

Using Acceptance and Commitment Therapy to Treat Chronic Pain

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CHRONIC PAIN

Pain is a signal to the body that something is wrong. Chronic pain is pain which lasts more than three months. This type of pain is no longer considered a useful signal from the body to the brain because the body is asking for relief from a problem which cannot be resolved (Gauntlett-Gilbert et al., 2013).

Chronic pain suffering impacts an estimated 7% of Americans (Bailey et al., 2010). Researchers have documented many effects of chronic pain, including increased pain intensity, mood changes (depression), suffering, distress, negative thoughts and beliefs, social problems, anxiety, catastrophic thinking, increased medication and health care usage, and a reduction in physical activity (Gauntlett-Gilbert et al, 2013; McCracken & Vowles, 2014; Mo'tamedi et al., 2012).

PAIN STIMULUS AND PATHWAY

The term *nociception* describes the unconscious path of the stimulus signal through the CNS (including the spine) to the cerebral cortex. There can be errors in nociception (sometimes related to emotional or environmental factors), which can cause the cerebral cortex to perceive pain stimulus in error (Tul, 2009).

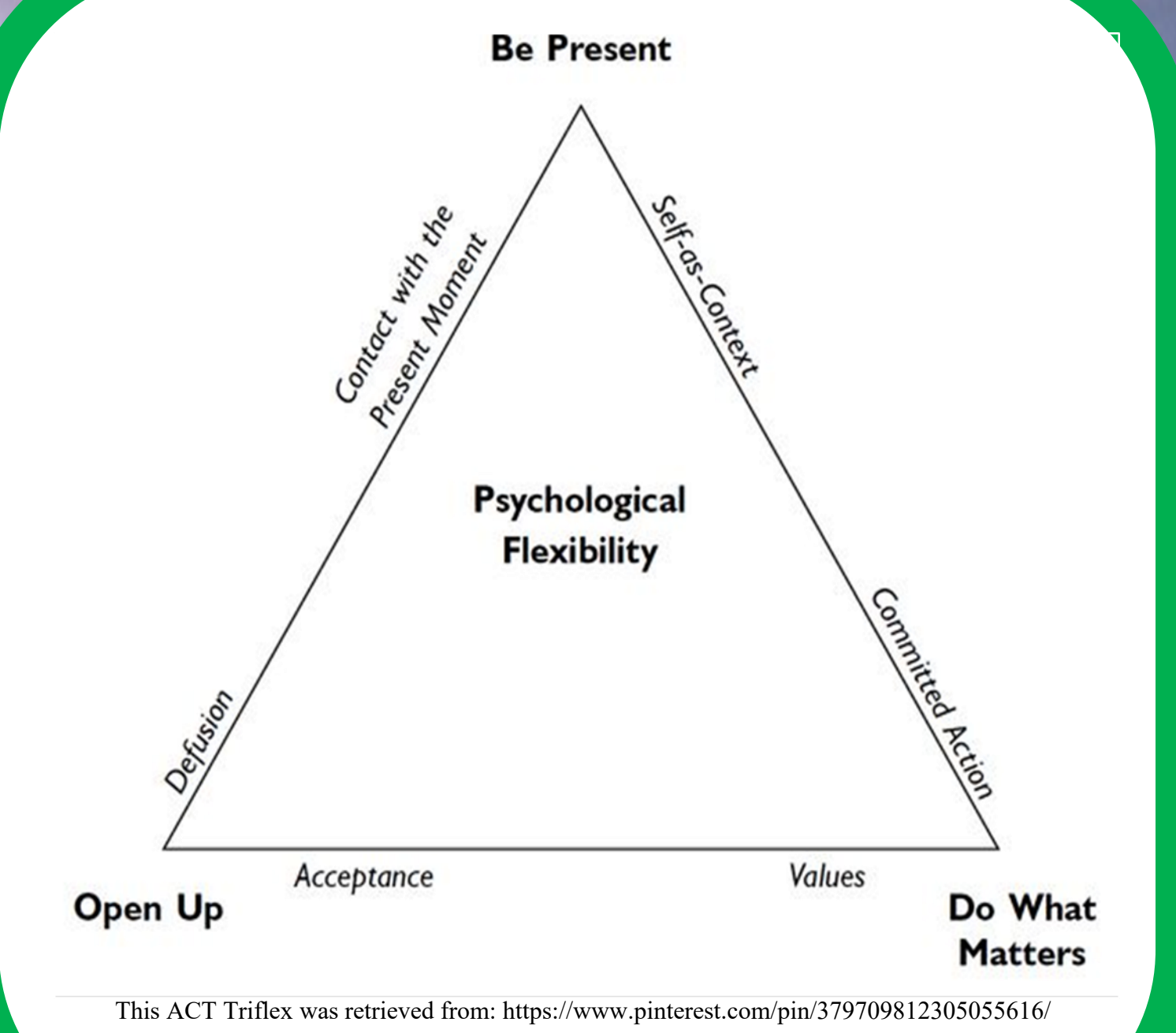
NOCICEPTIVE ERRORS

Pain, at initial onset, can often be traced to a physical cause. Sometimes the nociceptive (CNS stimulus and pathway) process can start to unravel, however, sending erroneous pain signals to the cerebral cortex. Since the nociceptive process can be affected by environmental and psychological factors (in addition to chemical, neurological and physical factors), the depressed, discouraged chronic pain client can experience exacerbated psychological and nociceptive errors leading to increased, long term pain without explanation (Tul, 2009; Vallath, 2010).

ACT therapists use cognitive defusion to provide a perspective of thought. A thought is not a plan written in stone, but objectively viewed as a thought which is coming up.

Ignoring or fighting the sensation (paradoxically) likely makes pain worse. Research indicates acceptance and action towards valued living improves outcomes.

The patient explores values, and actions they can take towards valued living, even while living in pain, rather than avoiding valued experiences because of pain.



Acceptance

Acceptance is the ability to become an objective observer of thoughts with the ability to accept, but not control, thoughts. Behaving and focusing on behavior towards valued living is the goal. Unhelpful thoughts (such as "it hurts too much to move today") are accepted and focus is returned to valued living (Foote, 2013; Hayes et al, 1999; Luoma et al., 2007).

Pain researchers quickly saw the potential of ACT as a treatment for chronic pain, since trying to make pain go away often makes the pain experience more powerful (McCracken & Vowles, 2014). Pain experience fits the paradox elucidated in ACT research: The harder an individual tries to ignore or change a thought, the more intense the thought becomes (Hayes et al., 1999). Accepting pain and acting towards valued living despite pain does not make pain go away, but reduces functional impact. This concept is the lynchpin of ACT treatment of chronic pain. Patients who accept their pain and still be committed to life goals can improve psychological and physical functioning.

Valued Living

In ACT, an assessment is usually done to determine what is important in a person's life. Therapy is then aimed toward behavior consistent with things which are valued in a person's life (Hayes et al, 1999). For example, a person might have chronic pain which keeps him in bed, but this individual might value his grandchildren enough to spend a few hours a day with them, which potentially improves his chronic pain outcomes.

Cross Sectional Studies, Common Measures in ACT Research
Cross-sectional studies sought to link specific ACT processes to the functioning of chronic pain clients. The cross-sectional studies used ACT process measures to compare responses to chronic pain functioning measures. The de Boer et al. (2014) study indicated that low levels of acceptance correlated with high levels of pain catastrophizing while high levels of mindfulness did not have much correlation with pain catastrophizing. So, acceptance seems to be a more affective process than mindfulness when treating chronic pain (de Boer et al., 2014). Therefore the research recommended the acceptance process of ACT as a specific treatment for people with chronic pain.
Cho et al. (2013) also explored how acceptance is related to experiences of pain and a person's level of acceptance. The researchers instructed study participants with chronic pain to keep a daily diary and to complete a Brief Pain Response Inventory (BPRI) modified for daily use. The BPRI is a 15 question survey which measures acceptance, among other measures of pain. Researchers discovered that acceptance produced decreased negative mood and lower intensity of pain, with greater amounts of positive thinking and activity on the same day acceptance was reported as high. Surprisingly, the increase in activity was sustained the day after high levels of acceptance were reported, even though the intensity of pain and negative mood returned. The researchers related acceptance to valued activity, thereby giving support to the assertion in current literature that acceptance and activity based on values are likely to reduce suffering for people living with chronic pain.

Esteve & Ramirez-Maestre (2013) studied 419 chronic pain clients to see how different psychological processes matched with chronic pain patients. The study utilized many measures of psychological attributes of chronic pain clients. In addition to the Acceptance and Action Questionnaire (AAQ), the Pain Catastrophizing Scale (PCS), and the Chronic Pain Acceptance Questionnaire (CPAQ), the study utilized the Anxiety Sensitivity Index (ASI), Pain Vigilance and Awareness Questionnaire (PVAQ), Pain Anxiety Symptoms Scale (PASS), Hospital Anxiety and Depression Scale, Impairment and Functioning Inventory, Pain Intensity Index, and the Bodily Pain Scale. In their final analysis, researchers concluded that experiential avoidance was highly correlated with fear pain avoidance. It is possible that chronic pain clients who can be guided to experience painful thoughts without catastrophe might willingly participate in activities which they had previously feared were too painful.
McCracken, Williams & Tang (2011) studied psychological flexibility and insomnia associated with chronic pain using the AAQ, CPAQ, MARS, Chronic Pain Values Inventory (CPVI), which measures action toward valued living for chronic pain clients, and the Sickness Impact Profile (SIP), which measures how a health issue affects functioning. Higher levels of psychological flexibility were correlated with lower levels of insomnia among chronic pain patients.
Different personality traits were studied in relation to chronic pain using the PCS, Bussness Cognition Questionnaire (BCQ) to measure acceptance, Multidimensional Pain Inventory (MPI-DLV) and the Millon Clinical Multiaxial Inventory (MCMI-3) (Poppe et al., 2011). This research with 100 chronic pain clients revealed that acceptance did not correlate with chronic pain clients' experience of the length, intensity, or disruptive nature of pain. Chronic pain clients who were likely to avoid and catastrophize were less likely to be receptive to the process of acceptance. People with schizoid, histrionic, avoidant, dependent, narcissistic, antisocial, compulsive or passive aggressive diagnosis may have catastrophizing issues to consider during their psychological treatment for chronic pain before acceptance is addressed. Therefore, research indicated that ACT therapists treating clients with personality disorders should consider treating catastrophic thoughts before working on acceptance (Poppe et al., 2011).

ACT Treatment Intervention Research Findings
In their study of Iranian women suffering chronic headaches, Mo'tamedi et al. (2012) utilized ACT group therapy conducted by a certified psychologist for 90 minutes once a week for eight weeks. The patients treated with ACT-consistent treatment found significant improvements in feelings of pain, the way pain affected their lives, levels of disability, and distress from pain when compared with a MTAU control group. The ACT treatment group members were much less likely to see themselves as severely disabled following ACT treatment intervention. Trompetter et al. (2015) utilized a 9-12 week internet self-help intervention which took about three (3) hours a week to complete. Counselors were available by e-mail for consultation, and clients reported to counselors weekly. The research used control groups including a wait list group and an expressive writing group. Trompetter et al. (2015) found that three months after treatment, the ACT group performed better than the expressive writing group: The ACT group had less interference from pain, fewer incidents of depression, reduced intensity of pain, and reduced pain catastrophizing. However, the wait list group also improved in the same areas as the ACT group. ACT was not seen as improving overall psychiatric health or engaged living compared with the control groups. Trompetter et al. (2015) indicated that the study started in the winter and ended in the summer, and weather might have affected the improvement seen in the ACT group and the expressive writing group.

Gauntlett-Gilbert et al. (2015) studied juveniles in the United Kingdom suffering chronic pain utilizing a three week, in-patient regime which included six hours a day of ACT-consistent psychological treatment, exercise, and managed activities. Similarly, McCracken and Jones (2012) studied elderly people with chronic pain, using a three to four week program in a specialty treatment setting which included six hours a day of ACT-consistent treatment, exercise, and managed activity. Both studies attempted study measures pre-treatment, on the last day of treatment, and three months later (Gauntlett-Gilbert et al. 2015; McCracken & Jones, 2012). The Gauntlett-Gilbert et al. (2015) study with juveniles concluded that intensity of pain was not reduced, but the study participants, who averaged 16 years of age, reported outcomes of improved social functioning, and improved performance of increasingly physical tasks. After ACT-consistent treatment, juveniles with chronic pain improved school attendance, and reduced utilization of health care facilities such as going to the doctor or hospital. The McCracken and Jones study (2012) with older adults concluded that ACT-consistent therapy led to improvement in level of depression as well as physical and psychosocial disability for individuals over age 60 in specialized treatment.

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