Journal of Psychosomatic Research xxx (2013) xxx–xxx

Contents lists available at SciVerse ScienceDirect

Journal of Psychosomatic Research

Review

Illness perceptions, mood and quality of life: A systematic review of coronary heart disease patients

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ARTICLE INFO

Article history:
Received 12 March 2013
Received in revised form 9 May 2013
Accepted 10 May 2013
Available online xxxx

Keywords:
Anxiety
Coronary heart disease
Depression
Illness perceptions
Quality of life

ABSTRACT

Objective: To examine published literature investigating the relationship between illness perceptions, mood and quality of life (QoL) in coronary heart disease (CHD) populations.

Methods: Key databases were systematically searched (CINAHL, Medline, PsycINFO, Scopus and Web of Science) for studies matching the inclusion criteria between November 2011 and February 2012. References of included studies were examined and key authors contacted. Studies were subject to a quality control check.

Results: 21 studies met the inclusion criteria. A synthesis of the results found that illness perceptions were correlated to and predicted QoL and mood across CHD diagnoses. Specific illness perceptions (*control*, *coherence* and *timeline*) were found to be important for patients that had experienced an unexpected medical event, such as myocardial infarction.

Conclusion: The results of this study provide support that illness perceptions are related to outcomes across CHD populations and disease progression, however the results do not selectively support one particular model. Recommendations are consistent with cardiac rehabilitation guidelines. Further research should focus on the systemic impact of illness perceptions.

Introduction

Coronary heart disease (CHD) occurs due to an accumulation of fatty plaque in the arterial walls of the heart; a process known as atherosclerosis. This plaque narrows the arteries and reduces the blood flow to and from the heart, leading to angina, and if the plaque erupts, this can lead to myocardial infarction (MI).

CHD accounted for over 7.3 million deaths worldwide in 2008 [1], and is the most common cause of death in the UK, with more than 65,000 people dying from CHD in 2010; more than any other disease [2]. The prevalence of CHD is increasing annually [3], creating a large societal burden [4]. The total cost to the UK Government, including healthcare, informal care and production loss due to morbidity and mortality was approximately £9 billion in 2006 [2].

There are a variety of physical, demographic and social factors that increase both the risk of developing CHD and subsequent morbidity and mortality, such as obesity, smoking, genetic predisposition, hyperlipidemia, hypertension and diabetes [2]. However, research has found that the degree of physical recovery is not directly linked to illness severity [5,6] and that psychological factors are also important determinants of CHD outcome and other chronic health conditions, such as locus of control (LoC) [7], self-efficacy [8], coping strategies [9], social support [10], mood [11] and illness perceptions [12]. Patients' perceptions of their illness are a pertinent research area for CHD, as studies have shown that many CHD patients (up to 83%) hold misconceptions about their illness [13–15]. Therefore, it is important to further understand the impact on CHD outcomes of holding maladaptive illness perceptions.

Illness perceptions are beliefs and expectations regarding one's own or others' illness and develop from a variety of sources, including experience and environment. The most widely applied model for explaining the relationship between illness perceptions and emotional and behavioural responses is the self-regulatory model [16]. This model demonstrates that patients react to specific internal and external stimuli, such as symptoms, events and treatment effects and employ illness-related cognitive and emotional representations to make sense these and their illness in general. These representations guide decisions regarding coping strategies, which are subsequently evaluated based on outcome (see Fig. 1). Although coping appears to mediate the relationship between illness perceptions and outcome, research also indicates that there is a direct relationship independent of coping [17].

Leventhal, Meyer and Nerenz [16] proposed 5 core dimensions to illness perceptions. These were beliefs about illness symptoms (*identity*), expected duration (*timeline*), causal factors (*cause*), illness effects (*consequences*) and the extent to which the illness could be controlled

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0022-3999/$ – see front matter © 2013 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.jpsychores.2013.05.003

Please cite this article as: Foxwell R, et al, Illness perceptions, mood and quality of life: A systematic review of coronary heart disease patients, J Psychosom Res (2013), http://dx.doi.org/10.1016/j.jpsychores.2013.05.003

or cured (*control/cure*). Subsequent research highlighted the importance of patients' beliefs that their illness makes sense (*illness coherence*), which has been added as a sixth core dimensions [18].

These constructs were supported by a meta-analytic review of the self-regulatory model [17], which examined the relationship between illness perceptions and psychological wellbeing [19] and quality of life (QoL) [20] across various chronic illness, demonstrating that the relationship is not disease-specific. However, since this review, more studies have employed a longitudinal design, which enables the ability to conclude direction of causality. Furthermore, there has been an increased interest in illness perceptions in CHD, investigating a variety of outcomes, including medication adherence [21], cardiac rehabilitation attendance [22], mood [23] and QoL [24]. Mood and QoL are strong psychosocial predictors of CHD [25] and are independently associated with morbidity and mortality [26], highlighting the importance of these outcomes in research.

A systematic literature review was previously undertaken to investigate the effectiveness of interventions to change illness perceptions in CHD patients [27]. The review included a heterogeneous sample of CHD patients, including angina, MI, CHD and patients that recently received coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA). Cognitive–behavioural interventions were found to be the most effective to dispel misconceptions, irrespective of CHD patient population. The review also investigated whether these interventions would affect secondary outcomes, such as changes in QoL, health behaviour and psychological wellbeing. However, there was a shortage of consistent secondary outcomes investigated in the intervention studies, which led to a lack of clear evidence that changing illness perceptions influenced QoL and mood. As illness perceptions have been shown to be changeable through health-care interventions, it is important to focus on the specific relationship with secondary outcomes, such as mood and QoL, as these have been shown to be independently associated with morbidity and mortality [26]. Greater clarity of the relationship between these factors could potentially inform health-care interventions for CHD patients and build on the emerging research. Furthermore, it is important to review this relationship across a heterogeneous sample of CHD patients, as this will enable similarities and differences in this relationship to be highlighted across the whole disease course.

The aim of the current review was to examine published literature investigating the relationship between illness perceptions, QoL and mood in CHD populations. The following review questions were identified:

1) How do illness perceptions relate to mood and QoL in CHD populations?
2) Are there differences in the influence of illness perceptions in relation to QoL and mood in CHD populations?
3) Are there differences in these relationships dependent on the stage of CHD disease course and progression?

Method

Data sources

A systematic electronic search of the literature was performed, searching the databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medline, PsycINFO, Scopus and Web of Science. Databases were selected to enable a comprehensive search of psychological, medical and sociological factors. References from selected articles were searched by hand to ensure additional relevant studies were also included.

Search strategy

The electronic search was performed between November 2011 and February 2012. The search terms in Table 1 were selected to optimise likelihood of identifying relevant studies specific to the review questions. Search terms were chosen through initial checks of key studies and the relevant key words used in these studies.

Inclusion and exclusion criteria

The inclusion and exclusion criteria were as follows. Studies had to include participants over 18 years old with a diagnosis of at least one of the following: 1) angina 2) myocardial infarction 3) CHD 4) eligible for or recently received revascularisation via PTCA or CABG. These CHD patient populations have been researched in a previous systematic literature review [27]. The studies selected also needed to include at least one measure of illness perception and at least one secondary outcome measure: either QoL (physical and/or emotional) or mood (anxiety and/or depression). The studies also needed to employ a

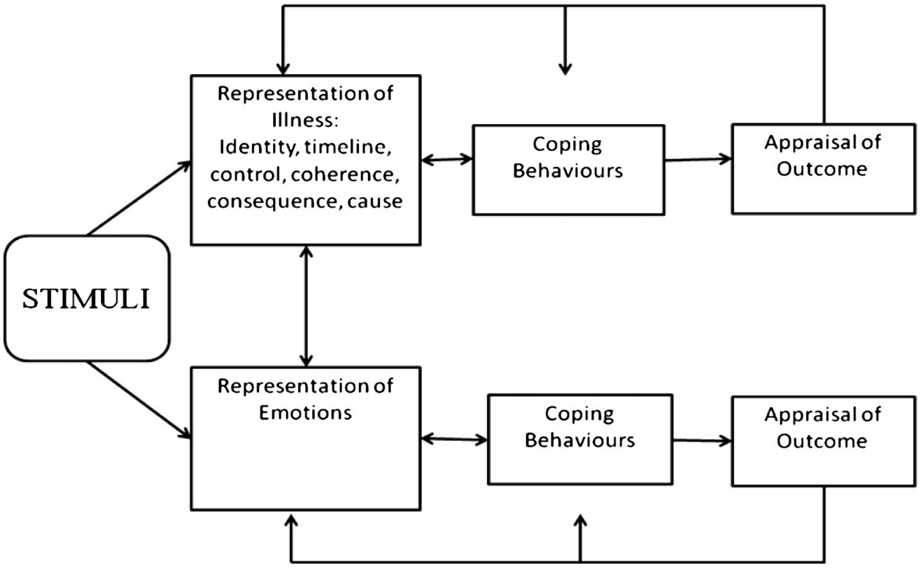

Fig. 1. The self-regulatory model [16].

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