

The psychology of pain

Pain is more than a physical sensation - it has psychological, emotional and biological components. These components influence the intensity with which individuals experience pain, how debilitating the pain is, and how effective treatment is likely to be.

Individuals show enormous differences in their ability to regulate emotions, including their emotional response to pain. Studies have shown that some patients appear to experience pain more intensely than others. Even under laboratory conditions, where the intensity of a pain-inducing stimulus can be controlled, there is great variability in patient response.

Similarly, while some patients are able to make a rapid recovery from extensive physical damage and pain, others continue to report chronic and sometimes debilitating pain, long after treatment options for physical symptoms are exhausted.

Studies have identified a number of factors that appear to contribute to the intensity of pain experienced by different individuals, and the effectiveness of treatment. Three particular emotional responses to pain have been shown to put patients at greatest risk of experiencing ongoing, debilitating pain:

- Pain catastrophizing – While pain can provide a helpful warning signal and/or direct attention toward appropriate action to deal with the injury, some people display increased or heightened attention to pain sensation. In particular, where the threat of pain is constant or recurrent, a pattern of vigilance to pain can develop. Vigilance refers to an abnormal focus on possible signals of pain or injury. This intense worry about the pain/ the threat of pain may result in a fixed pattern of response, known as ‘catastrophic thinking’ or ‘catastrophizing’. It involves a habitual, almost immediate, appraisal of any pain stimulus as extremely severe – the intensity of pain is magnified, emotional distress associated with pain is more severe, and the individual feels helpless to manage the situation.
- Fear avoidance - Our beliefs, attitudes and social context influence how we attribute the sources of our pain, and what should be done about it. Some individuals interpret pain as a signal to restrict physical movement or activity, to rest the body. Individuals with pain may avoid any activity that could potentially induce pain. While this may be an effective strategy to cope with acute pain, in the longer term, such behaviours lead to decreased mobility, causing patients to decline into inactivity, depression and disability. Studies have shown that fear of pain may be more disabling than pain itself. In the absence of fear-avoidance beliefs about pain, individuals are more likely to confront pain problems and become more engaged in active coping to improve daily function.
- Poor expectations for recovery - Our understanding and expectations of the cause of pain, its management, and how long it should take for recovery, inform our coping behaviour, and are often a good predictor of outcome. Patients who don’t have a clear understanding of the cause of their pain, and therefore how to manage it, show greater distress and are prone to developing greater disability. Patients may be over-optimistic about how quickly they will recover - when the expectation is not fulfilled, it may generate a negative cognitive response and motivate

behaviours that undermine effective healing. By contrast, patients who believe in their personal ability to exert control over the pain are more likely to adjust more effectively.

- Pre-existing emotional distress may predispose some individuals to cope poorly with an episode of acute pain. For an individual who is already under significant psychological stress, pain may result in more significant functional limitations and generate higher levels of emotional distress.

The typical emotional reaction to pain includes anxiety, fear, anger, guilt, frustration, and depression. Emotions shape our experience of the pain via neural connections and are powerful drivers of behaviour. Clinicians report that the majority of adult chronic pain patients are depressed to some degree, less as a result of the pain itself, and more owing to the disabling consequences of the pain. Depression and anxiety have been shown to correlate with higher pain intensity, poorer prognosis for treatment, and higher incidence of disability. Patients often feel blamed/judged for their condition. Their frustration, and resulting feelings of anger and hostility, drives a wedge between patient and others, including caregivers, further undermining the treatment process.

Given the strong correlation between emotional responses to pain, and pain intensity and treatment prognosis, it is crucial that treatment of chronic pain goes beyond treating physical symptoms alone, and includes attention to patient responses to pain. Individuals suffering chronic pain need help understanding and managing the thoughts, emotions and behaviours associated with their pain, and support to cope more effectively with both the pain and the impacts it has on life more broadly. If pain is treated solely as a physical problem, aimed at removing or reducing pain, repeated failure to achieve this objective will reinforce anxiety and depression, and encourage hypervigilance to pain.

Patients can benefit from cognitive behaviour therapy, shifting the focus of treatment away from the pain towards the detrimental effects of pain. Often this treatment is organized as a programme of therapy and is delivered by a team of pain therapists, including anaesthetists, clinical psychologists and physiotherapists. Treatment therapies may include:

- Techniques such as meditation, distraction, and visualization, to enable the patient to regulate and/or alter their perception of pain
- Increasing general fitness and mobility, to reduce fatigue, and setting realistic personal goals, achievement of which can provide positive reinforcement and self-belief

Patients need to be supported to develop coping strategies to manage their pain while still maintaining physical activity, and social and work relationships and activities. This should include helping them to develop a sense of understanding of the problem and a degree of control – a sense of confidence that they can deal with pain. Advice and treatment should be delivered in a way that takes into account individual patient preferences, involves patients in decision making, and provides self-management strategies for coping with pain flare-ups and functional difficulties.

Studies of chronic pain patients show that pain-related acceptance and focus on functional adaptation and daily coping can reduce emotional distress and encourage higher physical functioning – more so than ongoing experimenting with new curative or palliative measures. The acceptance and commitment model encourages individuals to reduce futile attempts to avoid or

control pain and focus instead on living life to the fullest, participating in valued activities, and pursuing personally relevant goals.

Sources:

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