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Women, men and coronary heart disease: review of the qualitative literature

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ABSTRACT

Background. Understanding patients' experiences of their illness is important for coronary heart disease prevention and education. Qualitative methods are particularly suited to eliciting patients' detailed understandings and perceptions of illness. As much previous research has been 'gender neutral', this review pays particular attention to gender.

Aim. To review the qualitative literature which examines the experiences of coronary heart disease patients. The paper also assesses whether the experiences of both female and male patients are reflected in the literature and summarises the key themes.

Methods. Published papers from 60 qualitative studies were identified for the review through searches in MEDLINE, EMBASE, CINAHL, PREMEDLINE, PsychINFO, Social Sciences Citation Index and Web of Science using keywords related to coronary heart disease.

Findings. Early qualitative studies of patients with coronary heart disease were conducted almost exclusively with men, and tended to generalize from 'male' experience to 'human' experience. By the late 1990s this pattern had changed, with the majority of studies including women and many being conducted with solely female samples. However, many studies that include both male and female coronary heart disease patients still do not have a specific gender focus. Key themes in the literature include interpreting symptoms and seeking help, belief about coronary 'candidates' and relationships with health professionals. The influence of social roles is important: many female patients have difficulties reconciling family responsibilities and medical advice, while male patients worry about being absent from work.

Conclusions. There is a need for studies that compare the experiences of men and women. There is also an urgent need for work that takes masculinity and gender roles into account when exploring the experiences of men with coronary heart disease.

Keywords: gender, men's health, women's health, qualitative approaches, lay knowledge, nursing, literature review

SUMMARY STATEMENT

What is already known about this topic

- Qualitative methods are useful for exploring patients' perceptions and experiences of their illness.
- A review of the qualitative literature on CHD patients, published in 1998, identified only 6 studies.
- These studies were limited by their emphasis on male respondents.

What this paper adds

- There has been a great increase in qualitative research on patients with coronary heart disease.
- Recent studies are likely to include female respondents, and many concentrate solely on women.
- Studies that include men and women rarely have a specific gender focus, while studies of male patients fail to consider the influence of masculinity on health beliefs and behaviours.

INTRODUCTION

Coronary heart disease (CHD) is the leading cause of death world-wide (Mackay & Mensah, 2004). Although men have higher rates than women at all ages, and coronary disease occurs up to 10 years later in women (Sharp, 1994), CHD is a major cause of death for both sexes: the World Health Organisation estimates that 3.8 million men and 3.4 million women around the world die from it each year (Mackay & Mensah, 2004). Despite recent improvements, the mortality rate in the UK remains amongst the highest in the world and coronary prevention is a priority (The Scottish Office, 1999; Department of Health, 1999).

In recent years, gender issues have received increasing attention in international health policy. For example, the recognition that medical research was largely based on the experiences of young white men led to initiatives to make research more gender sensitive in the United States, Canada, Australia and South Africa (Doyal *et al.*, 2003). However, White & Lockyer (2001) have suggested that, despite established gender differences in incidence, presentation, referral, recovery and rehabilitation, current UK policy on CHD is gender neutral and this makes it less effective. They also suggest that UK research has often been gender neutral; for example, women's experiences of CHD have been ignored because of the focus of biomedical research on men, while some aspects of men's experiences have been neglected because of a failure to consider the impact of masculinity on men's illness and recovery. It is therefore important that those caring for patients with CHD have an understanding of the gendered nature of health and illness (White, 2003).

Understanding patients' experiences is essential in order to improve CHD prevention and education. Qualitative studies, which use less structured research methods (e.g. semi-structured interviews, conversation-style in-depth interviews, and participant observation), are better suited to eliciting patients' detailed understandings and their perceptions of illness than quantitative studies, which ask patients to indicate their preference from a limited range of answers. Despite the strengths of qualitative methods, an earlier review of the published literature (Clark *et al.*, 1998) demonstrated that less structured forms of interviewing have not been widely used to explore the experiences of CHD patients. Indeed, Clark *et al.* identified only six studies using these methods. They argued that these studies were limited by their emphasis on myocardial infarction (MI) as opposed to other experiences of CHD, and their narrow focus on white, married men. However, as there have been a large number of qualitative studies since the publication of that review, a new review is needed.

AIM

The aim of this paper is to provide an updated review of qualitative studies of patients' experiences of coronary heart disease, using a gender sensitive approach. From a methodological point of view, it assesses whether the experiences of both female and male patients are reflected in the published literature and examines whether authors take a gender neutral or a gender sensitive approach to their material. The paper also describes the key themes reported in the literature and explores whether female and male patients have similar or different perceptions and experiences of CHD.

SEARCH METHODS

Inclusion criteria

The widest possible range of studies that met the inclusion criteria was included, as it has been argued that excluding studies on the grounds of 'poor quality' introduces the most important source of bias into qualitative reviews (Sandelowski and Barroso, 2003b).

Sandelowski & Barroso's (2003a) broad definition of qualitative studies was used when establishing inclusion criteria: 'empirical research with human participants conducted in any research paradigm, using what are commonly viewed as qualitative techniques for sampling, data collection, data analysis, and interpretation' (Sandelowski and Barroso, 2003a, p. 227).

The inclusion criteria were:

- Journal papers published in English before 1st January 2004 (i.e. excludes theses, books and book chapters)
- Qualitative studies focusing on patients' experiences of CHD (MI, angina, cardiac surgery, chest pain, heart failure)
- Qualitative research methods that allow individual respondents to present their perceptions in their own words (i.e. excludes highly structured interviews and focus groups).

Search strategy

Searches in MEDLINE, EMBASE, CINAHL, PREMEDLINE, PsychINFO, Social Sciences Citation Index and Web of Science, using keywords related to CHD (e.g. myocardial infarction, coronary disease, angina, acute heart infarction, chest pain) and the relevant

research methods (e.g. interview, qualitative) yielded 569 references. After scanning the electronic abstracts, papers were excluded if they did not meet the inclusion criteria; for example, many papers identified by the keyword 'interview' referred to the administration of structured psychological instruments rather than qualitative interviews. Ninety-nine papers appeared relevant and were retrieved and reviewed in full. Additional studies were identified from the bibliographies of key references, from prior knowledge of the literature, and from a citation search on an early influential paper (Cowie, 1976). A final, detailed reading of each of these papers against the inclusion criteria led to 60 studies being included in this review.

Literature reviewing process

Formal systematic review or meta-analysis is not appropriate when reviewing findings from qualitative studies (Barbour, 2003). This analysis of the literature used the first stage of the method outlined by Britten and colleagues (Britten *et al.*, 2002; Campbell *et al.*, 2003), although there was no attempt to synthesize the findings because of the large number of papers. Each paper was read to identify the main concepts of the study, study setting and participants. These details were entered into a grid. Papers were then systematically compared for common and recurring concepts to establish similarities and differences in scope and findings across the studies.

FINDINGS

Sixty studies (reported in 66 papers) used qualitative methods to examine patients' perceptions of coronary heart disease. Almost two-thirds of the studies were carried out in the USA (20) or the UK (18). Half (30) concentrated on the experiences of patients with MI and about one-fifth (13) on patients with more general CHD; very few examined those with angina (4), chest pain (3) or heart failure (4). Only one report (Webster, 1997) stated that its main aim was to investigate CHD in patients from an ethnic minority, and only seven sampled purposively in order to ensure ethnic diversity.

Representation of male and female patients

Qualitative studies of patients with CHD in the 1970s and 1980s were conducted almost exclusively among men. This began to change in the 1990s: Johnson & Morse (1990) included equal numbers of men and women in their study, while Thomas (1994) was the first to use a solely female sample. The pattern was almost completely reversed by the late 1990s,

almost all of these later studies included women and many were conducted with exclusively female samples.

For this research, the studies were divided into three categories, according to the gender composition of their samples, to explore these trends in more detail. Table 1 shows studies with predominantly male samples, Table 2 studies that used female-only samples, and Table 3 studies that used mixed samples. Gardner & Chapple's study (1999) is not included in these tables as they failed to include any details about the gender composition of their sample or to indicate the gender of the respondents they quoted. The tables show the main aim of the studies and the methods of data collection, in addition to gender composition and sample size. They also give the sampling criteria; this differentiates between studies that aimed explicitly to include both women and men, and those that used convenience sampling and so had a mixed sample.

Predominantly male samples (10 studies)

Seven studies included only men, while three included one or two women but did not justify why they had done so (Keller, 1991; Pattenden *et al.*, 2002; Schwartz & Keller, 1993) (Table 1). Many of these studies tended to generalize from 'male' to 'human' experience; for example, Thompson and colleagues (1995) state in their title and abstract that they are exploring the experiences of 'patients and their partners', rather than clarifying that they interviewed married men and their wives, while Pattenden *et al.* (2002) refer to 'people' or 'patients' in their title and abstract, but only included two women in their sample of 22 patients.

Only three studies had the explicit aim of investigating **men's** experiences of CHD. Ford (1989) states that he focuses on men because the incidence of MI is greater in males than in females. Keaton & Pierce allude to gendered aspects of identity by asking respondents to discuss '...what it is like to be a man enrolled in a cardiac therapy program' (Keaton & Pierce, 2000, p. 71). However, White and colleagues (White, 1999; White & Johnson, 2000) are unusual in considering how masculinity (the process of 'becoming a man' and the social expectations that different cultures have of men) influences the way that men respond to ill health.

Female samples (20 studies)

All studies in this category had exclusively female samples (Table 2). The majority (15) were published by authors based in North America. In contrast to the studies on men, all state the

gender composition of their sample in the paper's title and abstract. The earliest study was published in 1994 reflecting the relatively recent interest in female patients. Most of the authors note that CHD research has traditionally focused on white men, with findings generalized to other groups, and argue that it is important to address this imbalance. The substantial number of studies in this category reflects the rapid recent growth in interest in the experiences of CHD among different groups of women [e.g. younger women (LaCharity, 1999), mid-life women (Plach & Stevens, 2001), postmenopausal women (LaCharity, 1997), and older women who live alone (Robinson, 2002)].

Mixed samples (29 studies)

The remaining 29 studies included both sexes in their samples (Table 3). Two did not provide actual numbers of men and women in their sample but are included in this category. It was possible to deduce from the quotations that Hunt (1999) used that at least 3 of the 12 participants were women, while Cowie's (1976) sampling criteria specifically included women as well as men.

Despite the inclusion of both men and women, over two-thirds of these studies do not have a specific gender focus. They either randomly or consecutively select respondents, which means their samples are likely to include women as well as men, and ignore gender, or state that they are sampling by 'sex' or 'gender' but do not make any reference to this in their findings sections (e.g. Lidell *et al.*, 1998; Wiles, 1998; Rogers *et al.*, 2000). Therefore, relatively few studies deliberately included both men and women and then explicitly compared their experiences (Johnson & Morse, 1990; Foster & Mallik, 1998; Lukkarinen, 1999; Evangelista *et al.*, 2001; Richards *et al.*, 2002b; Brink *et al.*, 2002; King, 2002; Zuzelo, 2002). With one exception (Johnson & Morse, 1990), the results from these studies have been published in the past few years.

Key themes

Interpreting symptoms and seeking help

Cowie (1976) first described the cardiac 'careers' of 27 patients who had suffered heart attacks, from their first perception of symptoms, through to their decision to call for medical assistance and their experiences in hospital. He argued that a heart attack is often not immediately recognizable to those experiencing it. Initial symptoms (e.g. chest pains, heartburn, sweating) were often 'normalized' by attributing them to indigestion or exertion. Patients (or sometimes their spouses) only sought medical assistance when the severity of

chest pain increased so much that non-serious complaints were ruled out. After hospitalization, most patients expected a full recovery and to return to normal life. Patients reviewed their past lives in an attempt to ‘explain’ their heart attack; these explanations included physically and/or mentally hard work, strenuous activity, past health problems, warnings such as earlier chest pain, ageing, smoking, stress and the idea that the heart attack ‘built up’ through strain over a long period. Cowie’s (1976) account is valuable as he first raised many of the issues taken up by later researchers. However, his study suffers from some of the criticisms raised by Clark *et al.* (1998); for example, he focuses solely on heart attacks rather than other manifestations of CHD; he only interviewed married respondents; and few women were included in the study.

Given that receiving treatment quickly following an acute MI is vital for survival, it is not surprising that many researchers have concentrated on patients’ first perceptions of symptoms and the reasons they delay presenting symptoms to health professionals. Subsequent research supports Cowie’s (1976) argument that patients interpret their initial symptoms in a variety of ways, attributing them to old age, tiredness, other illnesses or less threatening causes such as heartburn or mild food poisoning rather than CHD (Dempsey *et al.*, 1995; White & Johnson, 2000; Clark, 2001). Others have interpreted these reactions as denial or as an attempt to minimize the significance of the illness (Foster and Mallik, 1998; Holliday *et al.*, 2000; Pattenden *et al.*, 2002). Some patients worried about ‘bothering’ the doctor or calling the emergency services unnecessarily in case of a false alarm (Pattenden *et al.*, 2002). Partners or spouses often encouraged patients to seek help, removing the responsibility from the patient for taking immediate action (Foster & Mallik, 1998). Many CHD patients (Ruston *et al.*, 1998; Wiles, 1998; Pattenden *et al.*, 2002; Zuzelo, 2002), as well as those in the general population (Emslie *et al.*, 2001a), have an image of the ‘typical’ heart attack as involving dramatic, crushing pain and sudden collapse. As many patients do not experience these symptoms (Johnson & Morse, 1990), they may be unsure about the nature of their illness; for example, respondents in Wiles’ study (1998) believed that a heart attack resulted in sudden death or permanent disability. Patients subsequently tried to reconcile their earlier perceptions with their CHD event by viewing their heart attack as ‘mild’ rather than ‘severe’.

Relatively few studies have compared the experiences of male and female CHD patients. Foster & Mallik (1998) found that women appeared to delay longer than men before seeking medical help. This was partly because they believed CHD to be a ‘man’s disease’ (see below). Other reasons for this increased delay may be that women seem more likely than men

to consider their own health a low priority compared with other family members (Richards *et al.*, 2002b) and to prioritize their role obligations (i.e. taking care of their husband, children and home) over seeking medical care (Zuzelo, 2002). Finally, there may be gender differences in the way that respondents seek advice from relatives. Men seemed more likely to seek help from their spouses, who encouraged them to seek medical care (Brink *et al.*, 2002; Zuzelo, 2002), or were more often 'forced' by their spouses to seek care than was the case with women (Brink *et al.*, 2002). Women responded in more diverse ways. Richards and colleagues (2002b) found that women did not want to worry their husbands and so did not ask them for advice. Brink (2002) reported that the women who were 'forced' to seek care, were persuaded to do so by their daughters as opposed to their husbands. Other studies have found that when women do seek advice from relatives, this can lead to increased delay (as relatives minimize symptoms and reassure patients) as well as encouragement to seek help (Foster & Mallik, 1998; Zuzelo, 2002).

Beliefs about coronary 'candidates'

Research on lay perceptions has identified stereotypical 'coronary candidates' as fat, red-faced, overweight, inactive smokers with a fatty diet (Davison *et al.*, 1991) and male (Ruston *et al.*, 1998; Emslie *et al.*, 2001a). Some respondents were puzzled and indignant as they tried to align this image with their own self-image and past behaviour (Clark, 2001; Brink *et al.*, 2002). White & Johnson's (2000) male respondents simply did not see themselves as at risk from CHD. Patients with a previous heart problem often delayed seeking help because they believed their changed lifestyle, cardiac rehabilitation or surgery would protect them from subsequent cardiac events (Pattenden *et al.*, 2002).

The strong perception of CHD as a 'man's disease' persists among CHD patients (Johnson & Morse, 1990; Dempsey *et al.*, 1995; Ruston & Clayton, 2002; Richards *et al.*, 2002b), which may result in women finding it more difficult to attribute their symptoms to CHD (Foster & Mallik, 1998). Some researchers have found that women are less likely than men to report the 'classic' symptoms of CHD and so find it harder to interpret these signs appropriately (Zuzelo, 2002; Schoenberg *et al.*, 2003). Even women who believe they may be at risk feel they are safe until after the menopause (LaCharity, 1999). Ruston & Clayton (2002) describe the process through which women used their perception of CHD as a 'man's disease' to distance themselves from risk. Their respondents attributed 'risky' lifestyle behaviours to men, downplayed the consequences of these same behaviours in women, and overemphasized the importance of men's social position (i.e. being a breadwinner with a

stressful or manual job) as a risk factor. Thus women were only deemed to be at high risk of CHD if they adopted a 'man's way of life'.

Relationship with health professionals

A number of studies have focused on patients' relationship with health professionals and their perceptions of the health services; for example, Gardner & Chapple (1999) identified barriers to patients being referred for possible revascularization. These included fear of hospitals and medical tests, the perception that angina is a chronic illness to be managed or denied, patients' perceptions that ill health is a natural part of older age, diagnostic confusion about angina and the 'cultural gap' between doctors and patients. Similarly, Tod *et al.* (2001) found that barriers to the uptake of CHD health services included structural factors (e.g. poor transport, long waiting lists and inconvenient surgery times), personal factors (e.g. fear and denial), cultural factors (strength and stoicism in the South Yorkshire mining culture), past experiences of health services and professionals, and lack of awareness of the high incidence of heart disease. These studies were conducted in the context of the UK National Health Service, where treatment is free at the point of delivery. Barriers in other countries may include financial cost.

Other studies have focused on effective communication between doctors and patients (Thompson *et al.*, 1995; Rogers *et al.*, 2000). Clark (2001) stresses the need for health professionals to find out the beliefs that patients have about themselves and about coronary risk generally, in order to encourage them to see themselves as at risk of CHD. Wiles & Kinmonth (2001) warn of the tension between reassuring patients, and providing realistic information about the uncertainty of outcome. Richards *et al.* (2002a) considered the influence of social class on doctor-patient relationships. They found that patients from deprived backgrounds who experienced chest pain were more negative about their health than affluent patients and had low expectations about their probable lifespan. They often did not seek medical help because they normalized their symptoms (e.g. put them down to working long hours), could not distinguish them from the other conditions they suffered from and did not want to overuse medical services. They had a more negative experience of healthcare than affluent patients and felt they were likely to be blamed by health professionals (e.g. for smoking) rather than assisted (Richards *et al.*, 2003).

With regard to gender, Schoenberg and colleagues (2003) argue that women's experiences of CHD symptoms and care are linked to broad social and structural constraints rather than individual responsibility; for example, women feared being viewed by their

physician as a worrier, a hypochondriac or ignorant, which made them reluctant to seek medical help, even when in pain. Similarly, Thomas (1994) found that female respondents felt they were treated differently, or less seriously by health professionals, because they were women and relatively young. LaCharity (1997) found that postmenopausal women were angry that their cardiac symptoms were diagnosed as muscle spasm, nerves, indigestion, stress and the effects of ageing. Very few studies have compared male and female experiences of health professionals. Richards *et al.* (2002b) found that women were more likely to worry about wasting their general practitioner's time, or to believe that their problems would be attributed to 'nerves' than men.

Gendered social roles: paid work and family life

After a cardiac event, many respondents have to adjust to changes in their roles as spouses, parents and employees. Johnson & Morse (1990) found that women felt uncomfortable when their children tried to help them and minimized their symptoms so that they would be less of a 'burden' to their families. Their female respondents engaged in housework, against medical advice, rather than ask others to help. Women who worked outside the home found it easier to stay away from paid work than to avoid domestic work. As the authors point out, this behaviour relates to 'the cultural belief that it is unacceptable for mothers to sit while there is work to be done' (Johnson & Morse, 1990, p. 130). Svedlund and colleagues (2001) also found that female respondents spent a good deal of their time in hospital worrying how their husband and families were coping. Women also tended to put their family responsibilities before lifestyle change; for example, many women were reluctant to cook a separate, low fat meal for themselves to follow their recommended lifestyle advice, as they could not (or would not) change the diet of their husband and children (Thomas, 1994; LaCharity, 1997). While some studies have found that female patients report feeling undersupported by their spouses (Lukkarinen, 1999), other women praised the understanding and support of spouses (LaCharity, 1997).

In contrast, Johnson & Morse (1990) found that men enjoyed the attentions of their family members. They saw lifestyle modification as a joint venture with their spouse and were more likely to rest at home, because of the physical separation between their home and workplace. However, men worried about being absent from work and feared that others would regard them as 'physically weak, impotent or incapable' (Johnson & Morse, 1990, p. 131). Some tried to remove this perception by participating in 'manly' tasks such as lifting heavy boxes or shovelling snow. Other studies have reported conflict between men and their

spouses when their wives take over the jobs they would normally do (White, 1999; Stewart *et al.*, 2000). Similarly, Ford (1989) found that one of his male respondents stopped going shopping with his wife because he could not stand the 'looks' from other people when he struggled to lift the grocery bags.

Very few sources have examined the traditional expectation that men will be hardy and strong, and will not complain about illness. Tod *et al.* (2002) alluded only in passing to their finding that men in ex-mining communities in the UK were reticent about their illness and that the 'macho' culture reduced the perceived need for cardiac rehabilitation or support. White & Johnson (2000) are unusual in exploring these societal expectations of men in some detail. They found that some men did not want to discuss health problems for fear of appearing a 'wimp' or 'unmanly'. Other men experienced tension between experiencing severe pain (and feeling that they were really ill) and soon afterwards feeling symptom-free (and feeling like 'a fraud' for being in hospital). The lack of visibility of their symptoms was also problematic. The authors concluded that these respondents had internalized an expectation that men should be fit and productive at all times in order to carry out the roles expected of them (White and Johnson, 2000).

DISCUSSION

In recent years, there has been a huge increase in interest in using qualitative methods to explore patients' experiences of CHD. Two-thirds of the papers identified in this review were published during the past 5 years. However, some of the criticisms identified by Clarke and colleagues (1998) remain relevant. Where studies focus on a particular manifestation of CHD, it still tends to be MI. Similarly, there is still little information about the beliefs and experiences of patients from ethnic minority backgrounds. Other criticisms made by Clarke *et al.* (1998) do not apply to recent research; for example, few studies now confine their samples to married respondents. The most striking change has been the move from focusing solely on male respondents to including women in studies, and in many cases, focusing exclusively on women. This move mirrors the belated recognition in the 1990s that women were excluded from biomedical research on CHD (Healy, 1991; Khaw, 1993).

Despite this recent interest in female patients, the perception that CHD is a 'male disease' persists among health professionals (McKinlay, 1996; Richards *et al.*, 2000), the general public (Emslie *et al.*, 2001b) and cardiac patients (Ruston *et al.*, 1998; LaCharity, 1999) and is likely to have consequences on the time women take to present with symptoms and on the time taken for symptoms to be treated. Male cardiac patients are also

disadvantaged by a gender neutral approach by researchers. The analysis of men's accounts of CHD has been limited by a lack of attention to men's gendered experiences. The recent concern to regard men as 'engendered and engendering persons' (Gutmann, 1997) has been stimulated by the move from viewing men as a homogenous group, to a broader focus on multiple masculinities, which emphasizes differences and diversity among men (Connell, 1985; Schofield *et al.*, 2000). These issues have been discussed in other broader commentaries on gender and health; for example, Annandale neatly summarizes the consequences of female 'invisibility' and male 'lack of gender':

'Patriarchy has carried with it an ironic twist: by creating history as an ungendered and universal process, it has not only concealed female oppression, but also sidelined men's experience as men. This has meant that it has been difficult for men to appreciate the gendered character of their experience' (Annandale, 1998, p. 140).

The review raises a number of methodological issues. First, there is some debate about whether it is preferable to include every paper that meets the inclusion criteria or to use some form of critical appraisal to exclude papers that are judged not to be of high enough quality (Campbell *et al.*, 2003). This review used the former method because of the difficulties of deciding what constitutes good design and analytical rigour in qualitative research (Barbour, 2003) and in order to minimize bias by excluding 'poor' studies. The inclusion of details of the sampling strategy and sample size in the tables gives the reader some indication of how each study was conducted. Secondly, while this literature search was rigorous and thorough, searching effectively for qualitative research is notoriously difficult (Barbour, 2003), so it is possible that some relevant papers have been overlooked. Finally, it could be argued that another way to approach the review, with its emphasis on gender, would be to use meta-ethnography to synthesize the research on male samples, and to compare these results with a synthesis of the research on female samples. The decision to conduct a literature review, rather than meta-ethnography, was made in order to include research that made direct comparisons between male and female patients with CHD. This meant it was possible to trace the progress of qualitative research on patients with CHD, from an exclusive focus on male patients with CHD in the 1970s and 1980s, to the inclusion of both women and men in samples in the 1990s, to the current situation, where many studies are conducted on exclusively female samples. The practicalities of conducting meta-ethnography with such a large number of papers as included in this review is also questionable. However, this could be a fruitful direction for future research, if the review was narrowly focused to make the number of papers more manageable.

The review suggests two main gaps in the qualitative literature on patients' experiences of CHD. First, relatively few studies have deliberately included both men and women in their samples and then explicitly compared their experiences. Secondly, studies of male patients have rarely considered the influence of masculinities on health beliefs and behaviours. Taking a gender-sensitive approach to CHD research is essential in order to understand the experiences of both male and female patients and to improve their care.

CONCLUSION

This paper has important implications for nursing practice. Gender-neutral research is likely to lead to gender-neutral policy and gender-neutral care (White & Lockyer, 2001). In contrast, gender-sensitive research should inform gender-sensitive policy and care, which aims to increase the efficiency and effectiveness of services through an understanding of gender differences and so enhance the health and life expectancy of both women and men (Doyal *et al.*, 2003). Gender-sensitive care therefore requires an understanding of 'patterns of mortality and morbidity and sound knowledge about relevant research that explores men's and women's experiences of health and illness in their social worlds' (Miers, 2002, p. 72). This review of the qualitative literature seeks to provide such knowledge about the gendered nature of illness. Nurses working in cardiac care and rehabilitation may find this information helpful when seeking to understand the ways in which male and female patients interpret symptoms and seek help, and how gendered social roles influence recovery. Information about the gendered character of CHD also helps nurses to contest stereotypical beliefs about CHD being a male disease.

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Table 1 Published studies with predominantly male samples

Author, year and country	Main aim	Data collection	Sampling criteria	Sample and gender
Levy, 1981 (USA)	Describe how patients made sense of their MI and how they intend to cope with it	1 interview	MI patients matched for class (all blue collar workers) and verbal IQ	$n = 28$ 28 men 0 women
Patterson, 1989 (USA)	Examine the beliefs of surgery patients and their spouses	1 semi-structured interview (spouses present)	Bypass or angioplasty patients <66 years of age who had undergone elective surgery and were living with a partner	$n = 10$ 10 men 0 women
Ford, 1989 (Canada)	Understand men's experience of MI at least 2 years after the event	2 interview-conversations	Men who had experienced MI at least 2 years previously	$n = 7$ 7 men 0 women
Keller, 1991 (USA)	Describe the experiences of coronary bypass patients	1 semi-structured interview	Coronary artery bypass patients	$n = 9$ 8 men 1 woman
Schwartz & Keller, 1993 (USA)	Explore the factors that encourage MI patients to report chest pain, while in hospital	1 semi-structured interview	Patients admitted to hospital with acute MI, purposively sampled to vary by acuity of chest pain and location of the infarction	$n = 7$ 6 men 1 woman
Thompson <i>et al.</i> , 1995 (UK)	Explore experiences of patients and their partners 1 month after a heart attack	1 semi-structured interview (spouses present)	Married men with first heart attack, selected at random	$n = 20$ 20 men 0 women

White, 1999; White & Johnson, 2000 (UK)	Examine men's experience of chest pain and why they delay in presenting symptoms	Participant observation, then 1 semi-structured interview	All men admitted with chest pain in 2 months ($n = 25$). Interviewees ($n = 10$) theoretically sampled to vary by age, class, ethnicity and experiences	$n = 25$ 25 men 0 women
Keaton & Pierce, 2000 (USA)	Explore men's experience of CHD and cardiac therapy	1 semi-structured interview	Men diagnosed with CHD in the past 2 years, aged 60–70 years, in a cardiac therapy programme	$n = 5$ 5 men 0 women
Stewart <i>et al.</i> , 2000 (Canada)	Explore MI patients' and spouses' experiences of stress, support and coping	Weekly diaries and researchers' fieldnotes	$n = 14$ First time MI patients	$n = 14$ 13 men 1 woman
Pattenden <i>et al.</i> , 2002 (UK)	Explore why second-time MI patients delay seeking medical help after the onset of symptoms	1 semi-structured interview	Acute MI patients who had experienced at least one infarction previously	$n = 22$ 20 men 2 women

Key

CHD Coronary Heart Disease

MI Myocardial Infarction

Table 2 Published studies with female samples

Author, year and country	Main aim	Data collection	Sampling criteria	Sample and gender
Thomas, 1994 (USA)	Examine efforts of female patients with CHD to make lifestyle changes	1 semi-structured interview	Women with CHD aged >20 years	<i>n</i> = 8 0 men 8 women
Dempsey <i>et al.</i> , 1995 (USA)	Explore why female MI patients delay seeking medical help after the onset of symptoms	1 semi-structured interview	Women with acute MI aged between 30 and 85 years	<i>n</i> = 16 0 men 16 women
LaCharity, 1997 (USA)	Explore the experiences of postmenopausal women with CHD	1 semi-structured interview	Postmenopausal women aged >50 years diagnosed with CHD for at least 3 months	<i>n</i> = 12 0 men 12 women
Helpard & Meagher-Stewart, 1998 (Canada)	Examine the perceptions of older women with CHD	1 semi-structured interview	Convenience sample of white women aged >60 years recovering from cardiac illness	<i>n</i> = 8 0 men 8 women
McSweeney, 1998 (USA)	Identify symptoms experienced by women before and during MI	2 semi-structured interviews	Female MI patients aged 30–80 years, purposively selected to vary by ethnicity	<i>n</i> = 20 0 men 20 women
Miklaucich, 1998 (UK)	Describe women's experiences of angina	2 unstructured interviews and patient diaries	Female angina patients aged 50–70 years with recent acute chest pain requiring admission to hospital	<i>n</i> = 8 0 men 8 women
LaCharity, 1999 (USA)	Explore the experiences of younger women with CHD	1 semi-structured interview	Premenopausal women	<i>n</i> = 11 0 men 11 women

Svedlund <i>et al.</i> , 2000, 2001 (Sweden)	Explore women's experiences of MI	3 semi-structured interviews	Female patients aged <60 years, with acute MI, living with a male partner	<i>n</i> = 9 0 men 9 women
Miller, 2000 (USA)	Explore why female patients with CHD delay seeking medical help after the onset of symptoms	2 semi-structured interviews	Female patients with CHD purposively sampled to vary by age, diagnoses, length of illness, ethnicity and social class	<i>n</i> = 10 0 men 10 women
Jackson <i>et al.</i> , 2000 (Australia)	Explore women's experiences of recovering from first-time MI	3 semi-structured interviews	Convenience sample of women admitted to hospital with a first MI	<i>n</i> = 10 0 men 10 women
Holliday <i>et al</i> 2000 (Australia)	Explore why female MI patients delay seeking medical help after the onset of symptoms	2 semi-structured interviews	Women admitted to hospital with acute MI	<i>n</i> = 16 0 men 16 women
Tobin, 2000 (Canada)	Examine the recovery process of female MI patients	1 unstructured interview	Female MI patients	<i>n</i> = 12 0 men 12 women
McSweeney & Crane, 2000 (USA)	Identify symptoms experienced by women before and during MI	2 semi-structured interviews	Female MI patients aged 25–80 years	<i>n</i> = 40 0 men 40 women
Sutherland & Jensen, 2000 (Canada)	Explore elderly women's perception of having a MI	1 unstructured interview and 1 structured phone interview	Female first-time MI patients aged >69 years who had not received bypass surgery	<i>n</i> = 11 0 men 11 women
Crane, 2001 (USA)	Explore how older women acquire health knowledge after a MI	1 in-depth interview and 1 phone interview	Female MI patients aged >64 years who did not participate in cardiac rehabilitation	<i>n</i> = 15 0 men 15 women

Plach & Stevens, 2001 (USA)	Examine the experiences of mid-life women after cardiac surgery	Observation, conversations and interviews (2)	Midlife women who had recently had angioplasty or heart surgery	<i>n</i> = 15 0 men 15 women
Ruston & Clayton, 2002 (UK)	Examine women's perceptions and experiences of CHD	1 in-depth interview	Women admitted to hospital with a cardiac event	<i>n</i> = 50 0 men 50 women
Robinson, 2002 (USA)	Explore the experiences of older women who live alone after cardiac surgery	1 semi-structured interview and 1 brief follow-up phone interview	Female coronary bypass patients aged >49 years who lived alone and felt they had recovered from the surgery	<i>n</i> = 12 0 men 12 women
Kerr & Fothergill-Bourbonnais, 2002 (Canada)	Examine the experience of initial recovery from MI among older women	1 unstructured interview and follow-up interview(s)	Older women with a first time MI	<i>n</i> = 7 0 men 7 women
Schoenberg <i>et al.</i> , 2003 (USA)	Explore why female patients with CHD delay seeking medical help after the onset of symptoms	1 semi-structured interview	Women aged >54 years at risk of, or currently diagnosed with, CHD, purposively sampled to be ethnically and residentially diverse	<i>n</i> = 40 0 men 40 women (14 with CHD, 26 'at risk of' CHD)

Key

CHD coronary heart disease

MI myocardial infarction

Table 3 Published studies with mixed samples

Author, year and country	Main aim	Data collection	Sampling criteria	Sample and gender
Cowie, 1976 (UK)	Describe accounts of illness behaviour by CHD patients	2 semi-structured interviews	Married men and women aged <60 years with first MI	<i>n</i> = 27 (quotes 21 men and 2 women)
Johnson & Morse, 1990 (Canada)	Explore the experiences of MI among both men and women	At least 1 unstructured interview (26 in total)	First time MI patients purposively sampled by gender (equal men and women)	<i>n</i> = 14 7 men 7 women
Webster, 1997 (UK)	Describe experiences and needs of Asian patients with CHD	2 semi-structured interviews (partner/carer present at both interviews)	Gujurati Hindu coronary patients, sampled consecutively	<i>n</i> = 40 30 men 10 women
Treloar, 1997 (Australia)	Explore experiences of patients with CHD and their time in hospital	1 semi-structured interview	Randomly selected	<i>n</i> = 20 13 men 7 women
Scherck, 1997 (USA)	Explore why MI patients delay calling for medical help after the onset of symptoms	1 semi-structured interview	Patients admitted to medical centres with acute MI	<i>n</i> = 30 24 men 6 women
Wiles, 1998; Wiles & Kinmonth, 2001 (UK)	Explore patients' understandings of MI	2 in-depth, semi-structured interviews	Maximum variation sample of MI patients by gender, age, class, employment, marital status and household composition	<i>n</i> = 25 13 men 12 women

Ruston <i>et al.</i> , 1998 (UK)	Explore why CHD patients delay calling for medical help after the onset of symptoms	1 semi-structured interview	Cardiac patients	<i>n</i> = 43 28 men 15 women
Lidell <i>et al.</i> , 1998 (Sweden)	Explore factors that indicate vulnerability in MI patients	1 semi-structured interview	MI patients strategically selected to vary by age, gender, work, family structure and participation in rehabilitation	<i>n</i> = 12 9 men 3 women
Foster & Mallik, 1998 (UK)	Compare why men and women delay seeking medical help for acute chest pain	1 structured interview	Convenience sampling of patients with acute chest pain attributable to first MI or angina, by gender	<i>n</i> = 24 12 men 12 women
Daly <i>et al.</i> , 1999 (Australia)	Explore concept of hope among MI patients	1 in-depth interview	Convenience sample of patients who had recently experienced a first MI	<i>n</i> = 8 6 men 2 women
Hunt, 1999 (Australia)	Explore cardiac surgery patients' expectations and experiences of nursing care	2 semi-structured interviews	Patients admitted for elective coronary artery bypass surgery	<i>n</i> = 12 Gender mix not given (quotes 8 men and 3 women)
Lukkarinen, 1999 (Finland)	Examine experiences of patients with CHD	1 semi-structured interview	Angioplasty or bypass surgery patients, sampled to vary by type of surgery, gender, age, and household composition	<i>n</i> = 19 9 men 10 women
Rogers <i>et al.</i> , 2000; Rogers <i>et al.</i> , 2002 (UK)	Explore experiences of patients with heart failure	1 in-depth interview	Patients with symptomatic heart failure admitted to hospital in past 20 months, sampled to include older and female patients	<i>n</i> = 27 20 men 7 women

Higgins <i>et al.</i> , 2000 (Australia)	Describe cardiac surgery patients' perception of recovery	1 semi-structured interview	Coronary angioplasty in patients over the age of 18 years who had undergone elective surgery	<i>n</i> = 11 8 men 3 women
Buetow & Coster, 2001 (New Zealand)	Explore understanding of patients with heart failure of their condition	1 semi-structured interview	Patients with heart failure aged >44 years offered treatment. Selected randomly by GPs, stratified by deprivation, ethnicity and practice type	<i>n</i> = 62 36 men 26 women
Tod <i>et al.</i> , 2001 (UK)	Identify factors that influence the use of health services by people with angina	1 semi-structured interview	Patients aged <75 years with angina diagnosed in past 10 years, purposively sampled to vary by age, gender, place, employment and ethnicity	<i>n</i> = 14 7 men 7 women
Clark, 2001 (UK)	Explore why MI patients delay calling for medical help after the onset of symptoms	4 semi-structured interviews	Patients with first MI, sampled to vary by sex, age and social class	<i>n</i> = 14 8 men 6 women
Evangelista <i>et al.</i> , 2001 (USA)	Examine whether gender differences exist in perceptions of heart failure	1 interview	Patients with heart failure, purposively selected to include equal numbers of men and women	<i>n</i> = 32 16 men 16 women
Richards <i>et al.</i> , 2002a, 2002b, 2003 (UK)	Explore gender and social class variations in perceptions of, and response to, chest pain	1 semi-structured interview	Respondents with chest pain aged 45–64 years, purposively sampled to vary by gender and social class	<i>n</i> = 60 30 men 30 women
Furze <i>et al.</i> , 2001 (UK)	Explore the beliefs of angina sufferers	1 semi-structured interview	Angina patients sampled consecutively	<i>n</i> = 20 11 men 9 women

Bergman & Bertero, 2001 (Sweden)	Examine experiences of patients with CHD of disease	1 semi-structured interview	Maximum variation sample of patients with CHD by age, gender, education and occupation	$n = 8$ 5 men 3 women
Roebuck <i>et al.</i> , 2001 (UK)	Examine the effects of MI on quality of life	1 semi-structured interview	MI patients sampled consecutively	$n = 31$ 21 men 10 women
Tod <i>et al.</i> , 2002 (UK)	Examine barriers that exist for patients with MI in accessing cardiac rehabilitation services	1 semi-structured interview	Acute MI patients sampled to vary by age, gender, postcode, employment, cardiac history	$n = 20$ 16 men 4 women
Karner <i>et al.</i> , 2002 (Sweden)	Examine experiences of patients with MI of disease and treatment	1 semi-structured interview	MI patients aged <60 years, sampled to vary by age, sex, profession and area	$n = 23$ 14 men 9 women
Brink <i>et al.</i> , 2002 (Sweden)	Explore why patients with MI delay seeking medical help after the onset of symptoms	1 semi-structured interview	Maximum variation sample of first time patients with MI, by gender, age, education, employment and disease severity	$n = 22$ 11 men 11 women
King, 2002 (Australia)	Explore perceptions of patients with of illness causation	1 semi-structured interview	Patients with a provisional diagnosis of MI, purposively sampled by gender and social class	$n = 24$ 12 men 12 women
Zuzelo, 2002 (USA)	Compare the symptom experience of acute MI for women and men	1 semi-structured interview	MI patients purposively sampled by gender (equal numbers of men & women) and ethnicity (only white)	$n = 20$ 10 men 10 women
Jensen & Petersson, 2003 (Denmark)	Investigate patients' experiences of illness after a first MI	2 semi-structured interviews	First time MI patients consecutively selected	$n = 30$ 22 men 8 women

Zambroski, 2003 (USA)	Explore the experience of living each day with heart failure	1 semi- structured interview	Patients with heart failure receiving medical treatment, aged >39 years, purposely selected to allow diversity of age, gender and ethnicity	<i>n</i> = 11 5 men 6 women
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Key

CHD Coronary Heart Disease

GP General Practitioner

MI Myocardial Infarction