



## Assessment of Perioperative Nursing Care of Patients Undergoing Cardiovascular Cartogram

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### ABSTRACT

*Varieties of diagnostic tests are available to aid the practitioner in diagnosing patients, who present with signs and symptoms of coronary artery disease. Regarding caring and cardiac patients, the importance of nurse caring behavior is the successful care of cardiac patients. The question still remains whether there will be difference in patient satisfaction as it is related to newer nursing care in comparing concepts of caring and clinical care. Statement of the problem: A descriptive study on perioperative nursing care of patients undergoing cardiovascular cartogram in selected hospital, at Kanyakumari District. The research design adopted was descriptive design. The study was conducted on 30 patients of cardiovascular cartogram. The investigator provided perioperative nursing care for cardiovascular cartogram patients. The cardiovascular cartogram patients were asked to mark the graded score in Likert scale, after perioperative nursing care. The study concluded that perioperative nursing care was more effective subjects have scored above 75% and exhibit complete satisfaction of nursing care.*

**KEYWORDS : Perioperative nursing care, Cardiovascular Cartogram, Patient Satisfaction.**

### Introduction

The prevalence of coronary artery disease in India is increasing steeply. It has been confirmed by several studies. An increasing number of young Indians are falling prey to coronary artery disease, with million hooked to a roller coaster lifestyle, the future looks even more grim (Kissen 2007).

Today, there are varieties of advanced tests available to support the practitioner in diagnosing patients who present with signs and symptoms of coronary artery disease. Some of the diagnostic tests are Electrocardiogram (ECG), Graded Exercise Test (GxT), Myocardial Perfusion Studies, and 6A - Slice Computer Tomography. However one golden standard approach in diagnosing the presence or absence of coronary artery disease is coronary angiogram. Cardiovascular angiogram was invented by Dr. Mason Sones in 1950's. Cardiovascular angiogram provides direct visualization of coronary arterial anatomy as well as measurement of heart function. In 2000 AD, Dr. Kubicek. et. al, established the concept of cartography in cardiology known as Cardiovascular cartogram which was approved by USFD and used worldwide ( Kissore, 2009).

Cardiovascular cartogram is not a replacement of cardiovascular angiogram, it gives a clear perspective of the underlying hemodynamic behaviour and circulatory status, thus it complemented with cardiovascular angiography (Ethayarajan, 2009)

Based on cardiovascular angiogram and cardiovascular cartogram, patient will experience safe, cost effective, non invasive and less anxiety due to new technological procedure comparatively. (Rajasimha 2009)

The satisfaction of cardiac patients in procedures is related to their initial expectations of care. The expectations of nursing care include caring behaviour which they used to evaluate the nursing care provided ( Staniszewska and Ahmed,2009)

Regarding caring and cardiac patients, the importance of nurse caring behavior is the successful care of cardiac patients (Valentine 2009)

The patient satisfaction with hospital services has become an important bench mark of the quality of care provided by hospitals and managed care agencies. (Joiner, Niles et al 2010)

Various studies done at different periods states that patients with cor-

onary artery disease who underwent invasive or non invasive procedure experience different level stress. The stress which is experienced during diagnostic procedures will add on to further delay in prognosis. Thus nursing care plays a major role in prognosis of these patients, which is mainly centered towards nursing care and patient's satisfaction. (Joiner, Niles et al 2008, Duffy 2009)

Thus, the researchers decided to find the patients satisfaction of nursing care targeting initial expectation of care for patients undergoing newer technology like cardiovascular cartogram.

### Objectives

This study sought to:

1. To identify patients underwent cardiovascular angiogram among patients undergoing cardiovascular cartogram.
2. To provide perioperative nursing care for patients undergoing cardiovascular cartogram.
3. To assess patient satisfaction on perioperative nursing care for patients undergoing cardiovascular cartogram.
4. To find association between selected demographic variables and patient satisfaction for patients undergoing cardiovascular cartogram.

### ASSUMPTION

1. Patients undergoing cardiovascular cartogram will be satisfied comparative with other diagnostic procedures.
2. Nurses role in implementing newer technology place vital role.
3. Nursing care for newer approach is important for professional growth.

### METHODOLOGY

Quantitative research approach – Descriptive design. The study was conducted at Irudhayams Hospital, Nagercoil at Kanyakumari District. Necessary ethical approval was obtained. The sample consisted of 30 patients undergoing cardiovascular cartogram who fulfil the inclusion criteria were chosen for the study by using convenience sampling technique. The tool used was a demographic variables , perioperative nursing care and Patient satisfaction scale.

### Section - A

It consists of items related to demographic data of cardiovascular cartogram patients which includes age, sex, religion, marital status, residence, educational status, occupation, diagnosis, date of admission

and history of previous cardiovascular angiogram.

**Section - B**

It consisted of check list of periprocedural nursing care in meeting nursing care of the study subjects.

**Section - C**

This comprises of patient satisfaction scale through likert scale. The scale has 10 statements related to patients satisfaction to nursing care, and cardiovascular cartogram.

**Results**

The study findings showed that the mean age of the total patients was 53.1 ± 7.8 years. The prevalence of triple valve disease and coronary artery disease among the both sexes were 33.3% and 44.4% respectively. The heavy workers were suffering from triple valve disease (75%) than the coronary artery disease (25%). Among the total percentage of 63.3% were suffering from coronary artery disease and the remaining 36.7% were suffering from coronary artery disease and the remaining 36.7% were suffering from triple valve disease. All study subjects (100%) coronary artery disease and triple valve disease had undergone cardiovascular angiogram. In the aspect of periprocedural nursing care one hundred percent nursing care provided to all subjects. In respect to patient satisfaction the study subjects has scored above 75% and exhibit complete satisfaction of nursing care. There is no significance relationship between demographic variable and patient satisfaction. The above dissociation clearly shows the complete satisfaction attainment of all patients was attributed to the one hundred percent of periprocedural nursing care of patients.

The first objective of the study was to identify patients underwent cardiovascular angiogram among patients undergoing cardiovascular cartogram.

The study subject of 63.3% of the patients had coronary artery disease and 36.6% of the patients had triple valve disease among cardiovascular cartogram patients . A one hundred percentage of the study subjects had underwent cardiovascular angiogram and fulfilled the objective.

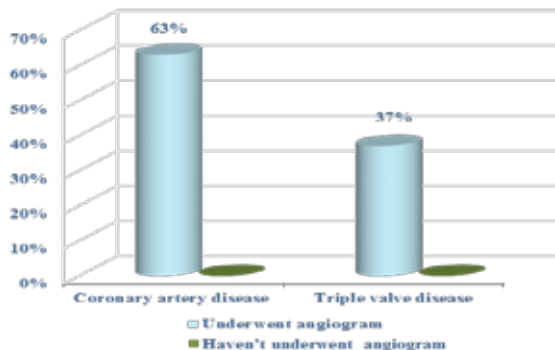
**Classification of Disease with Previously Underwent Cardiovascular Angiogram of Study Subjects.**

**N = 30**

Diagnosis	Underwent angiogram		Haven't underwent angiogram		Total	
	No	%	No	%	No	%
Coronary artery disease	19	63.4	-	-	19	63.4
Triple valve disease	11	36.6	-	-	11	36.6
Total	30	100.0	-	-	30	100.0

The above table describes that diagnosis wise classification on previously underwent angiogram. The patients with coronary artery disease were 63.4% and patient with triple valve disease were 36.6% and all the patients had previously had underwent cardiovascular angiogram.

**Bar diagram depicts the classification of disease with previously underwent cardiovascular angiogram of study subjects.**



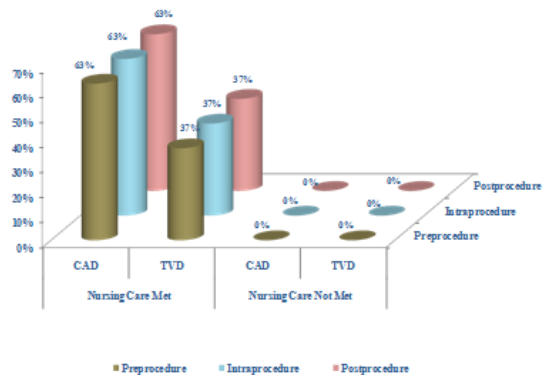
**The second objective of the study was to provide periprocedural nursing care for patients undergoing cardiovascular cartogram.**

Periprocedural means the period of pre, intra, and post procedure. Further periprocedural nursing care was subdivided into various sub-headings under the pre intra and post procedure. The periprocedural nursing care regarding the cardiovascular cardiogram and cardiovascular angiogram was accepted and adopted cent percentage by all the patients without any shortfall.

**Classification of Procedural Check List with Nursing Care Met of the Study Subjects.**

PERIPROCEDURAL NURSING CARE	DIAGNOSIS		NURSING CARE MET		NURSING CARE MET		TOTAL	
	CAD	TVD	No	%	No	%	No	%
PRE PROCEDURE								
Explanation	19	11	30	100%	-	-	30	100%
Skin preparation	19	11						
INTRA PROCEDURE								
Placing electrodes	19	11	30	100%	-	-	30	100%
Placing ventricular-accelerator device	19	11						
Assisting cartogram	19	11						
Stress study	19	11						
POST PROCEDURE								
Removing attachments	19	11	30	100%	-	-	30	100%
Positioning	19	11						
Shifting	19	11						

**Bar diagram depicts classification of periprocedural check list with nursing care met of the study subjects.**



**The third objective was to assess patient satisfaction on periprocedural nursing care for patients undergoing cardiovascular cartogram.**

The one hundred percent accepted and adopted periprocedural nursing care regarding cardiovascular cartogram study subjects were measured for their satisfaction. The median satisfaction was 39 and the mean score was 38.3 ± 2.1. All the 30 subjects were attained satisfaction above 50% and 76.6% were completely satisfied.

**Percentage Distribution of the Satisfaction of the Study Subjects:**

Score	Percentage	Grading of the score	Patients	
			No	%
30 - 40	75 - 100	Complete satisfaction	30	100
20 - 30	50 - 75	Moderate satisfaction	0	0.0
10 - 20	25 - 50	Inadequate satisfaction	0	0.0
0 - 10	0 - 25	No satisfaction	0	0.0
Total			30	100%

**Bar diagram depicts percentage distribution of the patient satisfaction of the study subjects.**



**The fourth objective of the study was to associate selected demographic characteristic (Age, sex, education, religion, nature of work and diagnosis) and patient satisfaction on periprocedural nursing care for patients undergoing cardiovascular cartogram.**

The demographic variables like age, sex, education, religion, nature of work and diagnosis was associated with patient satisfaction. The satisfaction score was classified into below median and above median and tested with chi-square test at  $P > 0.05$ .

**Age**

There was no significant association between age and satisfaction. The obtained  $\chi^2$  value was 0.001 and not significant associated at the level of  $P > 0.05$ .

**Sex**

There was no significant association between sex and satisfaction. The obtained  $\chi^2$  value was 0.782 and not significant associated at the level of  $P > 0.05$ .

**Religion**

There was no significant association between religion and satisfaction. The obtained  $\chi^2$  value was 2.919 and not significant associated at the level of  $P > 0.05$ .

**Education**

There was no significant association between education and satisfaction. The obtained  $\chi^2$  value was 2.919 and not significant associated at the level of  $P > 0.05$ .

**Nature of work**

There was no significant association between nature of work and satisfaction. The obtained  $\chi^2$  value was 3.523 and not significant associated at the level of  $P > 0.05$  (Table 13).

**Diagnosis**

There was no significant association between diagnosis and satisfaction. The obtained  $\chi^2$  value was 0.032 and not significant associated at the level of  $P > 0.05$ .

**Conclusion**

The present study assessed the periprocedural nursing care of patients undergoing cardiovascular cartogram. The study findings revealed The study subjects of age, sex, religion, education, nature of work, diagnosis, and undergone cardiovascular cardiogram. The periprocedural nursing care was met to all study subjects. All 30 samples had complete patients satisfaction on periprocedural nursing care. There is no significant association between patient's satis-

faction and demographic variables. The complete patient satisfaction attained by patients underwent cardiovascular cartogram is by periprocedural nursing care.

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