped by the same powerful forces: demographic ageing, rapid urbanization, and the globalization of unhealthy lifestyles. Increasingly, wealthy and resource-constrained countries are facing the same health issues. One of the most striking examples of this shift is the fact that non-communicable diseases such as cardiovascular disease, cancer, diabetes and chronic lung diseases have overtaken infectious diseases as the world's leading cause of mortality. And one of the cardiovascular diseases, by which most of the people are affected, is HYPERTENSION.

'Hypertension, or high blood pressure, is defined as a persistent systolic BP greater than or equal to 140 mm Hg, diastolic BP greater than or equal to 90mm Hg, or current use of antihypertensive mediation.' **(Sharon Lewis)**

One of the key risk factors for cardiovascular disease is hypertension - or raised blood pressure. Hypertension already affects one billion people worldwide, leading to heart attacks and strokes. Researchers have estimated that raised blood pressure currently kills nine million people every year. But this risk does not need to be so high.

Globally cardiovascular disease accounts for approximately 17 million deaths a year, nearly one third of the total. Of these, complications of hypertension account for 9.4 million deaths worldwide every year. Hypertension is responsible for at least 45% of deaths due to heart disease, and 51% of deaths due to stroke.

In 2008, worldwide, approximately 40% of adults aged 25 and above had been diagnosed with hypertension; the number of people with the condition rose from 600 million in 1980 to 1 billion in 2008.The prevalence of hypertension is highest in the African Region at 46% of adults aged 25 and above, while the lowest prevalence at 35% is found in the Americas. Overall, high-income countries have a lower prevalence of hypertension - 35% - than other groups at 40%. **(W.H.O.)**

The prevalence of hypertension in the late nineties and early twentieth century varied among different studies in India, ranging from 2-15% in Urban India and 2-8% in Rural India. Review of epidemiological studies suggests that the prevalence of hypertension has increased in both urban and rural subjects and presently is 25% in urban adults and 10-15% among rural adults. The prevalence of hypertension in the last six decades has increased from 2% to 25% among urban residents and from 2% to 15% among the rural residents in India. According to Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India, the overall prevalence of hypertension in India by 2020 will be 159.46/1000 population. Various factors might have contributed to this rising trend, attributable to several indicators of economic progress such as increased life expectancy, urbanization and its attendant lifestyle changes including increasing salt intake and the overall epidemiologic transition India is experiencing currently. Another factor that may contribute is the increased awareness and detection.

A study published in the International Journal of Public Health reported 21.4 per cent hypertension prevalence in about 10,500 people (aged 25-64) in 11 villages in the State. Prevalence was nearly the same in both sexes.

A combination of genetic (non-modifiable) and environmental (modifiable) risk factors are thought to be responsible for the development of hypertension, although the cause remains unknown. Non-modifiable risk factors—those that cannot be changed—include a family history of hypertension, age, ethnicity, and diabetes mellitus. Modifiable risk factors—those that can be changed—include blood glucose levels, activity levels, smoking, and salt and alcohol intake.

Concerning the treatment, the goal of hypertension treatment is to prevent death and complications by achieving and maintaining the arterial blood pressure at 140/90 mm Hg or lower. This is achieved by two kinds of management strategies, they are life style modification and drug therapy.

Life style modifications are nothing but to modify or avoiding ones' habit that puts him in the risk of further worsening his disease. In medical terms it is terminating the risk factors in one's life. For hypertension this includes losing weight if overweight, limiting alcohol intake to no more than 30 ml, increasing aerobic physical activity (30 to 45 minutes most days of the week), reduction of sodium intake to no more than 100 mmol per day (2.4 g sodium or 6 g sodium chloride), maintaining adequate intake of dietary potassium (approximately 90 mmol per day), maintaining adequate intake of dietary calcium and magnesium for general health, stop smoking and reduce intake of dietary saturated fat and cholesterol.

'A natural healing force within each of us is the greatest force in getting well.'

(Hippocrates)

And next is drug therapy - for patients with uncomplicated hypertension and no specific indications for another medication, the recommended initial medications include

diuretics, beta-blockers, or both. Patients are first given low doses of medication. If blood pressure does not fall to less than 140/90 mm Hg, the dose is increased gradually, and additional medications are included as necessary to achieve control. When the blood pressure has been less than 140/90 mm Hg for at least 1 year, gradual reduction of the types and doses of medication is recommended. To promote compliance, clinicians try to prescribe the simplest treatment schedule possible, ideally one pill once each day.

If hypertension is not treated it will lead to severe life threatening complications. Common complications of hypertension include coronary artery disease, atherosclerosis, myocardial infarction (MI), heart failure (HF), stroke, and kidney or eye damage. The severity and duration of the increase in blood pressure determine the extent of the vascular changes causing organ damage. High blood pressure levels may also result in an increase in the size of the left ventricle, referred to as hypertrophy. Elevated blood pressure damages the small vessels of the heart, brain, kidneys, and retina. The results are a progressive functional impairment of these organs, known as target-organ disease.

Hypertension can be prevented. Doing so is far less costly, and far safer for patients, than interventions like cardiac bypass surgery and dialysis that may be needed when hypertension is missed and goes untreated. They need to know that raised blood pressure and other risk factors such as diabetes often appear together. To raise this kind of awareness, countries need systems and services in place to promote universal health coverage and support healthy lifestyles: eating a balanced diet, reducing salt intake, avoiding harmful use of alcohol, getting regular exercise and shunning tobacco.

Access to good quality medicines, which are effective and inexpensive, is also vital, particularly at the primary care level. As with other non-communicable diseases,

awareness aids early detection while self-care helps ensure regular intake of medication, healthy behaviours and better control of the condition. High-income countries have begun to reduce hypertension in their populations through strong public health policies such as reduction of salt in processed food and widely available diagnosis and treatment that tackle hypertension and other risk factors together. Many can point to examples of joint action – across sectors – that is effectively addressing risk factors for raised blood pressure.

'Prevention and control of raised blood pressure is one of the cornerstones.'

NEED FOR THE STUDY

Hypertension is a chronic condition of concern due to its role in the causation of coronary heart disease, stroke and other vascular complications. It is the commonest cardiovascular disorder, posing a major public health challenge to population in socio-economic and epidemiological transition.

A meta-analysis of prevalence studies on hypertension in India from January 2000 to June 2012 reveals a high prevalence of hypertension in the urban (40.8%) as well as rural population (17.9%). The prevalence of hypertension is markedly higher in the urban population compared to the rural population, but the prevalence in the rural population is also a matter of concern with almost every fifth individual at risk. This is indicative of the epidemiological transition, which must raise an alarm for policy makers and health care professionals. Primordial and primary prevention of hypertension can bring about a substantial reduction in cardiovascular morbidity and mortality which occurs as a consequence of hypertension.

(**Tanu Midha *et al,* 2013)**

The treatment of hypertension is no longer limited to the simple prescription of pharmaceuticals. For many patients, maximal medical therapy is insufficient to adequately treat refractory hypertension. In addition, some patients may prefer to explore therapies that do not involve drugs as an initial step. Utilizing our broadening understanding of the physiology of hypertension, new technology and interventions have been developed that allow for treatments that do not rely on medications. In addition, dietary supplements and modification, as well as herbal supplements, may be useful under the right circumstances. Lifestyle modification remains a necessary part of treatment for all patients with hypertension. **(Woolf KJ 2011)**

Patients with hypertension are advised to lower their blood pressure to <140/90 mm Hg through sustained lifestyle modification and/or pharmacotherapy. To describe the use of lifestyle changes for blood pressure control and to identify the barriers to these behaviors, the data from 6,142 Canadians with hypertension who responded to the 2009 Survey on Living With Chronic Diseases in Canada were analyzed. Men, those aged 20 to 44 years, and those with lower educational attainment and lower income were, in general, less likely to report engaging in lifestyle behaviors for blood pressure control. A low desire, interest, or awareness were commonly reported barriers to salt restriction, changes in diet, weight loss, smoking cessation, and alcohol reduction. In contrast, the most common barrier to engaging in physical activity to regulate blood pressure was the self-reported challenge of managing a coexisting physical condition or time constraints.

In conclusion, programs and interventions to improve the adherence to lifestyle changes to treat hypertension may need to consider the identified barriers to lifestyle behaviors in their design. **(Bienek A *et al*, 2011)**

Obesity-related hypertension is increasingly recognized as a distinct hypertensive phenotype requiring a modified approach to diagnosis and management. In this review rapidly evolving insights into the complex and interdependent mechanisms linking obesity to hypertension are discussed. Overweight and obesity are associated with adipose tissue dysfunction, characterized by enlarged hypertrophied adipocytes, increased infiltration by macrophages and marked changes in secretion of adipokines and free fatty acids. This results in chronic vascular inflammation, oxidative stress, activation of the renin-angiotensin-aldosterone system and sympathetic overdrive, eventually leading to hypertension. These mechanisms may provide novel targets for anti-hypertensive drug treatment. Recognition of obesity-related hypertension as a distinct diagnosis enables tailored therapy in clinical practice. This includes lifestyle modification and accommodated choice of blood pressure-lowering drugs. **(Dorresteijn JA 2012)**

Hypertension is the most common lifestyle related disease in Japan. Among the lifestyle modifications, salt restriction is most important especially in Japanese hypertensive patients. Although Japanese as well as international guidelines recommend the restriction of salt intake less than 6 g/day, very few Japanese hypertensive patients are able to achieve this goal. Other lifestyle modifications include the increased intake of vegetables and fruits, maintenance of appropriate body weight, regular exercise, the restriction of alcohol intake and cessation of smoking. It is emphasized that comprehensive lifestyle modification is more effective. Since the long-term compliance of lifestyle modification is difficult, a strategy to promote lifestyle modification by encouraging individual subject should be established. **(Tsuchihashi T 2011)**

Hypertension is the major risk factor for the development of cardiovascular and renal disease. This disease has a disproportionate effect on African Americans when compared to other races. The purpose of this project was to examine the effectiveness of healthy lifestyle modifications on blood pressure control among hypertensive African American adults. Thirty-six individuals participated in the 12-week project, with a 67% retention rate. Weekly sessions included interactive educational and walking components. Initial and final BMI measurements were recorded. Participants completed health risk assessments; pre and post questionnaires; and, daily logs of blood pressure measurement, dietary consumption, and physical activity levels. Data were collected from the logs, BMI measurements, and questionnaires. Overall, the results revealed that participants experienced an increase in healthy lifestyle modification adoption resulting in blood pressure control improvement. Implementation of healthy lifestyle modifications is crucial in providing quality patient care to hypertensive individuals. **(Rigsby BD 2011)**

Since masked hypertension (MHT) is high risk for cardiovascular disease, the importance of home blood pressure (HBP) control is emphasized. The aim of this study was to investigate the prevalence of MHT in the treated hypertensives and the consequence of their BP control status after a 1-year follow up period. Results suggest that one-third of MHT patients showed the improvement of HBP after the 1-year follow-up period. Not only intensive antihypertensive treatment with the appropriate use of diuretics, but also the encouragement of lifestyle modification including alcohol restriction, seems to be important to the management of MHT. **(Ohta Y 2011)**

Study conducted in Japan investigate the status of adherence to lifestyle modifications and BP control status in hypertensive outpatients. It is concluded that about

60% of the patients achieved goal BP by the intensive combination therapy. The lifestyle modification seems to be important especially for the young, male and obese patients. The treatment of high blood pressure must normally be life-long and this presents problems of patient compliance, which is defined as "the extend to which patient behavior (in terms of taking medicines, following diets or executing other life-style changes) coincides with clinical prescription." The compliance rate can be improved through education directed to patients, families and the community. **(Ohta Y 2011)**

Client education is an integral part of nursing care. It is the nurse's responsibility to assist the client to identify the learning needs and resources that will restore and maintain an optimal level of functioning. Client education is extremely important today in a health care environment that demands cost-effective measures. Client education, a hallmark of quality nursing care, is a fiscally responsible intervention that encourages health care consumers to engage in self-care and to develop healthy lifestyle practices. According to Edelman and Mandle (1997), the goal of health education is to help individuals achieve optimum states of health through their own actions. Teaching, one of the most important nursing functions, addresses clients' need for information. Often, a knowledge deficit about the course of illness and/or self-care practices hinders a client's recovering from illness or engaging in health promotion behaviors. The nurse's charge bridges the gap between what a client knows and what a client needs to know in order to achieve optimum health.

Among the medical and paramedical personnel it is nurses who spent more time with the patients. Nurses are vital in ensuring holistic assessment and management of patients with hypertension. The patient needs to understand the disease process and how

lifestyle changes and medications can control hypertension. The nurse needs to emphasize the concept of controlling hypertension rather than curing it. The responsibility of educating the patient on the disease condition, its management and life style modification for hypertension to a large extend lies on the nurses.

STATEMENT OF THE PROBLEM:

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

OBJECTIVES OF THE STUDY:

1. To assess the level of knowledge and practice regarding life style modification among hypertensive patients before and after the structured teaching programme.
2. To implement and evaluate the effectiveness of structured teaching programme on the knowledge and practice regarding lifestyle modification among hypertensive patients.
3. To find out the relationship between knowledge and practice regarding life style modification among hypertensive patients.
4. To find out the association between knowledge and practice among hypertensive patients with selected demographic variables such as age, gender, marital status etc,.

RESEARCH HYPOTHESES:

H_1 – There will be significant enhancement in the level of knowledge and practice regarding lifestyle modification among hypertensive patients after structured teaching programme.

H_2 – There will be significant relationship between knowledge and practice regarding lifestyle modification among hypertensive patients.

H_3 – There will be significant association between the level of knowledge and practice regarding lifestyle modification with selected demographic variables like age, gender, religion, marital status, education status, type of occupation, monthly income, type of family, dietary pattern, personal habits, residential area, family history of hypertension, when hypertension was diagnosed, and Body Mass Index.

ASSUMPTIONS:

- People who have recently diagnosed with hypertension have inadequate knowledge regarding the need of lifestyle modification for hypertension.
- Structured teaching programme enhances the knowledge and practice regarding lifestyle modification among hypertensive patients.
- Demographic variables influences the knowledge and practice among hypertensive patients regarding lifestyle modification.

LIMITATIONS:

The study is limited to

- Hypertensive patients attending medicine O.P.D. in Government Head quarters hospital, Erode.
- Patients who are recently got diagnosed with hypertension.
- Sample size is limited to 60 only.
- The study period is limited to 4 – 6 weeks only.

OPERATIONAL DEFINITIONS:

Assess

It refers to estimate or judge the value, character, etc., of.

In this study it refers to evaluating the level of the knowledge and practice regarding lifestyle modification among hypertensive patients.

Effectiveness

It refers to adequate to accomplish a purpose; producing the intended or expected result.

In this study it refers to the enhancement in knowledge and practice regarding lifestyle modification among hypertensive patients.

Knowledge

It refers to familiarity with someone or something, which can include fact, information, descriptions, skills acquired.

In this it refers to awareness and familiarity about lifestyle modification for hypertensive patients which is measured by self structured questionnaire.

Practice:

It refers to the actual application or use of an idea, belief, or method, as opposed to theories relating to it.

In this study it refers to application of knowledge regarding lifestyle modification for hypertension in day to day life, which is measured by self structured questionnaire.

Hypertension:

Hypertension or high blood pressure, is defined as a persistent systolic blood pressure 140 mm Hg and above, diastolic blood pressure 90 mm Hg and above, or current use of antihypertensive medication.

In this study patients with a persistent systolic blood pressure 140 mm Hg and above, diastolic blood pressure 90 mm Hg and above, or current use of antihypertensive medication and who got recently diagnosed with hypertension.

Structured teaching programme:

Structured teaching programme is a system of projects or services intended to meet a public need

In this study it refers to teaching programme which is structured by the researcher and will be given by using L.C.D. about the life style modifications for hypertensive patients.

Lifestyle modification:

Lifestyle modification is defined as the application of environmental, behavioural, medical and motivational principles to the management of lifestyle-related health problems in a clinical setting.

In this it refers to the application of environmental, behavioral, medical, and motivational principles to the management of hypertension in day to day life.

CONCEPTUAL FRAMEWORK

Conceptual frameworks are inter-related concepts that assembled together in some rational scheme by virtue of their relevance to a common theme. Conceptual framework helps to stimulate research and the extension of knowledge by providing both direction and inputs. **(Polit and Hungler, 1999)**

Conceptual framework is the precursor of a theory. It provides broad prospective for nursing practice, research and education. Conceptual framework plays several inter-related roles in the progress of science. Their overall purpose is to make scientific and meaningful findings and also to generalize the findings.

(Polit and Hungler, 1999)

The present study is focused on the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients. The study is based upon **J.W.Kenny's open system model**. The system's theory is concerned with changes due to interrelation between various factors in a situation. All living systems are open, in which there is a continual exchange of matter, energy and information. Open system have varying degrees of input and gives back output in form of matter, energy and information.

The concepts of Kenny"s open system model are input, throughput, output and feedback. Input refers to matters and information, which are continuously processed through the system and released as outputs. After processing the input, the system returns output (matter and information) to the environment in as altered state, affecting

the environment for information to guide its operation. This feedback information of

environment responses to the systems output is used by the system in adjustment correlation with the environment. Feedback may be possible, negative or neutral. In this study the concepts have been modified as follows.

INPUT:-

According to J.W. Kenny"s input can be matter, energy and information from the environment. In the present study the input refers to assessment of the level of knowledge and practice regarding life style modification among hypertensive patients.

THROUGHPUT:-

Throughput was the implementation of structured teaching programme regarding lifestyle modification among hypertensive patients.

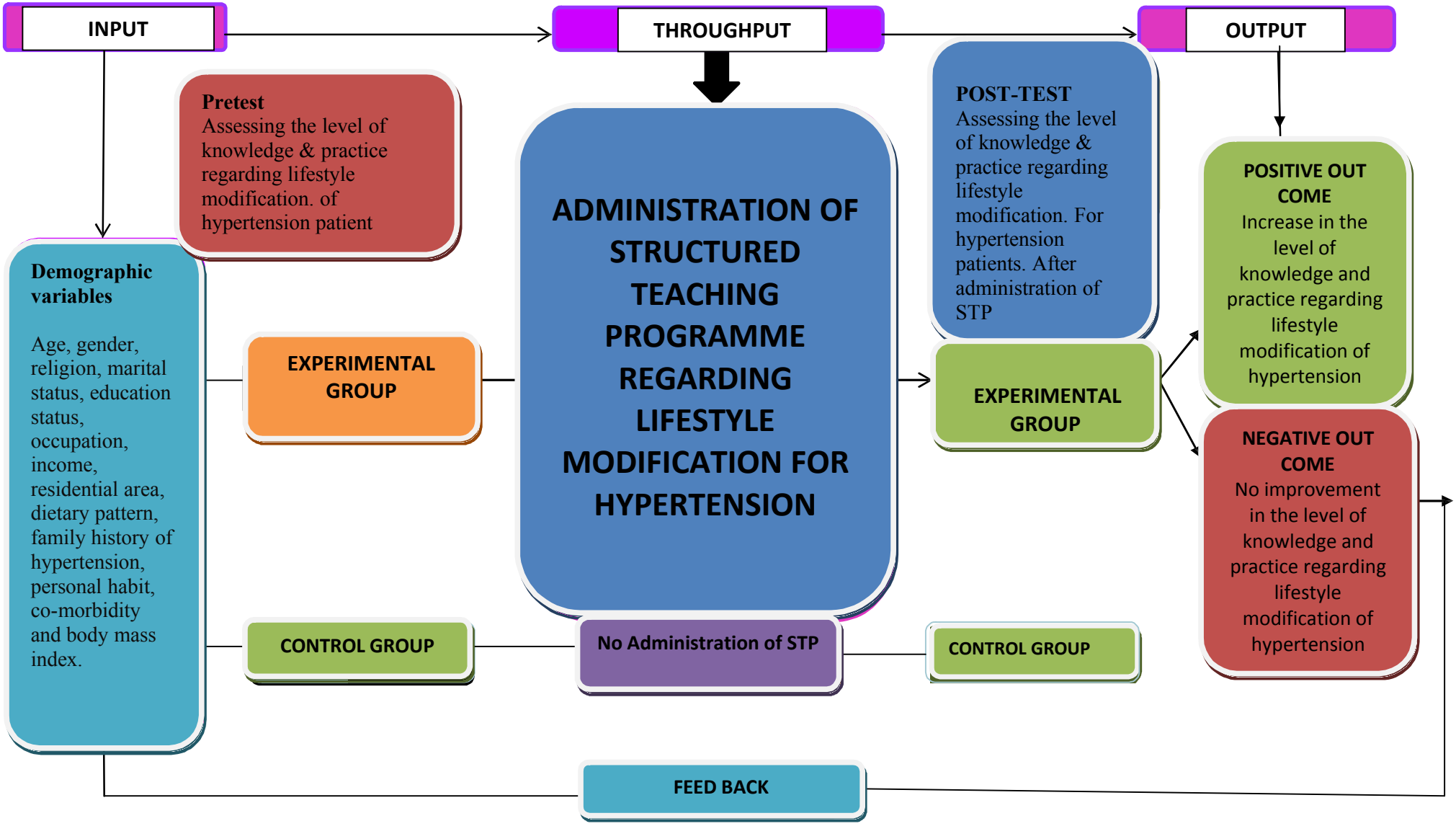
OUTPUT:-

The expected outcome was obtained by assessing the level of knowledge and practice regarding life style modification among hypertensive patients through self-structured questionnaire. The output was considered in terms of change in posttest level of knowledge and practice regarding life style modification obtained through self-structured questionnaire.

FEEDBACK:-

Differences in pre and post-test scores were observed from the level of knowledge and practice scores of the sample. In the present study, the feedback considered as a process of maintaining the effectiveness of structured teaching programme. Feedback was based on the analysis of post-test scores, the intervention strategy can be modified if necessary and the same pattern can be followed once again.

Figure-1 **CONCEPTUAL FRAMEWORK BASED ON MODIFIED J.W KENNY'S OPEN SYSTEM**



CHAPTER – II

REVIEW OF LITERATURE

Review of literature is an essential step in the development of research project and broadening the understanding and developing an insight into the phenomena. A literature review is a written summary of the state of existing knowledge on a research problem. The task of reviewing research literature involves the identification, selection, critical analysis and written description of existing information on a topic. (**Polit and Hungler, 1999)**

The review of literature provides a basis for future investigations, justifies the need for replication, throws light on the feasibility of the study, indicates constraints of data collection and helps to relate findings from one study to another. It also helps to establish a comprehensive body of scientific knowledge in a professional discipline from which valid and pertinent theories may be developed.

(Abdellah and Levine 1979)

The present study will reveal the effectiveness of structured teaching programme regarding lifestyle modification for hypertensive patients on knowledge and practice. An extensive review was made to strengthen the present study in order to lay down foundation. The related literatures for this study are divided under different subtitles.

- Studies related to people knowledge and practice regarding hypertension.
- Studies related to effectiveness of lifestyle modification on hypertension.
- Studies related to people's knowledge and practice on lifestyle modification for hypertension.
- Studies related to effectiveness of structured teaching programme on lifestyle modification.

STUDIES RELATED TO PEOPLE KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING HYPERTENSION:

Aleksandra Piwońska (2012) conducted a cross-sectional study of a random sample of the Polish population was including 6977 men and 7792 women aged 20–74 year in the WOBASZ (Wieloośrodkowe Ogólnopolskie BadanieStanu Zdrowia Ludności). Data were collected using a questionnaire. They analyzed how many respondents knew their blood pressure (BP) and classified it correctly, knew the upper limit of normal BP values (BPlim), and complications of untreated hypertension. Statistical analysis was performed using the c2 test. Overall, 51% of men and 56% of women reported they knew BPlim ($p < 0.0001$), but about 50% of them identified it within the normotensive range, 40% reported it at the level corresponding to stage I HT, and 8% of men and 6% of women even reported it as >160/100mm Hg. Fifty-nine percent of men and 69% women ($p < 0.0001$) reported being aware of their own BP, but only 72% of these men and 80% of these women classified it correctly. The most often mentioned HT complications were stroke (58% men and 69% women, $p < 0.01$) and myocardial infarction (60% and 65%, respectively, $p < 0.01$), and 32% of men and 23% of women did not know any complications of HT ($p < 0.01$). Older, more educated persons and those with HT or family history of death to CVD had greater knowledge on HT. Knowledge concerning HT is still insufficient in the Polish population, with women being more knowledgeable than men. Age, education level, HT status, and a family history of death due to CVD were significant independent predictors of knowledge level.

Mumtaz Ali Shaikh (2011) conducted a prospective and descriptive, study on 1000 diagnosed hypertensive patients at medical outdoor department of Liaquat University of

Medical and Health Sciences (LUMHS) in Pakistan. Appointed medical persons questioned the patients assessing various factors as lifestyle and risk factors. The special case sheets were prepared, containing all the information as name, age, sex, address, family history, personal history, marital status of the patients. Case sheets were containing special questionnaire to study the knowledge about hypertension, its control and complications. Results were analyzed by SPSS 10. The age of patients ranged from 19 years to 95 years with mean age of 50.5 years and median age of 47.5 years. 48% patients belonged to grade 1 education grade, 32% belonged to grade 2, 13% belonged to grade 3, and 7% belonged to grade 4. 10% patients can explain the hypertension, mostly in higher education grade. 76% patients can tell that salt is not good for hypertension. 22% patients had good compliance about the drugs. 50% can say good control is advantageous for health. 6% have knowledge about complications. Our study concludes that a significant proportion of hypertensive patients have poor knowledge about hypertension.

Godfrey B.S. Iyalomhe (2010) conducted a qualitative phenomenological survey in Auchi in Niger Delta region in Nigeria with 108 randomly selected hypertensive, to determine hypertensive patients' knowledge, perceptions, attitudes and life-style practices so as to optimize their health and treatment needs. They examined by means of a self-structured questionnaire and a detailed interview. Analysis was by statistical package for social sciences (SPSS) and chi-square of the Graph Pad Prism software was used for significance tests at 0.05 level. More males 60 (55.6%) than females 48 (44.4%) were assessed. Their age range was 35 – 80 years (mean = 59.05 ± 9.06 years), the modal age group was 56 – 60 years (24.1%). Sixty-six respondents (61%) knew hypertension to be high blood pressure (BP), 22 (20%) thought it meant excessive thinking and worrying

while 57 (53%) claimed it was hereditary. Forty-three (40%) felt it was caused by malevolent spirits, 32 (30%) believed it was caused by bad food or poisoning. A few (18%) knew some risk factors. Symptoms attributed to hypertension were headache, restlessness, palpitation, excessive pulsation of the superficial temporal artery and "internal heat", but 80 (74%) attested to its correct diagnosis by BP measurement. Although 98 (90.7%) felt the disease indicated serious morbidity, only 36 (33.3%) were adherent with treatment and fewer practiced life-style modification. Thirty-two (30%) knew at least one antihypertensive drug they use. Psychosocial factors like depression and anxiety fear of addiction and intolerable drug adverse effects impacted negatively on patients' attitude to treatment. They conclude that patients' knowledge of hypertension in Auchi is low and their attitudes to treatment negative. Patient education, motivation and public enlightenment are imperative.

Fakhri Sabouhi (2009) conducted a cross-sectional, correlation-descriptive study with 234 patients were recruited by random sampling among hypertensive patients referring to public health care centers in Khoor & Biabanak(an area in Isfahan Iran). Data gathering was carried out with a questionnaire. Data analysis was carried out SPSS software with descriptive and inferential statistics. Data analysis show that there is significant relationship between awareness and knowledge ($P = 0.003$), awareness and attitude ($P = 0.0001$), awareness and practice ($P = 0.0001$). There is no significant relationship between knowledge and attitude, or knowledge and practice. In addition, there is significant relationship between attitude and practice ($P = 0.0001$). There is significant relationship between knowledge score and age ($p = 0.002$), but there is no significant relationship between age and awareness, attitude and practice score ($p > 0.05$). In addition, a

significant relationship is seen between length of disease, knowledge and practice score ($p < 0.05$). Although there is no significant relationship between educational level and awareness, attitude and practice score ($p = 0.001$) but it is significant relationship between knowledge score and educational level ($p < 0.05$). There is significant difference between men and women awareness score ($p < 0.005$), but this difference is not seen in other aspects (knowledge, attitude, practice) ($p > 0.05$).And finally women awareness score was more than men ($p = 0.0007$).

Yadlapalli S. (2008) conducted a cross-sectional prevalence Study to find out the Knowledge and perceptions about hypertension among neo- and settled-migrants in Delhi, India. Data pertaining to blood pressure, height, weight; socio-demographic details and knowledge and perceptions on hypertension were obtained from a total of 453 individuals (227 neo-migrants and 226 settled-migrants) aged 20 years and above. The responses to open-ended questions were narrative and were categorized during analysis. Percentages were calculated and chi-square test was used as a test of significance of difference. A value of p less than 0.05 was taken as the minimum level of significance. SPSS v 13.0 (SPSS Inc., Chicago, IL, USA) was used for analyses. Awareness and understanding of Hypertension - around 5% settled-migrants and 14% neo-migrants could not explain its meaning 18% of neo-migrants and 13% settled-migrants, hypertension means dizziness; and some stated that hypertension means anxiety/palpitation. Perceptions on the seriousness of hypertension - 58% (neo-migrants) and 70% (settled-migrants), of those who had heard of hypertension, expressed that hypertension is a serious problem Knowledge on reasons for hypertension - A majority (49% neo- and 61% settled migrants), who had heard of hypertension, highlighted tensions/ anger as the reason for

hypertension Poverty and poor diet were seen as probable reasons by neo-migrants (7%) Knowledge and perceptions on consequences of hypertension - Only 50% of hypertensives and 43% of normotensives perceived that hypertension leads to other diseases. Perceptions on who is prone to hypertension - A considerable proportion of the neo-migrants (41%) compared to settled-migrants (15%) indicated that anybody can get hypertension. Around 29% of settled-migrants and 14% of neo-migrants considered tense and short tempered people are prone to hypertension. Around 17% of settled-migrants and only one of the neo-migrants informed that over weight/obese individuals get hypertension. Several other perceptions were also reported. Knowledge on treatment and prevention/ control of hypertension - 96% mentioned that it can be treated by medicines, and a few considered lifestyle changes. The study underscores the importance of increasing public health knowledge and awareness in preventing and controlling hypertension along with the provision of primary health care services with an emphasis on hypertension and related cardiovascular diseases for these socio-economically disadvantaged communities.

STUDIES RELATED TO EFFECTIVENESS OF LIFESTYLE MODIFICATION ON HYPERTENSION:

Adel Al-Wehedy (2014) conducted a quasi-experimental research with 84 hypertensive elderly patients attending outpatient clinics of the specialized medical hospital, Mansoura university hospital to determine the effect of lifestyle intervention on controlling hypertension among older adults at Egypt. The subjects were alternatively divided into two equal groups; the first was study group, comprised of 42 patients and they were received the lifestyle intervention regarding control blood pressure. The second was control group, comprised of 42 patients and exposed to routine outpatient care only. Data was collected

using 3 tools, socio-demographic and clinical data structured interview sheet, hypertension knowledge, and health promoting lifestyle profile. Data was analyzed using PC with statistical package for social science (SPSS) version 16. The age of the study group ranged from 60 to 79 years, with a mean age of 65.64 }4.88 years, while it ranged from 60 to 76 years, with a mean age of 65.11 }3.97 years for those in the control group. Females were more prevalent in the studied sample. Illiteracy was prevailing among 38.1%, and 45.2% of the study and control groups respectively. knowledge of the study group increased significantly immediately after applying sessions where P values were found to be (0.000) In the study group, systolic and diastolic blood pressure measurements decreased significantly post 6 months of session implementation (P=0.000 and 0.000 respectively). study group total cholesterol TC, triglycerides TG, and LDL levels decreased after 6 months from the program. The differences were statistically significant (P=0.000 for each) Conclusion of the study is the lifestyle intervention program was effective in the control of blood pressure via adoption of healthy behaviors.

Huang S (2011) conducted an experimental study with 1632 participants to evaluate the effects of a community intervention program, which focused on improving the HTN knowledge, diets and lifestyles in a rural China. A total of 1632 participants were recruited. Of the participants, 826 from the town of Xiaoxita and 806 from the town of Fenxiang were assigned to the intervention group (group I) and to the control group (group C), respectively. Group I participants underwent an intervention that included HTN education and dietary and lifestyle guidance. Group C participants were not subjected to an intervention. The outcome measures included HTN knowledge, dietary and lifestyle behaviors, and prevalence, awareness, treatment and control rates of HTN. Along with the

changes in HTN education (P<0.05), the participants in group I exhibited a significantly greater improvement in dietary habits and lifestyle behaviors, including reducing salty food intake (13.6%), fat intake (22.9%) and alcohol consumption (9.6%), after 3 years in comparison with those in group C (21.7, 31.9 and 18%, respectively). The prevalence of HTN was significantly lower in group I (22.5%) than in group C (36%) after the intervention strategies. The study showed that the implementation of a community intervention program involving HTN education and lifestyle modifications for rural residents is a powerful approach to reduce HTN prevalence and improve long-term health outcomes.

Rigsby BD (2011) conducted an experimental research with 36 individuals in Alabama (U.S.A.) Southern Community College to examine the effectiveness of healthy lifestyle modifications on blood pressure control among hypertensive African American adults. Individuals participated in the 12-week project, with a 67% retention rate. Weekly sessions included interactive educational and walking components. Initial and final BMI measurements were recorded. Participants completed health risk assessments; pre and post questionnaires; and, daily logs of blood pressure measurement, dietary consumption, and physical activity levels. Data were collected from the logs, BMI measurements, and questionnaires. Overall, the results revealed that participants experienced an increase in healthy lifestyle modification adoption resulting in blood pressure control improvement.

STUDIES RELATED TO PEOPLE'S KNOWLEDGE AND PRACTICE ON LIFESTYLE MODIFICATION FOR HYPERTENSION:

Afia F A Marfo (2014) conducted a prospective study with 516 patients out at three selected hospitals in the Greater Accra and Ashanti Region (Ghana) to evaluate the level

of knowledge of hypertensive patients with regard to administration of medicines and life style modifications for the management of hypertension, as this can affect control levels. Patients were interviewed using a semi structured questionnaire which captured data on patients knowledge on the purpose, side effects, frequency, duration of medicines and life style modification for managing hypertension. 193 (37%) of the patients were males and 323(63%) were females. 184 (36%) had middle school education. 201 (39%) were aware of side effects of medicines dispensed for the management of hypertension whereas 490(95%) knew the frequency of administering antihypertensive dispensed. The mean antihypertensive knowledge score obtained was 2.6221 [SD: 1.30816] out of 5. The p - value obtained for the effect of education on patients knowledge on the administration of antihypertensive 0.000. Three hundred and twenty respondents (62%) and 195 (37%) of respondents were aware of lifestyle modification such as reducing dietary salt intake and avoiding cigarette smoking. The mean score obtained for respondents knowledge on life style modification was 2.4981[SD: 1.25334] The chi square test value obtained for the effect of gender and educational background on patient knowledge on life style modification for the management of hypertension were [13.294, df=4, p=0.010], [26.603, df=16,p=0.046] respectively. It is concluded that the patient's knowledge on the administration of medicines and lifestyle practices for the management of blood pressure can be graded as average. There is the need for initiates to address counseling and monitoring of hypertensive patients with regard to their therapy (both medicines and lifestyle practices) in settings were the number of health professionals are limited and literate levels are low.

Manju. V (2012) conducted a descriptive survey with 60 Hypertensive patients to identify and determine the level of the knowledge and attitude of Hypertensive patients regarding Life style modification at selected Hospitals of Bangalore, Karnataka. The investigator had utilized Non probability convenient sampling for the selection of the subjects. The result of this study shows that - The level of knowledge of Hypertensive patients regarding Life style modification shows 16.7 % of them having poor knowledge and 65 % of them having average knowledge, 18.3% of them having good knowledge. The level of attitude of hypertensive patients on life style modification shows 13.3% of them having unsatisfactory attitude, 53.4% of them having moderately satisfactory attitude, 33.3% of them are having satisfactory attitude. The Correlation between Knowledge and Attitude of Hypertensive patients regarding Life style modification shows significant positive, moderate correlation. The researcher prediction says when knowledge increases their attitude score also increases moderately. Based on the study there was an association between the knowledge and attitude score of the Hypertensive patients with selected socio-demographic variables like age, family history of Hypertension and habits are significantly associated with their level of knowledge and sex, occupation and type of family are significantly associated with their level of attitude. The result of this study shows that - The level of knowledge of Hypertensive patients regarding Life style modification shows 16.7 % of them having poor knowledge and 65 % of them having average knowledge, 18.3% of them having good knowledge. The level of attitude of hypertensive patients on life style modification shows 13.3% of them having unsatisfactory attitude, 53.4% of them having moderately satisfactory attitude, 33.3% of them are having satisfactory attitude. Correlation Knowledge & attitude Mean ± SD 9.40±2.28, 26.23±7.50 Karl pearson

Correlation coefficient r=0.52, P=0.001. The Correlation between Knowledge and Attitude of Hypertensive patients regarding Life style modification shows significant positive, moderate correlation. The researcher prediction says when knowledge increases their attitude score also increases moderately. Based on the study there was an association between the knowledge and attitude score of the Hypertensive patients with selected socio-demographic variables like age, family history of Hypertension and habits are significantly associated with their level of knowledge and sex, occupation and type of family are significantly associated with their level of attitude.

Ike SO (2010) conducted a descriptive study with 260 hypertensive patients to evaluate the perception, knowledge and practices of Nigerian hypertensive patients regarding hypertension and lifestyle modification measures. Consecutive hypertensive patients attending the cardiac clinics of the University of Nigeria Teaching Hospital, Enugu, Nigeria, were recruited. A pre-tested structured interviewer-administered questionnaire was used to collect data. Questions were categorised to elicit patients' demographic characteristics, knowledge, perception and practice of various lifestyle-modification measures. chi(2) tests were performed. More than half (54.2%) of the 260 respondents had no formal, or just primary, education. About 25% were no longer taking their antihypertensive medication. Fifty per cent of the patients thought that hypertension was caused by stress. Most knew about the lifestyle measures through health personnel. More than 50% adopted the lifestyle-modification measures once they became aware of their effects. This study has shown a poor level of perception of hypertension and awareness of the lifestyle-modification measures through the mass media, but a high level of willingness to adopt the lifestyle measures

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON LIFESTYLE MODIFICATION:

Rosakutty George (2012) used evaluative approach with pre experimental design among 40 hypertensive patients onMangalore, Karnatakawho areselected by purposive sampling technique to determine the knowledge and perceivedbarriers of hypertensive persons on life style modification practicesand tofind the effectivenessof a structured teaching programme on the knowledge level. Demographic proforma,knowledge checklist and 5 point rating scale were theinstruments usedfor the study. The study revealed that, 19(47.5%)ofthe hypertensiveadults had averageknowledge, 18 (45%) had poor knowledge and only 3(7.5%)had good knowledge. 21 (52.5%) of the hypertensive adults faced severe barriers. Among the barriers, the highestperceived barrier was lack of knowledge (82.27%) and leastwas lack of socialsupport (53.14%).A significant improvement in the knowledge was found after theadministration of the structured teaching programme (.t. cal value = 22.22 > t tab (39) = 1.68, $p<0.05$).Education is a key component in bringing about changes in health care behavior.The present study calls for strengthening of publiceducation system which plays a vital role in health promotion and disease progression.

Kim MJ. (2011) conducted a descriptive comparative study with a convenience sample of 100 Korean Americans and 100 native Koreans with hypertension. They were interviewed and received advice from healthcare providers on lifestyle and their subsequent action in terms of taking medication, weight control, dietary change, exercise, low-sodium diet, smoking cessation, alcohol restriction and tension reduction. Nutrient profiles were examined using the 24-hour dietary recall method. Korean Americans received advice on lifestyle less than did native Koreans, but more Korean Americans followed healthy

lifestyle advice on dietary change and exercise than did native Koreans (P<0.001). Weight control was the least adhered to behaviour among the Korean Americans, although almost two-thirds of them were overweight or obese. Both groups exceeded the Dietary Reference Intakes of sodium, but perceived their sodium consumption as low. Native Korean participants need to pay closer attention to carrying out the advice, whereas healthcare providers to Korean Americans need to give more advice on culturally acceptable healthy lifestyles, particularly on dietary changes and weight control. Both groups need to monitor their sodium intake more realistically. It is not only advice from healthcare providers that is integral to control of hypertension, but also that patients should follow that advice.

Prathiba G . (2010) conducted a QuasiExperimental study with a sample of 60 hypertensive patients to examine the effectiveness of structured teaching programme on knowledge and attitude regarding lifestyle modificationonhypertension and its relationship with selected demographic variables, among patients in selected hospital at Coimbatore, Tamilnadu. The study Structured interview questions on knowledge and attitude were developed and used as tools to measure the study variables by adopting simple random sampling technique. The obtained were summarized and analyzed by using appropriate statistical toolsThe study result shows that obtained 't' value was 31,29.It is concluded that structured teaching programme was effective in influencing knowledge and attitude among hypertension patients to prevent complications of hypertension. The major findings of the study are among the hypertension paient selected from thestudy, majority were between 51 – 60 years of age group, most of them are males and the educational status majority of them are primary and secondary level of education most of them are cooli workers, most of them earn below Rs. 3000 per month and not having family history of hypertension.

CHAPTER III

METHODOLOGY

The methodology of research indicates the general pattern of organizing the procedure for getting valid and reliable data for problem under investigation. The methodology enables the researcher to project a blue print of the data, approach analysis and findings of the researcher undertaken.

The methodology consists of research design, setting, population and sampling, sample size, criteria for selection of samples, instruments and tools for measuring variables, techniques of data collection, method of data analysis, report of pilot study and needed changes to be incorporated for the main study.

Designing a research involves the development of plan or strategy that will guide the collection and analysis of the data. The study was designed to find out the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients.

RESEARCH APPROACH

The research approach selected to accomplish the objectives of the study was **Quantitative educative and evaluative approach**. Since the purpose of the study was to find out the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients., the Quantitative educative and evaluative approach was found to be suitable for this research study.

RESEARCH DESIGN

The research design used for the present study was Non equalent control group before-after design which is a **Quasi experimental design** used to measure the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients.

The Quasi experimental design lacks atleast one of the properties that characterize true experiments randomization, control group and manipulation **(Polit & Hungler, 1999).** This study had control group, experimental group and manipulation without randomization. In this design the experimental group received the structured teaching programme, but the control group did not receive the structured teaching programme.

The research design used in the study was was **Non equalent control group before-after design** to determine the effectiveness of intervention strategy. Diagrammatic representation of the design is given below,

Experimental group	**O_1**	**X**	**O_2**
Control group	**O_1**		**O_2**

Key,

O_1 – pre-test of knowledge and practice regarding lifestyle modification among hypertensive patients.

X – administration of structured teaching programme regarding lifestyle modification among hypertensive patients.

O_2 – post-test of knowledge and practice regarding lifestyle modification among hypertensive patients.

VARIABLES OF THE STUDY

Variables are characters that can have more than one value. The categories of variables discussed in the present study are,

Independent variable:-

The independent variable is believed to cause or influence the behaviour and ideas. **(Polit and Hungler, 1999)**

The independent variable in this study was structured teaching programme regarding lifestyle modification to the experimental group of patients with hypertension.

Dependent variable:-

It is the outcome variable of interest. It is the variable that is hypothesized to depend on or caused by the other.

The dependent variables in this study were knowledge and practice regarding lifestyle modification.

RESEARCH SETTING

Research settings are specific places in a research where data collection is to be made. The selection of setting was done on the basis of the feasibility of conducting the study, availability of subject and permission of authorities. **(Polit and Hungler, 2003)**

The study was conducted **in Medical OPD Government Head Quarters Hospital, Erode.**

POPULATION

Population refers to the entire aggregation of cases that meets the design criteria. **(Polit and Beck, 2002)**

In this study population includes Patient with hypertension who are attending Medical OPD at Government Head Quarters Hospital, Erode

SAMPLE

A sample is the portion of the population that has been selected to represent the population of interest. **(Talbott, 1991)**

In this study, sample comprised of patients who are recently diagnosed with hypertension and fulfills the inclusion criteria.

SAMPLE SIZE

The size of the sample is 60.

30 will be in experimental group and 30 will be in control group.

SAMPLING TECHNIQUE:

Sampling is the process of selecting a portion of the population who represent the entire population**.** **(Polit and Beck, 2001)**

In this study **Purposive sampling technique** was used. Sometimes referred to as "judgment or theoretical sampling" involves subjects conscious selection by the researcher of certain elements to include in the study. **(Burns & Susan, 1999).** The hypertensive patients who were attended Medicine diseases OPD during data collection and met the inclusion criteria were taken as sample.

CRITERIA FOR SAMPLE SELECTION:

Inclusion criteria:

- ✓ Patients who are recently diagnosed as hypertensive.
- ✓ Those who are willing to participate in the study
- ✓ Those who are available during the time of collection of data.

Exclusion criteria:

- ✓ Those who are deaf, dumb and blind.
- ✓ Those who are having critically ill.

CONSTRUCTION OF RESEARCH INSTRUMENT:

Research instruments or tools are ways of gathering data. Without them data would be impossible to put in hand which is used by the researcher to observe or measure the key variables in the research problem. The major task of the researcher is to construct instruments most accurately.

The instrument used in the research is a self-structured instrument.

DATA COLLECTION METHOD

Interview method was used.

DATA COLLECTION INSTRUMENT

The instrument was structured by the investigator based on the objectives of the study, after reviewing the literature about hypertension.

The following steps were carried out in construction of the tool

- ➢ A review of the research and non-research literature done in the areas related to structured teaching programme regarding lifestyle modification.
- ➢ Opinion of experts was sought to ascertain the clarity and appropriateness of the items.
- ➢ Informal discussions were held with teaching staff and concerned experts. This helped to identify the items to be included.
- ➢ Professional experience of the researcher in medical and surgical nursing field helped in determining the areas to be included.

DISCRIPTION OF THE INSTRUMENT:

Data collection instrument used is a self structured questionnaire which has three parts - Part A ,Part B and Part C.

Part A- consists of questionnaires to collect demographic data.

Part B- consists of questionnaire to assess the patient level of knowledge regarding lifestyle modification.

The tool consisted of 30 multiple choice questions to measure the level of knowledge of patients with hypertension regarding hypertension and lifestyle modification. All the items had four response options; 1 correct and 3 wrong answers. The correct answer was given a score of 1 and wrong answer was given a score of 0. The total possible score was 30.

Part C- consists of questionnaire to assess practice regarding lifestyle modification.

The rating scale was prepared to` assess the level of practice. It consisted of 20 items. It was 3 point scale with responses as Never do = 0, Occasionally do = 1, and Always do = 2, which consists of both positive statements. The total maximum score is 40.

SCORING INTERPRETATION:

Part – B

The interpretation of the total score was:

- Inadequate knowledge: less than 50%
- Moderately adequate knowledge: 50%-75%
- Adequate knowledge: greater than 75%

0 – 14	**Inadequate knowledge**
15 – 22	**Moderately adequate knowledge**
>22	**Adequate knowledge**

Part – C

The total score was categorize as,

- Poor practice: less than < 50%
- Moderate practice: 50-75%
- Good practice: more than > 75%

0 – 19	**Poor practice**
20 – 29	**Moderate practice**
>29	**Good practice**

TESTING OF THE TOOL

Content validity

The instruments were validated by 5 experts from the field of Nursing and Medicine. The experts suggested addition, deletion of certain items and re-organization of questions. Appropriate modifications were made and the tool was finalized.

Reliability

Reliability of research instruments defined as the extent to which the instrument has the same results on repeated measures. (**Polit and Beck 2004)**

Demographic variables, self-structured questionnaire on Knowledge and practice was tested by implementing the tool on 6 patients with hypertension who are outpatients in OPD unit in Primary Health Centre, Thindal, Erode. "Split half method" (Spearman Brown Formula) is used to test the reliability of the tool and the tool was found to be reliable **(r^1=0.969, for knowledge questionnaire & r^2= 0.942, for practice questionnaire).**

PILOT STUDY

In order to test the feasibility, relevance and practicability of the study, pilot study was conducted among 6 patients attending OPD in Primary Health Centre, Thindal, Erode in a manner in which final study would be done. It revealed that the study is feasible. Data were analyzed by using differential and inferential statistics. The study report ensured feasibility of the study.

DATA COLLECTION PROCEDURE

Data collection is the gathering of the information to address the research problem. The word "data" means information i.e. systematically collected in the course of study. Permission from the concerned authority prior to the collection of the data, permission was obtained from the Medical superintendent of Government Head Quarters Hospital, Erode.

Data collection process

Samples were selected by using simple purposive sampling technique. Hypertensive patients who met the inclusion criteria were selected for the study. Demographic data was collected by interview and medical record. The Self-structured questionnaire were administered to the control group and the experimental group to assess the level of knowledge and practice prior to the intervention. For the experimental group structured teaching programme was administered . The level of knowledge and practice were assessed for both experimental and the control group 1 week after the intervension.

DATA ANALYSIS

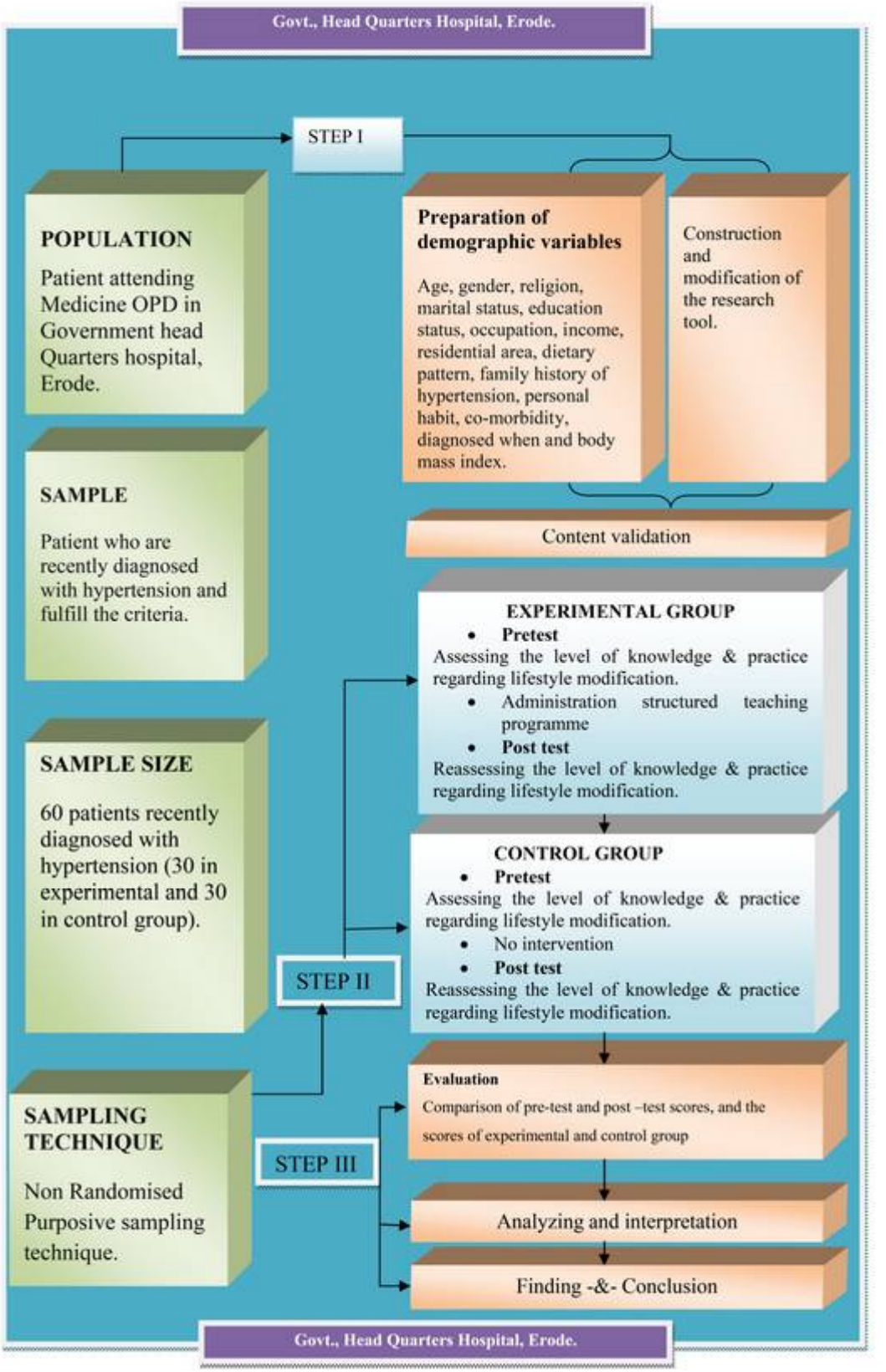
- ✓ To assess the level of Knowledge and practice was assessed before and after Structured Teaching programme among experimental and control group, frequency and percentage was used.

✓ To compare the effectiveness of structured teaching programme on the knowledge and practice regarding lifestyle modification among experimental and control group, **paired 't' test and unpaired 't' test** were used for analysis.

✓ To find out the relationship between knowledge and practice regarding lifestyle modification among hypertensive patients, correlation co-efficient was used.

✓ To find the association between post-test scores of effectiveness of structured teaching among experimental group and control group of patients with hypertension, with their demographic variables **chi-square test** was used.

FIGURE 2 - SCHEMATIC REPRESENTATION OF RESEARCH DESIGN OF THE STUDY



CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

Analysis is a "process of organizing and synthesizing data in such a way that research questions can be answered and hypothesis tested**", (Polit and Hungler, 2003)**

This chapter deals with the description of the analysis and interpretation of the data collected to evaluate effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode.

The obtained data was analyzed, tabulated and interpreted by employing descriptive and inferential statistics.

SECTION – I: Finding related to sample characteristics of experimental and control group. The sample characteristics are described in terms of frequency and percentage.

SECTION – II: Assess pre-test and post-test score of knowledge and practice regarding life style modification among control and experimental group.

SECTION –III: Comparison of pre-test and post-test score of knowledge and practice regarding life style modification among control and experimental group.

SECTION – IV: Assess relationship between post-test score of knowledge and practice in experimental group.

SECTION –V: Association between post-test scores of knowledge and practice regarding life style modification in control and experimental group with selected demographic variables.

SECTION –I

TABLE–1 DISTRIBUTION OF SAMPLE IN TERMS OF DEMOGRAPHIC VARIABLES

S. No.	Characteristics	Control group n=30		Experimental group n=30	
		F	%	F	%
1.	**Age**				
	a) Below 30 years	0	0	1	3
	b) 31 – 45 years	7	23	5	17
	c) 46 – 60 years	17	57	15	50
	d) 61 years and above	6	20	9	30
2.	**Gender**				
	a) Male	13	43	15	50
	b) Female	17	57	15	50
3.	**Religion**				
	a) Hindu	25	83	24	80
	b) Muslim	4	14	5	17
	c) Christian	1	3	1	3
	d) Others	0	0	0	0
4.	**Marital status**				
	a) Married	28	93	27	90
	b) Unmarried	0	0	1	3
	c) Widow/widower	2	7	2	7

5.	**Educational status**				
	a) No formal education	15	50	7	23
	b) Up to primary level	14	46	20	67
	c) Higher secondary	1	4	1	3
	d) Under graduate and above	0	0	2	7
6.	**Type of occupation**				
	a) Unemployed	13	43	6	20
	b) Sedentary worker	2	7	1	3
	c) Moderately heavy worker	8	27	17	57
	d) Heavy worker	7	23	6	20
7.	**Monthly family income in rupees**				
	a) Below 2,500	5	17	6	20
	b) 2,501 - 5,000	11	37	9	30
	c) 5,001 – 10,000	10	33	9	30
	d) Above 10,000	4	13	6	20
8.	**Residential area**				
	a) Urban	21	70	28	93
	b) Rural	9	30	2	7
9.	**Family history of hypertension**				
	a) Yes	8	27	15	50
	b) No	22	73	15	50
10.	**Dietary pattern**				
	a) Vegetarian	5	17	5	17

	b) Non-vegetarian	25	83	25	83
11.	**Personal habit**				
	a) Consuming alcohol	1	3	3	10
	b) Use of tobacco (smoking/chewing)	4	14	7	23
	c) Both a & b	7	23	3	10
	d) None of the above	18	60	17	57
12.	**Any other illness**				
	a) Diabetes mellitus	4	13	3	10
	b) Heart diseases	0	0	0	0
	c) Stroke	1	3	0	0
	d) None of the above	25	84	27	90
13.	**When hypertension was diagnosed**				
	a) In the health camp or regular check up	1	3	2	7
	b) After signs and symptoms	17	57	17	57
	c) During treatment of other illnesses	11	37	10	33
	d) After complications	1	3	1	3
14.	**B.M.I.**				
	a) Normal	16	53	19	63
	b) Below normal	2	7	1	3
	c) Above normal	12	40	10	34

Table 1 describes the distribution of subjects in control group and experimental group according to age, gender, religion, marital status, educational status, type of occupation,

monthly family income, residential area, family history of hypertension, dietary pattern, personal habit, any other illness, when hypertension was diagnosed and B.M.I.

The above table shows in control group 57% were in the age group between 46 -60 years, 57% were female, majority of 83% were hindus, majority of 93% were married, 50% had no formal education, 43% were unemployed, 37% were receiving the family income between 2,501 – 5,000 rupees, majority of 70% were residing in urban area, majority of 73% had no family history of hypertension, majority of 83% were non-vegetarian, 60% were not having any bad habit, majority of 84% has no associated illness, 57% were diagnosed as hypertensives after appearance of signs and symptoms and 53% were having normal B.M.I.

In experimental group 50% of clients were between the age group of 46 – 60 years, both male and female contributes 50%, majority of 80% were hindus, 90% were married, 67% were educated up to primary level, 57% were moderately heavy workers, 30% receives a family income between 2,501 – 5,000 rupees, 30% receives a family income between Rs.5001 – 10,000, majority of 93% lives in urban area, 50% of clients had the family history of hypertension and other 50% had no history of hypertension, majority of 83% were non-vegetarian, 57% had no bad habits, 90% doesn't had any associated illness, 57% were diagnosed with hypertension after appearance of signs and symptoms, and 63% had normal B.M.I.

Table – 2 Distribution of sample in terms of age

Demographic variables	Control group n=30		Experimental group n=30	
	F	%	F	%
Age				
a) Below 30 years	0	0	1	3
b) 31 – 45 years	7	23	5	17
c) 46 – 60 years	17	57	15	50
d) 61 years and above	6	20	9	30

Table 2 shows that most of the clients in control and experimental groups belongs to the age group between 46 – 60 years (57% and 50% respectively). In control group 23% belongs to 31 – 45 years of age, 20% belongs to 61 years and above and there was no one in the age group below 30 years, where as in experimental group 30% belongs to 61 years and above age group17% belongs to 31 – 45 years and 3% belongs to the age group below 30 years. ***(figure 3)***

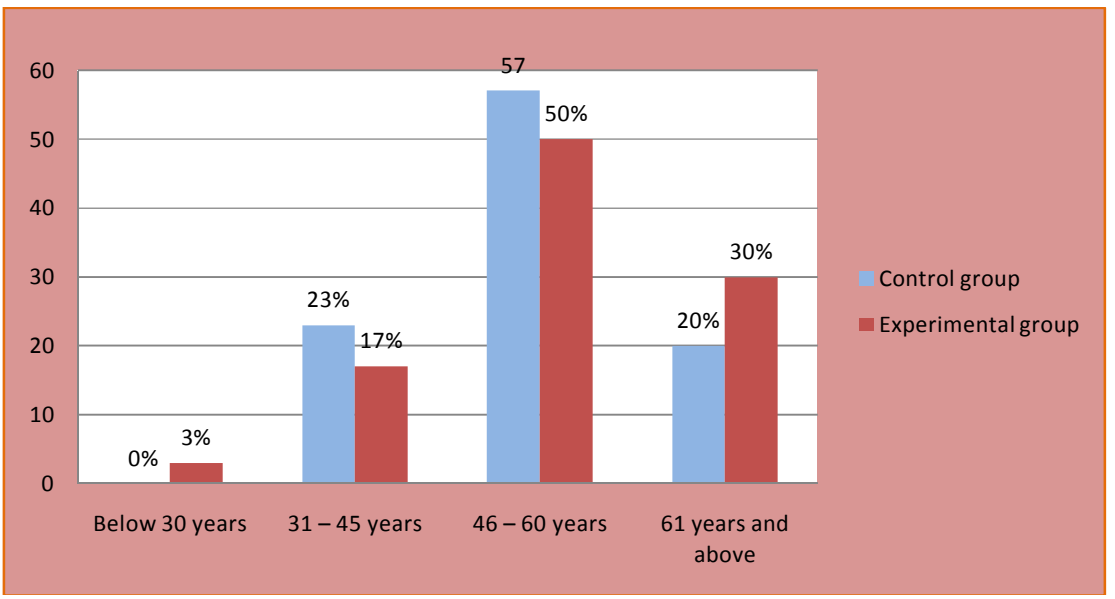


Figure 3 Distribution of sample in terms of Age

Table 3 - Distribution of sample in terms of gender

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Gender				
a) Male	13	43	15	50
b) Female	17	57	15	50

Table 3 shows that in control group majority of 57% were female and 43% were male, where as in experimental group samples are equally distributed between male and female (50% each).***(figure 4)***

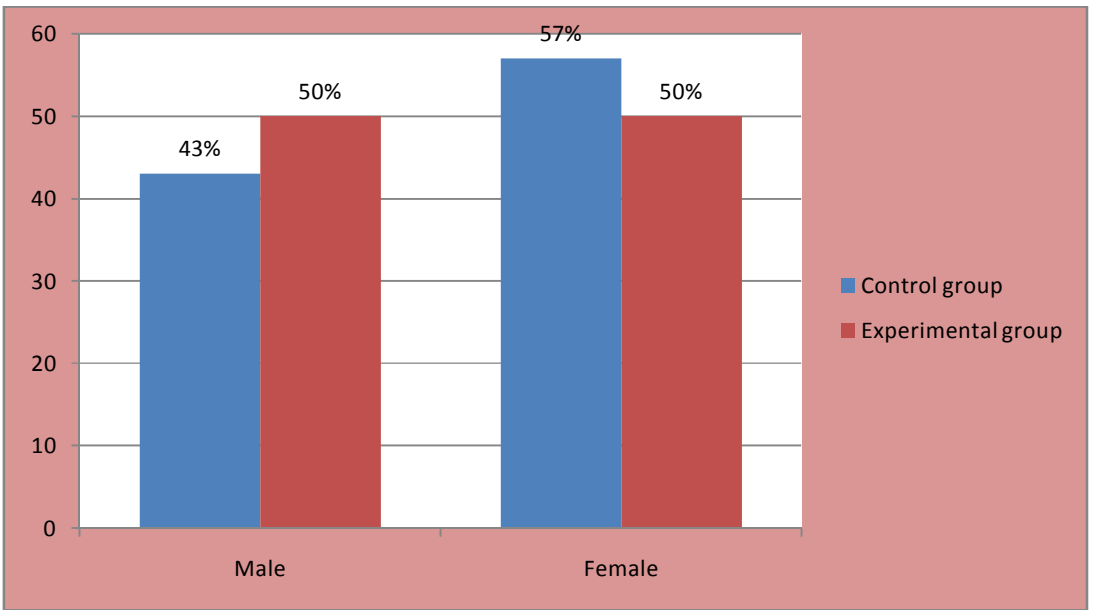


Figure 4 - Distribution of sample in terms of Gender.

Table 4 - Distribution of sample in terms of Religion.

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Religion				
a) Hindu	25	83	24	80
b) Muslim	4	14	5	17
c) Christian	1	3	1	3
d) Others	0	0	0	0

Table 4 shows that highest percentage of clients belongs to Hindu both in control and experimental group (83% and 80% respectively). In control group 14% belongs to Muslim, 3% belongs to Christian and no clients come under other religion category, where as in experimental group 17% were Muslim, 3% were Christians and no clients come under other religion category. ***(figure 5)***

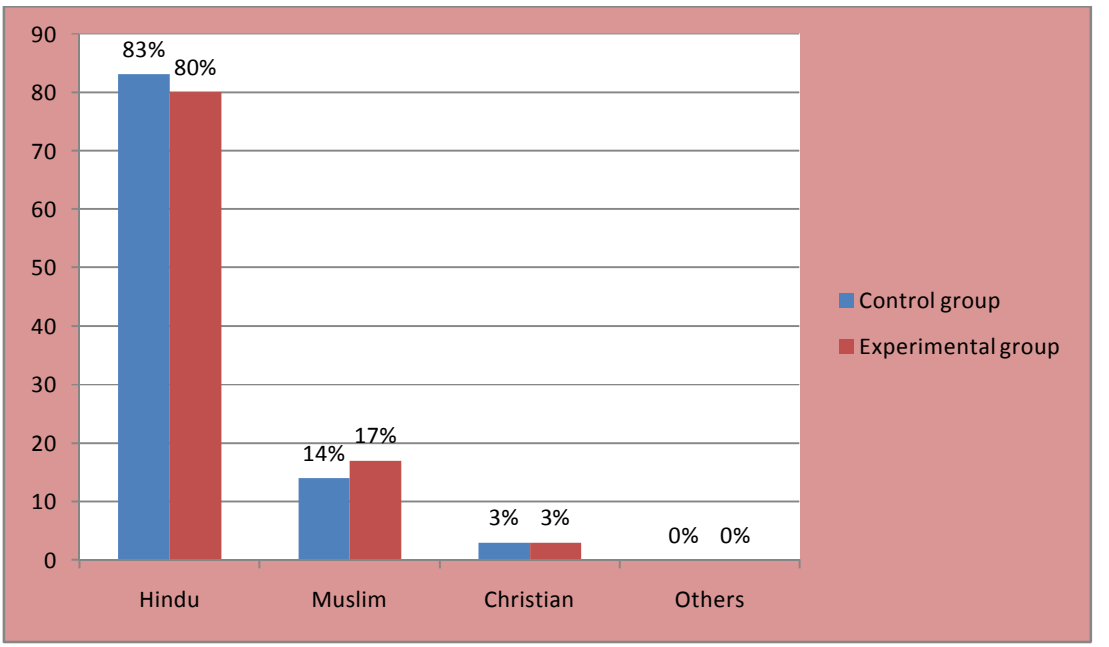


Figure 5 - Distribution of sample in terms of Religion

Table 5 - Distribution of sample in terms of marital status.

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Marital status				
a) Married	28	93	27	90
b) Unmarried	0	0	1	3
c) Widow/widower	2	7	2	7

Table 5 shows that highest percentage of clients belongs to married category both in control and experimental group (93% and 90% respectively). In control group 7% come under widow/widower category and no clients comes under unmarried category, whereas in experimental group 7% were widow/widower and 3% of clients were unmarried. ***(figure 6)***

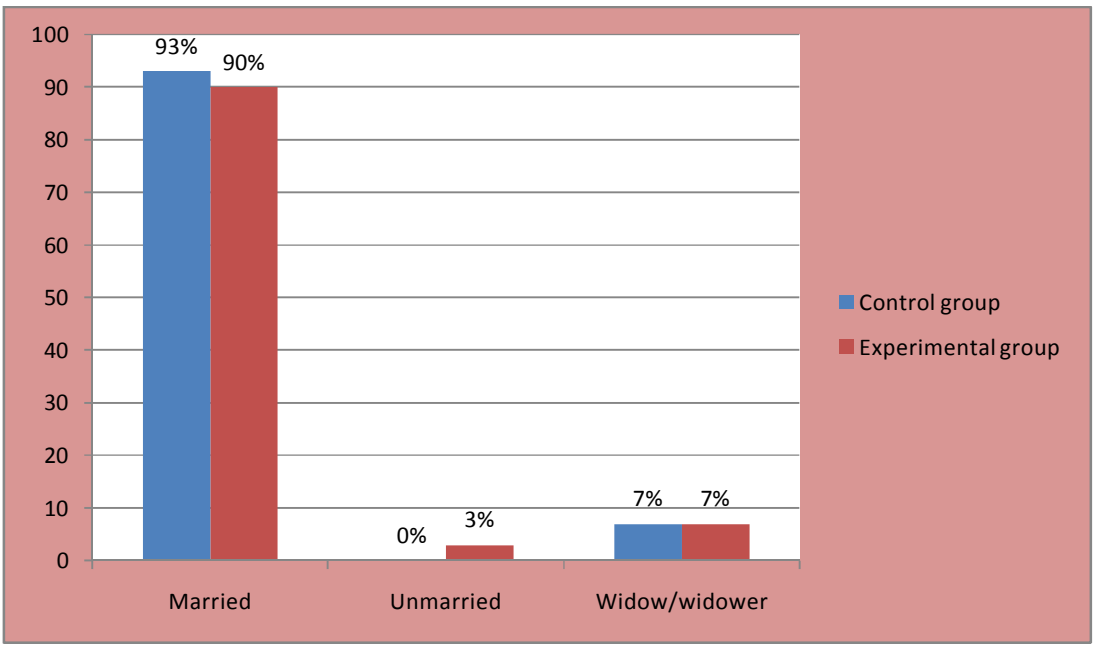


Figure 6 - Distribution of sample in terms of Marital status.

Table 6 - Distribution of sample in terms of Educational status

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Educational status				
a) No formal education	15	50	7	23
b) Up to primary level	14	46	20	67
c) Higher secondary	1	4	1	3
d) Under graduate and above	0	0	2	7

Table 6 shows that in control group majority of clients 50% had no formal education, 46% had primary education, 4% had higher secondary education and no clients had the educational qualification of undergraduate and above, whereas in experimental group 67% had primary education, 23% had no formal education, 3% had higher secondary education and 7% were under graduates. ***(figure 7)***

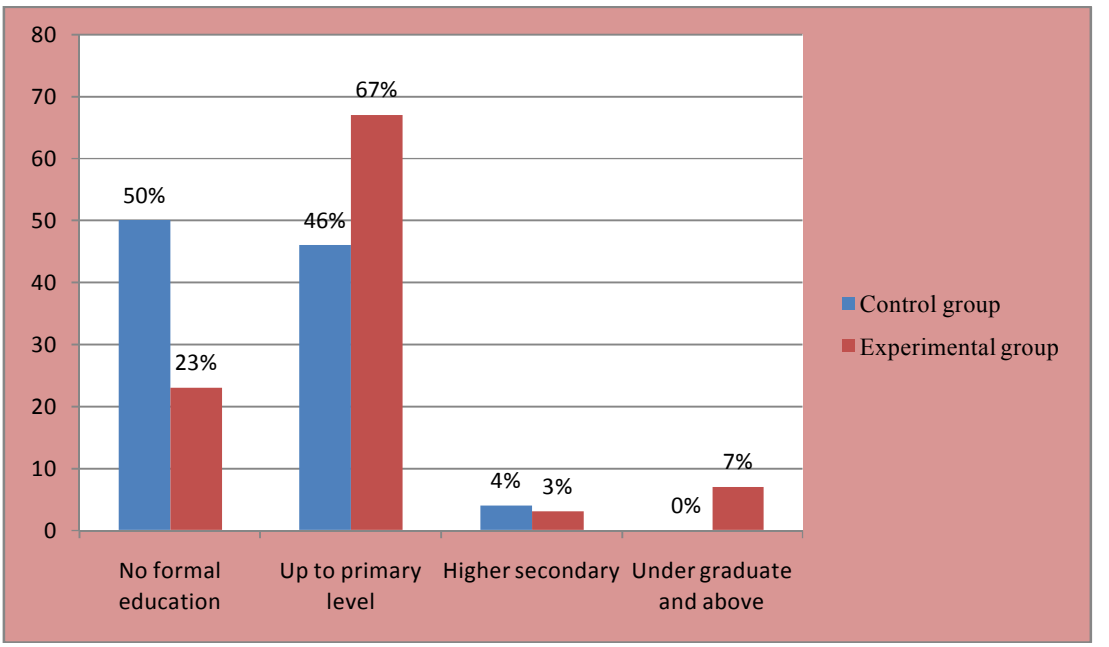


Figure 7 Distribution of sample in terms of Educational status

Table 7 - Distribution of sample in terms of Type of occupation

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Type of occupation				
a) Unemployed	13	43	6	20
b) Sedentary worker	2	7	1	3
c) Moderately heavy worker	8	27	17	57
d) Heavy worker	7	23	6	20

Table 7 shows that in control group majority of clients 43% were unemployed, 27% were moderately heavy workers, 23% were heavy workers and 7% were sedentary worker,. whereas in experimental group majority 57% belongs to moderately heavy workers, 20% of clients were unemployed, 20% were heavy workers and 3% were sedentary workers. ***(figure.8)***

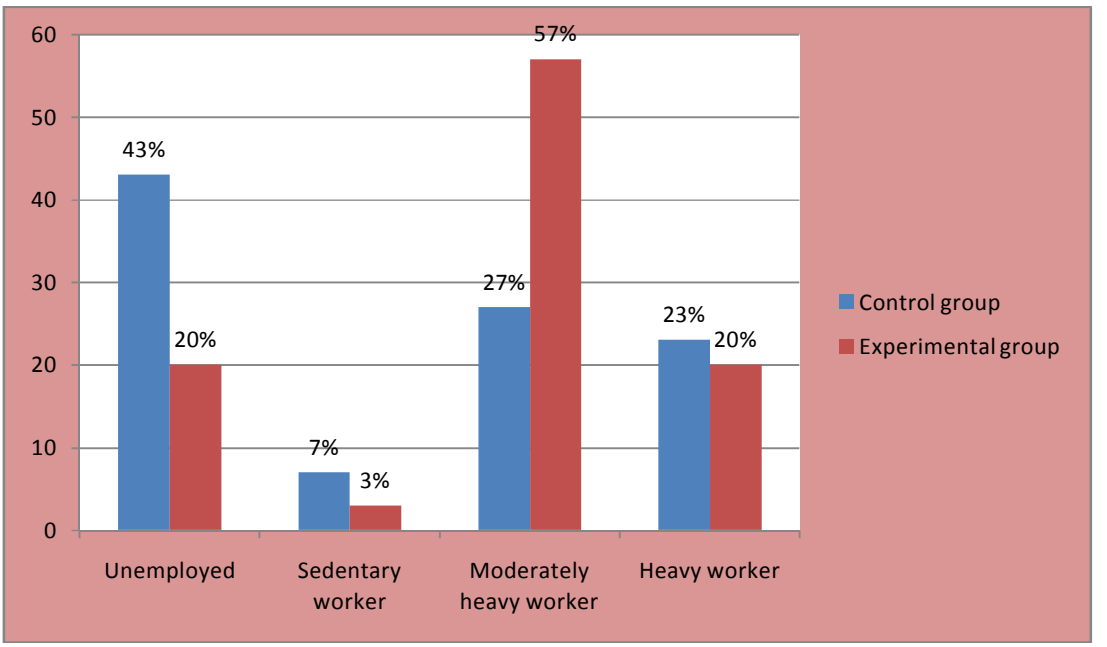


Figure 8 - Distribution of sample in terms of Type of Occupation

Table 8 - Distribution of sample in terms of Monthly Family Income

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Monthly family income in rupees				
a) Below 2,500	5	17	6	20
b) 2,501 - 5,000	11	37	9	30
c) 5,001 – 10,000	10	33	9	30
d) Above 10,000	4	13	6	20

Table 8 shows that in control group majority of the clients 37% had family income Rs.2,501 – 5,000, 33% had Rs.5,001 – 10,000, 17% had below Rs.2,500, and 13% had above Rs.10,000 as their family income. Where as in experimental group majority 30% of the clients had Rs.2,501 – 5,000 income, 30% had Rs.5,001 – 10,000, 20% had Rs.2500and 20% had above Rs.10,000 as their family income. ***(figure 9)***

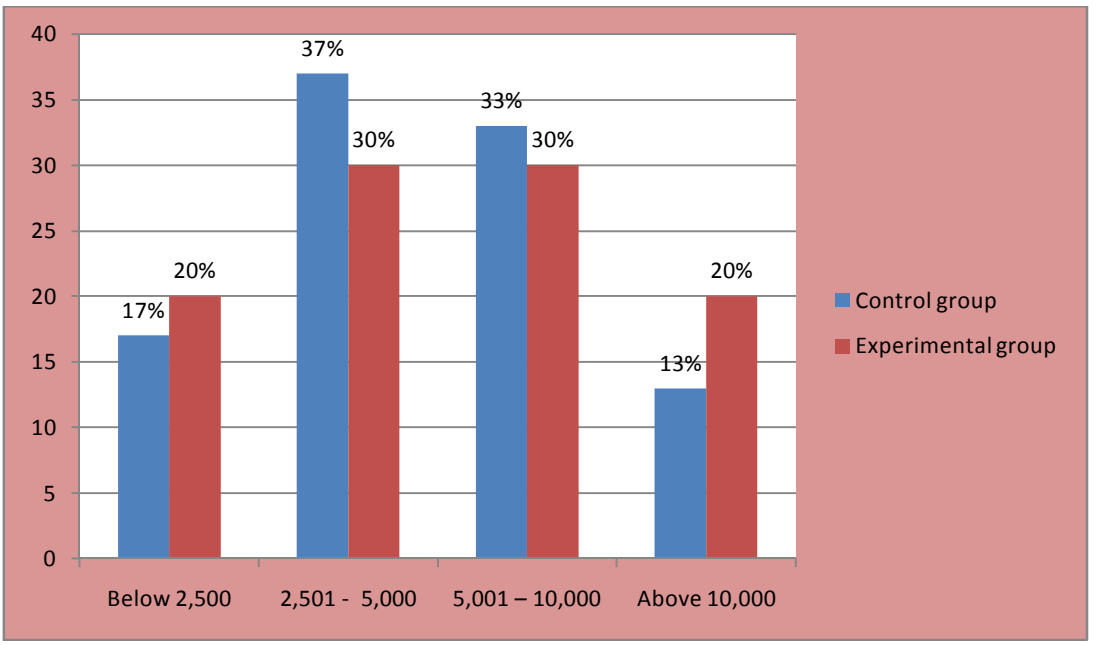


Figure 9- Distribution of sample in terms of Monthly family income

Table 9 - Distribution of sample in terms of Residential area

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Residential area				
Urban	21	70	28	93
Rural	9	30	2	7

Table 9 shows that highest percentage of clients lives in urban area both in control and experimental group (70% and 93% respectively). In control group 30% resides in rural area and in experimental group 7% resides in rural area. ***(figure 10)***

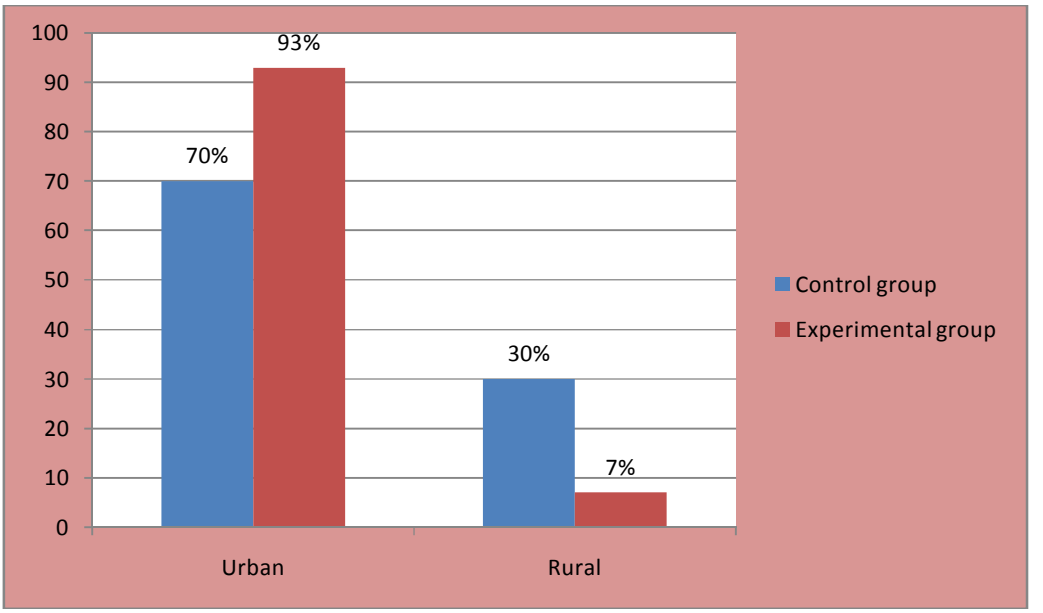


Figure 10 - Distribution of sample in terms of Residential area

Table 10 - Distribution of sample in terms of family history of hypertension

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Family history of hypertension				
Yes	8	27	15	50
No	22	73	15	50

Table 10 shows that in control group 73% had no family history of hypertension 27% of clients had family history of hypertension. Whereas in experimental group samples where equally distributed between the presence and absence of family history of hypertension (each 50%). ***(figure 11)***

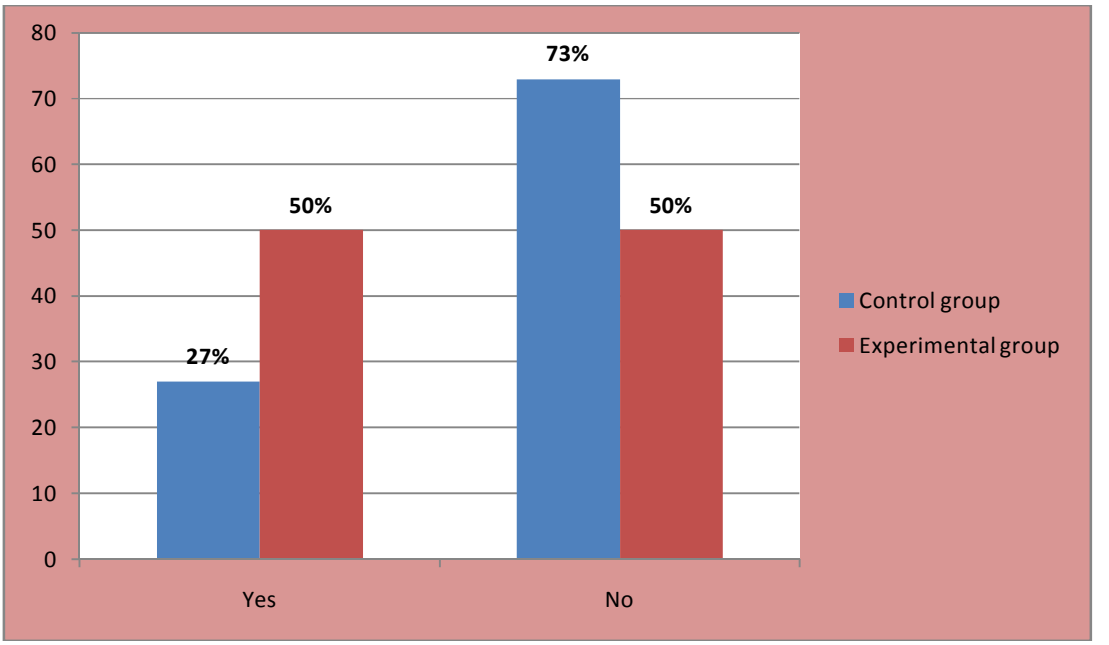


Figure 11 - Distribution of sample in terms of Family history of hypertension

Table 11 - Distribution of sample in terms of Dietary pattern

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Dietary pattern				
Vegetarian	5	17	5	17
Non-vegetarian	25	83	25	83

Table 11 shows in both control and experimental group 83% were non-vegetarians and 17% were vegetarians. ***(figure 12)***

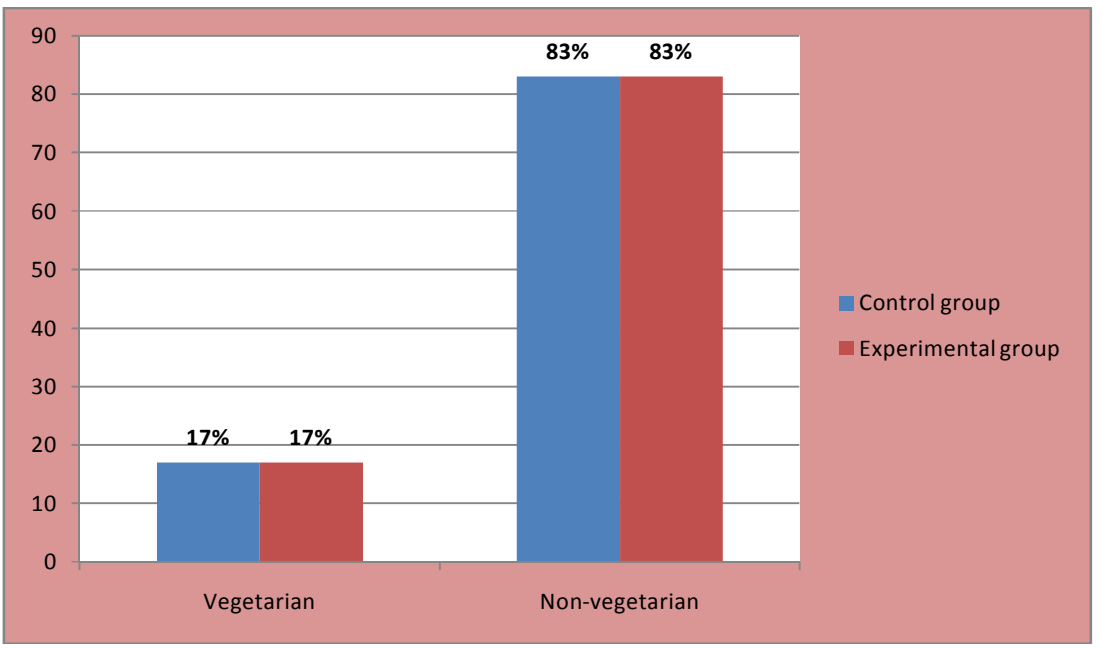


Figure 12 - Distribution of sample in terms of Dietary pattern

Table 12 - Distribution of sample in terms of Personal habit

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Personal habit				
Consuming alcohol	1	3	3	10
Use of tobacco (smoking/chewing)	4	14	7	23
Both a & b	7	23	3	10
None of the above	18	60	17	57

Table 12 shows that highest percentage of clients both in control and experimental group had no bad habits like using tobacco or alcoholism (60% and 57% respectively). In control group 23% were both smokers and alcoholics and 14% had the habit of using tobacco and 3% were alcoholics, where as in experimental group 23% uses tobacco, 10% were both smokers and alcoholics and 10% were alcoholics.***(figure 13)***

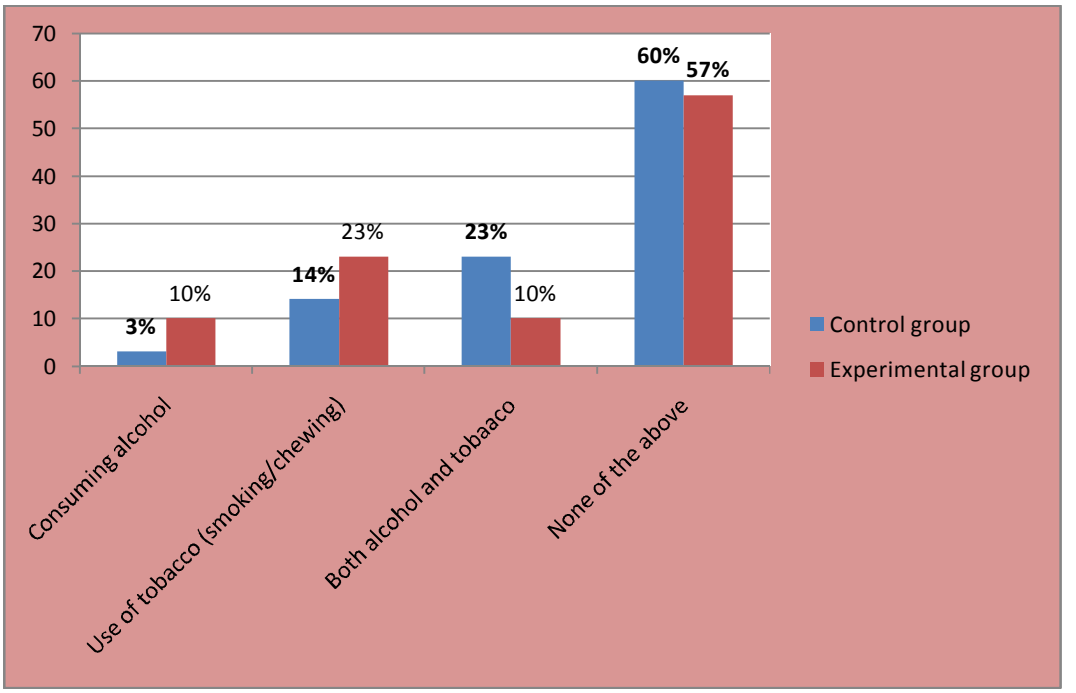


Figure 13 - Distribution of sample in terms of Personal habit

Table 13 - Distribution of sample in terms of Any other illnesses

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
Any other illness				
Diabetes mellitus	4	13	3	10
Heart diseases	0	0	0	0
Stroke	1	3	0	0
None of the above	25	84	27	90

Table 13 shows that highest percentage of clients both in control and experimental group had no associated illness (84% and 90% respectively) and in both control and experimental group there were no clients under heart disease category, where as in control group 13% had diabetes mellitus and 3% had stroke. Whereas in experimental group 10% of clients had diabetes mellitus and no clients comes under stroke category.***(figure 14)***

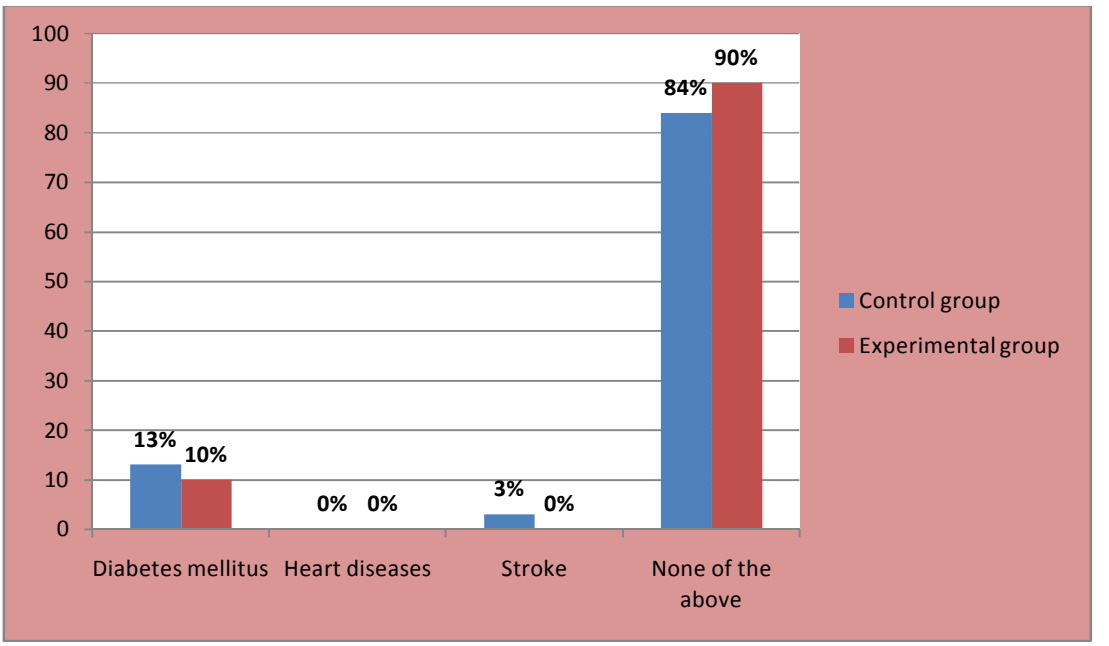


Figure 14 - Distribution of sample in terms of Any other illnesses

Table 14 - Distribution of sample in terms of when hypertension was diagnosed

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
When hypertension was diagnosed				
In the health camp or regular check up	1	3	2	7
After signs and symptoms	17	57	17	57
During treatment of other illnesses	11	37	10	33
After complications	1	3	1	3

Table 14 shows that highest percentage of clients both in control and experimental group (57% and 57% respectively) were diagnosed with hypertension after the appearance of signs and symptoms of hypertension. In control group 37%were diagnosed as having hypertension during the treatment of other illnesses, 3% were diagnosed in health camp or regular check up, and 3% after the complication of hypertension, whereas in experimental group 33% were diagnosed during the treatment of other illnesses and 7% were diagnosed in health camp or regular check up, and 3% after the complication of hypertension. ***(figure15)***

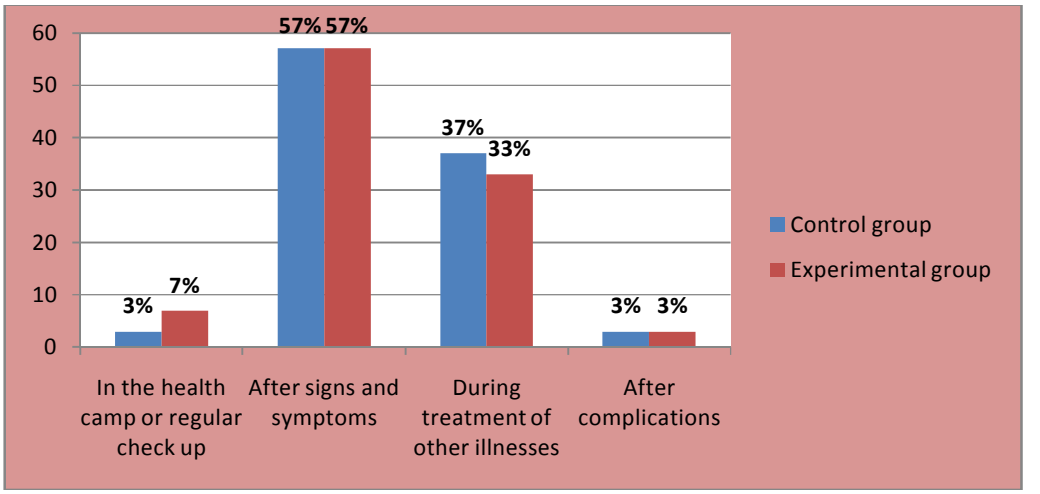


Figure 15 - Distribution of sample in terms of when hypertension was diagnosed

Table 15 - Distribution of sample in terms of B.M.I.

Demographic variable	Control group n=30		Experimental group n=30	
	F	%	F	%
B.M.I.				
Normal	16	53	19	63
Below normal	2	7	1	3
Above normal	12	40	10	34

Table 15 shows that in control group majority of 53% of clients had normal B.M.I., 40% had above normal B.M.I and 7% had below normal B.M.I. whereas in experimental group majority of 63% had normal B.M.I., 34% had above normal B.M.I and 3% had below normal B.M.I. ***(figure 16)***

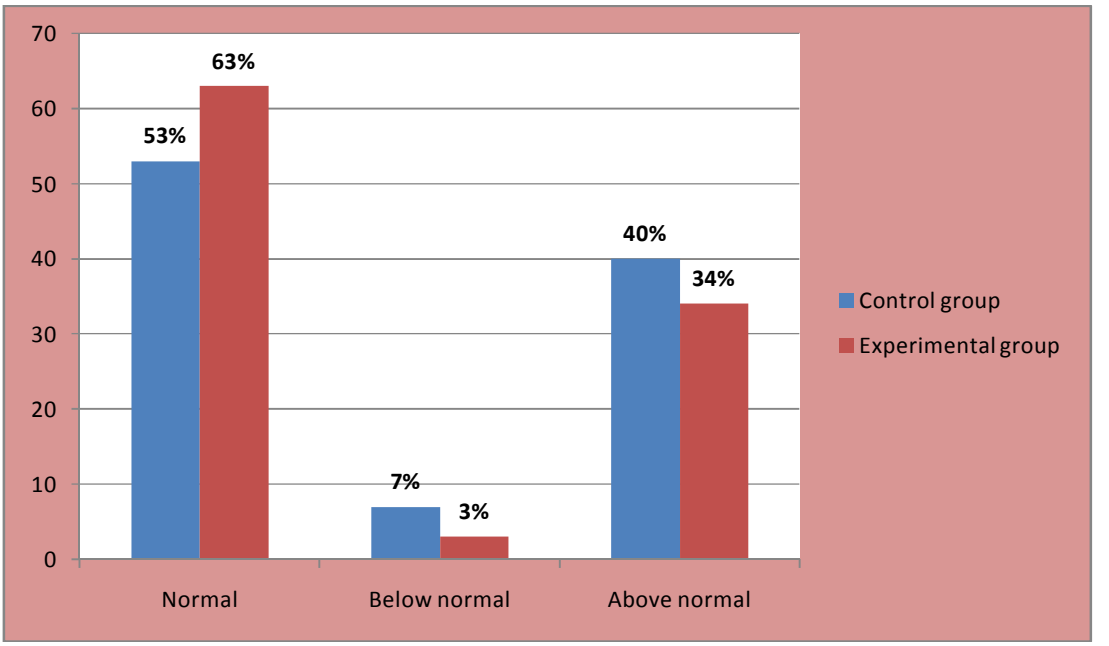


Figure 16 - Distribution of sample in terms of B.M.I.

SECTION – II

PRE-TEST AND POST-TEST SCORE OF KNOWLEDGE AND PRACTICE REGARDING LIFE STYLE MODIFICATION AMONG CONTROL AND EXPERIMENTAL GROUP

Table -16 Pre-test and post-test score of knowledge in control group (N=30)

Level of knowledge regarding life style modification	Control group			
	Pre – test scores		Post – test scores	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Inadequate	28	93	27	90
Moderately adequate	2	7	3	10
Adequate	0	0	0	0

Table 16 depicts distribution of pre – test and post – test scores of knowledge in control group. In pre – test majority of clients 93% had inadequate knowledge and 7% had moderately adequate knowledge, whereas in post – test majority of clients 90% had inadequate knowledge and 10% had moderately adequate knowledge and none of the clients had adequate knowledge both in pre-test and post test ***(figure 16)***

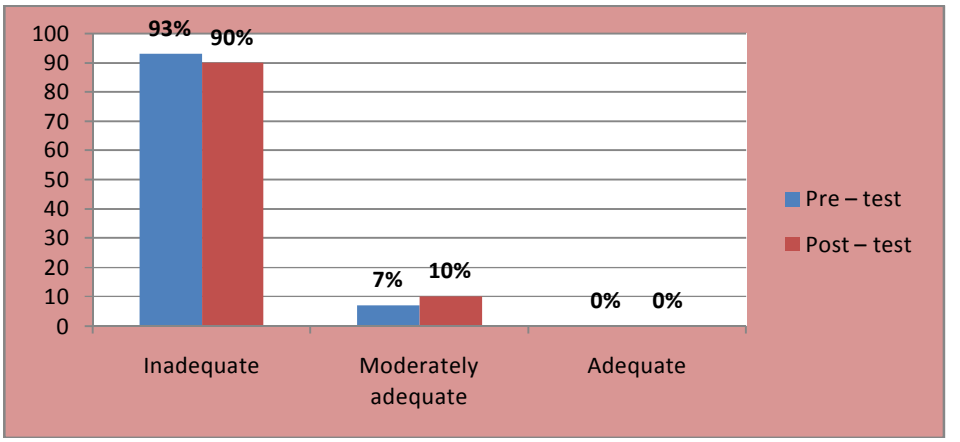


Figure- 17: Diagram shows the pre-test and post-test score of knowledge regarding lifestyle modification in control group

Table -17 Pre-test and post-test score of practice in control group (N=30)

Level of practice regarding life style modification	Control group			
	Pre – test scores		Post – test scores	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Poor	19	63	20	67
Moderate	11	37	10	33
Good	0	0	0	0

Table 17 depicts distribution of pre – test and post – test scores of practice in control group. In pre – test majority of clients 63% had poor practice and 37% had moderate practice. In post – test majority of clients 67% had poor practice and 33% had moderate practice and none of the clients had good practice both in pre-test and post-test.***(figure 18)***

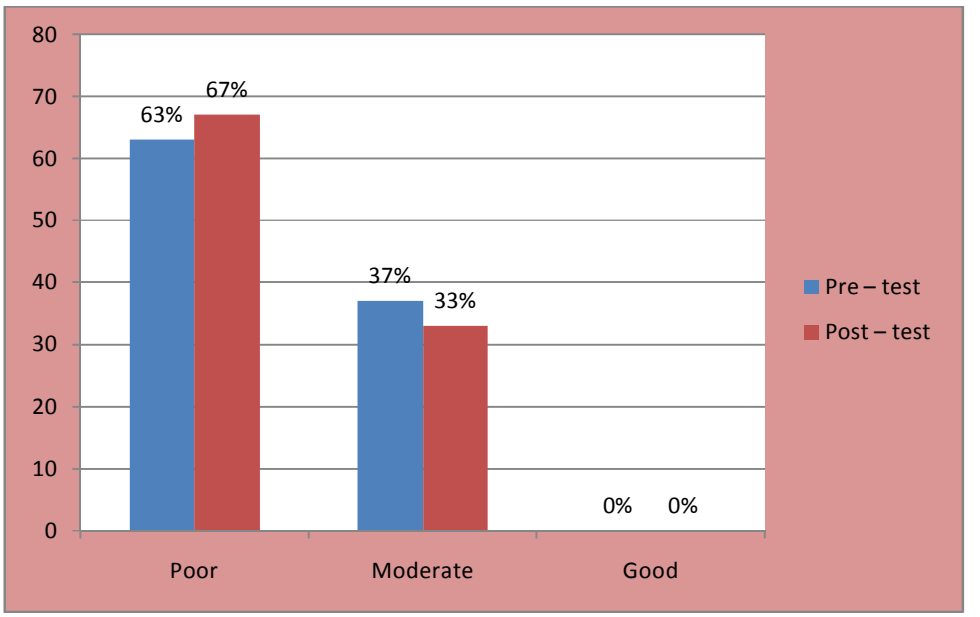


Figure- 18: Diagram shows the pre-test and post-test score of practice regarding life style modification in control group

Table -18 Pre-test and post-test score of knowledge in experimental group (N=30)

Level of knowledge regarding life style modification	Experimental group			
	Pre – test scores		Post – test scores	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Inadequate	27	90	0	0
Moderately adequate	3	10	27	90
Adequate	0	0	3	10

Table 18 depicts the distribution of pre – test and post – test scores of knowledge in experimental group. In pre – test majority of 90% of clients had inadequate knowledge and 10% moderately adequate knowledge, whereas in post – test majority of 90% of clients had moderately adequate knowledge and 10% adequate knowledge. ***(Figure- 19)***

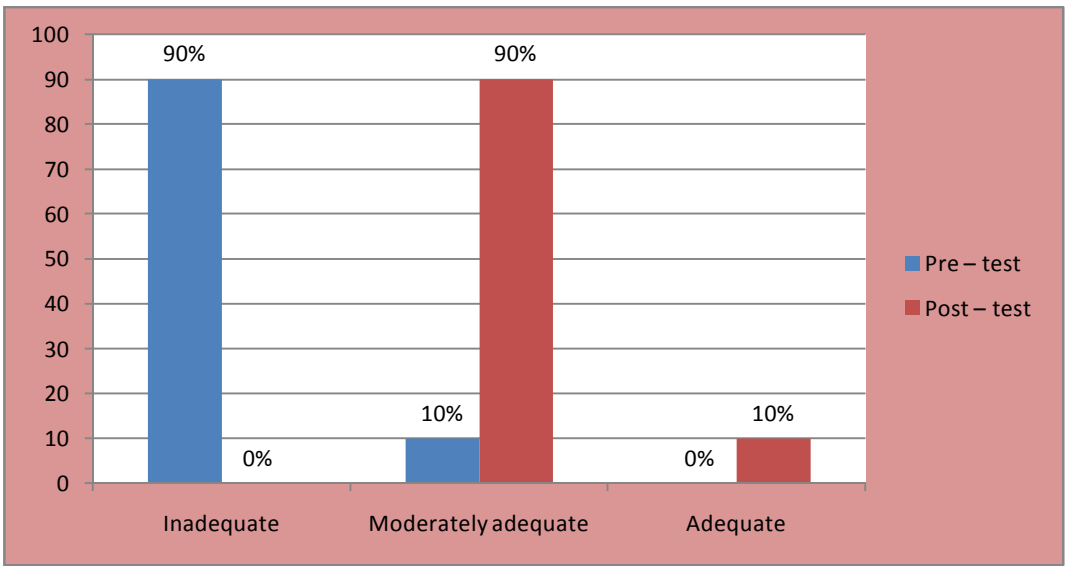


Figure- 19: Diagram shows the pre-test and post-test score of knowledge regarding life style modification in experimental group

Table -19 Pre-test and post-test score of practice in experimental group (N=30)

Level of practice regarding life style modification	Experimental group			
	Pre – test scores		Post – test scores	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Poor	16	53	0	0
Moderate	13	43	15	50
Good	1	4	15	50

Table 19 depicts the distribution of pre – test and post – test scores of practice regarding life style modification in experimental group. In pre – test 53% of clients had poor practice, 43% had moderate practice and 4% had good practice. In post – test 50% had moderate practice and 50% had good practice. ***(figure 20)***

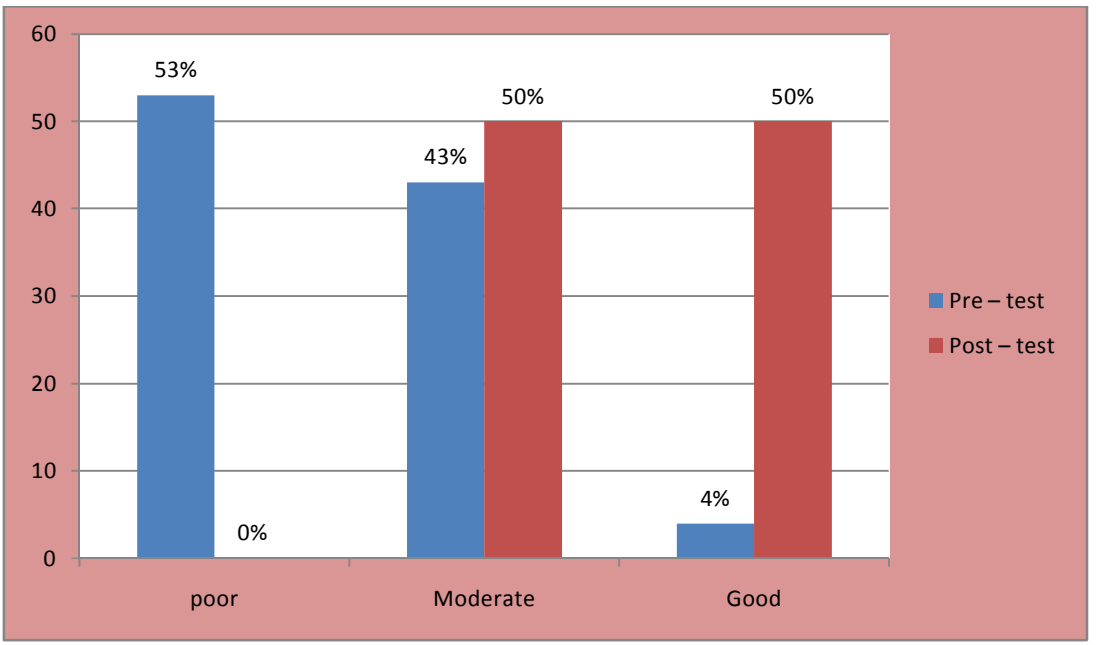


Figure- 20: Diagram shows the pre-test and post-test score of practice regarding life style modification in experimental group

SECTION –III

COMPARISON OF PRE-TEST AND POST-TEST SCORE OF KNOWLEDGE AND PRACTICE REGARDING LIFE STYLE MODIFICATION AMONG CONTROL AND EXPERIMENTAL GROUP

The effectiveness of the structured teaching programme was tested by using paired "t" test and unpaired "t" test. Paired "t" test and unpaired "t" test was calculated to analyze the difference in pre and post test scores of knowledge and practice regarding life style modification in control and experimental group.

Table-20 Comparison of mean pre-test and mean post-test score of knowledge in control group (N=30)

Component	Observation	Mean	SD	Paired "t" value
Control group knowledge score	Pre – test	9.66	2.92	0.07_{NS}
	Post – test	10.7	2.39	

NS – Not significant at 0.05level

Table 20 shows that the comparison of pre – test and post – test scores of knowledge in control group. The mean pre – test score is 9.66 and mean post – test score is 10.7, the Paired "t" test value was 0.07 when compared to table value (1.69) is low. It seems that without structured teaching programme there is no significant difference between pre – test and post – test scores of knowledge in control group.***(figure 21)***

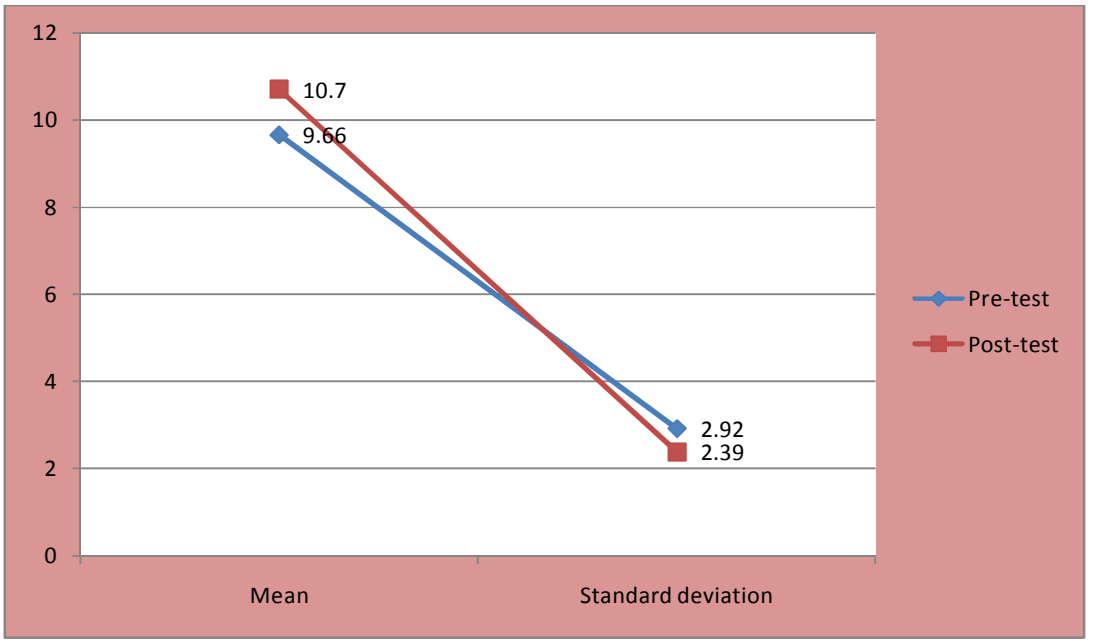


Figure 21: Mean and standard deviation of pre-test and post-test knowledge score in control group

Table-21 Comparison of mean pre-test and mean post-test score of practice in control group (N=30)

Component	Observation	Mean	SD	Paired "t" value
Control group practice score	Pre – test	17.3	3.71	0.06_{NS}
	Post – test	18.6	2.68	

NS – Not significant at 0.05level

Table 21 shows that the comparison of pre – test and post – test scores of practice in control group. The mean pre – test score is 17.3 and mean post – test score is 18.6. the Paired "t" test value was 0.06 when compared to table value (1.69) is low. It seems that without structured teaching programme there is no significant difference between pre – test and post – test scores of practice in control group.***(figure 22)***

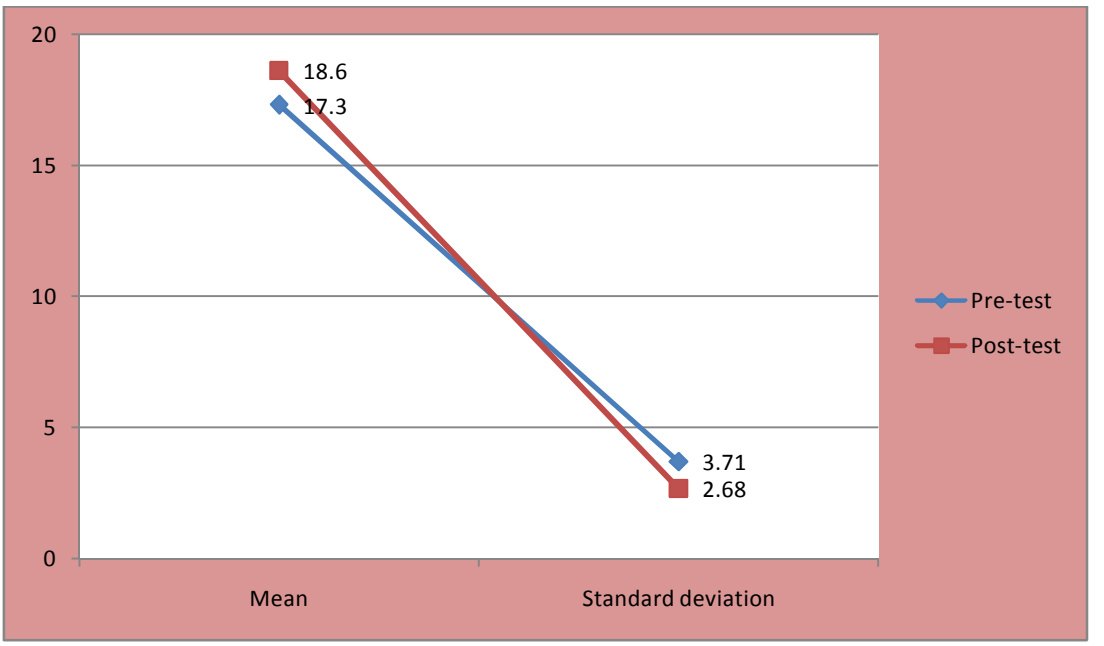


Figure 22: Mean and standard deviation of pre-test and post-test practice score in control group

Table-22 Comparison of mean pre-test and mean post-test score of knowledge in experimental group (N=30)

Component	Observation	Mean	SD	Paired "t" value
Experimental group knowledge score	Pre – test	9.33	3.00	*18.09
	Post - test	19.5	2.56	

Significant at 0.05 level

Table 22 shows that the comparison of pre – test and post – test scores of knowledge in experimental group. The mean pre – test score is 9.33 and mean post – test score is 19.5. the Paired "t" test value was *18.09 when compared to table value (1.69) is high. It seems that structured teaching programme makes significant difference between pre – test and post – test scores of knowledge in experimental group.***(figure 23)***

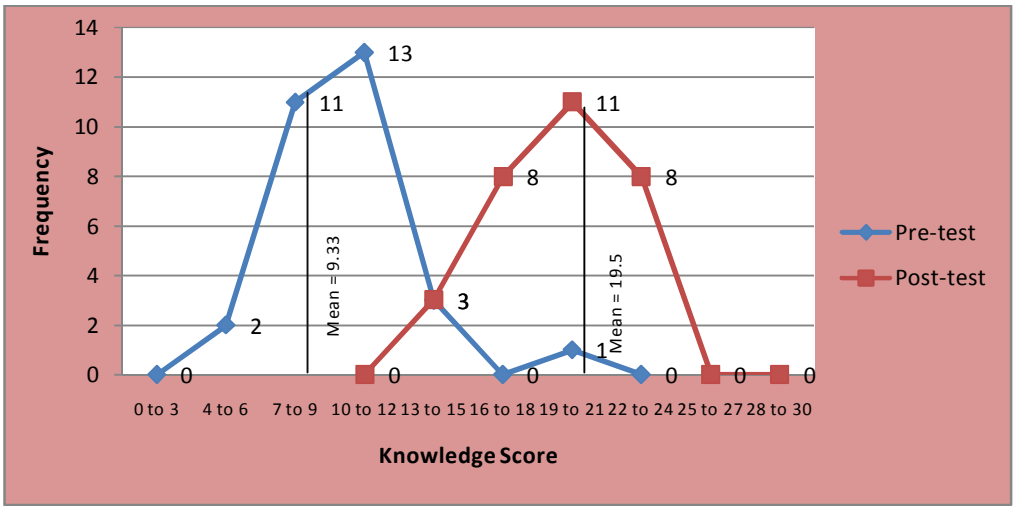


***Figure 23*: Comparison of mean pre-test and mean post-test score of knowledge in experimental group.**

Table-23 Comparison of mean pre-test and mean post-test score of practice in experimental group (N=30)

Component	Observation	Mean	SD	Paired "t" value
Experimental group Practice score	Pre – test	18.73	5.95	*12.47
	Post - test	29.43	2.75	

Significant at 0.05 level

Table 23 shows that the comparison of pre – test and post – test scores of practice in experimental group. The mean pre – test score is 18.73 and mean post – test score is 29.43. the Paired "t" test value was 12.47 when compared to table value (1.69) is high. It seems that structured teaching programme makes significant difference between pre – test and post – test scores of practice in experimental group.***(figure 24)***

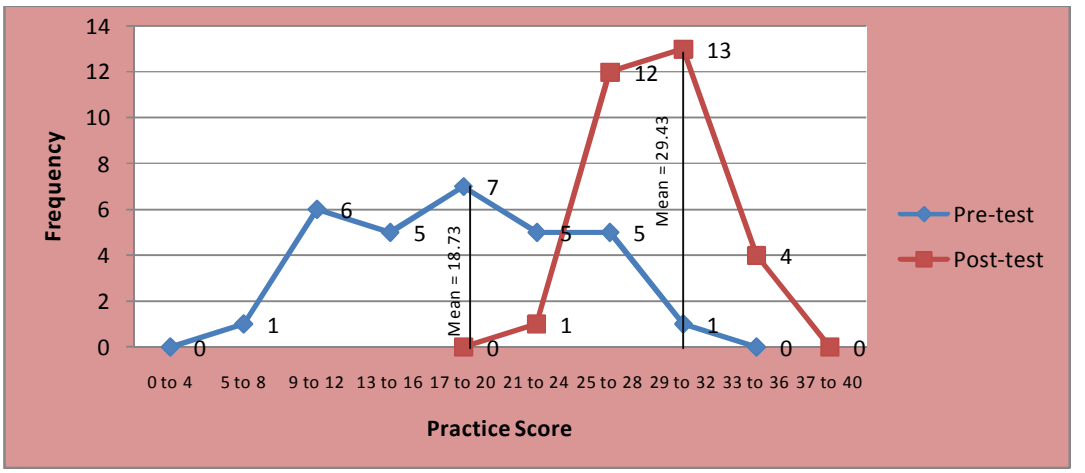


Figure 24: **Comparison of mean pre-test and mean post-test score of practice in experimental group**

Table 24: Comparison of mean post-test scores of knowledge in control and experimental group (N=60)

Test	N	Mean	SD	Unpaired "t" value
Control group	**30**	**10.7**	**2.39**	***7.27**
Experimental group	**30**	**19.5**	**2.56**	

***significant at 0.05 level**

Table-24 shows calculation of unpaired t test to analyze the difference between the mean post-test score of knowledge in control and experimental group. The mean post-test value of control group was 10.7 which is lesser than the post-test value 19.5 of experimental group. The Unpaired t value was *7.27 when compared to table value (2) is high. The findings show there is significant increase in the level of knowledge in experimental group than control group. It indicates the effectiveness of structured teaching programme in increasing knowledge level regarding life style modification among hypertensive patients.***(figure 25)**

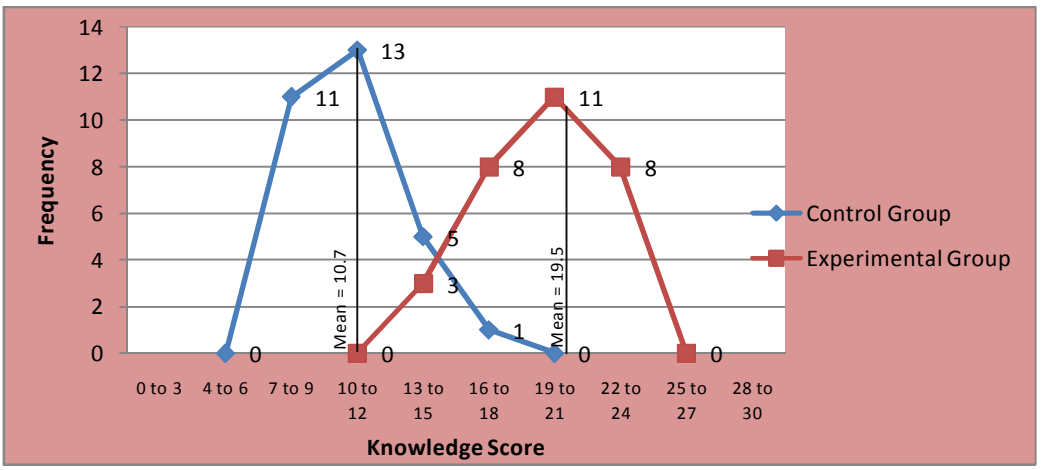


Figure 25: **Comparison of mean post-test scores of knowledge in control and experimental group**

Table 25: Comparison of mean post-test scores of practice in control and experimental group (N=60)

Test	N	Mean	SD	Unpaired "t" value
Control group	30	18.6	2.68	*3.35
Experimental group	30	29.43	2.75	

***significant at 0.05 level**

Table-25 shows calculation of unpaired t test to analyze the difference between the mean post-test score of practice in control and experimental group. The mean post-test value of control group was 18.6 which is lesser than the post-test value 29.43 of experimental group. The Unpaired t value was *3.35 when compared to table value (2) is high. The findings show there is significant increase in the level of practice in experimental group than control group. It indicates the effectiveness of structured teaching programme in increasing practice level regarding life style modification among hypertensive patients. ***(figure 26)***

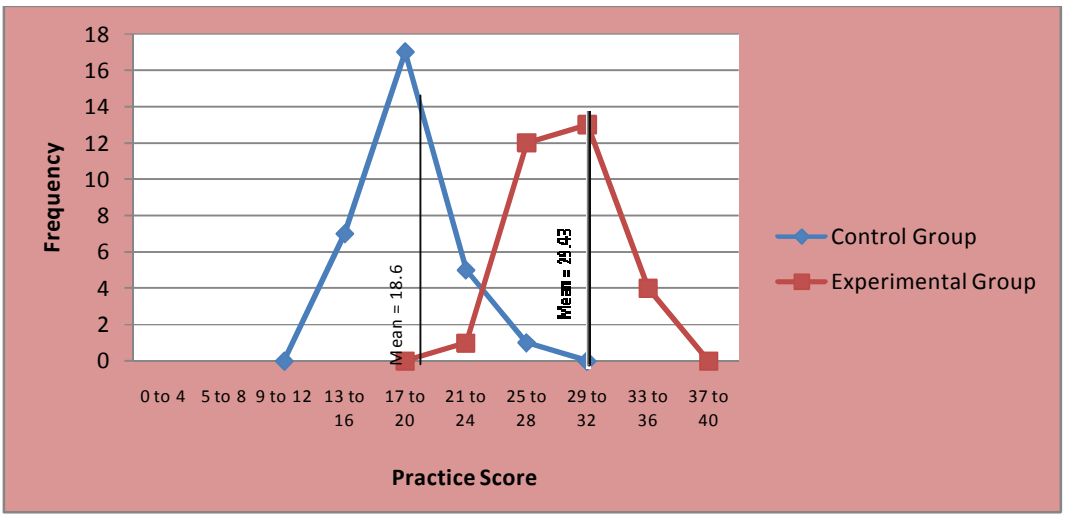


Figure 26: **Comparison of mean post-test scores of practice in control and experimental group**

SECTION IV

RELATIONSHIP BETWEEN POST-TEST SCORE OF KNOWLEDGE AND PRACTICE IN EXPERIMENTAL GROUP.

Table 26 – Relationship between post test score of knowledge and practice in experimental group (N=30)

Test	Mean	SD	Df	'r'
Knowledge	19.5	2.56	28	*0.45
Practice	29.43	2.75		

***Significant at 0.05 level**

To find out the relationship between the mean post-test knowledge score and mean post-test practice score of experimental group, the correlation co-efficient was obtained.

Table- 26 shows the post-test mean knowledge value 19.5 was higher than the pre-test mean value 10.7 and the post-test mean practice value 29.43 was higher than the pre-test mean value 9.33. The obtained r value 0.45 was significant at 0.05 level. The findings shows when the post-test knowledge score was increased along with that the post-test practice score. It indicates there was a positive relationship between post-test score of knowledge and practice in experimental group.

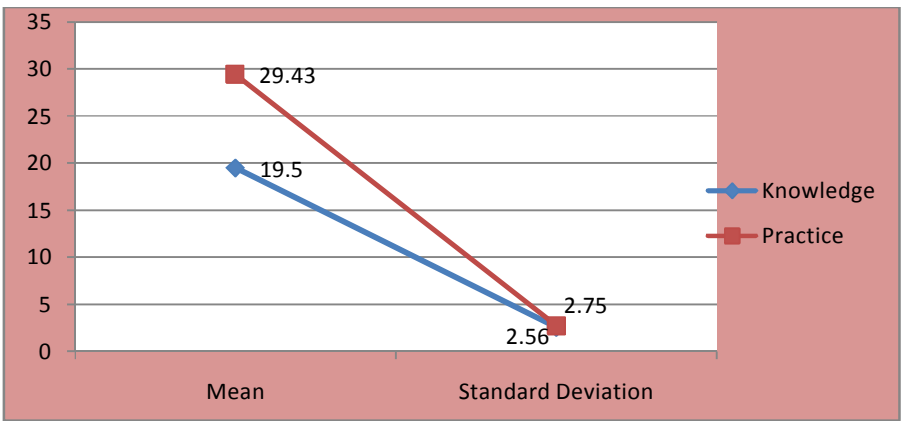


Figure 27: **Mean and standard deviation of Post-test Knowledge and practice scores in experimental group.**

SECTION – V

ASSOCIATION BETWEEN POST-TEST SCORES OF KNOWLEDGE AND PRACTICE IN CONTROL GROUP WITH DEMOGRAPHIC VARIABLES

Table 27: Association between post test scores of knowledge and Demographic variables in control group

Demographic variables	F	%	df	$\chi 2$	Table value	Level of significance
Age			6	3.69	12.59	P> 0.05 Not significant
a) Below 30 years	0	0				
b) 31 – 45 years	7	23				
c) 46 – 60 years	17	57				
d) 61 years and above	6	20				
Gender			2	0.14	5.99	P> 0.05 Not significant
a) Male	13	43				
b) Female	17	57				
Religion			6	1.22	12.59	P> 0.05 Not significant
a) Hindu	25	83				
b) Muslim	4	14				
c) Christian	1	3				
d) Others	0	0				
Marital status			4	10.95	9.48	***P< 0.05 significant**
a) Married	28	93				
b) Unmarried	0	0				
c) Widow/widower	2	7				

Educational status			6	10.95	12.59	P> 0.05 Not significant
a) No formal education	15	50				
b) Up to primary level	14	46				
c) Higher secondary	1	4				
d) Under graduate and above	0	0				
Type of occupation			6	7.74	12.59	P> 0.05 Not significant
a) Unemployed	13	43				
b) Sedentary worker	2	7				
c) Moderately heavy worker	8	27				
d) Heavy worker	7	23				
Monthly family income in rupees			6	2.12	12.59	P> 0.05 Not significant
a) Below 2,500	5	17				
b) 2,501 - 5,000	11	37				
c) 5,001 – 10,000	10	33				
d) Above 10,000	4	13				
Residential area			2	1.43	5.99	P> 0.05 Not significant
a) Urban	21	70				
b) Rural	9	30				
Family history of hypertension			2	2.73	5.99	P> 0.05 Not significant
a) Yes	8	27				

b) No	22	73				
Dietary pattern			2	0.67	5.99	P> 0.05 Not significant
a) Vegetarian	5	17				
b) Non-vegetarian	25	83				
Personal habit			6	11.17	12.59	P> 0.05 Not significant
a) Consuming tobacco	1	3				
b) Use of tobacco (smoking/chewing)	4	14				
c) Both a & b	7	23				
d) None of the above	18	60				
Any other illness			6	0.67	12.59	P> 0.05 Not significant
a) Diabetes mellitus	4	13				
b) Heart diseases	0	0				
c) Stroke	1	3				
d) None of the above	24	84				
When hypertension was diagnosed			6	0.29	12.59	P> 0.05 Not significant
a) In the health camp or regular check up	1	3				
b) After signs and symptoms	17	57				
c) During treatment of other illnesses	11	37				
d) After complications	1	3				

B.M.I.			4	5.00	9.48	P> 0.05 Not significant
a) Normal	16	53				
b) Below normal	2	7				
c) Above normal	12	40				

Chi-square was calculated in control group to find out the association between post-test score of knowledge with demographic variables. Table 27 shows that there was significant association between post test knowledge score and marital status.**(P<0.05)**

No significant association between post-test knowledge score of control group with demographic variables namely age, gender, religion, educational status, type of occupation, monthly family income, residential area, family history of hypertension, dietary pattern, personal habit, other illnesses, when hypertension was diagnosed, and B.M.I.**(P>0.05)**

Table 28: Association between post test scores of practice and Demographic variables in control group

Demographic variables	F	%	df	χ^2	Table value	Level of significance
Age			6	9.91	12.59	P> 0.05 Not significant
a) Below 30 years	0	0				
b) 31 – 45 years	7	23				
c) 46 – 60 years	17	57				
d) 61 years and above	6	20				
Gender			2	0.14	5.99	P> 0.05 Not significant
a) Male	13	43				
b) Female	17	57				
Religion			6	1.22	12.59	P> 0.05 Not significant
a) Hindu	25	83				
b) Muslim	4	14				
c) Christian	1	3				
d) Others	0	0				
Marital status			4	0.24	9.48	P> 0.05 Not significant
a) Married	28	93				
b) Unmarried	0	0				
c) Widow/widower	2	7				
Educational status			6	10.95	12.59	P> 0.05 Not significant
a) No formal education	15	50				
b) Up to primary level	14	46				

c) Higher secondary	1	4				
d) Under graduate and above	0	0				
Type of occupation			6	7.78	12.59	P> 0.05 Not significant
a) Unemployed	13	43				
b) Sedentary worker	2	7				
Moderately heavy worker	8	27				
c) Heavy worker	7	23				
Monthly family income in rupees			6	2.12	12.59	P> 0.05 Not significant
a) Below 2,500	5	17				
b) 2,501 - 5,000	11	37				
c) 5,001 – 10,000	10	33				
d) Above 10,000	4	13				
Residential area			2	2.43	5.99	P> 0.05 Not significant
a) Urban	21	70				
b) Rural	9	30				
Family history of hypertension			2	0.19	5.99	P> 0.05 Not significant
a) Yes	8	27				
b) No	22	73				
Dietary pattern			2	0.67	5.99	P> 0.05 Not significant
a) Vegetarian	5	17				
b) Non-vegetarian	25	83				

Personal habit			6	11.17	12.59	P> 0.05 Not significant
a) Consuming tobacco	1	3				
b) Use of tobacco (smoking/chewing)	4	14				
c) Both a & b	7	23				
d) None of the above	18	60				
Any other illness			6	0.67	12.59	P> 0.05 Not significant
a) Diabetes mellitus	4	13				
b) Heart diseases	0	0				
c) Stroke	1	3				
d) None of the above	24	84				
When hypertension was diagnosed			6	0.29	12.59	P> 0.05 Not significant
a) In the health camp or regular check up	1	3				
b) After signs and symptoms	17	57				
c) During treatment of other illnesses	11	37				
d) After complications	1	3				
B.M.I.			4	5.00	9.48	P> 0.05 Not significant
a) Normal	16	53				
b) Below normal	2	7				
c) Above normal	12	40				

Chi-square was calculated in control group to find out the association between post-test score of practice with demographic variables. Table 28 shows that there was no significant association between post-test practice score of control group with demographic variables namely age, gender, religion, marital status, educational status, type of occupation, monthly family income, residential area, family history of hypertension, dietary pattern, personal habit, other illnesses, when hypertension was diagnosed, and B.M.I.**(P>0.05)**

Table 29: Association between post test scores of knowledge and Demographic variables in experimental group

Demographic variables	F	%	df	χ^2	Table value	Level of significance
Age			6	2.35	12.59	P> 0.05 Not significant
a) Below 30 years	1	3				
b) 31 – 45 years	5	17				
c) 46 – 60 years	15	50				
d) 61 years and above	9	30				
Gender			2	0.37	5.99	P> 0.05 Not significant
a) Male	15	50				
b) Female	15	50				
Religion			6	10.46	12.59	P> 0.05 Not significant
a) Hindu	24	80				
b) Muslim	5	17				
c) Christian	1	3				
d) Others	0	0				
Marital status			4	8.22	9.48	P> 0.05 Not significant
a) Married	27	90				
b) Unmarried	1	3				
c) Widow/widower	2	7				
Educational status			6	1.67	12.59	P> 0.05 Not significant
a) No formal education	7	23				
b) Up to primary level	20	67				
c) Higher secondary	1	3				

d) Under graduate and above	2	7				
Type of occupation			6	1.13	12.59	P> 0.05 Not significant
a) Unemployed	6	20				
b) Sedentary worker	1	3				
c) Moderately heavy worker	17	57				
d) Heavy worker	6	20				
Monthly family income in rupees			6	2.84	12.59	P> 0.05 Not significant
a) Below 2,500	6	20				
b) 2,501 - 5,000	9	30				
c) 5,001 – 10,000	9	30				
d) Above 10,000	6	20				
Residential area			2	0.24	5.99	P> 0.05 Not significant
a) Urban	28	93				
b) Rural	2	7				
Family history of hypertension			2	0.37	5.99	P> 0.05 Not significant
a) Yes	15	50				
b) No	15	50				
Dietary pattern			2	0.67	5.99	P> 0.05 Not significant
a) Vegetarian	5	17				
b) Non-vegetarian	25	83				

Personal habit			6	2.55	12.59	P> 0.05 Not significant
a) Consuming tobacco	3	10				
b) Use of tobacco (smoking/chewing)	7	23				
c) Both a & b	3	10				
d) None of the above	17	57				
Any other illness			6	0.73	12.59	P> 0.05 Not significant
a) Diabetes mellitus	3	10				
b) Heart diseases	0	0				
c) Stroke	0	0				
d) None of the above	27	90				
When hypertension was diagnosed			6	10.39	12.59	P> 0.05 Not significant
a) In the health camp or regular check up	2	7				
b) After signs and symptoms	17	57				
c) During treatment of other illnesses	10	33				
d) After complications	1	3				
B.M.I.			4	10.12	9.48	***P< 0.05 significant**
a) Normal	19	63				
b) Below normal	1	3				
c) Above normal	10	34				

Chi-square was calculated in Experimental group to find out the association between post-test score of knowledge with demographic variables. Table 29 shows that there is significant association between B.M.I. and post test knowledge scores.**(P<0.05)**

And there was no significant association between post-test knowledge score of experimental group with demographic variables namely age, gender, religion, marital status, educational status, type of occupation, monthly family income, residential area, family history of hypertension, dietary pattern, personal habit, other illnesses, and when hypertension was diagnosed.**(P>0.05)**

Table 30: Association between post test scores of practice and Demographic variables in experimental group

Demographic variables	F	%	df	$\chi 2$	Table value	Level of significance
Age			6	2.27	12.59	P> 0.05 Not significant
a) Below 30 years	1	3				
b) 31 – 45 years	5	17				
c) 46 – 60 years	15	50				
d) 61 years and above	9	30				
Gender			2	3.33	5.99	P> 0.05 Not significant
a) Male	15	50				
b) Female	15	50				
Religion			6	6.67	12.59	P> 0.05 Not significant
a) Hindu	24	80				
b) Muslim	5	17				
c) Christian	1	3				
d) Others	0	0				
Marital status			4	1.04	9.48	P> 0.05 Not significant
a) Married	27	90				
b) Unmarried	1	3				
c) Widow/widower	2	7				
Educational status			6	7.37	12.59	P> 0.05 Not significant
a) No formal education	7	23				
b) Up to primary level	20	67				
c) Higher secondary	1	3				

d) Under graduate and above	2	7				
Type of occupation			6	3.25	12.59	P> 0.05 Not significant
a) Unemployed	6	20				
b) Sedentary worker	1	3				
c) Moderately heavy worker	17	57				
d) Heavy worker	6	20				
Monthly family income in rupees			6	6.89	12.59	P> 0.05 Not significant
a) Below 2,500	6	20				
b) 2,501 - 5,000	9	30				
c) 5,001 – 10,000	9	30				
d) Above 10,000	6	20				
Residential area			2	0	5.99	P> 0.05 Not significant
a) Urban	28	93				
b) Rural	2	7				
Family history of hypertension			2	3.33	5.99	P> 0.05 Not significant
a) Yes	15	50				
b) No	15	50				
Dietary pattern			2	3.33	5.99	P> 0.05 Not significant
a) Vegetarian	5	17				
b) Non-vegetarian	25	83				

Personal habit			6	6.09	12.59	P> 0.05 Not significant
a) Consuming tobacco	3	10				
b) Use of tobacco (smoking/chewing)	7	23				
c) Both a & b	3	10				
d) None of the above	17	57				
Any other illness			6	0.37	12.59	P> 0.05 Not significant
a) Diabetes mellitus	3	10				
b) Heart diseases	0	0				
c) Stroke	0	0				
d) None of the above	27	90				
When hypertension was diagnosed			6	7.48	12.59	P> 0.05 Not significant
a) In the health camp or regular check up	2	7				
b) After signs and symptoms	17	57				
c) During treatment of other illnesses	10	33				
d) After complications	1	3				
B.M.I.			4	1.87	9.48	P> 0.05 Not significant
a) Normal	19	63				
b) Below normal	1	3				
c) Above normal	10	34				

Chi-square was calculated in Experimental group to find out the association between post-test score of practice with demographic variables. Table 30 shows that there was no significant association between post-test practice score of experimental group with demographic variables namely age, gender, religion, marital status, educational status, type of occupation, monthly family income, residential area, family history of hypertension, dietary pattern, personal habit, other illness, when hypertension was diagnosed, and B.M.I.**(P>0.05)**

CHAPTER V

DISCUSSION

This chapter deals with the discussion which was based on the findings obtained from the statistical analysis and its relation to the objectives of the study, the conceptual frame work and the related literature.

The aim of the study was to assess the effectiveness of structured teaching programme regarding life style modification among hypertensive patients at Government Headquarters Hospital, Erode".

Sample characteristics in control group and experimental group

Regarding the age most of the clients in control and experimental groups belongs to the age group between 46 – 60 years (57% and 50% respectively). In control group 23% belongs to 31 – 45 years of age, 20% belongs to 61 years and above and there was no one in the age group below 30 years, where as in experimental group 30% belongs to 61 years and above age group17% belongs to 31 – 45 years and 3% belongs to the age group below 30 years.

Regarding the gender that in control group majority of 57% were female and 43% were male, where as in experimental group samples are equally distributed between male and female. (50% each).

With regard to religion highest percentage of clients belongs to Hindu both in control and experimental group (83% and 80% respectively). In control group 14% belongs to Muslim, 3% belongs to Christian and no clients come under other religion category, where as in experimental group 17% were Muslim, 3% were Christians and no clients come under other religion category.

In connection with marital status highest percentage of clients belongs to married category both in control and experimental group (93% and 90% respectively). In control

group 7% come under widow/widower category and no clients comes under unmarried category, whereas in experimental group 7% were widow/widower and 3% of clients were unmarried.

Regarding education status in control group majority of 50% of clients had no formal education, 46% had primary education, 4% had higher secondary education and no clients had the educational qualification of undergraduate and above, whereas in experimental group 67% had primary education, 23% had no formal education, 3% had higher secondary education and 7% were under graduates.

Pertaining to type of occupation in control group majority 43% of clients were unemployed, 27% were moderately heavy workers, 23% were heavy workers and 7% were sedentary worker,. whereas in experimental group majority 57% belongs to moderately heavy workers, 20% of clients were unemployed, 20% were heavy workers and 3% were sedentary workers.

Concerning the monthly income of the family that in control group majority 37% of the clients had family income Rs.2,501 – 5,000, 33% had Rs.5,001 – 10,000, 17% had below Rs.2,500, and 13% had above Rs.10,000 as their family income. Where as in experimental group majority 30% of the clients had Rs.2,501 – 5,000 income, 30% had Rs.5,001 – 10,000, 20% had Rs.2500and 20% had above Rs.10,000 as their family income.

Regarding residential area that highest percentage of clients lives in urban area both in control and experimental group (70% and 93% respectively). In control group 30% resides in rural area and in experimental group 7% resides in rural area.

With regard to family history of hypertension in control group 73% had no family history of hypertension 27% of clients had family history of hypertension. Whereas in experimental group samples where equally distributed between the presence and absence

of family history of hypertension (each 50%).

Considering the dietary pattern in both control and experimental group 83% were non-vegetarians and 17% were vegetarians.

Concerning the personal habits highest percentage of clients both in control and experimental group had no bad habits like using tobacco or alcoholism (60% and 57% respectively). In control group 23% were both smokers and alcoholics and 14% had the habit of using tobacco and 3% were alcoholics, where as in experimental group 23% uses tobacco, 10% were both smokers and alcoholics and 10% were alcoholics.

Regarding the presence of associated highest percentage of clients both in control and experimental group had no associated illness (84% and 90% respectively) and in both control and experimental group there were no clients under heart disease category, where as in control group 13% had diabetes mellitus and 3% had stroke. Whereas in experimental group 10% of clients had diabetes mellitus and no clients comes under stroke category.

With regards to when hypertension was diagnosed both in control and experimental group (highest percentage of clients both in control and experimental group (57% and 57% respectively) were diagnosed with hypertension after the appearance of signs and symptoms of hypertension. In control group 37%were diagnosed as having hypertension during the treatment of other illnesses, 3% were diagnosed in health camp or regular check up, and 3% after the complication of hypertension, whereas in experimental group 33% were diagnosed during the treatment of other illnesses and 7% were diagnosed in health camp or regular check up, and 3% after the complication of hypertension.

Concerning B.M.I. that in control group majority of 53% of clients had normal B.M.I., 40% had above normal B.M.I and 7% had below normal B.M.I. whereas in

experimental group majority of 63% had normal B.M.I., 34% had above normal B.M.I and 3% had below normal B.M.I..

The first objective of the study is to assess the level of knowledge and practice regarding life style modification among hypertensive patients before and after the structured teaching programme.

This was analyzed by using frequency and percentage and the result shows that, structured teaching programme increases the level of knowledge and practice regarding lifestyle modification among hypertensive patients. In order to determine the effectiveness of structured teaching programme on knowledge and practice regarding life style modification among hypertensives the investigator assessed the level of knowledge and practice among hypertensive patients before and after structured teaching programme in both the groups.

Table 16 depicts distribution of pre – test and post – test score of knowledge in control group. In pre – test majority of clients 93% had inadequate knowledge and 7% had moderately adequate knowledge, whereas in post – test majority of clients 90% had inadequate knowledge and 10% had moderately adequate knowledge and none of the clients had adequate knowledge both in pre-test and post test.

Table 17 depicts distribution of pre – test and post – test score of practice in control group. In pre – test majority of clients 63% had poor practice and 37% had moderate practice. In post – test majority of clients 67% had poor practice and 33% had moderate practice and none of the clients had good practice both in pre-test and post-test.

Table 18 depicts the distribution of pre – test and post – test score of knowledge in experimental group. In pre – test majority of 90% of patients had inadequate knowledge

and 10% moderately adequately knowledge. In post – test majority of 90% of patients had moderately knowledge and 10% adequately knowledge.

Table 19 depicts the distribution of pre – test and post – test scores of practice regarding life style modification in experimental group. In pre – test 53% of clients had poor practice, 43% had moderate practice and 4% had good practice. In post – test 50% had moderate practice and 50% had good practice.

The second objective of the study is to implement and evaluate the effectiveness of structured teaching programme on the knowledge and practice regarding lifestyle modification among hypertensive patients

Comparison of mean pre-test and mean post-test score of knowledge in control group.

In order to compare the level of knowledge the investigator assessed the pre and post- test score on knowledge before and after the structured teaching programme in control group. Table 20 shows that the comparison of pre – test and post – test scores of knowledge in control group. The mean pre – test score is 9.66 and mean post – test score is 10.7, the Paired "t" test value was 0.07 when compared to table value (1.69) is low. It seems that without structured teaching programme there is no significant difference between pre – test and post – test score of knowledge in control group.

Comparison of mean pre-test and mean post-test score of practice in control group.

In order to compare the level of knowledge the investigator assessed the pre and post- test score on practice before and after the structured teaching programme in control group. Table 21 shows that the comparison of pre – test and post – test scores of practice in control group. The mean pre – test score is 17.3 and mean post – test score is 18.6. the

Paired “t” test value was 0.06 when compared to table value (1.69) is low. It seems that without structured teaching programme there is no significant difference between pre – test and post – test scores of practice in control group.

Comparison of mean pre-test and mean post-test score of knowledge in experimental group

In order to compare the level of knowledge the investigator assessed the pre and post- test score on knowledge before and after the structured teaching programme in experimental group. Table 22 shows that the comparison of pre – test and post – test scores of knowledge in experimental group. The mean pre – test score is 9.33 and mean post – test score is 19.5. the Paired “t” test value was 18.09 when compared to table value (1.69) is high. It seems that structured teaching programme makes significant difference between pre – test and post – test scores of knowledge in experimental group. So the researcher concluded that structured teaching programme is effective increasing the knowledge among experimental group regarding life style modification among hypertensive patients.

Comparison of mean pre-test and mean post-test score of practice in experimental group.

In order to compare the level of knowledge the investigator assessed the pre and post- test score on practice before and after the structured teaching programme in experimental group. Table 23 shows that the comparison of pre – test and post – test scores of practice in experimental group. The mean pre – test score is 18.73 and mean post – test score is 29.43. the Paired “t” test value was 12.47 when compared to table value (1.69) is high. It seems that structured teaching programme makes significant difference between pre – test and post – test scores of practice in experimental group. So the researcher concluded that structured teaching programme is effective increasing the

practice among experimental group regarding life style modification among hypertensive patients.

Comparison of mean post-test scores of knowledge in control and experimental group

Table-24 shows calculation of unpaired t test to analyze the difference between the mean post-test score of knowledge in control and experimental group. The mean post-test value of control group was 10.7 which is lesser than the post-test value 19.5 of experimental group. The Unpaired t value was *7.27 when compared to table value (2) is high. The findings show there is significant increase in the level of knowledge in experimental group than control group. It indicates the effectiveness of structured teaching programme in increasing knowledge level regarding life style modification among hypertensive patients.

Comparison of mean post-test scores of practice in control and experimental group

Table-25 shows calculation of unpaired t test to analyze the difference between the mean post-test score of practice in control and experimental group. The mean post-test value of control group was 18.6 which is lesser than the post-test value 29.43 of experimental group. The Unpaired t value was *3.35 when compared to table value (2) is high. The findings show there is significant increase in the level of practice in experimental group than control group. It indicates the effectiveness of structured teaching programme in increasing practice level regarding life style modification among hypertensive patients.

The third objective is to find out the relationship between knowledge and practice regarding life style modification among hypertensive patients.

Correlation co-efficient between post test score of knowledge and practice in experimental group

To find out the relationship between the mean post-test knowledge score and

mean post- test practice score of experimental group, the correlation co-efficient was obtained. Table- 26 shows the post-test mean knowledge value 19.5 was higher than the pre-test mean value 10.7 and the post-test mean practice value 29.43 was higher than the pre-test mean value 9.33. The obtained r value 0.45 was significant at 0.05 level. The findings shows when the post-test knowledge score was increased along with that the post-test practice score. It indicates there was a positive relationship between post-test score of knowledge and practice in experimental group.

The fourth objective is to find out the association between knowledge and practice among hypertensive patients with selected demographic variables.

Chi-square was calculated to find out the association between post-test score of knowledge with demographic variables.

Chi-square calculation in control group to find out the association between post-test score of knowledge with demographic variables (Table 27) shows that there was significant association between post test knowledge score and marital status.**(P<0.05)**

No significant association between post-test knowledge score of control group with demographic variables namely age, gender, religion, education status, type of occupation, monthly income, residential area, family history of hypertension, dietary pattern, personal habit, associated illness, when hypertension was diagnosed, and B.M.I.**(P>0.05)**

Chi-square calculation in control group to find out the association between post-test score of practice with demographic variables (Table 28) shows that there was no significant association between post-test practice score of control group with demographic variables namely age, gender, religion, marital status, education status, type of occupation, monthly income, residential area, family history of hypertension, dietary

pattern, personal habit, associated illness, when hypertension was diagnosed, and B.M.I.**(P>0.05)**

Chi-square calculation in Experimental group to find out the association between post-test score of knowledge with demographic variables (Table 29) shows that there is significant association between B.M.I. and post test knowledge scores.**(P<0.05)**

And there was no significant association between post-test knowledge score of experimental group with demographic variables namely age, gender, religion, marital status, education status, type of occupation, monthly income, residential area, family history of hypertension, dietary pattern, personal habit, associated illness, and when hypertension was diagnosed.**(P>0.05)**

Chi-square was calculated in Experimental group to find out the association between post-test score of practice with demographic variables (Table 29) shows that there was no significant association between post-test practice score of experimental group with demographic variables namely age, gender, religion, marital status, education status, type of occupation, monthly income, residential area, family history of hypertension, dietary pattern, personal habit, associated illness, when hypertension was diagnosed, and B.M.I.**(P>0.05)**

CHAPTER – VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter deals with the summary of the study, its findings, conclusion and the implications for nursing administration, the health care delivery system(nursing practice), nursing education and nursing research. This study has been started with a few limitations and ends with suggestions and recommendations for research in future.

SUMMARY

Hypertension has become a significant problem and contributor to cardiovascular diseases (CVD) in many developing countries. Over the last 30 years, there has been an increase in the prevalence and incidence of stroke in India, for which hypertension is one of the principal risk factors. The socio-economically disadvantaged communities such as those with migrants are vulnerable to hypertension. Hypertension presents a major area of intervention because it is a frequent condition that is amenable to control through both non-pharmacological lifestyle changes and pharmacological treatment. Though well defined preventive strategies through lifestyle and dietary modifications are available for hypertension, it is not clear whether the public has access to this knowledge and services. An insight into the communities' knowledge and perceptions on hypertension is important as prevention requires a life-long adoption of healthy lifestyles.

(Yadlapalli Sriparvati Kusuma 2008)

Structured teaching programme is one carefully organized and presented to the subject in order to achieve the intended goal. So the investigator studied **the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode.**

The objectives of the study were,

1. To assess the level of knowledge and practice regarding life style modification among hypertensive patients before and after the structured teaching programme.

2. To implement and evaluate the effectiveness of structured teaching programme on the knowledge and practice regarding lifestyle modification among hypertensive patients.

3. To find out the relationship between knowledge and practice regarding life style modification among hypertensive patients.

4. To find out the association between knowledge and practice among hypertensive patients with selected demographic variables such as age, gender, marital status etc.

The following hypotheses were set for the study and the entire hypothesis were tested at 0.05 level.

H_1 – There will be significant enhancement in the level of knowledge and practice regarding lifestyle modification among hypertensive patients after structured teaching programme.

H_2 – There will be significant relationship between knowledge and practice regarding lifestyle modification among hypertensive patients.

H_3 – There will be significant association between the level of knowledge and practice regarding lifestyle modification with selected demographic variables like age, gender, religion, marital status, education status, monthly income, type of family, dietary pattern, personal habits, residential area, and family history of hypertension.

Major findings of the study:

✓ Mean difference between pre-test and post-test score of knowledge in experimental group was significant at 0.05 level.

✓ Mean difference between pre-test and post-test score of practice in experimental group was significant at 0.05 level

✓ Mean difference between post-test score of knowledge in control and experimental group was significant at 0.05 level

✓ Mean difference between post-test score of practice in control and experimental group was significant at 0.05 level

✓ There was a positive correlation found between knowledge and functional practice of patient with hypertension.

✓ There was significant association between the post-test score of knowledge in control group and marital status. **(p<0.05)**

✓ There was a significant association between the post-test score of knowledge in experimental group and B.M.I. **(P< 0.05)**

CONCLUSION

The following conclusions were drawn from the study,

✓ The level of knowledge regarding lifestyle modification was increased among patient with hypertension who received structured teaching programme.

✓ The level of practice regarding lifestyle modification was increased among patient with hypertension who received structured teaching programme.

✓ The study proved that there was a positive relationship between knowledge and practice.

✓ There was significant association between the post-test score of knowledge in control group and marital status. **(p<0.05)**

✓ There was a significant association between the post-test score of knowledge in experimental group and B.M.I. **(P< 0.05)**

IMPLICATIONS FOR NURSING

The findings of the present study have implication in Nursing practice, Nursing Education, Nursing administration and Nursing research.

Nursing Practice

1. Nurses play a pivotal role in helping the patients by increasing the knowledge and practice regarding lifestyle modification for hypertension.

2. Structured teaching programme can be used to increase the knowledge and practice regarding lifestyle modification for hypertensive patients.

3. Nurses are in an excellent position to assess and counsel their patients about the benefits of lifestyle modification.

4. The nursing personnel working in hospital can reinforce the health benefits of lifestyle modification to patients, family members and other health care team members.

5. This structured teaching programme can be used in various settings like inpatients department,and home settings.

6. The structured teaching programme can be printed and distributed to the patients as a preventive measure of complication.

Nursing Education

- Nursing personal working in various health setting should be given in-service education to update this knowledge and ability to identify the learning needs of the patients on lifestyle modification in order to increase the knowledge and practice regarding lifestyle modification for hypertension.
- Nursing educator should educate the nursing professionals about the effectiveness Structured teaching programme to increase the knowledge and practice regarding lifestyle modification for hypertension.
- Nursing educator should influence nursing professionals to review the curriculum of

the course in order to include lifestyle modification for preventing the complications of hypertension.

- The nurse researcher educates the hypertension patients to practice lifestyle modification in order to live a healthy life and to prevent complications of hypertension
- Nursing students should be encouraged to participate in the education of patients regarding lifestyle modification of hypertension.

Nursing Administration

- The nurse administrator should arrange in-service education to update their subordinates' knowledge regarding life style modification for hypertensive patients.
- **N**urse administrator can review the policies of Structured teaching programme as a protocol for to increase the knowledge and practice regarding lifestyle modification for hypertension..
- Nurse administrator can encourage the researchers to conduct the research to identify the effectiveness of structured teaching programme regarding lifestyle modification for hypertensive patients.
- Cost effective production of materials used for teaching by the nursing staff should be encouraged.
- The content of structured teaching programme can be printed in to booklet and distributed to staff nurse.
- The administrator should make arrangements to prepare adequate A.V. Aids for giving health education.

Nursing Research

- It is essential to identify the present level of knowledge and practice of individual regarding lifestyle modification of hypertension to know the extent of information necessary to be taught.

- Further research must be conducted to identify more effective methods for patient education.
- This study also brings out the fact that more studies can be done in different settings.

RECOMMENDATIONS

- A similar study can be conducted on a larger sample.
- A similar study can be done using true experimental design.
- A similar study can be conducted with a post-test after 4 weeks, 6 weeks interval to evaluate the retention of knowledge.
- A similar study can be compared with other alternative programmes like video assisted teaching programme, self instructional module etc,.

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ANNEXURE - A

LETTER REQUESTING PERMISSION FOR CONDUCTING THE FINAL STUDY

NANDHA COLLEGE OF NURSING

(Approved by INC, New Delhi and TNNMC, Chennai
Affiliated to The Tamilnadu Dr. M.G.R. Medical University, Chennai)

Koorapalayam "Pirivu",
Pitchandampalayam Post,
ERODE - 638 052.
TAMILNADU.

Tel : 04294 - 224611, 221405
Fax : 04294 - 224622
Web : www.nandhainstitutions.org
E-mail : nandha_nursing@yahoo.co.in

Prof. R.VASANTHI, M.Sc.(Nur).,
Principal

Date 16.05.2014

To

The Medical Superintendent,
Govt. Head Quarters Hospital,
Erode.

Dear Sir,

Sub : Nandha College of Nursing, Erode – M.Sc. (Nursing) Degree Course – Conducting Research Study – Permission requested – Reg.

* * *

We would like to bring to your kind perusal that we are planned to send our Second year M.Sc.(Nursing) student namely **Mr. RALPH RAJA.D** to conduct a research study in your esteemed hospital for a period of fifteen days from 19.05.2014 to 02.06.2014 as a part of their curriculum.

We assure that he will not disturb the routine function of the hospital.

Hence, we request you to kindly accord permission to our student for the above said purpose.

This is for your kind perusal and favourable action.

Thanking you,

Yours faithfully,

16/5/14

PRINCIPAL
NANDHA COLLEGE OF NURSING
ERODE.

ANNEXURE – B
LETTER SEEKING EXPERT OPINION FOR CONTENT VALIDITY OF TOOLS

LETTER SEEKING EXPERT'S OPINION FOR CONTENT VALIDITY OF TOOLS

From:
Ralph Raja. D
M.Sc., Nursing 2nd year,
Nandha college of Nursing,
Erode.

To

_____
_____
_____

SUB : Request expert's opinion on content validity of tool.

Dear Sir/Madam,

I am a final year Master of nursing student in Nandha College of Nursing. I have selected the under mentioned topic for research project to be submitted to the DR.M.G.R. University of Tamilnadu in partial fulfillment of university requirements for the award of Master of Nursing Degree.

Topic : "A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

I request you to kindly go through these tool i.e., interview schedule for collecting Demographic data and self structured questionnaire to assess the level of knowledge and practice regarding lifestyle modification among hypertensive patient and give your valuable opinion and comments for any modification and improvement in the tool. A copy of the objectives has also been enclosed along with. I shall grateful to you if you would be able to return the validated tool by . . . . . as we are supposed to conduct our final study by . . . . . and also for the expert opinion and kind cooperation solicited.

Thanking you,

Yours sincerely,
Ralph Raja. D

Date:
Place:

CONTENT VALIDITY CERTIFICATE

I here by certify that I have validated the teaching content of *RALPH RAJA. D* , M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place: ERODE

Date: 06-05-2014

Signature of the Expert

Name: Dr.S. SOMASUNDARAM, M.D., C.C.S. (Gen.Med) Reg.No: 49576

Designation:

GOVT. Hd. Qrs. HOSPITAL ERODE-638 009

TOOL VALIDITY CERTIFICATE

I here by certify that I have validated the tool of *RALPH RAJA. D* , M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place: Erode

Date: 06-05-2014

Signature of the Expert

Dr.S. SOMASUNDARAM, M.D.,
C.C.S. (Gen.Med)
Reg.No: 45375

Name:

Designation:

GOVT. Hd. Qrs. Hospl
ERODE-638 009

CONTENT VALIDITY CERTIFICATE

I here by certify that I have validated the teaching content of *RALPH RAJA. D* , M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place: Pallakkapalayam.

Date: 8/5/2024.

C. Grazy

Signature of the Expert

Name: MRS. GRAZY.C.

Designation: Assistant Professor.

Mrs.C.GRAZY.M.Sc.(N)
Medical Surgical Nursing
RN: 70475 RM: 75756

TOOL VALIDITY CERTIFICATE

I here by certify that I have validated the tool of *RALPH RAJA. D* , M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place: Pallakkapalayam.

Date: 8/5/2014.

C. Grazy

Signature of the Expert

Name: MRS. GRAZY.C.

Designation: Assistant professor

Mrs.C.GRAZY,M.Sc.(N)
Medical Surgical Nursing
RN: 70475 RM: 75756

CONTENT VALIDITY CERTIFICATE

I here by certify that I have validated the teaching content of *RALPH RAJA. D*, M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place: Thindal, Erode.

Date: 16.05.2014.

Signature of the Expert

Name: M. SUDHA DEVI

Designation: Assistant Professor.

TOOL VALIDITY CERTIFICATE

I here by certify that I have validated the tool of *RALPH RAJA. D* , M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place: Thindal, Erode

Date: 16.05.2014.

Signature of the Expert

Vellalar College of Nursing, Maruthi Nagar, Thindal, ERODE.

Name: M. Sudhadevi.

Designation: Assistant Professor.

CONTENT VALIDITY CERTIFICATE

I here by certify that I have validated the teaching content of *RALPH RAJA. D*, M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place:

Date:

Signature of the Expert

Name: Dr.K. SUDHAKAR, MD.,(DNB)Cardiology.
Managing Director
Reg. No: 70324
SUDHA INSTITUTE OF MEDICAL SCIENCES
162, Perundurai Road, Erode - 638 011.

Designation:

TOOL VALIDITY CERTIFICATE

I here by certify that I have validated the tool of *RALPH RAJA. D* , M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place:

Date:

Signature of the Expert

Dr.K. SUDHAKAR, MD.,(DNB)Cardiology.,
Managing Director
Reg. No: 70324
SUDHA INSTITUTE OF MEDICAL SCIENCES
162, Perundural Road, Erode - 638 011.

Name:

Designation:

CONTENT VALIDITY CERTIFICATE

I here by certify that I have validated the teaching content of *RALPH RAJA. D*, M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place: Erode

Date: 7/04/14

Signature of the Expert

Name: Mrs. Gnanadhinagari, M.Sc(N).

Designation: HOD dept of Med-Surg Nursing, Dr. Mahalingam college of Nursing Erode.

TOOL VALIDITY CERTIFICATE

I here by certify that I have validated the tool of *RALPH RAJA. D* , M.Sc.,[Nursing] II year student of Nandha college of Nursing DR. M.G.R. University, Tamilnadu, who has under taken the dissertation titled,

"A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode."

Place: Erode.

Date: 7/05/14

Signature of the Expert

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ANNEXURE – C

EDITOR'S CERTIFICATES

CERTIFICATE BY THE EDITOR

This is to certify that the dissertation entitled , "A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode" is a bonafied research work by Ralph Raja. D, II year M.Sc., (Nursing), student of Nandha College of Nursing, 29/4, Koorapalayam Pirivu, Pichandampalayam post, Erode district. Mrs. E. V. R. Thenarasi. M.A. B.Ed. literature edited this manuscript on behalf of the partial fulfillment of the prerequisite for the degree of master in Nursing (Medical Surgical Nursing)

E.V.R. Thenarasi
Signature of the Editor

Name : E.V.R. THENARASI M.A. B.Ed.

Designation : Teacher

Date : 11.08.2014

CERTIFICATE BY THE TAMIL EDITOR

This is to certify that the dissertation entitled , "A study to assess the effectiveness of structured teaching programme regarding lifestyle modification among hypertensive patients at Government Head quarters Hospital, Erode" is a bonafied research work by Ralph Raja. D, II year M.Sc., (Nursing), student of Nandha College of Nursing, 29/4, Koorapalayam Pirivu, Pichandampalayam post, Erode district. Mrs. Vijayalakshmi. M.A. B.Ed., has helped in translation of the tool on behalf of the partial fulfillment of the prerequisite for the degree of master in Nursing (Medical Surgical Nursing)

Signature of the Tamil editor

Name : K. VIJAYALAKSHMI M.A., B.Ed.,

Designation : Teacher

Date : 11 - 08 - 2014

ANNEXURE – D

STRUCTURED INTERVIEW SCHEDULE

PART – A

DEMOGRAPHIC VARIABLES

I. Age

1	2	3	4

1. Below 30 years
2. 31 – 45 years
3. 45 – 60 years
4. 61 and above

II. Gender

1	2

1. Male
2. Female

III. Religion

1	2	3	4

1. Hindu
2. Muslim
3. Christian
4. Others

IV. Marital status

1	2	3

1. Married
2. Unmarried
3. Widow/widower

V. Educational status

1	2	3	4

1. No formal education
2. Primary education
3. Higher secondary
4. Under graduate and above

VI. Occupation

1	2	3	4

1. Unemployed
2. Sedentary worker
3. Moderately heavy worker
4. Heavy worker

VII. Monthly family income

1	2	3	4

1. Below Rs.2500
2. Rs. 2501 – 5000
3. Rs. 5001 – 10,000
4. Above Rs. 10,000

VIII. Residential area

1	2

1. Urban
2. Rural

IX. Family history of hypertension | 1 | 2 |

1. Yes
2. No

X. Dietary habit | 1 | 2 |

1. Vegetarian
2. Non-vegetarian

XI. Personal habit | 1 | 2 | 3 | 4 |

1. Alcoholic
2. Use of tobacco
3. 1&2
4. None of the above

XII. Associated illness | 1 | 2 | 3 | 4 |

1. Diabetes
2. Heart diseases
3. Stroke
4. None of the above

XIII. When hypertension was diagnosed | 1 | 2 | 3 | 4 |

1. In health camp/regular health check up
2. After the appearance of signs and symptoms
3. During treatment of other illnesses
4. After complications

XIV. B.M.I. | 1 | 2 | 3 |

1. Normal
2. Below normal
3. Above normal

PART – B

KNOWLEDGE QUESTIONNAIRE

1. The normal blood pressure is

1	2	3	4

a) 140/110mmof Hg

b) 130/100 mm of Hg

c) 120/80mm of Hg

d) 110/50mm of Hg

2. Hypertension means

1	2	3	4

a) Increased pulse rate

b) Increased blood pressure

c) Increased respiratory rate

d) Increased body temperature

3. Hypertension is commonly called as

1	2	3	4

a) The salty killer

b) The serious killer

c) The secret killer

d) Silent killer

4. Blood pressure can be calculated by using

1	2	3	4

a) Weighing machine.

b) Thermometer

c) Inch tape

d) B.P. apparatus

5. Which of the following condition is dangerous?

1	2	3	4

a) Pre hypertension

b) Stage 1 hypertension

c) Stage 2 hypertension

d) None of the above

6. Which blood pressure is more dangerous?

1	2	3	4

a) High systolic B.P.

b) High diastolic B.P.

c) Both systolic and diastolic B.P.

d) None of the above

7. The major risk factor for hypertension do not include

1	2	3	4

a) Excessive salt and fat intake in the diet

b) Stressful environment

c) Heredity

d) Excessive vitamin intake

8. Predisposing factors of hypertension is

1	2	3	4

a) Stressful job condition

b) Lack of physical activity

c) Frequently taking alcohol

d) All the above

1	2	3	4

9. Which of the following mineral increases blood pressure?

a) Potassium

b) Sodium

c) Calcium

d) Zinc

10. What are the signs and symptoms of hypertension?

1	2	3	4

a) Fever

b) Giddiness, headache

c) Running nose

d) Diarrhea

11. Which one of the following is the symptom of very high blood pressure?

a) Dizziness

b) Severe chest pain

1	2	3	4

c) Vomiting blood

d) Palpitation

12. Which of the following investigation is done for hypertension?

a) USG abdomen

1	2	3	4

b) Sputum test

c) Blood and urine test

d) C.T. scan.

13. Which of the following is an antihypertensive drug?

1	2	3	4

a) Calpol

b) Amlodepine

c) B complex

d) Anacin

14. Which of the following is the common side effect of antihypertensive drugs?

a) Vomiting

b) Blurred vision

c) Stomach upset

d) Hypotension

1	2	3	4

15. Which of the following is the symptom of hypotension?

a) Dizziness

b) Weakness

c) Fainting

d) All the above

1	2	3	4

16. Weight loss of 10 kg reduces how much blood pressure?

a) 30 – 40 mm Hg

b) 1 – 4 mm Hg

c) 41 – 50 mm Hg

d) 5 – 20 mm Hg

1	2	3	4

17. The diet which is rich in salt and fat is

a) Fruits

b) Vegetable

c) Junk foods and fried food items

d) Pulses and whole grains

1	2	3	4

18. How much amount of salt has to be taken per day?

a) 1 teaspoon

b) 2 teaspoon

c) 3teaspoon

d) 4 teaspoon

1	2	3	4

19. Food habits causing increase in blood pressure are includes

a) Mutton

b) Fish

c) Sweet fruits

d) White part of egg

1	2	3	4

20. The dairy product which will help to control hypertension is

a) Skimmed milk

b) Whole milk

c) Ghee

d) Panneer

1	2	3	4

21. Which of the following is good cholesterol?

a) LDL

b) HDL

c) VLDL

d) None of the above

1	2	3	4

22. Which of the following food reduces blood cholesterol levels?

a) Pulses

b) Oats

c) Polished rice

d) Milk

1	2	3	4

23. Which of the following mineral is helpful in reducing B.P.?

a) Potassium

b) Selenium

c) Cadmium

d) Zinc

24. Common salt is high in _____ .

a) Copper

b) Calcium

c) Sodium

d) Iron

1	2	3	4

25. Which one of the following disease is caused by alcoholism that leads to hypertension?

a) Cancer of the intestine

b) Mouth cancer

c) Cirrhosis of the liver

d) Pneumonia

1	2	3	4

26. How many minutes of walking is needed per day?

a) 5 min

b) 10 min

c) 15 min

d) 30 min

1	2	3	4

27. Regular walking reduces B.P. by

a) 4 – 9 mm Hg

b) 10 – 19 mm Hg

c) 20 – 29 mm Hg

d) 30 – 39 mm Hg

1	2	3	4

28. Why smoking has to be avoided?

a) It causes vasoconstriction and increases B.P.

b) It causes vasodilatation and increases B.P.

c) It causes stomach cancer.

d) It causes mental changes.

1	2	3	4

29. Which activity can be done in home to relax?

a) Doing difficult work

b) Listening to music

c) Watching a ghost movie

d) Eating snacks.

1	2	3	4

30. The major complication of uncontrolled hypertension is

a) Heart attack

b) Kidney failure

c) Stroke

d) All the above

1	2	3	4

Part – C

Practice questionnaires

Sl No.	Practices	Never do (0)	Occasionally do (1)	Always do (2)
1.	Do you check your BP regularly?			
2.	Do you record your BP?			
3.	Do you walk?			
4.	Do you walk daily for 30 minutes?			
5.	Do you walk briskly?			
6.	Do you take fibre rich food?			
7.	Do you take more vegetables?			
8.	Do you take fruits daily?			
9.	Do you use sesame oil for cooking?			
10.	Do take 1 teaspoon of salt per day?			
11.	Do you avoid taking pickle?			
12.	Do you avoid taking fried foods?			
13.	Do you take fish as curry?			
14.	Do you avoid mutton?			
15.	Do you avoid taking snacks?			
16.	Do you spend time for relaxing?			
17.	Do you sleep for 6 – 8 hours?			
18.	Do you take tablets regularly?			
19.	Do you identify your tablet by name?			
20.	Do you visit doctor regularly?			

ANSWER KEYS FOR THE KNOWLEDGE QUESTIONNAIRE:

I	3	XVI	4
II	2	XVII	3
III	4	XVIII	1
IV	4	XIX	1
V	3	XX	1
VI	1	XXI	2
VII	4	XXII	2
VIII	4	XXIII	1
IX	2	XXIV	3
X	2	XXV	3
XI	2	XXVI	4
XII	3	XXVII	1
XIII	2	XXVIII	1
XIV	4	XXIX	2
XV	4	XXX	4

ANNEXURE – E

STRUCTURED INTERVIEW SCHEDULE AND QUESTIONNAIRES (TAMIL VERSION)

ஒருங்கமைக்கப்பட்ட நேர்காணல் திட்டம்

மாதிரி எண்:

குறிப்பு : கீழ்காணும் காரியங்களில் சரியானவற்றை வட்டமிடவும்

பகுதி 1

பொதுவான விபரங்கள்

I. வயது ஆண்டுகளில்

1) 30 வயதுக்கு கீழ்
2) 31-45 வயது
3) 45-60 வயது
4) 61 வயதுக்கு மேல்

1	2	3	4

II. பாலினம்

1) ஆண்
2) பெண்

1	2

III. மதம்

1) இந்து
2) முஸ்லீம்
3) கிறிஸ்த்தவம்
4) மற்றவை

1	2	3	4

IV. திருமண விபரம்

1) திருமணமானவர்
2) திருமணம் ஆகாதவர்
3) கணவன் (அல்லது) மனைவியை இழந்தவர்

1	2	3

V. கல்விநிலை

1) படிப்பறிவில்லாதவர்
2) துவக்கக்கல்வி பெற்றவர்
3) 12 ம் வகுப்பு முடித்தவர்
4) பட்டப்படிப்பு மற்றும் அதற்கு மேல் படித்தவர்

1	2	3	4

VI. வேலை

1) வேலை இல்லாதவர்
2) சரீர உழைப்பில்லாத வேலை செய்பவர்
3) மிதமான உடலுழைப்புள்ள வேலை செய்பவர்
4) கடின உடலுழைப்புள்ள வேலை செய்பவர்

1	2	3	4

VII. மாத குடும்ப வருமானம்

1	2	3	4

1) ரூ.2,500க்கு கீழ்

2) ரூ. 2,501-5000

3) ரூ.5001 -10,000

4) ரூ.10,000க்கு மேல்

VIII. குடியிருப்பு

1	2

1) நகர்ப்புரம்

2) கிராமப்புரம்

IX. தங்களது குடும்பத்தில் யாருக்கேனும் உயர் இரத்த அழுத்தவியாதி உள்ளதா?

1	2

1) ஆம்

2) இல்லை

XI. தங்களது பழக்க வழக்கம்

1	2	3

1) மது அருந்தும் பழக்கம் உள்ளது.

2) புகை இலை புகைக்கும் (அல்லது) சுவைக்கும் பழக்கம் உள்ளது.

3) 1 மற்றும் 2

4) மேற்கண்ட பழக்கங்கள் இல்லை.

XII. தங்களுக்கு இருக்கும் உடல் நலக் குறைவு.

1	2	3	4

1) சர்க்கரை நோய்

2) இருதய நோய்

3) பக்கவாதம்

4) மேற்கண்ட எந்த நோயும் இல்லை.

XII. உயர் இரத்த அழுத்தம் தங்களுக்கு உள்ளது என்று எப்போது கண்டறியப்பட்டது.

1	2	3	4

1) சுகாதார முகாமில்

2) அறிகுறிகள்தோன்றிய பின்

3) வேறு நோய்க்காக மருத்துவமணையில் சிகிச்சையின் பொழுது.

4) உயர் இரத்த அழுத்தத்தால் சிக்கல்கள் ஏற்பட்ட பொழுது.

XIII. தங்களது உடற்பருமன் அயவு

1	2	3

1) சரியான அளவில் உள்ளது

2) சரியான அளவிற்கு கீழ் உள்ளது

3) சரியான அளவிற்கு மேல் உள்ளது

பகுதி 2

உயர் இரத்த அழுத்தம் மற்றும் வாழ்க்கை முறை மாற்றம் பற்றிய அறிவு வினாத் தொடர்.

I. சகஜ நிலை இரத்த அழுத்தத்தின் அளவு

1) 140/110 மிமீ பா
2) 130/100 மிமீ பா
3) 120/80 மிமீ பா
4) 110/50 மிமீ பா

1	2	3	4

II. உயர் இரத்த அழுத்தம் என்றால் என்ன?

1) அதிகமான நாடித்துடிப்பு
2) அதிகமான இரத்த அழுத்தம்
3) அதிகமான சுவாச எண்ணிக்கை
4) அதிகமான உடல் வெப்பம்

1	2	3	4

III. பொதுவாக உயர் இரத்த அழுத்த நோயை எவ்வாறு கூறுவர்?

1) உப்புக் கொலையாளி
2) மோசமான கொலையாளி
3) இரகசிய கொலையாளி
4) அமைதிக் கொலையாளி

1	2	3	4

IV. இரத்த அழுத்தத்தை எந்த கருவியைக் கொண்டு அளப்பார்கள்?

1) எடைபார்க்கும் கருவி
2) தெர்மாமீட்டர்
3) அளவு கோல்
4) நாடியழுத்தமானி

1	2	3	4

V. கீழ்கண்ட உயர் இரத்த அழுத்த நிலைகளில் எந்த நிலை ஆபத்தானது?

1) இரத்த அழுத்தத்திற்கு முந்தைய நிலை
2) முதல் நிலை உயர் இரத்த அழுத்தம்
3) இரண்டாம் நிலை உயர் இரத்த அழுத்தம்
4) மேற்கண்டவைகளில் எவையும் இல்லை

1	2	3	4

VI. எந்த இரத்த அழுத்தம் மிகவும் ஆபத்தானது?

1) அதிக சுருங்குநிலை இரத்த அழுத்தம்
2) அதிக விரிநிலை இரத்த அழுத்தம்
3) மேற்கண்ட இரண்டும்
4) மேற்கண்ட எவையும் இல்லை

1	2	3	4

VII. கீழ்க்கண்ட காரணிகளில் எவை உயர் இரத்த அழுத்தத்திற்க்கான காரணி கிடையாது?

1) உணவில் அதிக உப்பு மற்றும் கொழுப்பு சேர்த்துக் கொள்ளுதல்
2) மனஅழுத்தம் தரும் சூழ்நிலை
3) பரம்பரைக் காரணி
4) அதிக வைட்டமின்களை உட்கொள்ளுதல்

1	2	3	4

VIII. உயர் இரத்த அழுத்தத்தின் காரணி ஏது?

1) சர்க்கரை நோய்
2) உடல் செயல்பாடின்மை
3) அடிக்கடி மது அருந்துதல்
4) மேற்கண்ட அனைத்தும்

1	2	3	4

IX. கீழ்கண்ட எந்த தாது இரத்த அழுத்தத்தை அதிகரிக்கும்?

1) பொட்டசியம்
2) சோடியம்
3) கால்சியம்
4) துத்தநாகம்

1	2	3	4

X. உயர் இரத்த அழுத்தத்தின் அறிகுறி எது?

1) காய்ச்சல்
2) மயக்கம் , தலைவலி
3) மூக்கு ஒழுகுதல்
4) வயிற்றுப் போக்கு

1	2	3	4

XI. மிகவும் உயர்ந்த இரத்த அழுத்தத்தின் அறிகுறி எது?

1) மயக்கம்
2) அதிக நெஞ்சு வலி
3) இரத்த வாந்தி எடுத்தல்
4) இருதய படபடப்பு

1	2	3	4

XII. கீழ்காணும் பரிசோதணைகளில் எவை உயர் இரத்த அழுத்தத்திற்கு செய்யப்படும்?

1) வயிற்று ஸ்கேன்
2) சளி பரிசோதனை
3) இரத்தம் மற்றும் சிறுநீர் பரிசோதனை
4) சீ.டீ. ஸ்கேன்

1	2	3	4

XIII. கீழ்காணும் மருந்துகளில் எவை உயர்இரத்த அழுத்தத்திற்கு கொடுக்கப்படும்?

1) கால்பால்
2) அம்லோடிப்பைன்
3) பீ-காம்பிலக்ஸ்
4) அனாசின்

1	2	3	4

XIV. கீழ்காணும் பக்கவிளைவுகளில் எவை உயர் இரத்த அழுத்த மருந்தின் பக்கவிளைவாகும்?

1) வாந்தி
2) மங்களான பார்வை
3) வயிற்று உபாதை
4) குறை இரத்த அழுத்தம்

1	2	3	4

XV. குறை இரத்த அழுத்தத்தின் அற்குறி எது?

1) தலை சுற்றல்

1	2	3	4

2) உடல் பலவீனம்

3) மயக்கம்

4) மேற்கண்ட அனைத்தும்

XVI. உடல் எடை 10கிலோ குறைந்தால் இரத்த அழுத்தம் எவ்வளவு குறையும்?

1) 30-40 மி மீ பா

2) 1-4 மி மீ பா

3) 41-50 மி மீ பா

4) 5-20 மி மீ பா

1	2	3	4

XVII. கீழ்காணும் உணவுகளில் எந்த உணவில் உப்பு, கொழுப்பு அதிகம் உள்ளது?

1) பழங்கள்

2) காய்கறிகள்

3) நொருக்கு தீனி மற்றும் பொரித்த உணவு

4) பருப்பு மற்றும் முழுதானியம்

1	2	3	4

XVIII. நாள் ஒன்றிற்கு எவ்வளவு உப்பு பயன்படுத்த வேண்டும்?

1) 1 தேக்கரண்டி

2) 2 தேக்கரண்டி

3) 3 தேக்கரண்டி

4) 4 தேக்கரண்டி

1	2	3	4

XIX. எந்த உணவு இரத்த அழுத்தத்தை அதிகமிக்கும்?

1) ஆட்டு இறைச்சி

2) மீன்

3) இனிப்பு பழங்கள்

4) முட்டையின் வெள்ளை

1	2	3	4

XX. எந்த பால்வகை உணவு உயர் இரத்த அழுத்தத்தை கட்டுபடுத்தும்?

1) கொழுப்பு நீக்கப்பட்ட பால்

2) கொழுப்பு நீக்கப்படாத பால்

3) நெய்

4) பால்கட்டி

1	2	3	4

XXI. எந்த வகை கொழுப்பு நல்லது?

1) குறை அடர்த்தி கொழுப்பு புரதம்

2) அதிக அடர்த்தி கொழுப்பு புரதம்

3) மிகவும் குறை அடர்த்தி கொழுப்பு புரதம்

4) மேற்கண்ட எவையும் இல்லை

1	2	3	4

XXII. எந்த உணவு இரத்தத்தில் கொழுப்பின் அளவை குறைக்கும்?

1) பருப்பு வகைகள்

2) ஓட்ஸ்

3) தவுடு நீக்கப்பட்ட தானியம்

4) பால்

1	2	3	4

XXIII. கீழ்காணும் தாதுக்களில் எது இரத்த அழுத்ததத்தை குறைக்கும்?

1) பொட்டாசியம்
2) செலினியம்
3) காட்மியம்
4) துத்தனாகம்

1	2	3	4

XXIV. கீழ்காணும் தாதுக்களில் எது நாம் பயன்படுத்தும் உப்பில் அதிகம் உள்ளது?

1) தாமிரம் (காப்பர்)
2) கால்சியம்
3) சோடியம்
4) இரும்பு

1	2	3	4

XXV. கீழ்கண்ட வியாதிகளில் எவை குடிப்பழக்கத்தால் வருவதும் உயர் இரத்த அழுத்தத்தை வரவழைப்பதுமான நோய்?

1) குடல் புற்று நோய்
2) வாய் புற்று நோய்
3) கல்லீரல் இழைநார் வள்ர்ச்சி
4) நிமோனியா

1	2	3	4

XXVI. நாள் ஒன்றிக்கு எவ்வளவு நிமிடம் நடக்க வேண்டும்?

1) 5 நிமிடம்
2) 10 நிமிடம்
3) 15 நிமிடம்
4) 30 நிமிடம்

1	2	3	4

XXVII. அன்றாட நடைப்பயிற்சி எவ்வளவு இரத்த அழுத்தத்தை குறைக்கும்?

1) 4-9 மிமீபா
2) 14-19 மிமீபா
3) 24-29 மிமீபா
4) 34-39 மிமீபா

1	2	3	4

XXVIII. ஏன் புகைப்பிடிக்கும் பழக்கத்தை தவிர்க்க வேண்டும்?

1	2	3	4

1) புகையிலை இரத்தநாளங்களை சுருக்கி இரத்த அழுத்தத்தை அதிகரிப்பதால்.
2) புகையிலை இரத்தநாளங்களை விரிவடைய செய்து இரத்த அழுத்தத்தை குறைப்பதால்.
3) புகையிலை வயிற்றுப்புற்று நோய் உண்டாக்குவதால்.
4) புகையிலை மன நல பாதிப்பை உண்டாக்குவதால்.

XXIX. வீட்டில் இளைப்பார நீங்கள் எந்த செயலை செய்யலாம்?

1) கடினமான வேலை செய்தல்
2) இசை கேட்டல்
3) பேய்ப்படம் பார்த்தல்
4) நொறுக்கு தீனி உண்ணுவது

1	2	3	4

XXX. கட்டுப்படுத்தப்படாத உயர் இரத்த அழுத்தத்தின் சிக்கல் எது?

1) மாரடைப்பு
2) சிறுநீரக செயலிளப்பு
3) பக்கவாதம்
4) மேற்கண்ட அனைத்தும்

1	2	3	4

பகுதி 3

உயர் இரத்த அழுத்தம் மற்றும் வாழ்க்கை முறை மாற்ற பற்றிய செயல் வினாத் தொடர்.

No .	செயல்கள்	செய்வது கிடையாது	அவ்வப்போது செய்கிறேன்	எப்போதும் செய்கிறேன்
1.	நீங்கள் வழக்கமாக இரத்த அழுத்தத்தை பரிசோதிக்கிறீர்களா?			
2.	பரிசோதிக்கப்பட்ட இரத்த அழுத்தத்தை குறிக்கிறீர்களா?			
3.	நீங்கள் நாள்தோறும் நடைப்பயிற்சி செய்கிறீர்களா?			
4.	தினமும் 30 நிமிடம் நடைப்பயிற்சி செய்கிறீர்களா?			
5.	நீங்கள் சுறுசுறுப்பாக நடக்கிறீர்களா?			
6.	நீங்கள் நார் சத்து நிறைந்த உணவை உட்கொள்ளுகிறீர்களா?			
7.	நீங்கள் அதிக காய்கறிகளை உட்கொள்ளுகிறீர்களா?			
8.	நீங்கள் தினமும் பழங்களை உட்கொள்ளுகிறீர்களா?			
9.	நீங்கள் சமையலுக்கு நல்லெண்ணெய் பயன்படுத்துகிறீர்களா?			
10.	நீங்கள் நாள் ஒன்றிற்கு ஒரு தேக்கரண்டி உப்பு பயன்படுத்துகிறீர்களா?			

11.	நீங்கள் ஊறுகாய் உட்கொள்ளுவதை தவிர்கிறீர்களா?			
12.	நீங்கள் பொறித்த உணவுகளை உட்கொள்ளுவதை தவிர்கிறீர்களா?			
13.	நீங்கள் மீனை பொறிக்காமல் குழம்பு வைத்து உண்ணுகிறீர்களா?			
14.	நீங்கள் ஆட்டு இறைச்சியை தவிர்கிறீர்களா?			
15.	நீங்கள் சிற்றுண்டி உண்ணுவதை தவிர்கிறீர்களா?			
16.	நீங்கள் இளைப்பாற நேரம் செலவு செய்கிறீர்களா?			
17.	நீங்கள் 6-8 மணி நேரம் தூங்குகிறீர்களா?			
18.	மாத்திரைகளை தவறாமல் உண்ணுகிறீர்களா?			
19.	மாத்திரைகளை பெயரைக்கொண்டு அடையாளம் காண்கிறீர்களா?			
20.	மருத்துவரை வழக்கமாக அணுகுகிறீர்களா?			

ANNEXURE - F

LESSON PLAN

ON

LIFESTYLE MODIFICATION FOR HYPERTENSION

Name of the topic	:	Lifestyle modification for hypertension
Duration	:	30 minutes
Group	:	Patients who are in experimental group
Method of teaching	:	Lecture cum discussion
Language	:	Tamil
A.V. aids	:	L.C.D. projector
Setting	:	Erode Govt., Head Quarters Hospital
Name of the teacher	:	Ralph Raja. D

CENTRAL OBJECTIVE:

After the teaching programme the patients will be able to understand the disease condition Hypertension and it's lifestyle modification and will practice it in their day-to-day life.

SPECIFIC OBJECTIVES:

After the teaching programme the patients will be able to,

i) Explain what is blood pressure and identify normal and abnormal levels of blood pressures.
ii) Explain what is hypertension.
iii) Identify their own stage of hypertension.
iv) Enumerate the risks factors of hypertension.
v) List out the signs and symptoms of hypertension.
vi) Enumerate the investigations for hypertension.
vii) List out the treatments of hypertension.
viii) Understand the lifestyle modifications for hypertension and will follow it.
ix) Enumerate drugs used for hypertension and their side effects.
x) List out the complications of hypertension.

Sl. NO	TIME	SPECIFIC OBJECTIVES	CONTENT	TEACHER'S ACTIVTY	LEARNER'S ACTIVITY	A.V. AIDS	EVALUATION
1	2 mins		**Introduction:** Hypertension is an important medical and public health issue. It exists worldwide at epidemic rates affecting an estimated 1 billion people. The prevalence of hypertension in Indians is 25% in urban and 10% in rural population. According to estimates there are nearly 31.5 million hypertensives in rural and 34 million in urban populations. Hypertension is directly responsible for 57% of stroke deaths and 24% of coronary artery disease deaths in India. It is commonly called as 'silent killer'.	Lecture cum discussion	Listening	L.C.D. project-tor	Which area has the highest prevalence of hypertension?
2.	1 min	Explain what is blood pressure and identify normal and abnormal levels of	**Blood pressure:** Blood pressure is the force exerted by the blood against the walls of the blood vessel. It can be measured by sphygmomanometer. It must be adequate to maintain tissue perfusion during activity and rest. Normal blood pressure is 120/80 mm Hg. Numerator 120 mm Hg refers to systolic blood pressure [pressure when heart contracts].	Lecture cum discussion	Listening	L.C.D. project-tor	What is the normal level of blood pressure?

		blood pressures.	Denominator 80 mmHg refers to diastolic blood pressure [pressure when heart relaxes].				
3.	1 min	Explain what is hypertension.	**Hypertension:** Hypertension, or high blood pressure, is defined as a persistent systolic BP greater than or equal to 140 mm Hg, diastolic BP greater than or equal to 90mm Hg, or current use of antihypertensive mediation. Hypertension means that the heart is working harder than normal, putting both the heart and the blood vessels under strain.	Lecture cum discussion	Listening	L.C.D. project-tor	What is meant by hypertension?
4.	2 min	Identify their own stage of hypertension.	**Stages of hypertension:** a) Normal – when systolic BP is <120 mm Hg and diastolic BP is <80 mm Hg. b) Pre-hypertension –when systolic BP is 120 – 139 mm Hg (or) diastolic BP is 80 _ 89 mm Hg. c) Stage I hypertension – when systolic BP is 140 – 159 mm Hg (or) diastolic BP is 90 – 99 mm Hg. d) Stage II hypertension – when systolic BP 160 mm Hg and above (or) diastolic BP 100 mm Hg and above.	Lecture cum discussion	Listening	L.C.D. project-tor	Which stage of hypertension is more dangerous?

			Stage II hypertension is dangerous since it may lead to severe complications. Both systolic and diastolic high blood pressure are dangerous.				
5.	4 min	Enumerate the risks factors of hypertension.	**Risk factors of hypertension:** There is no definite cause for hypertension but there are risk factors for hypertension. They are, i) Age - more than 50 years. ii) Alcohol intake. iii) Cigarette smoking. iv) Diabetes mellitus. v) Elevated serum lipids. vi) Excess dietary sodium intake. vii) Gender - in young adults up to 55 years prevalent in men and after 55 years female are more prevalent. viii) Family history of hypertension. ix) Obesity. x) Sedentary lifestyle. xi) Socio economic status – more prevalent in low socio economic status group.	Lecture cum discussion	Listening	L.C.D. project-tor	List out some of the risk factors of hypertension.

			xii) Stress.				
6.	2 min	List out the signs and symptoms of hypertension.	**Signs and symptoms of hypertension:** Hypertension is often called the 'silent killer' because it is frequently asymptomatic until it becomes severe and target organ disease has occurred. The secondary symptoms of hypertension includes, - Fatigue. - Reduced activity tolerance. - Dizziness. - Palpitation. - Angina. - Dyspnea. Symptoms of high very blood pressure, - Severe chest pain - Severe headache, accompanied by confusion and blurred vision - Nausea and vomiting - Severe anxiety - Shortness of breath	Lecture cum discussion	Listening	L.C.D. project-tor	List out some of the signs and symptoms of hypertension.

			- Seizures - Unresponsiveness				
7.	1 min	Enumerate the investigations for hypertension	**Investigations for hypertension:** The investigations done for hypertension are, - Routine urine test. - Blood test (serum glucose, lipid profile, electrolytes, liver function test). - Electrocardiogram (E.C.G.). - Echocardiogram. - Estimation of serum thyroid stimulating hormone.	Lecture cum discussion	Listening	L.C.D. project-tor	List out some of the investigations one for hypertension.
8.	1 min	List out the treatments of hypertension	**Treatment of hypertension:** Treatment for hypertension can be divided in to two. i) Lifestyle modification. ii) Drug therapy.	Lecture cum discussion	Listening	L.C.D. project-tor	What are the treatment done for hypertension?
9.	10 mins	Understand the lifestyle modifications for hypertension	**Lifestyle modification:** Lifestyle modifications should be used in all patients with pre-hypertension and hypertension. These modification are directed towards reducing BP and overall cardiovascular risk.	Lecture cum discussion	Listening	L.C.D. project-tor	What will you do to reduce stress?

		and will follow it.	Lifestyle modification includes, a) Weight reduction. b) DASH (Dietary approach to Stop Hypertension). c) Dietary sodium reduction. d) Moderate alcohol consumption. e) Physical activity. f) Avoidance of tobacco products. g) Stress managements. h) **1) Weight reduction:** Over weight individuals have an increased incidence of hypertension and increased risk for cardiovascular disease. Weight reduction has a significant effect on lowering BP in many people, and effect is seen in even moderate weight loss. A weight loss of 10 kg may decrease systolic blood pressure by approximately 5 to 20 mm Hg. **2) DASH Eating Plan:** This diet involves eating several servings of fish each week, eating plenty of fruits and vegetables, increasing fibre intake and drinking lot of water. The dash diet significantly lowers				

			BP. These decreases have been compared to those achieved with BP lowering medications. ✓ Lower sodium DASH diet - Grains include bread, cereal, rice. ✓ Grains: 6 to 8 servings a day - Tomatoes, carrots, broccoli, sweet potatoes, greens and other vegetables are full of fiber, vitamins, and such minerals as potassium and magnesium. ✓ Fruits: 4 to 5 servings a day – fruits rich in fiber, potassium and magnesium. ✓ Dairy: 2 to 3 servings a day - Milk, yogurt, cheese and other dairy products are major sources of calcium, vitamin D and protein. ✓ Lean meat, poultry and fish: 6 or fewer servings a day. ✓ Nuts, seeds and legumes: 4 to 5 servings a week - Almonds, sunflower seeds, kidney beans, peas, lentils and other foods in this family are good sources of magnesium, potassium and protein. ✓ Fats and oils: 2 to 3 servings a day. ✓ Sweets: 5 or fewer a week.				

			Other advices on diet: ✓ Deep fried food items has to be avoided. (snacks, pappads, etc.) ✓ Fish has to be taken as curry. ✓ Mutton has to be avoided. ✓ There are three types of lipids in our body. They are Low density lipoprotein (LDL), very low density lipoprotein (VLDL), and high density lipoprotein (HDL). The LDL and VLDL are called bad cholesterols. HDL is called good cholesterol. ✓ Oils like palm oil, ground nut oil, and sun flower oil is inferior to oils like olive oil and sesame oil because olive and sesame oil increases the level of good cholesterol and reduces the level of bad cholesterol. ✓ Fibre rich food helps in lowering blood cholesterol. ✓ Vegetables like green leafy vegetables, beans, cabbage are rich in fibre. ✓ Whole grains and oats are rich in fibre. ✓ Concerning diary products skimmed milk and butter milk are good because it has low fat in it.				

			✓ Orange, banana, sweet potato are rich in potassium which helps in reducing blood pressure. ✓ Calcium rich food like milk, rag has to be taken, since calcium reduces blood pressure. ✓ Fish oil which are rich in omega 3 fatty acid reduces LDL levels in blood. **3) Dietary sodium reduction:** Salt intake should be less than 6g (1 teaspoon) or less than 2.4g of sodium per day. This involves avoiding foods having high sodium in it. Common salt alternatives are also available which contains potassium chloride in it. This gives the taste of common salt and it doesn't have sodium in it. But it has to be taken after consulting doctor. **4) Moderate alcohol consumption:** ✓ 1 drink per day [1.5 Oz = 45 ml] of alcohol. (or) ✓ 150 ml of wine. (or)				

			✓ 45 ml of whiskey can be taken. **5) Physical activity:** ✓ Physical activity like walking, jogging, and swimming reduces blood pressure. ✓ 30 minutes of brisk walk in 5 – 7 days a week has to be done. ✓ It reduces systolic BP by 4 – 9 mm Hg. **6) Avoidance of tobacco products:** Nicotine contained in tobacco causes vasoconstriction and increases BP. So it has to be completely avoided in any form (smoking and chewing). The cardiovascular benefits of discontinuing tobacco use can be seen within 1year in all age groups. **7) Stress management:** Stress can raise BP on a short – term basis and has been implicated in the development of hypertension. Relaxation therapy, guided imagery and bio – feed back may be useful. Some of the relaxation activities, - Listening to music - Meditation				

			- Watching T.V. - Reading magazine				
10.	3 mins	Enumerate drugs used for hypertension and their side effects	**Drug therapy:** The general goals of drug therapy are achieve BP < 140/90 mmHg drug therapy is given for stage 1&2 hypertension. The drugs commonly used are, - Furosemide - Spironolactone - Prazosin - Atenolol - Enalapril - Amlodipine Common side effects of anti hypertensive drugs are, - Hypotension - Dizziness - Nausea and vomiting - Decreased heart rate - Erectile dysfunction - Decreased libido General instructions for who are taking medications: - Take prescribed medication ay correct time without skipping. - Do not take double the dose if skipped.	Lecture cum discussion	Listening	L.C.D. project-tor	What are all the steps will you take to avoid hypotension?

			- Anti hypertensive medications has to be taken lifelong. - You should not change or stop the medication by yourself. - Spironolactone tablet has to be taken after the food. - Prazosin has to be taken in the night before going to bed. - If you experience symptoms of hypertension or side effects even on regular treatment report to your doctor. - Hot baths, alcohol, strenuous exercises should be avoided within 3 hours after taking medications. - Hypotension is the common side effect of anti hypertensive drugs. - Signs of hypotension are dizziness and fainting. - If you have symptoms of hypotension, ✓ Arise slowly from bed. ✓ Sit on side of bed for few minutes before you stand. ✓ Stand slowly. ✓ Don't stand for long time. ✓ Do leg exercise. ✓ Lie or sit down when dizziness occurs.				

11.	1 min	List out the complications of hypertension	**Complications of hypertension:** Hypertension affects eyes, heart, brain, and kidney. The complications are, - Heart attack - Stroke - Heart failure - Left ventricular hypertrophy - Ischemic muscle pain (claudication) - Kidney failure - Blurred or loss of vision.	Lecture cum discussion	Listening	L.C.D. project-tor	What are all the organs affected by hypertension?
12.	1 min		**Summary:** So far we have seen about what is hypertension, its risk factors, signs and symptoms, investigations, mainly about lifestyle modification, drug therapy and complications of hypertension.	Lecture cum discussion	Listening	L.C.D. project-tor	
13.	1 min		**Conclusion:** Hypertension is a 'silent killer' disease, and it causes life threatening complications. So it is very safe to follow the instructions given. **"PREVENTION OF COMPLICATIONS OF HYPERTENSION IS BETTER THAN MANAGING IT."**	Lecture cum discussion	Listening		

STRUCTURE TEACHING PROGRAMME CONTENT IN TAMIL

உயர் இரத்த அழுத்தம்

முன்னுரை:

ஊயர் இரத்த அழுத்தநோய், மருத்துவம் மற்றும் பொது சுகாதாரத்தில் ஒரு முக்கிய பிரச்சனை. ஊயர் இரத்த அழுத்தம் பெருவாரியாக உலகம் முழுவதும் பரவியிருக்கிறது. 100,00,00,000 மக்கள் உலகம் முழுவதும் இதனால் பாதிக்கப்பட்டிருக்கிறார்கள். இந்தியர்களில் நகரங்களில் வசிக்கிற மக்களின் 25% மற்றும் கிராமப்புரங்களில் வசிக்கும் மக்களில் 10% பேரும் இந்த உயர் இரத்த அழுத்தத்தால் பாதிக்கப்பட்டுள்ளனர். கணக்கின்படி 3 கோடி மக்கள் கிராமப்பகுதியிலும், 3.5 கோடி மக்கள் நகரத்திலும் உயர் இரத்த அழுத்தம் உள்ளவர்களாக கண்டறியப்பட்டுள்ளனர். இந்தியாவில் பக்க வாதத்தினால் வரும் இறப்பில் 24மூக்கும் முக்கிய காரணி உயர் இரத்த அழுத்தம்.

உயர் இரத்த அழுத்தம் "அமைதியான கொலைகாரன்" என பொதுவாக கூறப்படுகிறது.

இரத்த அழுத்தம் என்றால் என்ன?

இரத்த குழாய் சுவற்றின் மீது இரத்தம் செலுத்தும் விசை தான் இரத்த அழுத்தம் எனப்படும்.

இரத்தஅழுத்தத்தை நாடியழுத்தமான (ஸ்பிக்மோமேனோ மீட்டர்) என்ற கருவி முலம் அளக்கமுடியும்.

உடலின் அனைத்து திசுக்களுக்கம் சீரான ஓட்டத்தை பராமரிக்கும் போதுமான இரத்த அழுத்தம் தேவை.

இரத்த அழுத்தத்தின் சகஜநிலை 120/80 மிமீ பாத.

- மேல் தொகுதி எண்ணான 120 மிமீ பாதரசம் என்பது சிஸ்டாலில் இரத்த அழுத்தமாகும் அதாவது இதயம் சுருங்கும் போதான இரத்த அழுத்தம் .
- கீழ் வகுக்கும் எண்ணான 80 மீமி பாதரசம் என்பது டயஸ்டாலிக் இரத்த அழுத்தம் அதாவது இதயம் விரிவடையும் போதான இரத்த அழுத்தம்.
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உயர் இரத்த அழுத்தம் என்றால் என்ன?

உயர் இரத்த அழுத்தத்தின் கொற்பொருள் விபரமானது தொடர்ச்சியான 140 மிமீ பாதரசம் அல்லது அதர்க்கும் மேலான சிஸ்டாலிக் இரத்த அழுத்தம், 90 மிமீ பாத ரசம் அல்லது அதர்க்கும் மேலான டயஸ்டாலிக் இரத்த அழுத்தம்,(அல்லது) உயர் இரத்த அழுத்தத்திற்கு மருந்து உபயோகித்தல்.

ஊயர் இரத்த அழுத்தத்தின் பொருளான இருதயம் சகசமாக இயங்காமல் கடினமாக இயங்குகிறது, இதனால் இருதயமும் இரத்த குழாய்களும் அதிக பிரயாசத்திசற்குள்ளாகுகிறது.

உயர் இரத்த அழுத்தத்தின் நிலைகள் யாவை?

சகஜநிலை	சிஸ்டாலிக் இரத்த அழுத்தம் 120 கீழ் மற்றும் டயஸ்டாலிக் இரத்த அழுத்தம் 80 கீழ்.
உயர்இரத்த அழுத்தத்தின் முந்தைய நிலை	சிஸ்டாலிக் இரத்த அழுத்தம் 120-139 (அல்லது) டயஸ்டாலிக் இரத்த அழுத்தம் 80-89.
முதல் நிலை உயர் இரத்த அழுத்தம்	சிஸ்டாலிக் இரத்த அழுத்தம் 140-159 (அல்லது) டயஸ்டாலிக் இரத்த அழுத்தம் 90-99.
இரண்டாம் நிலை உயர் இரத்த அழுத்தம்	சிஸ்டாலிக் இரத்த அழுத்தம் 160 அதர்க்கும் மேல் (அல்லது) டயஸ்டாலிக் இரத்த அழுத்தம் 100 அதர்க்கும் மேல்.

இரண்டாம் நிலை உயர் இரத்த அழுத்தம் கடுமையான சிக்கல்களுக்கு வழிநடத்துவதால் இந்நிலை மிகவும் ஆபத்தானது.

சிஸ்டாலிம் மற்றும் டயஸ்டாலிக் உயர் இரத்த அழுத்தம்.

இரண்டு உயர் இரத்த அழுத்தங்களுமே ஆபத்தானது.

உயர் இரத்த அழுத்தத்தின் காரணிகள் யாவை?

ஊயர் இரத்த அழுத்ததிற்கு காரணம் ஏதும் கிடையாது. ஆனால் இந்த நிலைக்கு வழிநடத்து அதே ஏது காரணிகள் உண்டு அவை.

- வயது ___ 50 வருடங்களுக்கு மேலான வயது
- மது அருந்துதல்
- புகை பிடித்தல், புகை இலை சுவைத்தல்.

- சர்க்கரை நோய்
- அதிகமான இரத்தக் கொழுப்பின் அழவு.
- உணவில் அதிகமான சோடியம் (முக்கியமாக உப்பு) எடுத்துக் கொள்ளுதல்.
- புாலினம் - ஆண்களுக்கு 55 வயது வரை, பெண்களுக்கு 55 வயதுக்கு மேல்.
- உடற்படுமன்.
- உடல் உழைப்பில்லாத வாழ்க்கை முறை
- பொளாதாரத்தில் பின் தங்கிய நிலை
- மன அழுத்தம்

உயர் இரத்த அழுத்தத்தின் அறிகுறிகள் யாவை?

பெரும்பாலும் உயர் இரத்த அழுத்தம் உடையவர் அறிகுறிகளின்றி காணப்படுவர். ஊயர் இரத்த அழுத்தம் மோசமடையும் அல்லது உடல் உருப்புக்கள் பழுதடையும் பட்சத்தில் பெரும்பாலும் அறிகுறிகள் வெளிப்படுவது இல்லை.

- சோர்வு
- குறைந்த நடவடிக்கை சகிப்புத்தன்மை
- தலை சுற்றல்
- இருதய படபடப்பு
- நெஞ்சு வலி

மிக அதிகமான இரத்த அழுத்தத்தின் அறிகுறிகள்

- அதிக நெஞ்சுவலி
- தலைவலி, குழப்பம், மங்கலான பார்வை
- வாந்தி
- பதற்றம்
- வலிப்பு
- மூச்சுத்திரைல்

7. உயர் இரத்த அழுத்தத்திற்கு செய்யப் பரிசோதனைகள் யாவை?

- சிறுநீர் பரிசோதனை

- இரத்தப்பரிசோதனை

- ஈ.சீ.ஜீ

- மின் ஒலி இதய வரைவு

- மருந்து சிகிச்சை முறை

8. உயர் இரத்த அழுத்தத்திற்கான வைத்திய முறைகள் யாவை?

உயர் இரத்த அழுத்தத்திற்கு இரண்டு வைத்திய முறைகள் உள்ளன.

l. வாழ்கை முறை மாற்றங்கள்

l) வாழ்கை முநை மாற்றங்கள்

வாழ்கை முறை மாற்றங்கள் உயர் இரத்த அழுத்தத்திற்கு முந்தய நிலை மற்றும் ஒன்றாம் இரண்டாம் உயர் இரத்த அழுத்த நிலைகளில் உள்ள நோயாழிகளுக்கு வாழ்கைமுறை மாற்றம் இன்றியமையாதது. இந்த மாற்றங்கள் இரத்த அழுத்தத்தை குறைக்கிறது மற்றும் கொரோநரி இருதய நோய் வராமல் மனிதனை காக்கிறது.

கீழ்காணும் வழிமுறைகள் வாழ்கைமுறை மாற்றத்தில் உள்ளவகைகள்.

a) உடல் இடை குறைப்பு

b) உணவு பழக்க வழக்கம்

c) சோடியம் உட்கொள்ளுவதை குறைத்தல்

d) மிதமாக மதுஅருந்துதல்

e) முறையாக உடற்பயிற்ச்சி செய்தல்

f) புகைஇலை உபயோகிப்பதை தவிர்த்தல்

g) முன அழுத்தம் மேலாண்மை

8) உடல் இடை குறைப்ப

பெரும்பாலும் உடல் இடை அதிகம் உடையவர்களுக்கு உயர் இரத்த அழுத்தம் இருப்பதாக கண்டறியப்பட்டுள்ளது மற்றும் அவர்கள் கொரோணி இருதயநோய் வருவதர்க்கும் இது ஏது காரணியகிறது. அநேக மக்களிடையே உடல் இடைகுறைப்பு இரத்த அழுத்தத்தை குறிப்பிடத்தக்க அளவு குறைக்கிறது. சிரிய அளவிலான உடல் இடைகுறைப்பு கூட இந்த விளைவை ஏற்ப்படுத்துகிறது. ஊடல்

அடையில் 10 கிலோ குறைந்தால் இரத்த அழுத்தம் 5-20 மிமீ பாத குறைக்கிறது.

டி) உணவு பழக்கவழக்கம்

உணவில்

- வாரத்திற்கு அனேக முறை உணவில் மீன் சேர்த்துக்கொள்ள வேண்டும்
- பழங்கள், காய்கரிகள் அதிகம் உட்கொள்ள வேண்டும்
- அதிகம் நார் சத்துள்ள உணவை உட்கொள்ள வேண்டும்
- அதிகம் நீர் உட்கொள்ள வேண்டும்

மேற்கண்டவை உயர் இரத்த அழுத்தத்தை குரைப்பதில் மாத்திரை மருந்துக்கு ஒப்பானவை.

இன்னும் சில அறிவுரைகள்

- எண்ணெயில் பொரித்த உணவுகளை தவிற்க வேண்டும்
- மீன் உணவுகளை குழம்பாக உட்கொள்ளுங்கள்.
- ஆட்டுஇறைச்சி தவிர்க்க வேண்டும்
- நம் உடலில் கொழப்புகளில் மூன்று வகை உண்டு அவை குறைந்த அடர்த்தி புரதக் கொழுப்பு,மிக குறைந்த அடர்த்தி புரதக் கொழுப்பு,அதிக அடர்த்தி புரதக் கொழுப்பு

இவைகளில்

- குறைந்த அடர்த்தி புரதக் கொழுப்பு , மற்றும் மிக குறைந்த அடர்த்தி புரதக் கொழுப்பு கெட்ட கொழுப்பு ஆகும்.
- அதிக அடர்த்தி பரதக் கொழுப்பு நல்ல கொழுப்பு எனப்படும்.
- எண்ணெய் வகைளில் பாம்மாயில், கடலை எண்ணெய் சுரிய காந்தி எண்ணெய்களைவிட நல்லெண்ணெய்,ஒலிவ எண்ணெய் உடலின் கெட்ட கொழுப்பை குறைக்கிறது.ஆகையால் நல்லெண்ணெய், ஒலிவ எண்ணெய் சமையலில் பயன்படுத்த வேண்டும்.
- காய்கறி வகைகளில் கீரை,பீன்ஸ்,முட்டைகோஸில் நார்சத்து அதிகம் உள்ளது.எனவே இவ்வகைக ாய்கறிகளையும் உணவை சேர்க்க வேண்டும்.

- நார்சத்து நிறைந்த முழுதானிய வகைகள்,ஓட்ஸ் ஆகிய உணவு பொருட்களை சேர்த்து கொள்ள வேண்டும்.
- புால் தயாரிப்புகளில் கொழுப்பு நீக்கப்பட் பால்,மோர் ஆகியவைகளை உணவில் சேர்த்துக் கொள்ள வேண்டும்.
- பொட்டாசியம் நிறைந்த பழங்களை ஆரஞ்சு,வாழைப்பழம் ஆகியவைகளை எடுத்துக் கொள்ள வேண்டும்.இவை இரத்த அழுத்தத்தை குறைக்கும்.
- கால்சியம் நிறைந்த பால்,கேழ்வரகு போன்ற உணவுகளை சேர்த்துக் கொள்ள வேண்டும்.
- மீன் எண்ணெயில் உள்ள ஓமேக 3 கொழுப்பு அமிலம் இரத்தத்தில் கெட்ட கொழுப்பை குறைத்து நல்ல கொழுப்பின் ளவை உயர்த்துகிறது.

(C) சோடியம் உட்கொள்ளுதலை குறைத்தல்

நாம் அன்றாட வாழ்வில் உட்கொள்ளும் உப்பில் அதிக அளவு சோடியம் உள்ளது.ஒரு நாளைக்கு ஒரு தேக்கரண்டிக்கும் குறைவாகவே உப்பை உட்கொள்ள வேண்டும்.சோடியம் அதிகம் உள்ள உணவுப் பொருட்களான சாஸ்வகைகள்,பால்கட்டி, நொறுக்குதீனிகள் ஆகிய உணவுப் பொருட்களை நாம் தவிர்க்க வேண்டும்.

மருந்துகளின் அறிவுரைப்படி நாமுடைய சாதாரண உப்பிற்கு மாற்று உப்பை நாம் உபயோகிக்கலாம்.இவ்வகை மாற்று உப்பில் பொட்டாசியம் குளோரைடு தான் உள்ளது சோடியம் இவ்வுப்பில் கிடையாது.

(D)மிதமாக மது அருந்துதல்

- புழிக்கவைத்த திராட்சை நாள் ஒன்றிற்கு 150 மில்லி குடிக்கலாம்.
- விஸ்கி நாள் ஒன்றிற்கு 45 மில்லி கடிக்கலாம்

(E)முறையான உடற்பயிற்சி

-நடைபயிற்சி,சீராக ஓடுதல் ,நீச்சல் பயிற்சி ஆகியவை இரத்த அழுத்தத்தை குறைக்கிறது.

- வாரத்தில் 5-7 நாட்கள் நடக்க வேண்டும்

-நாள் ஒன்றிக்கு 30 நிமிடம் விறுவிறுப்பாக நடக்க வேண்டும்.

- நடைபயிற்சி சிஸ்டாலில் இரத்த அழுத்தத்தில் 4-9 மிமீ பா குறைக்கிறது.

(F) புகையிலைப் பொருட்களை தவிர்ப்பது

புகையிலையில் காணப்படும் நிகோடீன் எனப்படும். நுச்சப் பொருள் இரத்த நாளங்களை சுருக்கி இரத்த அழுத்தத்தை உயர்த்துகிறது.எனவே புகையியை புகைப்பதையோ,சுவைப்பதையோ தவிர்க் வேண்டும். புகையிலையை நிறுத்துவதனால் வரும் பலனை நாம் ஒரு வருடத்திற்குயள் காணலாம்.

(G) மனஅழுத்த மேலாண்மை

மனஅழுத்தம் சிறிய நேரத்திற்கே இரத்த அழுத்தத்தை உயர்த்துகிறது ஆயினும் பிற்பாடு இவை உயர் இரத்த அழுத்தத்தை வரவழைக்கும்.தளர்வு சிகிச்சை,உடல் இயங்கல் மாற்ற குறிப்பு,கைடட் இமேஜரி ஆகிய முறைகள் இரத்த அழுத்ததை குறைக்கிறது.

வீட்டில் செய்யக்கூடிய தளர்வு முறைகள்

-இசை கேட்பது

-தியானம் செய்வது

-தொலைக்காட்சி பார்பது

-பத்திர்கை வாசிப்பது

II.மருந்து சிகிச்சை முறை

மருந்து சிகிச்சையின் முக்கிய குறிக்கோள் இரத்த அழுத்தத்தை 140/90 மிமீபா கீழ் பாராமரிப்பமே.ஒன்று மற்றும் இரண்டாம் நிலை உயர் இரத்த அழுத்த்திற்கு இந்த சிகிச்சை அளிக்கப்படுகிறது.

பொதுவாக பயன்படுத்தும் முறைகள்

-புரோசிமைடு

-ஸ்பைரோனோ லாக்டோன்

-பிராசோசைன்

-அடினலால்

-எனலாபிரில்

-அம்லோ டிப்பைன்

மேற்கண்ட மருந்துகளின் பொதுவாக காணப்படும் பக்க விளைவுகள்.

-குற்றுநிலை இரத்த அழுத்தம்

-தலை சுற்றுதல்

-குமட்டுதல்,வாந்தி

-குறைவான இருதயதுடிப்பு

-இல்லற வாழ்க்கையில் குறைவான ஆர்வம்

மருந்து உட்கொள்ளுபவர்க்கு சில ஆலோசனை

-தவறாமல் கறித்த நேரத்தில் மருந்தகள் உட்கொள்ள வேண்டும்

-வாழ்நாள் முழுவதும் உயர் இரத்த அழுத்தத்திற்க்கான மருந்தை உட்கொள்ள வேண்டும்

- தாமாகவே மாத்திரைகளை மாற்றவோ நிறுத்தவோ கூடாது.

-ஸ்பைகோலாக்டோன் மாத்திரையை சாப்பிட்டவுடன் உண்ணவும்.

-பிராசோசைன் மாத்திரையை இரவு படுக்கைக்கு செல்லும் முன் சாப்பிடவும்.

-மருந்து உட்கொள்ளும் போது உயர் இரத்த அழத்தத்தின் அறிகுறிகள் இருக்குமானால் உடனே மருந்துவரை அணுகவேண்டும்.

-மருந்தை உட்கொண்டபின்பு சூடான தண்ணீரில் குளிக்கக்கூடாது,மது அருந்தக்கூடாது,கடிமான உடற்பயிற்சி செய்யக்கூடாது.

-குற்றுநிலை இரத்த அழுத்தத்தின் அறிகுறிகள்,தலைச்சுற்றல், மயக்கம்,பலவீனம்.

-மேற்கண்ட அறிகுறிகள் இருக்குமானால்

- படுக்கையின் இருந்து எழும்பொழுது மெதுவாக எழவும்.
- நிற்கும் முன் படுக்கையில் சிறிது நேரம் அமர வேண்டும்.
- மெதுவாக நிற்க வேண்டும்.
- கால்களுக்கு பயிற்சி கொடுத்தல் வேணடும்.
- அதிக நேரம் நிற்க கூடாது.
- மயக்கம் வரம்போது உட்காந்து கொள்ளவும் அல்லது படுத்துக் கொள்ளவும்.

உயர் இரத்த அழுத்தத்தால் வரும் சிக்கல்கள் யாவை?

உயர் இரத்த அழுத்தம் கண்,இருதயம்,மூளை,சிறுநீரகம், ஆகிய உறுப்புகளை பாதிக்கிறது.

இதனால்

- மாரடைப்பு

- பக்கவாதம்
- இருதய செயலிப்பு
- இருதய பொருமல்
- குருதி ஊட்டக்குறைவால் வரும் வலி
- சிறுநீரக செயலிளப்பு
- பார்வ மங்குதல்,பார்வை இழப்பு

முடிவுரை:

எனவே உயர்இரத்த அழுத்தத்தின் விழைவுகளை மனதில் வைத்து கூறப்பட்ட காரியங்களை வாழ்வில் செயல்படுத்துங்கள்.

ANNEXURE – G

PHOTOGRAPH TAKEN DURING THE STUDY