9-2011

The Application of Dialectical Behavior Therapy to Chronic Pain Management

Jacob S. Iwaszewski

LOMA LINDA UNIVERSITY
School of Science and Technology
in conjunction with the
Department of Psychology

The Application of Dialectical Behavior Therapy to Chronic Pain Management

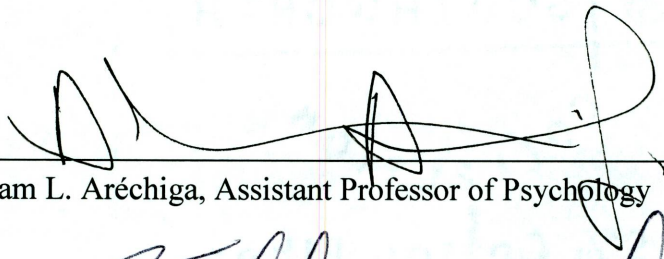
by

Jacob S. Iwaszewski, M.A., M.S.

Project submitted in partial satisfaction of
the requirements for the degree of
Doctor of Psychology

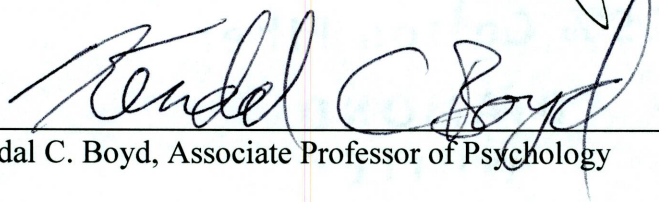
September 2011

Each person whose signature appears below certifies that this project in his/her opinion is adequate, in scope and quality, as a project for the degree Doctor of Psychology.



_____, Chairperson

Adam L. Aréchiga, Assistant Professor of Psychology



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Kendal C. Boyd, Associate Professor of Psychology

ACKNOWLEDGMENTS

I would like to thank my committee, Drs. Arechiga and Boyd, for their guidance and support throughout this rigorous process. I would like to recognize Dr. Davidian for his assistance in editing this document. Lastly, I would like to acknowledge Dr. Jenkins and Shari Lane for all that they do.

I want to express my love and appreciation to my family and my wife. Mary you are my best friend and soul mate; I am blessed. I would like to express my gratitude for all of the wonderful people and mentors with whom God has blessed me. This project is dedicated to my son, Jacob—I love you.

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ABSTRACT

The application of Dialectical Behavior Therapy to chronic pain management

by

Jacob S. Iwaszewski

Doctor of Psychology, Graduate Program in Psychology
Loma Linda University, September 2011
Dr. Adam Arechiga, Chairperson

Pain affects more than 50 million Americans annually, costs over 150 billion dollars each year in healthcare and legal expenses, and results in decreased work productivity and missed work days (Ballantyne, 2006; Boll, Raczynski, & Leviton, 2004; Thorn, 2004). It is estimated that chronic pain negatively impacts 15% to 33% of the US population (Bokarius et al., 2008). Third-wave acceptance-based therapies, such as Dialectical Behavior Therapy (DBT), have demonstrated significant improvements in mental health functioning for a variety of populations (Carmody & Baer, 2008; Cusens, Duggan, Thorne, & Burch, 2010). DBT, one of the primary treatment modalities for Borderline Personality Disorder, is now being utilized to treat mental health disorders including, more recently, the psychological component of chronic pain (Fruzzetti & Shenk, 2008; Linton, 2010). The purpose of this research is to discuss the application of DBT in the psychotherapy of individuals who present with the psychological sequelae of chronic pain. This study results in an innovative and comprehensive group therapy manual that integrates DBT skills in the treatment of chronic pain.

Chapter 1

Introduction

Pain affects more than 15% to 33% of the US population annually, negatively impacting the ability to live productive lives, decreased productivity, and increased healthcare costs (Bokarius et al., 2008; Boll, Raczynski, & Leviton, 2004; Thorn, 2004). There are several medical treatments available to treat chronic pain as well as non-invasive treatments such as psychotherapy (Fishman, Ballantyne, & Rathmell, 2010). Cognitive Behavior Therapy is evidence-based and has been applied to treat various disorders including the psychological component of chronic pain (Cusens, Duggan, Thorne, & Burch, 2010). Various medical institutions have used CBT to treat chronic pain such as the Veteran's Affairs Health Care System (Cusens, Duggan, Thorne, & Burch, 2010; Smith et al., 2008; Thorne, 2004). According to Smith et al. (2008) CBT places an emphasis on changing irrational cognitions, which impact emotions and subsequent behavior, to logical and rational thoughts. CBT's approach to pain management includes encouraging individuals to judge which thoughts are rational or irrational, and to change these thoughts to logical ones. CBT's framework and interventions regarding judging thoughts as irrational can be invalidating for people's life experiences (Linehan, 1993; Linton, 2010).

Recent research has demonstrated that open acceptance of the experience of chronic pain in a nonjudgmental manner leads to decreased physical and psychological distress. Acceptance of pain engenders emotion regulation, effective coping strategies, and stress reduction (Linton, 2010; Smith, et al. 2008). Similarly, McCraken, Vowles,

and Eccleston (2004) posit acceptance of chronic pain results in decreased subjective experience of pain, reduced psychological distress and an increase in physical activity. Of particular note, acceptance reduces chronic pain in that one actively observes inner-experiences without reacting to them, without judgment or intentionally attempting to change one's thoughts about the immediate experience of chronic pain (McCraken & Thompson, 2009). Acceptance-based, 'Third Wave' empirically-validated treatments such as DBT encourage individuals to release the inner psychological toiling with chronic pain to create a fruitful life congruent with their values (Cusens et al. 2010; Linton, 2010). According to Marsha Linehan, "DBT was designed for adaptation," (personal communication, March 28, 2011). The aforementioned statement affirms the current move to adapt the evidenced-based skills of DBT to treat various psychological disorders including chronic pain (Linton, 2010).

Chapter 2

Literature Review

Global Impact of Pain

Pain affects more than 50 million Americans annually, costs over 150 billion dollars each year in healthcare and legal costs, decreased work productivity, and missed work days (Boll, Raczynski, & Leviton, 2004; Thorn, 2004). It is estimated that chronic pain negatively impacts 15% to 33% of the US population (Bokarius et al., 2008). Every individual will experience pain at some period whether acute or chronic. Twenty to 30% of people in the US suffer from a chronic pain condition (Boll, Raczynski, & Leviton, 2004; James, & Folen, 2005; Thorton, 2004). James and O'Donohue (2009) state that pain is responsible for two of every five visits to a primary care physician each year. In fact, one of the most common complaints reported to primary care physicians is pain.

Pain Defined

Pain is defined as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage." (James, & O'Donohue, 2009, p.183). Pain is primarily considered subjective and personal and, thus, is experienced by each person differently, making quantitative measurement a challenge (Fishman, Ballantyne, & Rathmell, 2010; James, & O'Donohue, 2009). According to Bokarius, et al. (2008), the experience of pain is based on an individual's perception of the sensation, which varies according to the following factors such as biology (e.g., anatomy, physiological state), psychology (psychological health and healthy coping), and

social factors (e.g., culture). Pain is considered by many to be a fifth vital sign, in addition to pulse, blood pressure, core temperature, and respiratory rate (Boll, Raczynski, & Leviton, 2004). Historically, when the etiology of pain could not be pinpointed, the term psychogenic was used. Psychogenic refers to the dichotomous viewpoint that was embraced by medical professionals. The etiology of pain was considered to be either psychological or biological, but not a combination of both. More recently, the dualistic viewpoint has since been replaced by a biopsychosocial approach, which will be discussed later in this paper.

Pain: Illness or Disease

Pain is conceptualized both as an objective and subjective experience (Boll, Raczynski, & Leviton, 2004). Pain is also an indicator of disease or injury (Haas, 2004). The term disease is used to describe an "objective biological event" in which there is a disruption in the body's physiology that has deleterious effects (Boll, Raczynski, & Leviton, 2004). On the other hand, the term illness describes the subjective experience of dealing with disease. In particular, this subjective process encompasses phenomenological, societal, and psychological processes, all of which are interconnected with disease and, for example, chronic pain. Of note, the biopsychosocial theory of pain embraces the illness/subjective perspective, which is a combination of biological, psychological, and social factors (Boll, Raczynski, & Leviton, 2004).

Types of Pain

Acute pain. Although the literature commonly references two different types of pain (i.e., acute and chronic), a third (i.e., widespread pain) will also be discussed. First, acute pain is triggered by pain receptors in response to damage or potential tissue damage (Boll, Raczynski, & Leviton, 2004; James, & O'Donohue, 2009; Thorn, 2004). The individual perceives this potential threat as noxious or painful. Acute pain is brief in duration and abates when damaged tissue heals. Acute pain is a common response to injury and usually lasts under six months. Acute pain may elicit emotional distress, although it is usually brief.

Chronic pain. On the other hand, chronic pain persists beyond six months. In fact, chronic pain may be longstanding and persist over the course of several years (Thorn, 2004). Chronic pain for some individuals may last a lifetime. This type of pain exceeds the "normal healing period one would expect for its protective biological function." (Boll, Raczynski, & Leviton, 2004, p. 362). Arthritis, joint and back injuries, fibromyalgia, lupus, and cancer can cause chronic pain (Boll, Raczynski, & Leviton, 2004; Gatchel, & Oordt, 2003). This type of pain may likely have a negative impact on an individual's Activities of Daily Living (ADLs). For instance, individuals may be unable to perform basic self-care tasks such as bathing, grooming, and cooking. Additionally, Independent Activities of Daily Living (IADLs) may also be hampered such that the individual may be unable to carrying out tasks including driving, shopping, managing medication, and handling finances. Most chronic pain conditions may likely be intractable to various types of medical interventions and treatment, thus rendering such

modalities ineffective. Noteworthy, chronic pain causes emotional distress which negatively impacts one's quality of life (Linton, 2010).

Widespread pain. Last, widespread pain is a relatively new category that is receiving more attention and research (James, & O'Donohue, 2009). Widespread pain is present in at least two "contralateral quadrants of the body and in the axial skeleton" (James, & O'Donohue, 2009, p. 183). This type of pain persists longer than two months and may also elicit emotional distress.

Pain Transmission

Neurons. According to Thorn (2004), a nociceptor is an afferent neuron (i.e., carry sensory information to the central nervous system) that specifically senses painful or noxious stimuli. These neurons are free nerve endings in the skin, muscles, and the internal organs of the body. Nociception is the neuronal process involving the stimulation of peripheral pain-carrying nerve fibers (i.e., C-fibers, A-delta fibers) and the transmission to the central nervous system (CNS) at which point the stimulus is then perceived as pain (Gatchel & Oordt, 2003; James, & Folen, 2005; Thorn, 2004). According to Victor and Richeimer (2003) there are different paths through which pain travels. A-beta nerve fibers are a fast path in which pressure and touch travel quickly. A-delta nerve fibers provide a slower path in which sharp, stabbing pain travel. The slowest of the paths are the C nerve fibers; they are the slowest path in which chronic pain such as aching and burning travel. Victor and Richeimer (2003) provide the following example to highlight the different paths through which pain travels, "Giving patients the example that one instinctively rubs a knee that has bumped into a sharp object because sensations

of touch or rubbing travel quickly and beat sharp pain, which travels more slowly, to the brain; thus the sensation of rubbing interferes with the sensation of sharp pain," (Victor & Richeimer, 2003, p. 648).

Stimulation to free nerve endings sends a message to the spinal cord by way of axons (Thorn, 2004). Axons carry messages via an electrochemical process in which neurotransmitters, or chemicals, are released. From the spinal cord, messages are then relayed to various areas of the brain such as the thalamus and limbic systems; these two areas play an important role in cognition and emotion. "We think of the final destination of pain signals is the somatosensory cortex of the brain, where neurons are arranged into multiple maps of the body surface, each responding to a different kind of stimulation to a different part of the body" (Thorn, 2004, p. 236). Moreover, Victor and Richeimer (2003) assert that the ascending track (i.e., spinal cord) which transmits pain to the brain has two paths, a fast and slow path. The fast path transmits stabbing or sharp pain to the cortex. The slow path transmits dull, aching, chronic pain to the limbic system which is the emotional center of the brain. This process underscores the key difference between pain and chronic pain and how the part of the brain that receives the information, in this case the limbic system, likely plays a role in the emotional suffering component of chronic pain (Victor & Richeimer, 2003). Pain that is transmitted through the limbic system or the emotional center of the brain has important implications relative to chronic pain, in that people with chronic pain suffer physical pain as well as emotional pain.

The spinal track also has a descending path which is known as the "brain-to-pain" route (Victor & Richeimer, 2003). The descending pathway is especially relevant to pain management. To elaborate, the brain uses the descending pathway to counteract

ascending pain messages; the brain sends messages down the spinal cord to shut the so-called gateway of pain that continually sends pain messages from the location of pain. Of note, pain management techniques such as biofeedback and relaxation training, which rely on self-regulatory techniques, are "descending track" modes of pain management (Victor & Richeimer, 2003).

Neuronal plasticity and pain conditions. Chronic pain has been recently shown to cause changes in a neuron's structure and function. This process is called neural plasticity. The changes that take place within the various neuronal structures during pain transmission, especially with respect to chronic pain, results in an increase in a neuron's sensitivity to minor pain indicators (Thorn, 2004). "Long-lasting alterations in neurons…include such structural changes as an increase in the number of pain receptors in the spinal cord following tissue damage and inflammation, and a reduction in brain inhibitory processes following nerve injury" (Thorn, 2004, p. 237). Allodynia is one such condition that results when there is an over stimulation in nerve fibers such that ordinary, painless stimuli are experienced as painful (Gunzburg, Szpalski, & Andersson, 2004; Thorn, 2004). For example, an individual may experience a benign touch of the hand as painful.

Hyperalgesia. Hyperalgesia is an excessive sensitivity to pain. Damage to tissue causes an inflammatory response in which various substances are released including substance P, bradykinin, and prostaglandins (Curatolo, Arendt-Nielsen, & Petersen-Felix, 2006). Primary afferent pain-carrying nerve fibers may change and become overly sensitized. Nociceptors that are usually dormant may become activated. "Peripheral sensitization results in an increased nociceptive input to the spinal cord" (Curatolo,

Arendt-Nielsen, & Petersen-Felix, 2006, p. 288). One study demonstrated that individuals with different types of chronic pain exhibited pain hypersensitivity when healthy tissue was stimulated. This finding has important implications for those who suffer from chronic pain. It is likely that those who have longstanding pain may in fact experience higher levels of pain, for example at the bump of the elbow, due to an abnormality in how pain is transmitted in their bodies (Curatolo, Arendt-Nielsen, & Petersen-Felix, 2006).

The Pain Cycle: Acute to Chronic

Gatchel developed a three-stage model which elucidates how an individual perceives pain and the associated impact on psychological and physiological states—also referred to as the biopsychosocial process of pain. This process sheds light on the progression of acute pain that eventually graduates to chronic pain (Boll, Raczynski, & Leviton, 2004). Stage 1 includes the individual's emotional reaction to pain. Psychological distress ensues and the person may experience worry, fear, and anxiety, all of which is a normal process. When this process exceeds four months, however, the pain results in a chronic condition—stage 2 of the model.

Stage 2 incorporates a diathesis-stress model which takes into account an individual's predisposition to psychopathology. That is to say, an individual's premorbid mental health functioning that becomes strained and exacerbated by the insidious effects of chronic pain. Psychological and behavioral problems may result including learned helplessness, depression, anxiety, anger, substance abuse, and social seclusion (Boll, Raczynski, & Leviton, 2004; Gatchel, & Oordt, 2003). The preceding stages culminate into Stage 3, which is the chronic stage of the model. In this final stage the individual's

life centers on the pain. The person may assume the role of a "sick" patient. Of note, this part of the model emphasizes how individuals' identities become enmeshed with the role of sick patient, in that it becomes part of their identities.

The sick role may also have value particularly relating to secondary gain. The individual may use the sick role as an excuse to avoid various types of responsibilities. This process may give rise to maladaptive behaviors that may have reinforcing qualities. It is important to note that the preceding stages are described as a collective mental deconditioning process. In particular, each stage gives rise to decreased levels of mental health and physical functioning. Within each stage there is an inherent "physical deconditioning syndrome", which gives rise to further physical deconditioning. This is a cyclical process. For example, an injury leads to muscle atrophy, impaired mobility, weakness, and lethargy. In turn, this begets depression and other psychosocial sequelae, causing an individual to be less likely to engage in physical rehabilitation.

Pain Theories

Biomedical reductionism. During the Renaissance there was a burgeoning of information in medicine within the areas of anatomy, physics, and physiology (Boll, Raczynski, & Leviton, 2004). These advancements led to biomedical reductionism. This perspective posited that the mind and body were unrelated, in that one's mental state did not affect her physical functioning or behavior. This perspective embodied dualism in which the mind and body were seen as separate entities, independent of one another. Rene Descartes was the first to solidify the dualistic perspective. In particular, Descartes posited that the mind or, as some have referred to it as the soul, was separate and unable

to affect the body or the "physical or somatic" processes of an individual. Of note, the zeitgeist during Descartes' time embodied the perspective of biomedical reductionism, which was embraced by physicians. Dualism flourished and informed the understanding and conceptualization of the etiological factors of disease. (Boll, Raczynski, & Leviton, 2004).

Descartes claimed that pain transmission resulted from a *straight through* channel in the sensory nervous system (Boll, Raczynski, & Leviton, 2004). He stated the process of pain involves particles that are sent from the site of injury, directly to the brain. For example, if one touches fire, particles are generated that travels up the arm, to the neck, and eventually the brain in which a defense mechanism is activated, that is, pain. Descartes conceptualization lacked empirical evidence and was purely deductive, although it spawned the study of pain for centuries (Boll, Raczynski, & Leviton, 2004)

In 1894 von Frey proposed the specificity theory of pain. This theory was more sophisticated than Descartes'. Sensory receptors transmitted specific sensations such as pain, warmth, and pressure (Boll, Raczynski, & Leviton, 2004). The receptors themselves contained various sites that enabled them to vary in sensitivity according to the level or type of stimulation. Further, an alternative pain model was proposed by Goldschneider, the pattern theory of pain. He asserted that pain transmission was due to coding of "nerve impulse patterns" by the central nervous system (Boll, Raczynski, & Leviton, 2004). Thus, the forgoing are mechanistic and dualistic theories of pain.

Gate control theory. Melzack's gate-control theory of pain was the first model to incorporate a biopsychosocial conceptualization of pain (Boll, Raczynski, & Leviton, 2004; Haas, 2004; Thorn, 2004). This theory accounts for the dynamic interaction of the

central nervous system as well as the psychosocial variables in pain perception. "The gate-control model describes the integration of peripheral stimuli with cortical variables, such as mood and anxiety, in the perception of pain…It [gate-control model] emphasizes the central nervous system mechanisms and provides a physiological basis for the role of psychological factors in chronic pain" (Haas, 2004, p. 236). Haas (2004) underscores three interrelated systems that are responsible for the transmission of pain, which include: sensory-discriminative, motivational-affective, and cognitive-evaluative. "All three systems are thought to contribute to the subjective experience of pain" (Haas, 2004, p. 236). Thorn (2004) states that this theory highlights the importance that psychological variables have on the perception of pain at the cortical level, and how individuals ultimately respond to painful stimuli both biologically and psychologically.

In recent years Melzack refined the gate control theory by introducing a neuromatrix. This matrix includes an updated conceptualization of neural networks such as the thalamus, limbic system, and cortex to explain the dynamic process of pain transmission (Boll, Raczynski, & Leviton, 2004; Thorn, 2004). Melzack also emphasized the interrelated role that psychological processing plays in the experience of pain. Although there is a genetic component that accounts for pain transmission, there are also psychological factors that can exacerbate or reduce this process all of which have important implications specific to chronic pain.

Biopsychosocial theory of pain. The biopsychosocial model is the interplay among biological, psychological, and sociocultural factors, which ultimately affect an individual's response to pain (Fishman, Ballantyne, & Rathmell, 2010). This model also takes into account the cognitive processes such as appraisal and perception of pain. The

significant role that cognitions, namely interpretation, have relative to pain perception is also examined in this approach.

Chronic pain can have harmful effects on an individual's biological state (Thorn, 2004). In particular, the research literature highlights the ill-effects of chronic stress that may result from chronic pain. Stress causes a variety of endocrine reactions which weakens the immune system. Lupus is an example of a disease linked with chronic pain that has damaging effects on one's physiology (Thorn, 2004). Social roles play an integral role in behavior and are impacted by pain. Social roles vary and include gender, family, societal, and occupational roles. Personality factors play a critical role in how individuals cope with pain. A predisposition toward negative affect impacts one's resilience in response to physical trauma. Thorn (2004) posits that personality traits such as neuroticism, negative affectivity, and emotional vulnerability likely have a strong influence on how individuals tend to experience pain.

The biopsychosocial theory of pain also includes three processes in the perception of pain (Haas, 2004). First, when noxious stimuli come into contact with any part of the body, the peripheral receptors generate nociception. Haas (2004) posits that this may or may not be interpreted as painful until "higher order" psychological processing ensues. This process includes perception and appraisal, all of which affect one's behavior. Perception takes place when the individual "interprets" the nociception as a certain type of pain such as burning, pins and needles, or aching. The next step involves appraisal which is when the individual attributes a certain meaning to the pain and makes a judgment (Haas, 2004). For instance, the person may choose to ignore the pain, carry on with her activities accordingly, or assume a victim of pain role.

Classically conditioned fear/avoidance and pain. This concept is based on operant conditioning in which a person's behavior and response is heightened by reinforcement. The conditioning sequence by which an individual learns or associates a specific behavior with pain is now discussed using "lifting" to illustrate this. Initially an individual does not experience any avoidance of lifting any object fearing that pain will ensue. Then the individual learns, during the conditioning phase, that pain progressively increases when an object is lifted, such that the individual now refrains from lifting due to the fear of increased pain. Once conditioning is achieved, the individual experiences fear and avoidance at the thought of lifting something to avoid pain (Fishman, Ballantyne, & Rathmell, 2010). This conditioning can be extinguished with the proper treatment from a cognitive and behavioral perspective.

Gender and Pain

Pain experience among females and males. According to epidemiological and clinical findings, women tend to experience a higher frequency of pain as compared to men (Fishman, Ballantyne, & Rathmell, 2010). In 1985 a national survey was conducted called the Nuprin Pain Report in which 1254 Americans were contacted via telephone in various parts of the United States. The people were asked about seven types of pain including: headache, backache, muscle pain joint pain, stomach pain, dental pain, and perimenstrual pain. The studied examined the relationship among life stressors and its impact on the experience of pain and how one's locus of control mediates this process. One of the key findings revealed that women reported more pain than males; the types of

pain include: headache, stomach pain, joint pain, and back pain (Fishman, Ballantyne, & Rathmell, 2010).

In a household Canadian survey, women experienced increased levels of temporary and persistent pain relative to men. A mail survey in Scotland of over 3600 adults revealed that women were more likely to experience chronic pain than men. In addition, women were found to suffer from specific pain conditions than men; some of these conditions include: fibromyalgia, migraine headache, temporomandibular disorder, and chronic widespread pain (Fishman, Ballantyne, & Rathmell, 2010). It is important to note that women are more likely than men to seek healthcare, and thus, make up a higher proportion of people in healthcare.

Additional studies were conducted to investigate how women and men compare regarding postoperative pain. Women reported experiencing severe pain following oral surgery in various studies. Studies also revealed that women experience greater levels of pain than men following orthopedic surgery, cardiothoracic surgery, and laparoscopic cholecystectomy. Women were also found to report more pain than men subsequent to receiving endoscopic colorectal cancer screening procedures (Fishman, Ballantyne, & Rathmell, 2010). Overall, clinical research findings revealed that women experience greater pain severity than men following surgery or other invasive procedures (Fishman, Ballantyne, & Rathmell, 2010).

Culture

Ethnic differences in pain. The term ethnicity is used to describe cultural factors such as language, religion, and other practices specific to a people. Race is used to

describe certain biological factors that make people unique relative to physical and genetic characteristic. Thus, both terms are combined and applied for the purpose of this discussion (Fishman, Ballantyne, & Rathmell, 2010). It is important to note that socioeconomic factors such as income and access to healthcare, contribute to increased pain due to poor health status—all of which leads to health disparities among racial/ethnic inequalities in pain (Fishman, Ballantyne, & Rathmell, 2010).

Studies revealed that the experience of clinical pain varies across respective cultures in the United States. To elucidate, it has been documented that African Americans experience greater pain severity as compared to non-Hispanic whites for the following pain conditions: cancer, arthritis, and back pain (Fishman, Ballantyne, & Rathmell, 2010). One study demonstrated that African American women experienced greater levels of widespread pain; on the other hand, Caucasian women endorsed more pain sensitivity and tenderness to palpation. African Americans exhibited higher levels of pain and deficient levels of adjustment to pain than non-Hispanic whites (Fishman, Ballantyne, & Rathmell, 2010).

Hispanics in the United States reported the highest level of pain relative to chronic pain patients. In another study, Hispanic employees were more inclined to report musculoskeletal pain than non-Hispanic whites. Hispanics were more likely to report unrelenting pain symptoms than non-Hispanic whites following an occupational injury (Fishman, Ballantyne, & Rathmell, 2010). Hispanic and African American individuals report more pain following oral surgery than non-Hispanic people. According to Fishman, Ballantyne, and Rathmell (2010), community-based research surveys revealed

that African American and Hispanic people experience a greater occurrence of more severe pain than non-Hispanic people.

Psychophysiology and Chronic Pain

Psychophysiology. Psychophysiology is the study of the interconnection among physiology, cognition, affective states, and behavior—the interdependence of the mind and body. In particular, psychophysiology provides a basis to understanding cognitive processes and pain, and the utility of psychological intervention (Fishman, Ballantyne, & Rathmell, 2010). People who experience chronic pain are impacted not only by the sensory component (i.e., noxious sensation) but by the affective component (i.e., negative emotions).

Affect is a critical component in the pain experience. Affect, or emotion, is described by Fishman, Ballantyne, and Rathmell (2010) as a being physiological in nature with an awareness that attributes either positive or negative qualities to the stimulus in the external or internal milieu. There are two aspects of emotions: Objective and Subjective. First, the objective component of emotion includes a physiological component that is medicated by the autonomic hormonal systems, respectively. Second, emotion is subjective such that it is a phenomena of conscious awareness of which perception is a critical component. Depending on the individual's perception of an event, the emotion has a specific valence. Valence refers to either the positive or negative quality or feeling given to the perception. Arousal is then the degree to which the perception intensifies the activity within the central and autonomic nervous systems (Fishman, Ballantyne, & Rathmell, 2010).

Emotions can negatively impact cardiovascular function, visceral motility, genitourinary function, and the immune system which makes them a critical component in health functioning, especially relating to pain management. In particular, negative emotions such as fear, anxiety, and panic can exacerbate various types of pain such as headache and fibromyalgia. Negative emotional arousal negatively affects musculoskeletal pain and pelvic pain (Fishman, Ballantyne, & Rathmell, 2010). It is important to note that emotions have adaptive and survival components. However, negative emotion, similar to chronic pain, that is longstanding, likely spawns physiological pathology and psychopathology.

The autonomic system (ANS) plays a critical role in the psychological experience of pain. The ANS "has three divisions: the sympathetic, the parasympathetic, and the enteric. Others subsume the enteric under the other two divisions. Broadly, the sympathetic nervous system makes possible the arousal needed for fight or flight reactions, while the parasympathetic system governs basal heart rate, metabolism, and respiration. The enteric nervous system innervates the viscera via a complex network of interconnected plexuses (Fishman, Ballantyne, & Rathmell, 2010, p. 377).

The physiological component of pain relative to the emotional experience takes place mechanistically (Fishman, Ballantyne, & Rathmell, 2010). First, the initial experience generates an experience similar to fear or hypervigilance. From a survival perspective, this process disrupts the individual and calls one's attention and behavioral pattern. Simultaneously, efferent messages from limbic structures enervate the ANS, which then changes bodily states (e.g., cardiac function, muscle tension, altered visceral

function, respiration rate, and trembling—all of which begets a subjective, negative experience).

Chronic pain is a type of stressor (Fishman, Ballantyne, & Rathmell, 2010). A stressor may be a physical or environmental event. There are three types of responses to stress, namely the alarm reaction, resistance, and exhaustion (i.e., when the stressor does not abate). Stressors compromise the homeostasis and internal milieu of the body. Homeostasis refers to the internal processes of the body (e.g., blood pressure, thermoregulation fluid levels) that are critical to survival. Allostasis, on the other hand, is a process that responds to changes in the internal milieu, and activates the necessary physiological "coping" mechanisms (Fishman, Ballantyne, & Rathmell, 2010). Allostasis is the stress responses that serves to protect the body and preserve homeostasis. Of note, continual allostasis may expend the body's resources quicker than they may be replenished—this is referred to as allostatic load.

Assessment of Pain

Self-report pain questionnaires. According to Ballantyne (2006) there is no objective measurement of pain because it is multifaceted and involves various components such as tissue damage, psychological and environmental factors. Self-report is the most effective measure of pain as pain cannot be seen, or touched. Pain is, therefore, defined by the patient who is influenced by various factors including gender, psychological factors, culture, secondary gain such as legal case that is pending, and drug-seeking behaviors (Ballantyne, 2006). Verbal numerical scales are the most common and easy to administer self-report measures. The patient picks a number

between 0 (i.e., no pain) to 10 (i.e., worst pain imaginable). Children as young as 5 whom have a conceptual understanding of numerical values may use this type of scale. The faces pain rating scale is utilized for children to describe their pain. There are six sketches of facial features with a numerical value including 0 (i.e., smiley face, indicating no pain) to 5 (i.e., a sad, teary face indicating worst pain imaginable).

Personality assessment. Assessment instruments that examine the whole person including personality factors are critical when assessing chronic pain (Ballantyne, 2006; Thorn, 2004). An individual's personality affects how he or she responds to pain and copes. The Minnesota Multiphasic Personality Inventory (MMPI-2) is utilized to assess psychological factors that are underlying factors in the pathogenesis of chronic pain. The MMPI-2 is 567 items and not specific to pain but has a hysteria scale that contains items reflecting specific somatic symptoms. Ballantyne (2006) states that the Mcgill Pain Questionnaire (MPQ) is the most frequently used multidimensional test, and is the most reliable. There are three dimensions of pain (i.e., sensory, affective, and evaluative) that further subdivided into 20 subclasses. Further, the West Haven-Yale Multi-dimensional Pain Inventory (WHYMPI) is another widely used comprehensive instrument that specifically measures pain. It contains 62 items that assess various psychosocial variables relating to the experience of chronic pain. It contains 3 sections which are divided into12 subscales and assesses, for example, an individual's pain severity, affective distress, coping style, and the individual's perception of how his or her partner interpersonal interactions when one is experiencing pain (Thorn, 2004). The Dysfunctional Attitude Scale (DAS) is a 100-item is based on Beck's cognitive theory of depression and is considered a useful adjunct measurement in assessing chronic pain specific to global

beliefs and attitudes (Thorn, 2004). Thorn (2004) recommends using the DAS-24 which is a short version of the DAS, has a 7-point response rating format, and may be useful as a pretreatment assessment measure when working within a cognitive framework examining core beliefs. Of particular note, Thorn (2004) states that the DAS-24's dependency scale is especially beneficial in elucidating an individual's chronic pain expressive behaviors, need to receive emotional support, and pain catastrophizing.

Cognitive appraisals and pain. The Pain Appraisal Inventory (PAI) assesses an individual's cognitive appraisal of pain (Thorn, 2004). This is a 16-item that is comprised of two factors. The first is the Threat/Loss scale which includes items such as, "I am concerned that the pain might become more than I can manage." The second factor is the Challenge scales which includes items such as, "I think the pain makes me a stronger person." Thorn (2004) stated that is it important to examine an individual's scores on the Threat/Loss scales as it is usually the case that individuals with chronic pain tend to score higher on the aforementioned scale. The Multidimensional Pain Readiness to Change Questionnaire (MPRCQ) examines an individual's willingness to utilize coping behaviors such as exercise, task persistence, relaxation, cognitive coping in managing one's pain. This questionnaire is based on the stages of change model (i.e., precontemplation, contemplation, action, and maintenance).

According to Thorn (2004) the two most widely used measures to assess one's attitudes or feelings about pain, and beliefs or acquired knowledge about pain are the Pain Beliefs and Perceptions Inventory (PBPI) and the Survey of Pain Attitudes-Revised (SOPA-R). Thorn (2004) recommends using these measures pre- and post-treatment. The PBPI is a 16-item that includes four factors including pain as mystery (e.g., "No one has

been able to tell me exactly why I am in pain"), self-blame (e.g., "If I am in pain, it is my own fault."), pain as constant (e.g., "I am continuously in pain") and pain as permanent (e.g., "My pain is here to stay"). The SOPA-R is a revised version of the 75-item SOPA. The SOPA-R underwent various revisions and is 35-items. The subscales include the following: solicitude—the belief of how family members should solicit helping behaviors when one is in pain (e.g., "My family needs to learn to take better care of me when I am in pain."); medication—one's belief about medication as a mode of treatment for pain (e.g., "Medicine is one of the best treatments for chronic pain"); disability—one's ability to function in pain (e.g., "My pain problem does not need to interfere with my activity level"); emotion—the relationship between pain and one's emotions (e.g., Depression increases the pain that I feel"); medical cure—one's belief that a medical cure is available for his or her pain (e.g., "I trust that doctors can cure my pain"); and harm—to reduce the damage the pain has caused, physical activity and exercise should be avoided (e.g., If I exercise, I could make my pain problem much worse).

Automatic thoughts. The Pain Catastrophizing Scale (PCS) is a 13-item scale and has received much attention relative to assessing the impact of catastrophizing and the experience of chronic pain (Thorn, 2004). There is a 5-point item response format, one construct with three subscales which include the following: magnification—overemphasizing the threat value of pain (e.g., "I wonder whether something serious may happen); rumination—excessive mental pondering over one's pain (e.g., "I can't seem to keep it out of my mind"); and helplessness—negative outlook relative to one's pain (e.g., "There's nothing I can do to feel better"). Additionally, The Inventory of Negative Thoughts in Response to Pain (INTRP) assesses one's negative thoughts concerning an

exacerbation in one's pain level as well as poor coping with pain. There are three subscales including negative sense of self (e.g., "I am worthless"), negative thoughts about interactions with others (e.g., "Other people do not believe I have pain), and self-blame concerning pain (e.g., "I must have done something to bring on this pain"). The Cognitive Coping Strategies Inventory Revised (CCSI-R) assesses cognitive coping strategies relating to acute pain and is also used for individuals with chronic pain (Thorn, 2004). Due to poor internal consistency, a factor analysis of items and the original 7 scales resulted in 3 factors which are distraction, coping self-statements/cognitive minimization of stimulus, and catastrophizing. Thorn (2004) states that his instrument in useful in assessing an individual's coping techniques particularly catastrophizing as well as distraction strategies.

Acceptance of pain. The Chronic Pain Acceptance Questionnaire (CPAQ) is primarily used for assessing acceptance of pain in pain populations (McCracken, Vowles, & Eccleston, 2004). There are 34 items and four factors including activity engagement (i.e., engaging in pleasurable activities irrespective of pain), pain willingness (realizing that avoidance and exerting control are ineffective in coping with pain), thought control (i.e., believing that one can control pain by changing one's thoughts), and chronicity (i.e., recognizing that pain will not change).

Multiple dimension instruments. The Brief Pain Questionnaire (BPQ) asks patients to evaluate their pain over the past 24 hours. Patients rate their pain choosing from 'worst', 'least', or 'average'. The level of pain is then identified relative to its location on a schematic body diagram. The Massachusetts General Hospital Pain Center

Pain Assessment Form (MGH) assesses pain intensity, location via a body diagram, quality of pain, therapies tried, and medications (Ballantyne, 2006).

Treatment Approaches of Chronic Pain

Multidisciplinary approach. According to Bokarius et al., (2008), multidisciplinary pain centers have a higher efficacy rate in the treatment of chronic pain as compared to centers that take a unimodal treatment approach. Individuals who engage in multidisciplinary treatment for chronic pain have better treatment outcomes relative to pain reduction, improved mental health, and improved sleeping. Individuals, in another study, were shown to have improved mood (e.g., decreased depression and anxiety), reduced opioid use, and increased involvement psychosocial activities (Bokarius et al., 2008). Additionally, multidisciplinary treatment for chronic pain was also successful in curtailing the amount of sick days that people took due to pain (Bokarius et al., 2008). In sum, Bokarius et al. (2008) state that based on their research findings multidisciplinary pain centers are effective and have been instrumental in the following outcomes regarding patient care: return to work twice as likely, 20% reduced cost of care, reduced medication use, decreased depression and anxiety, and increased involvement in daily psychosocial activities.

Bokarius et al. (2008) report that the multidisciplinary pain center provides the most comprehensive treatment for chronic pain. They entail a myriad of professionals (e.g., physicians, psychologists, nurses, physical therapists, counselors, social workers) who work collaboratively in the service of the patient's biopsychosocial recovery. For example, the Cleveland Clinic offers a multidisciplinary treatment program that treats the

whole patient and offers a plan of care that includes the following: behavior modification; psychotherapy (i.e., group, individual, family/couples, and sexual dysfunction counseling); psychophysiological and stress management; physical therapy; patient and family education; substance abuse and medication misuse; vocational rehabilitation counseling; medication management; occupational therapy (i.e., the goal is to assist patient in achieving independence with ADLs); work reconditioning; medication management; medical surgical consultations; anesthesia pain therapy (i.e., epidural injections/nerve blocks); psychological testing; case manager to follow patient to ensure services are provided in a timely manner and monitor patient's progress; and nutritional counseling. Of note, clinical research is also an integral component in multidisciplinary teams to inform treatment.

Pharmacological treatment of chronic pain. There are five classes of medications that are used to treat chronic pain (Bokarius et al., 2008). Opioids, nonsteroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, adjuvant analgesics, and medications for topical use. Bokarius et al. (2008) state that the adjuvant analgesics are a broad class of medications which include anticonvulsants, anxiolytics, antidepressants, antipsychotics, NMDA blockers, and cannabinoids. Of the aforementioned classes of medications, only two groups have been proven effective in treating chronic pain. The anticonvulsants is the class of medications that are most used which include the following medications: pregabalin (i.e., Lyrica), carbamazepine (i.e., Tegretol), and gabapentin (i.e., Neurontin). Duloxetine (i.e., Cymbalta) has been shown to be effective in treating chronic pain Bokarius et al. (2008). While the other classes of

medications have not been proven effective to treat chronic pain, they may be useful in treating comorbid psychiatric conditions.

Epidural injections. McLain, Kapural, and Mekhail (2005) state epidural steroid injection is a nonsurgical intervention to combat neuropathic pain and swelling. Epidurals were used as early at the 1920s to treat lower back, leg, and radicular pain. The epidurals are a combination of anesthetic agent (i.e., marcaine) and cortisone. Epidurals are intended to anesthetize the site and reduce inflammation (McLain, Kapural, & Mekhail, 2005). Price, Arden, Coglan, and Rogers (2005) state that epidurals/nerve blocks provide short-term, temporary relief of pain. In a cost and benefit analysis, Price et al. (2005) reported that epidurals yielded a low efficacy rate, and when coupled with insurance costs they do not prove to be a viable treatment modality for chronic pain. Ballatyne (2006) states that epidurals are indicated for acute pain but also provide relief for those who suffer from chronic pain, especially pain that is not widespread and below the mid-thoracic region.

Cognitive therapy for chronic pain. According to Thorn (2004) the stress-appraisal-coping model of pain includes the following: primary appraisals (i.e., a judgment is made as to whether a stressor is a potential threat, positive/negative, or benign); secondary appraisals (i.e., a belief about one's coping options and the efficacy of these options); and coping responses (i.e., the cognitive, emotional, and behavioral facets).

Core beliefs (also called schemas) are deeply held "world beliefs" about oneself and others that stem from early childhood. Some core beliefs include: "I am helpless, I am weak". Negative core beliefs are triggered by negative events. Core beliefs create a

cognitive vulnerability that gives rise to emotional disorders. (Thorn, 2004). It is important to note that individuals with dysfunctional core beliefs who also suffer from chronic pain are, therefore, more susceptible to dysfunction and disability resulting from their pain.

Primary appraisals from a transactional model of stress states that an event or stimuli is only considered stressful when it is judged as such. In particular, pain would be judged as stressful if the person judges it to exceed his or her ability to successfully manage and cope with it (Thorn, 2004). Thorn (2004) states there are three types of primary appraisals relative to the experience of pain. First, the Threat Appraisal and Pain is when an individual perceives pain as exceeding one's ability to cope; negative emotional states such as fear and anxiety ensue. Cognitively, the individual may ruminate and become fixated on the pain such that a more realistic appraisal of pain is distorted. Behaviorally the individual may engage in avoidance behaviors such as avoiding physical activity which leads to physical deconditioning and muscle atrophy of the injured area.

The Loss Appraisal and Pain is when the individual experiences a "loss" of pre-morbid level of functioning with respect to one's milieu. Individuals with chronic pain experience a loss of physical energy, which negatively affects their ability to be physically active. It also decreases their ability to work, affecting their income level, as well as their social lives, resulting in fewer interpersonal relationships—all of which cause a feeling of loss. Consequently, depression and hopelessness likely result; individuals will exhibit passivity in their lives, avoidance of physical activity, which negatively impact other areas of their lives. Last, the Challenge Appraisal is when individuals judge their pain as not surpassing their ability to successfully cope. That is,

people respond proactively to their pain, increase their physical activity such as attending physical therapy, and view their prognosis realistically. Unfortunately, Thorn (2004) states that few individuals use challenge appraisals in appraising their pain.

From a diathesis stress model perspective, Thorn (2004) asserts that certain temperamental factors such as tendency toward negative affectivity and emotional vulnerability make one more susceptible and less resilient to chronic pain and its psychological sequelae. An understanding of one's emotional resilience to chronic pain from a diathesis stress perspective is important for treatment recommendations and prognosis.

Secondary cognitive appraisals are beliefs as well as automatic thoughts concerning the expectation of pain. Beliefs are learned and deeply ingrained assumptions about the self, others, and the environment. Automatic Thoughts occur in response to an event or anticipated event at an unconscious level. They happen "reflexively" such that individuals may not be aware of the thoughts, and the thoughts may not be based on reality. Beliefs and automatic thoughts mutually impact one another and both affect one's ability to cope with pain (Thorn, 2004). In the context of chronic pain, beliefs that pertain to the cause, meaning, and ability to cope are intermediate beliefs; they also have a "should" or "ought" component to them. In response to their pain, individuals acquire various beliefs about their pain to make sense of it and how to manage it. For example, individuals formulate response to their pain such as, "I should not engage in physical activity so I will not further injure myself." They also develop beliefs about how much control they ought to have over their pain such as, "I ought to be able to control the pain." People's beliefs about their chronic pain impact their stress level, disability, and

willingness to engage in treatment. Further, catastrophizing in the context of chronic pain is defined as maladaptive and distorted thinking. Thorn (2004) states that people with chronic pain who catastrophize have a pessimistic and helpless disposition relative to coping with their pain. These individuals may also magnify their pain.

Locus of control and self-efficacy were developed from social learning theory. Locus of control is when one believes that outcomes in his or her life result from either internal efforts (i.e., hard work, perseverance) or external (i.e., luck, others' help beside oneself). Thorn (2004) reports that those with internal locus of control report lower levels of pain than those with external locus of control. In addition, internal locus of control accounts for individuals who attribute reduced pain and treatment success on one's efforts such as medication compliance, completing physical therapy, and adhering to treatment recommendations. Self-efficacy is the belief that one is able to perform a behavior, or perceives oneself as able (Thorn, 2004). For example, people with high self-efficacy believe that they can effectively manage their pain irrespective of whether or not they actually possess the requisite coping skills, and if they actually work.

CBT targets "disordered thinking" which is posited as the fundamental element inherent in various mental disorders such as depression and anxiety. Disordered thinking is defined as "an idiosyncratic but systematic bias in information processing, recall, and interpretation of events and experiences" (Thorn, 2004, p. 24). Thorn (2004) states that "chronic pain is often associated with particular information-processing styles and characteristic themes regarding interpretation of events and experiences…there is evidence that although many pain related thoughts and appraisals contain some truth, they are distorted to some extent, causing unnecessary suffering" (Thorn, 2004, p.25).

Because the brain is seen as the core source responsible for interpreting stimuli, along with associated thoughts and feelings, then an individual's thinking can cause excessive pain from a cognitive conceptualization.

The stress-appraisal-coping model of pain described the various ways in which a person's cognitive processing relative to his or her affects one's resilience, coping, treatment, and prognosis. Therefore, the treatment clinician must understand the individual's thoughts, appraisals, and beliefs regarding chronic pain. "The cognitive therapy technique used to help clients evaluate, challenge, and construct alternative thoughts and beliefs are called cognitive restructuring…to help clients reorganize their thoughts and beliefs; examine their validity; and construct…more realistic alternative cognitions" (Thorn, 2004, p.26). Psychoeducation, cognitive restructuring, evaluating and challenging intermediate and core beliefs about chronic pain, and various coping techniques such as expressive writing or journaling are applied as the CBT mode to treat chronic pain (Thorn, 2004).

CBT in the VA system. A myriad of studies have demonstrated CBT efficacy in treating chronic pain. At present, the DVAMC uses CBT to treat chronic pain in a group therapy format (Heapy, Stroud, Higgins, & Sellinger, 2006). In the CBT format, the emphasis is on changing distorted cognitions and ineffective coping behaviors that result in negative consequences for the individual such as increased pain intensity, affective distress, pain-related disability, and decreased productivity. Although CBT has been proven effective in treating chronic pain, there continues to be a high drop-out rate and non-adherence to treatment. This could result from several reasons namely patient's

believing that a medical treatment is the only treatment appropriate for a medical problem such as pain, readiness to change, and avoidance.

Biofeedback for chronic pain. Biofeedback is a mind-body modality in which individuals learn how to self-regulate and modify physiological (i.e., body functions such as heart rate, respiration, skin surface temperature) factors using specialized equipment (Frank, Khorshid, Kiffer, Moravec, & McKee, 2010). Biofeedback is used concurrently with relaxation training so that individuals are able to modify their physiology to the desire change (Victor & Richeimer, 2003). The term biofeedback was first used in 1969 to describe a novel process that took place in the 1940s in which individuals in a laboratory setting learned to modify their physiological functions such as heart rate, respiration, and blood flow—functions that were once thought of as being beyond one's control (McKee, 2008).

The process of biofeedback consists of providing feedback to individuals by way of biofeedback equipment; these instruments monitor one or more of an individual's physiological functions. These functions are then presented into auditory and visual signals, which are then immediately transmitted to individuals in non-invasive modes (e.g., a computer monitor) so that they are able to change their physiology in a positive path (McKee, 2008). Similar to looking into a mirror, biofeedback enables individuals with the opportunity to look at their behaviors and how it impacts their physiology so that they are able to change those behaviors to modify their physiology. The overarching goal of biofeedback is to help people reduce sympathetic response (e.g., increased heart rate and respiration). Biofeedback is considered training as opposed to a treatment, in that the patient is an active participant in her or his treatment. In particular, the patient is

encouraged to actively apply skills that are learned which is considered by many a process of training, not treatment; the emphasis in on educating an individual on to how identify physiological symptoms and its effects on thoughts, feelings and behaviors (Frank, et al., 2010).

Biofeedback is recognized by the National Institute of Complementary and Alternative Medicine as a mind-body medicine approach that is applied as a mode of Complementary and Alternative Medicine (CAM). CAM is defined as a, "diagnosis, treatment and/or prevention which complements mainstream medicine by contributing to a common whole, satisfying a demand not met by orthodoxy, or diversifying the conceptual frameworks of medicine" (Tan, Alvarez, & Jensen, 2006, p. 1420). CAM is comprised of nontraditional treatments applied in combination with Western medical practices, and it also encompasses alternative medical interventions that are used to replace traditional Western medicine treatment (Tan, Alvarez, & Jensen, 2006). According to Frank et al. (2003), in 2007 Americans spent $34 billion on CAM treatments. In fact, in the United States 38% of adults and 12% of children are using CAM treatments (Frank et al., 2010). According to Tan, Alvarez, and Jensen (2006), back, neck, and joint pain are some of the most common ailments for which people most commonly seek CAM treatments. Of note, Biofeedback is increasingly gaining acceptance in the US as Americans continually seek complementary and alternative treatments (Frank et al., 2010).

Pre-treatment. According to Victor and Richeimer (2003), before individuals begin biofeedback, they must first learn relaxation techniques, namely diaphragmatic breathing. This form of breathing is the foundation of relaxation skills, is easy to learn,

and is proven to result in immediate results (Victor & Richeimer, 2003). Prospective candidates for biofeedback are also instructed to practice these relaxation techniques at home for 20 minutes two to three times a day. Individuals are taught that among all of the autonomic nervous system functions, breathing is one function over which they are able to effect conscious change. Through deep, diaphragmatic breathing one is able to elicit change over other functions that are mediated by the autonomic nervous system, thus producing a widespread change (Victor & Richeimer, 2003). In particular, diaphragmatic breathing causes increased oxygenation to the blood supply and reduced muscle tension. Other relaxation techniques that are applied in conjunction with biofeedback are progressive muscle relaxation (i.e., patients go through a series of focusing on specific muscles group through which they tense muscles and slowly release the tension), mental imagery (i.e., a relaxing, soothing, image is selected to help release and move one's focus away from the sensation of pain), and self-hypnosis (i.e., diaphragmatic breathing combined with mental imagery), (Victor & Richeimer, 2003).

Modes of biofeedback. There are four types of biofeedback that are used to treatment individuals with chronic pain which include electromyograph (EMG) training, thermograph (temperature) training, galvanic skin response (GSR) or also known as skin conductance level (SCL) training, and electroencephalography (EEG), (Frank, et al., 2010; Victor & Richeimer, 2003). According to Frank et al. (2010) surface electromyography (sEMG) is the most frequent physiological variable observed using biofeedback. sEMG is used to treat a variety of disorders such as chronic pain, tension headaches, spasmodic torticollis, and temporomandibular joint dysfunction. In EMG training the goal is to monitor skeletal muscle tension which is part of the voluntary

nervous system (Victor & Richeimer, 2003). For example, the trapezius, masseter, and frontalis muscles are monitored with EMG because they are most susceptible to stress and subsequently tense-up; they can also be isolated for measurement. In this mode two electrodes (i.e., sensors) are placed over the area of skin/muscle that is being monitored with a third sensor over a bone to serve as an electrical reference point (Victor & Richeimer, 2003).

The second mode of biofeedback is thermograph monitoring. Peripheral temperature is monitored by way of heat sensitive monitors that measure variations in temperature that arise in the, for example, hands or feet. The objective of this mode is to increase skin temperature to reverse peripheral vasoconstriction that results from stress, all of which is regulated by the autonomic nervous system (Victor & Richeimer, 2003). The last mode, GSR, is applied in unison with EMG and temperature training to reduce hyperactivity in the autonomic nervous system. In this mode, the electrical potential of the skin with respect to the changes in the salt and water levels are monitored (Victor & Richeimer, 2003). The fourth mode of biofeedback is EEG, which is also known as neurofeedback and is used to treat attention deficit hyperactive disorder (ADHD) and epilepsy.

Spirituality. Spirituality is a fascinating realm to explore relative to healing and coping with illness, especially its treatment implications to pain. "A review of more than 1,000 articles in primary care physician journal articles revealed only 11 studies (1.1%) that examined religious considerations" (Block et al., 2003, p.180). These findings underscore an absence in the integration of spirituality in Western Medicine. Block et al. (2003) state that spirituality has been linked to superior recovery outcomes, for example

with back surgery recovery, as compared to individuals who were not spiritually inclined. Additionally, Block et al. (2003) state that having a belief in a higher power may be instrumental in effective coping and enhanced recovery from surgery. Prayer and meditation may be instrumental to enhanced mental health and assuage the experience of chronic pain.

Mindfulness-based stress reduction. Mindfulness-Based Stress Reduction (MBSR) by Jon Kabat-Zinn is a mind-body intervention that has been adapted from Buddhist practices in which mindfulness practices are the primary method applied to various disorders such as illness, stress, and pain (Smith et al., 2008). According to Smith et al. (2008) MBSR is evidenced-based and has demonstrated specific reductions in stress, depression, fatigue, pain, and binge eating. This intervention utilizes meditation, body scans, hatha yoga, and group dialogue to facilitate mindfulness, which is the overarching goal of this treatment (Carmody & Baer, 2008). Participants usually attend 8 to 10 weekly sessions in which they are taught and practice the aforementioned techniques to facilitate mindfulness (Cusens, 2010).

Dialectical Behavior Therapy

Dialectical Behavior Therapy (DBT) is part of the Third Wave or Third Generation behavior therapies. The first generation is Behavior Therapy and the second generation is Cognitive Behavior Therapy (CBT). DBT is derived from Cognitive Behavior Therapy (CBT), both of which are evidence-based treatments. It is important to note that evidence-based practice (EBP) is the chosen and widely accepted method of delivering clinical care to various populations within the last ten years (Barlow, 2008).

Health care policy makers, government, and professional/academic organizations have, therefore, come to a consensus that the delivery of any health care service, including mental health, should be based on scientific research (Barlow, 2008). Marsha Linehan, Ph.D. is the founder of DBT, an empirically supported therapeutic intervention for Borderline Personality Disorder (Linehan, 1993).

Individuals who suffer from BPD experience emotional, behavioral, cognitive, and interpersonal dysregulation which negatively affects their lives; these people are reactive, labile, irritable, and impulsive (Linehan, 1993). The individual with BPD will act-out behaviorally and engage in self-damaging, impulsive behaviors; these behaviors are known as parasuicidal behaviors in which one intentionally engages in self-injurious behaviors that are not necessarily meant to end one's life but to allay emotional distress; however, parasuicidal behaviors may end one's life in extreme cases of bodily harm (Linehan, 1993).

Since its inception, DBT has gained popularity as an empirically supported psychological intervention for BPD. In fact, "DBT is one of the few psychosocial interventions for BPD that has controlled, empirical data supporting its actual effectiveness" (Linehan, 1993, p. 22; McMain, Korman, & Dimeff, 2001). DBT is an evidence-based treatment that has not only been shown over the years to effectively treat BPD, but DBT interventions have also been modified to specifically treat emotion dysregulation and other difficult-to-treat disorders (Gratz, 2007; Lynch & Cheavens, 2008). Because of the success DBT has demonstrated with difficult-to-treat individuals, it is now used to treat various Axis I disorders in county mental health facilities, such as group homes and foster care programs. In fact, the DBT model has been implemented in

the treatment of child and adolescent clients who demonstrated behavioral disorders associated with PTSD, Depression, Reactive Attachment Disorders, and other disorders related to emotional dysregulation. Similarly, Waltz (2003) states that DBT is used in the treatment of abusive behavior such as partner abuse. DBT has grown as an empirically supported modality that is effective in treating challenging populations and is now being used to treatment other populations in addition to individuals with BPD. Fruzzetti and Shenk (2008) have applied DBT interventions with families and couples to bolster interpersonal relatedness and communication through the use of validation and emotion regulation, two components that are linked to the development of BPD. More recently, DBT skills have been used as a combination therapy to treat chronic pain (Linton, 2010).

Dialectical behavior therapy principles. The term dialectical, as used by Linehan, embodies three characteristics: the principles of interrelatedness and wholeness, polarity, and continuous change (i.e. thesis, antithesis, and synthesis) (Linehan, 1993). The crux of the principle of interrelatedness is a holistic conceptualization of the client in the context of psychotherapy. The whole is greater than the sum of its parts, yet without each integral element, the whole is not significant. Likewise, each respective element holds no significance without being whole: all parts are interrelated. In other words, a client does not exist in a psychosocial vacuum. The therapist, therefore, must examine and take into account all interrelated integral aspects of the client's life and milieu (i.e. family, job, friends, socio-economic status, spirituality, cultural issues, etc.) to devise an effective treatment plan.

The principle of polarity states that within every system there is opposition. Linehan (1993) uses the example of truth as paradoxical to underscore how within every

truth there is contradiction; therefore, there is thesis and antithesis; there is function within a client's dysfunction. For example, the client who engages in aggressive and verbally abusive verbal dialogue (dysfunctional) to get her needs met (functional) in an emotionally, chaotic abusive household, is managing as best as she can given those are the only coping/survival skills that she has to utilize.

Linehan (1993) presents the following analogy of a teeter-totter to underscore dialectics as it applies to mental health therapy, "Therapy is the process of going up and down, each of us sliding back and forth on the teeter-totter, trying to balance it so that we can get to the middle together and climb up to a higher level…the ends of the teeter-totter represent the opposites ("thesis" and "antithesis"); moving to the middle and up to the next level of the teeter-totter represents the integration or "synthesis" of these opposites, which immediately dissolves into opposites once again" (Linehan, 1993, p. 30). In dialectical terms, clients desire change, but are often fearful; change is exciting, yet daunting. The middle ground is the interplay of both opposites (change and acceptance), while the integration of these opposites forms synthesis. To further elucidate dialectics, Linehan states, "The primary therapy dialectic is that of change in the context of acceptance of reality as it is" (Linehan, 1993, p. 201). Dialectic, in the context of therapy, is when individuals desire change, but are often fearful; change is hopeful, yet daunting. Therefore, the process of change and validation/acceptance creates a dialectic.

Mindfulness. Mindfulness in DBT focuses on teaching a client to become aware of his or her environment without judgment and to remain in the present (Linehan, 1993). Mindfulness is being in-the-present-moment. It is also the ability to be conscious of one's thoughts, feelings, physiology, and behaviors without judgment or criticizing oneself for

that experience (McKay,Wood, & Brantley, 2007). Mindfulness is the experience of the present by way of turning one's attention to the current situation. Mindfulness is strongly influenced by eastern spiritual practices (e.g. Zen practices) and, thus, a client is able to achieve awareness through psychological and behavioral meditation skills (Linehan, 1993).

What skills. What skills are used to practice mindfulness (Linehan, 1993). Briefly stated, these skills consists of the following: observe—paying attention to experiences at the sensation level (i.e. hearing, tasting, smelling, etc.); describe—describing a situation without judging or interpreting it: being literal; and participate—immersing oneself into the moment without separation (Linehan, 1993). Judgment is described by Linehan (1993) as assigning a value and labeling something as either "good" or "bad." McKay,Wood, and Brantley (2007) state that judgments are responsible for triggering emotions, exacerbating suffering, and preventing an individual from being present in-the-moment.

Applying judgment in the context of chronic pain, people may be quick to judge themselves and their pain. For example, "If only I didn't injure myself—I am so stupid;" or "My pain is terrible and destroying my life." On the contrary, pain isn't good or bad, it is just pain—a complicated, multi-faceted psychobiological consequence of tissue damage. Further, judgment coupled with assigning language (i.e., provocative terms) makes the experience of pain something that it is not. Judging and using terms to describe the experience of pain as being "terrible," causes the experience of pain to be a frightening, dreadful occurrence.

How skills. How skills reflect the way one mindfully focuses and becomes aware of a situation. To elaborate, it is the absence of judgment or labeling situations as good or bad; being fully mindful in the moment (e.g., studying and not thinking about how one is going to perform on a final three weeks away); and being effective in the moment (Linehan, 1993). That is, skillfully doing what is most effective in the current situation to accomplish one's goal such as hiring a tutor to do well in a course as opposed to spending time wishing things were different.

Emotion mind. Emotion mind is the individual's emotions assuming control over one's thinking and behavior in everyday situations (Linehan, 1993). Certain physiological and psychological states can predispose someone to emotion mind such as when one is hungry, lonely, tired, and in chronic pain. Of note, chronic pain exacerbates emotion mind. Cognitions are also "hot" while in emotion mind. A hot cognition or hot thought is one that is emotionally charged and strongly linked to a primary emotion such as anger or fear. People may experience some relief and benefit when in emotion mind (McKay,Wood, & Brantley, 2007). For instance, someone may feel better momentarily when driven by emotion mind such as verbally abusing another; however, the long-term effects of acting out behaviorally when in emotional mind are deleterious and may, for example, destroy interpersonal relationships.

Reasonable mind. Reasonable mind, which is the person's ability to think critically relative to everyday situations such as when applying problem solving skills. Reasonable mind is the logical and rational part of one's mind—it is often referred to as the counterpart of emotion mind (McKay,Wood, & Brantley, 2007). It is that part of the mind that is analytical, takes into account the various aspects of a situation, engages in a

cost-benefit analysis and is responsible for decision making. For example, one who suffers from chronic pain is in reasonable mind when dealing with the pain by taking medication and releasing that chronic pain waxes and wanes.

Wise mind. Wise mind is the synthesis or fusion of both reasonable mind and emotion mind (Linehan, 1993). Wise mind is also described as a gut feeling or intuition about a situation in which one knows and feels that his or her response is appropriate and reasonable (Linehan, 1993). Wise Mind is doing what is most effective in the moment. It is often referred to as intuition (McKay,Wood, & Brantley, 2007). For example, a chronic pain patient is in wise mind when he or she attends physical therapy and adheres to a medication regimen. To achieve wise mind, the following DBT psychological and meditation skills are applied.

Emotion regulation. Emotion regulation, an integral part of DBT, enables clients to learn alternative ways to regulate their negative emotions without having to engage in self-destructive behaviors to attenuate emotional distress (Linehan, 1993). Emotion regulation is learning how to identify emotional triggers and how to handle them to avoid emotion dysregulation. According to Linehan (1993), there are three goals of emotion regulation: understanding emotional experiences, decreasing emotional intensity, and decreasing emotional sensitivity—these incorporate the core mindfulness practices. To elaborate, understanding emotional practices entails identifying and labeling emotions. Next, is the process of becoming mindful of the emotion to decrease the emotional intensity that one may experience. Last, the process of decreasing emotional sensitivity takes place when an individual is able to decrease his or her sensitivity and vulnerability to emotion mind (Linehan, 1993).

Emotion regulation is best described as, "You can't control what you feel but you can control how you react to those feelings" (McKay, Wood, and Brantley, 2007, p. 123). Emotion regulation teaches the client healthy and effective methods of problem solving and coping with difficult and painful emotions. Consequently, in an attempt to reduce intense feelings, individuals engage in risky and self-destructive behaviors such as self-medication (i.e. abusing alcohol and illicit substances) and parasuicidal behaviors (i.e. cutting oneself or other acts of self-mutilation).

Emotional dysregulation. Emotion dysregulation is an inability to control one's emotions (Mckay, Wood, & Brantley, 2007). Individuals who are emotionally dysregulated tend to be intense and labile. In the context of chronic pain, emotion mind is when someone is in so much pain that his or her thoughts and behaviors controlled by the emotion (e.g., fear, sadness, anger, annoyed anxious, scared). While in pain, someone is likely driven by the emotion of fear and/or anger. Pain exacerbates emotion mind. People may benefit in the short-term from emotion mind (e.g., emotionally abusing others to vent one's frustrations), but the long-term effects are negative (e.g., destroy interpersonal relationships).

When a person experiences an emotion, it is accompanied by an associated behavior or action. For example, when a person experiences the emotion of fear, the subsequent action may be avoidance; as this cycle continues, the initial emotion is actually strengthened. To counter this cycle, opposite action alters the behavioral response that is contrary to the emotion's action. In the scenario of person who is afraid to encounter his ex-girlfriend at work and calls in sick in an attempt to avoid her, would thus be instructed to pursue the opposite action by doing all that he can to run into her at

work. The client's opposite action changes the client's behavioral expressive component of the emotion, and therefore reduces the client's sensitivity to the emotion (Linehan, 1993).

Linton (2010) asserts that opposite action is a type of exposure technique which is essential to providing positive reinforcement to individuals, for example, with chronic pain. Individuals may avoid certain types of physical activity for several months fearing increased physical pain. Opposite action provides the opportunity to create novel, positive experiences that provide evidence to support that certain types of physical activity, for example, do not have to be avoided.

Distress tolerance. Distress tolerance is a way of dealing with emotionally difficult life situations in a healthy manner (Linehan, 1993). By applying distress tolerance, individuals are able to tolerate and accept circumstances with less emotion pain, and avoid the change of resorting to dysfunctional behaviors that are counterproductive to one's mental health. The purpose of distress tolerance is to improve the moment (Linehan, 1993). Distress tolerance skills provide someone with additional time to find an alternate, effective, healthy coping response (McKay,Wood, & Brantley, 2007).

At times emotions can intensify such that they become difficult to effectively cope in the moment and that is why distress tolerance skills are necessary. There are two sets of skills that are critical to distress tolerance. First, crisis survival strategies which incorporate core mindfulness skills, focusing on the pros and cons of a given situation, self-soothing, and distracting (Linehan, 1993). Second, is reality acceptance, which

consists of subset skills: observing one's breathing exercises, turning the mind, half smiling, and radical acceptance (Linehan, 1993).

The concepts of willingness versus willfulness play an important role in DBT by helping a client gain insight into her attitude and approach towards life. Willingness is a proactive stance in life. The person is an active participant in his or her life, accepting without judgment, and doing what is necessary and effective in-the-moment. Willingness is doing the next indicated thing. Linehan (1993) usually refers to the spirit of willingness as making lemonade out of lemons. On the other hand, willfulness is a stance in which the person is not willing to do what is needed in the present moment, is not willing to accept reality as it is without judgment, and imposes his or her will on reality (Linehan, 1993). In other words, someone who is willful wishes that things could be different in a particular situation and assumes an intractable attitude toward change; she also forgoes the willingness to seek out alternative, proactive solutions. For example, a person who suffers from chronic pain is willful does not take an active role in her treatment.

Interpersonal effectiveness. The final core element of DBT is interpersonal effectiveness skills, which is similar to the literature on assertiveness interpersonal communication. Clients are instructed on how to effectively relate their needs to others, and how to say no to certain demands while taking the other person's feelings and needs into consideration. Individuals also learn, through training and coaching, how to skillfully contend with interpersonal conflict (Linehan, 1993). Although these goals are similar to assertiveness training, the emphasis in DBT is placed on ability to be effective in the moment. Furthermore, an essential facet of interpersonal effectiveness is the ability to think and acting effectively. To enhance the ability to think and act effectively while

applying mindfulness skills in an interpersonal context, Linehan devised the following acronyms: DEAR MAN (i.e. Describe, Explain, Assert, Reinforce, Mindful, Appear confident, and Negotiate); GIVE (i.e. be Gentle, act Interested, Validate, and use an Easy manner); and FAIR (i.e. be Fair, no Apologies, Stick to one's values, and be Truthful (Linehan, 1993).

There are four characteristic factors of interpersonal effectiveness. The first is attending to interpersonal relationships such that one is mindful of caring for and mending a relationship if necessary, and resolving any resentment or bitterness. Second, is the skill of balancing priorities and demands in one's life, and being able to compromise in interpersonal relationships. Next, determining wants and "shoulds" in one's life by effectively defining what is essential (should) versus what is more of a luxury (want). In addition, building mastery and self-respect within oneself and in one's interpersonal relationships, is achieved through one's willingness to work hard and practice resilience. For example, one achieves mastery by overcoming difficult life challenges (even small ones) and embracing one's sense of accomplishment, which then bolsters competence and effectiveness. The task of attempting new and challenging things in one's life comes with inherent disappointment and failure; however, being able to face failure without turning on oneself and asking for assistance ,when necessary, builds mastery and self-respect. Finally, self-respect comes from standing up for what one believes in; self-respect is also achieved by adhering to wise mind and doing what is right according to one's beliefs, morals, values, and opinions (Linehan, 1993).

Treatment targets. DBT places great emphasis on both the behavioral and emotional components in treating the symptomatology. It is important to note that the

biosocial theory provides the treatment hierarchy by which problem behaviors in therapy are targeted. For example, if a client's maladaptive behaviors are due to emotion dysregulation, then the primary target in treatment is the emotion dysregulation and not specifically the behaviors. In other words, Wagner, Rizvi, and Harned (2007) argue that it is counterproductive to treat an individual, for instance, using behavioral interventions that require the experience and tolerance of intense emotions. It is, therefore, necessary to first treat the emotion dysregulation component which often manifests itself behaviorally through nonsuicidal self-harm and interpersonal chaos as a means of coping with one's emotion dysregulation (Wagner, Rizvi, & Harned, 2007).

Treatment hierarchy. The DBT treatment hierarchy is designed such that the emphasis is placed on the individual's safety. According to Linehan (1993), the first stage, commonly referred to as Stage 1, includes: the therapist targeting suicidal behaviors and nonsuicidal behaviors such as self-mutilation, and other parasuicidal behaviors where the actual intent is not to kill oneself; for example, most parasuicidal acts involve causing illness or damage to oneself such as cutting, however, there may also be the potential of risked death; therapy-interfering behaviors that may cause one to, for instance, miss therapy sessions; major-quality-of-life-interfering behaviors, and deficits in behavioral skills (Linehan, 1993).

Stage 2 focuses on reducing Posttraumatic Stress. It is important to note that Linehan (1993) asserts that trauma is not specifically targeted until the person has acquired the requisite emotion regulation and emotional support to resolve the trauma. Nonetheless, trauma is targeted and addressed in Stage 1 if it is related to the suicidal or nonsuicidal behaviors; therefore, the sequelae of trauma are dealt with in therapy as they

relate to the presenting symptomatology (Linehan, 1993). Accordingly, there is an overlap of treatment hierarchy such that presenting trauma symptoms are targeted along with Stage 1 behaviors in treatment. Stage 3 fosters self-respect and validations of one's opinions, emotions, and actions. In Stage 3 an individual is also encouraged to achieve his or her personal goals such as relationship and career (Linehan, 1993).

Dialectical behavior therapy and pain management. In the seminal article, Linton (2010) introduces the utility and application of DBT skills that were adapted specifically for chronic pain. DBT to treat chronic pain can be a validating experience for an individual. The experience of chronic pain is radically accepted and associated psychological distress is reduced by applying DBT skills. Linton (2010) posits that emotion dysregulation is one of the primary comorbidities that develop as a result of chronic pain. There are a range of emotions associated with chronic pain such as anxiety, depression, anger, and fear. Affect regulation difficulties may likely lead to intrusive thoughts such as worry and rumination. Linton (2010) reports that the aforementioned emotions, affect dysregulation, and associated thoughts result in behavioral problems in chronic pain patients.

Linton (2010) conducted a controlled case study with an individual suffering chronic pain (i.e., back and neck pain) with comorbid depression for 10 years. The patient reported specific difficulty regulating her emotions, problems accepting the inherent limitations of chronic pain, catastrophic thinking, avoidance, and sleep difficulties. Linton (2010) targeted two components of the patient's presenting problem, namely emotion regulation and avoidance. The patient underwent 6 months of 16 one-hour sessions, and kept daily records with a 3 month follow-up. The intervention program

included the following components: validation of the patient's situation in which DBT chain analyses were used to address the patient's catastrophic thoughts, associated emotions, and behaviors; examination of the pain dialectic of the patient's desire to be pain free, and radical acceptance; breathing exercises to foster mindfulness and being nonjudgmental toward the pain; emotion regulation skills; opposite action to counter avoidance caused by chronic pain; activity monitoring; and maintenance of skills that were effective.

At the end of treatment the patient showed improvement on the following measures: a 0-10 measure of pain which showed marked improvement around day 65 to 81 when the patient was carrying out behavioral experiments; increased acceptance as evidenced by her score on the Chronic Pain Acceptance Questionnaire (CPAQ); reduction of depressive symptoms over the course of treatment (i.e., 26 at start of treatment to a 5 at the end of treatment); improved sleep which was measured using the Insomnia Severity Index—the patient's initial score was a 21 (i.e., poor sleep) and at the end of treatment her final score was a 4 (i.e., little sleep interference); and the patient began engaging in pleasurable activities in her life such as singing and volunteering; she was actively creating a life worth living. Linton (2010) asserts that DBT skills which are adapted to treat chronic pain are appropriate in the treatment of individuals with chronic pain who experience emotion dysregulation, cognitive distortions, and behavioral problems.

Dialectic of pain. From a chronic pain perspective a dialectic exists when an individual with chronic pain wants to participate in various therapies (e.g., physical therapy, psychotherapy) to feel better, but does not want to accept that he or she has

chronic pain—a life changing event. He or she may not want to take a proactive approach to managing her or his pain because this may mean acceptance of pain (e.g., I will never be the same again). Denial and avoidance are key components in this equation. Synthesis may be achieved when one engages in behaviors to manage one's pain such as physical therapy and adhering to a medication regimen, while also accepting one's pain. The crux is accepting that one cannot be entirely pain free while willingly engaging in behaviors to reduce emotional and physical suffering. Linehan states, "The primary therapy dialectic is that of change in the context of acceptance of reality as it is" (Linehan, 1993, p. 201). According to Linehan (2011) (personal communication, March 28, 2011) reality acceptance is the freedom to want something and yet be tolerant and accepting of not having it. Similarly, radical acceptance is accepting what is, in the current moment, without judgment. Of particular note, this skill incorporates Zen Buddhism.

Acceptance and pain. McCraken, Vowles, and Eccleston (2004) state that acceptance of chronic pain is a critical component that engenders enhanced mental health. Studies have shown that acceptance of chronic pain results in decreased subjective experience of pain, reduced psychological distress, and an increase in physical activity. McCraken, Vowles, and Eccleston (2004) cite one study in which individuals with chronic pain who actively accepted their pain levels and engaged in adaptive coping behaviors were less likely to experience depression, pain-related anxiety, and increased physical pain. Acceptance in the context of chronic pain is a proactive process that requires an active role on the part of the individual to continually participate in daily life activities irrespective of one's perception of physical pain (McCraken, Vowles, & Eccleston, 2004). On other hand, avoidance, passivity, and one's attempt to control the

pain results in maladaptive coping, psychological distress, and increased pain sensation. McCraken, Vowles, and Eccleston (2004) assert that acceptance-based psychological treatments for chronic pain are, therefore, promising.

In the context of chronic pain, the experience of pain is often a frustrating experience and can be an invalidating phenomenon. Invalidating environments occur when individuals in one's environment respond inappropriately and insensitively to one's private experiences such as one's beliefs, thoughts, and sensations (McKay, Wood, & Brantley, 2007). According to Fruzzetti and Shenk (2008), invalidation occurs in various interpersonal contexts in which one's thoughts, emotions, behaviors, and wishes are received by another with disparaging and/or condescending comments and discounted; therefore, individuals do not develop the ability to recognize and describe their emotional experiences (McMain, Korman, & Dimeff, 2001). For example, individuals who suffer from chronic pain may not physically present as if they are experiencing chronic pain which can be invalidating. Some examples of invalidation include: "You are not in pain; it must not be that bad!" In contrast, validation is when one's personal experiences are received with attention, respect, and understanding (e.g., to put oneself in another's shoes), and conveying this sentiment to the individual (Linton, 2010). In particular, to validate one's experience of chronic pain is to actively listen to his or her situation without judgment, acknowledge, affirm, and be considerate of that person's unique experiences.

Chapter 3

Treatment Manual

This innovative and comprehensive pain management manual integrating DBT skills in the treatment of chronic pain was experimentally implemented at the VA Loma Linda Health Care System. The treatment manual was applied in the Coping and Overcoming Pain Effectively (COPE) group therapy class. This was an eight week class, meeting one hour weekly, for military veterans who suffer from chronic pain due to various types of medical conditions. A total of 20 veterans completed the course. The overarching goal was to decrease emotional suffering through the use of DBT with emphasis on radical acceptance of chronic pain.

Limitations of Study

This study is a comprehensive review of the literature on chronic pain as well as treatment modalities specifically focusing on the adaptation of DBT as a combination therapy. The result of the research is an innovative and comprehensive group therapy manual designed to integrate DBT skills in the treatment of chronic pain. This manual was implemented at the VA Loma Linda Health Care System. The primary limitation of this research is the lack of outcome studies to measure the efficacy of the treatment manual. Reduction in individuals' pain levels was not assessed by way of quantitative means to track such improvements.

Group limitations. Several limitations of the implementation of the DBT treatment manual were due to logistical and group dynamics. The group was only 8, 1

hour consecutive sessions with over 30 veterans. There was excessive information to cover in a limited amount of time and, as a result, some content had to be removed. Twelve sessions, however, may have mitigated this issue. Additionally, the room in which the group was held was large but had temperature regulation issues. It was common for the room temperature to be at 68 degrees, which exacerbated some of the group members' pain level. Further, the room was set-up like a classroom with tables, which made it difficult for a few veterans who were in motorized wheelchairs to navigate through narrow spaces between the tables and chairs.

Of particular note, there is a paucity of research in this area, which makes this literature and treatment manual valuable for further development, application, and research. Further research is merited in this area and outcome studies would be invaluable to measure its efficacy. Empirical studies conducted using this manual is critical to test the proposed utility of using DBT skills as an evidence-based therapy to treat chronic pain.

Group dynamics. Several group dynamics presented limitations to the study. The most significant limitation was the members' ability to accept their chronic pain condition. Some group members expressed doubt as to whether their participation in the group would decrease their chronic pain. Of particular note, the group facilitators validated these concerns, implemented some motivational interviewing techniques, and emphasized that the goal of the group was to decrease the veterans' emotional suffering and not to stop their physical pain. An additional limitation was several group members did not do their assigned homework. The homework consisted of handouts designed to help participants implement and practice that week's skills; some members were not

willing to do the homework. The aforementioned therapy interfering behaviors were mostly due to the veterans' willfulness and avoidance. Veteran's voiced their struggle with acceptance of their current physical and mental health state resulting from longstanding chronic pain and associated psychological sequelae (e.g., cognitive distortions, emotion dysregulation, and maladaptive behaviors).

A final limitation that negatively impacted the veterans' motivation and willingness to actively participate in the group relates to 'travel pay.' The VA Health Care System compensates veterans for their roundtrip mileage, with qualification based on income, for attending appointments at the VA such as group therapy. Some participants seemed overly invested in receiving travel pay such that some would leave early to go to the travel office to collect their funds. Although most of the members were motivated and committed to participate in group, some appeared invested in receiving compensation as evidenced by their comments. For a few, select members, motivation and willingness were questionable.

Areas for Further Study

Additional research and investigative studies should be carried out in the application of DBT's evidence-based skills in treating chronic pain. This is an unfolding area of interest as it is novel in nature and only one study conducted by Linton in 2010, thus far, has been performed. One specific application for further study and development is the implementation of this treatment manual as part of a comprehensive pain management program at a medical center. To date, there has not been any such treatment manual applied with an outcome study. At present, most medical centers, for example the

VA system, utilize Cognitive Behavioral Therapy to treat the psychological component of chronic pain. DBT's acceptance-based skills provide promising treatment outcomes in the management of chronic pain. To establish its efficacy, a pilot study utilizing the proposed treatment manual in this study, along with quantitative research and outcome studies must be conducted to establish its utility as an evidence-based treatment manual for chronic pain. Further areas of interest are the implications of DBT's Mindfulness, Radical Acceptance, and Distress Tolerance skills with adjuvant pharmacotherapy treatment such as Cymbalta. Recent literature has demonstrated the use of psychotropic medication to treat chronic pain.

Chapter 4

Conclusion

Chronic pain negatively affects 15% to 33% Americans annually, costs over 150 billion dollars each year in healthcare and legal costs, and results in decreased work productivity (Ballantyne, 2006; Bokarius et al., 2008; Boll, Raczynski, & Leviton, 2004; Thorn, 2004). The psychological sequelae resulting from chronic pain negatively impacts people's quality of life. DBT's evidence-based skills have been successfully applied in one case study in the treatment of the psychological component of chronic pain. As evidenced in this study, chronic pain is a biopsychosocial process that affects all aspects of the person. Studies have shown that acceptance of chronic pain results in decreased subjective experience of pain, reduced psychological distress, and an increase in physical activity. For this reason, core components of DBT in the treatment of chronic pain have invaluable treatment utility. This treatment manual and proposed study was shared with Marsha Linehan during a personal communication on March 28, 2011 to which she responded, "Sounds good, you should do a pilot study." This study brings to fruition an unexplored area of research in the successful treatment of the psychological sequelae of chronic pain using DBT evidence-based skills.

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APPENDIX

Treatment Manual

The Application of Dialectical Behavior Therapy to Chronic Pain Management: Decrease Emotional Suffering & Create a Life Worth Living

AGREEMENT for Pain Management Group

Name:_____ Today's Date: _____

Ground Rules:

1. Attendance: Plan to attend each of the 8 classes from 2:00-3:00. If you'll be late or absent, call us as soon as possible. To **cancel**, call (562) 555-5555 ext 5555.

2. Confidentiality: No information about you can be given out without your written permission. Exceptions: Threats to harm yourself or others, and suspected abuse to children, dependent adults, or elders. No recording allowed.

3. Safety & Respect: Please be respectful to your fellow group members and staff. No cross-talking. Acts or threats of violence will not be tolerated.

4. Homework: This is a learning-by-doing class. You will be asked to do some practicing of skills and some writing between sessions. This is for your benefit. We will review what you did at our next session.

5. Medication: 'Skills, not pills.' If you are on medications, please take them as prescribed. If you have problems with them, please talk to whoever prescribed them as soon as possible

6. Substance Use: If you had past alcohol/ drug problems, please do not use them at least for the duration of this class.

7. Emergencies: For urgent mental health problems, or if you think you may harm yourself or someone else, please go to your nearest ER or call 911.

8. Cell Phones: Please silence them during class, take emergency phone calls outside.

I want to work on these **Problems**: (example: I can't stand the pain, depressed, can't do anything)

_____

Goals: "by the end of this class, I'd like to..." (ex: cope better with my pain, have more hope!)

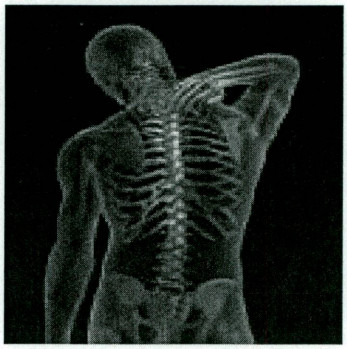
_____

Agreement: I agree to actively work on these Problems and accept these Ground Rules.

_____ _____ _____

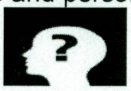
Your Signature Date Staff Member

What is Pain?



Pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage."

- Pain is subjective and personal and is experienced by each person differently!

What Impacts MY PAIN? 

- Biology—Your Body! Examples: brain, heart, muscles
  - Factors that increase pain: Injury, Illness, muscle atrophy

- Mental Health/Psychological Functioning! Examples: Emotions (happiness, excitement), Self-Esteem, Coping Skills
  - Factors that increase pain: Depression, Angry; Poor Self-Esteem; Unhealthy Coping such as Substance Abuse, Hurting Self and/or Others

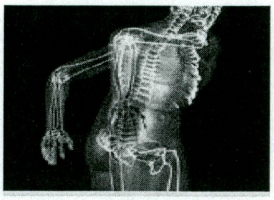
- Social/Spiritual, Examples: Family, Friends, Acquaintances, Counselors/Clergy, Church
  - Factors that increase pain: No family or friends or anyone to talk with

- Medication! Examples: Opioids, nonsteroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, Epidural injections
  - Factors that increase pain: Abusing prescribed medication and street drugs.

- Activity! Keeping active and staying healthy; exercising regularly
  - Factors that increase pain: Inactivity, bedridden, muscle atrophy due to inactivity

The Biopsychosocial-spiritual Model of Pain

Types of Pain



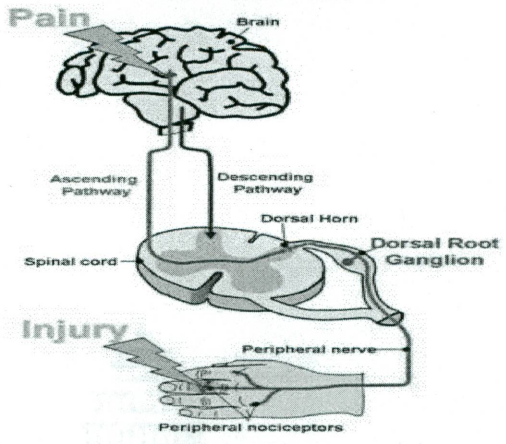
Acute Pain:
Caused by damage or potential tissue damage. Example: The person lifts a heavy box and strains his or her back muscle.

- The perception of this is painful. Acute pain is brief and goes away when damaged tissue heals.
    - Acute pain is a common response to injury and usually lasts under six months. Acute pain may cause some emotional distress, although it is usually brief.

Chronic Pain
Pain persists beyond six months. Chronic pain for some individuals may last a lifetime. Arthritis, joint and back injuries, fibromyalgia, lupus, and cancer can cause chronic pain

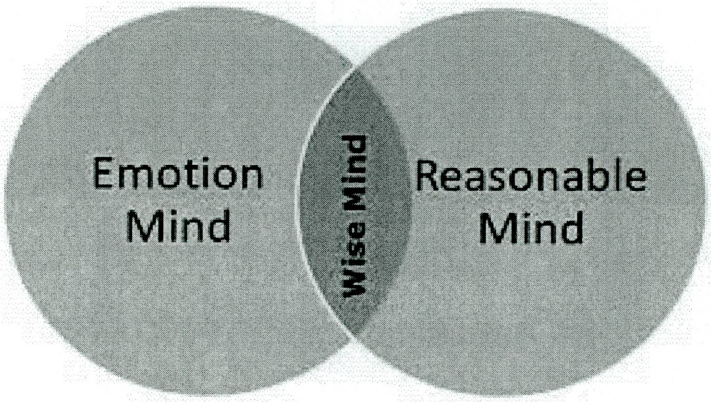
- This type of pain may likely have a negative impact Activities of Daily Living
    - bathing, grooming, and cooking.
        - Independent Activities of Daily Living may also be impacted: driving, shopping, managing medication, and handling finances.
- Most chronic pain conditions may be difficult to treat with some medical interventions and treatment
    - chronic pain causes emotional distress which negatively impacts one's quality

Pain Transmission



Stimulation and/or injury to free nerve endings (for example: your skin) send a message to the spinal cord by way of *neurons* (Thorn, 2004). Neurons carry messages via an electrochemical process in which neurotransmitters, or chemicals, are released. From the spinal cord, messages are then relayed to various areas of the brain such as the thalamus and limbic systems; these two areas play an important role in cognition and emotion.

Dialectical Behavior Therapy for Chronic Pain
Three States of Mind



Reasonable Mind: This is your logical, rational, thinking mind. It's that part of you that plans and evaluates things logically. It is the "cool" part of your mind, e.g., "If I take my medication as prescribed, my pain will decrease."
Emotion Mind: This is when your emotions are in control—they influence/control your thinking and behavior. The results of emotion mind are positive in the short-term (e.g., yell at someone you care about to bring your medication when you're in pain) but negative in the long-term (e.g., damage your relationship). Emotion mind is exacerbated by HALT (i.e., hungry, angry, lonely, tired); e.g., "I'm in so much pain. Get out of here—leave me alone!" "The pain will never stop, my life sucks!"
Wise Mind: Wise mind is the integration of emotion mind and reasonable mind. It is like intuition; doing what is most effective in the moment. It has a centeredness feeling to it; e.g., "Yes, I am in a lot of pain; I feel angry and irritable. And, I'm taking an active role in my healthcare by participating in physical therapy, taking my medication regularly all of which will keep my pain at a manageable level."

- Please list some recent examples of YOUR three states of Mind.
- Place a check mark next to the state of mind you feel you are most in.
- Reflect on how you are able to come to the middle ground, Wise Mind.

Reasonable Mind:

Emotion Mind:

Wise Mind:

How do you achieve Wise Mind?

Diaphragmatic Breathing

To begin, get in a comfortable position. If you feel comfortable closing your eyes, do so to help you relax. Now, take a few slow, long breaths, and relax. Place one hand on your stomach. Feel your stomach rise and fall as you breathe. Imagine your belly filling up with air like a balloon as you breathe in, and then feel it deflate as you breathe out. Feel the breath moving in across your nostrils, and then feel your breath blowing out across your lips.

Now, as you continue to breathe, begin counting your breaths each time you exhale silently to yourself. Count each exhalation until you reach "4" and then begin counting at "1" again. To begin, breathe in slowly through your nose, and then exhale slowly through your mouth. Count "1." Again, breathe in slowly through your nose, and then slowly exhale. Count "2." Repeat, breathing in slowly through your nose, and then slowly exhale. Count "3." Last time – breath in through your nose and out through your mouth. Count "4." Now begin counting at "1" again.

This time, though, as you continue to count, occasionally shift your focus to how you're breathing. Notice the rising and falling of your chest and stomach as you inhale and exhale. Again, feel the breath moving in through your nose and slowly out through your mouth. If you want to, place one hand on your stomach and feel your breath rise and fall. Continue counting as you take slow, long breathe out. Continue to shift your focus back and forth between counting and the physical experience of breathing.

Continue counting your breaths, noticing the physical sensations of your breathing and letting go of any distracting thought or other stimuli. Then, when you are ready, slowly open your eyes and return your focus to the room.

Adapted from McKay, Wood, Brantley (2007)

Radical Acceptance of Chronic Pain

Acceptance of reality is not equivalent to approval of reality—Marsha Linehan

Now answer the questions for yourself. Think of a distressing situation that you experienced recently such as being in extreme pain. Then answer these questions that will help you ***accept*** the situation in a new way:

What happened in this distressing situation?

What role did you play in creating this situation?

What DO YOU have control of in this situation?

What DON'T YOU have control of in this situation?

What was YOUR response in this situation?

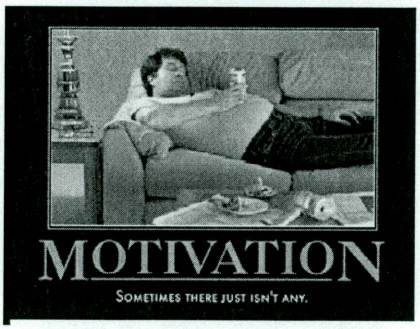
How did YOUR response affect your thoughts and feelings?

How did YOUR response affect other people?

How might you EFFECTIVELY ACCEPT this situation (TIP: Focus on what works. Do what needs to be done in this situation—stay away from: fair, unfair, wrong, should, shouldn't, right, wrong; ACT skillfully, meeting the needs of the situation you are in—and not the situation you WISH you were in).

Staying Mindful Of Your Activity Level:
Decrease the likelihood of re-injuring Your Body!

At times it may be difficult to radically accept your current physical health and condition of your body. For example, many veterans with chronic pain continue to maintain a physical activity level as they did when they were, for example, in the military. However, their bodies have changed due to pain/physical condition, and cannot perform at that same level. As a result, many people with chronic pain who tend to "over work themselves" without setting limits on their physical activity actually exacerbate their pain and may hurt themselves. For instance, individuals who try to complete a household chore such as yard work, ignoring their pain level, likely aggravate the injury and end up in more pain for extended periods of time.



Underactivity

Injuries may lead to physical deconditioning due to periods of inactivity for healing. However, once healing has occurred, physical activity should resume accordingly. Prolonged periods of inactivity leads to muscle atrophy, impaired mobility, weakness, and lethargy. In turn, this gives to depression causing an individual to be less likely to engage in physical rehabilitation

Overactivity

This can be counterproductive to one's physical well-being and cause increased levels of pain. Additionally, one may be more prone to re-injuring onself if acitivities levels are not carefully monitored. Frustration may also result due to re-injury and pain flare-up which may lead to avoidance of physical acitivity.

When was the last time you were Underactive? What did you notice?

_____

_____

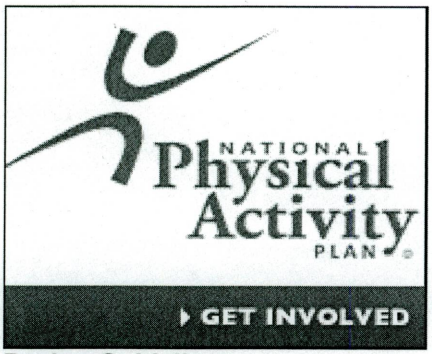
When was the last time you were Overactive? What did you notice?

_____

_____

Mindful Goal Setting of Physical Activity

It is critical to be MINDFUL of one's physical activity level. For this reason, plan activities accordingly. Consult with your physician before engaging in exercise programs, and even engaging in daily household chores such as mowing the lawn. It is helpful to be not judge your body and try to perform as you were prior to your injury. This mindset leads to frustration, willfulness, and failure.



Pacing Guidelines:

- Be Mindful of the activities in which you engage and how this impacts your health
- Take your time when engaging in activities.
- Take rest breaks! You don't have to finish it in one sitting.
- Find your activity baseline, i.e., the amount of time you can engage in an activity before a pain flare-up.
- Create an activity schedule in which you set aside time for your chores, exercise, etc
- Set achievable goals that you can attain regarding all activities.
- Record your successes

Possible Barriers: _____

Skills to Overcome Barriers:_____

Activity Goal: _____

Active Time: _____

Rest Time: _____

Guided Imagery: Safe(r) Place

To begin, get into a comfortable position with your feet flat on the floor and your hands resting comfortably, either on the arms of the chair or in your lap. Now, close your eyes and take a few slow, long breaths.

With your eyes closed, imagine that you enter your safe place using all of your senses to ground yourself in the scene.

...**Look around** using your imaginary sense of sight. What does this place look like? Is it daytime or nighttime? Is it sunny or cloudy? Notice the details. Are you alone or are there other people or animals? What are they doing? If you're outside, look up and notice the sky. Look out at the horizon. If you're inside, notice what the walls and the furniture look like. Is the room light or dark? Choose something soothing to look at. Then continue looking for a few seconds using your imaginary sense of sight.

Next, use your imaginary sense of hearing. What do your hear? Do you hear other people or animals? Do you hear music? Do you hear wind or the ocean? Choose something soothing to hear. Then listen for a few seconds using your imaginary sense of hearing.

Then use your imaginary sense of smell. If you're inside, what does it smell like? Does it smell fresh? Do you have a fire burning that you can smell? Or, if you're outside, can you smell the air, the grass, the ocean, or the flowers? Choose to smell something soothing in your scene. Then take a few seconds to use your imaginary sense of smell.

Next, notice if you can feel anything with your imaginary sense of touch. What are you sitting or standing on in your scene? Can you feel the wind? Can you feel something you're touching in the scene? Choose to touch something soothing in your scene. Then take a few seconds to use your imaginary sense of touch.

Last, use your imaginary sense of taste. Are you eating or drinking anything in this scene? Choose something soothing to taste. Then take a few seconds to use your imaginary sense of taste.

Now take a few more seconds to explore your safe place using all of your imaginary senses. Recognize how safe and relaxed you feel here. Remember that you can come back to this place in your imagination whenever you need to feel safe and relaxed. You can also come back whenever you're feeling sad, angry, restless, or in pain. Look around one last time to remember what it looks like.

Now keep your eyes closed and return your focus to your breathing. Again, take some slow, long breaths in through your nose and exhale through your mouth. Then, when you feel ready, open your eyes and return your focus to the room.

SLEEP Management

You'll get better **quality** (restful) sleep by using these suggestions. Do what

works best **for you!**

1. **Sleep Schedule**: Go to bed and get up at the same time every day, even weekends. This helps get your mind and body in the habit of having a stable sleep pattern. If you often 'sleep in' on weekends, you may not be getting enough sleep during the week.

2. **Naps**: If you're having trouble falling – or staying – asleep at night, limit daytime naps ('sleep restriction'). Taking naps can make it harder to develop a stable nighttime sleep pattern.

3. **Your Bed is for...** three things only: Sleep, Sex, and Rest. Don't use it for reading, eating, watching TV, arguing, or worrying. If you can't sleep, your body needs rest and relaxation.

4. **Bedtime:** Develop a restful routine for going to bed. This might include a brief security check of the house, a bath or shower, relaxing music, calming reading. Avoid loud music, violent movies, and upsetting TV shows – even watching the news may not be conducive to sleep.

5. **Bedroom**: Keep it dark, cool, and quiet. Distracting noises may be blocked out by playing soft music, using a fan or another source of "white noise." This also quiets the mind, reduce worrying.

6. **Relaxation**: Practice any form of relaxation, meditation, or mindfulness that works for you.

7. **Tossing & Turning**: If you don't fall asleep in about 15 minutes, get out of bed, go into another room and do something quiet and peaceful. Return to bed when you're sleepy.

8. **Worry Journal**: If your mind is filled with worries, ideas or memories, write them in a journal which you keep away from the bed. Put them down on paper to empty them from your mind. The next day, you can decide which ones you have control over or need to 'let go' of.

9. **Exercise regularly:** it helps promote healthy sleep. Just not too close to bedtime.

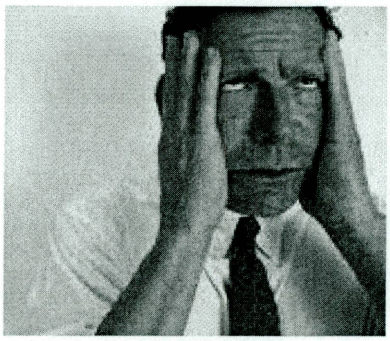
10. **Alcohol, Caffeine, Nicotine...**usually don't lead to healthy sleep. Don't drink coffee, tea, or caffeinated soft drinks after early afternoon. Caffeine is also found in chocolate and some over the counter medications, which may contain other stimulants as well. Nicotine is a stimulant!

11. **Medications:** Ask your medical provider if your medications may be keeping you awake. Perhaps you can take it at a different time of day so that it won't interfere with your sleep. Or maybe substitute a different medication. Discuss any changes with your physician.

12. **Detective work**: Keep a log of your sleep pattern: what you did **before** bed, your **activity** level that day, what you **ate** or **drank**, your **stress level**, what **time** to bed, how **long** till fell asleep, what time(s) you **woke** up, and any **dreams**. Notice any patterns? Make changes slowly!

Distress Tolerance: Radical Acceptance

Distress tolerance is a way of dealing with emotionally difficult life situations in a healthy manner. By applying distress tolerance, individuals are able to tolerate and accept circumstances with less emotion pain, and avoid the change of resorting to dysfunctional behaviors (examples: shouting, taking frustrations out on loved ones) that are counterproductive to one's mental health. The purpose of distress tolerance is to improve the moment. Distress tolerance skills provide someone with additional time to find an alternate, effective, healthy coping response.



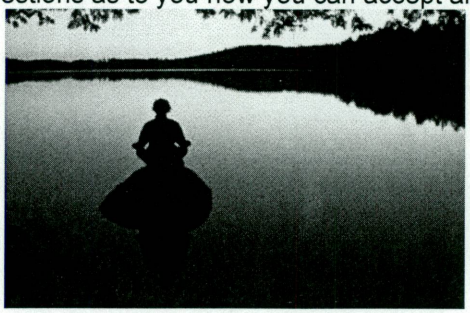
To help you begin practicing radical acceptance when you are feeling distressed, it's often helpful to use a coping statement when you are experiencing chronic pain.

Below are a few examples and spaces to create your own:

___This is the way is has to be
___All the events have led up to now
___I can't change what's already happened
___It's no use fighting the pain
___Fighting the pain only blinds me to my present
___The present is the only I have control over
___It's a waste of time to fight what's already occurred
___This moment is exactly the way it should be, given the occurrence of events
1___
2___
3___

Distress Tolerance Skills

Here are some helpful tips to help you bear your pain skillfully. Whether your pain is physical and/or emotional, there is not way that it can be avoided entirely!
The following are some suggestions as to you how you can accept and tolerate in the moment



- **Wise Mind ACCEPTS:**
  - Engage in activities that can help regulate negative emotions: Hobbies, Call a friend, Play a board-game, Read
  - Compare yourself to someone less fortunate: example: "My pain could be worse!"
- **Self-Soothe with Your Senses**
  - Vision: Go outside, if possible, and look at nature
  - Hearing: Listen to your favorite music; listen to nature: example: birds, ocean
  - Smell: Scents that are pleasing to you
  - Taste: Have a good meal, drink herbal decaffeinated coffee, chew gum
- **Improve the Moment: Replace immediate negative events with more positive ones**
  - Imagery: Imagine a safe(r) place. Imagine lying on a beach
  - Find meaning: Find some kind of purpose out of your situation, "Make lemonade out of lemons".
    - Focus on the positive aspects of your situation!
  - Engage in relaxation techniques; take a warm bath to help soothe your muscles; listen to relaxation CDs
  - One Thing in The Moment—focus on what you are doing in that moment
    - Say a mantram, "This to shall pass", "One day at a time"

Now you choose 3 distress tolerance skills you will use to help you bear your pain skillfully:

1_____

2_____

3_____

Emotion Regulation Skills for Pain Management: Decrease Emotional Suffering

The overarching goal of emotion regulation skills is to help you understand the emotions you experience, reduce emotional vulnerability, and decrease emotional suffering!

- Reduce Vulernerability: PLEASE
  - P-Physical: Take care of your body, Treat illness, and Take your medication!
  - L-HeaLth: Eat healthy, nutritional food "You are what you eat." Balanced eating!
  - E-Eating: Avoid foods that affect your mood. Example: caffeine
  - A-Altering: Avoid non-prescribed mood altering substances, alcohol, & "drugs"
  - S-Sleep: Practice good sleep hygiene: Get enough sleep (see sleep handout)
  - E-Exercise: Consult with your physician. Exercise is good for your body and can decrease depression and anxiety levels.
- Build Mastery
  - Engage in activities that make you feel competent, in control, and good!!
- Build Positive Experiences-Focus on the positive aspects of each event
  - Short-term: Do things that are possible TODAY
  - Long-term: Make changes in your life to make positive things happen. Work toward small, achievable goals that will make your long-term goals possible!
  - Attend to Relationships: Repair damaged relationships, nurture current relationships, and reach out for new ones!
- Let Go of Emotional Suffering—Mindfulness of Your Current Emotion
  - Observe your emotion: Just notice and describe the emotion nonjudgmentally
  - Experience your emotion: Like an ocean WAVE ebbing and flowing. Try not to block it, suppress it, or push it away—but do not hold on to it
  - You are not your emotion! You are responsible for your behaviors, so don't act on your emotions!
  - Allow time for negative emotions to pass—they will and you will feel better. Emotions last for a moment (i.e., could be 30 seconds or 2 minutes).
- Opposite Action—Act contrary to how you feel emotionally. Engage in activities that you have been avoiding
  - Fear: Engage in the activities you are afraid of. Example: Consult with your Dr. about resuming physical activity, especially if you are afraid if engaging in any type of activity will cause you to re-injure yourself. Stay active!
  - Guilt or Shame: Repair what you have damaged—apologize. Accept consequences without judgment and LET GO.
  - Empathy: Put yourself in another's shoes with whom you have been angry.

Judgment Defusion for Chronic Pain

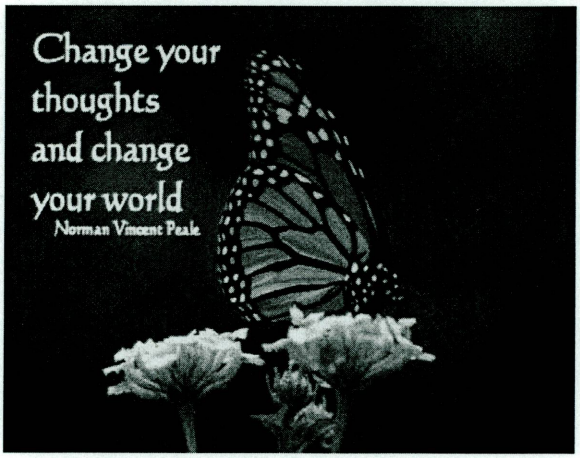
The following is an exercise designed to help you "let go" of your judgments regarding your chronic pain, but this can be applied with anything else with which you are struggling. The object here is to watch your judgments arise and then to let go of them without getting stuck on them. Judgment defusion requires the use of your imagination. The object of this exercise is to visualize your judgments, either as pictures or words, harmlessly floating away from you without obsessing about them or analyzing them. If you need help finding a visualization technique, here are some suggestions: 1) Imagine sitting in a field watching your judgments float away on clouds 2) Picture yourself sitting beside a stream watching your judgments float past on leaves

Take a few slow, long breaths, relax, and if you are comfortable, close your eyes—If you are not comfortable closing your eyes then stare at a point in this room where you feel comfortable. Now, in your imaginations, picture yourself in the scenario that you chose in order to watch your judgments come and go, whether it's a stream, in a field, or somewhere else. Do your best to imagine yourself there. After you do, start to become aware of the judgments that you're having, it could be about your chronic pain, health, relationships, or something else. Start to observe the judgments that come up. Don't try to stop your thoughts, and do your best not to criticize yourself for having those judgments. Just watch those judgments arise, and then, using whatever technique you've chosen, watch the judgments disappear and float away.
Whatever the judgment is, big or small, important or not, watch the judgment arise in your mind and then let it float away or disappear by whichever means you've chosen. Just continue to watch the judgments arise and disappear without getting hooked into them and without criticizing yourself. If more than one judgment comes up at the same time, see them both arise and disappear. If judgments come very quickly, do your best without getting hooked on any of them. Continue to breathe and watch the judgments come and go for the next few moments.

Now turn your attention back to this room. You are aware that you are here at the VA in this pain management class listening to Jacob's voice. Feel your body in the chair, feet on the ground. Take a few more slow, long breaths and when you are comfortable, open your eyes.

Adapted from McKay, M., Wood, J. C., Brantley, J. (2007). *The Dialectical Behavior Therapy Skills Workbook.*

Self-Encouraging Coping Thoughts



There are many distressing times in life when we all need to hear some encouraging words to keep us motivated or to help us endure the pain that we are experiencing. Coping thoughts are reminders of how strong you've been in the past when you survived distressing situations, and they're also reminders of encouraging words that have given you strength. Coping thoughts are especially helpful when you first notice that you are experience an increase in your pain (physical and/or emotional) and become upset (e.g., sad, angry, anxious). If you recognize your distress early on, you will have a better chance of using one of these thoughts to help soothe yourself.

List of Coping Thoughts:

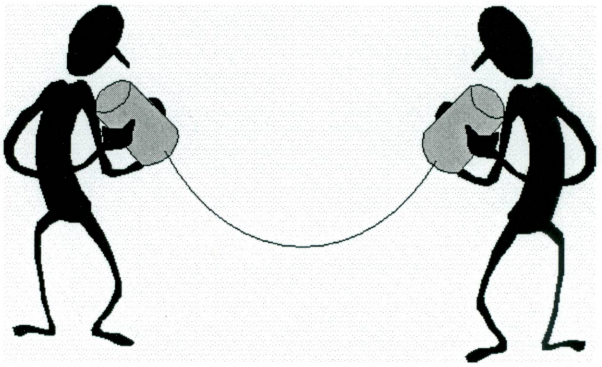
___This level of pain won't last forever
___ I've already experienced many other painful experiences, and I have survived
___This too shall pass
___The pain makes me uncomfortable right now, and I can accept it
___I am strong enough to handle what's happening to me right now in this moment
___This level of pain will only last for a moment of time
___It's okay to feel sad/anxious/afraid sometimes
___This may not feel good in the moment, but it won't last forever

Now list some additional coping thoughts of your own:

1___
2___
3___

Interpersonal Effectiveness for Pain Management: "Keeping" the Relationship

G.I.V.E



Be:	
Gentle	Be COURTEOUS and keep your 'Cool' in your approach.
No Attacks	No verbal attacks or rude comments, e.g., "You're an idiot! You don't understand my pain or my experience!"
No Judging	No moralizing, e.g., "If you were a good person you would help me out and schedule my doctor's appointment tomorrow!"; "If you really cared about me, you would do that now...."
Act:	
Interested	Listen to the person's story. Be patient. Paraphrase what you heard to ensure you 'heard what you heard.' "So, what I am hearing is that you are going to reschedule my spinal epidural because the authorization hasn't been approved, yet. Is that correct?"
Try and:	
Validate	Validate or acknowledge the other person's feelings, wants, difficulties, and opinions about the situation. Be nonjudgmental and express it, e.g., "I understand that it is also difficult for you to interact with me when I am in a lot of pain..."; "I realize that you are trying your best."
Use an:	
Easy Manner	Use a little humor. SMILE ☺; it's hard to be angry when you are smiling. Ease the person along. Be light-hearted. "How are you doing today... Glad to hear that... What I would like your help with today is..." Use a Half-Smile approach, if necessary, when you may be feeling agitated.

Other Ideas: _____

Interpersonal Effectiveness for Pain Management

Goals: Get your objectives or goals obtained, for the most part, in a respectful, nonjudgmental, empathic regard. Have others hear your views and take them seriously. Resolve interpersonal conflict and maintain, preserve, and even nurture important relationships.

D as in **D**escribe the facts of the situation or event.
"*When...*" _____
_____
_____

E as in **E**xpress FEELINGS and/or OPINIONS about the situation.
"*I feel...*" (Use feeling words and/or state your opinion clearly) "*I think it's a good/bad idea...*"
_____
_____
_____

A as in **A**ssert. ASK for what you want, or, SAY NO Clearly.
"*What I'd like is for my doctor's appointment to be changed*" or "*I won't do that because...*"
_____
_____
_____

R as in **R**einforce. You Reinforce or Reward people by explaining CONSEQUENCES. Tell the positive/negative effects of getting what you want, or, for not doing what the person wants you to do.
"*If I don't see my pain management physician on that day I will not be able to get my medication refilled...*"
_____
_____
_____

M as in (stay) **M**indful. Stay focused on your Objective. Don't get derailed by the other person's comments, blame, subject changing, or verbal attacks. If you think the person might object to your limit-setting, or make accusations, or bring up unrelated past events; write some possible distractions here:
_____
_____
_____

A as in **A**ppear Confident. Even when you feel anxious, if you use a confident tone of voice, clearly state what you want, or don't want, you will appear confident to others. If you keep your gaze steady, try not to stammer, or act unsure of yourself, you can do this! Be aware of your body language. Role-play is the best form of practice. Write some practice ideas to use in role-play: _____
_____
_____

N as in **Negotiate**. Possible examples of Negotiate are to offer to give something in order to get something, to ask for ideas, or to brainstorm ideas in order to find a solution that everyone agrees upon. Ask the person "What do you think we should do?" "How can we solve this problem?" Write examples of Negotiate here:
_____
_____
_____

Chain Analysis of Problem Behavior

Links of Action: Event→Thought/Interpretation→Feeling/Body Sensation→Behavior→Consequence

WHAT EXACTLY IS THE ***PROBLEM BEHAVIOR***? (e.g., Yelled at someone; broke something)

WHAT ***PROMPTING EVENT*** IN THE ENVIRONMENT STARTED ME ON THE CHAIN TO MY PROBLEM BEHAVIOR? JUST THE FACTS (e.g., Didn't take pain medication; Lifted something too heavy)

WHAT THINGS IN MYSELF AND MY ENVIRONMENT MADE ME ***VULNERABLE?*** (e.g, ↑Pain; ↓Sleep; ↓Exercise; Mood Altering Drugs; ↓Mastery)

WHAT EXACTLY WERE THE ***CONSEQUENCES*** IN THE ENVIRONMENT?
Immediate:
Delayed:

and IN MYSELF?
Immediate:
Delayed:

WAYS TO REDUCE MY ***VULNERABILITY*** IN THE FUTURE?

WAYS TO PREVENT ***PROMPTING EVENT*** FROM HAPPENING AGAIN?

WHAT ***HARM*** DID MY ***PROBLEM BEHAVIOR*** CAUSE?

PLANS TO ***REPAIR*** AND ***CORRECT*** THE ***HARM***?

LIST ACTUAL BEHAVIORS:

NOW, LIST ***SKILLFUL BEHAVIORS*** TO ***REPLACE*** THE ***INEFFECTIVE BEHAVIORS***:

Buddy List

This list is ***optional, confidential,*** and is only for the use of members of the Pain Management Group

FIRST NAME, Last Initial	Phone number(s) &/or e-mail
1)	
2)	
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	
11)	
12)	
13)	
14)	
15)	
16)	
17)	
18)	
19)	