



Understanding Discrepancies in a Person's Fear of Movement and Avoidance Behavior: A Guide for Musculoskeletal Rehabilitation Clinicians Who Support People With Chronic Musculoskeletal Pain

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**Study Design:** Clinical Commentary

**Abstract:**

**BACKGROUND:** Generic self-report measures do not reflect the complexity of a person's pain-related behavior. Since variations in a person's fear of movement and avoidance behavior may arise from contextual and motivational factors, a person-centered evaluation is required—addressing the cognitions, emotions, motivation, and actual behavior of the person.

**CLINICAL QUESTION:** Most musculoskeletal rehabilitation clinicians will recognize that different people with chronic pain have very different patterns of fear and avoidance behavior. However, an important remaining question for clinicians is “How can I identify and reconcile discrepancies in fear of movement and avoidance behavior observed in the same person, and adapt my management accordingly?”

**KEY RESULTS:** We frame a clinical case of a patient with persistent low back pain to illustrate the key pieces of information that clinicians may consider in a person-centered evaluation (ie, patient interview, self-report measures, and behavioral assessment) when working with patients to manage fear of movement and avoidance behavior.

**CLINICAL APPLICATION:** Understanding the discrepancies in a person's fear of movement and avoidance behavior is essential for musculoskeletal rehabilitation clinicians, as they work in partnership with patients to guide tailored approaches to changing behaviors.

**Key Findings:**

**FINDINGS:** Total scores on generic self-report measures fail to capture all the relevant information regarding fear of movement and avoidance behavior and thus, inaccurately reflect the complexity of pain-related behavior. A person-centered evaluation addresses the cognitions, emotions, motivation, and actual behavior of the individual person in the relevant context, identifying the variable pattern of fear of movement and avoidance behavior in one person. Specific attention during behavioral assessment and treatment should be directed to a person's safety behaviors, as these may become potential sources of local peripheral nociception and reinforce harm beliefs, contributing to the persistence of pain. Combining knowledge from various theoretical frameworks can explain discrepancies in a person's fear of movement and avoidance behavior.

**IMPLICATIONS:** Although clinicians might find it challenging to perform, interpret, and implement a person-centered evaluation of fear of movement and avoidance behavior, it is necessary to gain all relevant information to understand the problem and to guide appropriate treatment choices.



**CAUTION:** Part of the reasoning that justifies the clinical approach is based on assumptions and treatment principles from theoretical models. While there is emerging evidence from (mostly) experimental studies supporting these theoretical models, properly designed studies in clinical populations are necessary to validate the assumptions.

**Reviewer Summary:**

Overall, self-reported outcome measures, such as the Tampa Scale for Kinesiophobia and Fear-Avoidance Beliefs Questionnaire do not assess fear related to specific movements and do not dive into contextual or motivational factors that impact their fear avoidance beliefs. The Photograph Series of Daily Activities-short electronic version or the Avoidance of Daily Activities Photo Shoulder Scale also does not consider these factors as well. Therefore, it is important during the evaluation to not rely on the total score of these outcome measures, and dive in deeper to specific components and ask the patient specific questions to identify movements that the patient perceives as harmful, and why they perceive them as harmful to help guide treatment. It's also important to consider motivational factors of why the patient avoids certain movements and performs others that they consider "harmful". In the patient example provided in the article, the patient avoided cleaning that involved sustained bent over postures but continued to ride her bike with her husband which also requires her to be in a sustained bent over posture. The patient valued riding her bike with her husband over cleaning her home. They related this to discussing the importance of identifying safety behaviors that allows the patient to perform what they perceive as "harmful" movements. For example, she adjusted the height of her handlebars to prevent her from bending over further while riding with her husband. Other safety behaviors that are commonly used that they discussed are spinal bracing and keeping the back straight while bending over which may lead to continued peripheral nociceptive input and perception of pain. It's important to identify these behaviors and then evaluate which ones are appropriate to address since some safety behaviors, such as adjusting the handlebar height, may allow the patient to continue to participate in valued activities. Based off the factors identified during the evaluation, then a more patient-centered treatment plan can be created to provide exposure to fearful activities in different contexts. As this is a clinical commentary based on assumptions and treatment principals from theoretical models as previously mentioned, higher level of evidence is needed to validate these assumptions in clinical musculoskeletal pain populations.