

Nurses' knowledge and practice involving patients' resuming sexual activity following myocardial infarction: implications for training

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KEY WORDS

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ABSTRACT

Objective

The main aim of the study was to determine the knowledge level of cardiology nurses in relation to sexual and other lifestyle adjustments required of their patients following myocardial infarction (MI).

Design

This descriptive study conducted structured interviews using a data collection questionnaire.

Setting

Cardiology nurses working in cardiology clinics and outpatient clinics of university hospitals in Turkey.

Subjects

The study was completed with 108 nurses.

Main outcome measures

Nurses' knowledge and practice pertaining to sexual adjustment issues including changes in sexual activity and the correct sexual practices following MI were measured.

Results

Accurate and appropriate responses by nurses to the questions regarding sexual activity in post-MI patients were rare, ranging from 0.9% for nine out of 15 questions to 23.1% for one out of 15 questions. However unmarried nurses' knowledge about the factors influencing patients' sexual activity and post-MI changes affecting their sexual activity was higher than for married nurses. The findings indicated that almost all the nurses (99.4%) did not provide sexual education to post-MI patients due to a lack of knowledge and skill and their perception that sexual issues belong to a patient's private domain.

Conclusions

This study expanded the knowledge base regarding the knowledge and skill that should be required for nurses when providing sexual education. The data highlighted nurses' neglect and avoidance in addressing sexual issues due to inadequate knowledge as well as cultural factors. The results clearly suggest the importance of addressing topics regarding sexual life during basic nursing education and continuing education programs.

INTRODUCTION

Due to the fact that ischaemic heart disease is the major cause of death and generates the greatest number of hospitalisations with increasing health care expenses, the management of ischaemic heart disease should receive high priority in national health policies and preventive health care programs. A major concern in both developing countries with a young population and developed countries with an older population is the mortality related to ischaemic heart disease (Arntz et al 1998). According to the data from the World Health Organization (WHO), the mean 28-day case fatality rate from episodes thought to be due to acute myocardial infarction (MI) is formidably high, at 32.8% for men and 53.3% for women, increasing with age (Evans et al 2001; Marques-Vidal et al 2000). A comparison of Turkey with other European countries in terms of MI mortality indicates that the mortality rate among men in Turkey is second to Baltic countries and Russia; among women the mortality rate also holds second place following the Ukraine (Turkish Cardiology Society 2000a).

Along with the fear of recurrence of a heart attack, survivors of MI can experience physical, psychological, and social difficulties owing to the numerous restrictions in their usual daily routine. Some limitations may be imposed on doing housework, climbing stairs and shopping. A variety of rehabilitation strategies are used to cope with these restrictions which include symptom management, medication information, lifestyle changes, psychological factors and physical activity. The literature suggests that the issue of 'when to resume sexual activity' was ranked by patients as most important among the items of physical activity. Sexual issues cause great concern to patients because of a potential decrease in the frequency of their sexual activity, sexual interest, sexual satisfaction, and sexual performance (Jaarsma 2002). Patients fear coital coronary, perceived harmful effects of sexual activity to the heart, and symptoms such as shortness of breath, anxiety, guilt, loss of libido and impotence (Timmins and Kaliszer 2003; Jaarsma 2002; Friedman 2000; Taylor 1999).

Normal signs of sexual arousal which include increased heart rate, increased respiration and sweating can easily be misinterpreted as cardiac symptoms although research has reported the estimate of the relative risk of MI after sexual intercourse was insignificant (Rerkpattanapipat et al 2001). This increased risk appears to be restricted to the two hour time period following sexual intercourse. Beyond that time window, there was no increased risk of MI after sexual intercourse (Drory 2002; Kimmel 2000). Despite the low risk of severe symptoms, low incidence of recurrence of MI associated with sexual intercourse and the fact that the majority of (22%-75%) post-MI patients suffer from sexual dysfunction; the sexual issue is rarely addressed by health professionals (Rerkpattanapipat et al 2001; Friedman 2000).

LITERATURE REVIEW

Relevant literature which clarifies the importance of sexual rehabilitation, the risk of recurrent MI caused by sexual activity, nurses' responsibility regarding the issue, and reasons for nurses' avoidance of this subject is summarised below.

The need for sexual rehabilitation: a component of cardiac rehabilitation programs

Cardiac rehabilitation aims to improve and optimise patients' physical, emotional, vocational and social recovery so they may preserve, or resume when lost, their normal activities of daily life after a cardiac event (Warrington et al 2003; WHO 1993). Sexual activity should be considered as one of life's normal elements regardless of chronic diseases and age. However studies indicate that many cardiac rehabilitation programs neglect sexual issues for cardiac patients and simply include exercise, diet, stress-modification, smoking cessation and vocational rehabilitation (Zwisler et al 2005; Taylor 1999; Gohlke and Gohlke-Barwolf 1998). The need to expand cardiac rehabilitation content to include a patient's sexual activity results from the difficulties expressed by post-MI patients about resuming and attaining satisfaction from sexual activity. Most post-MI patients exhibit concern about the high

possibility of death after a cardiac event itself and also about the potential danger to them of resuming sexual activity (Taylor 1999; Wiklund et al 1984).

In this sense, sexual rehabilitation should include information regarding resumption of sexual activity; a graded exercise tolerance test to measure a patient's confidence; monitoring medications for side effects; encouraging counselling for distressed couples; reducing the patient's partner's fears; discouraging goal-oriented sexual activity (the expectation of high-level physical sexual performance rather than emotional and psychological satisfaction); and information about the safety of sexual activity (Taylor 1999). The literature suggests that sexual activity can resume 3-6 weeks after stabilisation in a familiar place with mild temperature and with a familiar partner and position. The key principles are for couples to relax and go slow in re-establishing the sexual relationship with emphasis on renewing both their romantic as well as their physical intimacy. Counselling regarding the recommendations for pre-sexual activity suggests that patient should be well rested and that food and particularly alcoholic drinks should be avoided for 1-3 hours before sexual activity (Friedman 2000; Taylor 1999).

The risk of MI triggered by sexual activity

The literature further suggests that oxygen requirements and energy expenditure during sexual activity are moderate; heart rate values during intercourse are similar to those found in daily life; sexual activity in most post-MI patients is associated with a low risk of cardiac complications; and coital death among post-MI patients is rare (Stein 2000; Drory et al 1995). Moreover, the evidence indicates that peak heart rate during exercise testing is higher than the peak heart rate during all phases of sexual intercourse (Drory et al 1995).

For the last three decades researchers have tried to ascertain the risk of MI triggered by sexual intercourse. Kimmel's (2000) study determined that the relative risk of MI after sexual activity is approximately 2.5 during the two hour period following sexual activity. However when the basic MI risk for

society is considered, not all incidences of post-coital MI should be attributed to sexual activity. Because this baseline risk during any two hour period is low; the absolute increase in risk due to sexual activity among high-risk individuals is only 0.1% annually compared with 0.01% for low-risk individuals (Kimmel 2000). An enhanced physiological response to coitus with an extramarital partner and in an unfamiliar place is reported to account for 75% of sudden coital deaths (Stein 2000; Drory et al 1995).

Nurses' responsibilities for educating post-MI patients about sexual activity

The scope of knowledge and skill required to address the multifaceted elements of cardiac rehabilitation is broad, hence the need for a wide range of multidisciplinary input to include the cardiologist, nurse, dietitian, exercise physiologist, occupational therapist, physiotherapist, psychologist and social worker (Stokes 2000). The responsible health professional for sexual education and counselling in cardiac rehabilitation programs varies at the organisational level from country to country and may be led or directed by the cardiologist, nurse, occupational therapist or other members of the health team (Shell 2007; Stokes 2000).

Nurses are often in a position to conduct an assessment of patients which should include a full sexual history. While almost all nurses consider sexual assessment, evaluation, and counselling should be a part of their professional role, they have difficulty integrating this awareness into patient care (Hardin 2007; Magnan et al 2006). The literature indicates that numerous barriers exist for nurses who need to provide information and education about a patient's sexual life. Barriers include discomfort talking about the subject, embarrassment, a lack of knowledge and skill in approaching the subject, and a lack of time (Hardin 2007; Shell 2007; Cort et al 2001). Because many nurses are not given any basic sexuality education during their nursing education, increasing their sexual health knowledge is important (Hardin 2007). Some researchers have emphasised the cultural aspects of addressing sexual matters with

patients, reporting that talking about this subject in certain cultures might be more difficult than in others (Shell 2007; Magnan et al 2006; Aras et al 2004). Within Turkish society, the topics of sexuality and sexual activity have traditionally been considered as taboo. These attitudes are cultivated from an early age and can be attributed to the religious, moral and social values of the people. Consequently, this has an impact on nurses' own perceptions, values and attitudes and may prevent them from fulfilling their professional roles as counsellors and educators in an area about which they should be knowledgeable and skilled.

The research suggests that education programs are needed to help nurses develop both comfort and confidence in dealing with patient sexual matters (Magnan et al 2006; Stokes 2000). In Turkey, there is data showing that nurses employed in the cardiology field have insufficient knowledge, skill or special training regarding sexual issues for cardiac patients (Turkish Cardiology Society 2000b). There is little data regarding nurses' skills and practices related to post-MI changes in patients' sexual activity, sexual dysfunction or other sexual problems, the risk of a new MI caused by sexual activity, and sexual topics in the context of cardiac rehabilitation. This is the case despite the fact that nurses need to address patients' sexual lives as an element of a patient's overall health and as a part of quality of life in the critical post-MI period. In order for nurses to provide education regarding sexual activity for post-MI patients, the extent of nurses' knowledge regarding sexual activities for their post-MI patients should first be ascertained. From this perspective, this study will contribute to the nursing literature regarding nurses' knowledge and their practices as related to the sexual issues and concerns of post-MI patients.

Aim

The aim of this study was to ascertain through open-ended questions cardiology nurses' knowledge about both the sexual life changes of patients suffering from MI and the physiological burden of sexual intercourse on the individual and indirectly to identify nurses' approach to addressing sexual issues of patients.

Method

For this descriptive study, a structured face-to-face interview was conducted with 108 cardiology nurses at four university hospitals who were asked 15 questions related to their knowledge of sexual and lifestyle adjustments required following MI and the way in which this information could be best provided to their clients prior to discharge. In order to avoid interaction between the nurses during data collection, each nurse was interviewed individually in the nurses' room.

Sample

Out of a total of 140 nurses working in the cardiology clinics and outpatient clinics of four large urban university teaching hospitals in Turkey, 108 (77.1%) agreed to participate in the study. All participants had a minimum of six months' employment. Each of the university hospitals where the study was conducted had a unit supervisor for the education and training of nurses. The nurses had not had any type of education regarding sexuality and rehabilitation in general; in particular they had no training concerning sexual-life changes in MI patients.

Measurements

The data were collected using a questionnaire developed by the researchers based on the literature (Boyce and Umbland 2001; DeBusk et al 2000; Kimmel 2000; Moreira et al 2000; Muller 2000; Stein 2000; Drory et al 1995). The questionnaire consisted of the following sections: The first section included general demographic characteristics of participants. The second section posed questions related to the nurses' responsibility for providing sexual education to post-MI patients, education topics and content, and difficulties encountered while providing education. The third section contained questions related to changes in sexual activity following MI, the stress of sexual activity to the body, the recommended prerequisites for participating in sexual intercourse, and the medical treatments influencing the sexual activity of post-MI patients.

The responses to the open-ended questions in the questionnaire were classified as 'adequate,' 'partially adequate,' and 'inadequate' based on the inclusion

of the responses on the answer key. Even though the interviewer neither directly sought to reflect nurses' views on the subject, nor asked nurses to express their opinions, some nurses reacted verbally to the questionnaire. These intact verbal comments were recorded using pen and paper and transcribed to the findings section.

Ethical considerations

Official permission was obtained from the institutions included in the sampling. Informed consent of the nurses was obtained after verbal and written explanations of the study objectives; confidentiality of information was ensured.

Data analysis

SPSS Version 10.0 (Statistical Package for Social Sciences) was used for data evaluation. When expected cell sizes were adequate, nominal measures were compared using the Pearson Chi-Square test. Otherwise, the Likelihood Ratio Chi-Square test and Fisher's Exact Chi-Square test for 2x2 tables were used. In order to show statistically significant differences between demographic variables and the nurses' knowledge of sexual activity and the difficulties they experienced when discussing the topic, Chi-Square tests were used. The Mann-Whitney U test was used for comparing the number of nurses' appropriate answers with regard to sexual and lifestyle adjustment required following MI.

Findings

The findings of the study were presented in two major sections which included nurses' knowledge of appropriate sexual practices for post-MI patients, nurses' actual conduct or 'status' as to whether they provided education regarding sexual activity for post-MI patients, and their comments on providing sexual education to post-MI patients. The majority of the study sample was younger than 30 years with over five years' employment experience. Almost half the nurses were married and had undergraduate or graduate degrees.

Nurses' knowledge of appropriate sexual practices for post-MI patients: Among the acceptable answers to multiple-choice questions related to post-MI sexual activity; appropriate room temperature during sexual activity (57.4%) was ranked the highest, while pulse changes during sexual activity (4.6%) and the risk of

a new MI caused by sexual intercourse (7.4%) were ranked the lowest (table 1). As shown in the table, statistical analysis between nurses' demographic variables and their answers to multiple-choice questions were not significant ($p > 0.05$). However the Pearson Chi-Square test demonstrated significant differences between demographic variables and factors affecting sexual activity MI, and post-MI changes in sexual activity ($p = 0.029$; $p = 0.009$). Nurses' marital status was the variable responsible for the statistical difference, both in terms of factors influencing sexual activity and post-MI changes, in favor of unmarried nurses ($p < 0.01$) (table 1). Despite the lack of a statistically significant difference, those who were younger than 30 years and highly educated had more adequate knowledge with regard to factors influencing post-MI sexual activity and nurses' knowledge on post-MI changes in sexual activity than the others (table 1).

The nurses' general knowledge of sexual activity after MI was evaluated based on their answers to 15 relevant questions. Only a negligible percentage of the nurses (0.9%) were able to give appropriate answers to a maximum of nine out of the 15 knowledge questions, a minority (23.1%) knew one acceptable answer, and some (13%) could answer none (figure 1). The Mann-Whitney U test showed no difference between the nurses' acceptable answers and their demographic variables ($p > 0.05$). As to nurses' knowledge about the effects of medication on sexual function, the majority (76.9%) was unaware of the effects of drugs on sexual function and none provided instructions and information on the drugs and their effects on sexual function to post-MI patients. None of the nurses who considered that certain drugs could influence sexual function (13%) had enough knowledge about either the drugs or their effects. Regarding the use of Sildenafil (distributed under various names to include Viagra®) for post-MI patients, over half of the nurses (63.9%) had no information and nearly a quarter (26.9%) reported that Sildenafil use was not appropriate. A small percentage of nurses (9.2%) indicated that Sildenafil can be used by post-MI patients under doctor's orders, but none of those could correctly define the precautions for its use in post-MI patients except one nurse who pointed out that Sildenafil use could cause hypotension.

Table 1: Nurses' knowledge of sexual activity after myocardial infarction

Knowledge based on responses to single answer multiple choice questions	DEMOGRAPHIC VARIABLES (n=108)										P value
	Age %		Marital status %		Education %		Professional experience %				
	<30	≥30	Married	Unmarried	Vocational high school of health/ Two year nursing college	Under graduate/ Graduate	6 months to 5 years	>5 years			
Proper room temperature	Yes	57.4	66.7	25	55.9	59.2	54.1	61.7	53.2	63	0.241*
	No	42.6	33.3	75	44.1	40.8	45.9	38.3	46.8	37	0.943**
Frequency of sexual activity	Yes	37	38.1	33.3	35.6	38.8	31.1	44.7	37	37.1	0.595***
	No	63	61.9	66.7	64.4	61.2	68.9	55.3	63	62.9	0.471****
Effect of foreplay	Yes	31.5	32.3	29.2	28.6	33.9	26.2	38.3	29	34.8	0.489*
	No	68.5	67.7	70.8	71.4	66.1	73.8	61.7	71	65.2	0.939**
Exercise-MI correlation	Yes	25	29.2	23.8	24.5	25.4	18	34	21.7	27.4	0.352***
	No	75	70.8	76.2	75.5	74.6	82	66	78.3	72.6	0.201****
Time of resuming sexual activity	Yes	16.7	16.7	16.7	13.6	20.4	11.5	23.4	17.4	16.1	0.146*
	No	83.3	83.3	83.3	86.4	79.6	88.5	76.6	82.6	83.9	0.418**
Easiest position for the heart	Yes	13.9	13.1	16.7	20.4	8.5	6.4	19.7	8.7	17.7	0.186**
	No	86.1	86.9	83.3	79.6	91.5	93.6	80.3	91.3	82.3	0.513****
Energy consumption during sexual activity	Yes	11.1	13.1	4.2	16.3	6.8	8.2	14.9	10.9	11.3	0.862*
	No	88.9	86.9	95.8	83.7	93.2	91.8	85.1	89.1	88.7	0.799**
Recurrent MI risk	Yes	7.4	7.2	8.3	10.2	5.1	11.5	2.1	2.2	11.3	0.091***
	No	92.6	92.8	91.7	89.8	94.9	88.5	97.9	97.8	88.7	0.320****
Changes in the heart rate during sexual activity	Yes	4.6	4.8	4.2	6.2	3.4	6.5	2.1	2.2	6.5	†
	No	95.4	95.2	95.8	93.8	96.6	93.5	97.9	97.8	93.5	
Factors affecting sex life	Adequate	13.9	14.3	12.5	6.1	20.3	9.8	19.1	17.4	11.3	0.971*
	Partially adequate	31.5	32.1	29.2	30.6	32.2	29.5	34	26.1	35.5	0.029**
	Inadequate	54.6	53.6	58.3	63.3	47.5	60.7	46.9	56.5	53.2	0.222****

Table 1: Nurses' knowledge of sexual activity after myocardial infarction, continued...

Knowledge based on responses to single answer multiple choice questions	DEMOGRAPHIC VARIABLES (n=108)										P value
	Age %		Marital status %		Education %		Professional experience %				
	<30	≥30	Married	Unmarried	Vocational high school/ Two year nursing college	Under graduate/ Graduate	6 months to 5 years	>5 years			
Post-MI changes in sex life	Partially adequate	22.2	23.8	16.7	16.4	29.8	20.3	24.5	21.7	22.6	0.009** 0.138***
	Inadequate	77.8	76.2	83.3	83.6	70.2	79.7	75.5	78.3	77.4	
Measures against warning signs	Adequate	2.8	2.4	4.2	2	3.4	3.3	2.1	2.2	3.2	†
	Partially adequate	15.7	14.3	20.8	20.4	11.9	16.4	14.9	8.7	21	
Warning signs	Inadequate	81.5	83.3	75	77.6	84.7	80.3	83	89.1	75.8	†
	Adequate	-	-	-	-	-	-	-	-	-	
Factors increasing recurrent MI risk	Partially adequate	13	13.1	12.5	8.2	16.9	9.8	17	13	12.9	†
	Inadequate	87	86.9	87.5	91.8	83.1	90.2	83	87	87.1	
Deciding when to have sex activity time	Adequate	-	-	-	-	-	-	-	-	-	†
	Partially adequate	7.4	4.7	16.7	10.2	5.1	9.8	4.3	2.2	11.3	
	Inadequate	92.6	95.3	83.3	89.8	94.9	90.2	95.7	97.8	88.7	
	Adequate	-	-	-	-	-	-	-	-	-	
	Partially adequate	-	-	-	-	-	-	-	-	-	
	Inadequate	100	100	100	100	100	100	100	100	100	

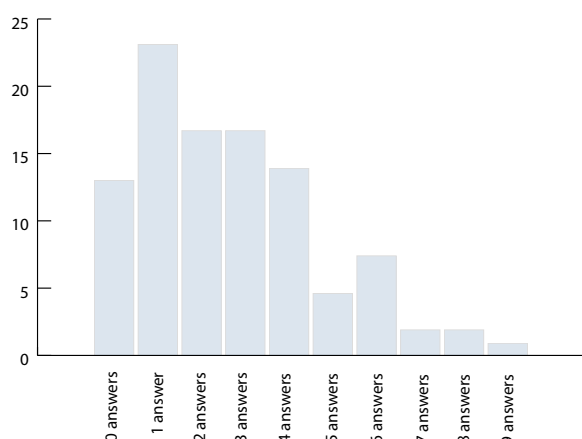
*Statistical evaluation is based on the age of nurses

**Statistical evaluation is based on the marital status of nurses

***Statistical evaluation is based on the educational level of nurses

****Statistical evaluation is based on the professional experience of nurse

†Statistical analysis could not be performed because of inadequate cell size

Figure 1: Number of correct answers

Nurses' status of and comments on providing sexual education to post-MI patients

The present study indicated that the nurses did not receive any formal education relating to changes or eventual adjustments in sexual life and changes in lifestyle following MI or other diseases. Consequently, almost all the nurses (99.4%) did not provide sexual education or counselling to post-MI patients; the minority who did offer sexual education and counselling were better educated with two years of nursing college, undergraduate, or graduate degrees, however excluded the patient's partners from the education process. Some verbal comments and statements that the nurses expressed during the interviews were as follows:

One of my patients asked: *'How will I maintain my sex life after being discharged? I have fears about this'* and I said: *I don't have information about this subject, ask your doctor.*

This statement demonstrates avoidance by the nurse to providing sexual counselling even when sought by the patient. The reason for this avoidance might result from a lack of knowledge or a lack of willingness to communicate with patients concerning sexual matters. The nurse's reference to the doctor suggests that the nurse considers the physician as the authority on the subject rather than the nurse. This statement also suggests that the patient probably did not talk with the doctor about his/her concerns regarding future sexual activity.

A male patient with acute MI diagnosis whom I was monitoring asked me a question about his sexual life. I was very angry with him for directing such a question at me.

Perhaps the salient point which can be derived from this reaction by the nurse is gender discrepancy in providing such service. Or the nurse might be angry because of not having the answer.

Even if I had information about sexuality following MI, I could not talk about this subject with my patient. Actually, our job may have been easier if relevant brochures were to be developed.

Here, the nurse indicates her lack of information and avoidance in providing information about sexual activity following MI and suggests written resources are made available for patients. Informational brochures would take some of the pressure from nurses while providing patients with at least some information in this area.

While there were no statistically significant differences in demographic variables for those nurses who did not score well, those who had work experience of less than two years (59.3%) reported greater difficulty. The results showed that nurses' scored least in the area relating to the effect of sexual activity on a patient's health. Some verbal comments of nurses relating to the effect of sexual activity on an individual were:

Something like this never occurred to me while doing that act and so I never took my pulse.

We can't go into our patients' bedrooms, so how would we know their positions?

Both comments imply that nurses consider sexual activity as a personally private and intimate domain that should not be intruded on by them or others. It also highlights nurses' lack of experience in approaching the topic of patients' sexuality as part of their professional role.

DISCUSSION

The findings of this study indicate that the nurses had extremely limited knowledge about the resumption of

sexual activity for post-MI patients and the impact of sexual intercourse on MI patients' health. Results of the study also revealed nurses' discomfort in talking about topics with a sexual content, thus they did not address these issues for post-MI patients. These findings are consistent with other research showing nurses' avoidance in mentioning the sexuality and sexual activity of patients. Matocha and Waterhouse (1993) concluded that almost half the nurses in their study did not evaluate the sexual health of any patient and those that did evaluate a patient's sexual health did not do so with all patients. Initiating a conversation about sexual matters with patients proved entirely too difficult. Likewise, Webb (1988) found that nurses had a generally low knowledge score on questions relating to sexual activity. None mentioned possible problems related to sexual function or provided clear information and they ignored the sexual life of their patients (Webb 1988). However due to the fact that sexuality is an essential aspect of normal human function, well-being and quality of life, nurses should approach their patient's sexual life holistically together with other areas of health and life without bias or partiality (Shell 2007). Individuals expect nurses to be able to address their problems related to sexual activity and to provide sexual education 'always' or 'in certain circumstances' (Fridlund 2002; Waterhouse and Metcalfe 1991).

The literature indicates that although healthy and ill individuals feel that nurses should be able to address sexual related topics, nurses keep as far away from the issue as possible (Gill and Hough 2007; Hardin 2007; Shell 2007; Magnan et al 2006; Cort et al 2001; Stokes 2000). According to McCormick (1980), nurses avoid addressing sexual matters because it implies interfering in the individual's personal life and privacy, since many people consider sexuality in the context of moral values and as part of the individual's private life. For this reason, discussing sexual related issues may be an uncomfortable area for nurses. In addition to the anxiety and discomfort caused by talking about sexual topics with patients, not discussing the subject may lead to feelings of guilt for the nurse. Therefore, nurses need to receive

professional training in human sexuality in order to enable them to provide information and education services to patients and their partners on this difficult to broach subject (Shell 2007; Magnan et al 2006).

Differences specific to culture, age and gender exist in sexual knowledge, attitude, and behaviour traits (Aras et al 2004). In a study conducted by Payne (1976) with family planning nurses and student nurses, the age and education of the nurses were found to be major determinants of knowledge, attitude and behavior relating to sexuality. In this present study, unmarried nurses' knowledge about the factors influencing a resumption of sexual activity for post-MI patients and changes in a patient's sexual life following MI were higher than for married nurses. Contrary to this study however, Payne (1976) found that sexuality knowledge was greater among married nurses compared with unmarried nurses. This discrepancy in research might be attributable to the characteristics of unmarried nurses in the present study who were highly educated and young. Perception of nursing as solely a woman's profession and the characteristics, social, religious and moral values of Turkish society may also have an effect on nurses' knowledge, attitudes, and practices toward the sexual life of post-MI patients.

One of nurses' fundamental roles is to be aware of the expected effects, side effects, contraindications and dosage of medications and to inform and counsel their patients about these. However studies conducted in Turkey have shown that nurses in general do not satisfactorily meet this responsibility (Ak 2000; Baklacioğlu 1995). Similarly, the findings of this present study highlight that nurses are not well enough informed to educate and advise their patients on the precautions related to using medications that affect sexual function, including Sildenafil. Consistent with the rest of the findings in this study, it is considered that the failure of nurses to provide information and education about the effects of medications on sexual function to post-MI patients is due to their lack of knowledge on the subject and the uneasiness they feel in addressing the subject.

CONCLUSIONS

Nurses who have the task of evaluating sexual health for patients with MI, identifying existing and potential problems and intervening as necessary, feel uncomfortable discussing sexual issues with their patients and answering their patients' questions about sexual activity post-MI. This study found that nurses do not receive programmed information or training on post-MI sexual life; most nurses do not provide education on this subject to their patients; and all the nurses who do provide sexual education hold nursing college, undergraduate, or graduate degrees. In order to provide patient education on sexual life changes, nurses need to have a good grasp of human sexuality issues and a relaxed attitude to equip them to address this subject. The findings also suggest that although nurses in general have a poor understanding of post-MI sexual life, single nurses under the age of 30, who have perhaps not yet adopted the social values imposed by marriage and who have a modern thought structure, are more knowledgeable about the subject than their married counterparts.

RECOMMENDATIONS

Nurses need to be educated to ensure they explore their own perceptions and values regarding sexuality, attain the knowledge and skills necessary to provide counselling and guidance to patients about care and sexual activity following MI and become equipped to identify problems and provide relevant information. Nurses can thus develop the relaxed attitude they need to confidently discuss sexuality and sexual activity with patients and their partners and refer them for specialised care as necessary. Both nurses and patients would deal more easily and comfortably with sexual issues if standards, booklets and brochures were developed to facilitate nurses' evaluation of the sexual issues for MI patients. Nurses could then make the necessary interventions based on their evaluations and education.

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