

ORIGINAL ARTICLE

Influence of an Interventional Health Education in Enhancing the Perceived Learning Needs of Patients with Myocardial Infarction

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ABSTRACT

Background: Myocardial infarction is the leading cause of coronary heart disease and death. Because post-MI patients are more likely to have another attack, it is vital that they have enough knowledge about their health and the appropriate self-care. post-MI patients, it is critical for post-MI patients to have adequate health information and self-care, especially if they have risk factors such as smoking, hypertension, hyperlipidemia, obesity, and a lack of exercise.

Objectives: To evaluate influence of an interventional health education in enhancing the perceived learning needs of patients with myocardial infarction.

Methods: A quasi-experimental design was used with the application of pre and post-test approach for both studied and controlled groups. This study was conducted at cardiac advisory department on purposive sample was selected to obtain representative and accurate data consisting of (90) patients at Missan Center for Cardiac Diseases and Surgery, (10) patients were excluded for the pilot study. Data were analyzed using descriptive statistical data analysis approach of frequency, percentage, mean, mean of scores, a total of scores, range and standard deviation and inferential statistical data analysis approach T-test, and analysis of variance (ANOVA).

Results: highly significant difference between pre and posttests responses at (P value < .05) in the study group related to all domains of the study.

Conclusions: Less than one-quarter of patients in the study group were institute graduate level, and more than one-quarter of patients in the control group were secondary level graduate, one quarter of patients in the study group were within employee level; and more than one quarters in control group were within the retired level. more than half of patients in the study group and more than two-thirds of patients in the control group were married. In pretest and posttest, there is a significant influence of an interventional health education in enhancing the perceived learning needs of patients with myocardial infarction.

Recommendations: The study recommend that it is critical to update patient learning needs by encouraging and inspiring patients to participate in particular interventional health education on the perceived learning needs of patients with Myocardial Infarction. Patients should have access to continued education and resources that enhance patient's learning needs during their hospitalization.

Keyword: Myocardial Infarction, Influence, Interventional, Enhance.

INTRODUCTION

Myocardial infarction (MI), sometimes known as a heart attack, is a significant cause of death globally. It is caused by an interruption in myocardial blood flow and the resulting ischemia¹.

This is usually the result of a blood clot in the epicardial artery, which supplies that area of heart muscle.

Myocardial infarction, on the other hand, was classified as ischemia and injury that did not affect all three layers of the heart muscle, usually sparing the epicardium. This was thought to be the result of a severe decrease in blood supply to the region, either with or without complete obstruction of a coronary artery or branch².

Myocardial infarction is the major cause of coronary heart disease and mortality³. Modifiable risk factors account for more than 90% of the risk of acute MI. Dyslipidemia, smoking, psychosocial stressors, diabetes, hypertension, obesity, alcohol consumption, physical inactivity, and a diet low in fruits and vegetables were all risk factors for myocardial infarction¹⁸.

Cardiovascular diseases are one of the world's top three causes of mortality and morbidity⁴. Every year, more than 1 million new and recurrent myocardial infarction occur, with 12,000 people still alive. Patients who survive a myocardial infarction must learn to live with the disease and regain their quality of life. As a result, patient health education has become critical in the fight against the disease as a secondary preventative strategy¹⁷. Because post-MI patients are at a higher risk of experiencing another heart attack, it is critical that they have enough information about their health and the necessary self-care, especially if they have risk factors such as smoking, hypertension, hyperlipidemia, obesity, and lack of exercise. As a result, it is critical to investigate post-MI patients' information needs since the findings can provide with the baseline data required to construct effective pre-discharge education interventions¹¹.

METHODOLOGY

Study Design: To achieve the aims of this study, a quasi-experimental design was used with the application of pre and post-test approach for both studied and controlled groups..

Study Sample: A non- probability (purposive) sample was selected to obtain representative and accurate data. From (90) patients who are in a period of recovering from myocardial infarction at cardiac advisory department in at Missan Center for Cardiac Diseases and Surgery, (10) patients were excluded for the pilot study. So the total number of patients participating in the study was (80) patients in order to obtain accurate data and a representative sample. The sample had been taken in two group. (40) patients were assigned to the control group. (40) patients for the study group.

Ethical Considerations: The ethical considerations are one of the fundamental concepts for respecting the participant's beliefs and dignity prior to data collection. The study's conduct has been approved by the research ethical committee at the University of Baghdad's College of Nursing. The recruited Patient's written consents to participate in the study were acquired, and privacy and data confidentiality were respected. The subjects' participation was entirely voluntary. Subjects were given the opportunity to read the study questionnaire and study steps to ensure that they were aware of all pertinent information.

Inclusion Criteria: All Patients with Myocardial Infarction those who are in the recovery stage who come to the cardiac advisory department and who have agreed to participate in the study.

Exclusion Criteria: Patients who cannot read or write, as well as those who are unable to communicate and refuse to engage in the study, will be excluded from the study population.

Study Instrument : The researcher constructs the tool in order to meet the study's objectives, and it is divided into two sections; which includes the following:

Part I: Demographic Data Form: This section is concerned with collecting demographic data from the patients and consists of (Five) items including age, gender, educational level, occupation, and marital status.

Part II: Self-Administered Questionnaire Sheet Related Perceived Learning Needs of Patients with MI.

This part was constructed to assess the Perceived Learning Needs of Patients with MI. comprises items which measure subscales related to Learning Needs of Patients with Myocardial Infarction. in domains: These subscales are listed below: "medication information (5 items)", "dietary information (5 items)", **Validity:** The questionnaire was reviewed by ten experts from various scientific fields, each with at least ten years of experience in their field.

Reliability of the questionnaire Items: The questionnaire's reliability was assessed using a test-retest reliability analysis, and the results was (0.88).

Statistical Data Analysis: Data were entered into the IBM-Statistical Package for the Social Sciences (SPSS) version 21 software program and analyzed using descriptive and inferential statistics Procedure. The Used statistical approaches were however not limited to Percentages, frequencies, Mean, Analysis of Variance (ANOVA) to measure the difference between variables. Independent samples T-test to find out the correlation between the variables, and to measure the association between variables.

RESULTS

Table 1: The Distribution of the Study Samples (Study and Control) according to the Demographical Data.

Variable	Groups	Study group		Control group	
		Freq.	%	Freq.	%
Age Groups	20 – 29 years	1	2.5	1	2.5
	30 – 39 years	2	5	2	5
	40 – 49 years	13	32.5	11	27.5
	50 years and more	24	60	26	65
	Total	40	100	40	100
Gender	Male	22	55	23	75.5
	Female	18	45	17	42.5
	Total	40	100	40	100
Educational level	Read and write	3	7.5	5	12.5
	Primary	6	15	5	12.5
	Intermediate	7	17.5	6	15
	Secondary	7	17.5	11	27.5
	Institute	9	22.5	6	15
	Colleague	6	15	4	10
	Postgraduate	2	5	3	7.5
	Total	40	100	40	100
Occupation	Free work	8	20	7	17.5
	Employee	10	25	8	20
	Retired	9	22.5	12	30
	Housewife	8	20	6	15
	Not work	5	12.5	7	17.5
	Total	40	100	40	100
Marital status	Single	7	17.5	5	12.5
	Married	25	62.5	28	70
	Divorced	3	7.5	0	0
	Widowed	4	10	4	10
	Separated	1	2.5	3	7.5
	Total	40	100	40	100

Table (1) presented that 60 percent of the study group and 65 percent of the control group were within age group of 50 years and older. In addition, results revealed that 55 percent of the study group were males and the highest percent of the control group were also males whom accounted 75.5 percent. Corresponding to the education level, 22.5 percent of the study group were within institute graduate level, and this accounted the highest percent in the study group, while the highest percent in the control group were within secondary level graduate who accounted for 27.5 percent. The highest percent among study group occupation level were within the employee level who accounted for 25 percent, while the highest percent in the control group were within the Retired level and accounted for 30 percent. Related to marital status, 62.5 percent of the study group and 70 percent of the control group were married, respectively.

Table 2: The Distribution of the Study Samples (Study and Control) according to their responses to about learning needs related to myocardial infarction (medication information [medical])

List	Items	Study group												Control group																	
		Pretest						Posttest						Pretest						Posttest											
		Freq.						Freq.						Freq.						assessment											
		NI	SI	MI	I	VI	Mean	Assessment	NI	SI	MI	I	VI	Mean	Assessment	NI	SI	MI	I	VI	Mean	Assessment	NI	SI	MI	I	VI	Mean	Assessment		
1	General rules about using medications.	0	2	1	2	0	3.5	I	0	0	0	6	3	4	4.8	VI	0	2	1	2	0	3.4	I	1	2	2	1	0	3.3	MI	
2	Why should I take the treatment?	0	0	1	2	4	3.8	I	0	0	0	3	3	7	4.9	VI	0	0	1	2	5	3.8	I	0	2	1	6	2	0	3.5	I
3	When should I take the treatment	0	0	7	3	1	3.8	I	0	0	0	1	3	9	4.9	VI	0	0	7	3	2	3.8	I	0	0	2	1	3	3.5	I	

were either unable to read or write, or could read and write because of their high education level.

The highest percent among study group occupation level were within the employee level who accounted for 25 percent, the study result comes along with the study that found that the most participants were employed¹⁶. While the study result of control group showed that the highest percent of patients were within the retired level and accounted for 30 percent. These findings are supported by a study that found that the most participants were either retired^{6,5}.

Related to marital status, 62.5 percent of the study group and 70 percent of the control group were married, respectively. These findings are supported by a study that found that the most participants were married^{7,8}.

Table (2) presented shifting in the mean of posttest responses of the study group about learning need related to medication information from important to very important level of score as an improvement in their learning needs about the targeted domain, while there was no change among responses of the control group in both pre-test and posttest responses.

These findings are consistent with studies conducted by^{10,11,12}, which demonstrated that post-MI patients have the greatest learning need related to medication information.

Table (3) also presented an improvement in knowledge of the study group as shifting in the mean of posttest responses about learning need related to dietary information from moderate important and important level to very important level, while there was no shifting among responses of the control group in both pre-test and posttest responses.

This result is confirmed through a study done by⁹, who found that dietary information are important for patients as learning needs.

The study sample revealed that patients' post-test learning needs are high, with a statistical mean of (5) in the tables (3). This study found that interventional health education about perceived learning needs was highly effective in enhancing the perceived learning needs of patients with MI.

Table (4) shows that there were highly significant difference between pre and posttests responses in the study group related to both domains of the study, while there was only one significant difference between pre and posttests in the control group related to medication information domain.

The researcher explains the findings of his study, revealing that the majority of the patients had not attended any training sessions on learning needs. As shown in the table (4), after implementing the interventional health education, patients' learning needs improved in the post-test.

This finding lends support to the literature that promotes in-patient education as a way of increasing patients' knowledge of their disease^{13, 14, 15, 16}.

All eight categories of information are regarded as critical areas of learning for patients with MI in order to effectively manage their discharge life⁷.

According to the researcher's findings, the majority of the patients had not enough knowledge related to their perceived learning needs, which was evident in both the pretest (control and study groups) and the posttest (control group). Patients' learning needs improved after the application of an interventional health education in post-test trials for the study group, as shown in the table (4).

CONCLUSIONS

The researcher has reached the following conclusions based on the findings of this study and the discussion and interpretations of the findings More than a quarters of patients in the study group and more than half in control group were within age group 50 years and older. More than half of patients in the study group and more than three quarters in control group were males.

Less than one quarter of patients in the study group were within institute graduate level, and more than one quarter in control group were within secondary level graduate.

One quarter of patients in the study group were within employee level; and more than one quarters in control group were within the retired level. More than half of patients in the study group and more than two thirds in control group were married. There is a significant influence of an interventional health education in enhancing the perceived learning needs of patients with MI.

Recommendations: The researcher suggests the following based on the results and conclusions of the study Larger sample sizes are recommended for future research. Updating patient learning needs through encouragement and inspiration to participate in specific interventional health education on the perceived learning needs of MI patients. Patients should have access to continuing education and resources that expand on patient's learning needs gained during hospitalization.

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