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Psychosocial Interventions for Pain Management

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Abstract

Chronic pain has been identified as the most common somatic complaint that prompts individuals to seek medical assistance. Although the aetiology of pain is often organic, chronic pain can have a significant impact on the overall well-being of the individual. Multi-disciplinary approaches adopting a bio-psychosocial perspective offer a more comprehensive treatment to minimalist ones relying solely on pharmacological treatments. The bio-psychosocial approach views pain as an illness rather than disease, thus recognizing the subjectivity nature of the pain experience. Apart from that, pain alleviation is often challenging and the importance of pain management is becoming increasingly important. This review is a brief exploration of psychological interventions for the management of chronic pain, with the aim of promoting positive behaviour change, increasing selfmanagement skills and pain-coping responses as well as improving the overall quality of life of the individual.

Keywords: Chronic pain; Opioids; Medical pharmacology; Cognitive behaviour therapy; Psychology

Psychosocial Interventions for the Treatment of Chronic Pain

Pain is an inevitable and universal human experience. The International Association for the Study of Pain defines pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage" [1]. Although pain is uncomfortable and exacerbates unpleasant physical sensations, it is of vital importance for the body. It signals that something is not working as it should within the human body. These sensations can be life-saving by prompting the person to take protective action to reduce the impact of any physical damage incurred [2].

Chronic pain affects between 12 to 25% of the adult population in the US and 19% of Europeans [3,4]. Despite its crucial role for survival, pain becomes problematic when it is enduring, persistent and dominating and when it impairs the quality of life of the sufferer. Living with pain on a day-to-day basis can be exhausting, especially when no pain relief is available [5]. Persistent pain can also be a source of challenge for health care professionals who are struggling to alleviate the pain of their clients and trying to improve their quality of life [6].

Pharmacological and physical interventions are the first line of treatment for managing pain. These include corrective surgery, over-the-counter or prescription drugs, local anaesthetics, physical therapy such as counter-irritation or acupuncture, transcutaneous electrical nerve stimulation (TENS) and massage therapy. Since symptoms of depression, mood disturbance, insomnia and anxiety often co-exist with chronic pain conditions; psychotropic drugs are popularly prescribed [7]. Opioids are very powerful in relieving pain. Doubtlessly, while medical interventions play a crucial role in alleviating pain, they have their limitations including unpleasant side effects, tolerance and physical dependence [8]. Apart from that, some chronic pain problems are difficult to diagnose and medicine may only provide temporary relief [9].

Despite advances in medical pharmacology, the treatment of unrelieved pain remains a challenge. Up to this day, cure for certain pain conditions such as fibromyalgia have not been identified [10]. Chronic pain management is also expensive, mostly due to the need for long-term treatment. The accepted gold standard treatment for the management of chronic pain in most health centres relies on a multi-disciplinary approach consisting of feedback from diverse health care professionals working closely with the patient to ensure a holistic treatment plan [11]. Psychological interventions incorporated alongside medical treatments play a crucial role in helping patients adjust to pain, adapt to new changing roles, cope with feelings of distress, sadness or depression and ensure adherence to medication. They are also effective in reducing fear and distress during painful medical procedures such as needle-related interventions, lumbar punctures and bone marrow aspirations [12,13].

The most commonly used psychological interventions include behavioural treatments and activation, cognitive therapies, cognitive behaviour therapy, hypnosis, biofeedback, relaxation and distraction [2,14]. Other approaches that are gaining increased popularity include Acceptance and Commitment Therapy, Emotional Freedom Techniques, Motivational Interviewing and Dialectical Behaviour Therapy [15-17].

Behavioural Approaches

Chronic pain patients sometimes engage in unhelpful behaviours to reduce unpleasant pain sensations. Behavioural interventions attempt to reward healthy behaviours and punish or ignore unhealthy ones. Trials using behavioural approaches have revealed encouraging findings. Positive reinforcement of healthy behaviours such as making an extra effort, increasing physical activity and withdrawal of attention by significant others was found to reduce pain intensity, symptoms of disability and sick leave behaviour [18,19]. Other behavioural approaches include relaxation exercises used to distract the mind from painful stimuli by allowing pain to drop in the background [20].

Motivational Interviewing

Motivational interviewing [21] is a client-centred approach that motivates individuals to engage in the necessary changes needed to reduce disability and sick role behaviours resulting from pain, thereby encouraging a restoration of health to the maximum of the clients' abilities. Results of studies involving MI interviewing techniques have revealed positive effects on pain reduction and disability and increased physical and psychological health [22,23].

Cognitive Behaviour Therapy

Cognitive behaviour therapy (CBT) is a well-established intervention that aims to psycho-educate patients about their condition and about factors that may aggravate pain as well as change maladaptive thoughts and behaviours. CBT also encourages the scheduling of pleasant events, cognitive reframing and problem solving. Individuals are helped to set realistic and achievable goals, thereby taking an active role in treatment. An understanding of unhealthy constructions of reality is another primary goal. This helps clients break free from emotional helplessness and imparts an increased sense of selfefficacy to take adaptive action [24]. CBT has revealed promising results for the management of chronic pain conditions and is considered to be the standard treatment of use with chronic pain patients [25,26]. For instance, a meta-analysis on psychological interventions for the management of chronic low back pain revealed moderate to large positive effects on reduced pain intensity and health-related quality of life when CBT was incorporated [27].

Mindfulness-Based Approaches

Acceptance and commitment therapy (ACT) is a mindfulnessbased approach. Acceptance does not mean giving up or being a passive victim of circumstances but adjusting and accommodating to pain, without struggling or resisting it, while taking up actions that foster overall improvement in quality of life. ACT uses mindfulness-based techniques that teach patients the necessary psychological skills needed to deal more effectively with painful thoughts and feelings, to develop a transcendent sense of self, and to live the here-and-now, without the need to resort to experiential avoidance [28]. One way of overcoming life challenges and living a meaningful life is by connecting with values [29]. Harris describes values as on-going actions and desires that drive a person's behaviour. Sometimes, pain becomes the main focus of attention for the chronic pain sufferer. Unsuccessful attempts to eliminate pain often results in a state of 'creative hopelessness' [30]. As a result, personal values, qualities and goals are often put on hold or forgotten altogether. ACT aims to promote valued actions by encouraging the person to accept both pleasant and unpleasant thoughts and sensations in a non-judgmental way, without attempting to modify them or act on them [31]. Cognitive defusion techniques and experiential acceptance (as opposed to avoidance) are incorporated to help the person develop effective coping patterns that bring them closer to their chosen values, thereby living a meaningful life [32].

Living a meaningful life despite pain is also in line with existential approaches. Frankl [33] holds that man's search for meaning is a natural, healthy and motivational driving force. He believes that individuals who have the ability to connect to something they truly value in life are better able to endure suffering and find a sense of purpose. Within the context of chronic pain, finding meaning in pain means making sense of pain and finding a reason to live rather than giving in to a meaningless existence.

A recent systematic review reveals that ACT is a good alternative to cognitive behaviour therapy for chronic pain, particularly for patients who are not responsive to the latter [17]. The effectiveness of ACT for pain management has been reported in diverse studies [17,34]. Kabat-Zinn's [35] mindfulness-based stress reduction (MBSR) program is a technique using body scan and sitting meditation as a way of getting out of the head and developing intimacy with one's body. MBSR has proved to be effective for diverse mental and physical disorders, including pain management [36].

Despite stemming from Buddhist practices, mindfulness is a health psychology technique [37]. While traditional and complementary therapies focus on alleviating bodily pain, health psychology adopts a holistic approach to health preservation. Since chronic pain involves the complex interaction between body and mind processes, incorporating mental and behavioural self-help techniques fosters an increased sense of empowerment and control [37].

Dialectic Behaviour Therapy (DBT)

Linehan's [38] Dialectic Behaviour Therapy incorporates mindfulness techniques aimed to help individuals develop a moment-to-moment sense of awareness and a balanced state of being. It has been successfully applied to treat diverse health conditions including depression and chronic pain [39]. Chronic pain sufferers are taught techniques that allow the safe regulation of emotions, whilst encouraging the wise mind to override the emotion mind. The emotion mind often induces feelings of self-pity, helplessness and negative thinking [40]. On the other hand, the wise mind encourages disengaging attention from emotional stimuli towards more productive practices, thereby encouraging positive coping skills. Some programs such as the Teach, Apply and Generalize (TAG) incorporate practices from diverse fields and are gaining increasing popularity for the management of chronic pain [16].

Conclusion

Apart from reducing pain and distress arising from painful medical procedures, psychological interventions can also instil a sense of control and empowerment in the individual, making the person an active participant in their own care. Furthermore, the use of timely psychological interventions for pain coping may reduce the development of further psychopathologies that may arise due to a chronic illness [41].

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