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Review Article

Fear-avoidance beliefs and pain avoidance in low back pain—translating research into clinical practice

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Abstract

BACKGROUND CONTEXT: For patients with low back pain, fear-avoidance beliefs (FABs) represent cognitions and emotions that underpin concerns and fears about the potential for physical activities to produce pain and further harm to the spine. Excessive FABs result in heightened disability and are an obstacle for recovery from acute, subacute, and chronic low back pain.

PURPOSE: This article summarizes past research concerning the etiology, impact, and assessment of FABs; reviews the results and relevance to clinical practice of trials that have addressed FAB as part of low back pain treatment; and lists areas in need of further study.

STUDY DESIGN: This article reports on a plenary presentation and discussion of an expert panel and workshop entitled ''Addressing fear-avoidance beliefs in a fear-avoidant world—translating research into clinical practice'' that was held at Forum X, Primary Care Research on Low Back Pain, during June 2009, at the Harvard School of Public Health in Boston, MA, USA.

METHODS: Important issues including the definition, etiology, impact, and treatment of FAB on low back pain outcomes were reviewed by six panelists with extensive experience in FAB-related research. This was followed by a group discussion among 40 attendees. Conclusion and recommendations were extracted by the workshop panelist and summarized in this article.

RESULTS: Fear-avoidance beliefs are derived from both emotionally based fears of pain and injury and information-based beliefs about the soundness of the spine, causes of spine degeneration, and importance of pain. Excessively elevated FABs, both in patients and treating health care providers, have a negative impact on low back pain outcomes as they delay recovery and heighten disability. Fear-avoidance beliefs may be best understood when patients are categorized into subgroups of misinformed avoiders, learned pain avoiders, and affective avoiders as these categories elucidate potential treatment strategies. These include FAB-reducing information for misinformed avoiders, pain desensitizing treatments for pain avoiders, and fear desensitization along with counseling to address the negative cognition in affective avoiders. Although mixed results have been noted, most clinical trials have documented improved outcomes when FAB is addressed as part of treatment. Deficiencies in knowledge about brief methods for assessing FAB during clinical encounters, the importance of medical explanations for back pain, usefulness of subgroup FABs, core points for information-based treatments, and efficient strategies for transferring FAB-reducing information to patients hamper the translation of FAB research into clinical practice.

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CONCLUSIONS: By incorporating an understanding of FAB, clinicians may enhance their ability to assess the predicaments of their patients with low back pain and gain insight into potential value of corrective information that lessen fears and concerns on well-being of their patients.

Keywords: Disability; Fear avoidance; Pain avoidance; Pain beliefs; Cognitive behavioral treatment

Introduction

When faced with a difficult problem like low back pain, the mind routinely theorizes about the implications of symptoms and considers the consequences of future actions. Exploration of the thoughts of people disabled by low back pain have uncovered that many endorse disproportionately strong beliefs about the importance of back pain and the vulnerability of the spine and as a consequence avoid activities they ''fear'' will lead to additional pain and injury [1]. These disadvantageous concerns were termed fear-avoidance beliefs (FABs) by Lethem et al. [2]. It is recognized that excessive FAB and resultant disability have dire consequences for patients. These include physical inactivity, reduced mental well-being, assumption of the sick role, deterioration in family dynamics, dependence on medications, and excessive utilization of medical services [3–5].

Because of the direct consequences of heightened FAB on the health and well-being of people with low back pain, it would seem beneficial for the health care system to understand and address them. Regrettably, discoveries about FAB have not been widely translated into clinical practices. Many health care providers are not cognizant of the importance of FAB and are subsequently unmindful about the potential for clinical encounters to positively or negatively impacting FAB. This omission may be partially responsible for the increasing level of disability reported by people with low back pain in modern societies, despite ever increasing medical expenditure for the care of this problem [6].

This article highlights important issues regarding FAB, including their influences on outcomes, assessment, treatment potential, and areas in need of further study. These materials are based on presentations and discussions that surrounded a focused workshop entitled ''Addressing fear-avoidance beliefs in a fear-avoidant world—translating research into clinical practice'' at the Forum X, Primary Care Research on Low Back Pain, held during June 2009, at the Harvard School of Public Health in Boston, MA, USA. This workshop consisted of presentations by international panelists with extensive experience addressing/measuring/modifying back pain–related FAB in research and clinical practice. This was followed by expanded discussions between panelist and workshop participants that explored actual experiences with addressing FAB during medical encounters. By summarizing the materials developed during and in response to that workshop, this paper presents a practical review of the importance of FAB to low back pain that may benefit practicing clinicians and future research efforts.

What are FABs?

Fear is an emotional response generated during dangerous or painful experiences and can include potentially useful survival mechanisms, such as escape and avoidance behaviors [7]. Through classic conditioning, after experiences that stimulate low back pain, anticipated or actual exposures to similar experiences can reelicit a fear response, even when these experiences are neither harmful nor painful. Fear can also be learned through vicarious exposure, including observing others with back pain (modeling) [8], and as a result of fear-inducing information about back pain [9,10]. It is likely that classic conditioning and vicarious learning combine to produce fear of movements and physical activities for some individuals with low back pain, with resultant reluctance to engage in normal physical activities, called fear-avoidance behaviors.

Although emotion-based fear may be a relevant factor in a subset of people, reason-based beliefs are important to all people with low back pain. Beliefs are defined as convictions of the truth of propositions without their verification and as such are subjective mental interpretations derived from perceptions, reasoning, or communications. All adults have measurable beliefs about back pain that encompass thoughts about the processes responsible for back pain, structural soundness of the spine, and risks to the spine associated with physical activities [11]. These beliefs are likely derived from multiple sources, including personal experiences, family, acquaintances, societal attitudes, media, low back literature, Internet research, and encounters with the health care system. Because human behaviors are shaped by beliefs, back pain beliefs directly influence decisions to perform or avoid personal, recreational, or vocational activities and therefore underpin the resultant level of ability/disability noted in response to back pain.

Impact of medical concepts about low back pain on FABs

In contrast to medical advances in many fields, dissemination of knowledge about the etiology of low back pain