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Cardiac rehabilitation staff views about discussing sexual issues with coronary heart disease patients: A national survey in Ireland

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Abstract

Background: While a healthy sexual life is regarded as an important aspect of quality of life, sexual counselling from healthcare providers for cardiac patients has received little attention in the literature.
Aim: To document current practice and assess the needs of cardiac rehabilitation service providers in Ireland with regard to sexual assessment and management for patients.
Methods: Cardiac rehabilitation staff in all relevant centres in Ireland responded to a postal questionnaire. Sexual health management was assessed by a series of questions on current practice, staff attitudes, beliefs and perceived barriers to discussing sexual problems.
Results: Staff ($N=60$; 61% response rate) reported a lack of assessment and counselling protocols for addressing sexual health problems, with little or no onward referral system available. Results also suggest staff believe that patients do not expect them to ask about their sexual concerns. Barriers reported included an overall lack of confidence (45%), knowledge (58%) and training (85%).
Conclusion: Development of guidelines, assessment protocols and training for cardiac rehabilitation staff are essential in the area of sexual health problems in order to improve the quality of services for patients with coronary heart disease.

Keywords: Cardiac rehabilitation; Sexual problems; Quality of health care

1. Introduction

According to the World Health Organization, sexual health has been defined as "a state of physical, emotional, mental, and social wellbeing in relation to sexuality…" [1]. Healthy sexual functioning has important implications for emotional health, happiness and self esteem. Likewise, sexual dysfunction may have a negative impact on anxiety, depression, stress and loneliness and quality of interpersonal relationships [2].

Evidence suggests that sexual dysfunction is a common problem, increasingly associated with patients with coronary heart disease (CHD) [3]. A significant proportion of men experience erectile dysfunction (ED) while women report problems with sexual arousal and pain disorders [4]. Both male and female cardiac patients and their partners report concerns about their sexual functioning in relation to loss of interest, decrease in frequency of sexual activity and changes in satisfaction and problems with sexual performance [5]. Depression, fear of another heart attack or even death, and the side effects of medication such as beta-blockers and lipid lowering drugs have been shown to increase sexual dysfunction in men and women who have experienced

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CHD [6]. Individuals with heart disease may hold negative perceptions of their bodies as being fragile and develop a negative relationship with their body [4]. While exact incident rates of sexual dysfunction are difficult to ascertain due to under reporting and a lack of investigation by health service providers [7,8], it is important to understand the issues of sexual dysfunction in patients with underlying cardiovascular disease [4,9].

Internationally the prevalence of patients with CHD continues to rise due to improvements in prognosis, reduction in population risk factors, improved treatment, changes in health behaviours and lifestyles and an increase in the age of the population [3,4,10]. This increase in survival rates has resulted in a greater demand for disease management, secondary prevention and cardiac rehabilitation services. Currently in Ireland, 38 centres provide cardiac rehabilitation services. In the year 2008, 8932 patients attended phase I, of which 5233 (58%) patients went on to attend phase II and 3000 (35%) of these cardiac patients attended phase III [11]. Patients who do not attend cardiac rehabilitation services are normally seen by their GP or health care provider. Cardiac rehabilitation programmes have been recognised at an international level to offer excellent delivery of secondary prevention by providing education, exercise and lifestyle support to patients following a cardiac event [12].

The promotion of sexual health is a legitimate role for cardiac staff who support patients in the early rehabilitation phase of illness. Sexuality should be seen as a developmental process, as sexual desire does not diminish with age [13]. Recent research has identified that, whilst older people do experience sexual concerns which they would like to discuss with a health care professional, most will not do so, often because they are worried about the appropriateness of being seen as sexual 'at their age' [14]. On the other hand, health professionals fear that raising a sexual issue with an older person may cause offence or that such issues are simply not of relevance within this context [15].

According to previous research, nurses agree that sexuality assessment and counselling are within the remit of their professional role [16]. This research also suggests that nurses do not routinely inquire about patients sexuality and provide little teaching and guidelines for individuals resuming sexual activity following a cardiac event [13,17–22]. When patients' views were sought, they reported that they would like service providers to take their full sexual history and that they would be comfortable with these discussions [23]. Interestingly women are less likely than men to receive sexual counselling following a cardiovascular disease [23].

Barriers to addressing patients' sexuality concerns, as reported by nurses, include not making time to address the concerns of patients and patients not expecting nurses to address these issues [24]. Recognition of the fears and anxieties for both service providers and cardiac patients is important in order to develop a patient centred model for the management of sexual dysfunction [25]. Providing early intervention is increasingly recognised as a key area to avoid negative outcomes [26].

Several studies [19,27,28] have reported cardiac patients would like to receive information about resuming sexual activity. Indications suggest that while resuming sexual activity is a significant concern it often rates lower than medication and risk factors and resuming normal activities. This may be due to the fact that it is only when patients return home and resume their normal day to day lives that the issues related to sexual activity may arise.

There is no detailed specific information readily available in relation to assessment and guidelines for sexual functioning post CHD in Ireland. The current study aimed to survey staff from a national list of cardiac rehabilitation services in Ireland to provide evidence-based knowledge of the services available and to develop strategies and interventions for optimal sexual counselling in the coronary healthcare setting.

2. Methods

This study investigated the views and experiences of cardiac rehabilitation staff working in all cardiac rehabilitation hospitals throughout the Republic of Ireland in relation to current practices of sexual assessment and management of patients with coronary heart disease.

2.1. Study participants

The study aimed to recruit all cardiac coordinators, nurses, physiotherapists and psychologists listed in the current Irish Association Cardiac Rehabilitation Handbook. This resulted in a sampling frame of 99 staff, of which 38 were cardiac coordinators (the role of the cardiac coordinator is to manage and coordinate the multidisciplinary team and the cardiac patients from phase I to phase IV of the cardiac rehabilitation process). The coordinator was not asked which professional group they belonged to in this study, but normally they are affiliated with the nursing profession.

Results from a pilot study of the postal questionnaire, conducted with a random sample of six cardiac rehabilitation staff members indicated satisfaction with the questionnaire and any recommendations made were included. Respondents' also indicated in the pilot study that their preferred method of completing the questionnaire was by post. A letter of introduction, a survey overview, a short questionnaire and a freepost return envelope were posted to all 99 staff. An option to "opt out" of the survey was also included in the participant pack; this consisted of a freepost card. After a three week time period 48 questionnaires were completed. A reminder letter was sent to 42 participants. Final response rate; $N=60$; 61%.

2.2. Questionnaire

The study questionnaire was based on a review of the literature, discussions with research steering committee members and results from a pilot study with six cardiac rehabilitation staff. It was composed of 20 questions divided into three sections: cardiac rehabilitation staff details, management of sexual health and their patient details, e.g. total number of patients in the unit, percentage of men and women, age range of patients and management of sexual health. Cardiac rehabilitation staff were asked questions about:

(a) Discussing the return of sexual activity for cardiac rehabilitation patients, either in a group or individually.
(b) Who was the most likely person to deliver information about sexual problems, a choice of nine options of the most likely staff were offered as well as an "other" option.
(c) Questions relating to the current guidelines for assessment and counselling protocols and referrals.
(d) Staff were asked to rate their own and their colleagues' knowledge, awareness and confidence in dealing with sexual problems based on a 5-point Likert scale ranging from 4=excellent, 3=very good, 2=good, 1=fair and 0=poor.
(e) Sexual attitudes and beliefs survey (SABS) a 12-item, 6-point Likert scale (1=strongly disagree; 6=strongly agree) to assess disagreement with statements which may prevent sexual assessment and counselling [29]. In order to avoid response bias scores were reversed on 6 of the 12 items. Total scores ranged from 6 to 72 with higher scores indicating greater disagreement with statements which could be perceived as barriers to incorporating human sexuality into assessment. Items included: (1) *I am uncomfortable talking about sexual issues* and (2) *Sexuality is too private to discuss with patients*. Internal consistency reliability of the SABS in the current study was Cronbach's alpha of 0.75.The construct validity of the SABS is supported by the significant correlations in the expected direction, $r=-0.37$, $p<0.05$, between SABS and the attitudes section of the Sexual Knowledge and Attitudes Test (SKAT) [30]. Further support for the construct validity of the SABS was demonstrated by its significant correlation, $r=-0.43$, $p<0.01$ with the sexual myths subscale of the SKAT attitudes scale. Finally the nonsignificant correlation $r=0.28$, $p>0.10$ between SABS scores and scores from a shortened 10 item version of the Marlowe–Crowe Social Desirability Scale [31] suggest that SABS scores are not unduly influenced by social desirability bias [29].
(f) Staff were also asked to rate a list of barriers derived from previous literature, which consisted of 17 items, again on a 6-point Likert scale (1=strongly disagree; 6=strongly agree).
(g) One item on a 4-point scale enquired how sexual health problems were best addressed (1=very well addressed; 2=adequately addressed; 3=poorly addressed and 4=not addressed).
(h) Two open-ended questions asked for the opinions of cardiac rehabilitation staff on any other barriers not previously mentioned and views on improvements to their services with regard to management of sexual health problems.

2.3. Statistical analysis

Quantitative data were analysed by SPSS (v15). Responses to the final open-ended question regarding how sexual problems *should* be managed within cardiac rehabilitation units were transcribed and analysed qualitatively. Two members of the research team (SD and MB) independently read each response and sorted responses into basic categories, based on perceived similarities and differences. The summary lists of categories generated by each researcher were compared. Differences were discussed and categories were refined. A final comprehensive list was prepared.

2.4. Ethical considerations

The investigation conforms with the principles outlined in the Declaration of Helsinki (Br Med J 1964; ii:177). The study was granted ethical approval by the National University of Ireland, Galway Research Ethics Committee in June 2008.

3. Results

3.1. Cardiac rehabilitation staff

The final sample of respondents consisted of a total of 60 cardiac rehabilitation staff, of which 29 were coordinators, 15 were nurses, 13 were physiotherapists and 3 psychologists. The majority of the staff were women (88%) with a mean age of 40.7 years (SD=6.7), age range 28–54 years. The mean length of time in current position was 7.5 (SD=4) range 1–26 years.

A total of 29 cardiac rehabilitation units reported the number of patients attending their services (range 17–500 ($M=122$, SD=148)). The majority were men, aged 50–79 years. Table 1 summarises the findings concerning discussion of sexual health and returning to sexual activity, 42% of the cardiac units reported they "always" discussed

Table 1
Delivery of sexual health discussions with patients in a group or individual setting ($N=60$).

	Never %	Rarely %	Sometimes %	Frequently %	Always %
Group	13	13	20	12	42
Individual	17	37	25	12	10

this in a "group" while 14% reported it was "never" discussed in a group. Only 10% of the units discussed this on an "individual basis" while 17% reported it was "never" discussed on an individual basis.

Almost all cardiac staff surveyed (87%) when given the choice of ten professionals working in cardiac rehabilitation, agreed that the most likely person to discuss sexual health and returning to sexual activity with patients was the cardiac coordinator. Just over half (52%) agreed that it was the role of the cardiac nurse and 25% agreed it was the remit of the psychologist. The majority (95%) of all cardiac rehabilitation staff agreed there were no specific guidelines for assessment or counselling for sexual health problems following coronary heart disease. Almost half (45%) of all staff agreed they had referred patients to other services such as a GP, and 12% had referred patients to a psychologist. Referrals to counselling, marriage guidance, and sex therapy services were not availed of by many of the cardiac rehabilitation units.

As summarised in Table 2, cardiac staff generally rated themselves and other their perception of other staff members as "fair" to "good" in their knowledge, awareness and confidence in dealing with sexual problems with patients who have coronary heart disease. Four staff members were not willing to report other staff ratings on knowledge, awareness and confidence. Staff reported that "other" staff members' knowledge and confidence were better than their own, but not awareness in dealing with sexual health problems.

Items (Table 3) on the sexual attitude and beliefs questionnaire (SABS) were indicative of staff disagreement with the statements in addressing sexual concerns and assessment for patients with cardiac health problems.

The five items with the highest mean score indicate that cardiac rehabilitation staff believe that patients do not expect them to ask about their sexual concerns. They expressed less confidence in their ability to discuss sexual health issues when compared to other staff and felt that it was not a staff responsibility to give patients permission to discuss sexual health issues. In general, cardiac rehabilitation staff felt uncomfortable discussing sexual health issues.

Table 2
Cardiac rehabilitation staff ratings of their own and other staff members' knowledge, awareness and confidence in dealing with sexual problems for patients with CHD.

	N	Mean (SD) 1–4	Poor %	Fair %	Good %	V good %	Excellent %
Own knowledge	60	1.5 (.89)	12	42	35	10	2
Own confidence	60	1.4 (.99)	20	37	33	7	3
Own awareness	60	1.8 (.93)	3	37	37	18	5
Other's knowledge	56	1.6 (.90)	11	38	36	14	2
Other's confidence	56	1.4 (.91)	14	43	32	9	2
Other's awareness	56	1.6 (.83)	9	36	38	18	0

Table 3
Cardiac rehabilitation staff disagreement with sexual attitude and belief statements (*N*=60, "Disagree"=those who ticked strongly disagree, disagree, possibly disagree mean values indicate a higher level of disagreement).

	% Disagree (*N*)	Mean	SD
Patients' expect hospital staff to ask about their sexual concerns.	67 (40)	4.1	1.3
I am more comfortable talking about sexual issues with my patients than most of the staff I work with.	48 (35)	3.7	1.5
Giving a patient permission to talk about sexual concerns is a nursing responsibility.	50 (30)	3.6	1.8
I feel confident in my ability to address patient's sexual concerns.	45 (27)	3.3	1.4
I am uncomfortable talking about sexual issues.	57 (34)	3.1	1.6
I make time to discuss sexual concerns with my patients.	37 (22)	3.1	1.5
Whenever patients ask me a sexually related question, I advise them to discuss the matter with their doctor.	60 (36)	2.8	1.5
Most hospitalized patients are too sick to be interested in sexuality.	76 (47)	2.4	1.2
Sexuality should be discussed only if initiated by the patient.	88 (53)	2.3	1.0
Discussing sexuality is essential to patients' health outcomes.	13 (8)	2.3	1.0
I understand how my patients' disease and treatments might affect their sexuality.	2 (1)	1.8	.8
Sexuality is too private an issue to discuss with patients.	95 (57)	1.6	.8

Staff training, patients' lack of readiness, knowledge, cultural issues and language problems were noted as the five highest perceived barriers preventing staff in cardiac rehabilitation units from discussing sexual health problems with cardiac heart patients (Table 4).

Interestingly, barriers which were not highly endorsed in discussing sexual health problems were, the perception that it was someone else's job, working with a patient of opposite gender or that negative attitudes and beliefs to sexual issues were an issue.

Almost 61% of staff reported that sexual problems were poorly addressed for coronary heart disease patients in their service. Just over 3% reported that sexual problems were well addressed and 3% reported sexual problems were not addressed at all. When asked "In your opinion are there any other barriers not previously mentioned?" 25% of respondents offered an opinion. Responses included a lack of privacy and ignorance about sexual health issues. The majority (90%) of cardiac staff responded to an open-ended question about improvements they would like to see in relation to how sexual health problems could be best managed for staff. Half expressed a need for further training; 46% reported more staff were required for referrals (such as psychologists and a referral pathway); 24% highlighted the need for specific protocols and guidelines; 9% requested patient information resources such as DVDs and leaflets; and

Table 4
Barriers which may prevent cardiac rehabilitation staff from discussing sexual health problems with coronary heart disease patients (Agreeing = those who ticked partly agree, agree and strongly agree, mean agreement score [1 = strongly disagree; 6 = strongly agree] $N = 60$).

	% Agreeing (*N*)	Mean 1–6	SD
Lack of training	85 (50)	4.6	1.4
Patients lack of readiness	57 (34)	3.6	1.3
Lack of knowledge	58 (35)	3.6	1.6
Issue relating to culture and religion	45 (27)	3.9	1.5
Issues relating to language and ethnicity	38 (23)	3.0	1.6
Presence of third party	36 (21)	2.9	1.4
Not enough time	38 (23)	2.9	1.5
Concerns about increasing patients anxiety and discomfort	34 (20)	2.9	1.4
Patient too ill to address sexual issues	34 (20)	2.9	1.4
Sexuality not seen as a problem for the patient	34 (20)	2.8	1.4
Older aged patient	39 (23)	2.8	1.5
Fear of offending patient	42 (25)	2.8	1.4
Embarrassment	34 (20)	2.6	1.3
Too large and age difference between you and the patient	24 (14)	2.3	1.3
Someone else's job	19 (11)	2.2	1.2
Patient of opposite sex to you	14 (8)	2.1	1.3
Negative attitude and beliefs about sexuality	32 (19)	2.1	1.1

5% thought more publicity in the general population would improve how they would deal with sexual health problems in cardiac rehabilitation. Responses were organised into 6 categories, with illustrative quotations, in Table 5.

Table 5
Five categories of responses to the question: 'How do you think sexual problems should ideally be managed within cardiac rehabilitation for patients with coronary heart disease?'

Category	Illustrative quotation
Training	*CR008: Improve training for staff to improve confidence levels. I feel it is more of an issue for patients who have recuperated and would probably be more appropriately addressed in the out-patient setting 6–8 weeks post event surgery and perhaps this question should be asked to every patient who is seen in out-patient clinic by the medical team.*
Increase referral services	*CR012: Access to services to refer on to counselling/ psychotherapy. Not all problems cardiac in origin, high proportion of alcohol problems, depression, psychological issues leading up to the cardiac event. Follow-up availability is poor.*
Need for guidelines	*CR015: To have a guideline to guide clinical practice in terms of ensuring the adequate assessment of sexual problems/subject is addressed post coronary event.*
Resources for patients	*CR032: Greater awareness publicly that this is a common problem. More aids i.e. DVD's, leaflets to give to patients and for health care professionals to use as educational tools. Seminar/workshops. Sexual counselling.*
Increase awareness for staff	*CR091: More attention drawn to it. Publicised more. NB: Educational training for staff to educate. Counselling back-up.*

4. Discussion

The results from this study support previous findings in the area of sexual health management for patients with CHD [3,8,16,20,23,29]. There are currently no widely recognised standard guidelines for assessment and counselling of sexual health problems for these patients. While sexual problems were discussed in almost half of cardiac rehabilitation units in a group setting, only one in ten staff members reported that patients received personal individual counselling and information. The majority of cardiac rehabilitation staff agreed that the person most likely to deliver this information was the coordinator. Interestingly there was almost no referral by cardiac staff to other services such as counselling, marriage guidance, or sex therapy with only a small minority referring to psychologists. This may be indicative of a lack of knowledge about such services or a lack of referral services.

Results from recent studies [16,29,32] were strongly supported in the current study in relation to understanding cardiac staff perception of beliefs and attitudes which may prevent them from discussing sexual problems with patients in the current study. The greatest belief held by staff was that they did not believe that patients expect cardiac rehabilitation staff to ask about their sexual concerns (Table 3). Magnan et al. [16] propose that this belief may influence nursing behaviour, in respect to increasing patient anxiety and quite possibly their own anxiety, as levels of confidence and being uncomfortable with sexual issues rated highly both in previous and the current study. When asked to rate their own and other staff members' knowledge, confidence and awareness in dealing with sexual problems for patients with CHD, staff members in general rated both themselves and their perception of other staff as "fair" to "good", although on average cardiac staff rated "other" staff as having more knowledge and confidence in this area than themselves. While cardiac staff did not believe that patients were too sick to discuss sexual health issues, they also expressed the view that such discussions were not essential to improve patient's health outcomes.

Interestingly, findings from a generated list of barriers developed from previous literature [8,18] were not rated as highly in the current study. Instead a lack of training, a perception that the patient is not ready to discuss sexual health issues, a general lack of knowledge of sexual health issues and issues relating to both culture and language were listed as the greatest barriers for cardiac rehabilitation staff. Previous studies rated a lack of time, patient too ill and embarrassment as being the greatest barriers for staff members. This may be a reflection on the fact that many of the staff interviewed are working with patients who are post-MI and are attending rehabilitation services rather than chronically ill patients on a busy ward. Results from a recent study [33], which examined general practitioners' views about discussing sexual issues with coronary care patients revealed similar conclusions. While GPs believed addressing sexual problems were important for coronary care patients they reported a lack of awareness, knowledge and training in

addressing sexual problems. Barriers reported included a lack of time and a perception that the patient was not ready to discuss this topic.

In response to open-ended questions, relating to improvements within services, almost half of cardiac rehabilitation staff reported that they would welcome training in the area of sexual functioning, with almost 45% staff noting that follow-up referral services were not available for MI patients. Many staff were aware of the psychosocial issues relating to CHD such as depression, anxiety and alcohol problems and the comorbidity relating to these issues. There was also a strong call for guidelines for both staff and patients.

5. Conclusion

Little research has taken place within cardiac rehabilitation services on the topic of sexual health management for patients. The response rate from a wide range of staff working in this area was adequate, allowing for confidence in the findings to present a clear picture of the current situation within these services in Ireland. It appears that educational programmes in the area of sexual counselling are not readily available to staff working in cardiac rehabilitation units in Ireland, although there is a strong recognition of the fact that there is a need for training and guidelines from staff. According to Albarran and Bridger [13], providing cardiac rehabilitation staff with these necessary educational skills are essential determinants of the quality of life for patients with CHD. Providing such information helps to allay the patients' and the partners' fears and the misconception that sexual activity combined with coronary heart disease is a dangerous activity.

Competing interests

None declared.

Author contributions

SD drafted the manuscript, participated in the design and co-ordination of the study, collected and prepared study data. MB conceived the study, and helped to draft the manuscript, and participated in its design and co-ordination. HMcG and AWM participated in the design and co-ordination of the study and helped to draft the manuscript. All authors read and approved the final version.

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References

[1] Organisation WH. Progress in reproductive health research: sexual health — a new focus for WHO. Progress Report; 2004.
[2] Laumann EO, Paik A, Rosen RC. Sexual dysfunction in the United States: prevalence and predictors. J Am Med Assoc 1999;281:537–44.
[3] Hardin SR. Cardiac disease and sexuality: implications for research and practice. Nurs Clin N Am 2007;42:593–603.
[4] Traeen B, Olsen S. Sexual dysfunction and sexual well-being in people with heart disease. Sex Relat Ther 2007;22:195–208.
[5] Jaarsma T, Dracup K, Walden J, Stevenson L. Sexual function in patients with advanced heart failure. Heart Lung 1996;25:262–70.
[6] Steinke E. Sexual counseling after myocardial infarction. Am J Nurs 2000;100:38–43.
[7] Schwarz E, Kapur V, Bionat S, Rastogi S, Gupta R, Rosanio S. The prevalence and clinical relevance of sexual dysfunction in women and men with chronic heart failure. Int J Impot Res 2008;21:85–91.
[8] Crouch S. Sexual Health 1: sexuality and nurses' role in sexual health. Br J Nurs 1999;8:601–6.
[9] Schwarz E, Shen B-J. Sexual dysfunction in cardiac rehabilitation patients is much more than simply an epiphenomenon and needs more study. Rev Esp Cardiol 2008;61:907–10.
[10] Schwarz E, Rodriguez J. Sex and the heart. Int J Impot Res 2005;17: S4–6.
[11] Irish Association Cardiac Rehab (IACR) www.iacr.ie accessed October 2008.
[12] Third National Survey of. Cardiac Rehabilitation Service Provision. progress on the 1999 National Cardiovascular Health Strategy Recommendations. Dublin: Health Services Research Centre, Royal College of Surgeons in Ireland; July, 2006.
[13] Albarran JW, Bridger S. Problems with providing education on resuming sexual activity after myocardial infarction: developing written information for patients. Intensive Crit Care Nurs 1997;13:2–11.
[14] Gott M, Hinchliff S. How important is sex in later life? The views of older people. Soc Sci Med 2003;56:1617–28.
[15] Gott M, Hinchliff S, Galena E. General practitioner attitudes to discussing sexual health issues with older people. Soc Sci Med 2004;58:2093–103.
[16] Magnan M, Reynolds KE, Galvin EA. Barriers to addressing patient sexuality in nursing practice. Dermatol Nurs 2006;18:448–58.
[17] Trudel G. Sexuality and marital life; results of a survey. J Sex Marital Ther 2002;28:229–49.
[18] Steinke EE, Patterson-Midgley P. Perspectives of nurses and patients on the need for sexual counselling of MI patients. Rehabil Nurs 1998;23:64–70.
[19] Crumlish B. Sexual counselling by cardiac nurses for patients following an MI. Br J Nurs 2004;13:710–3.
[20] O'Donovan K. Addressing the taboos: resuming sexual activity after myocardial infarction. Br J Card Nurs 2007;2:165–74.
[21] Hatzichristou D, Tsimtsiou Z. Prevention and management of cardiovascular disease and erectile dysfunction: toward a common patient-centered, care model. Am J Cardiol 2005;96:80–4.
[22] Stewart M, Davidson K, Meade D, Hirth ALM. Myocardial infarction: survivors' and spouses' stress, coping and support. J Adv Nurs 2003;31: 1351–60.
[23] Bedell SE, Duperval M, Goldberg R. Cardiologists' discussions about sexuality with patients with chronic coronary artery disease. Am Heart J 2002;144:239–42.
[24] Magnan MA, Norris DM. Nursing students' perceptions of barriers to addressing patient sexuality concerns. J Nurs Educ 2006;47:260–8.
[25] Giami A, Pacey S. Training health professionals in sexuality. Sex Relat Ther 2006;21:267–71.
[26] Steinke EE, Wright DW. The role of sexual satisfaction, age, and cardiac risk factors in the reduction of post-MI anxiety. Eur J Cardiovasc Nurs 2006;5:190–6.
[27] Turton J. Importance of information following myocardial infarction: a study of the self-perceived information needs of patients and their

spouse/partner compared with the perception of nursing staff. J Adv Nurs 1997;27:770–8.
[28] Fridlund B. Healthy sexual life after a cardiac event: what do we know and what do we do now? Eur J Cardiovasc Nurs 2009;8:159–60.
[29] Reynolds K, Magnan MA. Nursing attitudes and beliefs toward human sexuality. Clin Nurse Spec 2005;19:255–9.
[30] Miller WR, Lief HI. The sex knowledge and attitude test (SKAT). J Sex Marital Ther 1979;5:282–7.
[31] Strahan R, Gerbasi KC. Short homogeneous versions of the Marlowe–Crowe social desirability scale. J Clin Psychol 1972;28:191–3.
[32] Jaarsma T, Stromberg A, B.F., De Geest S, Martensson J, Moons P, et al. Sexual counselling of cardiac patients: nurses' perception of practice, responsibility and confidence. Eur J Cardiovasc Nurs 2010;9:24–9.
[33] Byrne M, Doherty S, McGee H, Murphy A. General practitioners views about discussing sexual issues with patients with coronary heart disease: a national survey in Ireland. BMC Fam Pract 2010;11:40.