A PRE-EXPERIMAENTAL STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED HEALTH TEACHING PROGRAMME REGARDING LIFESTYLE MODIFICATION IN THE MANAGEMENT OF HYPERTENSION AMONG HYPERTENSIVE CLIENTS BOTH MALE AND FEMALES (20YEARS -80 YEARS) IN THE URBAN AREA OF RATTI, DISTT.MANDI, H.P. IN AUGUST 2022

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ABSTRACT

Objective: Present study was conducted to evaluate the effectiveness of planned health teaching programme regarding lifestyle in the management of hypertension among hypertensive clients.

Methodology: Qualitative approach and pre- experimental design was used in the study. The sample size was 30 hypertensive clients living in the urban area of Ratti, Distt- Mandi (H.P). Purposive sampling technique was used for selecting the sample. Ethical approval was taken from concerned departments. The structured questionnaire was developed and validated with the help of Delphi technique. Pilot study was conducted on 5 hypertensive clients living in Nerchowk, Mandi (H.P). Reliability was checked by split half method (r=0.89). After administering the pre-test planned health teaching programme was executed. Post test was conducted after 4 days. After post-test the leaflets were distributed to the group.

Results: The study showed that in pre-test 15(50%) is having moderate knowledge, 13(43.3%) is having inadequate knowledge and 2(6.7%) is having adequate knowledge. Whereas in post-test, 29(96.7%) is having adequate knowledge 1(3.3%) is having moderate knowledge and 0(0%) is having inadequate knowledge. Finding shows that the mean percentage of post-test knowledge is 82.10% was significantly higher than the mean percentage of pre-test knowledge that is 38.70 % and mean difference is 16.040. The knowledge scores in association with demographic variables, the P value for pre-test and post-test is less than 0.01% and is a significant one. The calculated chi- square value is 15.115 is a significant, tabulated at the 0.05%. In pre-test, there is significant co relation between knowledge score and demographic variables like educational status and socio-economic status. In post-test, there is a significant correlation between knowledge score and demographic variables like educational status and residential area.

Conclusion: The planned health teaching program was effective in improving the knowledge of hypertensive clients regarding lifestyle modification in hypertension.

KEYWORDS: Lifestyle modification, Management of Hypertension

Introduction:

A persistent and sustained high blood pressure has damaging effects on the heart, brain and kidneys.[1] Considerable research has shown that controlling hypertension increases longevity, and help prevent cardiovascular diseases.[2]

Blood pressure is the force exerted by circulating blood against the walls of the body's arteries, the major blood vessels in the body. When blood pressure is too high is called hypertension . Blood pressure is written as two numbers. The first (systolic) number represents the pressure in blood vessels when the heart contracts or beats. The second (diastolic) number represents the pressure in the vessels when the heart rests between beats.[3]

Hypertension is defined by the American Society of Hypertension (ASH) and the International Society of Hypertension(ISH) as a systolic blood pressure of 140 mm of Hg or higher or a diastolic blood pressure of 90 mm of Hg or higher based on the average of two or more accurate blood pressure measurements taken 1 to 4 weeks apart by a health care provider.[4]

Hypertension is classified as essential (primary, idiopathic) or secondary to other diseases. Primary hypertension constitutes about 90-95% of cases and the cause is unknown. Secondary hypertension comprises of 5-10% of cases and is caused by the diseases of the kidneys, endocrines or some other organs.[5]

The cause of hypertension is often not known. In many cases, it is the result of an underlying condition. Hypertension can result from multiple factors including smoking, being overweight /obese, lack of physical exercise, excessive salt intake, excessive alcohol consumption, stress, older age, sleep apnea, chronic kidney disease, family history.[6]

There are two types of risk factors namely, modifiable and non-modifiable risk factors. Modifiable risk factors include unhealthy diets (excessive salt consumption, a diet high in saturated fat and trans fats, low intake of fruits and vegetables), physical inactivity, consumption of tobacco and alcohol, and being overweight or obese. Non-modifiable risk factors include a family history of hypertension; age over 65 years and co-existing diseases such as diabetes or kidney disease.[3]

Need for study

According to WHO, approximately 1 in 5 adults (21%) with hypertension have it under control hypertension is a major cause of premature death worldwide. One global target for non-communicable diseases is to reduce the prevalence of hypertension by 33% between 2010 and 2030.[3]

About 33% urban and 25% rural Indians are hypertensive. Of these 25% rural and 42% urban Indians are aware of their hypertensive status. Only rural 25% and 38% of urban Indians are being treated for hypertension. One –tenth of rural and 1/5th of urban Indian Hypertensive population has their B.P. under control.[12]

During the community posting we find out that every alternate household has a hypertensive client in the family. Although they were taking medications but they don't have much knowledge regarding lifestyle modification which can lead to the poor prognosis and make them more vulnerable for further cardiovascular diseases. They believe that only reducing salt in their diet can reduce their blood pressure.

Problem statement

"A Pre-Experimental study to assess the effectiveness of Planned Health Teaching Programme regarding Lifestyle Modification in the Management of Hypertension among hypertensive clients both Male and Female (20yrs-80yrs) in the Urban area of Ratti, Distt. Mandi, H.P. in August 2022."

Objectives: -

a) To assess the prior knowledge regarding lifestyle modification in the management of hypertension among hypertensive clients.

b) To develop and administer planned health teaching programme regarding lifestyle modification in the management of hypertension among hypertensive clients.

c) To evaluate the effectiveness of planned health teaching programme regarding lifestyle modification in the management of hypertension among hypertensive clients.

d) To determine the association between level of knowledge with their socio-demographic variables regarding lifestyle modification in the management of hypertension among hypertensive clients.

Hypothesis: -

H01: - Planned health teaching programme does not help in improving the knowledge regarding lifestyle modification in the management of hypertension.

H02: - The mean posttest knowledge scores of hypertensive clients attending planned health teaching programme on lifestyle modification in hypertension will not be significantly higher than their mean pretest knowledge score.

H1: -Planned health teaching programme helps in improving the knowledge regarding lifestyle modification in the management of hypertension.

H2: -The mean posttest knowledge scores of hypertensive clients attending planned health teaching programme on lifestyle modification in hypertension will be significantly higher than their mean pretest knowledge score.

Assumption:

Planned health teaching programme may increase the knowledge of hypertensive clients regarding their lifestyle modification in the management of hypertension.

Delimitation:

- Data collection is limited to seven days only.
- Hypertensive clients less than 20 year and more than 80 years.

RESEARCH METHODOLOGY

Research approach: -

Quantitative research approach is adopted in this study to assess the knowledge and effectiveness of planned health teaching programme.

Research design: -

Pre-experimental research design.

Setting of the study:

The study is conducted in urban area of Ratti, Nerchowk, Distt. Mandi, Himachal Pradesh.

Target population:

The target population is hypertensive clients both male and female of age group 20-80 years in urban area of Ratti.

Sample size:- 30.

Sampling technique:- Purposive sampling technique.

Sampling criterion: -

The sample is selected with following pre- determined criterion.

Inclusion criterion:

* Male and female of age group 20-80 yrs.

* Males and females who are present at the time of study.

* Males and females who are willing to participate in study.

Exclusion criterion:

* Male and female other than the age group 20-80 yrs.

* Males and females who are not present at the time of data collection.

* Males and females who are not willing to participate in the study.

Development of tool:-

Steps involved in the development if tool are:

1 Review of literature:

The literature from books, journals and articles are selected.

2 Formulation of questionnaire:

Questionnaire is formulated to include question to assess the knowledge.

Questionnaire is prepared and sent for expert consultation. After the content validity the final questionnaire is prepared with opinion of guide and used in the study.

Description of tool:-

Based on the objective of study, following tools are prepared. It comprises of three sections.

Section A: This section is consists with *demographic variables* which include age, gender , educational status, residential area, type of family ,dietary habits, occupation, family income.

Section B: This section consists with the 37 structured questionnaire which are multiple choice questions.

Section-C: This section consists of planned health teaching programme and consists of charts, flashcards, and pamphlets.

Validity of the developed tools:-

Validity of tools is ensured as the tools is given to 13 experts in the to check its validity   for the contents in Govt. Nursing College SLBSGMC&H Nerchowk, Mandi (H.P.)

Reliability:-

Reliability of tool is 0.8910421

Data collection technique:-

Paper and pencil method for collecting data to the knowledge

Scoring criterion:-

Questionnaire consists of 37 multiple choice questions. For each correct response a score of "1" and for wrong "0" score is given.

Feasibility of study:-

Study was checked by doing pilot study in Nerchowk, Distt. Mandi (H.P.) in the year 2022.

Ethical consideration of research study:-

Ethical approval is taken from the institution and consent from clients.

RESULTS:

Section A

Findings on demographic characteristics of sample.

Table No 1 Details of Demographic variables

Variables	Opts	Frequency(percentage)
Age	20-39 years	9(30.0%)
	40-59 years	12(40.0%)
	60-79 years	9(30.0%)
	80 or above years	0(0.0%)
Sex	Male	8(26.7%)
	Female	22(73.3%)
	Others	0(0.0%)
Educational Status	10th passed	24(80.0%)
	12th passed	4(13.3%)
	Graduate	1(3.3%)

	Post-graduate or above	1(3.3%)
Residential area	Urban	29(96.7%)
	Rural	1(3.3%)
Are you suffering from hypertension	Yes	29(96.7%)
	No	1(3.3%)
Type of family	Nuclear	17(56.7%)
	Joint	13(43.3%)
	Extended family	0(0.0%)
	Others	0(0.0%)
Dietary habits	Vegetarian	21(70.0%)
	Non-vegetarian	7(23.3%)
	Eggitarian	2(6.7%)
Occupation of the participant	Govt. Employee/Semi-government	3(10.0%)
	Private. Employee	6(20.0%)
	Own business	6(20.0%)
	Others	15(50.0%)
Socio-economic status	Less than 10,000 /month	22(73.3%)
	10,001-20,000/month	4(13.3%)
	20,001-30,000/month	3(10.0%)
	More than 30,000/month	1(3.3%)

This table shows frequency distribution and percentage distribution of demographic variables used in this research study.

➢ **Age:** Majority of study subjects 12(40.0%) are in the age group of 40-59 years, 9(30.0%) subjects are 20-39 years of age, 9(30.0%) subjects are 60-79 years of age and 0(0%) subjects are 80 or above years.

➢ **Sex:** Majority of study subjects are female 22(73.3%) and 8(26.7%) subjects are male.

➢ **Educational status:** Majority 24(80.0%) study subjects are 10th passed, 4(13.3%) subjects are 12th passed, 1(3.3%) subject is graduate and 1(3.3%) subject is post graduate or above.

➢ **Residential area :** As for residential area 29 (96.7%) study subjects lives in urban area and 1(3.3%) subjects lives in rural area.

➢ **Hypertensive clients:** As for hypertension, 29(96.7%) subjects are already suffering from hypertension and 1(3.3%) subjects is not suffering from hypertension.

➢ **Type of family :** As for the type of family 17(56.7%) study subjects have nuclear family, 13(43.3 %) subjects have joint family and 0(0.0%) subjects have extended family.

➢ **Dietary habits:** As for the dietary pattern 21(70.0%) study subjects are vegetarian, 7(23.3%) subjects are non-vegetarian and 2(6.7%) subjects are eggitarian..

➢ **Occupational status:** Majority 15(50.0%) study subjects are having other business, 6(20.0%) study subjects are private employees, 6(20.0%) study subjects are having their own business and 3(10.0%) study subjects are government/semi government employees.

➢ **Socioeconomic status:** Majority socioeconomic status 22(73.3%) study subjects have less than 10,000 / month, 4(13.3%) subjects have 10,001 -20,000 / month, 3(10.0%) subjects have 20,001 – 30,000 /month and 1(3.3 %) subjects have more than 30,000/ month.

SECTION B

Findings and evaluation related to knowledge regarding lifestyle modification in the management of hypertension among hypertensive clients.

Table No 2 Pre-test and post-test knowledge score

SCORE LEVEL (N= 30)	PRE TEST f(%)	POST TEST f(%)
INADEQUATE KNOWLEDGE (0-12)	13(43.3%)	0(0%)
MODERATE KNOWLEDGE. (13-24)	15(50%)	1(3.3%)
ADEQUATE KNOWLEDGE. (25-37)	2(6.7%)	29(96.7%)

This table shows knowledge level score of pre-test and post-test**,**

In pre-test, there are15(50%) people with moderate knowledge,13(43.3%)people with inadequate knowledge and 2(6.7%)people with adequate knowledge.

In post-test, there are 29 (96.7%) people with adequate knowledge,1(3.3%) people with moderate knowledge and 0(0%) people with inadequate knowledge.
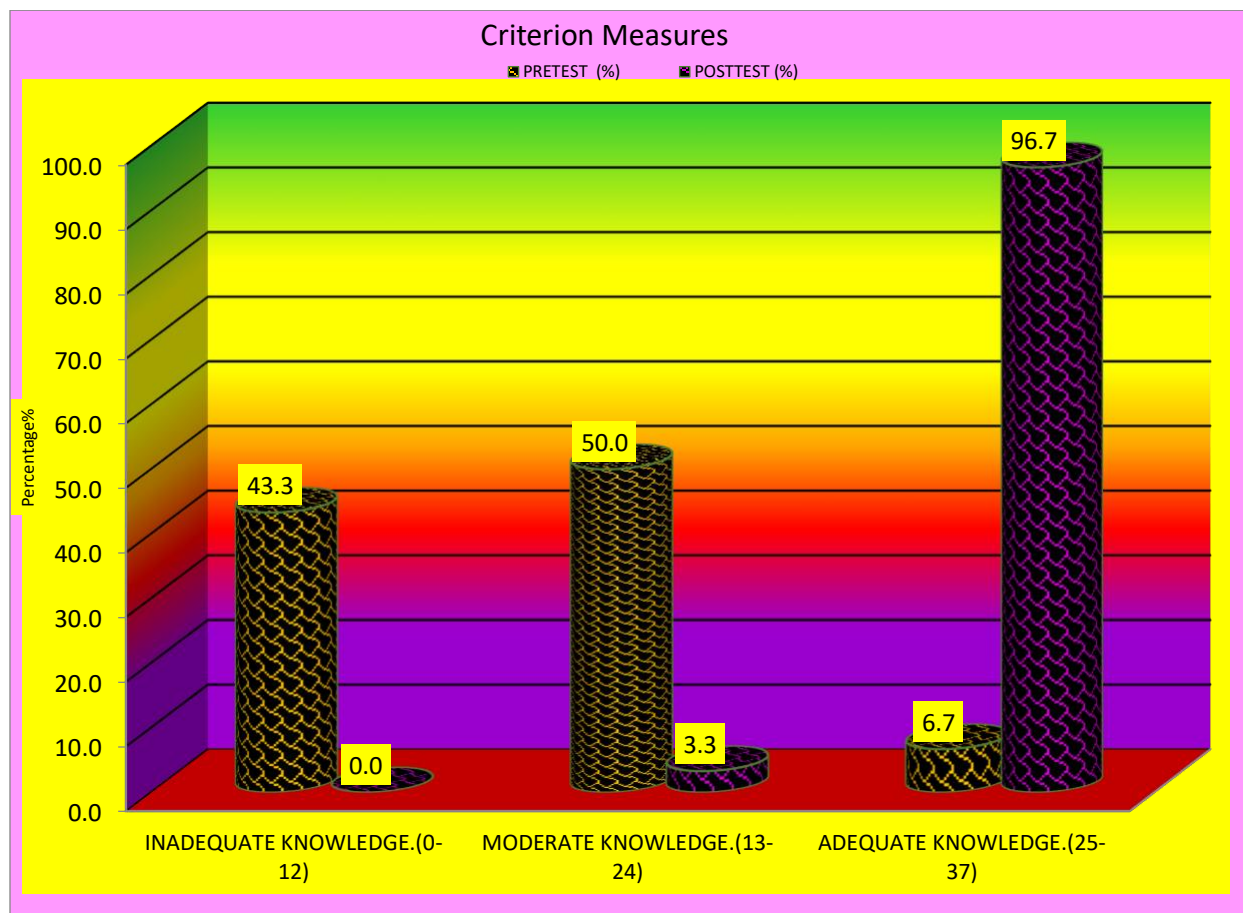
Figure 10 Bar graph showing pre- test knowledge score and post- test knowledge score

In pre test 50% subjects are having moderate knowledge , 43.3% subjects are having inadequate knowledge and 6.7% are having adequate knowledge.

In post test 96.7% are having adequate knowledge , 3.3% is having moderate knowledge and 0% is having inadequate knowledge.

Table No. 3: Descriptive Statistics table

Descriptive Statistics	Mean	S.D.	Median Score	Maximum	Minimum	Range	Mean%
PRETEST KNOWLEDGE	14.33	5.927	13.5	31	5	26	38.70
POSTTEST KNOWLEDGE	30.37	2.977	30.5	35	20	15	82.10
	Maximum=	37	Minimum=	0			

N = 30

This table depicts mean, standard deviation, median score, range and mean percentage of pre-test and post-test knowledge score of people residing in Ratti regarding lifestyle modification among hypertensive clients.

In pre-test knowledge score, mean score was 14.33, standard deviation was 5.927, median score was 13.5 ,maximum value was 31 and minimum value was 5, range was 26 and mean percentage was 38.70.

In post-test knowledge score mean score was 30.37,standard deviation was 2.977, median score was 30.5 ,maximum value was 35 and minimum value was 20, range was 15 and mean percentage was 82.10.

SECTION C

Evaluation of effectiveness of planned health teaching programme regarding lifestyle modification in the management of hypertension among hypertensive clients.

Table No:5 Level of Scores

CRITERIA MEASURE OF KNOWLEDGE SCORE		
SCORE LEVEL(N= 30)	PRE TEST f(%)	POST TEST f(%)
INADEQUATE KNOWLEDGE. (0-12)	13(43.3%)	0(0%)
MODERATE KNOWLEDGE. (13-24)	15(50%)	1(3.3%)
ADEQUATE KNOWLEDGE. (25-37)	2(6.7%)	29(96.7%)
Maximum Score=37 Minimum Score=0		

Table No. 6 Effectiveness of planned health teaching programme

DIAGRAM SHOWING INDIVIDUAL SCORE GAIN (EFFECTIVENESS))						
Mean%	PRE TEST KNOWLEDGE	POST TEST KNOWLEDGE	DIFFERENCE	PRE TEST KNOWLEDGE SCORE %	POSTTEST KNOWLEDGE SCORE %	DIFFERENCE %
Average	14.33	30.37	16.03	38.74	82.07	43.33

ECTION D

Findings related to association between knowledge score with their sociodemographic variables regarding lifestyle modification in the management of hypertension among hypertensive clients

Table no. 7 ASSOCIATION OF PRETEST KNOWLEDGE SCORES OF SELECTED SOCIO-DEMOGRAPHIC VARIABLES.									
Variables	Opts	ADEQUATE KNOWLEDGE	MODERATE KNOWLEDGE	INADEQUATE KNOWLEDGE	Chi Test	P Value	df	Table Value	
Age	20-39 years	1	4	4	1.778	0.777*	4	9.488	
	40-59 years	0	6	6					
	60-79 years	1	5	3					
	80 or above years	0	0	0					
Sex	Male	1	2	5	2.845	0.241*	2	5.991	
	Female	1	13	8					
	Others	0	0	0					
Educational status	10th passed	1	12	11	15.567	0.016**	6	12.592	
	12th passed	0	2	2					
	Graduate	0	1	0					
	Post-graduate or above	1	0	0					
Residential area	Urban	2	14	13	1.034	0.596*	2	5.991	
	Rural	0	1	0					
Are you suffering from hypertension	Yes	2	14	13	1.034	0.596*	2	5.991	
	No	0	1	0					
Type of family	Nuclear	0	7	10	5.399	0.067*	2	5.991	
	Joint	2	8	3					
	Extended family	0	0	0					
	Others	0	0	0					
Dietary habits	Vegetarian	1	11	9	0.974	0.914*	4	9.488	
	Non-vegetarian	1	3	3					
	Eggitarian	0	1	1					
Occupation of the participant	Govt. Employee/Semi-government	0	1	2	4.954	0.550*	6	12.592	
	Private. Employee	0	3	3					
	Own business	0	2	4					
	Others	2	9	4					
Socio-economic status	Less than 10,000/month	1	12	9	15.321	0.018**	6	12.592	
	10,001-20,000/month	0	2	2					
	20,001-30,000/month	0	1	2					
	More than 30,000/month	1	0	0					

**Significant, *- Not Significant

The chi-square test was used to determine the association between pre-test score levels and selected demographic variables. The Chi-square value shows significant association between the post test score level and demographic variables . The significant variables are educational status and socio-economic status.

Table No:8 ASSOCIATION OF POSTTEST KNOWLEDGE SCORES OF SELECTED SOCIO-DEMOGRAPHIC VARIABLES

Variables	Opts	ADEQUATE KNOWLEDGE	MODERATE KNOWLEDGE	INADEQUATE KNOWLEDGE	Chi Test	P Value	df	Table Value
Age	20-39 years	8	1	0	2.414	0.299*	2	5.991
.	40-59 years	12	0	0				
	60-79 years	9	0	0				
	80 or above years	0	0	0				
Sex	Male	8	0	0	0.376	0.540*	1	3.841
	Female	21	1	0				
	Others	0	0	0				
Educational status	10th passed	24	0	0	30.000	0.000**	3	7.815
	12th passed	4	0	0				
	Graduate	0	1	0				
	Post-graduate or above	1	0	0				
Residential area	Urban	29	0	0	30.000	0.000**	1	3.841
	Rural	0	1	0				
Are you suffering from hypertension	Yes	29	0	0	30.000	0.000**	1	3.841
	No	0	1	0				
Type of family	Nuclear	16	1	0	0.791	0.374*	1	3.841
	Joint	13	0	0				
	Extended family	0	0	0				
	Others	0	0	0				
Dietary habits	Vegetarian	21	0	0	3.399	0.183*	2	5.991
	Non-vegetarian	6	1	0				
	Eggitarian	2	0	0				
Occupation of the participant	Govt. Employee/Semi-government	3	0	0	4.138	0.247*	3	7.815
	Private. Employee	5	1	0				
	Own business	6	0	0				
	Others	15	0	0				
Socio-economic status	Less than 10,000 /month	22	0	0	6.724	0.081*	3	7.815
	10,001-20,000/month	3	1	0				
	20,001-30,000/month	3	0	0				
	More than 30,000 /month	1	0	0				

**- Significant, *- Not Significant

The Chi-square value shows significant association between the post test score level and demographic variables like educational status, residential area. The calculated chi-sqare values were more than the table value at the 0.05% level of significance.

Educational status : As for educational status, majority of the study subjects 24(80.0%) are 10th passed, 4(13.3%) subjects are 12th passed, 1(3.3%) subject is graduate and 1(3.3%) subject is post graduate or above.

Residential area : As for residential area, majority of the study subjects 29(96.7%) lives in urban area and 1(3.3%) subjects lives in rural area.

Discussion

The present study has been conducted in the Urban area of Ratti Distt. Mandi H.P .As for as age is concerned, majority of study subjects 12(40.0%) are in the age group of 40-59 years,9(30.0%) subjects are 20-39 years of age, 9(30.0%) subjects are 60-79 years of age and 0(0%) subjects are 80 or above years. Gender wise, majority of study subjects are female 22(73.3%) and 8(26.7%) subjects are male. According to educational status, 24(80.0%) study subjects are 10th passed, 4(13.3%) subjects are 12th passed, 1(3.3%) subject is graduate and 1(3.3%) subject is post graduate or above. As for residential area is concerned, 29 (96.7%) study subjects lives in urban area and 1(3.3%) subjects lives in rural area. According to blood pressure findings, 29(96.7%) subjects were already suffering from hypertension and 1(3.3%) subjects were not suffering from hypertension. Type of family 17(56.7%) study subjects has nuclear family, 13(43.3 %) subjects has joint family and 0(0.0%) subjects has extended family. Dietary pattern wise 21(70.0%) study subjects are vegetarian, 7(23.3%) subjects are non -vegetarian and 2(6.7%)subjects are eggitarian. As per socioeconomic status,22(73.3%) study subjects has less than 10,000 / month, 4(13.3%)subjects has 10,001 -20,000 / month, 3(10.0%)subjects has 20,001 – 30,000 /month and1(3.3 %)subjects has more than 30,000/ month.

The objective No 1 was to assess the prior knowledge regarding lifestyle modification in the management of hypertension among hypertensive clients. In present study the pre-test knowledge score of participant , 15(50%) subjects have moderate knowledge, 13(43.3%) subjects have inadequate knowledge and 2(6.7%) subjects have adequate knowledge.

The objective No 2 was to develop and administer planned health teaching programme regarding lifestyle modification in the management of hypertension among hypertensive clients.

The objective No 3 was to evaluate the effectiveness of planned health teaching programme regarding lifestyle in the management of hypertension among hypertensive clients. Finding shows that the mean percentage of post-test knowledge is 82.10% was significantly higher than the mean percentage of pre-test knowledge that is 38.70 % and there mean difference is 16.040. The knowledge scores in association with demographic variables, the P value for pre-test and post-test is less than 0.01% and is a significant one. The Range calculated in pre-test is 5-31 and in post-test it is 20-35.The standard deviation($\pm$ SD) for pre-test is $\pm$5.927 and for post-test is $\pm$2.977.

The objective No 4 was to determine the association between level of knowledge with their socio demographic variables regarding lifestyle modification in the management of hypertension among hypertensive clients. The chi-square test is used to determine the association between the score levels and selected demographic variables. It was very astonishing to see that, in pretest , there was significant co relation between knowledge score and demographic variables like Educational status and socio-economic status whereas in posttest there was a close relation in educational status and residential area.

CONCLUSION: -

On the basis of findings conclusion that after the planned health teaching programme, the knowledge regard lifestyle modification in the management of hypertension among hypertensive clients got increased by 43.3 %.

The chi-square test was used to determine the association between the score levels and selected demographic variables. The c square value shows that there is significance association between the score level and demographic variables like Educatio status and Residential area .The calculated chi- square values were more than the table value at the 0.05% level of significar

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