

Knowledge and Practices among Nurses regarding Patient Care, following Cardiac Catheterization, At a Tertiary Care Hospital in Karachi, Pakistan.



آغا خان یونیورسٹی
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Research Aim

The purpose of this study was to assess the level of knowledge and practices among nurses regarding patient care, following diagnostic / therapeutic cardiac catheterization, at a tertiary care hospital in Karachi, Pakistan. This study also attempted to identify the gaps in nursing knowledge and practices, in order to improve the quality of nursing care and patient outcomes.

Introduction

Cardiovascular diseases are the major cause of morbidity and mortality worldwide. Developing countries contribute a greater share to the global burden of cardiovascular disease. Nurses are the largest body of health care professionals who attempt to reduce the burden of cardiovascular diseases. Being at the patient's bedside round the clock, a nurse is in the best position to closely monitor and initiate the resuscitation process if any complication is observed. Hence, a competent nurse with sound knowledge and practical expertise is a key person for any health care organization. A nurse's role in caring for patients post coronary intervention is identified as having a 'spider-in-the-web' like character. A specialized nurse can effectively deal with cardiovascular emergencies, including rhythm recognition, early defibrillation, and emergency medication administration. The nurse's role as an educator can meet the needs of patients through education, support, supervision, and reinforcement. However, lack of specialized knowledge, work overload, and role confusion are barriers in a nurse's roles (Victor, Sommer & Khan, 2016).

In today's world, nurses are emerging as an ideal healthcare providers who provide care which helps patients expedite their recovery by reducing the risks of complications. However, better and safe patient outcomes can only be achieved if cardiac nurses have up-to-date knowledge about how to detect the signs of a complication at the earliest and to act upon it promptly (Watson, 2006).

Characteristics	Frequency (%age)
Age in Years	Min 20 years and max 48 years
Gender	
Male	41 (58.6)
Female	29 (41.4)
Qualification	
Generic BScN	8 (11.4)
Post RN BScN	22 (31.4)
Dip. in General Nursing	40 (57.1)
Specialization	
Diploma in Cardiology	35 (50)
Characteristics	Frequency (%age)
Years of Experience	Min 1 year and max 20 years
Novice Nurses	32 (45.7)
Expert Nurses	38 (54.3)
Departments	
Coronary Care Unit (CCU)	16 (22.9)
Male General Ward (MGW)	20 (28.6)
Female General Ward (FGW)	30 (46.9)
Day Care Unit (DCU)	04 (5.7)

Methods and Materials

This study employed a cross-sectional analytical study design to answer the research question. The target population of this study included registered nurses with a qualification of at least diploma in general nursing, and had a valid license issued by the Pakistan Nursing Council (PNC). A total of 70 nurses were recruited employing the universal sampling technique.

After approval from the Ethical Review Committee (ERC), AKUH, Karachi, and the Institutional Review Board (IRB), the data were collected between February to May 2018 using two instruments, which were designed by the primary investigator with the help of literature. The knowledge was assessed through 50 multiple choice questions based questionnaire. The questionnaire was divided into six sections; Cardiac physiology, cardiac diseases, cardiac catheterization and PCI procedure, ECG interpretation, procedural complications, and cardiac medications.

To assess practices, an observational checklist was utilized by the data collectors. This checklist was based on post-cardiac catheterization care standards and was developed with the help of literature. It composed of 20 components and the data collectors were had to fill it after observing each participant thrice, on three consecutive days, except for holidays; with three different patients in the morning and evening shifts. The purpose of frequent and long-term observations was to minimize the "hawthorne effect" (Gaskell, 2012). The confidentiality of the study participants was maintained throughout the study.

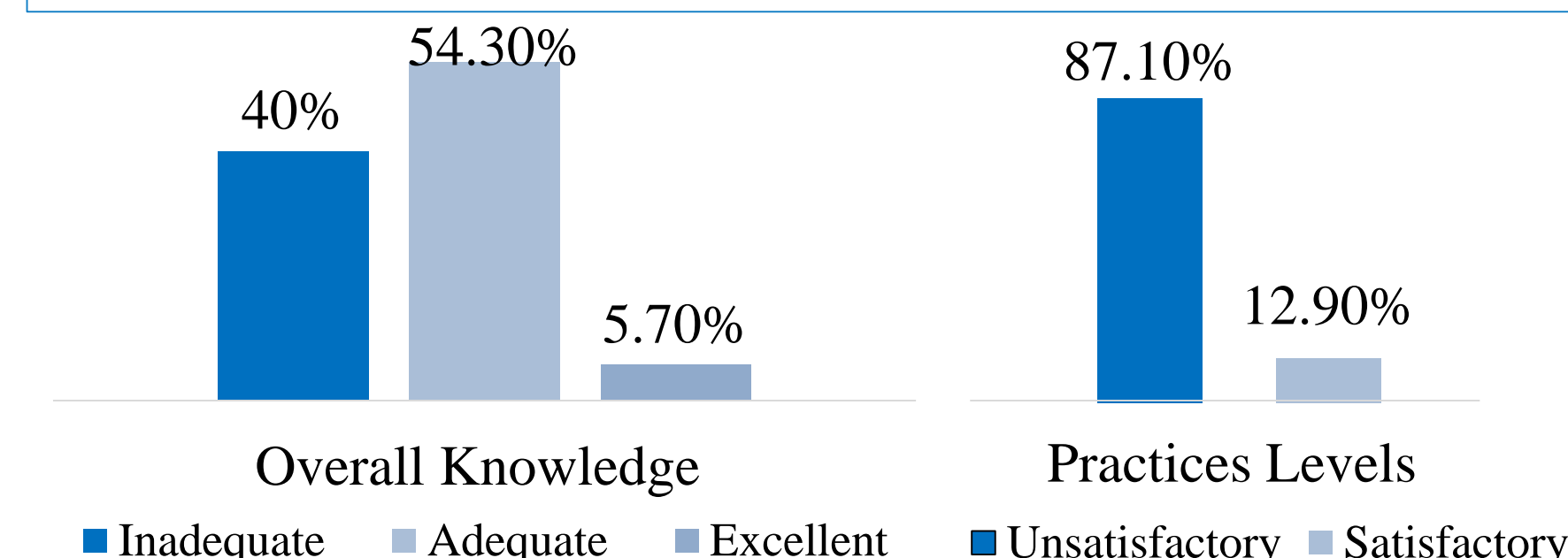
Results

To summarize the results, findings revealed that the majority of the nurses, 54.3%, had adequate knowledge scores, 40% nurses had inadequate knowledge scores, and only 5.7% nurses had an excellent knowledge level. A total of 44.3 % and 74.3% nurses had inadequate knowledge related to cardiac physiology and procedural complications, respectively. However, the knowledge was found to be adequate in following subcategories: 55.7% in cardiac pathology, 48.6 % in ECG interpretation (common rhythms), 67.1% in procedural knowledge, and 52.9% in pharmacology. Surprisingly, 87.1% nurses were observed as carrying out unsatisfactory practices, whereas only 12.9% nurses were found carrying out satisfactory practices.

Furthermore, no significant difference was found in knowledge and practice scores when compared to gender, specialization, and qualifications. However, difference was significant when this was compared with different departments. The difference was also significant in knowledge related to procedure with regard to specialization, as the p-value was 0.00. Whereas, knowledge related to procedural complications and cardiac pharmacology was found to be significant when compared for nurses with different qualifications, as the p-values of both was 0.01. On the other hand, When the level of practice

was compared with the overall knowledge scores, a significant association was found between those with adequate knowledge scores and satisfactory practices, and those with inadequate knowledge scores and unsatisfactory practice. Hence, it can be concluded that the more the level of knowledge the more satisfactory the practices are likely to be. Likewise, it was found that those nurses who scored adequate in cardiac physiology and procedural complications were found carrying out more satisfactory practices ($p < 0.05$) as compared to nurses scored adequately in other categories ($p > 0.05$).

Moreover, there was no significant difference when the three practice observations for each of participant were compared. However, it was found that the practice level of nurses working in the CCU was relatively satisfactory as compared to all the other departments.



Discussion

The overall mean knowledge score was found to be 27.2 + 6 (out of 50). This finding is consistent with the study done by Beneeta, Gireesh, and Sachina (2014), in India, in which they reported that the mean knowledge scores of staff nurses regarding the pre and post procedural nursing care of PTCA was found to be 23.58 + 2.52 (out of 30).

Furthermore, the majority of the study participants (54.3%) had adequate knowledge, 40% had inadequate knowledge, whereas only 5.7% had excellent knowledge. The reason for inadequate knowledge of 40% nurses could be ascribed to the fact that nurses are not offered training sessions as, in general, institutions pay little attention to the training of nurses (Jafree, Zakar, Zakria, & Fischer, 2016). In the analysis of three time practice observations, the mean practice score was 10.3 + 2.2. The minimum practice score was 6.3, whereas the maximum score was 15.6. On the contrary, the study conducted by Shini, Paul, and Smitha (2018) reported that the mean practice score among nurses after the administration of a nursing care protocol was found to be high. Since the nurses in this study were found carrying out practices without any standard protocol, this could have led to unsatisfactory practices.

Conclusions

Based on these findings, following measures are required which include; to provide better patient care. Furthermore, frequent spot rounds, audits, and quality education in nursing institutions by hiring qualified faculty. Moreover, due to variations in the practices, in each of the department the need for further research is indicated, to assess nurses' attitudes through the qualitative approach, and to develop and implement a standard post-cardiac catheterization care protocol.

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