Original Article

Sexual counseling to patients with myocardial infarction: Nurses' performance, responsibility and confidence

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ABSTRACT

Background & Aim: One of the main concerns in patients with myocardial infarction is that there is no return to sexual activities. Sexual counseling is an interaction between patient and nurse that requires appropriate performance, responsibility, and confidence. The present study aimed to determine nurses' performance, responsibility, and confidence in sexual counseling of myocardial infarction patients.

Methods & Materials: This descriptive/analytical cross-sectional study was carried out on 180 nurses from the cardiac care unit (CCU) at the hospitals located in southeastern Iran in 2018. Sampling was performed with the census method; and the data collection tool was a demographic information form and questionnaire, involving nurses' performance, responsibility, and confidence in sexual counseling of cardiac patients. Information was analyzed using SPSS software (ver.18) through descriptive and inferential statistics, including t-test, ANOVA, and Pearson correlation coefficient. The significance level was considered as 0.05.

Results: The mean of total performance scores in the nurses was 14.54 ± 4.4, indicating the average performance of nurses in the sexual counseling of myocardial infarction patients. The total mean score of responsibility was 14.32 ± 2.7, indicating their average responsibility in sexual consultation. The total mean score of confidence was 12.86 ± 2.35, indicating their average confidence in the sexual counseling of cardiac patients.

Conclusion: The present research showed that nurses' performance and confidence were not high or acceptable in the sexual counseling of patients with a myocardial infarction, which can lead to some dangerous events such as recurrent myocardial infarction or sudden death. Thus, holding some workshops or training related to the sexual counseling of the patients can assist nurses to be better in this case.

Introduction

Nowadays, cardiovascular diseases are the leading cause of mortality (1), which its prevalence rate was more than 16 million individuals per year in the world (2). World Health Organization (WHO) reported that 33% of death in the world result from cardiovascular disease. Expectations indicate that these diseases will be the causes of more than 75% of mortalities in the world until 2020 (3).

The American Heart Association announced that cardiovascular diseases are the cause of death in 840678 individuals in America in 2016, namely about the death of one person per three persons (4). According to WHO, of the 15.2 million deaths worldwide in 2016, about 56.9 million deaths are related to ischemic heart disease (5).

In the eastern Mediterranean countries such as Iran, heart diseases are an essential problem in the health system (3) and are known as one of the leading causes of

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mortality in Iran (6). Estimates show that cardiovascular diseases will be ranked among the six leading causes of mortality in 2020, and the prevalence of these diseases is increasing in developing countries such as Iran (7). According to the recent studies, the problems of cardiovascular diseases have been increasing in Iran during 2005 until now and will have increased until 2025, due to the increasing age of the population (8). Now, cardiovascular diseases are the first cause of death in individuals with more than 35 years old (3). About 10% of patients with chest pain, admitted to the emergency department, are hospitalized due to the recognition of heart attack (9). Myocardial infarction and consequently heart failure can restrict the routine activity of these patients, and not only affects the convenience of the patient but also influences social communications, routine life forms, occupation and the level of income (10).

One of the significant concerns in myocardial infarction patients is returning to sexual activities, and thus, they are continually looking for information about the resumption of sexual activities (11), because unawareness, in this case, can result in various problems such as rehospitalization, sudden death during sexual activity and sexual dissatisfaction for patient and his wife. Ozdemir et al. (2008) reported that 22- 75% of MI patients suffer from sexual disorders in Turkey (12), and they experienced a decrease or complete cessation in sexual activity. They may also experience a reduction in sexual pleasure and satisfaction resulting from fear of sexual activity and its adverse effects (13).

Sometimes, these patients do not distinguish sexual stimulation symptoms, such as increased heartbeat, breathing, and sweating from heart failure. These symptoms are resulting in some complications such as anxiety, feeling guilty, losing sexual desire, and sexual weakness in the patients and sometime in their wife (12). Some sexual problems are usual in heart patients due to the following reasons:

1- lack of awareness of sexual issues related to heart disease and cardiovascular drugs, 2- there is the fear of sexual activity because it may lead to angina pectoris, heart palpitation or death, 3- high prevalence of anxiety and depression in patients with cardiovascular (14). Goossens et al. (2011) believed that about 50-60% of patients and their wives do not have any information about returning sexual activity after a heart attack (15), and sexual consequences are seldom evaluated by healthcare providers (6). Unfortunately, despite the advantages of sexual counseling, sexual desires are not considered as an important issue (16).

Counseling is an integral part of nurse services, in which the nurse has an opportunity to be linked with individuals, families, and groups. Thus, the nurse can better play his/her crucial role in the sexual counseling of heart patients (9). Sexual counseling is the dealing between patient and nurse, involving providing information about sexual concerns about a patient and safe return to the sexual activity. Sexual counseling is evaluations, supports, and recommendations related to sexual and psychological disorders, the aim of which is to solve these problems (17). Although these patients with myocardial infarction have a lot of sexual concerns and disorders, studies show that they require sexual counseling. However, most patients are reluctant to discuss this case with healthcare providers, and nurses are careless of them (18).

Nurses rarely have responsibility for providing sexual counseling of patients with cardiac diseases daily (9). Jaarsma et al. (2010) reported that nurses should have an appropriate responsibility and confidence for the sexual counseling of patients with cardiac diseases (18). Responsibility is defined as a level of endeavor, conscientious, and organization against indolence, unresponsiveness, and action without thinking (19). Confidence is awareness and encouragement of individuals in performing their duties exactly (20).

Abundant studies were carried out, focusing on the importance and necessity of the sexual counseling of cardiac patients. Jaarsma et al. (2010) in a study "Sexual counseling of patients with cardiac diseases: awareness, responsibility, and confidence," reporting that although nurses have the responsibility to evaluate sexual concerns of cardiac patients, they rarely perform this evaluation daily. They concluded that nurses require increased knowledge and action skill in terms of sexual issues and sexual counseling of patients with cardiac diseases (18). Hoekstra et al. (2012) reported that 75% of nurses had the responsibility for evaluating sexual health of patients with cardiac fault. However, 61% of nurses did not evaluate sexuality of the patients (21). Shfiepour et al. (2006) reported that women and men with myocardial infarction required the highest level of training in terms of awareness of the resumption of sexual activity and start time of usual activity (11). Tirgary et al. (2019) reported that the sexual counseling of patients with cardiac disease decreases their anxiety, stress, and depression, and increases their sexual activity (22).

Although the importance of evaluating sexual problems and sexual counseling was emphasized in the above, nurses' performance, responsibility, and confidence in sexual counseling were not evaluated in Iran. Therefore, this study has particular importance because these issues are profoundly affected by culture, beliefs, social background, and also family beliefs. Iranian community considers sexual issues as a taboo, due to the cultural and social background (23). This issue is more evident in southeastern Iran with more conventional thoughts. On the other hand, sexual counseling results in timely diagnosis and treatment of sexual problems originated from cardiac diseases, and better quality of life in patients (13). Thus, this study was carried out to determine nurses' responsibility, confidence, and performance in the sexual counseling of cardiac patients in 2018.

Methods

This analytical/descriptive cross-sectional study was carried out (2018) to determine the performance, responsibility, and confidence of nurses, in sexual counseling of patients with myocardial infarction. These nurses work at the hospitals in Kerman city, which are the most important patient referral centers in southeastern Iran. The statistical population includes all nurses working at CCU, post CCU, and cardiothoracic surgery unit. The census method was used to select samples. Thus, the sample is equivalent to the research population (180 individuals).

Collecting data was initiated after obtaining ethical code (IR.KMU.REC.1396, 1341) from Kerman University of Medical Science. The researcher referred to the wards in Kerman hospitals on different work shifts. The participants filled the questionnaire with appropriate physical, mental, and psychological conditions, after getting permission from the manager and explaining the aim of the study to the nurses. The filled questionnaire was received on the same shift or the next shift. The data collection tool was two questionnaires in this study.

1- The first questionnaire included 11 questions related to demographic information of the nurses including age, gender, marital status, education level, the name of unit and hospital, position, work experience, and the level of training related to sexual issues.

2- The second questionnaire (survey of sexual counseling of MI patients in nursing practice) used in the present study was prepared by Steinke et al. (1996) in a study as " sexual counseling of patients with myocardial infarction: nurses' performance and responsibility. This questionnaire includes three subscales with 18 questions. The first, second and third subscales involve eight, five, and five questions, respectively, related to the performance, the responsibility, and the confidence of nurses in the sexual counseling of patients with myocardial infarction. The first four questions related to the performance were

designed based on the 5 points Likert scale, including never (zero), rarely (one), sometimes (2), often (3), always (4). The lower score was zero, and the higher score was16. Questions of 5-8 related to the performance were designed based on the Likert scale with 6 points as percentage including zero (never), 1-20% (score 1, equivalent to sometimes), 21-40% (score 2, equivalent to sometimes), 41-60% (score 3, equivalent to often), 61-80% (score 4, equivalent to often), 81-100% (score 5, equivalent to often). The maximum acceptable score in the second subscale was 20, and the minimum score was zero. Thus, total scores obtained from the performance subscale were 0-36. In this research, the scores of (0-11), (12-24), and (25-36) were considered weak, average, and good, respectively.

In the responsibility subscale, the questionnaire was designed based on the Likert scale with five points including I severely disagree (zero), I disagree (one), I am not sure (2), I agree 93), and I severely agree (4). The maximum score was 20, and the minimum score was zero, and the score of (0-9), weak (8-14), average (8-14) and more than 14 (good). In the confidence subscale, the questionnaire was designed based on the Likert scale with five scores including I severely disagree (zero), I disagree (one), I am not sure (2), I agree (3), and I severely agree (4). The maximum score was 20, and the minimum score was zero, and the score of (0-9), weak (8-14), average (8-14) and more than 14 (good).

In this study, the validity coefficients in the performance, responsibility, and confidence were reported as 0.89, 0.75, and 0.79, respectively (24). For the cross-cultural adaptation of questionnaire backward–forward translation method was used. The first questionnaire was translated into Persian by researchers and was again translated into English by two experts in English. Finally, only some small changes in the phrasing were carried out after implementing the requested modifications and rejecting the reconsideration of content

and face validity. In this process, no question was removed, and the experts (10 persons) evaluated the questionnaire. Their revision was implemented, and validity was estimated. The reliability of the tool (after studying on 30 nurses apart from the population) and the internal consistency of the questionnaire was computed using Cronbach's alpha coefficient (0.78). SPSS software (ver. 18) was used to analyze data through descriptive statistics, independent t-test, ANOVA, Pearson's correlation coefficient.

Results

Of 180 questionnaires distributed, 169 nurses working in cardiac units filled the questionnaire. Among participants, 91.1% of participants were female, 84.9% were married, 91.7% were bachelor, 74% were working in CCU, and 91% were working as a nurse. Moreover, the average age of nurses was 36.12 ±8.06 years old, the average work experience in nurses was 12.12±7.57, and the average work experience in cardiac units was 8.36±7.18. Most nurses (99.4%) did not pass specialized training related to sexual counseling of patients with cardiac problems. Most nurses (63.3%) believed that a deficient number of courses in university was related to sexual counseling. Most nurses (72.7%) believed that workshops related to sexual counseling rarely held at the university (Table 1).

Results showed that the total mean score of nurses' performance was 14.54±4.4, namely the performance of nurses in the sexual counseling of patients with myocardial infarction was an average. The maximum mean score obtained from the questions was related to the performance was: "response to patients' questions related to sexual issues." The result obtained from the evaluation of nurses' responsibility showed that the total mean score of this variable was 14.32±2.7, indicating that the nurses had average responsibility in sexual counseling of patients with myocardial infarction. The maximum mean score was assigned "in your opinion if the patients start discussing sexual

issues, should nurses continue this discussion?" The results related to the confidence of nurses showed that the mean score of confidence in sexual counseling was 12.86±2.35, indicating that nurses' confidence was average in the sexual

counseling of patients with myocardial infarction. The maximum mean score in questions was related to the "I have enough information to respond to most questions of patients with myocardial infarction in sexual issues" (Table 2).

Table 1. Demographic characterization of nurses working in cardiac units

Variable		N	%
Gender	Female	154	91.1
	Male	15	8.9
Marital status	Single	25	15.1
	Married	143	84.9
Education level	Bachelor	155	91.7
	M.S.	14	8.3
Position	Nurse	154	91.1
	Matron	15	8.9
Hospital in which services are done	Afzalipour	26	15.4
	Shefa	60	35.5
	Shahid Bahonar	14	8.3
	Seyed Al-Shohada	13	7.7
	Razieh Firozeh	20	11.8
	Payambare Azam	20	11.8
	Alzahra	5	3
	Fatemh Zahra	11	6.5
Unit in which service was done	CCU	125	74
	post CCU	22	13
	cardiothoracic surgery	18	10.7
Passing professional course and retraining	Yes	1	0.6
	No	168	99.4
The number of courses passed in university focusing on sexual counseling of patients	High	1	0.6
	Average	10	5.9
	Low	51	30.2
	very low	107	63.3
The level of training passed about sexual counseling	High	1	0.6
	Average	5	3
	Low	40	23.7
	Very low	123	72.7
Variable		**Mean**	**SD**
Age		36.12	8.06
Work experience		12.12	7.57
Previous work experience		8.36	7.18

One of the data was missed

Table 2. The mean of scores related to performance, responsibility, and confidence of nurses in the sexual counseling of patients with myocardial infarction

Variable	Mean	SD
Performance	14.54	4.4
Responsibility	14.32	2.7
Confidence	12.86	2.35

Results also showed that there was a positive and significant correlation between demographic variables of nurses and their performances in the sexual counseling of patients, based on gender and the location of their services. Regarding these results, male nurses had better performance in the sexual counseling of the patients compared to the female ($p=0.04$); and nurses working in private hospitals had better performance in

this case (p=0.015) (Table 3). There was no significant correlation between the demographic variables of nurses and their responsibility for sexual counseling of patients (p>0.05) (Table 4). The results related to the confidence showed that the nurses with an M.S. degree had more confidence compared to the nurses with a bachelor's degree (p=0.033). Moreover, the nurses who passed more training courses related to sexual counseling had more confidence (p=0.018) (Table 5).

Table 3. Comparison of performance in nurses in sexual counseling of patients with myocardial infarction

Variable		Performance of nurses		Test	P value
		Mean	SD		
Gender	Female	8.6	4.6	T=2.05	0.04
	Male	6.29	4.12		
Education level	Bachelor	6.38	4.16	T=-1.2	0.23
	M.S.	7.78	4.66		
Position	Nurse	6.34	3.83	T=-0.99	0.34
	Matron	8.13	6.95		
Hospital in which services are done	Afzalipour	4.42	5.83	F=2.59	0.015
	Shefa	6.55	3.29		
	Shahid Bahonar	7.14	2.38		
	Seyed Al-Shohada	4.46	2.82		
	Razieh Firozeh	8.90	4.6		
	Payambare Azam	7.25	4.83		
	Alzahra	7	1.63		
	Fatemh Zahra	6.82	3.68		
Unit in which service was done	CCU	6.21	4.29	F=2.24	0.11
	post CCU	6.27	3.65		
	cardiothoracic surgery	8.44	4.3		
Passing professional course and retraining	Yes	16	0	T=0.33	0.74
	No	14.5	4.39		
The number of courses passed in university focusing on sexual counseling of patients	High and Average	19.27	7.6	F=8.2	0.001
	Low	14.82	3.93		
	very low	14.54	4.38		
The level of training passed about sexual counseling	High and Average	21.33	10.15	F=9.43	0.001
	Low	15.2	3.62		
	Very low	13	3.9		

Table 4. The mean score of responsibility in nurses in sexual counseling or patients with myocardial infarction in hospitals of Kerman city based on demographic variables (qualitative)

Variable		Responsibility of nurses		Test	P value
		Mean	S.D		
Gender	Female	10.33	1.99	T=1.52	0.13
	Male	9.23	2.74		
Education level	Bachelor	9.27	2.71	T=-0.97	0.32
	M.S.	10	2.57		
Position	Nurse	9.3	2.74	T=-0.51	0.61
	Matron	9.67	2.26		
Hospital in which services are done	Afzalipour	8.92	2.83	F=0.66	0.7
	Shefa	9.33	2.65		
	Shahid Bahonar	9.69	2.36		
	Seyed Al-Shohada	8.92	3.17		
	Razieh Firozeh	10.10	2.97		
	Payambare Azam	9	2.58		
	Alzahra	8	2.16		
	Fatemeh Zahra	10	2.49		
Unit in which service was done	CCU	9.25	2.81	F=1.67	0.19
	post CCU	9.09	2.09		
	cardiothoracic surgery	10.44	2.48		
Passing professional course and retraining	Yes	18	0	T=1.36	0.17
	No	14.3	2.68		
The number of courses passed in university focusing on sexual counseling of patients	High and Average	15.72	3.22	F=1.83	0.18
	Low	14.39	2.76		
	very low	14.32	2.67		
The level of training passed about sexual counseling	High and Average	15.33	4.13	F=0.9	0.4
	Low	14.65	2.67		
	Very low	14.17	2.62		

Table 5. The mean score of confidence in nurses in sexual counseling in patients with myocardial infarction in hospitals of Kerman city based on demographic variables

Variable		Confidence of nurses		Test	P value
		Mean	S.D		
Gender	Female	8.93	1.48	T=1.86	0.06
	Male	7.76	2.4		
Education level	Bachelor	7.75	2.32	T=-2.15	0.033
	M.S.	9.14	2.35		
Position	Nurse	7.77	2.33	T=-1.66	0. 1
	Matron	8.86	2.41		
Hospital in which services are done	Afzalipour	7.23	2.89	F=1.82	0.08
	Shefa	7.52	2.23		
	Shahid Bahonar	8.71	1.86		
	Seyed Al-Shohada	7.77	1.74		
	Razieh Firozeh	8.84	2.03		
	Payambare Azam	8.75	2.79		
	Alzahra	7.2	1.92		
	Fatemh Zahra	7.27	1.85		
Unit in which service was done	CCU	7.77	2.4	F=2.22	0.11
	post CCU	7.54	2.02		
	cardiothoracic surgery	8.95	2.18		
Passing professional course and retraining	Yes	14	0	T=0.484	0.62
	No	12.85	2.35		
The number of courses passed in university focusing on sexual counseling of patients	High	20	0	F=2.11	0.1
	Average	15.3	3.05		
	Low	14.39	2.56		
	very low	14.15	2.68		
The level of training passed about sexual counseling	High and Average	15.5	3.01	F=4.93	0.008
	Low	13.17	1.97		
	Very low	12.63	2.35		

Discussion

Counseling is one of the essential leading roles of nurses (25), and sexual counseling of patients with cardiac diseases can have a desirable effect on the physical and psychological health of patients (26). The results of the present study showed that the performance of the nurses participating in the study was in average range to provide sexual counseling. Vassiliadou (2008) showed that about half of nurses did not have a problem related to the sexual issues of patients with a heart attack (27). Jaarsma (2010) reported that based on similar questionnaire scoring, the nurses had average performance in the sexual counseling of patients with cardiac problems (18). The results of this study are in agreement with the present study. However, nurses in Iran do not prefer to have sexual counseling, and it is considered as a taboo in the healthcare system. Lunelli et al. (2007) reported that nurses have problems to discuss sexual issues and provide sexual counseling of patients with myocardial infarction because they think that this subject is a particular issue (28). Byrne et al. (2010) reported that sexual problems are not considered a problem by healthcare providers (29).

The results of the present study showed the average score of responsibility for the sexual counseling of the patients in the nurses participating in the study. Sterinke et al. (2011) evaluated the sexual counseling process carried out by a cardiac nurse in 1994-2009, showing that the mean score of responsibility in nurses was acceptable in the sexual issues (30). Moreover, Vassiliadou et al. (2008) evaluated the role of nurses in the sexual counseling of patients with myocardial infarction in Greece, showing that only 48% of nurses had responsibility for sexual concerns in patients with MI (28). Kolbe et al. (2016) reported that the mean score of responsibility for sexual problems of the patients was average in nurses (31). Responsibility is an inseparable component in healthcare services and is created in the essence of nurses during their education. Jaarsma (2010) also showed that most participants in his study had responsibility for the sexual concerns of patients,

especially when the patient tended to receive the counseling (18). Saunamaki (2010) reported that 92% of nurses had a high responsibility for the sexual counseling of patients with cardiac patients (32). Hokstra et al. (2012) showed that most nurses (75%) had responsibility for the sexual health of their patients (21). The responsibility of nurses in the sexual counseling of patients with the heart attack observed in the above study is opposite to the result of this study. Probably, the use of different tools or research environments can be the reason of this difference. Characterizing this difference requires more research and evaluation of the predictor role of factors related to the responsibility for sexual counseling in the specific population.

Results also showed that the mean score of confidence in the nurses participating in the study was less than the average level. Jaarsma (2010) showed that the nurses participating in the study had an average level of confidence in the sexual counseling of patients with heart disease (18). Confidence means that having more knowledge and awareness to do duties without hesitation. Probably, nurses don't have enough knowledge and awareness to counsel with high confidence, and increased knowledge leads to high confidence in this case. Yati Afiyanti (2017) reported that relaxation and convenience is an important issue, promoting confidence in the sexual issue (33). It seems that enough knowledge and awareness is necessary for a nurse to have confidence in the sexual counseling of patients and can solve the problem of patients. It is better to discuss sexual issues as a routine activity in the healthcare setting, and not be a taboo.

The results related to the correlation between the performance and demographic variables showed that the performance score of nurses in the sexual counseling had a significant correlation with gender so that the male nurses have better performance in sexual counseling of patients compared to the female nurses. Sill and Kwang (2016) reported that male nurses are more adapted

to sexual issues compared to female nurses (34). Results also showed that the number of courses related to the sexual counseling of patients passing in university or training had a significant correlation with the performance of nurses participating in the study. The individuals who passed the courses or training related to sexual counseling more than average level had better performance in this area. Awareness or experience is effectiveness on future performance.

Meanwhile, sexual issues have been emphasized in some training. The results showed that the location of services had a significant correlation with the performance of nurses so that the private hospitals had better performance. It seems that private hospitals are not as crowded as much as university hospitals, and nurses have enough time to do their duties. On the other hands, private hospitals ask personnel to provide the sexual counseling of patients.

In the present research, there was a significant correlation between the confidence of nurses and the level of their training related to the sexual counseling, so that the nurses with more level of training had more confidence. Also, there was a significant correlation between their education degree and their level of confidence, so that the nurses with M.S. degree had higher confidence compared to the nurses with a bachelor degree. Pouaboli et al., (2009) suited "Knowledge and perspective of nurses in the sexual activities and its teaching to the patients with myocardial infarction and their wives in Kerman city", the reported showed that there was a significant positive correlation between the level of education and the level of knowledge and awareness in nurses (35), in agreement with the present study. Moreover, Pouraboli showed that gender, marital status, age, and work experience did not have a correlation with the awareness and knowledge of nurses (35), in agreement with the present study. According to the definition, confidence means awareness and assurance of individuals to perform their

duties appropriately. It should be mentioned that there was no significant correlation between demographic variables and the responsibility of nurses for sexual counseling. It is recommended that more studies be carried out.

Regarding the obtained results and importance of sexual issues in patients with myocardial infarction, the viewpoint of health providers, such as nurses, in the sexual issues and counseling of these problems, is originated from the occupational and individual status. Considering the important role of all nurses especially nurses working in the cardiac units, it is suggested that some courses as counseling skills hold. These courses can assist nurses to be free when they are discussing sexual issues, and consequently, performance, confidence, and responsibility for sexual counseling is created in these nurses. This study was only carried out in the cardiac units, which cannot be interpreted for other units. Moreover, the mental and psychological condition of participants can affect the results, which is out of our control.

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Conflict of Interest

The authors declare that there are no conflicts of interest in the publication of this study.

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