

# Assess Knowledge and Practice of Registered Nurses about Patient Safety after Cardiac Catheterization in Punjab Institute of Cardiology, Lahore

MARIAM FEROZE<sup>1</sup>, M. AFZAL<sup>2</sup>, HAJRA SARWAR<sup>3</sup>, AMIR GALANI<sup>4</sup>, SHAMILA AFSHAN<sup>5</sup>,

## ABSTRACT

**Background:** Cardiac Catheterization is an extremely extravagant procedure in determination and treatment of several cardiac diseases. Cardiac Catheterization is a critical health status which requires standardized care policies, as well as it needs qualified and skilled health provider to obtain good outcome of management.

**Aim:** To assess knowledge and practice of nurses regarding patient safety after cardiac catheterization.

**Methods:** This cross-sectional study was conducted in Punjab Institute of cardiology, Lahore, from 01<sup>st</sup> December 2016 to 31<sup>st</sup> March, 2017. Questionnaire with multiple choice was used to collect data. 171 nurses using convenient sampling technique were included in the study. Likert scale for practice questionnaire multiple choose questionnaire to assess the knowledge and coded correct into incorrect as gain by the marks of participant. 1-4 incorrect. Low knowledge 5-10 correct. High knowledge. Data was collected and analyzed using SPSS version 21.

**Results:** Out of 171 participants, females were 100%, most nurses had experience of 2-5 years and 6–10 years, they were represented by 34.5% and 31.0% respectively. Mean of total knowledge was found good, when compared to mean of practice which was poor. This showed that nurses have good knowledge about post cardiac catheterization complication..It was found significant value of  $p = 0.000$  by applying correlation. This showed that there was a good association between knowledge and practice.

**Conclusion:** There is positive association between the knowledge and practice about patient's safety after Cardiac Catheterization. Nurses those have proper knowledge and practice can help in rehabilitation of patients.

**Keywords:** Registered Nurses, Knowledge, Practices and Patient Safety, Cardiac Catheterization

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## INTRODUCTION

Cardiac Catheterization is that process which supposed as the golden standard for the diagnosis, evaluation, and treatment of cardiac diseases. Cardiac catheterization process is an extra valuable process for diagnosis and obtaining minute information about the structure and function of the cardiac chambers, valves and coronary arteries. This process also includes studies of the right or left sides of the heart and coronary arteries<sup>2</sup>.

Many patients suffer from preventable harm during health care in hospitals<sup>3</sup>. Therefore, improving patient safety is at the forefront of policy and practice<sup>4</sup>. Moreover, it is responsibility of cardiac nurses to take care of post cardiac catheterize

Procedure patients with proper standard because it is very contagious to retain infectious diseases<sup>5</sup> ideas that most of the threats which relate to patients safety and illness, were arise from health care provider and organization system factor. Professional factors such as health care professionals' awareness and skillfulness regarding patient safety have an influence on risk to patient safety, particularly when health care provider have a deficit level of safety knowledge and skillfulness to deliver secure care for their patients. Hence, the competencies of the cardiac nurses is imperative, little negligence's of cardiac nurses, there is a chance of getting minor and major complication such as hematoma, ecchymosis and oozing, cardiac perforation and abrupt closure etc. Therefore, nurses are playing an extremely important role in post cardiac catheterization patient's management<sup>6</sup>. Moreover, nurses need to develop standard and safe protocol of care for the patients of post cardiac catheterization and percutaneous coronary intervention that protocols should be research and evidence base. Hence, Patient outcomes can be

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<sup>1</sup>Student of BSc Nursing Degree Program (Post RN)

<sup>2</sup>Principal, Department of Nursing, University of Lahore:

<sup>3</sup>Demonstrator, Department of Nursing, University of Lahore

<sup>4</sup>Dean, Department of Nursing, University of Lahore:

<sup>5</sup>Biostatistician, Punjab Institute of Cardiology, Lahore

Correspondence to Mariam Feroze, Nursing Hostel, Punjab Institute of Cardiology, Lahore Email: shamailalam@gmail.com Cell: 0092-333-4241076

improved if there is a greater quantity or quality of nursing care<sup>7</sup>.

Moreover nurses who work in patient care after post cardiac catheterization procedure should be educated and have vast knowledge and skills to treat patients whose coming from different cardiac catheterizations procedure that require standard operating nursing care<sup>8</sup>.

Nurses in the Cardiac Catheterization Lab (CCL) play a vital part in providing quality care to their patients. Through knowledge and current evidence based practice, is the key to become an effective and efficient nurse<sup>9</sup>

CC staff and nurses whose caring for post cardiac catheterization procedure patients should be work together to reduce complications, when possible, and treat these complications when they occur. Careful nurses assessment and monitoring are required to reach these goals. Nurses with specialized in cardiac training must need to assess, identify and manage the blood vessels.<sup>10</sup>

**MATERIAL AND METHODS**

This cross sectional study included 171 consecutive Registered Nurses selected for the period of 1st December, 2016 to 31st March 2017 from Punjab Institute of Cardiology, Lahore, Pakistan.

Nurses working in Emergency Ward, CCU and Cardiology Ward of PIC Hospital were included while Doctor, paramedical staff of PIC were excluded from study. Data was collected using the structured questionnaire which is comprised of three sections. The questionnaire contains thirty one questions were presented in a ‘multiple choice response’ format with a single correct answer.

A score of ‘1’ was awarded for each correct answer.

Lowest ≤ 40% = Poor Knowledge

Highest ≥ 40% = Good Knowledge

**Statistical Analysis:** Data was analyzed by using SPSS ver 21.0. Frequencies, percentages were given for qualitative variables. Correlation of the knowledge and practice of the nurses were analyzed by using Spearman correlation coefficient. Level of significance was taken as ≤ 5%.

**RESULTS**

Table1: Correlation Test applied on Knowledge and Practice

	P-value.
Correlation	0.000

Table 2: Correlation Test applied on nurse’s qualification and knowledge

	P-value.
Correlation	0.024

Fig. 1: Demographic information of the participants with respect to age group

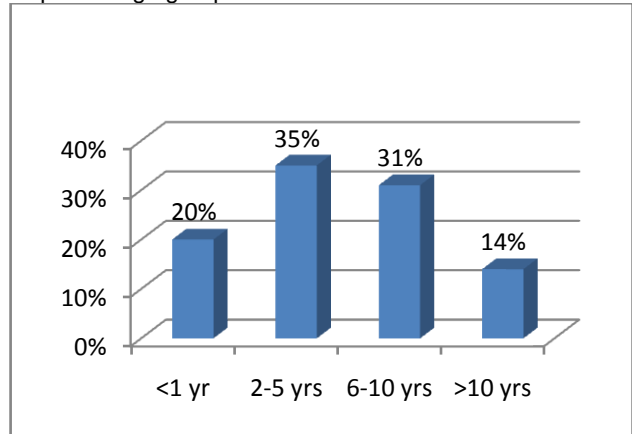


Fig 2: Distribution of the sample according to job experience

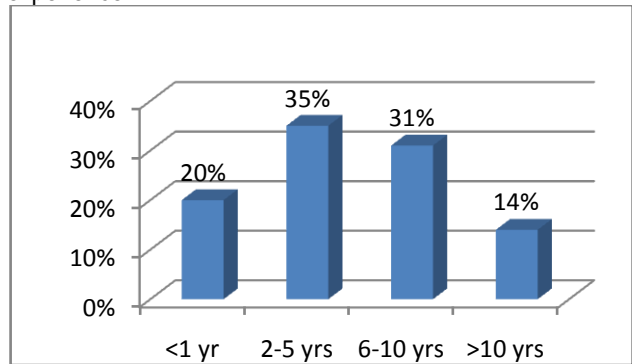
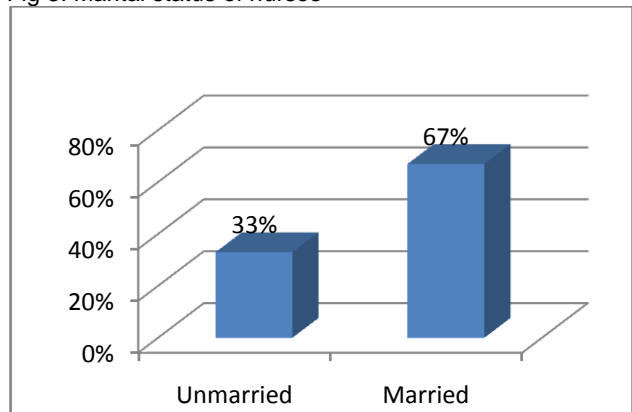


Fig 3: Marital status of nurses



**DISCUSSION**

Nursing care is important in survival and prevents the patients from post cardiac catheterization complications. So the competence of nurses about knowledge and practice regarding patient care after cardiac catheterization is very crucial. The current study is effort to assess the nurse’s knowledge and

practice regarding patients safety after cardiac catheterization.

**Demographic characteristics:** Age and experience distribution revealed that most of nurses were 26 – 30 years (41.5%) and (43.9%), it indicated that most of the nurses were juniors and have experience less than 5 years (34.5%). The advantages of nurses in young age are full of energy and hyperactivity which is always required in such crucial departments, as discussed in previous study<sup>12</sup>. According to marital status distribution it was also beneficial for institution that most of the nurses were unmarried (64.3%) and married (35.7%). According to qualification distribution most of the nurses are B.sc Nursing Diploma (48.5%), Post RN BSN (22.8%) and Specialization in CCU (28.7%). It indicated that most of nurses working in the PIC were highly educated.

**Knowledge:**In current study, nurse's knowledge was assessed about post cardiac catheterization complication. It was found through the study that most of the nurses have good knowledge about post cardiac catheterization complication. Similar study was done in Al-Najaf City to determine the nurses knowledge and found that nurses have good knowledge about cardiac patient care<sup>13</sup>. A study conducted in cardiac unit to determine the nurses knowledge about pacemaker implantation.<sup>14</sup> In current study nurses have a good knowledge about patient care after cardiac catheterization procedure.

**Practice:**In current study nurses practice assessed through 18 items, their practice was poor 25.74%. A similar study conducted in Cairo university hospitals to determine the nurses practice about patient care connected intra-aortic balloon pump and result was very unsatisfactory about nurses practice performance<sup>16</sup>. In current study nurses have good practice about some post procedural items like explain post procedure care (78.4%), removal of sheath (77.8%), apply firm pressure over catheter site (79.5%), assess stability for pain (76.0%), assess skin color or temperature (76.6%) and instruct the patient for self-management at home (78.9%). A study conducted in Sulaimani City and found that nurses have good practice about post cardiac procedure<sup>17</sup>.

**Knowledge and Practice Assessment:**Current study assessed the knowledge and practice performance of nurses about post cardiac catheterization complication and different post cardiac catheterization care procedure provided by the cardiac nurses. Overall knowledge about post cardiac catheterization complication was good as compared to practice, but practice was found good and near to knowledge only some post procedure items like explain post procedure care (78.4%), removal of sheath (77.8%), apply firm pressure over

catheter site (79.5%), assess stability for pain (76%), assess skin color or temperature (76.6%) and instruct the patient for self-management at home (78.9%) but the overall practice was poor. In current study it was found that nurses have good knowledge (74.27%) and poor practice (25.74%).

**Correlations:**Out of 28 standard items of knowledge and practice assessed, only 2 were significant that is the qualification of nurses through crosstab with knowledge  $p=0.24$  and knowledge and practice was significant  $p=.000$ . A similar study conducted in Egypt and reported similar findings of insignificance of experience age, job experience and other variables<sup>18</sup>. In current study there was no significant correlation existed between gender, age, job experience and marital status. There were negative correlation existed between practice and years of experience.

There was a significant relationship between knowledge and practice, knowledge and qualification, this result showed that qualification has great effect on the nurses knowledge and nurses can develop their knowledge through experience.

## CONCLUSION

It was observed that patients manage their routine life after cardiac catheterization properly due to good knowledge of nurses about post cardiac complication and satisfactory practice regarding good quality care of nurses. There was a significant association between knowledge and practice.

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