



# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

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## A PRE- EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING IRON-DEFICIENCY ANEMIA AMONG ANTENATAL MOTHERS IN SELECTED RURAL AREAS AT BARASIROHI, KANPUR"

<sup>1</sup>SACHIN CHHARI, <sup>2</sup>ANJULIKA YADAV, <sup>3</sup>SNEHA GUPTA, <sup>4</sup>Seema warsi, <sup>5</sup>Vibha yadav, vaibhav saini, Viddotma Gautam,

<sup>1</sup>ASST. PROFESSOR, <sup>2</sup>ASSO. PROFESSOR, <sup>3</sup>STUDENT, <sup>4</sup>student, <sup>5</sup>student

<sup>1</sup>REGENCY INSTITUTE OF NURSING,

<sup>2</sup>REGENCY INSTITUTE OF NURSING,

<sup>3</sup>REGENCY INSTITUTE OF NURSING,

<sup>4</sup>REGENCY INSTITUTE OF NURSING,

<sup>5</sup>REGENCY INSTITUTE OF NURSING

### INTRODUCTION-

**‘The most precious jewels you’ll ever have around your neck are the arms of your children’**

Iron deficiency anaemia is a major cause of morbidity and mortality of pregnant women and increases the risks of foetal, neonatal and infant mortality. Nutritional education, with special emphasis on strategies based on locally available food stuffs to improve the dietary intake of proteins and iron is important during pregnancy. This study aimed to evaluate diet behaviour of pregnant woman with iron deficiency anaemia before and after the implementation of educational intervention based trans-theoretical model of change.<sup>1</sup>

Iron deficiency anemia (IDA) continues to be the commonest etiology of anemia in pregnancy. The prevalence of iron deficiency (ID) in pregnant Indian women is amongst the highest in the world. Untreated iron deficiency (ID) has significant adverse feto-maternal consequences. Plethora of investigations are available for diagnosis of IDA, each having specific advantages and disadvantages when used in the pregnancy setting. Therapy for ID

includes dietary modification, oral iron supplementation, intravenous iron and blood transfusion. Newer parenteral iron preparations are safe and there is mounting evidence to suggest their use in frontline settings for pregnancy associated IDA in the second and third trimester. Through this review, we suggest an algorithm for diagnosis and treatment of IDA in pregnancy depending on the severity of anemia and period of gestation suited for widespread use in resource limited settings. Also, we recommend ways for increasing public awareness and tackling this health issue including the observance of “National Anemia Awareness and Treatment Day.”<sup>2</sup>

Anemia during pregnancy is a global public health challenge facing the world today, especially in the developing countries.<sup>3</sup>

Anaemia in pregnancy is a major health problem in developing countries. More than two third of the pregnant women in India are anaemic and most of the times it is due to deficiency of iron and folic acid.<sup>4</sup>

Anemia is a major global health problem, especially in developing countries and is a common and serious problem in pregnancy. It has serious short- and long-term consequences during pregnancy and beyond. This fundamental health issue has not still been solved but continues to exist affecting the health, quality of life and working capacity in billions of people all over the world. Untreated anemia also leads to increased morbidity and mortality from these chronic conditions as well.<sup>5</sup>

Anemia in pregnancy is defined as a haemoglobin level of less than 11g/dl, and is commonly due to iron deficiency. This systematic review was conducted to determine the prevalence and risk factors of anemia and iron deficiency among pregnant women.<sup>6</sup>

- Anemia, a morbid condition, is a global concern that affects people of all age groups. This scenario has attracted the attention of several government organizations for implementing strict regulations to provide nutritional security. Iron fortification and supplementation has been in practice from the past decades. However, there is a need for determining an effective strategy to address this rising concern among the vulnerable population

## OBJECTIVE

A Research objective is a specific accomplishment the researchers hope to achieve by Conducting the study.”

1-To assess the pre-test knowledge of antenatal mothers regarding iron deficiency anemia

2-To evaluate the effectiveness of structured teaching programme on knowledge regarding iron deficiency anemia

3-To associate the pre-test knowledge of antenatal mothers with their selected Demographic variables.

## HYPOTHESIS:

“A hypothesis is an assumption statement about the relationship between two or more variables That suggest an answer to the research question.”

**Research hypothesis H1-** There is a significant difference between the pre-test and post-test knowledge regarding iron deficiency anemia among antenatal Mothers.

**H2-** There is a significance association between pre-test knowledge score with the Selected demographic variables among antenatal mother.

**Null hypothesis H01-** There is no significant difference between the pre-test and post-test knowledge Regarding iron deficiency anemia among antenatal Mothers.

**H02-**There is no significant association between pre-test knowledge score with selected Demographic variables among antenatal mothers.

## REVIEW OF LITERATURE

“Review of literature is a broad systemic and critical collection and evaluation of important scholarly literature as well as unpublished material. The review serves as an essential background for any research. Written literature reviews are the critical summaries of what is known about a particular topic. The review serves as an integrative function and facilitates the accumulation of knowledge. Hence review of literature is important to research in order to know what has been established and documented”

“The review of literature is defined "as a broad, comprehensive in depth. Systemic and critical review of scholarly publication, unpublished scholarly print material, audio visual material and personal communication.” Therefore, the researcher has reviewed literature regarding assisted reproductive technology by referring books, journals, thesis etc.

The review of literature in this present study is organized under the following headings: -

1. Studies related to assess knowledge of antenatal mothers on Iron-deficiency anemia
2. Studies related to iron deficiency anemia.
3. Studies related to effective of structured teaching programme (Planned teaching programme, information booklet, A.V aids).
4. Studies related to assess the knowledge of antenatal mothers.

### 1. Studies related to assess knowledge of antenatal mothers on iron deficiency anemia:

1. **Ms arsonist tongue, Simpson Christy, (2022)** were conducted, a study to assess the effectiveness of structured teaching programme on knowledge and practice regarding prevention of anemia among antenatal mothers attending antenatal OPD at CIMSR, Dimapur Nagaland. The study design was a pre-experimental research design. 60 sample were collected by using sampling technique. The result Showed of the study was the mean post-test knowledge score (22.25%) Of antenatal mother but the mean pre-test score (6.25%) After implementation of STP 75.11% Of the participants Showed good practice after the intervention (STP) <sup>16</sup>

**Deepa Rani Prusty , Madhusudan 3 March (2022)** were conducted effectiveness of individual teaching programme on knowledge regarding antenatal diet among multigravida mother with iron deficiency anemia it was an international study and an evaluate research approach is selected for this study pre experimental research was adopted for the pre-test post-test design the main pre-test knowledge score is 17.28 was less than the post-test knowledge score 24.38 the findings also significant correlation between the demographic variables and knowledge of the multigravida mothers with iron deficiency anemia.

## VARIABLES

“Attributes or characteristics that can have more than one value, such as height or Weight.”

In other word, variables are qualities, quantities or characteristics of people, things or Situation change or vary.

### DEPENDENT VARIABLE-

“It is the outcome or response due to the effect of the independent variable which Researcher want to predict or explain.”

In this study dependent variable refers to the level of knowledge of antenatal mothers Regarding iron deficiency anemia

### INDEPENDENT VARIABLE –

“It is a stimulus or activity that is manipulated or varied by the researcher to create the Effect on the dependent variable.”

The independent variable of the study was structured teaching programme on knowledge Regarding Iron-deficiency anemia among antenatal Mothers

### DEMOGRAPHIC VARIABLES-

“Demographic variables are characteristics or attribute of subjects that are collected to Describe the sample.”

Demographic variable of the study was age, gender, educational Status of pregnant women, types of family, economic status, residence, previous knowledge and source of information

### POPULATION-

“The entire set of individual or objects having some common characteristics selected Research study.”

The population for the present study was antenatal mother at selected community areas of Barasirohi Kanpur.

**Target population-** “The target population is the total group of individuals from which the sample might be drawn.”

In the present study the target population was antenatal mothers.

**Accessible population-** “Accessible population is the portion of the population to which the researcher has reasonable access, may be subset of the target population.”

In the current study, the accessible mothers who was considered as antenatal mothers at community area of Barasirohi Kanpur.

### 3.5 SAMPLE-

“A sample is defined as a smaller set of data that a researcher chooses or selects from a Larger population using a pre-defined selection method.”

In this study the sample was antenatal mothers of community area of Barasirohi Kanpur who Fulfilled the sampling criteria for the study.

### SAMPLE SIZE-

“The sample size in the number of people who participate in the study.”

The sample size in the present study will be 60 antenatal mothers

### **SAMPLING TECHNIQUE-**

“Sampling is the process of selecting a representative segment of the population under Study.”<sup>48</sup>

In this study, non-probability convenient sampling technique will be used.

### **SAMPLING CRITERIA-**

“Criteria sampling involve selecting cases that need some predictor mixed criteria of Importance.”<sup>49</sup>

**INCLUSION CRITERIA-** The study includes mothers who are-

- antenatal mothers
- Those women who are willing to participate.
- antenatal mothers who are regularly attending the antenatal clinic.
  - Antenatal from 1 weeks of gestation up to term

The present study gave an insight into the effectiveness of structured teaching programme on knowledge regarding iron deficiency anemia among antenatal mothers, with the Selected variables.

expert.

To achieve the objective of the study

### **Assessment of knowledge of the antenatal mothers according to pre-test and post-test knowledge.**

This section deals with the pre-test scores of antenatal mothers in improving their knowledge which was obtained from the structured questionnaire on Iron deficiency anemia. The data were compiled into master data sheet and analysed. The total knowledge scores graded as follows:

<b>GRADING SCORES</b>	<b>GRADING OF KNOWLEDGE</b>
<b>0-13</b>	POOR
<b>14-26</b>	AVERAGE
<b>27-40</b>	GOOD

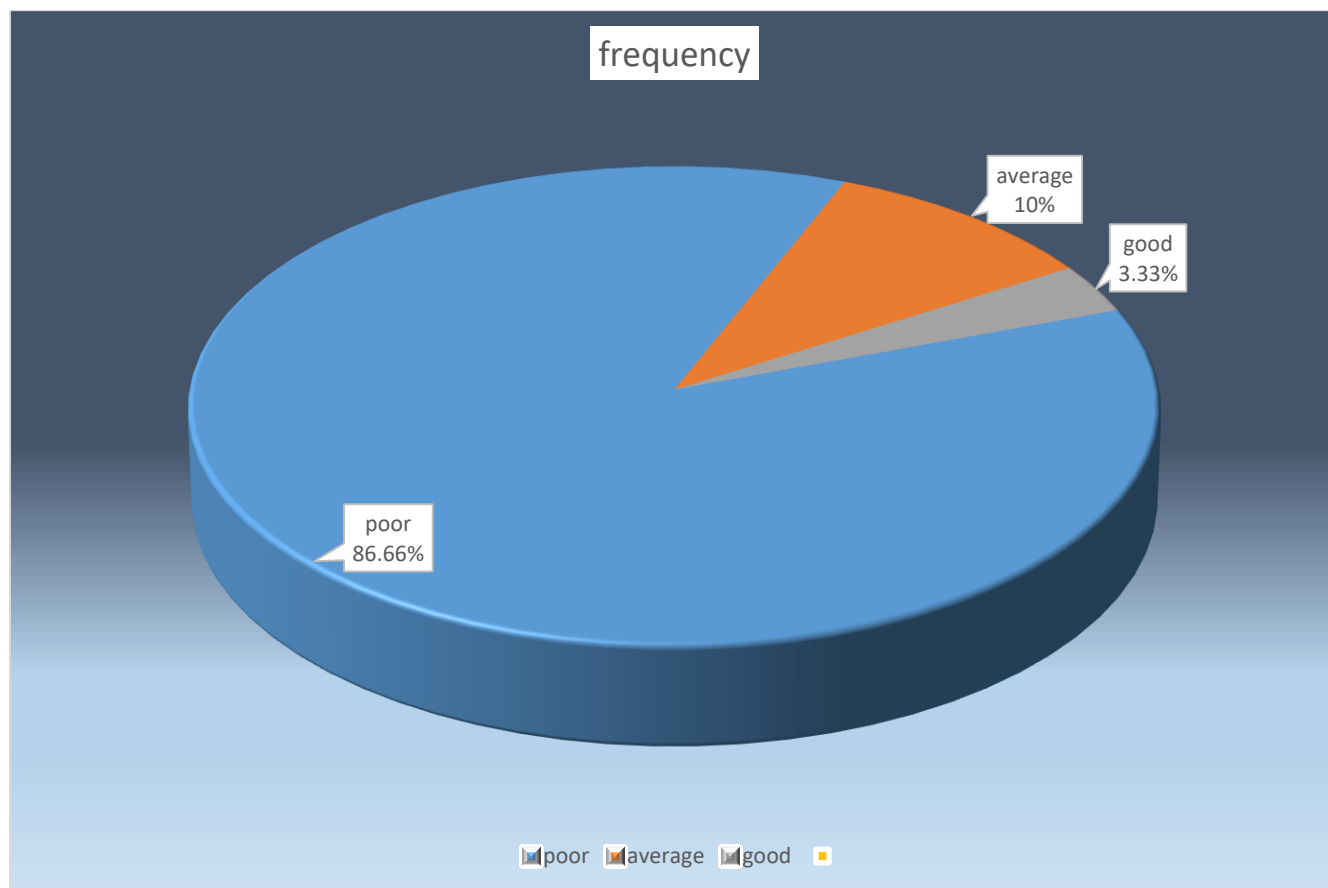
**Maximum score=40**

**Minimum score=0**

**Table no.9: Distribution of knowledge level of antenatal mothers to pre-test.**

**N=60**

<b>Pre-knowledge level</b>	<b>Frequency</b>	<b>Percentage</b>
Poor	52	86.66%
Average	6	10%
Good	2	3.33%
<b>TOTAL</b>	<b>60</b>	<b>100%</b>



**PRE-KNOWLEDGE LEVEL**

**Figure no.9- Pie diagram shows distribution of knowledge level of antenatal mothers according to pre-test.**

The above table no.9 and figure 9 pie diagram indicates that in pre-test level of knowledge majority 52(86.6%) of antenatal mothers had poor knowledge,6(10%) had average knowledge and 2(3.33%) of the mother had good knowledge.

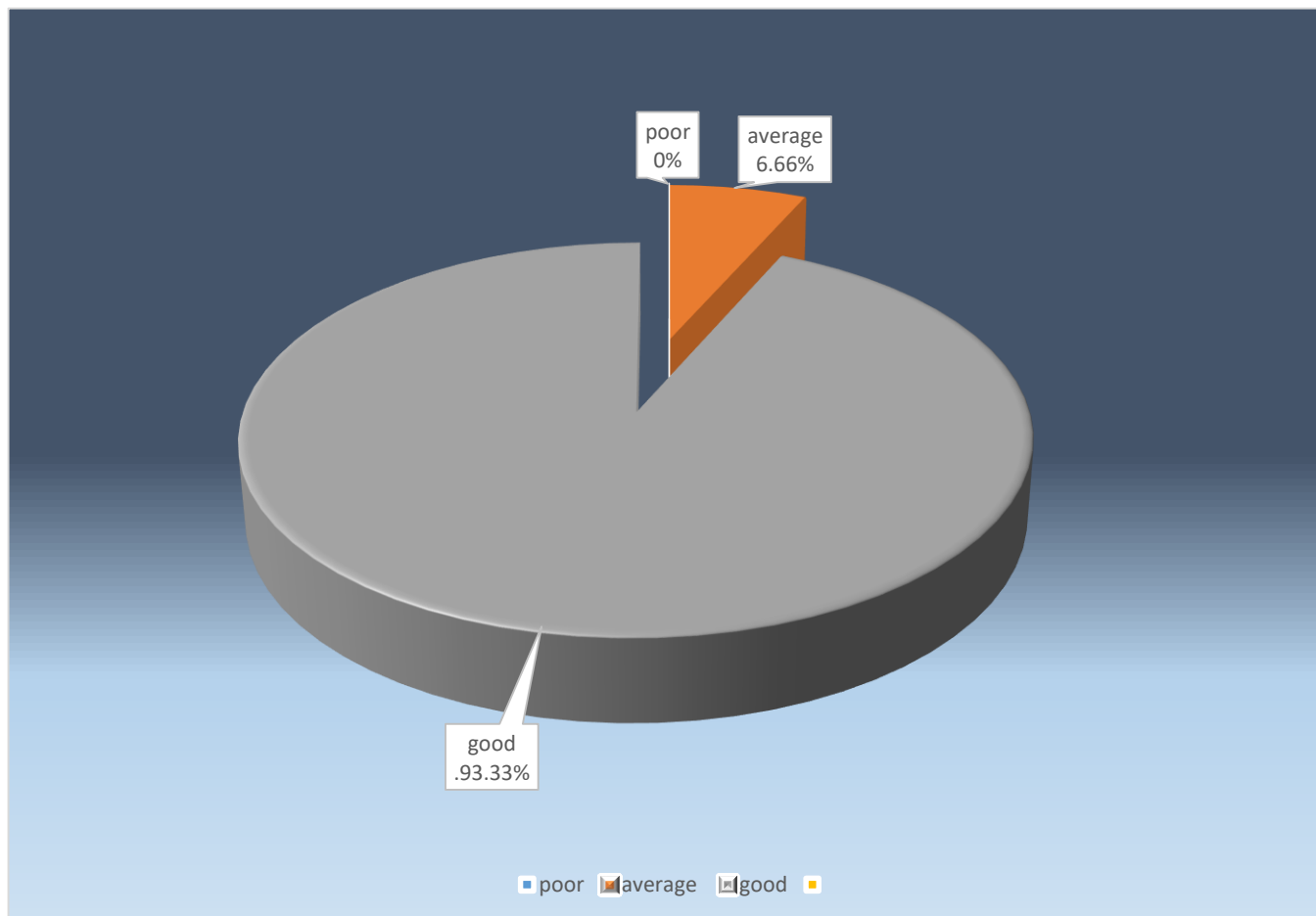
**Table no.10- Distribution of knowledge level of antenatal mothers according to post-test.**

**N=60**

Post knowledge level	Frequency	Percentage
Poor	0	0%
Average	4	6.66%
Good	56	93.34%

TOTAL	60	100%
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### POST KNOWLEDGE LEVEL



**Figure no.10- Pie diagram showing distribution of post-test knowledge level of antenatal mothers.**

Above table np.10 and figure 10 shows that of post-test level of knowledge majority56(93.34%) mothers had good ,4(6.66%) had average knowledge.

SECTION=C

**COMPARISON OF PRE-TEST AND POST-TEST KNOWLEDGE LEVEL REGARDING IRON DEFICIENCY ANEMIA ANTENATAL MOTHERS.**

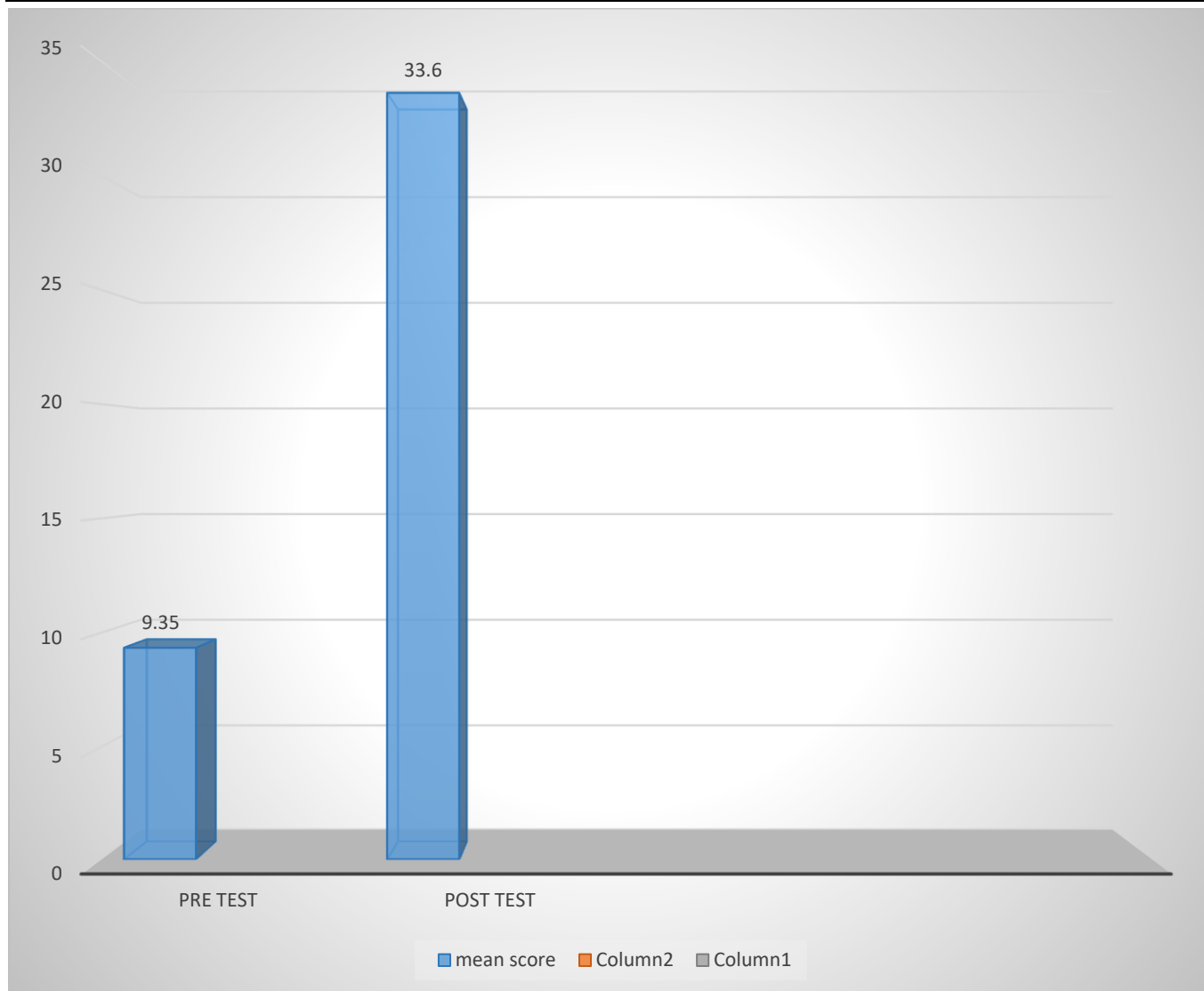
**Table no. 7: Comparison of pre-test and post-test knowledge level regarding iron deficiency anemia among antenatal mothers.**

N= 60

S.No.	Knowledge	Mean	Mean difference	Mean percentage	Standard deviation
1.	<b>Pre-test</b>	9.35	24.25	5.61%	5.59
2.	<b>Post-test</b>	33.6		20.16%	6.41







The above table shows comparison of pre-test and post-test level of knowledge regarding Iron deficiency anemia among antenatal mothers. The post-test mean score (33.6) was high when compared to the pre-test mean (9.35) score of the knowledge.

**SECTION=D**

**EFFECTIVENESS ON INTERVENTION ON KNOWLEDGE REGARDING IRON DEFICIENCY ANEMIA ANTENATAL MOTHERS.**

**EFFECTIVENESS ON INTERVENTION ON KNOWLEDGE REGARDING IRON DEFICIENCY ANEMIA ANTENATAL MOTHERS.**

**Table no. – Frequency, Mean, Mean percentage, Paired ‘t’ test of structured knowledge questionnaire.**

SN test	Knowledge	mean	Mean percentage	Paired 't' test
1	Pre-test	9.35	5.61%	21.82
2	Post-test	33.6	20.16%	

**SECTION=E**

**Association between the levels of pre-test knowledge score with the selected demographic variables of antenatal mothers.**

**Table no. Association of knowledge level of antenatal mothers, with their selected demographic variables**

N=60						
S no.	Demographic variables	Poor level of knowledge	Average level of knowledge	Good level of knowledge	Chi square value	Significant/non-significant
1.	<b>Age in years</b>					<b>Not significant</b>
	18-20years	03	10	02	$\chi^2= 1.367665$	
	21-25years	11	28	04	<b>df= 66</b>	
	36-40years	00	02	00	<b>P=0.05</b>	
	41-45years	00	00	00	<b>T = 12.59</b>	
2.	<b>Gender</b>				$\chi^2=0$	<b>Not Significant</b>
	Male	00	00	00	<b>df= 04</b>	
	Female	12	42	06	<b>P= 0.05</b>	
	Other	00	00	00	<b>T= 9.49</b>	
3.	<b>Education</b>					

	Informal education	03	01	02	$\chi^2=6.597608$	<b>Not significant</b>
	Primary Education	04	05	03	<b>df= 06</b>	
	High school	04	18	03	<b>P= 0.05</b>	
	Degree or above	00	14	03	<b>T=12.59</b>	
4.	<b>Family</b>					<b>Significant</b>
	Nuclear family	05	15	03	$\chi^2= 28.84722$	
	Joint family	07	24	05	<b>df= 04</b>	
	Broken family	00	01	00	<b>P=0.05</b>	
					<b>T= 9.49</b>	

5.	<b>Source of knowledge</b>					
	Parents	09	10	03	$\chi^2= 2.142055$	<b>Not significant</b>
	Relatives	01	04	01	<b>df= 06</b>	
	Advertise	01	02	00	<b>P= 0.05</b>	
	Books/articles	01	23	05	<b>T= 12.59</b>	
6.	<b>Economic</b>					
	Poor	04	05	03	$\chi^2= 3.62031$	<b>Not significant</b>
	Average	06	19	04	<b>df= 04</b>	
	Good	02	15	02	<b>P= 0.05</b>	
					<b>T= 9.49</b>	
7.	<b>Religion</b>					
	Hindu	10	36	07	$\chi^2= 1.292365$	<b>Not significant</b>
					<b>df= 6</b>	

	Muslims	01	06	00	<b>P= 0.05</b>	
					<b>T= 12.59</b>	
	Sikhs	00	00	00		
	Christians	00	00	00		
8.	<b>Residence</b>					
	Urban	00	00	00	$\chi^2=0$	
	Rural	12	42	06	<b>df=06</b>	<b>Not significant</b>
	Suburban	00	00	00	<b>P=0.05</b>	
	A & B both	00	00	00	<b>T=12.59</b>	

The association between pre-test knowledge score with selected demographic variables like age in years, gender, education, source of knowledge, economic status, religion, residence not significant and family is significant. Here calculated value of chi square was less than table value at 0.05 level of significance, so there was no significance association between the variables with their pre-test knowledge score. Hence the formulated research hypothesis H2 was rejected, H<sub>0</sub>2 the null hypothesis was accepted.

### SUMMARY

From the above data analysis, it was found that after the giving educational intervention package 60 samples of antenatal mothers, most of them 56(93.34%) had good knowledge, 4(6.66%) had average knowledge, no one had poor knowledge in post-test, where the pre-knowledge score 52 (86.66%) had poor knowledge, 6 (10%) had average knowledge, 2(3.33%) had good knowledge in pre-test.

### MAJOR FINDINGS

The result reveals that the mean value of knowledge score in pre-test is 9.35, and Standard deviation is 5.59 and mean value of knowledge score in post-test is 33.6. and Standard deviation is 6.41.

The ‘t’ test shows that the ‘t’ = 21.82 and P is <0.05 thus that the structured teaching programme was effective. Pre-experimental test revealed that there was no significant association between the pre-test knowledge score of antenatal mothers and their socio demographic variables.