

**“A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON RISK FACTORS OF CORONARY ARTERY DISEASE (CAD) TO CREATE KNOWLEDGE AMONG ADMINISTRATIVE EMPLOYEES IN SELECTED COLLEGES OF JAIPUR (RAJASTHAN)”**

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**ABSTRACT**

**Background of Study:-**The incidence of cardiovascular diseases (CVD) is on the rise in modern world. Coronary Artery Disease (CAD) is a leading cause of cardio vascular mortality worldwide with > 4.5 million deaths occurring in developing world. Despite a recent decline in developed countries, both CAD mortality and prevalence of CAD risk factors continue to rise rapidly in developing countries<sup>1</sup>.

**Material & Methods:** Research approach, research design, setting of the study, population, sample, sampling technique, ethical clearance, development of tool, method of data collection, development of the lesson, evaluation of the effectiveness of PTP and plan for data analysis and presentations.

**Result:** Data interpretation of data through descriptive and inferential statistics. To determine the effectiveness of the planned teaching programme, 't' test was computed and was found to be significant in experimental group only. Chi-square tests were computed in order to find out the association between the pre-test knowledge scores and selected demographic variables, which were not found to be significant for both groups.

**Conclusion:** Most of the sample (experimental group-80%, control group-86.7%) had moderate knowledge regarding risk factors of CAD in the pre-test.

**Keywords:** Effectiveness, Planned Teaching Programme, Risk Factor, Coronary Artery Disease(CAD)

**INTRODUCTION:**

CAD was the leading cause of morbidity and the fifth leading cause of mortality in the world. There are several factors contributing to its steady increase the common one is, industrialization leading to urbanization general improvement in economic status and its collective effects on peoples life style among men and women and across all ethical and ethnic groups, CAD is the world's leading killer<sup>2</sup>.

The following facts given by WHO (2001) show the extent of the disease:

- In 1999 CVD contributed to a third of global death
- In 1999, lower and middle income countries contributed to 78% of CVD deaths
- By 2010 CVD is estimated to be the leading cause of death in developing countries

The goal of WHO global strategy is to effectively control CVD risk factors to reduce the burden of the fast growing cardiovascular epidemic particularly in developing countries<sup>3</sup>.

The common cardiovascular diseases that cause increased burden all over the world are coronary artery disease (CAD). Coronary artery disease is one of the top ten causes of mortality with 6.1 million deaths per year<sup>4</sup>.

**NEED FOR THE STUDY**

Indians have the highest rates of CAD all over the world. It is 2 to 4 time higher at all ages and 5 to 10 time higher in those below 40 years of age. The excess burden of CAD in Indians is due to combination of nature (Genetic predisposition) and decreased physical activity and increased consumption of calories and metabolic abnormalities appears to have a synergistic effect on the development of CAD in genetically predisposed individuals<sup>6</sup>.

**OBJECTIVES**

1. Assess the knowledge regarding risk factors of CAD among administrative employees
2. Find the effectiveness of planned teaching programme between pre-test & post-test knowledge regarding risk factors of CAD.

3. Compare the effectiveness of planned teaching programme between the experimental and control group on knowledge of risk factors of CAD.

Find the association

### **MATERIAL & METHODS:**

**Research Approach:-** In order to achieve the objectives of the study an evaluative approach was found to be appropriate and selected for the study.

**Research design :-** The research design is the overall plan for obtaining answers to the questions being studied and for handling some of the difficulties encountered during the research process.

<b>GROUP</b>	<b>Pre-test</b>	<b>Intervention</b>	<b>Post-test</b>
Experimental	01	PTP X	02
Control	01	-	02

### **KEY**

01 ----- Pre Test

02 ----- Post Test

X ----- Intervention

PTP ----- Planned Teaching Programme

Schematic representation of the design for the study

### **Variables**

Variables are the qualities, properties or characteristics of person, things or situations that change or vary.

**Dependent variable:** A dependent variable is the response or the outcome that the researcher wants to explain or predict. In the present study the knowledge about risk factors of CAD is dependent variables.

**Independent variable:** An independent variable is a stimulus or activity that is manipulated or varied by the researcher to create on the dependent variable. In the present study the planned teaching programme about risk factors of CAD is the independent variable.

### **Setting of Study**

The study was conducted in the selected colleges of Jaipur(Raj.) district.

### **Population.**

The population for study consists of administrative employees from selected colleges of Jaipur (Raj.) district.

### **sample**

The samples for this study consisted of 60 administrative employees (30 experimental and 30 control groups) from selected colleges of Jaipur (Raj.) district.

### **Sampling technique**

Sampling is a process of selecting subjects who are representative of the population being studied.

### **Data collection instruments**

A knowledge questionnaire were developed to assess the knowledge about risk factors of coronary artery disease.

### **Development of the tool**

Data collection tools are the procedures and instruments used by the researcher to observe or measure the key variables in the research problem. The present study aimed to evaluate the effect of planned teaching programme on the knowledge regarding the risk factors of CAD; so structured knowledge questionnaire developed as the tool to collect data.

## Description of the final tool

Structured knowledge questionnaire will be used to assess the knowledge of administrative employees regarding the risk factors of CAD.

### Part 1: Demographic characteristics

Background of the subjects which included six items such as code no., age, gender, marital status, religion, dietary pattern, educational status etc.

### Part 2: Knowledge questionnaire

This part consisted 40 items to assess the knowledge of administrative employees regarding risk factors of CAD. Each multiple choice question consists of four options with one correct response. Each item had a score of 1 for the correct answer and 0 for the wrong answer. Maximum score is 40 and minimum score is 0.

### Development of Planned Teaching Programme

Planned Teaching programme is a guide for the teacher because it helps to cover the topics comprehensively with proper sequence and points and without missing anything.

The steps to prepare the teaching plan were:

1. Framing the outline of the teaching plan.
2. Framing the outline of the content.
3. Deciding the method of instruction and audio-visual aids.
4. Evaluations of teaching plan.

## RESULTS:

### Organisation of study findings

The data were coded tabulated, analyzed, and interpreted using descriptive and inferential statistics. The data were presented under the following headings:

Section I: Sample characteristics of the administrative employees.

Section II: Evaluation of the planned teaching programme in terms of gain in knowledge score.

Section III: Test to find out the difference between the means of pre-test and post-test knowledge score.

Section IV: Finding the effectiveness between experimental and control group.

Section V: Association between pre-test level of knowledge and demographic variables.

### Section I: DISTRIBUTION OF PARTICIPANTS ON SELECTED DEMOGRAPHIC CHARACTERISTICS

Frequency and percentage distribution of administrative employees on the basis of their demographic data

Variable	Experimental group		Control group		Total	
	f	%	f	%	f	%
<b>Age</b>						
a. 20-30 years	16	53.3	5	16.7	21	35.0
b. 30-40 years	4	13.3	15	50.0	19	31.7
c. 40-50 years	9	30.0	5	16.7	14	23.3
d. > 50 years	1	3.3	5	16.7	6	10.0
<b>Gender</b>						
a. Male	11	36.7	17	56.7	28	46.7

b. Female	19	63.3	13	43.3	32	53.3
<b>Marital status</b>						
a. Single	14	46.7	7	23.3	21	35.0
b. Married	16	53.3	22	73.3	38	63.3
c. Widower	-	-	1	3.3	1	1.7
d. Divorced	-	-	-	-	-	-
<b>Religion</b>						
a. Hindu	24	80.0	22	73.3	46	76.7
b. Muslim	6	20.0	6	20.0	12	20.0
c. Christian	-	-	1	3.3	1	1.7
d. Any other	-	-	1	3.3	1	1.7
<b>Dietary Pattern</b>						
a. Vegetarian	14	46.7	14	46.7	28	46.7
b. Non-vegetarian	16	53.3	16	53.3	32	53.3
<b>Educational qualification</b>						
a. Post Graduate in Administration	6	20	12	40	18	30
b. Post Graduate in general	6	20	6	20	12	20
c. Graduate	12	40	6	20	18	30
d. Diploma in administration	6	20	6	20	12	20

## Section II: EVALUATION OF PLANNED TEACHING PROGRAMME IN TERMS OF GAIN IN KNOWLEDGE SCORES

Frequency and percentage distribution of pre-test knowledge scores of subjects

N = 60

Level of knowledge	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Low	3	10.0	2	6.7
Moderate	24	80.0	26	86.7
High	3	10.0	2	6.7

Mean, median and standard deviation of pre-test and post-test knowledge score of experimental and control group

N = 60

Knowledge score	Mean		Median		SD	
	Exp.	Control	Exp.	Control	Exp.	Control
Pre test	28.50	28.80	29	29	4.092	3.537
Post-test	35.90	29.17	36	28	2.429	3.485

Area-wise pre-test and post-test knowledge scores of exp group and control group

N = 60

Area	Max. Score	Pre-test				Post-test			
		Exp. group		Control group		Exp. group		Control group	
		Mean score	Mean % score	Mean score	Mean % score	Mean score	Mean % score	Mean score	Mean % score
Area 1	7	4.43	63.30	4.63	66.14	6.07	86.71	4.73	67.57
Area 2	3	2.37	79.00	2.00	66.66	2.73	91.00	2.10	70.00
Area 3	30	22.03	75.96	22.27	79.53	27.10	87.41	22.30	79.64
Total	40	28.50	77.02	28.80	80.08	35.90	87.56	29.17	81.02

Key: Area 1: Anatomy and physiology of heart

Area 2: Non-modifiable risk factors of coronary arterial disease

Area 3: Modifiable risk factors of coronary arterial disease

Actual and modified knowledge gain scores in different areas of risk factors of CAD

N = 60

Area	Maximum Score	Mean pre-test score (%)		Mean Post-test score (%)		Actual gain		Modified gain score	
		Exp group	Control group	Exp group	Control group	Exp group	Control group	Exp group	Control group
Area 1	7	63.30	66.14	86.71	67.57	23.41	1.43	0.630	0.040
Area 2	3	79.00	66.66	91.00	70.00	12.00	3.34	0.570	0.100
Area 3	30	75.96	79.53	87.41	79.64	11.45	0.11	0.470	0.005
Total	40	77.02	80.08	87.56	81.02	10.54	0.94	0.450	0.050

### Section III: Test to find out the difference between the means of pre-test and post-test knowledge score

Mean, mean difference and 't' value of pre-test and post-test knowledge score

N = 60

Group	Test	Mean	Mean difference	't' value
Experimental	Pre-test	28.50	7.40	13.713
	Post-test	35.90		
Control	Pre-test	28.80	0.37	1.114
	Post-test	29.17		

$t_{29}=2.01, P<0.05$

Area wise significance of difference

Mean, mean difference and 't' value of pre-test and post-test knowledge score

N = 60

Area	Mean knowledge score				Mean difference		't' value	
	Pre-test		Post-test					
	Exp group	Control group	Exp group	Control group	Exp group	Control group	Exp group	Control group
Area 1	4.43	4.63	6.07	4.73	1.64	0.10	7.527	1.114
Area 2	2.37	2.00	2.73	2.10	0.36	0.10	3.003	1.796
Area 3	22.03	22.27	27.10	22.30	5.07	0.03	10.467	1.114
Total	28.50	28.80	35.90	29.17	7.40	0.37	13.717	1.114

$t_{29}=2.01, P<0.05$

Section IV: Finding out the effectiveness between the experimental and control group

Mean difference, SD of difference and 't' value of experimental and control group

N = 60

Group	Mean of difference	Standard deviation of difference	t value
Experimental group	7.4000	2.954	12.179
Control group	0.3667	1.129	

Section V: Association between pre-test level of knowledge score and the demographic variables

Chi-square value showing the association between pre-test knowledge score and demographic variables

N = 60

Variable	Knowledge score		$\chi^2$	df
	$\leq$ median	$>$ median		
Age				
a. 20-30 years	9	12	1.267	2
b. 31-40 years	8	11		
c. 41-50 years	8	6		
d. $>$ 50 years	2	4		

Gender				
a. Male	16	12	3.128	1
b. Female	11	21		
Marital status				
a. Single	10	11	0.645	1
b. Married	17	21		
c. Widower	-	1		
d. Divorced	-	-		
Religion				
a. Hindu	19	27	1.080	1
b. Muslim	7	5		
c. Christian	1	-		
d. Any other	-	1		
Dietary patterns				
a. Vegetarian	11	17	0.693	1
b. Non-vegetarian	16	16		
Educational qualification				
a. PG in administration	1	1	2.690	1
b. PG in general	9	5		
c. Graduate	16	24		
d. Diploma in administration	1	3		
a. PG in administration	1	1	2.690	1
b. PG in general	9	5		
c. Graduate	16	24		
d. Diploma in administration	1	3		

**DISCUSSION:** discussion of the findings of the study. The findings of the study were discussed by comparing them with the findings of similar studies conducted by other researchers in the past.

**CONCLUSION:** The following conclusions were drawn on the basis of the findings of the study:

- Most of the sample (experimental group-80%, control group-86.7%) had moderate knowledge regarding risk factors of CAD in the pre-test. Whereas the mean percentage post-test scores and the modified gain scores in all areas were found to be high in experimental group only.
- There was significant difference between pre-test post-test knowledge scores in experimental group only ( $t_{29}=13.717, p<0.05$ ).
- The effectiveness of planned teaching programme between experimental group and control group ( $t_{58}=12.179, p<0.05$ ) was highly significant.
- There was no significant association between pre-test knowledge and selected demographic variables.

**SUMMARY:-** deals with the discussion, conclusion, implications various nursing fields, limitation of the findings, recommendations and a brief description of the study and the major findings.

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