



**Original Research Article**

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**A PRE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF INFORMATION BOOKLET ON KNOWLEDGE REGARDING EARLY SIGNS IMMEDIATE TREATMENT OF ANGINA PECTORIS AMONG THE STAFF NURSES WORKING IN CARDIAC UNITS OF SELECTED HOSPITAL OF INDORE**

**<sup>1</sup>Neelu Chutel, <sup>2</sup>Neelima Choure, <sup>1</sup>Peter Jasper Youtham, <sup>1</sup>Sonali Kumawat**

<sup>1</sup>Indore Nursing College, Indore, M. P.

<sup>2</sup>L. N. Nursing College, Bhopal, M. P.

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**\*Corresponding author:**

Neelu Chutel

**Present address**

Indore Nursing College,  
Indore

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**Abstract:**

The existing pre-test knowledge regarding early signs immediate treatment of angina pectoris patient is identified by pre-test score and it is reflected that the small proportion of staff nurses (i.e.1.67%) were in **Good** (21-30) category which are aware about cardiac while a large proportion of staff nurse (78.33%) were in **Poor** (0-10) category and not aware about plotting of the cardiac immediate treatment of angina pectoris patient which needed careful attention towards the present problem. 12 staff nurse (45.0%) were observed in **Average** (11-20) category.

The observations reflect the need of awareness about immediate treatment of angina pectoris patient.

This study shows that there is a significant increase in knowledge of staff nurses after giving the information booklet. The t-value is 20.1254 for knowledge ( $p < 0.0001$ ). There was significant association between knowledge on immediate treatment of angina pectoris patient and age, professional education, clinical experience in cardiac unit, and the gender of staff nurses on immediate treatment of angina pectoris patient working in cardiac unit.

**Key words:** Angina pectoris, coronary heart disease

## INTRODUCTION

The heart is one of the vital organs. Disorders related to the heart are one of the leading causes of the death throughout the world. Angina pectoris also known as heart attack occurs when the blood supply to the part of the heart is interrupted. This is most commonly due to occlusion of coronary artery following the rupture of vulnerable atherosclerosis plaque, which is an unstable collection of lipids and white blood cells in the wall of the artery. The resulting ischemia and oxygen shortage if left untreated for a sufficient period can cause damage and/or death of heart muscle tissue.

A study says that Indians generally fall prey to heart attacks around 50 years of age. It also seems that the risk of heart attack in young adults, in 3rd and 4th decades of life is rising in India.

A study highlighted on coronary heart disease and expressed that of all the major ethnic groups in the world, Indians run the highest risk of coronary heart disease 3 to 4 times higher than white Americans, 6 times more than Chinese and 20 times more than Japanese people. The prevalence of coronary heart disease is estimated to be 7% to 10% in North India and as high as 14% in South India. Prevalence of Coronary heart disease in India is rising, though it is not so common in rural regions.

Recognizing the needs and action priorities in angina pectoris and secondary prevention, World Health Organization (WHO) suggested a new definition, which reflects the aims of modern treatment for angina pectoris. "The early signs immediate treatment of angina pectoris patients is the sum of activities required to influence favourably the underlying cause of the disease, as well as to ensure the patients best possible physical, social and mental conditions, so that they may by their own efforts, preserve or resume when lost, as normal a place as possible in the life of the community".

**PILOT STUDY:** The pilot study is a small preliminary investigation of the same general character in the major study which is designed to acquaint the researcher with problems that can be corrected in preparation for large research projects or is done to provide the researcher with an opportunity to tryout the procedures for collecting data, its feasibility and practicability, the principal focus in the assessment of the adequacy of measurements.

The pilot study was conducted in Bhandari Hospital and Research Centre, Indore, from 02/12/2013 to 09/12/2013. The permission to conduct the pilot study was obtained from the concerned authority prior to the study. The purpose of the study was explained to the sample and confidentiality was assured. Consent was obtained from sample. On the first day tool was administered to 6 staff nurses who fulfilled the criteria for selection of the study and the information booklet was given to staff nurses. On the fifth day, the post-test was conducted with the same tool to assess the gain in knowledge on immediate treatment of angina pectoris patient. After the pilot study tool was found to be feasible, practicable and acceptable.

### **PROCEDURE FOR DATA COLLECTION**

In order to conduct the research study in the Hospital a written permission was obtained from the concerned authorities of the hospital. The data collection period extended from 04/03/2014 to 20/03/2014. The date, time and place were confirmed after discussing with the head of the department of cardiac unit, surgeon and in-charge medical officer of Bhandari Hospital and Research Centre, Indore.

Before the pre test the purpose of the study was explained and the confidentiality of the subjects was assured. Consent was obtained from staff nurses regarding participation in the study. A good rapport was maintained. On the first day, the pre-test data was obtained using the structured questionnaire. On the fifth day, post-test was conducted using the same tool to assess the knowledge of staff nurses regarding immediate treatment of angina pectoris patient.

### **PLANS FOR DATA ANALYSIS**

The process of organizing and synthesizing data so as to answer research question and test hypothesis is known as analysis.

Data was planned to be analyzed on the basis of objectives and hypotheses.

1. Demographic data was planned to analyze in terms of frequency and percentage. In this we find out the age, sex, professional education and clinical experience.
2. The knowledge scores of the staff nurses before and after information booklet was planned to analyze in terms of frequency, percentage, mean, median, standard deviation and in the form of pie and bar diagrams and graphs.
3. Chi-square test was planned to find out the association between the knowledge and the demographic data.
4. The significant difference between the mean pre test and post test knowledge scores was planned to determine by the paired 't' test

### **DATA ANALYSIS AND INTERPRETATION**

The type of research study and statistical analysis of the data should be decided on the basis of its proposed aims, objectives and the availability of resources, in addition to ethical considerations. This present chapter is comprises of the statistical analyses and interpretation of the data collect to assessed "The effectiveness of information booklet regarding knowledge related to immediate treatment of angina pectoris patient among staff nurses working in cardiac unit of the selected hospital of Indore."

Analysis and interpretation of the data were based on data collected through structured knowledge questionnaire and observation checklist for practices questionnaire which involves drawing of valid inferences and the translation of information collected during the course of the research study into interpretable, convenient and descriptive terms. The main motive of statistical analysis is to reduce data to an intelligible and interpretable form so that the relations of research problems can be studied and verified. For testing of hypothesis analyses of data were done by using both descriptive and inferential statistics. Descriptive statistics have used to present the features and

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characteristic of the studied subjects (staff nurses) while inferential statistics have used to draw the valid inferences regarding knowledge of early sign immediate treatment of angina pectoris patient among staff nurses working in cardiac unit of the selected hospital of Indore.”

### **OBJECTIVE OF THE STUDY:**

- (1) To assess the pre test knowledge of staff nurses regarding early sign immediate treatment of angina pectoris patient.
- (2) To evaluate the effectiveness of information booklet on knowledge regarding early sign immediate treatment of angina pectoris patient
- (3) To find out the association between pretest knowledge, score and the selected demographic variables.

### **ORGANIZATION AND ANALYSIS OF FINDINGS**

For statistical findings, the responses of frequencies on the basis of collected data were calculated and analyzed by using various statistical tools. The descriptive statistics like mean and standard deviation of knowledge and practice scores were identified. Prevalence of an outcome variable along with 95% confidence interval was calculated. ‘t-test’, the parametric test was used to compare the mean values of pre and post test scores obtained for knowledge on early sign immediate treatment of angina pectoris patient among staff nurses working in cardiac unit.

The Chi-Square test had developed by Pearson was used to observe the association of knowledge scores regarding early sign immediate treatment of angina pectoris patient among staff nurses working in cardiac unit with various selected demographic variables. Both pre and post test scores were used to identify the associations for knowledge scores with various selected demographic variables .The probability value  $p < 0.05$  and  $p < 0.02$  was considered as significant;  $p < 0.001$  and  $p < 0.004$  were considered as highly significant. The present chapter concerned with tabulated and statistically analyzed data.

### **The statistics analysis of data is organized and presented under the following headings**

Section – I : Frequency and percentage of socio-demographic variables

Section – II : To evaluate the effectiveness of information booklet in terms of gain in knowledge scores of staff nurses regarding early sign immediate treatment of angina pectoris patient

Section – III : To find out the association between pre test knowledge scores and the selected demographic variables

### **SECTION I: FREQUENCY AND PERCENTAGE OF SOCIO -DEMOGRAPHIC VARIABLES**

The present section-I comprises of selected demographic variables with their tabular and graphic presentation involves the interpretation of data in terms of frequency and percentage distribution. The present section-I also concerned with the data pertaining to the baseline information such as age, sex, professional qualification, clinical

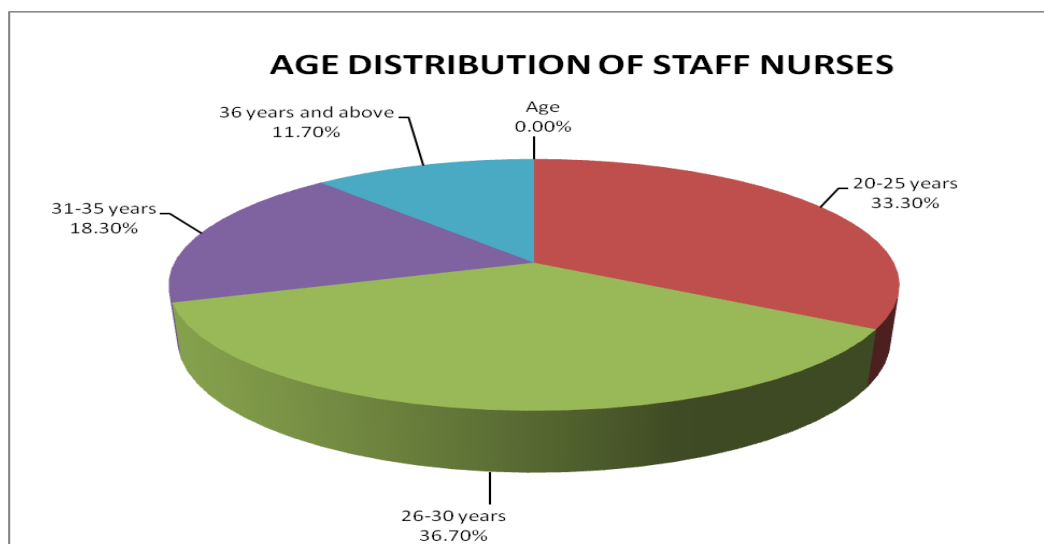
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experience in cardiac unit, sources of knowledge of early sign immediate treatment of angina pectoris patient of the staff nurses working in cardiac unit of selected hospitals of Indore.

**Table 4.1.1: Frequency and percentage distribution of studied subjects according to age**

Sr. No.	Particular Age	Frequency (No.)	Frequency (Percentage)
1.	20-25 years	20	33.3
2.	26-30 years	22	36.7
3.	31-35 years	11	18.3
4.	36 years and above	7	11.7

The information regarding age distribution of studied subject's (staff nurses) is identified in the present table 4.1.1. It is obtained that the 7 nurses (11.7%) were from 36 years and above age group, while 11 nurses (18.3%) from 31 – 35 years of age group. It is observed that the 22 nurses (36.7%) were from 26-35 years of age group. And it is also observed that 20 nurses (33.3%) were belongs the 20 – 25 years age group. Number of patient in age group 26-30 is highest as compare to other age group numbers.

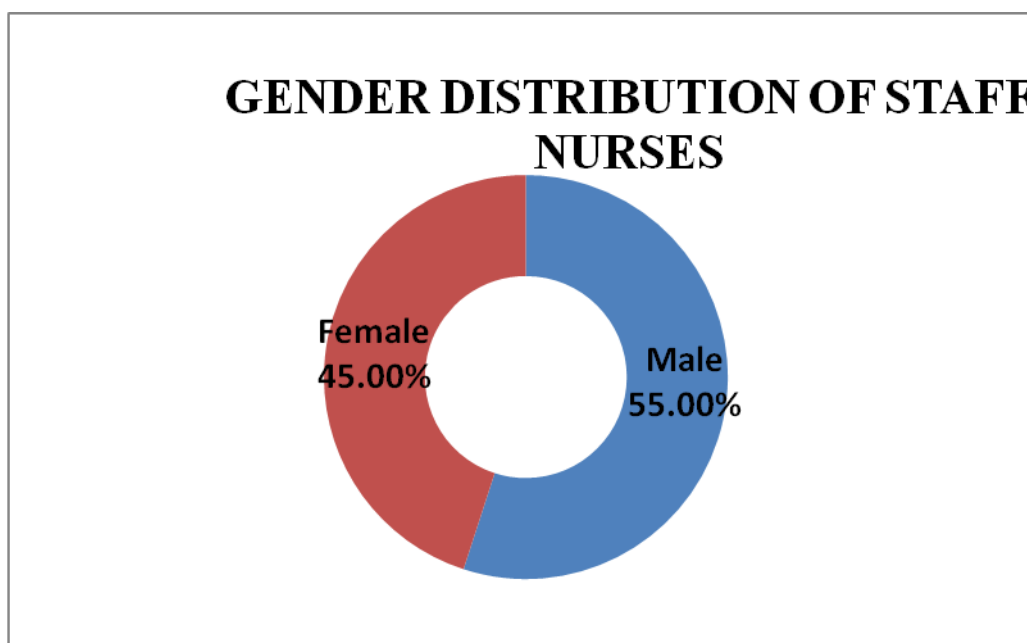


**Figure 4.1.1: Pie diagram depicting age distribution of studied sample**

**Table 4.1.2: Frequency and percentage distribution of gender of staff nurses**

Sr. No.	Particular Gender	Frequency (No.)	Frequency (Percentage)
1.	Male	33	55.0
2.	Female	27	45.0

The information regarding gender distribution of studied subject's (staff nurses) is identified in the present table 4.1.2. It is observed that the 33 nurses (55%) were male while 27 nurses (45%) were female. Number of patient in both male and female groups is almost equal and around 50% in both groups.



**Figure 4.1.2: Doughnut diagram depicting frequency and percentage distribution of gender of staff nurses**

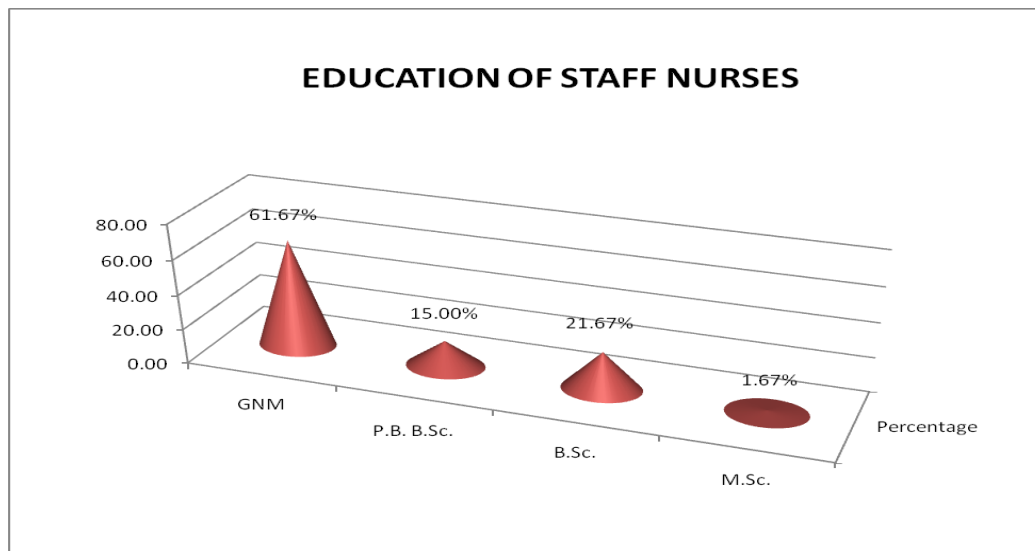
**Table 4.1.3: Distribution of professional qualification of selected samples in terms of frequency and percentage**

Sr. No.	Particular Educational Status	(Frequency) No.	(Frequency) Percentage
1	GNM	37	61.67
2	P.B. B.Sc.	9	15.00
3	B.Sc.	13	21.67
4	M.Sc.	1	1.67

Professional qualification acquired by the staff nurses is shown by table 4.1.3. It is observed that 37 nurses (61.67%) had acquired General Nursing Midwifery (GNM)

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course while one-fourth 9 staff nurses (15%) had completed Post Basic B. Sc. Nursing. It is also reported that 13 staff nurses (21.67%) who had completed their B. Sc. (Nursing). And only 1 staff nurse (1.67%) was found who completed M. Sc. (Nursing), is considered competent sample for the present study. The education status analysis seems that GNM has highest frequency with almost 62%. All other together contribute only 38%.



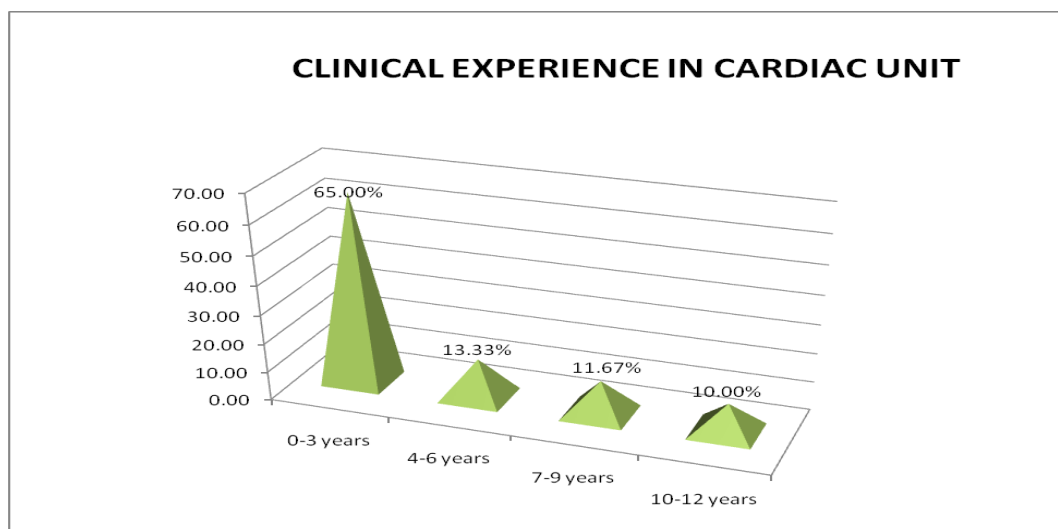
**Figure 4.1.3 Bar diagram depicting distribution of professional qualification**

**Table 4.1.4: Frequency and percentage distribution of staff nurses according to clinical experience in cardiac room**

Sr. No.	Particular EXPERIENCE	Frequency (No.)	Frequency (Percentage)
1	0-3 years	39	65.00
2	4-6 years	8	13.33
3	7-9 years	7	11.67
4	10-12 years	6	10.00

The table 4.1.4 deals with the clinical experience in cardiac unit which is in years of studied subject's. It is revealed from the study that most of the nurses (39, 65%) had 0-3 years of experience, 8 nurses has the 4 - 6 years of clinical experience in cardiac unit, 7 staff nurses 11.67% nurses had 7 - 9 years of clinical experience. It was also highlighted from the table that 6 staff nurse (10%) had a clinical experience of 10 - 12 years in cardiac unit. Level 0-3 Years of experience covers 2/3 rd or 65% of total number of patients. It is far ahead of other groups. The frequency is reducing with years of experience.





**Figure 4.1.4: Column diagram depicting distribution of clinical experience of staff nurses in cardiac unit**

Moreover, the major achievement of maximum gain in their respective knowledge of staff nurses regarding early sign immediate treatment is only due to information booklet of early sign immediate treatment. The post knowledge of staff nurses regarding early sign immediate treatment is adequate as responses were considered. It is reported that their knowledge related to early sign immediate treatment, myocardial infarction, and the phases of early sign immediate treatment of angina pectoris at more than satisfactory level and which is also correctly responded by approximately ninety percent (90.0%) of the population.

Moreover, it is also found that the knowledge about surgical management of angina pectoris patient, and the management of angina pain and emergency medical management of staff nurse working in cardiac unit was adequate.

All such subjects needed careful attention towards the knowledge of early sign immediate treatment of angina pectoris patient.

Furthermore, it is observed that after administration of information booklet of early sign immediate treatment, major part of selected population was benefited as their respective levels of knowledge related to early sign immediate treatment is considered which clearly influenced the effectiveness of information booklet in terms of significant gain in knowledge.

Furthermore, it is confirmed that gain in knowledge in staff nurses due to information booklet of early sign immediate treatment. The above statement and interpretation from all the tables of section-II confirm the second objective of the present study.

### **SECTION II: THE EFFECTIVENESS OF INFORMATION BOOKLET IN TERMS OF GAIN IN KNOWLEDGE SCORES OF STAFF NURSES REGARDING EARLY SIGN IMMEDIATE TREATMENT OF ANGINA PECTORIS PATIENT**

The section-III deals with Statistical analysis and interpretation of data in order to evaluate the effectiveness of information booklet in term of gain in knowledge of studied subject's i. e. staff nurses.



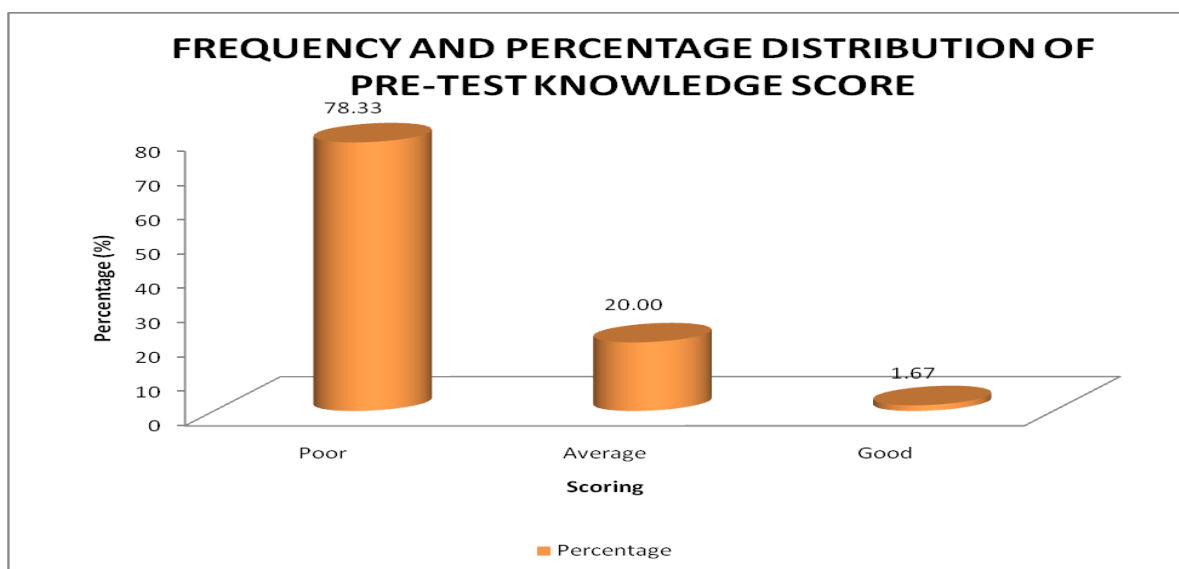
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The comparison between mean score of pre and post-test of knowledge and regarding early sign immediate treatment among staff nurses working in cardiac unit is also summarized in the present section-III.

**Table: 4.2.1 Frequency and Percentage distribution of pre-test knowledge score**

S. No.	Pretest knowledge score (N=60)	Frequency	Percentage
1	Poor (00-09)	47	78.33
2	Average (10-14)	12	20.00
3	Good (15-20)	1	1.67

The information on the existing knowledge of early sign immediate treatment among staff nurses working in cardiac unit of selected hospital of Indore are reported as the marks/category scored in pre-test by staff nurses is observed in table 4. 3.1 For determination of category, every correct answer carries one mark while every wrong answer carries zero mark. The distribution of marks such as 0 - 09 weighted for poor knowledge, 10 - 14 for average knowledge, and 15-20 for good knowledge has been assign to allocate a category.



**Figure: 4. 2.1. Bar diagram showing frequency and percentage distribution of pre-test knowledge score**

The existing pre knowledge regarding early sign immediate treatment is identified by pre-test score and it is reflected that small proportion of staff nurses (i.e.1.67%) were in **Good** (15-20) category which are aware about cardiac while a large proportion of staff nurse (78.33%) were in **Poor** (0-09) category and not aware about plotting of the early sign immediate treatment of angina pectoris patient which is needed careful attention towards the present problem. 12 staff nurse (45.0%) were observed in **Average** (10-14) category.

**THE COMPARISON BETWEEN MEAN SCORE OF PRE AND POST-TEST OF KNOWLEDGE**

**Table 4.2.2 - Mean ( $\bar{X}$ ) and Standard Deviation (s) of Knowledge Scores**

Variable	Test	Mean ( $\bar{X}$ )	S D (s)
Knowledge	Pre	8.27	4.40
	Post	23.18	3.69

Table 4.2.2 dealt with the mean and the standard deviation of knowledge scores regarding early sign immediate treatment among staff nurses working in cardiac unit of selected hospital of Indore. Knowledge in mean pre-test score was 8.27±4.40 while gain in knowledge regarding early sign immediate treatment among staff nurses had observed in post-test mean score and it was rose to 23.18±3.69.

The above mean difference of knowledge scores related to early sign immediate treatment is reflected that staff nurses gained knowledge due to information booklet.

Furthermore, it is reflected from the tables of section-III that there is a significant difference in means of knowledge of pre and post test which partially fulfil the objective of present study.

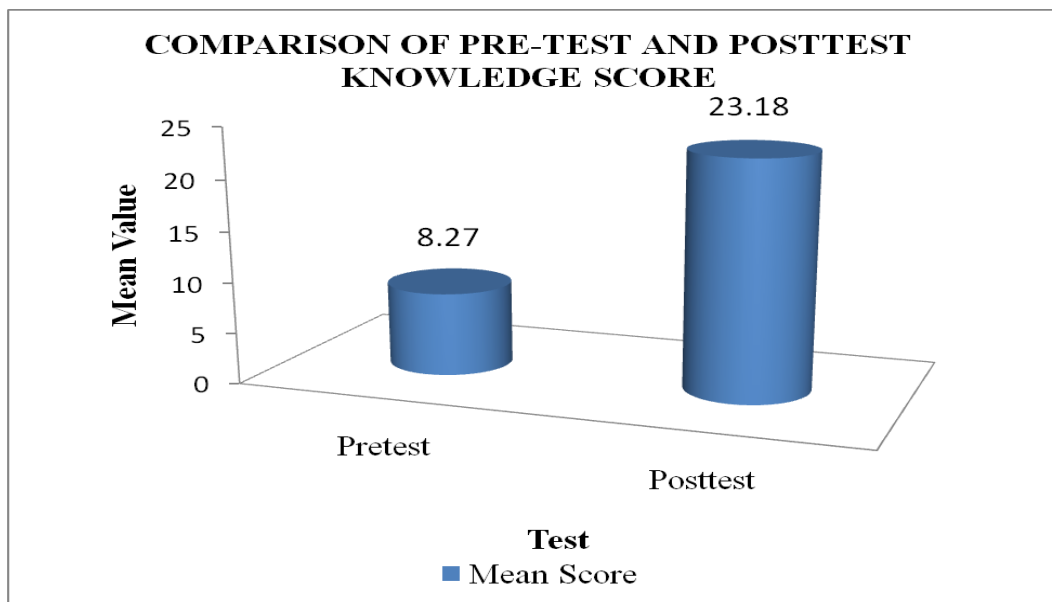
**Table 4.2.3 Comparison of knowledge scores between pre and post-test (Mean Score, Standard Error of Mean and Paired 't' Test)**

Knowledge Score	Mean	Standard Error of Mean	Degree of Freedom	't' value	Level of Significance
Pre-test	8.27±4.40	0.741	118	20.1254	< 0.0001*
Post-test	23.18±3.69				

\* Highly significant

The mean value of Post test is highly significantly more than Pre-test values. P<0.0001, the knowledge score has improved significantly.

The table 4.3.4 is revealing the comparison between pre-test and post-test knowledge scores. As knowledge of staff nurses is considered it is obtained by the table that observed probability value of student's t-test is 20.1254 for 118 degrees of freedom. The obtained probability value showed a very highly significant value (p<0.0001) which clearly influenced that there is no doubt in confirmation that there is a high significant difference between pre and post-test knowledge scores.



**Figure: 4.2.2 Comparison of knowledge scores between pre and post-test**

Moreover, the very high significant difference in pre and post knowledge test scores reported the remarkable gain which is due to information booklet of early sign immediate treatment on knowledge among staff nurses working in cardiac unit of selected hospital of Indore.

**SECTION III: ASSOCIATION BETWEEN KNOWLEDGE MEASURED IN PRE-TEST SCORES AND SELECTED DEMOGRAPHIC VARIABLES**

The present section-III deals with the association of selected demographic variables such as age, gender, professional qualification, and clinical experience of staff nurses working in cardiac unit of selected hospital of Indore.

The categorical assessment of the responses of pre and post test scores from selected staff nurses for the levels of knowledge regarding early sign immediate treatment is also summarized in the present section-III.

**ASSOCIATION BETWEEN KNOWLEDGE PRE TEST SCORE WITH SELECTED DEMOGRAPHIC VARIABLES**

**Table 4.3.1: Association of age with levels of knowledge identified in pre test scores**

Sr. No.	Particular AGE	Knowledge Score			Total	Degree of Freedom
		Poor	Avg.	Good		
1	20-25 years	18	2	0	20	6
2	26-30 years	21	1	0	22	
3	31-35 years	4	6	1	11	
4	36 years and above	4	3	0	7	
<b>χ<sup>2</sup> value</b>		<b>χ<sup>2</sup>=20.52, P&lt;0.001 Highly significant</b>				

The present table 4.3.1 is showing association of age with levels of knowledge reflected in pre test scores regarding early sign immediate treatment of angina pectoris patient

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among staff nurses working in cardiac unit of selected hospitals. The observed p-value of Chi-Square test is 20.52 for 6 degrees of freedom which showed a significant value ( $p < 0.001$ ). Hence, it is obtained that there is a significant association between age and levels of knowledge in pre test scores regarding early sign immediate treatment of angina pectoris patient.

Moreover, it is reflected that age is a factor which is partially influenced with knowledge shown in pre test scores regarding early sign immediate treatment of angina pectoris patient among staff nurses working in cardiac unit of selected hospital of Indore.

**Table 4.3.2: Association of professional education with levels of knowledge identified in pre test scores**

Sr. No.	Particular EDUCATIONAL STATUS	Knowledge Score			Total	Degree of Freedom
		Poor	Avg.	Good		
1	GNM	32	4	1	37	6
2	P.B. B.Sc.	7	2	0	9	
3	B.Sc.	8	5	0	13	
4	M.Sc.	0	1	0	1	
<b><math>\chi^2</math> value</b>		$\chi^2 = 9.19, P > .05$ Non significant				

The information on the association of professional education with knowledge identified in pre test scores about early sign immediate treatment of angina pectoris patient of studied subject reveals by table 4.3.2 and it is obtained that the probability value of Chi-Square test is 9.19 for 6 degrees of freedom which showed a significant value ( $P > 0.05$ ). Therefore, it is concluded that there no significant association between professional education of the studied subject and pre-test scores.

Moreover, it is reflected that professional education acquired by the studied subject is the factor which is partially influenced the existing knowledge regarding the present problem of early sign immediate treatment of angina pectoris patient among staff nurses working in cardiac unit.

**Table 4.3.3: Association of clinical experience in cardiac unit with levels of knowledge identified in pre test scores**

Sr. No.	Particular Experience	Knowledge Score			Total	Degree of Freedom
		Poor	Avg.	Good		
1	0-3 years	34	4	1	39	6
2	4-6 years	6	2	0	8	
3	7-9 years	5	2	0	7	
4	10-12 years	2	4	0	6	
<b><math>\chi^2</math> value</b>		$\chi^2 = 11.27, P > .05$ Non significant				

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The information on association of clinical experience in cardiac unit (in years) with pre-test scores related to knowledge of early sign immediate treatment of angina pectoris patient is depicting in table 4.3.3. The probability value of Chi-Square test is 11.27 for 6 degrees of freedom which showed a non-significant value ( $P>0.05$ ). Therefore, it is reported that there is no significant association between clinical experience in cardiac unit and pre-test scores related to knowledge of early sign immediate treatment of angina pectoris patient.

Moreover, it is observed that the clinical experience in cardiac unit is a factor which is does not influence the knowledge of early sign immediate treatment of angina pectoris patient among staff nurses working in cardiac unit.

The information on association of gender in cardiac unit with pre-test scores related to knowledge of early sign immediate treatment of angina pectoris patient is presented in table 4.3.3. The probability value of Chi-Square test is 2.5 for 2 degrees of freedom which showed a non-significant value ( $P>0.05$ ). Therefore, it is reported that there is no significant association between gender of staff nurses in cardiac unit and pre-test scores related to knowledge of early sign immediate treatment of angina pectoris patient.

**Table 4.3.4: Association of gender in cardiac unit with levels of knowledge identified in pre test scores**

Sr. No	Particular GENDER	Knowledge Score			Total	Degree of freedom
		Poor	Avg.	Good		
1	Male	28	5	0	33	2
2	Female	19	7	1	27	
$\chi^2$ value		$\chi^2=2.5, P>0.05$ Non significant				

Moreover, it is observed that the gender is a factor which is does not influence the knowledge of early sign immediate treatment of angina pectoris patient among staff nurses working in cardiac unit.

Furthermore, the analysis and interpretations of collected data indicated rejection of null hypothesis and acceptance of alternative hypothesis i. e. there will be significant difference between the pre-test knowledge score after administration of information booklet in terms of gain in knowledge regarding early sign immediate treatment of angina pectoris patient among staff nurses working in cardiac unit of selected hospital of Indore at 0.5 level.

Moreover, it is highlighted that using of early sign immediate treatment of angina pectoris patient by selected subjects is partially influenced with practices of early sign immediate treatment of angina pectoris patient after administration of information booklet which shown in post test scores among staff nurses working in cardiac unit.

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Hence, it is concluded from all the above tables of section-IV and drawn inferences that there is a significant association between pre test scores of knowledge related to early sign immediate treatment of angina pectoris patient with selected demographic variables which confirms the fifth objective of present study.

### **SUMMARY**

This chapter dealt with the analysis and interpretation of findings of the study. The analysis was organised and presented under various sections. Data was analysed by applying descriptive and inferential statistics.

### **MAJOR FINDINGS**

1. It is observed that 11.7% nurses were from 36 years and above age group, while 18.3% nurses from 31 – 35 years of age group. Number of patient in age group 26-30 is highest as compare to other age group numbers i.e. 36.7%.
2. It was found that the 55% nurses were male while 45% nurses were female.
3. The education status analysis seems that GNM has highest frequency with almost 62% while rest all together contribute only 38%. M. Sc. (Nursing), is considered competent sample for the present study.
4. Level 0-3 Years of experience covers 2/3 rd of total number of patients. The number of staff nurses is reducing with years of experience.
5. The mean post test knowledge score 23.18 was higher than mean pre test knowledge score (8.27). The computed 't' value is 20.1254 for knowledge test was more at the level of  $P < 0.0001$ .

### **DISCUSSION OF BASELINE DATA OF THE STAFF NURSES:**

It is obtained that the 7 nurses (11.7%) were from 36 years and above age group, while 11 nurses (18.3%) from 31 – 35 years of age group. It is observed that the 22 nurses (36.7%) were from 26-35 years of age group. And it is also observed that 20 nurses (33.3%) were belongs the 20 – 25 years age group. Number of patient in age group 26-30 is highest as compare to other age group numbers.

The gender distribution of studied subject's (staff nurses) is identified it is observed that the 33 nurses (55%) were male while 27 nurses (45%) were female. Number of patient in both male and female groups is almost equal and around 50% in both groups.

It is observed that 37 nurses (61.67%) had acquired General Nursing Midwifery (GNM) course while one-fourth 9 staff nurses (15%) had completed Post Basic B. Sc. Nursing. It is also reported that 13 staff nurses (21.67%) who had completed their B. Sc. (Nursing). And only 1 staff nurse (1.67%) was found who completed M. Sc. (Nursing), is considered competent sample for the present study. The education status analysis seems that GNM has highest frequency with almost 62%. All other together contribute only 38%.

It is revealed from the study that most of the nurses (39, 65%) had 0-3 years of experience, 8 nurses has the 4 - 6 years of clinical experience in cardiac unit, 7 staff nurses 11.67% nurses had 7 – 9 years of clinical experience. It was also highlighted

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from the table that 6 staff nurse (10%) had a clinical experience of 10 – 12 years in cardiac unit.

Level 0-3 Years of experience covers 2/3 rd or 65% of total number of patients. It is far ahead of other groups. The frequency is reducing with years of experience.

**Discussion about the pre-test knowledge**

The information on the existing knowledge of immediate treatment of angina pectoris patient among staff nurses working in cardiac unit of selected hospital of Indore are reported as the marks/category scored in pre-test by staff nurses. For determination of category, every correct answer carries one mark while every wrong answer carries zero mark. The distribution of marks such as 0 - 09 weighted for poor knowledge, 10 - 14 for average knowledge, and 15-20 for good knowledge has been assign to allocate a category.

The existing pre knowledge regarding immediate treatment of angina pectoris patient is identified by pre-test score and it is reflected that small proportion of staff nurses (i.e.1.67%) were in **Good** (15-20) category which are aware about cardiac while a large proportion of staff nurse (78.33%) were in **Poor** (00-09) category and not aware about plotting of the immediate treatment of angina pectoris patient which is needed careful attention towards the present problem. 12 staff nurse (45.0%) were observed in **Average** (10-14) category.

**Discussion of effectiveness of information booklet:**

This study shows that there is a significant increase in knowledge of staff nurses after giving the information booklet. The t-value is 20.1254 for knowledge test ( $P < 0.0001$ ).

In this study hypothesis **RH<sub>1</sub>** made by the investigator is accepted that there is a significant increase in level of knowledge after implementation of information booklet regarding the use of immediate treatment of angina pectoris patient among the staff nurses working in cardiac unit who participated in study.

**Discussion of association between pre tests score and selected demographic variable.**

The study shows that there is either has or has no significant association between age of staff nurses, professional education, clinical experience in cardiac unit, gender of staff nurses working in cardiac unit.

There was a significant  $\chi^2_6 = 20.52$  ( $P < 0.001$ ) association between age of staff nurses and their knowledge on immediate treatment of angina pectoris patient.

There was very less significant  $\chi^2_4 = 9.19$  ( $P > 0.05$ ) association of professional education with levels of knowledge identified in pre test scores.

There is also very less significant  $\chi^2_6 = 11.27$  ( $P > 0.05$ ) association of clinical experience in cardiac unit with levels of knowledge identified in pre test scores.



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There was a very less significant  $\chi^2 = 2.5$  ( $P > 0.05$ ) association between using immediate treatment of angina pectoris patient and levels of knowledge in pre test scores regarding immediate treatment of angina pectoris patient

### **CONCLUSION**

After the detailed analysis, this study leads to the following conclusion: The existing pre-test knowledge regarding early signs immediate treatment of angina pectoris patient is identified by pre-test score and it is reflected that the small proportion of staff nurses (i.e. 1.67%) were in **Good** (21-30) category which are aware about cardiac while a large proportion of staff nurse (78.33%) were in **Poor** (0-10) category and not aware about plotting of the cardiac immediate treatment of angina pectoris patient which needed careful attention towards the present problem. 12 staff nurse (45.0%) were observed in **Average** (11-20) category.

The observations reflect the need of awareness about immediate treatment of angina pectoris patient.

This study shows that there is a significant increase in knowledge of staff nurses after giving the information booklet. The t-value is 20.1254 for knowledge ( $p < 0.0001$ ). There was significant association between knowledge on immediate treatment of angina pectoris patient and age, professional education, clinical experience in cardiac unit, and the gender of staff nurses on immediate treatment of angina pectoris patient working in cardiac unit.

### **IMPLICATIONS**

The findings of the present study have implications in the field of nursing practice, nursing education, nursing research and nursing administration.

#### **Nursing practice**

The nurses working in hospital setting both in inpatient and outpatient services play an important role in educating the staff nurses of cardiac unit about the immediate treatment of angina pectoris patient. The nursing education group has the responsibility to provide necessary information and current practices regarding immediate treatment of angina pectoris patient. Further in-service education programs can help the nursing staffs of immediate treatment of angina pectoris patient to take the standard precautions in health care settings to enhance the immediate treatment. Copies can be kept in the cardiac unit to enlighten the nurses and it can also be given to them for learning, as it is an economical way of teaching in terms of time and resource the nurses can participate in various workshop and conferences.

Nurses need to be equipped with advanced knowledge to become involved in providing the necessary services to the patients in cardiac unit. In order to motivate and encourage the Staff nurses of wards the nursing educator and hospital director to appraise the staffs for their efficiency and devotion for patients. Nurses through their own training acquire a positive attitude and should equip themselves with a sound based of knowledge, which they can use in clinical practice.

### **Nursing education**

With changing health care trends nursing education must emphasize on prevention and then cure and thus, empowering the prospective nurses to be well prepared to assist client for soon recovery.

The basic training of nurses in India includes immediate treatment of angina pectoris patient should update as part of the course, in cardiac nursing. Theoretically the focus should be on prevention cardiac disorder and enhancing the immediate treatment. However specialty oriented courses are offered at the master level. Training programs for nurses however, need to be improved professional knowledge to provide quality care to the patient.

### **Nursing administration**

In the event of ever changing disease manifestations, knowledge explosion, technological and ever-growing challenges in nursing, the administration has a responsibility to provide nurses with substantial continuing education opportunities. Necessary administrative support should be provided for the development of such educational materials, nursing personnel should be motivated to devote their time for development educational material such as posters pamphlets, planned teaching, and booklets on immediate treatment of angina pectoris patient. There is a genuine need for continuing education of nurses, particularly for those who are working in hospital departments dealing with the mothers in cardiac unit. In India at present, short-term education courses are conducted at times for practicing nurses.

### **Nursing research**

Though nursing research in cardiothoracic nursing field is still at the growing stage in India, an increased number of studies related to immediate treatment of angina pectoris patient are being taken up by the nurses at master's and post master's level in various Indian settings.

There is a need for extensive research in this area so that strategies can be developed for educating the staff nurses those who are working in cardiac unit about immediate treatment of angina pectoris patient. The nurse researcher should be able to conduct the research at various aspects of awareness and prevention of infection so as to generate more scientific data. Findings of this study will provide the baseline data about immediate treatment of angina pectoris patient and nursing care strategies adopted to educate the staff nurses of cardiac unit about the immediate treatment of angina pectoris patient and it can be used for further the research.

### **LIMITATIONS**

1. The present study is limited to only one pre-test post test group; no control group is adopted for the study.
2. The study is also limited to a small sample in a different hospitals hence the findings of the study cannot be generalized.
3. The structured knowledge questionnaire was developed as no standardized tool was available.

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4. The study is limited to staff nurses.
5. Limited time available for data collection

**RECOMMENDATIONS**

On the basis of the findings of the study, it is recommended that:

1. Studies may be conducted to evaluate the effectiveness of the information booklet regarding immediate treatment of angina pectoris patient.
2. A similar study may be repeated on a larger sample covering all staff nurses in hospital.
3. An evaluator study to assess the knowledge of staff nurses on immediate treatment of angina pectoris patient
4. A study may be undertaken on staff nurses of different state to evaluate the effectiveness of protocol on immediate treatment of angina pectoris patient.

**SUMMARY**

This chapter dealt with the nursing implications, limitations, suggestions and recommendations drawn from the result of the study.

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