Evaluation of patients' self-care behaviors post percutaneous coronary intervention

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Abstract

Objective: The present study aims to evaluate of patients' behavior with regard to self-care post Percutaneous Coronary intervention patients and to determine the relationship between self-care and their demographic characteristics.

Methodology: A quasi-experimental pretest-posttest design was used in the study. with the application of pre- and post-test approach for both groups (study and control). This study was applied at Al-Basra oil hospital from October 14th, 2021 to June 2nd, 2024. The questionnaire was used to collect the data includes socio demographic, clinical characteristics, self-care Questionnaire.

Results: Statistically significant differences were observed between both according to the results groups ($p < 0.001$). Improvement in self-care was common among the intervention group. The control group had opposite trends, with self-care skills decreasing. demonstrated fair ratings, as reflected by mean scores ranging from 1.67 to 2.33. It is essential to highlight that statistically significant differences in self-care practice scores were observed between the study and control groups during the post-assessment period ($p<0.05$).

Conclusions: According to the findings of the study, a systematized and structured educational program, is effective in developing self-care skills inpatients after a Percutaneous Coronary intervention.

Recommendations: Based on the results that appeared in the study, we recommend that an educational program be organized to raise the level of knowledge post Percutaneous Coronary intervention patients self-care.

Keywords: self-care, behaviors, percutaneous coronary intervention

Introduction

Chronic disease management requires a high demand for ongoing care and has the dimension of priority in healthcare [1]. The morbidity rate for cardiovascular diseases is the highest among chronic diseases [2]. The high rate of hospital admissions for acute conditions. The combination of coronary syndrome and low adherence to cardiac rehabilitation (CR) constitutes. Nurses have an opportunity to develop interventions designed to encourage patients to Participate actively in their own health care. The performance of health-related activities is based on the concept of self-care. Recognition is necessary for the process. A change in a health condition that necessitates remediation and the selection of an option Engage in activities to address these changes [3]. National and international associations, such as the American Association Cardiovascular and pulmonary rehabilitation [4]. As well as the European Association of Cardiovascular Prevention and Rehabilitation [5]. Recommend CR as a secondary Prevention strategy. The World Health Organization defines CR as the "sum of activities required to influence favorably the underlying cause of the disease, as well as to provide the best possible physical, mental and social conditions, so that the patients may, by their own efforts, preserve or resume when lost, as normal a place as possible in the community" [6]. Percutaneous coronary intervention (PCI) is performed to open blocked coronary arteries caused by coronary artery disease (CAD) and to restore arterial blood flow to the heart tissue without open-heart surgery. The PCI is often combined with the permanent placement of a small wire mesh tube called a stent to help prop the artery open and decrease the chance of narrowing it again. Some stents are coated with medication to help keep the artery open (drug-eluting stents), while others are not (bare-metal stents [7]. Self-care is the cornerstone of therapy in cardiovascular risk factor management, and consequently in improving quality of life The positive impact of self-care health behaviors on QOL in cardiac patients has been confirmed in several randomized controlled trials (RCTs) involving short-term (< 6 months) self-care interventions, with 71.0% of findings from RCTs showing improved QOL in the intervention group. Previous research has also produced evidence that self-care management plays a significant role in the improvement of self-care and the reduction of modifiable risk factors such as cholesterol and body mass index (BMI) [8], reducing complications, and preventing recurrences of heart diseases. Little attention has been paid to the effect of modifiable risk factors on the relationship between self-care health behaviors and QOL. If patients can achieve short-term outcomes such as the reduction of risk factors through self-care health behaviors, this will enhance their QOL [9].

Methodology

A descriptive study was conducted Al-Basra oil hospital /Basra/Iraq, the study was carried out between 25th April, 2023 to 31th March, 2024. Non-probability, purposive sample of 40

patient were selected for the purpose of the study. A questionnaire was organized for the purpose of the study, which includes a set of information related to self-care. Content validity of a questionnaire is determined through panel of experts in adult health nursing and internal consistency reliability is obtained through pilot study. Data are collected through the use of the questionnaire and analyzed through the application of descriptive and inferential statistical approaches which are applied by using SPSS version 23 such as frequency, percentage, mean of score, standard deviation and T. test.

Ethical approval was granted by the Scientific Research Ethics Committee at the College of Nursing, University of Baghdad.

Patients' consent to participate in the study was obtained and a consent form was assigned. They were informed of their right to withdraw from the study.

A questionnaire was ®d based on a review of relevant literature and studies. The questionnaire consists of two parts; The first part includes social and demographic characteristics, which include: age, gender, level of education, marital status, occupation, monthly income, and residence. The second part includes clinical information, which includes: Clinical Data Heart diseases, Diabetes Mellitus, Allergy (Asthma), Medical Diagnosis, Duration of diseases, Smoking The third part includes self-care, which includes 25 items and the answer to them according to the three-point Likert scale, where it was (always, sometimes, never). He contents validity of the study tool is investigated through the panel of (10) experts to determine its clarity, suitability, and adequacy to attain the objectives of the study.

Internal consistency was performed for the determination of the study instrument reliability. The Pearson correlation coefficient ® was used for the determination of the reliability of the study instrument. Test-retest correlation coefficients of reliability (r = 0.87).

The study data were analyzed through the Statistical Package of Social Sciences (SPSS), version (23). A descriptive and inferential data statistical approaches were used including frequency, percentage, mean, mean of score, standard deviation, scores, and t. test.

Results

Table 1: Distribution of the patient's socio-demographic characteristics (n=40)

Variables		n	%
Age	20 to less than 30	0	0.00
	30 to less than 40	1	3.3
	40 to less than 50	5	16.7
	50 to less than 60	16	53.3
	60 and older	8	26.7
Gender	Male	25	83.3
	Female	5	16.7
Education level	Illiterate	4	13.3
	Read & write	1	3.3
	Elementary school	6	20.0
	Intermediate school	8	26.7
	High school	1	3.3
	Diploma	0	0.00
	Bachelor's	10	33.3
Marital status	Single	2	6.7
	Married	20	66.7
	Widowed	6	20.0
	Divorced	2	6.7
	Separated	0	0.00
Occupation	Employ	5	16.7
	Free-employ	3	10.0
	Retired	7	23.3
	Unemployed	15	50.0
Residents	Urban	27	90.0
	Rural	3	10.0

No.= Number; %= Percentage

The finding of this table indicated 53.3% of patients at age 50-60 years, 83.3% males, 33.3% high school graduate, 66.7% married, 50.0% Unemployed, 90.0% urban resident.

Table 2: Overall Evaluation of patients' behavior with regard to self-care care post Percutaneous Coronary intervention patients

Self-care	N	%
Poor	22	73.3
Fair	8	26.7
Good	0	0.0
Total	30	100.0

The finding shows that 73.3% of patients had Poor level of self-care. While 26.7 % were at the level fair.

Table 3: Statistical differences in patients self-care practices following percutaneous coronary intervention with regards socio-demographic data

Practices	Source of variance	Sum of Squares	d.f	Mean Square	F-statistic	Sig.
Age	Between Groups	.272	4	.068	.738	.575
	Within Groups	2.303	25	.092		
	Total	2.575	29			
Education level	Between Groups	.484	5	.097	1.110	.381
	Within Groups	2.091	24	.087		
	Total	2.575	29			
Marital status	Between Groups	.386	4	.096	1.101	.378
	Within Groups	2.189	25	.088		
	Total	2.575	29			
Occupation	Between Groups	.186	3	.062	.676	.575
	Within Groups	2.389	26	.092		
	Total	2.575	29			

The findings indicate that there were no statistically significant differences in patients self-care practices following percutaneous coronary intervention in pre test scores with regards their sociodemographic characteristics of the patients ($p > 0.05$).

Table 4: Statistical differences in patients self-care based on their differences in gender and residents

Periods	Groups	M		t-value	d.f	Sig
Gender	Male	1.60	.313	0.202	28	0.841
	Female	1.57	.284			
Residents	Urban	1.60	.322	0.515	28	0.610
	Rural	1.53	.181			

The findings indicate that there were no statistically significant differences in patients self-care practices following percutaneous coronary intervention in pre test scores with regards their gender and residents (p>0.05).

Discussion

The finding of the present study shows that the high percent 53.3% of patients at age 50-60 years, there is a study conducted in Iraq that supported the current study, as it was found that the ages of the patients were older than 50 years [13].

There is a study that supported the results of this study, as the majority of patients were between 40-60% of their ages [2].

The finding of the present study shows that the high percent (83.3%) of the study sample are males more than females. there is a study that supported the results of this study Most of the participants were male 80.5% [9].

The finding of the present study shows that the high percent 33% Bachelor's. There is a study conducted in Iraq, Maysan, which agreed with the current study in terms of educational level, as the majority of patients were in high school graduate [20].

There is a study that agreed with the results of this study, as there was a high percentage 50% Mild certification [5].

The finding of the present study shows that the high percent 66.7 % married. A study was conducted in Iraq that supported the current study, as it was found that the majority of patients' marital status was married [15]. There is a study that supported the results of this study married 80.5% [10].

The finding of the present study shows that the high percent 42.5% housewife. A study was conducted that supported the current results, as the study found that the majority of patients are unemployed 50% [16]. There is a study conducted that supported the current study, as it was found that 80% of patients are unemployed [20].

There is a study that disagreed with the results of this study, as there was a high percentage of 67.6% (125) were employed [9].

The finding of the present study shows that the high percent 90.0% urban resident. There is a study that agreed with the results of the current study within the patients' residence, and the majority of patients were residents of urban cities, at a rate of 60% [18].

The finding shows that 73.3% of patients had Poor level of self-care. While 26.7 % were at the level Fair. There is a study conducted in Ludhiana that supported the results of the current study, as it found a decrease in patients' self-care before giving them an educational program [14] found to be low Hassani *et al*, the higher average self-care agency score and better self-care agency in the intervention group than in the control group are consistent with the findings previously reported in the literature [21].

The findings indicate that there were no statistically significant differences in patients self-care practices following percutaneous coronary intervention in pre test scores with regards their socio demographic characteristics of the patients (p>0.05).

While, was no statistically significant differences in patients self-care practices following percutaneous coronary intervention in pre test scores with regards their gender and residents (p>0.05).

Conclusion

The study concluded that patients have a low level of self-care for post Percutaneous Coronary intervention and need education and courses to enhance their self-care behaviours.

Recommendations

Through the results of this study, which found a decrease in self-care for patients, we recommend that there be educational and counseling programs for patients in the cardiology center, and there are illustrative methods about self-care behaviors to prevent the exacerbation of coronary artery disease and reduce complications.

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