Educational needs of patients undergoing coronary artery bypass graft

Razieh Parizad[1], Mitra Mousavi Shabestari[1]*, Akram Movasegi[1], Elham Porshahbazi[1], Khadijeh Shafayi1

Abstract

Objectives: Cardiac surgery associates with potential physiological, mental, and emotional, growth and spiritual consequences due to the existence of many stressful factors. Training and learning patients can decrease risk-creating and stressful factors. Such a learning approach should be designed based on patients' needs and such needs should be identified by nurses before to any learning. However, there are rare studies focusing on the identification of patients' learning needs. Thus, this study aims to determine patients' awareness of learning needs for Coronary Artery Bypass Graft (CABG).

Material and Methods: This is a descriptive study carried out within 6 months on 101 cases undergone CABG (36 females and 65 males) in Tabriz Shahid Madani education and treatment center. They were investigated at the time of discharging from ICU and surgery departments. Patients' needs were determined using Cardiac Patients' Needs Learning Inventory (CPNLI) tool.

Result: According to findings, patients give the most important priority to the drug index. The next learning needs perceived by patients are :"How will my heart be treated?" related to "anatomical and physiological learning needs category", "what kind of activities can be done to reduce heart attack chance?" related to "risk factors learning needs category" and "how patients' activity level can be increased?" related to "physical activity learning needs category".

Conclusion: The prerequisite for implementing any learning program is the investigation and measurement of learning needs. Therefore, before initiating any learning program nurses need to continuously assay learning needs of patients while considering patients' abilities.

Key words: Coronary Artery Bypass Graft,   Educational Needs

Introduction

The prevalence of cardiovascular problems and, as a result, the number of people with cardiovascular disease is increasing in Middle East, especially in Iran every year (1). Coronary Artery Bypass Graft surgery, (CABG), is the only essential and vital solution for cardiovascular patients (2) and is one of the most important surgeries conducted frequently every day (3). CABG surgery is an important event with deep mental and emotional effects on patients and their families (4).

Today, patients experience a shorter post-surgery hospitalization than before and according to expectations, this period will be shortened more in future. This new situation demands new measures for caring patients at home (5). Since most patients have no sufficient time to acquire necessary information about their disease during hospitalization, they view discharging as a very stressful event (6).

Therefore, learning can serve as an effective approach for promoting patients' awareness and decreasing their anxiety (7). According to studies, patients' learning improves the sense of post-surgery improvement in patients (8). Learning needs during hospitalization differ from learning needs during discharging and learning needs during self-caring period at home. The assessment of learning needs can be helpful in responding such needs and can affect patients' life style (9).

It is necessary to identify and explain these beliefs in order to effectively learn patients. It seems that such interventions would be more effective if they are designed based on coping style of each patient (10). Nurses need to personally assess their patients and establish an open relation with them (11). Learning needs during hospitalization differ from learning needs during discharging and learning needs during next steps.

Such needs should be assessed accurately in order to make proper actions to respond them (12). For this purpose, by considering the ability of patients, all influential factors should be investigated and learning content should be designed based on learning needs (1).

Material and Methods

This is a descriptive study carried out within six months from October 2014 to March 2015 in ICU and surgery departments of education and treatment center of Shahid Madani hospital in Tabriz, Iran. First of all, patients' who satisfied inclusion measures were determined. Patients who undergo CABG surgery for the first time and were conscious and aware of time and location were studied at the time of discharging from ICU and surgery departments.

In 1984, Gerard developed Cardiac Patients Needs Learning Inventory (CPNLI) tool with questionnaire as data collection tool. This questionnaire consists of two parts. The first part covers demographic information while the second part deals with CPLNI tool including 37 questions of 6 categories: learning, anatomical and physiological questions, risk factors questions, medicinal information questions, diet information questions, physical activity questions and miscellaneous questions. The questions are scored as per Likert 5-point scale from 1 to 5 where 1 stands for not important, 2 stands for less important, 3 stand for relative important, 4 stands for important and 5 stands for very important.

All statistical analyses were carried out by SPSS 13. Frequency, percentage, mean and standard deviation were calculated using descriptive statistics. The total score of CPLNI factors was calculated using the scores allocated by each patient to all 37 questions and the maximum and the minimum scores were determined. $P \leq 0.05$ was set as the limit of statistical significance

Results

Thirty four (85%) did not have any university education. Twenty-four (23.7%) patients were seen training before surgery (Table 1). Sixty-five (64.3%) of patients were male. Total standard deviation of CPLNI was obtained as 4.29 ± 0.56 implying the importance of patients' awareness of learning needs for CABG surgery. Regarding the obtained mean value, the learning needs of patients in the subsystems of anatomical and physiological questions, risk factors questions, medicinal information questions, diet information questions, physical activities questions and miscellaneous information questions lie inside "important" range where learning needs for medicinal information is more important than other subsystems(Table 2).

The most perceived learning needs are "how will my heart be treated" belonging to "anatomical and physiological learning needs category", "what kind of activities can be done to reduce heart attack chance?" belonging to "risk factors learning needs" and "How patients' activity can be increased" belonging to "physical activity learning needs". However, the lowest perceived learning needs are "being in sick mood" belonging to "anatomical and physiological learning needs", "restarting sexual activities" belonging to "physical activities learning needs" and "the meaning of cholesterol and triglyceride words" belonging to "diet information learning needs" (Table3).

Table 1: Baseline personal characteristics of patients who were undergoing coronary artery bypass surgery

	Characteristics	Frequency	Percent
Education	Illiterate	34	85
	Pre – university education	47	46.5
	Diploma	11	22.2
	University education	9	38.1
Marital status	Single	9	8.91
	Married	92	91
Preoperative Education	Yes	24	23.7
	No	77	76.2
Ward	Men Surgical Department	53	52.4
	Female Surgical Department	22	21.7
	Intensive Care Unit	26	25.7

Table 2: Calibration the importance of the training needs of coronary artery bypass surgery patients

Training Needs	
Titles of training needs	**Calibration**
Drug Information	1
Physical Activity	2
Risk Factors	3
Other Information	4
Anatomy and Physiology	5
Diet Information	6

Table 3: The mean level of awareness the needs of patients with coronary artery bypass surgery

Training Needs		
Titles of training needs	**Mean and standard deviation**	**Confidence interval**
Anatomy and Physiology	4.26 ±0.55	4.07 -4.44
Risk Factors	4.36±0.58	4.16-4.56
Drug Information	4.42±0.65	4.20-4.64
Information Diet	4.25±0.73	4.01-4.50
Physical Activity	4.37±0.70	4.13-4.61
Other Information	4.34±0.72	4.09-4.58

Discussion

Learning is a dynamic issue of nursing. The determination of the priority of learning needs is the first step for learning programming. Therefore, nurses need to determine learning needs during hospitalization period or a short time after the illness (13). The extent of patients' awareness of CABG surgery lies inside "very important" category. This implies that patients need more learning. Through individual assessments and establishing an open relation with their patients, therefore, nurses can aid patients to satisfy their learning needs.

With an average score of 4.42, medicinal information subsystem is a high required learning need in our study. The study of Vahabi and Berner with the title of "investigating the learning needs of people with heart failure" showed that the most required learning need for patients is medicinal information need (14) that agrees with our study. It is better for nurses to pay more attention to learning medicinal information to their patients.

With a mean score of 4.54 the learning need of "actions to be done to reduce heart attacks" has the highest rank. In Rostami and etal study with the title of "learning needs of patients with myocardial infraction", this learning need had a mean score of 4.78 (15) implying that this study's patients have more learning needs than those of our study. However, it is better for nurses to inform patients of necessary actions to be done to reduce heart attack through establishing an open and continuous relation with patients.

With a mean score of 4.14, the learning need of "restarting sexual activities" is the least scored measure with the lowest priority. In Rostami and etal study with the title of "learning needs of patients with myocardial infraction" this learning need had a mean score of 2.30 (14).

Also, Torenton has express that sexual issues should be ranked as lower priorities and learning programs should be practiced in accordance with learning needs of patients (16).

Conclusion

The main emphasis of this study is patients' awareness of learning needs for CABG surgery. According to results and considering the importance of patients' learning needs for drug consumption, this necessity, especially the need for heart drugs information, should be explained to patients. It is recommended to prioritize the learning needs of patients at first and then put necessary training into practiced on this basis

Conflict of Interest: The authors declare no conflicts of interest.

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