"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING PREVENTION OF STROKE AMONG ADULT PEOPLE IN SELECTED COMMUNITY AREA IN MAHESANA DISTRICT,"

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ABSTRACT

The Brain is the most complex organ in the Human body. It produced our every though, Action , Memory, Feeling and Experience of the World. The parts of brain are cerebrum, Mid-Brain, Pons, medulla oblongata and cerebellum. Arterial blood supply to brain includes circulus areteriosus and its contributing arteries. It plays a vital role in maintaining a constant supply of oxygen and glucose to brain. Brain receives about 15% of the cardiac output, approximately 750 ml of blood per minutes.[1]

In adult, brain represents only 2% of total body weight, but consumes about 20% of the oxygen and glucose used even at rest. Typically an interruption in blood flow for 1 or 2 minutes impairs neuronal function and total deprivation of oxygen for about 4 minutes causes permanent injury. If blood entering the brain has low level of glucose, mental confusion, dizziness, convulsion and loss of consciousness may occur. The most common brain disorder is a cerebrovascular accident, also called a stroke or brain attack.[2] Stroke is a term used to describe neurologic changes caused by an interruption in the blood supply to a part of the brain. Two major types of strokes are ischemic and hemorrhagic. Ischemic stroke is caused by a

thrombosis or embolic blockage of blood flow to the brain. Bleeding in to the brain tissue or the subarachnoid space causes a hemorrhagic stroke. Ischemic strokes accounts for about 83% of all strokes. The remaining 17 % of strokes are haemorrhagic.

Key Words : Study**,**Knowledge,Effectiveness Adult people ,Stroke

INTRODUCTION

Stroke is a term used to describe neurologic changes caused by an interruption in the blood supply to a part of the brain. Two major types of strokes are ischemic and hemorrhagic. Ischemic stroke is caused by a thrombosis or embolic blockage of blood flow to the brain. Bleeding in to the brain tissue or the subarachnoid space causes a hemorrhagic stroke. Ischemic strokes accounts for about 83% of all strokes. The remaining 17 % of strokes are haemorrhagic.[3]

Stroke is a leading cause of morbidity and mortality worldwide, with prevention being a crucial strategy to reduce its impact. The study aimed to assess the effectiveness of a structured teaching program on stroke prevention among adults in Kansarakui village, Mahesana district.

METHODS AND MATERIALS

A research methodology defines what the activity of researcher is, how to proceed, how to measure progress, and what constitute success. Research methods are the steps, procedure and strategies for gathering and analyzing the data in a research investigation.

RESEARCH DESIGN

It is the overall plan for obtaining answer to the questions being studied and for handling some of the difficulties encountered during the research process**.**

The term,research design refers to the plan or organization of a scientific investigation. Research design helps the researcher in selection of subjects, manipulation of experimental variables, control of extraneous variables, procedure of data collection and the type of statistical analysis to be used to interpret the data. In the present study, pre experimental one group pre test post test design was selected for the study. The primary objectives of the study were to find the effectiveness of Structured Teaching Program.

The design chosen for the study is presented in the table as:

Table 1: Pre experimental One group pre test post test research design.

Group of adult people	Pre test	Intervention	Post test
	O_1	X	O_2

Key:

O_1 =Assessment of knowledge by pre test.

X =Structured Teaching Program on prevention of stroke among adult.

O_2 = Assessment of knowledge by post test.

RESEARCH SETTING

It refers to the physical location and conditions in the which data collection takes place in the study. The present study has been conducted in Kansarakui Village at Mahesana District.

The selection of the community Area was done on the basis of:

- Geographical proximity
- Feasibility of conducting study
- Availability of sample

VARIABLES OF THE STUDY

➢ **Dependent variable**:

Dependent variables are the response, behavior or outcome that is predicted on research. Changes in the dependent variable are presumed to be influenced by the independent variable. In this study the dependent variable is Knowledge Regarding Prevention of Stroke among Adult People.

➢ **Independent variable**:

Independent variables are the cause or influence the dependent variable which is manipulated. In this study independent variable is structured teaching program regarding prevention of Stroke among Adult people.

➢ **Demographic variable:**

The Demographic variable confound the relationship between the independent and dependent variable and that need to be controlled either through building in research design or through statistical procedure. In this study the selected demographic variables are age, gender, educational level, history of hypertension, family history of stroke, do you know about stroke and source of information about stroke etc.

POPULATION

Population refers to the entire aggregate of individuals or objects having common characteristics. In the present study the population consists of Adult people in Kansarakui Village at Mahesana District.

SAMPLING TECHNIQUE

Sample is used in research when it is not feasible to study the whole population from which it is drawn. The process of sampling makes it possible to accept a generalization to the intended population based on

careful observation of variables, within a relatively small proportion of population. In the present study, purposive sampling technique was taken to select 50 Adult people of Kansarakui Village at Mahesana District.

SAMPLE AND SAMPLE SIZE

Sample consists of a subset of a population selected in a Research study. The samples selected for the present study comprises of 50 Adult people from Kansarakui Village at Mahesana District.
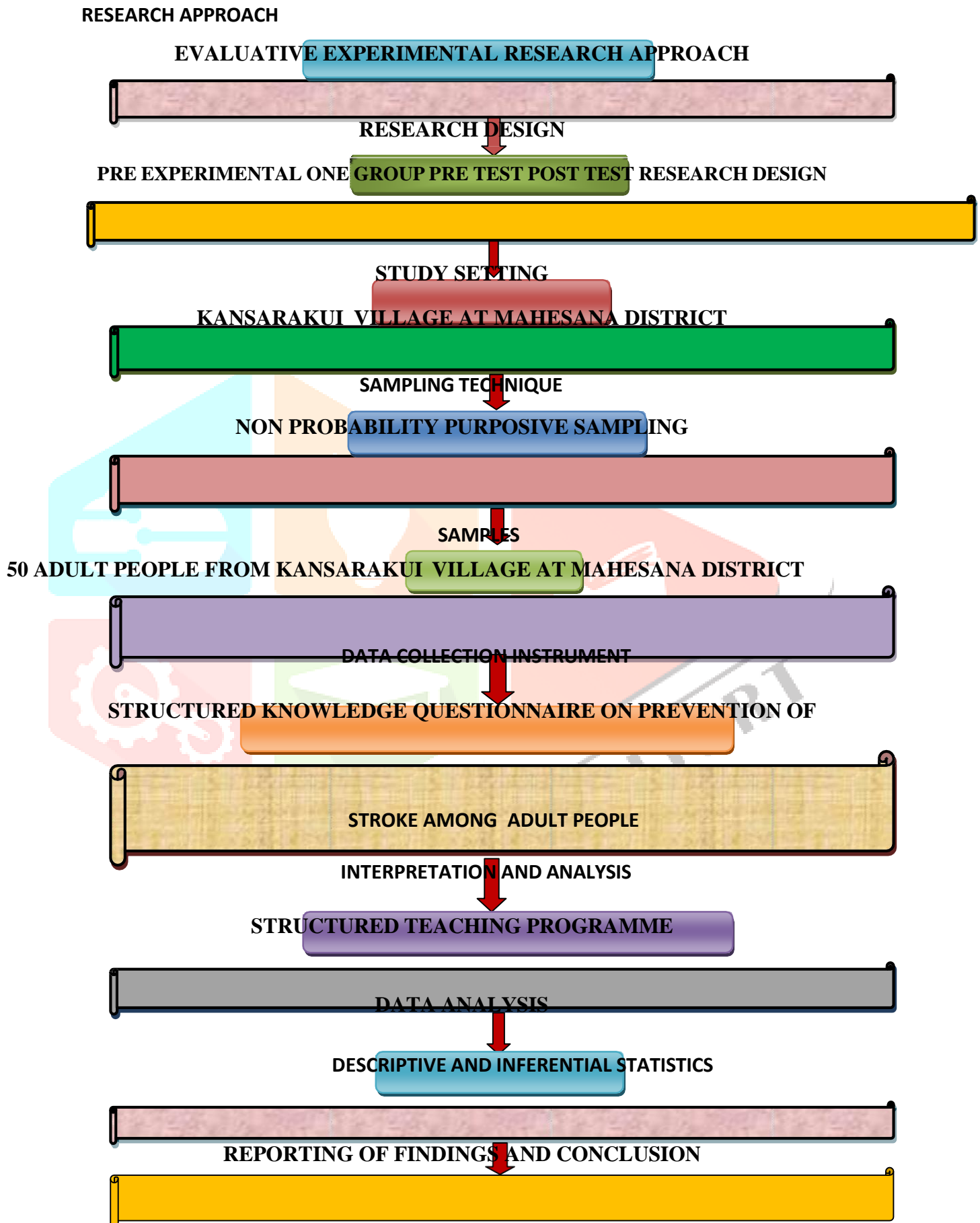
SAMPLING CRITERIA

The following criteria are set to select the samples:

Inclusion Criteria

➢   Adult people who are willing to participate.

➢   Adult people of above 18 years of age.

➢   Adult people who are available at the time of data collection.

➢   Adult people, who can read, write and understand Gujrati.

Exclusion Criteria

➢   Adult people who are sick at the time of data collection.

➢   Adult people who are not willing to participate.

➢   Adult people who have some Visual or Hearing problems or psychological disorders.

➢   Adult people who already attended any knowledge enhancing program related to stroke.

RESEARCH APPROACH

EVALUATIVE EXPERIMENTAL RESEARCH APPROACH

RESEARCH DESIGN

PRE EXPERIMENTAL ONE GROUP PRE TEST POST TEST RESEARCH DESIGN

STUDY SETTING

KANSARAKUI VILLAGE AT MAHESANA DISTRICT

SAMPLING TECHNIQUE

NON PROBABILITY PURPOSIVE SAMPLING

SAMPLES

50 ADULT PEOPLE FROM KANSARAKUI VILLAGE AT MAHESANA DISTRICT

DATA COLLECTION INSTRUMENT

STRUCTURED KNOWLEDGE QUESTIONNAIRE ON PREVENTION OF

STROKE AMONG ADULT PEOPLE

INTERPRETATION AND ANALYSIS

STRUCTURED TEACHING PROGRAMME

DATA ANALYSIS

DESCRIPTIVE AND INFERENTIAL STATISTICS

REPORTING OF FINDINGS AND CONCLUSION

Fig 2: Schematic representation of research methodology

OBJECTIVE OF THE STUDY WERE

1. To assess pre-test knowledge score on prevention of stroke among adult people.

2. To assess post test knowledge score on prevention of stroke among adult people.

3. To assess effectiveness of structured teaching program by comparing pre test knowledge score to post test score.

4. To find out association between pre test knowledge score with selected socio demographic variables.

HYPOTHESIS:

H1: There will be significant difference between pre test and post test knowledge score regarding prevention of stroke among adult people.

H2: There will be significant association between pre test knowledge score with selected socio-demographic variables.

METHOD:

In the study quantitative research approach pre-experimental design and one group pre test post test was used. Variables under study were structured teaching programme as independent variable; knowledge regarding stroke as a dependent variable and like Age, gender, education, history of hyper tension history of stroke, source of information about stroke, Demographic variable. Research setting selected school of Visnagar City in that total fifty samples were selected by Non probability purposive technique. The instrument used gathering necessary data structured knowledge questionnaire and self-structured check list.

DATA ANALYSIS AND INTERPRITATION OF DATA

The description of the result is the eternity of a research project which enables the researcher to reduce, summarize, organize, evaluate, interpret and communicate numerical information. In order to find a meaningful answer to the research problem, the data must be processed, analyzed in systemic and some orderly coherent fashion so that the pattern and relationship can be discerned.

An evaluative approach was adopted to assess the "A study to assess the effectiveness of structured teaching program on knowledge regarding prevention of stroke among adult people at selected in community area in Mahesana Distirct at Kansarakui on prevention of stroke". The data was tabulated, analyzed and interpreted using descriptive and inferential statistics based on the objectives and hypothesis formulated for the present study.

OBJECTIVES

1.   To assess pre-test knowledge score on prevention of stroke among adult people.

2.   To assess post test knowledge score on prevention of stroke among adult people.

3.   To assess effectiveness of structured teaching program by comparing pre test knowledge score to post test score.

4.   To find out association between pre test knowledge score with selected socio demographic variables.

HYPOTHESIS

H1: There will be significant difference between pre test and post test knowledge score regarding prevention of stroke among adult people.

H2: There will be significant association between pre test knowledge score with selected socio demographic variables**.**

PRESENTATION OF THE DATA

The collected data was entered in a master sheet for tabulation and statistical processing. The data is analyzed and interpreted using descriptive and inferential statistics based on the objectives and hypothesis formulated for the present study. The findings are presented under the following headings:

Section I: Description of demographic variables of respondents.

Section II: Findings related to knowledge scores of adult on prevention of stroke. **Part I:** Findings related to pre test knowledge score of respondents on prevention of stroke.

Part –II: Findings related to post test knowledge score of respondents on prevention of stroke.

Part –III: Findings related to Effectiveness of structured teaching program on prevention of stroke.
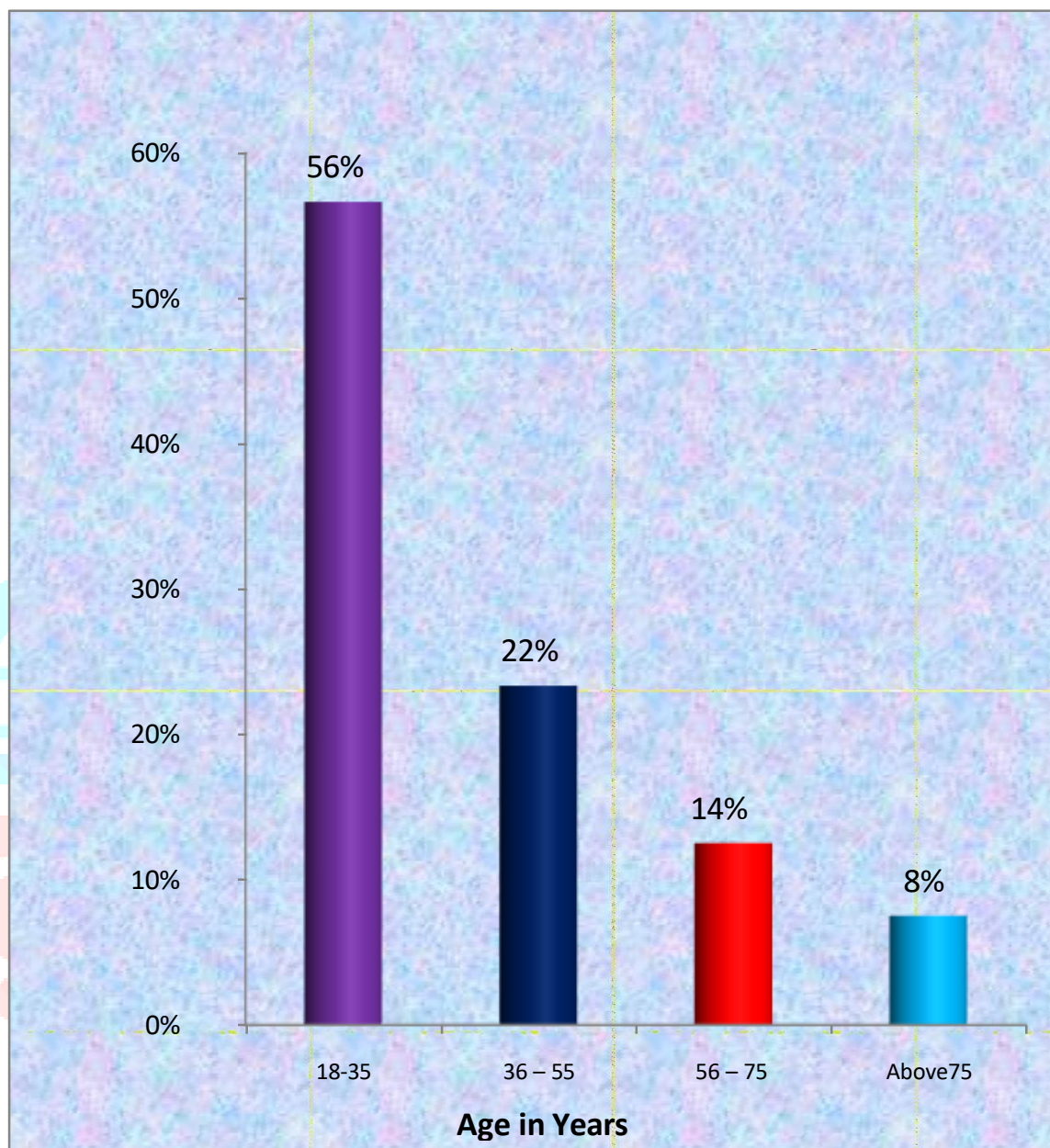
Section III: Findings related to association between pre-test knowledge score with selected demographic variables of adult people.
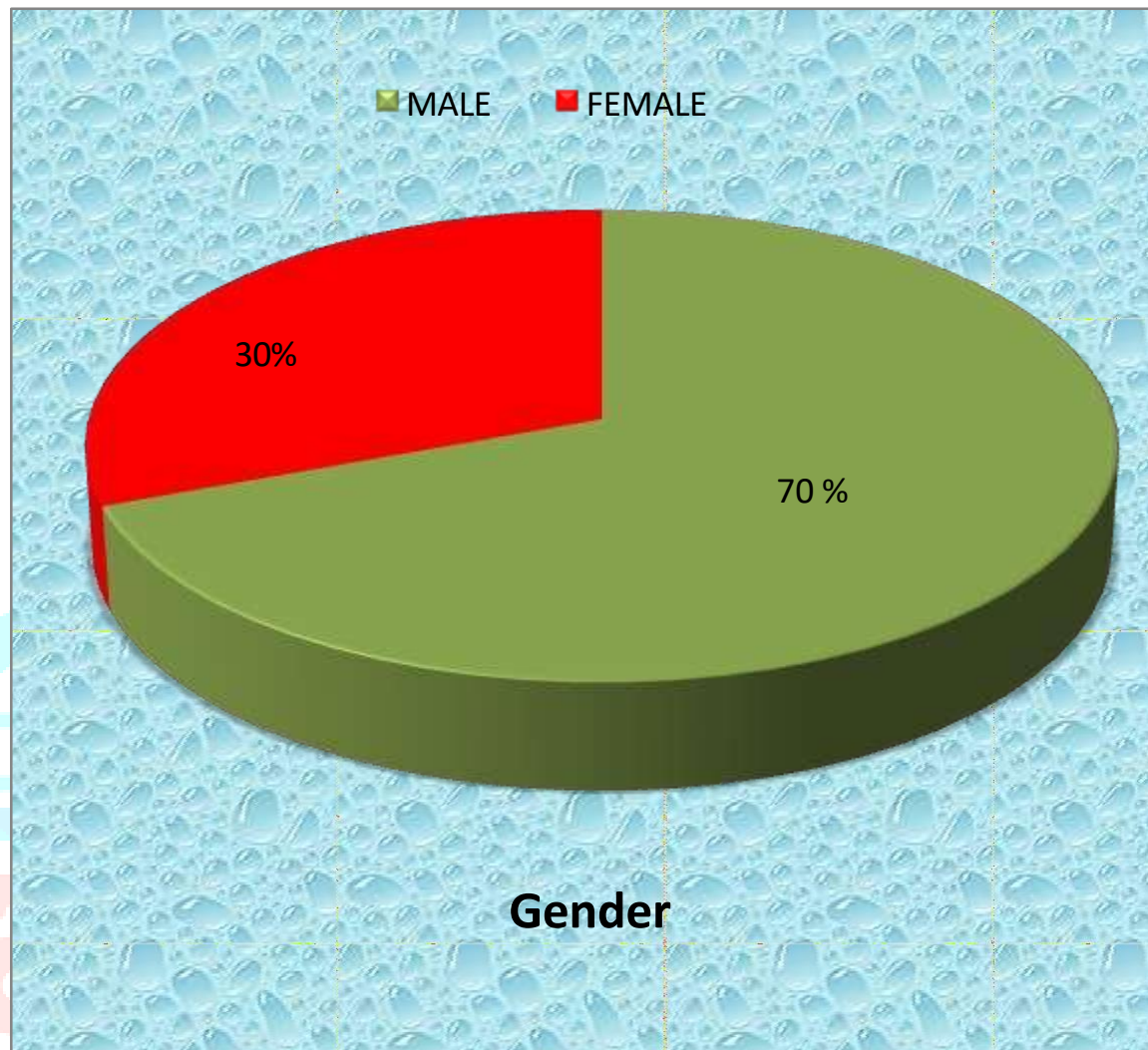
SECTION – I

Table no: 2 DESCRIPTION OF DEMOGRAPHIC VARIABLES OF RESPONDENTS

SR.NO	DEMOGRAPHIC VARIABLE		FREQUENCY	PERCENTAGE (%)
1.	Age in year	18 – 35 years	28	56%
		36 – 55 year	11	22%
		56- 75 year	7	14%
		> 75 year	4	8%
2.	Gender	Male	35	70%
		Female	15	30%
3.	Education status	Non formal	2	4%
		Primary	8	16%
		secondary	11	22%
		Senior secndory	24	48%
		Graduation above	5	10%
4.	History of hyper Tension	Yes	16	32%
		No	34	68%
5.	Family history of stroke	Yes	27	54%
		No	23	46%
6.	Source of information about stroke	Mass media	18	36%
		Health team member	20	40%
		Peer group	6	12%
		Family member	6	12%

Figure 3: Distribution of respondents by Age in years

Figure 4: Distribution of respondents by Gender
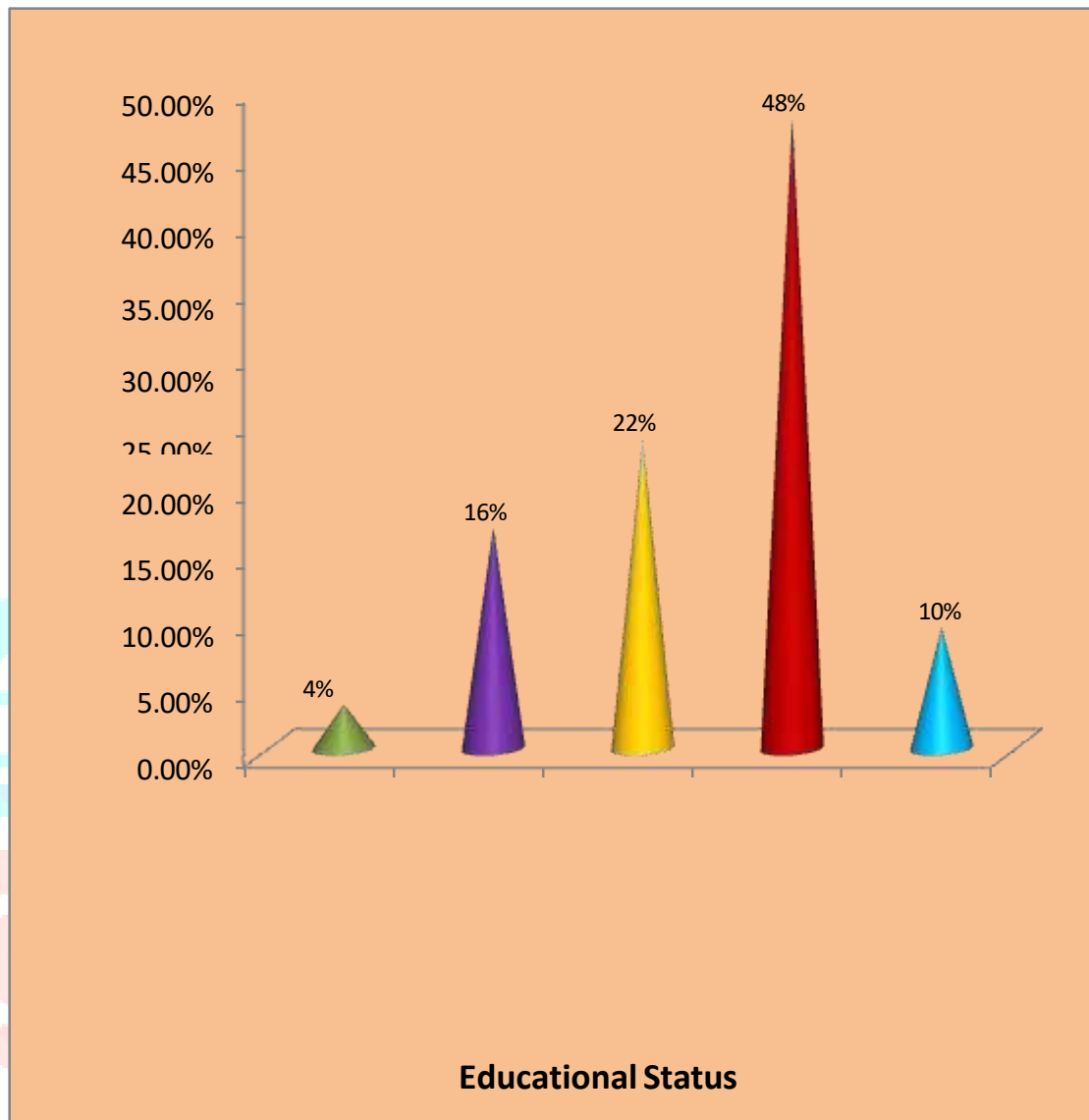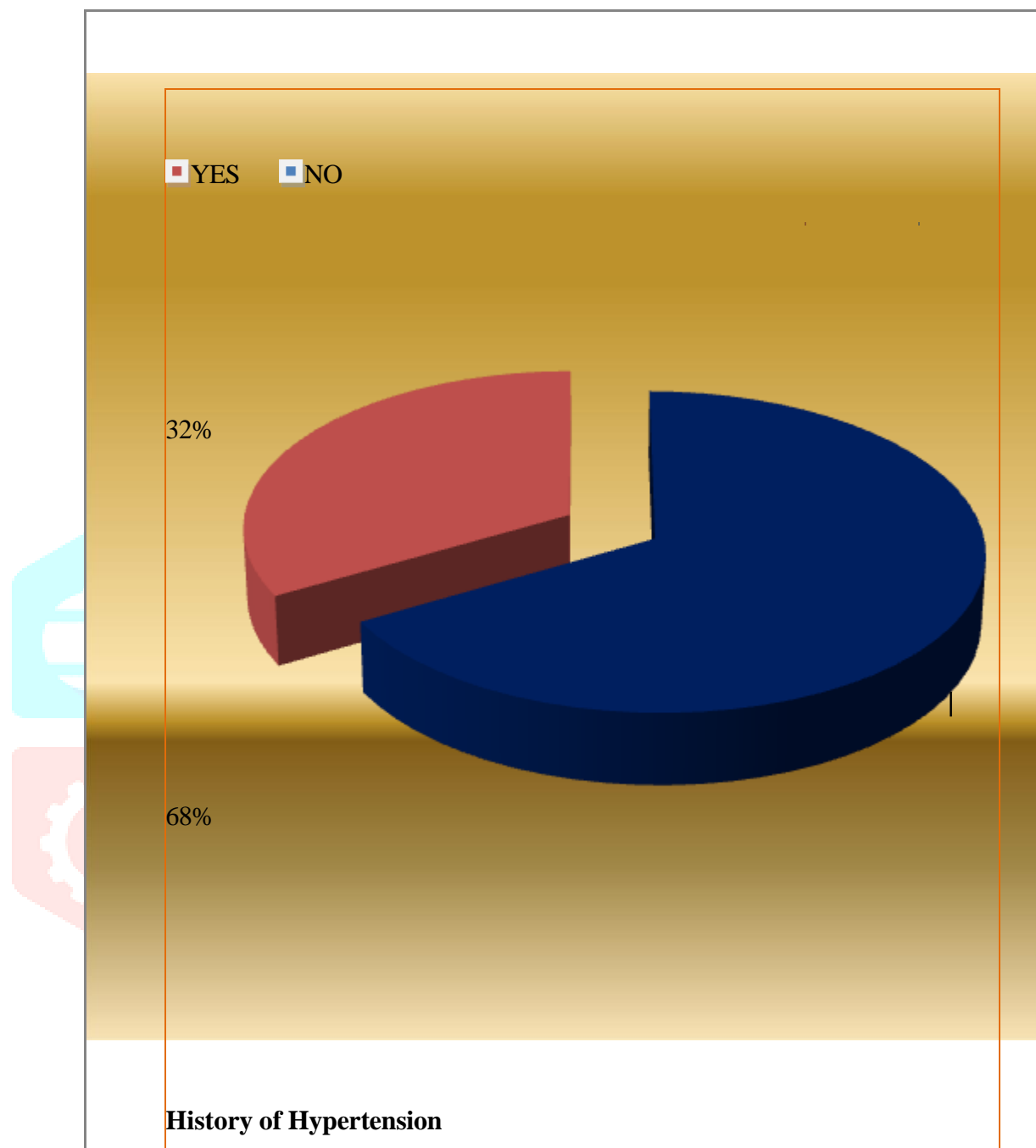

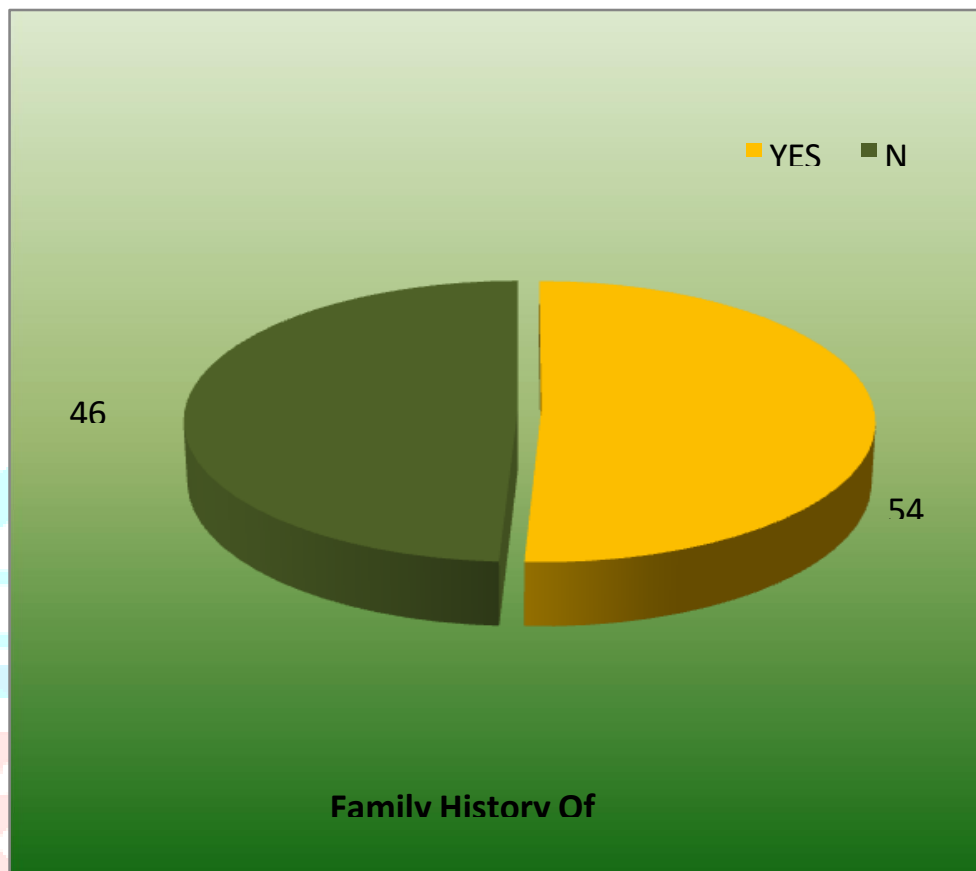MALE FEMALE

30%

70 %

Gender

NON FORMAL

PRIMARY

SECONDARY

SR. SEC.

GRADUATE&
ABOVE

Figure 5: Distribution of respondents by Educational status

Figure 6: Distribution of respondents by history of hypertension

YES   NO

32%

68%

History of Hypertension

Figure 7: Distribution of respondents by family history of stroke

Figure:8 Distribution of respondents by Source of information about stroke

Figure:8 Distribution of respondents by Source of information about stroke

SECTION II

FINDINGS RELATED TO SCORES OF ADULT PEOPLE REGARDING PREVENTION OF STROKE

This section deals with analysis and interpretation of collected data to find out the knowledge scores of respondents before and after, giving the intervention on prevention of stroke.

Part I: Findings related to pre test knowledge score of respondents on prevention of stroke.

Part II: Findings related to post test knowledge score of respondents on prevention of stroke.

Part III: Findings related to effectiveness of Structured Teaching Program by comparing pre test and post test knowledge score of respondents.

PART –I

Table 2: Pre-test knowledge score of respondents regarding prevention of stroke.

N= 50

level of knowledge (score)	Frequency	Percentage	Mean	Mean %	S.D.
Poor (0-10)	21	42%			
Average (11-20)	29	58%			
Good (21-30)	00	00%	7.64	76.4%	1.28

Table 2 The result showed that in pre test in level of knowledge in poor score frequency 21, percentage 42 %, second level of knowledge highest average score in frequency 29, percentage 58%, knowledge score good is 0 frequency 00% percentage the mean 7.64,mean percentage obtained by the respondents was 76.4 % with SD of

1.28

PART –I I

Table 3:post test knowledge score of respondents regarding prevention of stroke.

N=50

level of knowledge (score)	Frequency	Percentage	Mean	Mean %	S.D.
Poor (0-10)	00	00%			
Average (11-20)	27	54%			
Good (21-30)	23	46%	20.36	81.2%	2.24

Table 3 The result showed that in pre test in level of knowledge in poor score frequency 0, percentage 00 %, second level of knowledge highest average score in frequency 27, percentage 54%, knowledge good score is 23 frequency 46% percentage the mean 20.36,mean percentage obtained by the respondents was81.2 % with SD of 2.24

Table 4: Distribution of Adult people by the level of knowledge

N=50

Level of knowledge (score)	Frequency		Percentage	
	Pre test	Post test	Pre test	Post test
Poor (0-10)	21	00	42%	0%
Average (11-20)	29	27	58%	54%
Good (21-30)	00	23	00%	46%
Total	50	50	100	100

Table 4: The result showed that in the pre test most of the respondents 42% had no adequate knowledge on prevention of stroke, 58% respondents had moderately adequate knowledge & 00 % respondents had adequate knowledge on prevention of stroke.

After giving Structured Teaching Program, in the post test most of the respondents gain adequate knowledge on prevention of stroke that was 46 % whereas

54 % respondents had moderately adequate knowledge & 0 % respondents had inadequate knowledge

on prevention of stroke.

Part - III

Table 5: Effectiveness of Structured Teaching Program by comparing pre test and post test knowledge score of respondents.

N=50

Level of knowledge	Mean	Mean %	SD	Mean different	Mean different %	df	T value	p value (0.05)	Inference
Pre test	7.64	76.4%	1.28	12.72	4.8%	49	38	2.00	S
Post test	20.36	81.2%	2.24						

S = Significant

Table 5: The result showed that the mean post test knowledge score is 20.36 (81.2%) is greater than the mean pre test knowledge score 7.64 (76.4%). The above tale also depicts that the enhancement in the knowledge of respondents is 12.72 (4.8%) supporting the post test knowledge score are higher than the pretest knowledge score. The data further represent that the „t value of 38 is significantly higher than the table value 1.65 at 0.05 level of significance. This indicates that there was difference in pre test and post test knowledge score of respondents and Structured Teaching Program is effective in improving the knowledge score of adult people regarding prevention of stroke.

H1 - There is a significant difference between the pre and post test knowledge score of adult people regarding prevention of stroke. Hypothesis was tested at 0.05 levels. The calculated„t value38 is significantly higher than the table value 1.65 at 0.05 level of significance. This indicates that there is significant difference between the pre test and post test knowledge score hence the research hypothesis (**H1**) is accepted and proved.

SECTION - III

FINDINGS RELATED TO ASSOCIATION BETWEEN PRE TEST KNOWLEDGE SCORES WITH SELECTED DEMOGRAPHIC VARIABLES OF ADULT PEOPLE

This section deals with analysis and interpretation of the data collected to find out the association between pre test knowledge score with selected demographic variables like Age in years, gender, educational status, and history of hypertension, family history of stroke, do you know about stroke and source of information. A parametric chi square test is used to describe the association between pre test knowledge score with selected socio-demographic variables.

Table 6: Association between pre-test knowledge score with demographic variables such as Age in Year and Gender

N=50

Variables	Below Mean	Mean and above mean	frequency	Df	χ^2	Inference
1. Age in years						
18-35 years	10	18	28			
36-55 years	5	6	11			
56-75 years	3	4	7			
> 75 years	3	1	4			
Total	**21**	**29**	**50**	3	1.02	NS
2. Gender						
Male	16	19	35			
Female	5	10	15	1	1.36	NS
Total	**21**	**29**	**50**			

S = Significant   NS=Non Significant

The obtained χ^2 value of age in years (1.02) is less than tabular value so there is no significant association between pre test knowledge score and age in years. The obtained χ^2 value of gender (1.36) is less than the tabular value which indicates that there is a no significant association between the pre test knowledge score and gender at df of 3 (P <0.5 level)

Table 7: Association between pre-test knowledge score with demographic variables such as educational status and history of hypertension.

N=50

Variables	Below Mean	Mean and above mean	Total	df	χ2	Inference
3. educational status						
Non formal education	2	0	2			
Primary education	6	2	8			
Secondary education	5	6	11			
Senior secondary education	7	17	24			
Graduate and above	1	4	5	4	3.1	NS
Total	**21**	**29**	**50**			
4. History of hypertension`						
Yes	8	8	16			
No	13	21	34			
Total	**21**	**29**	**50**	1	0.6	NS

S = Significant   NS=Non Significant

The obtained χ2 value of educational status (3.1) and history of hypertension (0.6) is less than the tabular value which indicates that there is a no significant association between the pre test knowledge score and educational status and history of hypertension at df of 2,2 (p>0.05 level)

Table 8: Association between pre test knowledge score with demographic variable such as family history of stroke.

N=50

Variables	Below Mean	Mean and above median	Total	df	χ²	Inference
5. Family history of stroke						
Yes	16	11	27			
No	5	18	23			
Total	**21**	**29**	**50**	1	7.15	S

The obtained χ2 value of family history of stroke (4.8) is higher than tabular value so there is significant association between pre test knowledge score and family history of stroke at 1 degree of freedom (P <0.5 level).

Table 9: Association between pre-test knowledge score with demographic variable such as source of information about stroke

N=50

Variables	Below Median	Median and above median	Total	Df	χ²	Inference
7. Source of information about stroke						
Mass media	11	7	18			
Health team member	5	15	20			
Peer group	3	3	6			
Family members	2	4	6	3	3.93	NS
Total	**21**	**29**	**50**			

The obtained $\chi 2$ value of source of information about stroke (3.93) is less than the tabular value which indicates that there is a no significant association between the pre test knowledge score and source of information about stroke at df of 3.

There is no significant association is found between knowledge of adult people and demographic variables such as age ($\chi 2$=1.2) gender ($\chi 2$=1.36), educational status ($\chi 2$= 3.1), history of hypertension ($\chi 2$= 0.6), source of information about ($\chi 2$= 3.93) at 0.05 level of significance. Hence the research hypothesis is rejected at 0.05 level of significance. Significant association is found between knowledge of adult people and demographic variables such as family history of stroke (^{2}= 7.15) at .05 level of significance hence research hypothesis **(H2)** is accepted and proved.   □

RESULTS:

That data obtained were analyzed and interpreted in the light of objective and hypotheses using descriptive and inferential statistical in terms of mean, standard deviation , "t" test and chi square test value. The mean post test knowledge score 20.36 was higher than mean pre test knowledge score 7.64 with mean difference of 12.72 and the calculated "t" value (38) was greater than table value "t" (2.00). Have significant association with post test knowledge and practice score of sample.

CONCLUSION:

Thus finding indicate that the Structured Teaching Programme was a suitable and effective method of instruction for updating and enhancing the knowledge among the adult people.

Based on the finding the following recommendation were of offered for future research like : it can be replicated on a large sample size,conduct in a different setting like students (B.Sc & G.N.M)areas done with true experimental research approach, time series studies can be conducted different teaching strategies can be used etc.