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Original article

Physical therapists should integrate illness perceptions in their assessment in patients with chronic musculoskeletal pain; a qualitative analysis

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ABSTRACT

In the past decade, scientific evidence has shown that the biomedical model falls short in the treatment of patients with musculoskeletal pain. To understand musculoskeletal pain and a patient's health behavior and beliefs, physical therapists should assess the illness perceptions of their patients. In this quantitative study, we audiotaped the assessments of 19 primary care physical therapists on 27 patients and analyzed if and how illness perceptions were assessed. The Common Sense Model was used as the theoretical framework. We conclude that some of the domains of the Common Sense Model were frequently asked for (identity, causes and consequences), while others (timeline, treatment control, coherence, emotional representation) were used less frequently or seldom mentioned. The overall impression was that the assessments of the physical therapists were still bio-medically oriented in these patients with chronic musculoskeletal pain.

1. Introduction

For many physical therapists, a patient's health-behavior has become an important outcome of treatment, especially in patients with chronic musculoskeletal pain (MSK pain) and/or chronic diseases. To understand the patients' behavior, it is of importance to first analyze their current health behavior (Leventhal et al., 2008). Physical therapists therefore need to identify the factors related to this health behavior. In the last decade's research, particular psychological research has been published focusing on the perceptual and cognitive factors underlying a patient's health behavior.

A framework that highlights the importance of illness perceptions by linking illness perceptions to health behavior is the Common Sense Model (CSM) (Leventhal et al., 2003). The CSM identifies the factors involved in the processing of information by a patient regarding their disease or illness, how this information is integrated to provide a view of the illness, and how this view guides health behavior (Hagger and Orbell, 2003). In this identification process of symptoms, several factors can interfere such as general information (i.e. earlier experiences, cultural factors, social contacts), external information from significant others (doctors, parents), and the personal interpretation of current experiences i.e. bodily sensations for instance experienced during physical activities (Hagger and Orbell, 2003).

In the original CSM five core components of illness perceptions have been identified; *identity* – the symptoms associated with the illness, *cause* – personal ideas about etiology, *time-line* – the perceived duration of the illness, *consequences* – expected effects and outcome, and *cure control* - how one controls or recovers from the illness (Weinman et al., 1996). Later extended with the domains *illness coherence* (personal understanding of the illness or symptom) and *emotional representation* (emotional response to an illness or symptom) (Moss Morris et al., 2002). To study the domains of the CSM the Illness Perception Questionnaire (IPQ) was developed (Weinman et al., 1996). Later also a revised (IPQ-R) and brief version (IPQ-B) were developed (Moss Morris et al., 2002; Broadbent et al., 2006). The reliability, validity and feasibility of the revised Illness Perception Questionnaire (IPQ-R) was confirmed in several pain populations, although a factor structure for the IPQ-R in samples of

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patients with MSK pain showed limited evidence that the seven dimensions of the IPQ-R are distinct. Also a clear structure for the causal items was not determined. The authors stated that further work is needed in primary care patients with MSK pain (Nicholls et al., 2013).

Chronic MSK pain is the most frequently treated disorder by primary care physical therapists. The illness perceptions of patients with chronic pain largely determine their prognosis, and have been identified as important in the ability to control MSK pain conditions. In both cross-sectional and prospective studies across different MSK pain conditions, illness perceptions have been shown to be related to the severity of pain, affective distress, muscle and joint tenderness, pain-related disability, and poor treatment outcomes (Edwards et al., 2006; van Wilgen et al., 2008; van Ittersum et al., 2009). Patients with low back pain who attribute more physical symptoms to their low back pain had longer disease duration, and patients with a lower feeling of control of their back pain had a worse clinical outcome after 6 months (Foster et al., 2008). In patients with orofacial pain, it was shown that believing pain could have serious consequences was the most important predictor for treatment outcome. Furthermore, a low personal control and a chronic timeline were predictive for negative outcome (Galli et al., 2010). Changing the illness perceptions of patients after myocardial infarction positively influences the recovery and return to work of patients (Petrie et al., 2002).

Perceptions of patients with chronic MSK pain do not only predict outcome. They are also directly associated with altered movement performance in low back pain (Moseley, 2004), represent a major determinant of adherence to home exercise programs (Medina-Mirapeix et al., 2009), and are critical for the clinical effect of physical therapy interventions such as training of motor control in the lumbopelvic region (Oliveira et al., 2009). When illness perceptions are assessed properly, the physical therapist will have a better understanding of a patient's health behavior, motivation for treatment, and the need for specific education to try to alter these maladaptive perceptions (Nijs et al., 2011).

We conclude that there is increasing evidence that illness perceptions are useful for clinical physical therapists in their goal to focus on health behavioral change and in self- management. However, most illness perception studies have been carried out to demonstrate relationships between illness perceptions and outcomes. In contrast, relatively little work has been reported regarding if physical therapists are specifically questioning these illness perceptions in their assessment of patients with MSK pain.

The purpose of this study therefore was to analyze qualitatively how physical therapists working in primary care integrate illness perceptions during the first assessment of patient with chronic MSK pain, therefore physical therapists were asked to audiotape their assessments.

2. Methods

2.1. Physical therapists and patients

Participatory physical therapists were working in primary care practices in the northern part of The Netherlands. The physical therapists all had a degree in physical therapy with or without additional education. Patients with chronic MSK pain were determined by pain perceived in muscles, joints and bones or general pain such as fibromyalgia and back pain with referred pain. The pain was present for at least 6 weeks and had no specific somatic cause. The diagnosis was set by the participating physical therapists. Exclusion criteria were; patients not speaking the Dutch language, patients with other co-morbidity and patients who were treated for the same musculoskeletal pain at the same physical therapy practice before.

2.2. Design

To investigate the integration of illness perceptions in the assessment of the physical therapist a qualitative exploratory design was used. The participating physiotherapists were asked to audiotape their interview during the first consultation. The illness perceptions during the interview were inventoried afterward.

2.3. Procedure

Primary care physical therapy practices in the northern part of The Netherlands were approached to participate in the study. Physical therapists were informed about the study, although, to avoid information bias, they were told that the communication between the physical therapist and the patient was investigated. Afterward physical therapists where debriefed about the exact purpose of the study. When physical therapists approved to participate in the study, further information was given to them about the patient's inclusion and exclusion criteria and audio recording equipment was delivered. Each participating physical therapist was not required to recruit more than two patients for the study. The patients were informed about the study by their physical therapist and were assured of confidentiality before the start of the interview. The Human Research Ethics Committee of the University Hospital of Brussels approved the study and in case both the physical therapists and the patients agreed to participate, written informed consent was obtained prior to testing.

The interview during the first consultation took place in the private practice of the physiotherapist and was recorded by digital audio recording equipment. The audio recordings as a whole were transcripted verbatim by four researchers. The questions of the physical therapist and the responses of the patients were described separately. The patient's demographic and clinical characteristics were asked using a short questionnaire. The characteristics (age, gender, and additional education) of the physical therapists were collected through e-mail.

2.4. Analysis

The transcripts were read several times by each of the researchers so they could achieve familiarity with the contents. Before the study the observers were instructed and trained by indexing several assessments from patients other than those participating in the present study. Furthermore to increase the inter-rater reliability an observational instrument the GOSSIP (Groningen ObServation Score for Illness Perceptions) with instructions for the observers was used. Table 1 presents this observational instrument. In the analysis a deductive approach with an existing theoretical framework, the Common Sense Model, was used (Pope et al., 2000). Two researchers systematically indexed the interviews separately and blindly from one another. Any differences in the initial indexing process per interview and between researchers were resolved by discussion to reach consensus with use of the GOSSIP. In total, four researchers indexed all the transcripts of the interviews.

Within the assessment transcripts, significant phrases were identified which characterize a specific question to assess an illness perception by a physical therapist or an illness perception mentioned by a patient with chronic MSK pain. The phrases were categorized according to the seven core components of illness representations in Leventhal's Common Sense Model (CSM)