

Assessment of Nurses' Knowledge of Patient Care After Cardiac Catheterization in Mosul Hospitals

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ABSTRACT

Heart diseases can be diagnosed and evaluated using cardiac catheterization, which requires standardized policies of care. Cardiac catheterization needs qualified and skilled healthcare providers for excellent management outcomes. The current study aims to assess the nurses' knowledge of patient care after cardiac catheterization. The descriptive cross-sectional study was designed—the study sample consists of (110). The study setting is in Mosul Hospital. Data were collected for the period (20th February 2019) to (22th March 2019). A questionnaire depends on the interview style; the survey designed to achieve the study's objective consisted of three parts: the first content was demographic information (6 items). The second part includes the general knowledge of nurses about cardiac catheterization (10 items). The third part consists of the skill of the cardiac catheterization nurse (18 items). A descriptive statistical approach and an inferential analytical approach are used to analyze the data. The results showed that (56.4%) males, females (43.6%) were in the age of (25-29) years, most of the nurses had an experience of 1-5 years. The study showed a statistically significant relationship between the age of the nurse and their knowledge of the complications of cardiac catheterization ($P=0.05$). There is no statistically significant relationship between the gender of the nurses, education level, years of service in the nursing field, and experience. The study concluded that the sample percentage is high, and the result was is not acceptable for the level of knowledge regarding cardiac catheterization risk factors. The study recommended that nurses participate in training courses to improve nursing care provided to the patient and his family during cardiac catheterization.

Keywords: Cardiac Catheterization, Nurse, Knowledge, Patient care.

1. INTRODUCTION

The cardiovascular device helps supply the fast conduction of vitamins to the tissues in the body and permits the rapid elimination of unused products. There is no such structure in smaller, less complex organisms than the human body because their desires can meet with simple diffusion. The development of the cardiovascular device provided a competence in assisting the diffusion process, allowing the growth of more significant organisms [1]. The most common causes leading to death are cardiovascular diseases [2]. The World Health Organization reported 18 million loss of life from cardiovascular diseases in 2008 and was estimated to reach 23 million by 2030 [3]. One of the most common and the best way to diagnose coronary artery diseases is

Coronary Angiography (C.A) [4]. The cardiac catheterization procedure is used for heart patients such as ischemic heart disease (IHD), coronary artery disease CAD, heart valves, and congenital heart disease because it takes a wide range and its advantages for short time.

Additionally, with the increasing population, the likelihood of desired health outcomes is consistent with current professional knowledge of the quality of health care services for patients with cardiac catheterization [5]. A catheter is a thin tube passed into the heart chambers via a vein or artery and is usually inserted through the thigh right or area of the radial [6]. Cardiac catheterization is an alternating plan that does not require prolonged bed rest and is related to reductions, puncture site complications, and hospital stay [7]. The nursing

staff plays a dynamic role in monitoring and evaluating angina pectoris that recurs shortly after percutaneous coronary intervention and any chest pain requiring immediate and careful attention to the onset of blood vessel spasms or impended arteries blockage [8]. The Focusing on early priorities for nursing staff care for patients after Percutaneous Coronary Intervention includes determining physiological stability and patient comfort through combination bed technology, assessment, and monitoring; and also to need knowledge and competence regarding the efficacy of measures used to prevent complications of Post-Percutaneous Coronary Intervention [9]. The current study aims to assess the nurse's knowledge of patient care after cardiac catheterization in City of Mosul Hospitals.

2. METHODOLOGY AND RESULTS

A adopted the current study cross-sectional descriptive design to achieve the present study's objectives from (20th February 2019) to (20th April 2019). The research and data collection period (20th February 2019) (22th March 2019). Conducted the current study was in four hospitals, two on the right side of Mosul (Al-Jamhuri teaching Hospital and Mosul General Hospital) and two on the left side of Mosul (Al Salam hospital and Ibn-Sina Teaching Hospital). A self-designed data collection questionnaire was used to collect study information created based on previous studies and relevant literature. It is composed of three parts: - 1- part one: - this part includes (6) items that focus on the participant demographic data such as (age, sex, marital status, educational level, nursing years of experience, and participation in a heart catheter course). Part two consists of the general question to assess nurses' knowledge toward Cardiac Catheterization safety. Part three consists of (19) items to determine nurses' clinical practical knowledge about cardiac catheterization. The overall question is dependent on three options (Always, Sometimes, Never). A random sample was selecting the participation (110) of a nurse. The study's sample selection comprises male and female age groups between (22 – > 45) years. Knowledge level of was (0 – 2) Fail, Not Acceptable= (3-4), Acceptable= (5), very Good= (6-7), very Good= (8-9), Excellent= (10). The results of this study are shown in Table 1 to Table 3.

4. DISCUSSION

Nursing care is essential to prevent patients from experiencing complications post-cardiac catheterization and survival for a long time. Therefore, the competence of nurses in the knowledge of patient care after cardiac catheterization is critical.

Table 1. Demographical Characteristics of the Study Sample

Demographical Item		Freq.	%
Age	(20-24)	23	20.9
	(25-29)	44	40.0
	(30-34)	21	19.1
	(35-40)	14	12.7
	(40-44)	2	1.8
	(45-50)	6	5.5
Gender	Male	62	56.4
	Female	48	43.6
Marital Status	Single	35	31.8
	Married	73	66.4
	Widowed	2	1.8
Educational Level	Junior	20	18.2
	Institute	24	21.8
	University	62	56.4
	Master	4	3.6
Experience of work	(1-5)	95	86.4
	(6-10)	12	10.9
	(11-15)	3	2.7
Training course	Yes	49	44.5
	No	61	55.5
Total		110	100.0

Table 2. The Samples' Knowledge Level Results about the risk factors of the cardiac catheterization

Estimate	Freq.	%
Fail	27	24.5
Not Acceptable	53	48.2
Acceptable	17	15.5
Good	12	10.9
very Good	1	0.9
Excellent	0	0
Total	110	100.0

Fail= (0-2), Not Acceptable= (3-4), Acceptable= (5), very Good= (6-7), very Good= (8-9), Excellent= (10)

Table 3. Statistical Differences of Demographic Characteristics Result and Samples' Knowledge about patient care after cardiac catheterization

Descriptive Statistics	Years of service		Experience of work		Training course	
	P. value	Sig	P. value	Sig	P. value	Sig
Total Knowledge	0.008	S	0.120	NS	0.473	NS
Explain the post procedure care	0.006	S	0.175	NS	0.000	S
Remove the sheath	0.576	NS	0.167	NS	0.686	NS
Observe the catheter site insertion	0.008	S	0.079	NS	0.014	NS
Assess the vital sign	0.774	NS	0.900	NS	0.290	NS
Assess the skin color or temperature	0.026	S	0.304	NS	0.115	NS
Assess for stability of pain	0.162	NS	0.030	S	0.354	NS
Monitor the patient by ECG	0.167	NS	0.046	S	0.300	NS
Places the patient in a supine position	0.682	NS	0.694	NS	0.115	NS
Encourage patient to increased fluid intake	0.380	NS	0.328	NS	0.860	NS
Observe for signs of hypersensitivity	0.191	NS	0.151	NS	0.391	NS
Check the patient output	0.985	NS	0.593	NS	0.425	NS
Observe the extremity of catheter inserted	0.127	NS	0.027	S	0.144	NS
Immobilizes the arm-on-arm board	0.933	NS	0.608	NS	0.135	NS
Instruct the patient to cough on need	0.233	NS	0.186	NS	0.384	NS
Pressure dressing over the insertion site	0.519	NS	0.151	NS	0.174	NS
Applies firm pressure over the site	0.012	S	0.114	NS	0.197	NS
Monitor intake output after 24 hours	0.145	NS	0.942	NS	0.138	NS
Instruct the pt. for self-management at home	0.443	NS	0.267	NS	0.005	S

The result of the study sample showed that the majority (44%) was in the age group (25-29) years old, and the lowest (2%) was in the age group (40-44). Most of the study sample (56.4%) are males, and the rest (43.6%) are female; this finding is supported by [10]–[13], who concluded that the most of study nurses were male, but they differed with the result of [14], [15] showed in their studies that most nurses were female. The present study showed that most participants hold a technical institute degree and a bachelor's degree in nursing regarding educational level. This finding supported a study conducted in Egypt by [15], who studied nurses' knowledge and practiced the implant device, found that the majority of the sample had bachelor and technical institute of nursing. Another study showed conflict through [16], [17] they showed that most of their studied samples were diplomas in nursing. Also, [13], [18] found that the highest percentage of nurses were secondary school nurses. Regarding the years of general nursing services, (86.4%) of the sample was from (1-5) years. These findings contradict the study done in Baghdad [19], which indicated that the maximum percentage of experience years ranged among (1-10) years. However, another study result finding supports [10] that no training sessions are given regarding cardiac catheterization for most study samples (55.5%).

The questionnaire results demonstrated that nurses working in medical and surgical ward nurses' Knowledge of Patient Safety After Cardiac Catheterization were unacceptable. This finding disagrees with other studies done in Al-Najaf All-Ashraf City, which shows nurses' knowledge regarding cardiac patient care was good [13]. This finding is inconsistent with a cross-sectional study done in Pakistan showing that registered nurses have the correct level of knowledge regarding cardiac catheter care patients [20]. There were no statistically significant differences with the average knowledge scores with years of experience for the nurses. This result is inconsistent with the [21] study, which revealed a high relationship between practice scores and work experience. [22] An evaluation of nurse care practices provided to patients who underwent open-heart surgery in the Sulaimani Center of Heart Diseases showed a significant statistical association between nurses' training and experience years. Besides, [23] It was reported that the level of knowledge is higher for nursing staff nurses with more than five years of experience compared to those with less than five years of experience. Finally, [20] showed a statistically significant relationship between knowledge and practice, knowledge and qualification. This result indicated that ability greatly influences nurses' knowledge, and nurses can develop their knowledge through experience.

The researchers believe that this finding is related to data collection from nurses working in hospitals in the City of Mosul, not just nurses working in the coronary care unit. In general, in Iraq, nurses do not have a

subspecialty in nursing care; Also, barriers to the way nurses study and obtain a high degree about their specialty is a significant problem for nurses.

5. CONCLUSION

The current study shows that most of the study sample was male. The ages of the study sample members ranged between (25-29) years. The study shows a high percentage of those selected did not participate in training courses for cardiac catheterization. The high passage rate was not acceptable for knowledge of the level of nursing care after cardiac catheterization for patients with heart diseases.

Recommendation

The current study recommended developing an educational training program for nurses working in the field of cardiac catheterization. Nursing schools should pay more attention to cardiac catheterization and post-catheter care. Set a plan to program for postgraduate study means graduating nurses who specialize in cardiac catheterization. Nursing schools should pay more attention to cardiac catheterization and patient care after catheterization. Set a plan to program for postgraduate study means graduating nurses who specialize in cardiac catheterization.

AUTHORS' CONTRIBUTIONS

Mahmood was responsible for the study concept, design, and data collection. Ibrahim and Abdulgani analyzed the data, drafted the manuscript, and complete critical reviews to the paper for significant intellectual content and, in addition, to provide statistical expertise. while, Hassan provided administrative, technical support.

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