



Original article

Validation of the comprehensive ICF core set for low back pain: The perspective of physical therapists

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ABSTRACT

The “Comprehensive ICF Core Set for Low Back Pain (LBP)” is an application of the International Classification of Functioning, Disability and Health (ICF) and represents the typical spectrum of problems in functioning for patients with LBP. The aim of this study was to validate the Comprehensive ICF Core Set for low back pain from the perspective of physical therapists.

Physical therapists experienced in LBP treatment were asked about the patients' problems, patients' resources and aspects of environment treated by physical therapists in a three-round survey using the Delphi technique. Responses were linked to the ICF.

Eighty-four physical therapists in 32 countries named 1955 concepts that covered all ICF components. Fourteen ICF categories were not represented in the Comprehensive ICF Core Set for LBP although at least 75% of the participants have rated them as important. Most of them belonged to the ICF component “Body Functions”. Twenty-eight concepts were linked to the not-yet-developed ICF component personal factors. Further, 21 issues were not covered by the ICF.

The validity of the ICF components “Body Structures”, “Activities and Participation” and “Environmental Factors” was largely supported by the physical therapists. However, several body functions were identified which are not covered and need further investigation.

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1. Introduction

Various studies indicate that 60–80% of the general population in Western society will experience low back pain (LBP) during adult life (Kelsey et al., 1992; WHO, 2003). LBP is associated with impairment in functions and body structures including local as well as referred pain, reduced range of motion, impaired mobility of the spine, loss of muscle strength and sleep disturbance amongst others (Ehrlich, 2003; Cieza et al., 2004b; Van Tulder et al., 2006). Such impairments often lead to limitations in physical activities and restrictions in daily activities and social participation including disability and inability to work (Ehrlich, 2003a). A multidisciplinary biopsychosocial treatment conducted by rehabilitation professions including physicians, physical therapists, psychologists, occupation therapists and social workers was reported to be a promising approach to improve the functioning of persons with LBP (Karjalainen et al., 2001; Guzmán et al., 2001). Multidisciplinary

programs increased physical and functional performance, at least for people with chronic non-specific LBP (Alaranta, 1994; McQuay, 1997; McCracken and Gross, 1993; Morley et al., 1999). Although the scientific evidence of physical therapy interventions in general is limited, a number of systematic reviews recently summarized studies on a considerable number of relevant interventions. They demonstrated that amongst others, specific exercise training (Hayden et al., 2005), back school (Heymans et al., 2005) as well as neurophysiology and behaviour education (Moseley, 2002) support the treatment in patients with low back pain. Physical therapists are principally involved in these interventions.

To optimize interventions, a proper understanding of patients' functioning and health status is needed (Stucki et al., 2003). The *International Classification of Functioning, Disability and Health (ICF)* (WHO, 2001) and the integrated biopsychosocial model on which it is based, provides a useful framework for achieving this understanding. This model with its components *Body Functions and Structures* and *Activities and Participations*, is viewed in relation to the health condition under consideration as well as personal and environmental factors (see Fig. 1). Within each component, except for “personal factors”, there is an exhaustive hierarchically organized list of so-called “ICF categories”, which are the units of the

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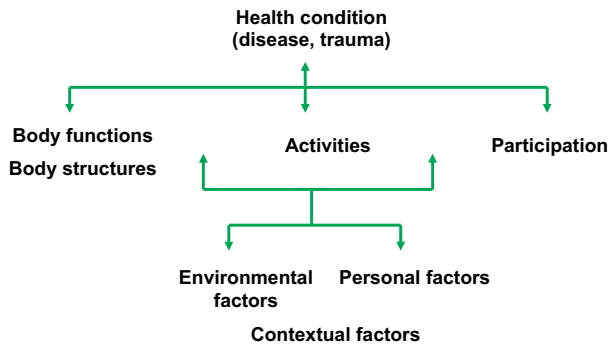


Fig. 1. The integrative biopsychosocial model of the ICF.

classification (see Fig. 2). Categories at higher levels (e.g. second or third-level) are more detailed. A higher-level (more detailed) category shares the attributes of the lower-level categories of which it is a member; that is, the use of a higher-level category implies that the lower-level categories are applicable.

Both the content and the structure of the ICF indicate its potential value for rehabilitation professions (Cieza and Stucki, 2005). In contrast to profession-specific guides, such as the *Guide to Physical Therapist Practice* (American Physical Therapy Association, 2001) the common language of the ICF can be used by different professions and health care disciplines. Furthermore, the ICF provides the basis for the selection of tests, measures, and interventions in physical therapist practice (Rauch et al., 2008). Despite its supposed value, the ICF including more than 1400 categories is not feasible for use in clinical practice. To facilitate the implementation of the ICF into clinical practice, ICF Core Sets for a number of health conditions, including LBP (Cieza et al., 2004b), have been developed (Stucki and Grimby, 2004; Üstüet al., 2004; Cieza et al., 2004b). The Comprehensive ICF Core Sets for LBP includes a set of 78 categories selected out of the whole ICF, covering the typical spectrum of problems in functioning of patients with LBP (Cieza et al., 2004b). It was developed by a formal decision-making and consensus process, integrating evidence gathered from preparatory studies by experts consisting of low back pain health care professionals (Cieza et al., 2004a).

The ICF Core Set for LBP defines the areas that are relevant to functioning of patients with LBP and consequently what to measure in patients with LBP from a comprehensive and multiprofessional perspective (Sigl et al., 2006; Kirschneck et al., 2007a,2007b). Therefore, it can be used as a starting point in the examination of patients with LBP.

However, a prerequisite is that the Comprehensive ICF Core Set for LBP includes all aspects of functioning and relevant environmental factors that are intervention goals for the different health professions involved in the care of patients with LBP, including physical therapists. Therefore, the objective of this study was to examine the content validity of the Comprehensive ICF Core Set for LBP from the perspective of physical therapists. First, this study intends to identify the patients' problems, patients' resources and aspects of environment treated by physical therapists in patients with LBP and second, to analyze to what extent these aspects are represented in the Comprehensive ICF Core Set for LBP.

2. Methods

We conducted a three-round electronic-mail survey of physical therapists using the Delphi technique (Linstone and Turoff, 1975; Goodman, 1987; Duffield, 1993; Jones and Hunter, 1995). The Delphi technique is applied to gain a consensus from a panel of people with knowledge of the topic being investigated (McKenna, 1994). These informed people are commonly referred to as "experts" (Strauss and Zeigler, 1975). Delphi surveys conducted with two or three rounds are preferred to increase participant compliance and the stability of the responses (Jenkins and Smith, 1994; Proctor and Hunt, 1994).

2.1. Recruitment of participants

In the preparatory phase of the study, contacts from international associations were used to identify physical therapists. In addition, literature searches and personal recommendations were used to identify individual physical therapists experienced in the treatment of patients with LBP. The sample was selected using a purposive sampling approach. Purposive sampling is based on the assumption that a researcher's knowledge about the population

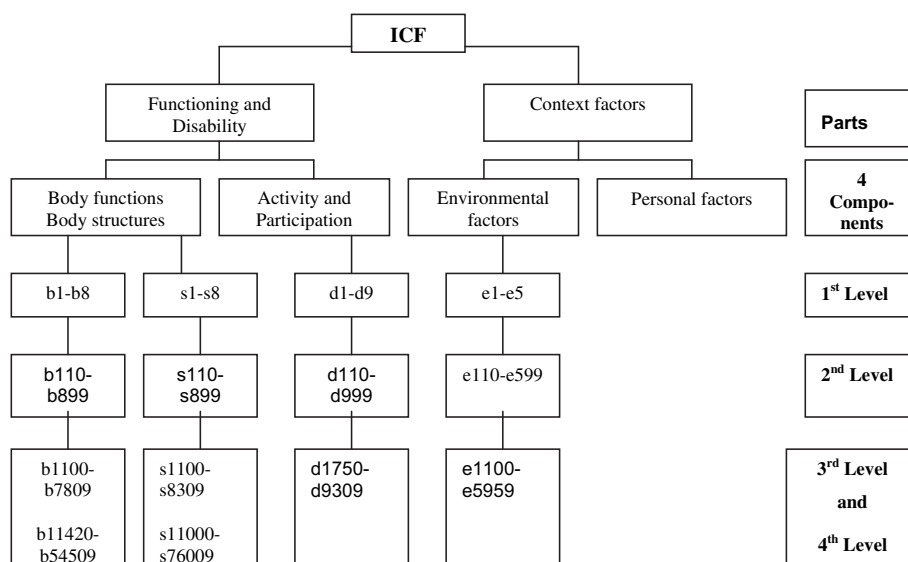


Fig. 2. The hierarchic structure of the classification.

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