The Evolving Theory of Pain Management

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Chronic pain is an ever-increasing issue in the workplace, and the associated costs have been projected to eclipse the combined cost of coronary artery disease, cancer and AIDS. Across the spectrum of chronic pain, the vast majority of claims is related to soft-tissue injury, particularly back pain.

The first major advancement in the treatment of chronic pain occurred during the 19th century when narcotics (e.g., opium and morphine) were introduced as an effective, immediate intervention. However, until the middle of the 20th century, the primary theory of pain (known as the Specificity Theory of Pain) proposed that the intensity of pain is directly related to the amount of associated tissue injury. This perspective assumed that surgery or medication should eliminate the root cause or source of the pain.

For chronic pain, these interventions were quite ineffective. They placed patients at risk for unnecessary procedures and repeated failures only further demoralized the patient. More recently, this Specificity Theory of Pain has been discredited, and a large body of literature now shows a relationship between mood and the experience of pain. Moreover, phenomena such as the effectiveness of hypnosis as an anesthetic intervention and the experience of “phantom limb” pain further undermine the older theory.

Researchers thus set out to more fully understand pain as a complex and multi-dimensional problem, developing the Gate Theory of Pain. Simply put, this theory argues that there are multiple pathways in the human nervous system that control the experience of pain. For example, some nerve fibers that respond to very light stimulation can control the intensity of pain following an injury. This is why we might lightly rub an injured area to experience some relief. The Gate Theory shows that pain does not necessarily occur at the site of the injury. Rather, we experience pain in our nervous system—most notably in our brain.

The Gate Theory has spawned an increasingly multi-dimensional approach to pain management. Also referred to as the Biopsychosocial Model, it argues that the experience of pain is a function of physical, psychological and environmental factors operating in concert with each other. This implies a sharp contrast to previous models of pain treatment, which looked at pain management from a purely physical perspective. That is, medical treatments, when used as the sole intervention, address only the physical aspects of the pain experience.

We know that pain patients frequently experience psychological distress in response to their injury, which can severely impede their physical recovery and actually increase the subjective experience of pain. Thus, the most effective solutions are those that include both physical (e.g., drugs, physical therapy, surgical intervention) and psychosocial interventions (e.g., psychotherapy, relaxation training, support groups, education).

There is also a clear correlation between mood and the subjective experience of pain, and those pain management programs that take a holistic approach reap rewards of improved clinical outcomes and more timely return-to-work rates. Moreover, indirect methods of relaxation training and mood management are believed to have a direct effect on the neural pathways that control the experience of pain. With respect to mood management, there is considerable research to support a therapeutic intervention known as Cognitive Behavioral Therapy (CBT) as a method to assist pain patients to exert direct control over their experience of pain. CBT assists patients in modifying thoughts and beliefs that can either reduce or increase the intensity of pain.

Because of this theoretical shift in pain management, and the consequent complexity of pain management techniques, many consumers of pain management services (particularly employers) are puzzled as to exactly what they are purchasing. With this in mind, the value of expert disability care management cannot be understated. Sending a pain patient out into a complex world of many interventions without stable clinical oversight, can lead to further demoralization and protracted leaves of absence. Thus, many employers are purchasing both behavioral health care management services and medical management services for their injured employees. This approach works well with the Biopsychosocial Model and has the potential to control overall healthcare costs, enhance the well-being of employees and facilitate a timely return to work.