

Psychosocial Needs among Patients Undergoing Coronary Catheterization

Thesis

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

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List of Abbreviations

Abbrev.	Full-term
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CAD : Coronary artery disease

CVDs : Cardiovascular diseases

MI : Myocardial infarction

SD Standard deviation

SPSS : Statistical package for social sciences

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ABSTRACT

Coronary catheterization can be a stressful experience for many patients because of its invasive nature and potential risks. **Aim:** Assess psychosocial problems among patients undergoing coronary catheterization. **Setting:** the cardiac department and cardiac care unit at Ain Shams University specialized hospital, Egypt. **Sample:** A purposive sample composed of 100 patients undergoing coronary catheterization attending the previous mentioned setting. **Tools:** *First tool*, socio demographic interviewing sheet. *Second tool*, disease history questionnaire. *Third tool*, Patients' psychological and social problems questionnaire. **Results:** The mean age of studied patients was 53.6 ± 4.2 , more than two thirds of them were married, more than one third of them had technical institute education, the majority of the studied patients were working, More than two thirds of the studied patients were males and more than half of the studied patients were had enough monthly income. There is a highly statistical significant relation between age, gender and marital status of the studied patients and their severity of psychosocial problems. **Conclusion:** About half of the studied patients were always fear from death, anxious due to unknown procedure about catheterization & fear from hearing that someone death due to catheterization. Also, more than one third of the studied patients were always had family support by frequent visits, need others help before and after procedure, fear from affecting sexual desire & feel fatigue when doing any activities. Moreover, more than one third of the studied patients were always change work style after catheterization procedure, decrease ability to prognosis & decrease working hours. One third of the studied patients were sometimes had medical insurance & treatment at the expense of the state, while one third of them was rarely not had enough monthly income. More than one third of the studied patients were always had psychological, social& work respectively. **Recommendations:** Further research studies are needed for ongoing assessment of patients including large sample for generalization of results.

Key words: *Psychosocial problems, Coronary catheterization.*

Introduction

Cardiovascular diseases (CVDs) are currently the major cause of mortality and morbidity around the world. Among the CVDs, coronary artery disease (CAD) is the most common cause of deaths related to CVDs. Coronary catheterization is the best tool and gold standard for diagnosis of CAD. Coronary catheterization is an invasive procedure which is routinely used for the assessment and diagnosis of CAD. Coronary catheterization is generally an elective procedure in which a symptomatic patient with heart disease follows a protocol that requires admission to hospital (WHO, 2018).

Coronary catheterization is the insertion of a catheter to the heart by puncturing the groin site via the femoral artery. In this procedure, dye is injected and the extent and severity of stenosis of the coronary arteries are assessed (Tavakol et al., 2014).

Although being the test of choice to diagnose and treat coronary disease, it still presents potential risks, such as arrhythmias, embolism, neurologic alterations, vasovagal changes, in addition to ischemic, allergic and vascular complications (Guérios et al., 2014).

Coronary catheterization can be a stressful experience for many patients because of its nature. Certain psychological and somatic dysfunctions whose connection with the inciting incident may be only temporal which can be observed. Anxiety alters the patient's vital signs; it results in physiological responses such as tachycardia, hypertension, elevated temperature, sweating, nausea and a heightened sense of touch, smell or hearing. A patient may also experience peripheral vasoconstriction. Anxiety may cause behavioral and cognitive changes which can result in increased tension, apprehension, nervousness and aggression. Some patients may become so nervous and apprehensive that they cannot understand or follow simple instructions. Some may be so aggressive and demanding that they require constant attention of the nursing staff. Patients with low anxiety tend to adopt a joking attitude **(Beckerman , 2015)**.

Patients with moderate anxiety may experience minor emotional tension occasional worry and fear usually they suffer from insomnia, and they respond well to mild sedatives. Their outward manner may seem relatively calm and well controlled, except for small moments where it is apparent to others that the patient is suffering from an inner conflict. They can usually perform daily tasks, only becoming restless from time to time. These patients are usually very motivated to develop reliable information from

medical authority in order to reach a point of comfortable relief. Patient with low anxiety usually deny apprehension about operational dangers (Ali, 2015).

Significance of the study

In daily practice it is observed that, patients undergoing coronary catheterization suffered from psychosocial problems due to stress and anxiety. Relatives are also stressed and share feelings and uncertainties with the patients, thus turning the situation more complex for the nursing team, since these experiences are mainly witnessed by nurses. In the daily routine, nurses find it difficult to deal with patients' psychosocial problems during catheterization period. In face of this situation, nurses should assess psychosocial problems among patients undergoing coronary catheterization to deliver a better care, thus diminishing the stressing factors to reduce patients' stress (Aboalizm et al., 2016).

Aim of the Study

This study aims to:-

- Assess psychosocial problems among patients undergoing coronary catheterization.

Research Questions:-

This study is based on answering the following question:

- What are psychosocial problems among patients undergoing coronary catheterization?

Review of Literature

I. Cardiac Catheterization

Cardiac catheterization is the insertion of a catheter into a chamber or vessel of the heart. This is done both for diagnostic and interventional purposes. Subsets of this technique are mainly coronary catheterization, involving the catheterization of the coronary arteries, and catheterization of cardiac chambers and valves of the cardiac system (**Aggarwal, Kumar, Gregory, Blair, Pauwaa & Tatooles, 2013**).

Procedure

According to **Nicolette and Mininni, (2012)** the cardiac catheterization determined as general term for a group of procedures that are performed using this method, such as coronary angiography and left ventricle angiography. Once the catheter is in place, it can be used to perform a number of procedures including, coronary angioplasty, balloon septostomy, electrophysiology study or catheter ablation.

Although **Lichtman, Froelicher, Blumenthal, Carney and Doering, (2014)** reported the procedures can be diagnostic or therapeutic. For example, coronary angiography is a diagnostic procedure that allows the interventional cardiologist to visualize the coronary vessels. Percutaneous coronary intervention, however, involves the use of mechanical

stents to increase blood flow to previously blocked (or occluded) vessels.

Other common diagnostic procedures include measuring pressures throughout the four chambers of the heart and evaluating pressure differences across the major heart valves. Interventional cardiologists can also use cardiac catheterization to estimate the cardiac output, the amount of blood pumped by the heart per minute (**ElBardissi, Aranki, Sheng, O'Brien, Greenberg & Gammie, 2012**).

Finally cardiac catheterization requires the use of fluoroscopy to visualize the path of the catheter as it enters the heart or as it enters the coronary arteries. The coronary arteries are known as "epicardial vessels" as they are located in the epicardium, the outermost layer of the heart. Fluoroscopy can be conceptually described as continuous x-rays. The use of fluoroscopy requires radiopaque contrast, which in rare cases can lead to contrast-induced kidney injury (**Lomivorotov, Efremov, Boboshko, Nikolaev, Vedernikov & Lomivorotov, 2013**).

Categories of Cardiac Catheterization

Left heart catheterization allows for direct intervention in cases of coronary artery occlusion. This technique is also used to assess the amount of occlusion (or blockage) in a coronary artery, often described as a percentage of occlusion. A