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Psychological and psychosocial determinants of musculoskeletal pain and associated disability

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A B S T R A C T

Although much attention has been given to the physical determinants of common musculoskeletal complaints such as back and arm pain, research points to a stronger influence of psychological factors. Multiple studies have implicated poor mental health and somatisation (a tendency to worry about the common somatic symptoms) in the incidence and chronicity of musculoskeletal pain and associated disability. Also important are adverse beliefs about the prognosis of such disorders, and about the role of physical activity in their development and persistence. Differences in societal beliefs may have contributed to major variation in the prevalence of disabling musculoskeletal pain that has been observed between countries and in the same countries over time. Psychosocial aspects of work have also been linked with musculoskeletal pain, although relative risks have generally been smaller. There is a need to take account of psychological factors in the clinical management of patients with back, neck and arm pain.

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Historically, attempts to prevent incapacity for work from musculoskeletal disorders have focused mainly on the physical demands of employment. It has been assumed that symptoms and disability arise from injury to tissues, and can be prevented by better ergonomic design of occupational tasks to reduce mechanical loading. This biophysical paradigm may be appropriate for some types of musculoskeletal disease – for example, osteoarthritis of the hip caused by heavy lifting (see Chapter X) and degenerative meniscal tears in the knee caused by prolonged kneeling and squatting (Chapter X). However, it has become increasingly apparent that the model has only limited applicability to common painful disorders of the back, neck and upper limb, which are the main musculoskeletal causes of disability for work.

Most disabling pain of the back and upper limb is non-specific in nature with no clear evidence of underlying injury to tissues, and even where pathology can be demonstrated (e.g., herniation of an intervertebral disc in people with back pain), it appears often not to be the explanation for the symptom [1]. Furthermore, there have been major temporal changes in the prevalence of musculoskeletal illness and disability, which cannot be explained by altered physical exposures. For example, social security statistics indicate that in Britain, long-term incapacity for work because of back pain increased more than eightfold between 1950 and the early 1990s [2], at a time when the physical demands of work were declining because of greater mechanisation and a shift in employment from manufacturing to service industries. And in Australia, there was a major epidemic of arm pain during the 1980s among office workers, which was not paralleled in other countries that were using similar technology [3].

These observations indicate that factors other than mechanical loading have much greater impact on common disabling musculoskeletal disorders, and that they can vary importantly over time. Several lines of investigation have suggested that the drivers of the observed trends are psychosocial. This chapter considers the evidence implicating psychological and psychosocial influences in the causation of disabling musculoskeletal pain, and their potential to account for observed variations in its occurrence. It focuses in particular on the role of mental health, tendency to somatise, health beliefs and expectations, and psychosocial aspects of work. Implications for clinical practice and priorities for further research are highlighted.

Mental health

Definition

Mental health refers to emotional and psychological well-being [4], impairment of which may adversely affect an individual's cognitive or social functioning, making it harder to cope with the demands of daily life, including, among other things, the ability to work productively and efficiently.

Problems with mental health range from the minor distress that all people experience at times in response to life's challenges through to major long-term clinical illness that can be severely incapacitating and may require psychological therapy or pharmacological treatment. According to the biopsychosocial paradigm [5,6], common psychological symptoms, such as low mood, importantly influence the occurrence and prognosis of musculoskeletal pain.

Methods of assessment

In studies of musculoskeletal pain, mental health is generally assessed through questionnaires. Many have used questions derived from the 36-item Short Form Health Survey (SF-36) [7]. This is a valid and reliable tool, designed for self-administration, which covers various aspects of health and quality of life, and has been translated into local languages in almost 50 different countries. It is made up of 36 items organised in eight scales, one of which (also known as Mental Health Inventory-5) concerns mental health. This comprises five questions about how much of the time during the past month individuals have been very nervous, felt so down in the dumps that nothing could cheer them up, felt calm and peaceful, felt downhearted and blue, and have been a happy person. Each of the five questions is rated on a five-point scale, ranging from ‘all of the time’ to ‘none of the time’. An overall measure can then be derived by assigning numerical scores to each answer (higher values indicating