

# Assessment of the Effectiveness of Planned Teaching on Knowledge Regarding Cardiac Catheterization among Staff Nurses Working in Selected Hospitals

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## Abstract

This study is conducted to assess the effectiveness of planned teaching on knowledge regarding cardiac catheterization among staff nurses of selected hospitals of vidharbha region in, Maharashtra.

The study objective were. (1) To assess the existing knowledge regarding cardiac catheterization among staff nurses. (2) To assess the effectiveness of planned teaching on knowledge regarding cardiac catheterization among staff nurses.

With an evaluatory approach, the researcher conducted plot study with pre-experimental one group pretest post-test design in a selected hospital of Maharashtra among 5 subjects who gave consent for the study and were selected through Non probability convenient sampling technique. The base measure was structured knowledge questionnaire validated by experts was used to assess the knowledge of subjects regarding cardiac catheterization.

The researcher found the study feasible and the tool reliable.

Main study was conducted in a similar setting other than one used in pilot study. After acquiring the necessary consent the main study was conducted among 40 subjects of selected hospitals of Vidharbha region, Maharashtra. The findings were.

Sample characteristic revealed that majority of subjects were having the experience of 1-5 year (92.5%). With regards to professional qualification 55% the subjects posses Basic B.Sc. nursing, 37.5% posses General Nursing and Midwifery and only 7.5% were post basic B.Sc. nursing.

**Keywords:** Coronary artery disease (CAD), cardiac catheterization, knowledge of staff nurses (care after cardiac catheterization).

## Introduction

1. Coronary artery disease is an emerging health problem in India. it has become a public health problem in the urban population of India. In India

in the past 5 decades, rates of CAD among urban populations have risen from 4% to 11% . The WHO estimation that 60%of the worlds cardiac patient will be Indian by 2010. Recent studies reveal that CAD is prevalent in 139/1000 and 30/1000 respectively in north India. Males are found to be more prone to CAD than females.

2. In the united states, more than 1.5 million people have a heart attack each year. About 400,000 to 500,000 of them die, half before they reach hospital.

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3. Across India, there is increase in the number of diagnostic and interventional coronary procedure, interventional coronary procedures, interventional centres offering percutaneous coronary interventional, and interventional cardiologist. in year 2011 we used a more comprehensive perform that only captured the number and types of interventions, but also tried to evaluate the prevailing practice pattern in PCI. such questions were related to primary PCI, admission and discharge practices following PCI, preferable hardware, ballons and stents, and outcomes data.
4. A representative of NIC was sent for data collection and the number of centres submitting the data was maximized. out of the 625 active catheterization laboratory centres, data submitted by 332 centres. A majority of high volume centres, were included in the analysis and thus, the captured data represent nearly 75-80% of total data. the results were compared with the data obtained by NIC in the previous year 2008-2011. a total of 152332 PCI procedures were performed in 332 centers. There is a 28.8% growth as compared to the data available for the previous year. The 332 centers had 471 cardiac catheterization laboratories with an average of 1.42 labs per centres. Twenty centers reported to have catheterization laboratories and 80 centres had dedicated catheterization laboratories for specific intervention. Facilities for intravascular ultrasound, rotablation and fractional flow reserve measurement were reported to be available in 75 and 117 centres respectively.

### Background of the Study

Cardiac catheterization can accomplish two main purposes based on which the classification being made. The prime one is diagnostic cardiac catheterization which includes, coronary cardiac biopsy, right heart catheterization, ventriculography and intracoronary ultrasound. The latter the interventional cardiac catheterization which includes angioplasty, cardiac stenting, mitral valvuplasty, patent foramen ovale repair or atrioseptal defect repair. very often the two goals are accomplished at the same time. As the cardiologists all over the world are engaged in discovering new diagnostic and therapeutic method for cardiovascular diseases, the cardiac catheterization position as the key procedure with diagnostic as well as therapeutic properties.

**Statement of the Problem:** Assessment of the effectiveness of planned teaching on knowledge regarding cardiac catheterization among staff nurses working in selected hospitals.

#### Objectives of the study:

To assess the existing knowledge regarding cardiac catheterization among staff nurses. To assess the effectiveness of planned teaching on knowledge regarding cardiac catheterization among staff nurses.

**Research Design:** One group pre-test post-test design has been used to find the effectiveness of planned teaching on care of patient with cardiac catheterization among staff nurses.

**Research methodology:** In this study descriptive evaluation approach with one group pre test and post test design adopted for the study. totally 40 staff nurses were selected through convenient sampling method in selected hospitals vidarbha region, Maharashtra . before conducting study the prior permission taken higher authorities and subjects.

**Development of the tool:** Based on the objective of the study, a structured knowledge questionnaire was prepared to evaluate the knowledge of staff nurses before and after treatment.

Closed end multiple choice based on the objective structured knowledge questionnaire was prepared to evaluate the effectiveness of knowledge regarding cardiac catheterization among staff nurses.

Before the main study, pilot study was conducted among 5 staff nurses 6/12/2015 to 20/12/2015 the result showed that the value was 0.05 thus the tool was found reliable.

The main study was conducted in 2 selected hospitals of vidarbha region from 4/ 01/ 2016 to 24/01/2016. the investigator personally explained the purpose as the study written consent was obtained from the staff nurses.

The subjects took 40-45 minutes to complete the structured questionnaire . after the pre test, planned teaching was conducted on the same day to enhance their knowledge. again on day 7 planned teaching was conducted to reinforce their knowledge. on day 15 post test was conducted using the same questionnaire.

## Results

**Table 1: Distribution of subjects according to their demographic variables.**

N=40

Demographic Variables	Frequency	Percentage (%)
<b>Years of experience</b>		
1-5 yrs	37	92.5
5-10 yrs	1	2.5
10-15 yrs	2	5
>15 yrs	0	0
<b>Professional Qualification</b>		
GNM	15	37.5
PB B.Sc.	3	7.5
Basic B.Sc.	22	55
Other	0	0.0

Majority of staff nurses were having the experience of 1-5 year (92.5%). With regards to professional qualification 55% the subjects possess Basic B.Sc. nursing, 37.5% possess General Nursing and Midwifery and only 7.5% were post basic B.sc. nursing.

**Table No. 3: Area wise pre test and post test knowledge score of study subjects regarding cardiac catheterization**

N=40

Area	Maximum Score	Pre test		Post test		Mean Gain %
		Mean	Percentage	Mean	Percentage	
Knowledge on Anatomy and Physiology of heart	3	1.30	43.33	2.08	69.17	25.83
Indication and purpose of cardiac catheterization	4	2.45	61.25	3.18	79.38	18.13
procedure of cardiac catheterization	5	2.35	47.00	3.70	74.00	27.00
Nursing management of patient with cardiac catheterization	18	8.25	45.83	11.78	65.42	19.58
Complication of Cardiac catheterization	1	0.68	67.50	0.85	85.00	17.50
P value		P<0.00001, significant				

Data presented in table 3 evidenced that staff nurses are having highest mean percentage gain in knowledge, i.e. 27% in area of procedure of cardiac catheterization, lowest gain in Complication of Cardiac catheterization 17.50%, 25.83% mean gain in Knowledge on Anatomy and Physiology, 19.58% mean gain in area Nursing management of patient with cardiac catheterization, 18.13% mean gain in area of Indication and purpose of cardiac catheterization. In addition the calculated

**Table 2: Overall comparison of effectiveness of planned teaching regarding cardiac catheterization among staff nurses.**

N=40

Overall	Mean	SD	Mean Percentage	t-value	p-value
Pre Test	15.02	3.36	48.46	18.50	0.0001*HS p<0.05
Post Test	21.72	2.38	70.08		

\*HS- Highly Significant

Table 2 depicts the overall mean knowledge scores of pre test and post test which reveals that post test mean knowledge score was higher 21.72 with SD of ±2.38 when compared with pre test mean knowledge score value which was 15.02 with SD of ±3.36.

The statistical Paired t test implies that the difference in the pre test and post test knowledge score found to be 18.50 statistically significant at 0.05 level. Hence it is statistically interpreted that planned teaching on knowledge regarding cardiac catheterization was effective. Thus  $H_0$  is rejected and  $H_1$  is accepted.

‘p’ values for all area of knowledge regarding cardiac catheterization was  $p<0.00001$  which was much less than the acceptable level of significance i.e. ‘p’=0.05

Source of study personal

Official clearance

Consist of interest nil

## Conclusion

This study leads to the following conclusion planned teaching on care of patient with cardiac catheterization was found to be effective in increasing the knowledge of staff nurses.

## Recommendation

A similar study can be done to assess the practice of care of patient with cardiac catheterization among staff nurse.

An study to find out the factor that hinder the nurses in providing care of patient with cardiac catheterization.

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**Conflict of Interest:** Nil

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