ORIGINAL ARTICLE

Evaluation of the Parameters Influencing Nurses' Effectiveness in the Treatment of Patients after Coronary Artery Bypass Graft Surgery in ICU

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ABSTRACT

Aim: A popular process used to treat coronary thrombosis heart disease is coronary artery bypass transplantation. It entails by means of the segment of the vein or an artery to join aortic and coronary arteries well beyond occlusion. The purpose of our current study was to evaluate parameters influencing nurses' effectiveness in the treatment of people after coronary artery bypass graft surgery in intensive care units at Services Hospital Lahore.

Method: Explorative research design. The research was carried out in the Cardiothoracic Intensive Care Unit and the Advanced Intensive Care Unit at Services Hospital in Lahore. A suitable sample of 50 nurses was used. An identity questionnaire consisting of three sections: Part 1: Demographic information on nurses. Part 2: nurses' understanding of people undergoing CABG care Part 3: Factors influencing nurses' competence in the treatment of CABG patients. Tool II: An observational questionnaire to evaluate nurses' performance.

Results: It was shown that 58.6 percent of the nurses investigated were females between the ages of 19 and 39. 54.7 percent of nurses finished diploma nursing programmes, and 67.1 percent of nurses had a little more than ten years of ICU experience. The current study found that almost half of the nurses investigated had insufficient absolute knowledge and poor total practice when it came to caring for patients. 92 percent of nurses are unaffected by nurse-related issues. While overall patient-related issues impacted 12% of them. 63.6 percent of nurses are unaffected by all work-related issues. Furthermore, the findings show that there is no strong relationship among Nurses' Education and Skills Scores and variables influencing nurse performance. There was no significant relationship between total awareness and education among the nurses investigated.

Conclusion: According to the study findings, nurses exhibited an unsatisfactory level of knowledge and practice when it came to caring for patients.

Keywords: Coronary Heart Disease, Coronary Artery Bypass Transplantation, Nurses' Effectiveness.

INTRODUCTION

Coronary illness refers to a set of disorders that affect both the heart and the blood arteries, such as coronary heart disease, artery disease, and sudden cardiac arrest. The global incidence of CAD in the 61–78-year-old age group was 21.8 percent in males and 10.8 percent in women. In this age range, 12.4 percent of males and 5.3 percent of women had suffered a heart attack [1]. CAD was found in 34.3 percent of males and 17.9 percent of women over the age of 81. In this age range, 18.4 percent of males and 9.7 percent of women have experienced MI. In Pakistan, 108, 237 people died from coronary artery disease, accounting for 24.15 percent of all fatalities. The time of life mortality rate in Lahore is 189.37 per 105,005 people, placing it 23rd in the world [2]. Coronary artery disease is caused by atherosclerosis, a condition in which lipids like cholesterol and other chemicals accumulate in walls of blood vessels that carry blood to the heart and other areas of body. Plaque development sources walls of blood vessels to widen over time, which can partially or completely obstruct blood flow [3]. As a lead, the heart muscle does not get enough blood, which could also outcome in chest tightness or uneasiness, the most frequent sign of CAD. In particular, arrhythmia (irregular heartbeat) might occur. High, low-density plasma, and low-density lipoprotein cholesterol are significant risk factors. Blood pressure is deemed high if it remains at or above 140/90 mmHg for an extended period of time. High blood pressure is defined as 133/84 mmHg or above whether there is diabetes or glomerulonephritis [4]. These risk factors for CAD can be exacerbated by smoking, a lack of physical exercise, and a poor nutrition. Plaque builds up in arteries with age caused by genetic or lifestyle factors. The risk rises if the father or brother was diagnosed with CAD before the age of 57, or if the mother or sister were identified as CAD before the age of 67 [5].

METHODOLOGY

Appropriate adherence using prescribed postoperative treatment following CABG continues to be an issue that health care practitioners face across all locations and groups. According to prior study, noncompliance during postoperative care poses a hazard to a satisfactory result. If the nurse is unable to sustain postoperative care conformance, this will result in issues for the clients, extending their duration of hospital stay, illness, and death, as well as increasing the expenses of treatment and the efforts of the care professionals. It was written in Arabic to prevent confusion. The researcher built it after researching pertinent literature and expert comments for internal reliability, and it contained the 3 segments listed below. It was made up of seven close-ends. Nurses' age, age, degree of education, overall years of experience, years of experience in ICU, and education programs are all inquiries. This section was designed to measure nurses' knowledge of coronary artery bypass graft patient safety. It was made up of six key questions, all of which were numerous MCQs, including such (definition of revascularization, indications for surgery, prevalent arteries used only for grafting, especially in the post difficulties, causes of bleeding after surgery, timeframe of prophylactic antibiotic after surgery). It was made up of eight questions (proof of efficient nursing care to patient with aerobic respiration failure, nursing role to client having gas exchange failings, and so on...). It consisted of three questionnaires: advantages of integrating lubricants in ventilators, temperature of fluids placed in lubricant, and wet rant loaded with. For the relevant questions, a correct reaction received a 1 and an erroneous response received a 0. For each area of expertise, the item scores were added together and total was divided by sum of objects, yielding the average score for section. Those results remained translated to the percentage score. Understanding was regarded good if the percentage score was 64 percent more than, and unacceptable if the percent score was less than 62 percent. It consisted of 6 (low, medium, and high) inquiries about symptoms, acute illnesses, chronic diseases, obesity, eye difficulties, and hearing impairment. The elements marked "not done" on the had been received a score of zero. For each method, the item scores were added together and the result was divided it through sum of matters, yielding the weighted way for section. Those results were translated into percentages. Derived from data gathering, the practice was regarded good if the percent score was 61 percent or more, and unacceptable if it was less than 64 percent. It was designed to ensure validity and reliability by a panel of 8 experts in doctors and health surgical nursing at Services Hospital who

revised the tools for simplicity, applicability, thoroughness, comprehension, and simplicity of execution, and subtle things were made based on their feedback.

RESULTS

The study sample comprised of 50 nurses; considering their age, 59.6 percent of the nurses (59.6 percent) varied from 19-39 years old and were all females. Furthermore, 96.1 percent were married. In terms of nursing qualifications, more over half of all nurses (53.6 percent) held a Diploma of Nursing. Additionally, fewer than half of nurses (43.6%) had more than 19 years of overall hospital experience with a mean SD of 17.39.5, while almost two-thirds of nurses (67.1%) had more than 10 years of experience in the ICU with a mean SD of 13.28.5. However, nearly three-quarters of nurses (76.1%) had not received multiple patient-care training. 88.6 percent did not have enough money, whereas 13.6 percent did. According to this table, the overall good competence of nurses on coronary artery bypass surgery was (6 percent). The greatest levels of satisfaction were associated to the duration of preventive antibiotics before surgery (96%) and the causes of bleeding after surgery (93.6%), whereas the lowest level was connected to Especially in the post problems (18.6 percent). This table demonstrates that the entire expert knowledge of nurses on nursing care in terms of respiratory workout is shown (23.6 percent). The most gratifying understanding was connected to the primary goal of respiratory exercise (93.6 percent). This chart also demonstrates that the complete decent knowledge of the nurse for nursing care related diet and fluids was (33.1 percent). The most gratifying understanding was connected to the Measures utilized during Ryle's insertion (98.6 percent). Whereas the lowest acceptable understanding (36.1 percent) was connected to preventing the viscosity of respiratory output, it reveals that the total satisfied knowledge of nurses addressing nursing care towards infection prevention is high (12.1 percent). The most satisfied knowledge was connected to the period of replacement of saline used for cleaning tubes (98.6 percent). The least satisfactory understanding was connected to the time of sterilization of the ambo bag (22.1 percent).

Table 1:

Factors	Pearson's association coefficient			
	Knowledge		Practice	
	R	P value	R	P value
Patient			0.18	0.295
Nurse	-0.014	0.939	0.005	0.983
Work	-0.097	0.549	0.178	0.274
	-0.006	0.976	-0.067	0.689
Total	-0.04	0.856	-0.008	0.965

Table 2:

	Suitable knowledge	
	No.	Percentage
antibiotic after surgery	38	96.1
coronary artery	9	24.6
Surgery Signs	7	18.6
Common arteries	30	76.1
post-operative problems	12	32.1
bleeding after surgery	34	92.5
Total	23	6.1

DISCUSSION

Coronary artery bypass grafting is now a viable therapy option for CAD. CABG surgery has been shown to be more beneficial than medication therapy in alleviating angina and increasing exercise tolerance, as well as extending life in cases having left key CAD and three-vessel illness without poor left ventricular purpose [6]. A cardiothoracic surgery nurse ought to be fully capable to care for people since such individuals require specialized nursing care; standard nursing care to enhance their circumstances and aid in the prevention or reduction of probable postoperative problems. Nurses should establish their own standards of care, and the

profession as a whole will agree on appropriate levels of quality [7]. Furthermore, upwards of half of the nurses investigated had a secondary school certificate, and fewer than half of the nurses had more than 21 years of hospital experience, with an average of 17.39.4, but more than half of the nurses analyzed had 10 years of ICU experience. Because the majority of nurses in the past were females, the gendered of a female was higher than that of a guy. In terms of the examination of nurses' features, the current study found that the ages of further than half of the nurses surveyed ranged from 219 to 39 years [8]. In terms of the gender of the nurses researched, the current study found that all of the nurses analyzed were females. This might have been attributable to the fact that the majority of nurses in Pakistan are females, or it could be connected to the fact that nursing studies in Pakistani universities were exclusively available to females until a few centuries prior [9]. This conclusion is similar with who did research on nurses' self-efficacy and behaviors linked to weight control utilizing surgical procedures and finding that the number of nurses were females, confirming the profession's gender bias. In terms of years of experience, the present study found that more than half of the nurses analyzed had 10 years or more of experience in ICU since they had a qualification and license to practice their area. According to the result of this research, less than half of the nurses tested had adequate understanding of postoperative diet. This might be because nurses did not provide basic nursing advice to individuals following surgery. This finding contradicts the findings of another researcher who published a survey on nutrition knowledge and behaviors of post bariatric weight loss individuals and discovered that far more than half of the nurses in his survey had an acceptable level of understanding regarding postoperative nutrition after bariatric surgery. According to the British Journal of Nursing, as part of their obligations in surgical treatment, nurses must be conscious of the hazards of surgical patients, as well as understanding the pertinent anatomy and physiology underlying the treatment [10].

CONCLUSION

The half of nurses in the destined ICU finished school from nursing school, their participants ranged in age from 19 to 39 years, and possibly a bit more than three quarters of them had more than ten years of experience in the ICU. In connection to the variables contributing nurses' performance, almost all of the nurses had unsatisfactory total knowledge and almost all of the nurses had unsatisfying total practice. In addition to more than two-thirds of nurses not being impacted by total variables associated with work, and far more than one-third of nurses being impacted by total variables related to work, there was no statistically significant relationship among education and experience, demographic data, and performance parameters.

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