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Health Care Professionals' Reactions to Patient Pain: Impact of Knowledge About Medical Evidence and Psychosocial Influences

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Abstract: This study examined the impact of evidence concerning the presence of 1) a biomedical basis for pain and 2) psychosocial influences on practitioner appraisals of patient pain experiences. Furthermore, the potential moderating role of patient pain behavior was examined. In an online study, 52 general practitioners and 46 physiotherapists viewed video sequences of 4 patients manifesting pain, with accompanying vignettes describing presence or absence of medical evidence and psychosocial influences. Participants estimated pain intensity, daily interference, sympathy felt, effectiveness of pain medication, self-efficacy, their likability, and suspicions of deception. Primary findings indicated lower perceived pain and daily interference, less sympathy, lower expectations of medication impact, and less self-efficacy when medical evidence was absent. The same results were found when psychosocial influences were present, but only when the patient displayed higher levels of pain behavior. Furthermore, absence of medical evidence was related to less positive evaluations of the patients and to higher beliefs in deception in both professions. The presence of psychosocial influences was related to less positive evaluations and higher beliefs in deception in both professions. In sum, a range of contextual factors influence health care practitioner responses to patient pain. Implications for caregiving behavior are discussed.

Perspective:* *The present study indicates that in the absence of clear medical evidence and in the presence of psychosocial influences, patient pain might be taken less seriously by health care practitioners. These findings are important to further understand the difficulties that relate to the clinical encounter between pain patients and health care practitioners.

Key words: *Pain, health care practitioner responses, medical evidence, psychosocial influences.*

Pain management poses a considerable challenge for both health care practitioners and people in pain.[6,39,40,51,53,62] Basic to delivery of care is the necessary but difficult task of understanding the subjective experience of pain, a covert experience to which observers do not have direct and complete access.[26] Recognizing the private features of the experience inevitably creates uncertainty in the health care practitioner about the basis for pain complaints and symptoms and appropriate treatment decisions.[56]

Although pain is now widely acknowledged to be a biopsychosocial phenomenon,[23] the biomedical model that presumes that pain is caused by physiological pathology remains the most influential in patient care.[32] This model leaves little room for multiple psychosocial factors to play influential roles in pain experience and disability.[18,41] Accordingly, although health care practitioner uncertainty is inherent and ubiquitous in patient care,[24,25] we may expect it to be heightened when medical evidence for the pain is absent and/or when there are psychosocial stressors that impact on the patient's pain experiences.[38,56] A thorough understanding of the influence of the absence of medical evidence and the presence of psychosocial influences on health care practitioners' responses is essential because pain complaints for which there is no clear medical explanation are highly prevalent.[27,30,33,34,48] Furthermore,

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psychosocial influences on the pain experience have widely been acknowledged in the literature.[7,23,36,44,46]

Using an online experimental design, the present study had 4 objectives. First, we investigated the effects of both 1) absence or presence of medical evidence and 2) psychosocial influences on health care practitioner (physiotherapists and general practitioners) appraisals (ie, estimates of pain, interference, sympathy, adequacy of pain medication, and self-efficacy) by means of vignettes with video sequences of actual patients displaying full body pain behavior. Second, we examined variations in patient pain behavior as a potential moderating factor in the relationship between 1) absence versus presence of medical evidence and psychosocial influences on the one hand and 2) the health care practitioner responses on the other. Patient pain behavior provides a range of cues of great importance to health care practitioners and other observers[14,20,64] that may limit or facilitate interpretations of the role of medical explanation and psychosocial influences. Third, we investigated whether the absence of medical evidence and the presence of psychosocial influences relate to the health care practitioner's belief in deception and his or her evaluation of the patient (in terms of likability). Research suggests that health care practitioners may dislike patients when clear medical evidence for the pain is lacking.[57,62] Furthermore, health care providers may have more doubts about the genuineness of the pain symptoms[38,40,43] when pain has no clear medical explanation.

To our knowledge, our study is the first to investigate the effect of the presence of psychosocial influences on health care practitioners' responses, independently from the effect of the absence of medical explanation. Furthermore, our study is the first to do this with videos displaying the patients' full body pain behaviors. Previous research into the influence of contextual information on observer responses has largely relied on short written stories about fictitious patients[55,57] or on videos displaying only the patients' facial pain expressions.[17] Our approach using videotaped full body pain behaviors of actual patients in pain is more akin to clinician assessment in natural settings, and therefore, more ecologically valid. Finally, in our study, participants were general practitioners and physiotherapists who have a preeminent role in the care of patients with pain.[4,22,37] In particular, general practitioners are responsible for the first-line care of patients with pain, and physiotherapists are responsible for the first-line interventions for many high-impact pain conditions. However, we are unaware of any study that investigated the influence of medical evidence and psychosocial factors in these groups of practitioners.

Methods

Participants

Participants were recruited by mail (physiotherapists [PTs]) or telephone (general practitioners [GPs]). Four hundred emails were sent to members of the Institute for Permanent Education in Physiotherapy of Ghent University. Furthermore, 142 Flemish GPs were randomly (computerized randomization) selected from the online public list of Belgian GPs. Seventy-four PTs and 87 GPs agreed to participate. The GPs and PTs were sent an email with the link to the online experiment. Five PTs and 7 GPs completed only the first part of the experiment (ie, the sociodemographics questionnaire), 7 PTs and 8 GPs reported technical problems, and 14 PTs and 19 GPs did not complete the experiment despite reminders. Furthermore, 1 email with the link to the experiment was not sent successfully to 1 GP. In consequence, 48 PTs and 52 GPs completed the experiment (response rate for PTs = 12%; response rate for GPs = 37%). To be eligible, participants had to speak Dutch fluently and they had to be active as a GP or PT. The study was approved by the ethical committee of the Faculty of Psychology and Educational Sciences of Ghent University and by the medical ethical committee of the Ghent University Hospital. Consent was obtained from each participant.

Design

The online experiment consisted of 2 main parts: 1) the sociodemographics survey and 2) the experiment proper. During the experiment proper, each participant was shown pictures of 4 different patients, each accompanied by a written vignette (detailed below). The information in the vignettes was manipulated across participants in a 2×2 within-subjects design. Vignettes described the presence or absence of 1) medical evidence for the pain and 2) psychosocial influences on the pain experience (see Appendix A). After each picture, a video sequence of the patient performing a pain-inducing activity was shown. Subsequently, participants estimated the patient's pain, the degree of the patient's pain interference with daily activities, their own sympathy for the patient, the likely effectiveness of pain medication, and the expectations of self-efficacy in treating the patient. Subsequently, pictures of the patients again were shown and participants reported their evaluation of the patient (in terms of likability) and their beliefs in the likelihood of deception.

Stimuli

The video sequences and pictures were selected from the Ghent Pain Videos of Daily Activities (G-PAVIDA), consisting of video sequences displaying 34 chronic back pain patients (19 women, 15 men; mean age = 52 years [range = 23–74], standard deviation = 12 years) who had performed 4 back-straining movements. All patients were suffering from chronic low back pain and were receiving (outpatient) treatment for the pain at the University Hospital in Ghent. The patients were asked to execute 4 movements: 1) lying down on a bed and standing up; 2) sitting down on a chair and standing up; 3) taking a box from the ground, putting it on a table, and replacing it on the ground; and 4) picking up marbles from the ground. Each movement was videotaped and every patient started the movement in an upright position