9 The Psychology of Pain

Chapter Summary

Pain is both a physical and a psychological experience and is often classified as acute or chronic. Acute pain is usually associated with recent ongoing tissue damage while chronic pain has persisted beyond the normal expected healing period (three to six months) or is otherwise persistent over time. Chronic pain can affect a variety of spheres of human functioning, including mood, relationships, productivity, and substance abuse.

Early theories of pain had a biophysical focus, whereas today pain is understood to be primarily a complex psychological experience. The gate control theory of pain describes the cortical mechanisms involved in the perception of pain and their physiological influence, while biopsychosocial formulations, consistent with the gate control theory, emphasize the role of social, cultural, psychological, and cognitive influences on pain and its communication. The neuromatrix model of pain explains the experience of phantom limb pain based on a central neural perception of the body as a unit.

Given the well-documented influence of psychological factors on pain, psychologists have been involved in research and clinical applications with pain patients. One of the most widely used psychometric tools, the McGill Pain Questionnaire (MPQ), has shown remarkable accuracy in correctly classifying people with a variety of pain syndromes.

Cognitive behavioural therapy (CBT) and related procedures are demonstrably effective in helping people cope with chronic pain. Research on the effectiveness of mindfulness-based interventions and of acceptance and commitment therapy has demonstrated that they also provide positive pain management outcomes, indicating a multidisciplinary approach is an effective solution for pain management.

Essay Topics

1. What are some of the primary differences between acute and chronic pain? (p. 189)

2. How do social and psychological variables influence the experience of pain? Explain using examples. (pp. 190–195)

3. What types of methods might be used in a typical cognitive behavioural therapy approach to treat chronic pain? (pp. 200–203)

4. How might psychologists become involved in chronic pain management? (pp. 196–197)

5. How does a therapy such as virtual reality work to manage acute pain episodes? (p. 204)

Weblinks

http://www.canadianpainsociety.ca/
The Canadian Pain Society is a chapter of the International Association for the Study of Pain. Their website provides links to articles, fact sheets, and the *Pain Research & Management* (PRM) journal.

http://www.chronicpaincanada.com
The website of the Chronic Pain Association of Canada offers a number of resources relevant to chronic pain and pain management.

http://www.backclinicsofcanada.ca
The Back Clinics of Canada website includes information on, among other things, spinal decompression, laser therapy, and personal success stories of back pain treatment.

https://www.youtube.com/watch?v=v6yLIqdLvNk
In this video from the Canadian Institute for the Relief of Pain and Disability (CIRPD), Dr Kenneth Craig outlines the use of cognitive behavioural therapy (CBT) for treating chronic pain.

http://www.vrpain.com/
This site provides a description of the development and use of virtual reality for pain management.

Glossary

Biopsychosocial models of pain These models tend to be consistent with the gate control theory of pain. While they recognize the importance of biological/physiological factors (e.g., tissue damage) in the pain experience, they also stress and describe the role of psychological and social (cultural) influences on pain.

Gate control theory Theory that conceptualizes pain as a complex psychological phenomenon and postulates that there is a theoretical "gating" mechanism in the dorsal horn of the spinal cord that either blocks potentially painful ascending signals or allows them to continue travelling to the brain. Signals travelling via small nerve fibres tend to open the "gate" whereas signals of large-diameter fibres tend to close the "gate." The "gate" can also be opened and closed through descending messages from the brain. This theory provides an explanation for the important role of social and psychological factors in the pain experience.

Neuromatrix model Model complementary to the gate control theory of pain positing that the multidimensional pain experience is associated with a whole body "neurosignature" or pattern of nerve impulses generated by a widely distributed neural network in the brain (the body–self neuromatrix).

Nociception The activation of specialized nerve fibres (nociceptors) that respond to stimulation that has the potential to be perceived as painful.

Pain According to the International Association for the Study of Pain (IASP), an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.

Specificity theory View based on the idea that there is a one-on-one correspondence between amount of pain experienced and amount of tissue damage. Greater the tissue damage, the greater the pain.