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Effects of Improving Cardiac Care Unit Nurses (CCU) in the Field of Sexual Education on Anxiety of Patients with Myocardial Infarction and their Spouses

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ABSTRACT

The purpose of this study was determining the impact of implementation of improving programs in the field of sexual education on the anxiety of patients with myocardial infarction and their spouses. This study was a clinical trial, which was performed at one of the teaching hospitals in Yazd city, in 1391-1392. The samples of the study were the patients with myocardial infarction and their spouses who were randomly selected according to inclusion criteria (30 patients and 30 spouses in each group). The data collection tool was a DASS-21 questionnaire for measuring the anxiety of patients and spouses and its validity was confirmed by content validity and the reliability was measured by Cronbach's alpha coefficient (r = 0/84). In this study, nurses, patients and their spouses in two groups, were similar according to individual characteristics (p> 0/05). Results showed a significant difference between the mean difference of anxiety scores of patients and their spouses in both the experimental and control groups before and after the intervention (p = 0/001), which showed a reduction of anxiety in patients and their spouses in the experimental group who received sexual education by educated nurses compared to the control group. the Education is effective in the experimental group and this program is inexpensive and easily accessible for patient . Implementation of program in the macro levels is recommended.

Key words: nursing improvment, sexual education, anxiety, Myocardial Infarction, cardiac care unit (CCU).

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1. INTRODUCTION

Myocardial Infarction (MI) is a life-threatening event. In the acute phase, the majority of patients and their spouses experience severe psychological tension, especially anxiety (1-3). One of the reasons for anxiety among the patients with MI and their spouses is having problem with sexual activities, which is the result of the lack of knowledge about sexual activity after discharge (4). Due to this lack of awareness, if sexual activity is not taken into account as a part of the nursing care of patients with cardiovascular problems, patients assume that they cannot engage in sexual activity, therefore they will experience a lot of stress and anxiety in their sexual encounters (5). Bridin, in 2004, stated that the sexual education is one of the vital and important care after myocardial infarction. Moreover, due to the complications during the convalescence phase, such as depression and anxiety, and because of maladaptation with the current problems of life, patients experience decreased libidoso. Sexual education plays an important role in their anxiety reduction (6). Moreover, cardiac nurses can play an important role by providing sexual consultation in this field (7). unfortunately, the discussion about sex has been neglected for these patients, (6) and sexual counseling, which is one of the main fields of nursing activity has been forgotten (6, 8-12). Thus, nurses should be familiar with the sexual education program in developing human resources. Improving manpower in nursing is one of the most important responsibilities of nurse managers and particularly educational supervisors, and includes some activities to promote competence and increase the knowledge and skills of nurses to provide clinical services and improve the quality of employee performance (13). The aim of this study was to determine the effect of

improving the cardiac care nurses (CCU) in the field of sexual education on anxiety in patients with myocardial infarction and their spouses.

2. MATERIALS AND METHODS

2.1. Study design

This is a Quasi- experimental study that was performed in Afshar hospital of yazd city in 1391-1392 on 92 patients with MI and their spouses in Yazd, Iran. For participating in our research inclusion criteria were: 30 to 60 years of age, being married, both male and female gender, no obstacle for sex between patients and their spouses, being literate, the diagnosis of MI confirmed by a cardiologist for participants, admission in CCU and at least 3 days past from their hospitalization, no history of heart attack, not having any sexual dysfunction and not having the risk of serious complications of a heart attack. Informed consent form completed by samples Permission from the university ethics committee, Confidentiality of patient information

2.2. Randomization

Samples were chosen by using Altman's nomogram and the results of Jariani's research entitled "The effect of progressive muscle relaxation on anxiety in patients with myocardial infarction" (14). Power of the test measured 0.7. The number of subjects was 30 patients in each group.

2.3. Intervention and study questionnaire:

The intervention was started by improving CCU nurses and was performed by educational supervisors about the sexual problems of the patients with myocardial infarction and their spouses.

For measuring the anxiety of patients and their spouses before and after the intervention, DASS-21 questionnaire has been used. This questionnaire was used in Iranian studies, such as Aghebati's study (1384) (15) and the validity of this questionnaire was confirmed. .The questionnaire was distributed among 10 subjects and the reliability of the instrument was approved by using Cronbach's internal homogeneity and Cronbach's alpha coefficients (0.84). There are 7 questions about the anxiety that the questions are scored on a Likert scale from 0 to 3 (min 0 And max 21) and the higher score is a sign of more anxiety. This questionnaire was completed to evaluate and compare the effectiveness of interventions, once before the intervention (the third day of hospitalization) and also 6 weeks after the intervention by the subjects of the control and experimental groups.

2.4. Training program

Educational supervisor improves CCU nurses, according to the in-service education basis, followed the steps listed below (steps 1 to 3) to educate the patients with MI and their spouses and evaluate effect of this education on them in steps 4 and 5:

Step 1: Investigating educational needs of CCU nurses

Step 2: Planning a program to the patients based on the educational needs of them in the field of sexual education

Step 3: Implementation of development programs for nurses by educational supervisor

Step 4: Monitoring the performance of nurses (evaluation of the sexuality education programs)

Step 5: Evaluating the results of the implementation of sexuality education programs (measuring the anxiety in patients and their spouses).

The nurses need training program in the field of sexual activities after MI was assessed in a 60-minute session through interviews that held by educational supervisor. The criteria for examining nurse's ability for educating patients depended on their success in educating at least 2 patients. The content of the program was designed based on the needs which included the issues of the importance of sex education in patients with MI and the effect of this disease on the sexual intercourse of the patients. Therefore, education of this content and assessing patient's sexual needs accomplished in a class during a 90-minute discussion and education for nurses. At the end, the educational issues were practiced and also feedbacks were given by supervisors. Then nurses could begin the training program at the supervision of supervisors. Firstly, each nurse educated one couple of patients and spouses during 4 sessions of 15 minutes and secondly their competency measured by checklists. If nurses were qualified, they start the education program for the patients and their spouses. In this stage, the supervisors examined the accuracy of implementing sexual education programs and became sure that these programs were trained to the patients and their spouse by nurses. The supervisors achieved this confidence by monitoring the work of nurses during the training and also by asking and answering the sexual issues from the patients and their spouses when they were discharged. To implement the sexual education programs for the patients and their spouses, nurses started training from the third day of hospitalization, by individually and face to face training, over 5 sessions of 15 minutes at the bedside of each patient. Duration of training varied on physical and mental status of the patient and also according to the patient's and spouse's tendency, training the spouses took place simultaneously or individually. During this time, the nurses in the control group received usual in-service training and sexuality education programs were not taught to them. As a result, in the control group, the patients and their spouses were not given any sexual training after discharge.

2.5. Statistical analysis

To analyze the data IBM SPSS statistics (version 16) was used. To categorize and summarize the findings, descriptive statistics was used which were included relative frequency distribution tables. Independent t-test (T-test) and Chi 2 (Chi Square) test were used to determine the homogeneity of two groups. In addition, independent t-test was used to determine the relation before and after the intervention in the control and experimental groups.

3. RESULTS AND DISCUSSION

In this study, 4 nurses (2 females and 2 males) with a mean age of 30-40 years and married with more than 5 years working experience were trained in CCU ward. The nurses were similar in terms of demographic characteristics (p>0/05). The number of samples for each experimental and control groups was 60 patients and their 60 spouses and this study was done on these 120 samples. The results obtained from the demographic data and participants medical history were given in Table 1 and Table 2. The mean and standard deviation of the age of the patients were 49.07± 7.56 in the control group, and in the experimental group they were 50.57± 8.6, the age of the spouses were 49.10± 10.53 in the control group, and in the experimental group they were47.97± 9.6, and the frequency of family members were 4.90± 1.2 in the control group, and in the experimental group they were 4.40±1.54, respectively. The mean score of anxiety in patients with myocardial infarction in the experimental group decreased from 13.53 to 10.32, but in the control group increased from 13.33 to 16.20, respectively. The independent t-test showed a significant difference between the mean score difference of two groups. The results of the independent t-test, in both the experimental and control groups, indicated that there was a significant difference between the mean score difference of anxiety in patients and their spouses before and after the intervention (P= 0.001). These results represented that in the control group who were received sexual education by nurses, there was a reduction of anxiety in the patients and their spouses compared with the control group who their nurses received only in-service training and also they were not aware of the content of sex education (Table 3). The results showed that there was no significant relationship between the anxiety and other factors like age, education, family, and numbers of family members (P>0.05). It should be noted that all the nurses were trained by the educational supervisors and their ability were evaluated while education and asking and answering some questions from the patients and their spouses when they were discharged and also the competency of nurses were monitored by checklists.

Table 1. Characteristics of the two groups in terms of demographic data

Variables		Experimental	Control	Test result
		Frequency and percentage	Frequency and percentage	
Age of the patient	30-40	3(10)	4(13.3)	P=0.47 t= -0.71
	41-50	9(30)	16(53.3)	
	51-60	18(60)	10(33.3)	
Patient sex	Female	10(33.3)	12(40)	P=0.59 X^2= 0.28
	Male	20(66.7)	18(60)	
Patient Education	Educated	6(20)	8(26.7)	P=0.9 X^2= 0.57
	High school	13(43.3)	13(43.3)	
	Diploma	3(10)	3(10)	
	Higher than Diploma	8(26.7)	6(20)	
Patient job	Housewife	9(30)	11(36.7)	P=0.33 X^2= 3.39
	Worker- Farmer	2(6.7)	6(20)	
	Clerk	5(16.7)	4(13.3)	
	Other	14(46.7)	9(30)	
Patient insurance status	Social security	20(66.7)	17(56.7)	P=0.68 X^2= 0.77
	Health care	7(23.3)	10(33.3)	
	Other	3(10)	3(10)	
With whom are they living?	Spouse	5(16.7)	3(10)	P=0.44 X^2= 0.57
	Spouse and Children	25(83.3)	27(90)	
Separate bedroom	Have	17(56.6)	16(53.3)	P=0.79 X^2= 0.06
	Does not have	13(43.4)	14(46.7)	
Age of patient's spouse	Less than 30	1(3.3)	0	P=0.66 t= 0.43
	30-40	5(16.7)	5(16.7)	
	41-50	10(33.3)	12(40)	
	51-60	11(36.7)	10(33.3)	
	More than 60	3(10)	3(10)	
Spouse Education	Literacy	13(43.3)	16(53.3)	P=0.42 X^2= 2.78
	High school	4(13.4)	6(20)	
	Diploma	6(20)	2(6.6)	
	Higher than Diploma	7(23.3)	6(20)	

Table 2. Characteristics of the two groups in terms of the data related to medical history

Variables		Experimental	Control	Test result
		Frequency and percentage	Frequency and percentage	
Heart disease	Yes	2(6.7)	6(20)	P=0.12
	No	28(93.3)	24(80)	X^2= 2.39
High blood pressure	Yes	8(26.7)	12(40)	P=0.27
	No	22(73.3)	18(60)	X^2= 1.20
Hypercholesterolemia	Yes	17(56.7)	14(46.6)	P=0.43
	No	13(43.3)	16(53.4)	X^2= 0.60
Diabetes	Yes	12(40)	11(36.7)	P=0.79
	No	18(60)	19(63.3)	X^2= 0.07
Respiratory disease	Yes	1(3.3)	0	P=0.31
	No	29(96.7)	30(100)	X^2= 1.01
Substance abuse in patients	Yes	6(20.1)	8(26.7)	P=0.54
	No	24(79.9)	22(73.3)	X^2= 0.37
Drug use in patients	Heart	2(6.7)	1(3.3)	P=0.22 X^2= 8.15
	Blood pressure	4(33.3)	6(20)	
	Diabetes	1(3.3)	4(13.3)	
	Other drugs	4(13.3)	0	
	Diabetes and Hypertension	2(6.7)	5(16.7)	
	Blood pressure and heart	2(6.7)	2(6.7)	
	None	15(50)	12(40)	
History of heart disease of patients	Yes	4(13.3)	10(33.3)	P=0.06 X^2= 3.35
	No	26(86.7)	20(66.7)	
History of Stress, anxiety, depression with taking drugs in spouses	Yes	1(3.3)	1(3.3)	P=1.00 X^2= 0.00
	No	29(96.7)	29(96.7)	

Table 3. The mean score difference of anxiety in the experimental group and control group

Variables	Groups	After the intervention	Before the intervention	**The mean Difference before and after the intervention**	**Paired T**
		Mean ± SD	Mean ± SD		
Anxiety of patients	Experimental	13.53± 3.44	10.33± 2.56	+ 3.2	t= 12.99 p= 0.001
	Control	13.33± 13.53	16.20± 3.89	+ 2.87	t= -6.49 p= 0.001
	Independent T test	t= -0.2 p= 0.83	t= 6.88 p= 0.001	t= -12 p= 0.001	
Anxiety of souses	Experimental	12.8± 3.27	9.7± 2.26	+ 3.1	t= 11.93 p=0.001
	Control	12.6± 3.84	15.37± 3.75	+ 2.77	t= -6.34 p= 0.001
	Independent T test	t= -0.21 p= 0.82	t= 7.08 p= 0.001	t= -11.56 p= 0.001	

The model which was used in this study, derived from the in-service training of CCU nurses principles about sexual issues, based on the educational needs of CCU nurses and the lack of attention of the medical staffs to this major issue, which performed by educational supervisors, the middle level nursing managers. In fact, Ivarsson et al., and Jaarsma et al., in their studies noted that the information provided by the medical and nursing staff about sexual activities after MI is limited (16, 17). The findings of this study indicated that: 1. Improving the nursing specially about training appropriate sexual activity to the patients after MI was practical and effective and it led to better nursing care. 2. The anxiety of patients was admitted to CCU ward after receiving such training from the caregivers were substantially reduced. The results of Emam Zadeh Ghasemi's study were in line with the present study which findings showed that improving manpower caused improving in the quality of nursing care, such as nursing documentation, the quality of the patients' clinical status, the quality of education for the patients by surgical nurses (13). The results of Salmani's study entitled "The effect of implementation staff development program based on evidences for supervisors on nurses, practice" was in accordance with the present study and reflected the impact of development programs which were done by educational supervisors on the nurses' function and improving the public and private nursing care for patients (18). The results of a study done by Branson in 2013 were in line with the findings of the present study, and it showed encouraging and improving nurses in counseling and educating of sexual activity for patients after a heart attack, led to improve clinical activity (19).

4. CONCLUSION

With respect to the results of this study, it can be concluded that one of the most important responsibilities of nursing managers especially educational supervisors is improving manpower to enhance the level of competence and increase staffs' knowledge and skills to improve clinical services. Moreover, one of the main tasks of nurses is education. It is recommended that nursing managers try

to support and provide appropriate educational classes for nurses based on their educational needs especially in CCU wards. Furthermore, they had to put sexual education in top priority and with presenting in-service training make the nurses to be aware of this important issue as a part of their nursing care plan.

4.1. Limitations

Limitations which could affect the results were as follows: individual differences and psychological states of the participants during the completing questionnaires and in training sessions, Characteristics and personal responsibility for their own health, and individual differences and psychological states of nursing in implementing the program, censoring the information and giving answers to questions which are popular in the community, different sexual behaviors in individuals and individual differences in statements on sexuality, and sexual satisfaction of patients before their disease.

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AUTHORS CONTRIBUTION

Robabeh Memarian designed the study and is supervision. Imane bagheri doing intervention, processed the data and analysis of information. Behrouz pakcheshm and Naiire Salmani prepared primary draft.

CONFLICT OF INTEREST

The authors declared no potential conflicts of interests with respect to the authorship and/or publication of this paper.

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