

Nurses' Roles towards Patient undergoing Cardiac Catheterization at Al- Najaf Governorate: Patient Perspective

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Abstract

The study objectives to evaluate nurses' roles toward patient undergoing cardiac catheterization and to find out the relationship between the patient perspective and demographic data (age, gender, level of education, social status, occupation, economic status, and residence). a descriptive cross-sectional design (patient perspective) was carried out through the present study in order to achieve the early stated objectives for period January 4th 2017 to August 6th 2017. The study conducted at AL-Najaf cardiac center, A convenient sample of (100) patients undergoing to cardiac catheterization patients that admitted to cardiac catheterization unites. The data were collected through the use of questionnaire, which consists of two parts, socio-demographic data, and question related to nurses' roles toward patient undergoing cardiac catheterization. The data were described statistically and analyzed through use of the descriptive and inferential statistical analysis procedures. The results of present study indicate that the nurses' roles toward patient undergoing cardiac catheterization was good more than 89% of patient agree with this role. The study confirms that the nurses have a good practice toward patient undergoing cardiac catheterization according to patient perspective. Nurses, who working in cardiac center, should be hired with certain qualification, which are related to the performance of such high quality practices. Special training programs should be designed and constructed for nurses in this area to reinforce their skills and promote their experience. The standards for such practices bill should be created and presented to all ties in which such practices are performed.

Keywords: Nurses' Roles; Patient undergoing Cardiac Catheterization; Patient Perspective.

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1. Introduction

Cardiac catheterization is a valuable diagnostic procedure which does a comprehensive examination of how the heart and its blood vessels function. One or more catheters is inserted through a peripheral blood vessel in the antecubital artery or vein or femoral artery or vein with x-ray guidance. This procedure gathers information such as adequacy of blood supply through the coronary arteries, blood pressures, blood flow throughout chambers of the heart, collection of blood samples, and x rays of the heart's ventricles or arteries [1]. Cardiac catheterization is perhaps one of the most diagnostic and interventional tools available to the cardiologist today, while many of these diagnostic and treatment procedures have become retained for most cardiac nurses. It is incumbent to educate the patient and to have understanding of what happens to the patient before, during, and after their procedure[2]. The incidence of procedure related death is now approximately (0.08 %), the risk of death varies with age; patients older than (60) years have an increased mortality rate from catheterization. Patients with valve heart disease, renal insufficiency, insulin – dependent diabetes mellitus, peripheral vascular disease, cerebrovascular disease, or pulmonary insufficiency also have an increased incidence of death and major complication. Mortality is especially high in those with preexisting renal insufficiency who have further deterioration of renal function within (48 hours) after the procedure, particularly when dialysis is required [3]. Nursing specialty that work with patient who suffer from various cardiac diseases like acute coronary syndrome , myocardial infarction, rheumatic heart disease ,various arrhythmias, patient who had undergone various cardiac interventional procedures like coronary angiogram, percutaneous transluminal coronary angioplasty, percutaneous transluminal mitral commissurotomy, permanent pacemaker implantation, device closures ,balloon mitral valvotomy, balloon pulmonary valvotomy etc. Cardiac nurse must assess and care for patients with cardiac problems as well as patients undergone cardiac catheterizations procedures, patient for any negative signs of a change in condition, safe transport, administering medication, help with basic personal care needs, and control of bleeding, maintenance of homeostasis .This will help in minimizing the vascular complications in patient.

Increased risk for vascular complications was found in patients who were older than 70 years, were female, had renal failure, and underwent percutaneous intervention. [4]. Nurses working in cardiovascular units must be responsible and highly competent to meet the demands of their profession .Hospitals that hire nurses for cardiovascular units also must assume responsibility for the competency of nurses hired [5]. Nurses play a major role in providing nursing care to patients who undergo cardiac catheterization, such care is presented into three different episodes that include pre-catheterization intra catheterization, and post catheterization. Nurse's practice is so critical concerning this procedure in order to reduce the risk and prevent complications that may be associated with this catheterization [6].

Nursing care for patients undergoing cardiac catheterization requires an expert nurse who understands the types of complications that can occur, as well as the assessment skills to spot them. The combination of nursing knowledge and skills during the period before and after cardiac catheterization aims to assure safe and accurate procedure, and improving physical and mental health [7]. Patients' education before cardiac catheterization is very important; the nurse should explain the procedure to the patients. A visit to the catheterization laboratory is also required and patients should watch a video of the procedure. The nurse's role is not only concerned with

implementation of patient teaching but also monitoring and caring for the patient post cardiac catheterization to prevent complications [8]. The study done by (Thabet and his colleagues 2019) their results showed that inadequacy of nurses' knowledge and practice regarding care of patients undergoing cardiac catheterization. Another study was conducted by (Feroze and his colleagues 2017) stated that there is positive association between the knowledge and practice about patient's safety after Cardiac Catheterization [9,10]. (Wolf and his colleagues 2003) claimed that the cardiac patients (N = 73) undergoing interventional cardiology studies reported perceptions of nurse caring and patient satisfaction with care. A moderately strong relationship ($r = 0.53$, $p = 0.01$) between caring and satisfaction was found. Male and female subjects did not differ on perceptions of caring and patient satisfaction. Since caring is considered fundamental to the nature of nursing, practicing nurses must appreciate its connection to outcomes, such as patient satisfaction. Nurses who have proper knowledge and practice can help in rehabilitation of patients. According to the stated facts, the present study attempts to evaluate practices of nurses toward patients who have undergone cardiac catheterization by (the patient perspective) [11].

2. Methodology

A descriptive cross-sectional design was carried out through the present study in order to achieve the early stated objectives for period January 4th 2017 to August 6th 2017. The study is conducted at AL-Najaf Center for Cardiac Surgery and Cardiac Catheterization.

A convenient sample of (100) patients undergoing cardiac catheterization patients that admitted to cardiac catheterization units. The researchers obtained official permission from The Director of Health in Al- Najaf city. A questionnaire form was developed by the researchers to obtain appropriate answer, and it consists of: **Part one:** socio-demographic variables: age, gender, level of education, social status, occupation, economic status, and residence. **Part two: (patient perspective)** 30 questions regarding to the nurses' roles towards patient undergoing cardiac catheterization were used to asking the patient admitted to al-Najaf cardiac center units to evaluate the nurses' practice according to their perspective.

The questionnaire was designed in English and then translated into Arabic, the data were collected through using of questionnaire format of interview with the patient. The validity of an instrument concerns its ability to gather the data that it is intended to gather. Content validity for the early developed instrument is determined through the use of panel of experts (who have more than 5 years of experience at their jobs field). A preliminary copy of the questionnaire was designed and presented to (7) experts.

The data were entered into Spss (version 22) in order to describe the statistical results as follows (Frequency distribution and Bar chart, and Chi-square). The study limitations were lack of relevant studies in Iraq regarding our study, and lack of cooperation from some patients as volunteers.

3. Results of study

Table 1: Distribution of The Study Sample by their Demographical Characteristics.

| Category | rating and interval | Frequency | Percentage % |
|-----------------|------------------------|-----------|--------------|
| Age (Years) | <= 35 | 7 | 7.0 |
| | 36 - 49 | 29 | 29.0 |
| | 50 - 63 | 38 | 38.0 |
| | 64 Up | 26 | 26.0 |
| Gender | Male | 61 | 61.0 |
| | Female | 39 | 39.0 |
| Residence | Rural | 66 | 66.0 |
| | Urban | 34 | 34.0 |
| Education level | Illiterate | 20 | 20.0 |
| | Reads and write | 6 | 6.0 |
| | Primary school | 18 | 18.0 |
| | intermediate school | 18 | 18.0 |
| | secondary school | 17 | 17.0 |
| | Institute / College | 21 | 21.0 |
| Social Status | Married | 73 | 73.0 |
| | Single | 6 | 6.0 |
| | Widowed | 14 | 14.0 |
| | Divorced | 4 | 4.0 |
| | Separated | 3 | 3.0 |
| Occupation | Government employee | 20 | 20.0 |
| | Free business | 29 | 29.0 |
| | Retired | 8 | 8.0 |
| | Housewife | 25 | 25.0 |
| | Student | 1 | 1.0 |
| | Jobless | 17 | 17.0 |
| Economic status | Adequate | 29 | 29.0 |
| | Adequate to what limit | 55 | 55.0 |
| | Inadequate | 16 | 16.0 |
| Total | | 100 | 100% |

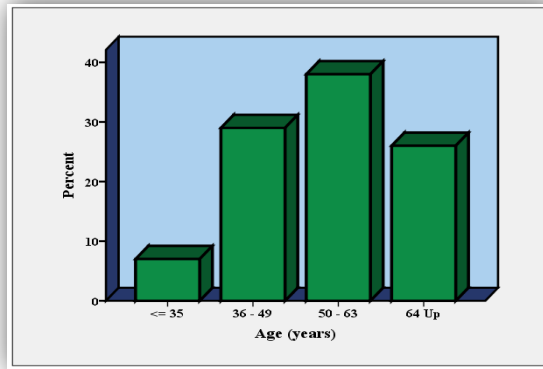


Figure 1: patients' age

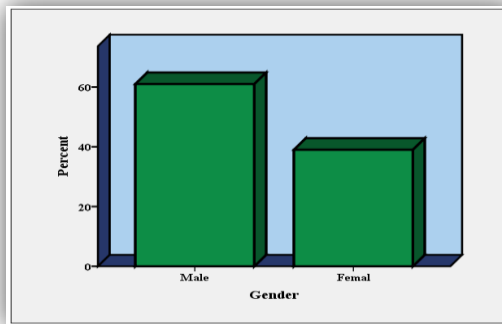


Figure 2: patients' gender

This table show that the patient 50 -63 years of age (38%) have a higher percentage , the male pateint (61%) is more than female pateint about , the rural (66%) Residence of patient is more than the urban residence about , Education level show the Institute/ College(21%) more than other educational level , the married (73%) patient have a higher percentage , the free business (29%) have a higher percentage , and the economic is adequate to what limit for living (55%) .

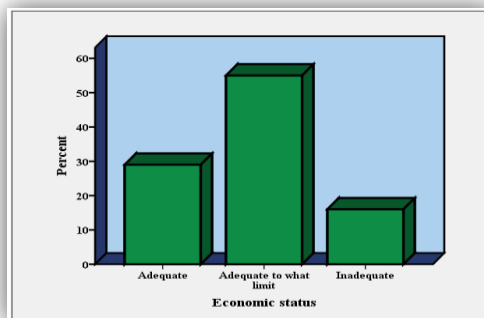


Figure 3: patients' economic status

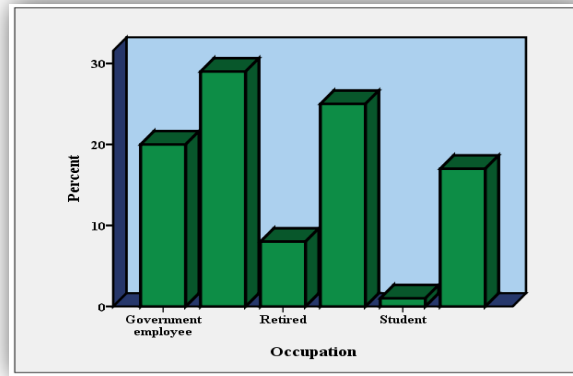


Figure 4: patients' occupation

Table 2: Nurses' Roles towards Patient undergoing Cardiac Catheterization (Patient Perspective).

| Category | M.S. | Frequency | Percentage % |
|---|--------------|------------|--------------|
| Role the patients' perspective toward Nurse's | Agree | 89 | 89.0 |
| | Disagree | 7 | 7.0 |
| | I don't know | 4 | 4.0 |
| Total | | 100 | 100% |

M.S.=mean of score

The table (2) show that (89%) of patient undergoing cardiac catheterization is agree with the nurse's role

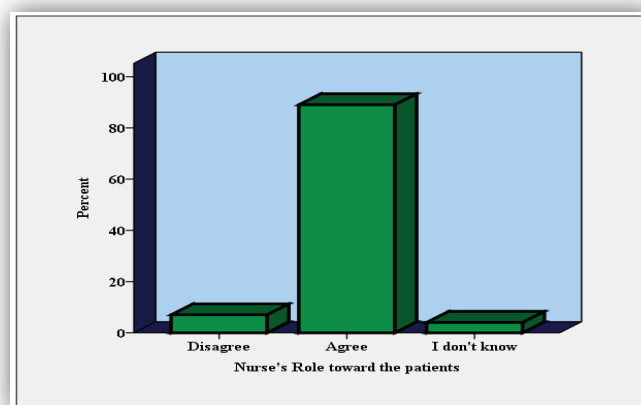


Figure 5: patients' perspective toward nurses roles

This table indicate that there is a non –significant association between the (age, gender residence, social status and occupation) and the patient perspective at p value 0.05.and indicate that there is a significant association

between (educational level, and economic status) and patient perspective at p value 0.05.

Table 3: Causes Relationship between Nurse's Role toward The Patients and Their demographic Data.

| Category | Chi-square | d.f | P-value (sig.) |
|-----------------|------------|-----|----------------|
| Age (Years) | 4.496 | 6 | 0.610 (NS) |
| Gender | 1.310 | 2 | 0.519 (NS) |
| Residence | 13.240 | 10 | 0.211 (NS) |
| Education level | 40.121 | 8 | 0.006 (HS) |
| Social Status | 4.680 | 10 | 0.912 (NS) |
| Occupation | 1.767 | 4 | 0.778 (NS) |
| Economic status | 20.264 | 2 | 0.026 (S) |

NS= non-significance, HS= high significance, S= significance, d.f.= degree of freedom, P-value= probability

4. Discussion

Catheterization is a procedure used to treat various forms of heart and vascular disease. The procedure is performed in an area of the hospital called the catheterization laboratory, or “catheterization lab. This procedure will insert long, thin tubes called catheters into blood vessels in your arm, leg or neck. The catheters are then threaded up to your heart or other vessels. The catheters are used to measure pressures in different parts of the circulation and the amount of blood that the heart is pumping [12]. In the present study, the table (2) show that (89%) patients were agree with the nurse's role that applied at AL-Najaf Center for Cardiac Surgery and Cardiac Catheterization , this mean the nurses' roles were good towards patient undergoing cardiac catheterization. This finding was inconsistent with study result one by **Laal 2013** which referred that about only half op patient participated in the study had good perspective toward nurses role and quality of care provided [13]. While later study done in Nigeria by **Folami and Odeyemi 2019** agreed with existing study results, they reported that majority of patients about 80 % showed excellent satisfaction toward quality care and role delivered by nurses [14]. A study done in India by **Feroz and his colleagues 2017** showed that nurses reported poor practice but good knowledge which may indicate that patient perspective and satisfaction of nurses role and care might be connected to the quality of care perceived during hospitalization for cardiac catheterization [9]. This evidence supported by **Rafil and his colleagues 2008** which their results showed that better quality of care lead to better level of satisfaction of nurses’ roles and care given from patients’ perspectives [15]. Similarly, an Egyptian study done by **Thabet, 2019** reported inadequacy of nurses’ knowledge and practice may lead to decrease of satisfaction of care from patients’ perspective [10]. Table (3) indicate that there is a non – significant association between the (age, gender residence, social status and occupation) and the patient perspective at p value 0.05, and indicate that there is a significant association between (educational level, and economic status) and patient perspective at p value 0.05. This result disagree with study done by **Samira A. 2006**. the study result said, inadequately performed pre catheterization practices that influenced the association in this context were obvious throughout the mean of score for non-significant items of these practices, as a matter of fact, nurses did not explain the procedure; the risk; the complication; being a wake during procedure; the what will be experienced during the procedure. They also did not insert the intravenous line due to the unit's

policy, nurses did not perform shaving to the patients because all the patients were informed to shave at home prior to their admission to the unit and they did not tell the patients to participate during the procedure [16]. Regarding the relationship between the patient perspective and demographic data, another work prepared by (Laal 2013) indicated that (female gender, age group less than 50 years old, single marital status, self-employed patient and rural residency) had significant differences and exposed better perspective toward nurses role and were more satisfied with performance of staff [13]. A study investigated nursing assessment of patient readiness for ambulation after cardiac catheterization. The study found that although nurses routinely perform activities that prevent or defect vascular complication following a cardiac catheterization, determining patient readiness for ambulation has received minimal research attention, educating nurses to determine patients' readiness for ambulation is a safe and effective way to promote patient comfort (Dadds A., 2007). This study agree with our study [17,18].

5. Conclusion

More of the study samples were male with age (30 –63), More of the study group with college level of education, More of the study have free business, and the nurses have a good practice toward patient undergoing cardiac catheterization according to patient perspective. Thus, better knowledge and practice of nurses improve the patients' perspective of nurses' role and more satisfaction toward quality care received by patients.

6. Recommendations

Nurses, who working in cardiac center, should be hired with certain qualification, which are related to the performance of such high quality practices, special training programs should be designed and constructed for nurses in this area to reinforce their skills and promote their experience, and the standards for such practices bill should be created and presented to all ties in which such practices are performed.

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