

On The Nexus of Chronic Pain, Posttraumatic Stress and Alexithymia

Nakieta M. Lankster, One HEARTT, Inc.
and
Jessica Williams, One HEARTT, Inc.

Abstract

Chronic pain, Posttraumatic Stress Disorder, and alexithymia are commonly co-occurring disorders which interact in such a manner that each exacerbates the symptomology of the other. The cyclical nature of co-morbid chronic pain and posttraumatic stress disorder symptoms (i.e., chronic pain reigniting trauma symptoms and trauma symptoms manifesting somatically to increase pain), coupled with the communication and emotion insight impairments associated with alexithymia, often leads to increased complications. However, the interaction between these diagnoses is often overlooked by treating health care and behavioral health practitioners and there is a dearth of research regarding efficacious treatment. This article explores the relationship between these disorders, their interaction, and hypothesizes treatment interventions that address the unique needs of these patients.

Keywords: Posttraumatic Stress Disorder, Chronic Pain, Alexithymia, Cognitive Behavioral Therapy, Acceptance and Commitment Therapy

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Chronic pain symptoms impact more people in America than heart disease, diabetes, and cancer combined (Roditi & Robinson, 2011, p.41). When chronic pain is co-morbid with Posttraumatic Stress Disorder the symptoms of both disorders are intensified (Asmundson, Coons, Taylor, & Katz, 2002). It is hypothesized that alexithymia is the link between these disorders. The purpose of this article is to explore the interaction between these three commonly co-occurring diagnoses and hypothesize effective treatment to address symptomology.

Pain

Traditionally, pain is defined as an adverse experience that indicates tissue damage (Merskey & Bogduk, 1994). From an evolutionary stance, pain functions as an alarm system that alerts one to danger or harm in the environment and teaches the individual how to survive in their world (Eccleston, 2011). In this manner pain is positive reinforcement which serves to reduce the likelihood of future harm and avoid further damage (Broom, 2001). Exempli grata, if a cave man pricks his finger on a thorn the pain associated with the prick teaches him to not touch it again; therefore, he learns that thorns are dangerous. However, pain is not an individual experience. Pain behaviors, or the communication of pain, also provide a social framework for

others to achieve a greater understanding of both their environment and the individual experiencing pain (Eccleston, 2011).

One of the earliest revolutionary theories on the origin of pain sensations came with the introduction of Gate Control Theory. Simply put, this theory states that the dorsal horn, at the bottom of the spinal cord, regulates the transmission of sensory data from various parts of the body to the brain (Moayed & Davis, 2013). When one has nerve damage, sensory information is transmitted to the dorsal horn. The pain gateway then either opens or closes based on a variety of factors. When this gateway opens, pain messages are allowed through to the brain which results in experiencing pain and when it closes sensory data is prevented from reaching the brain and therefore pain is not experienced (Deardorff, 2003).

Chronic Pain

Chronic pain is broadly defined as ongoing pain sensations which continue either constantly or intermittently in excess of three months (Otis, n.d.; Cleveland Clinic, 2017). This pain can be categorized based upon the physiological agent which sustains its presence (Roditi & Robinson, 2011). The most prevalent chronic pain conditions include: neuropathic pain conditions, pain from cancer, musculoskeletal disorders, visceral pain, and headaches (Roditi & Robinson, 2011). Approximately 20-35% of adults have chronic pain (Vlaeyen, Crombez, & Goubert, 2007, Roditi & Robinson, 2011). Moreover, one study found a 50% prevalence rate of chronic pain amongst military veterans receiving healthcare through the Veteran's Affairs healthcare system (Kern, Otis, Rosenburg, & Carrington, 2003).

For the wide array of individuals who experience chronic pain, the effects make daily functioning difficult. With the distraction of pain being ever present, tasks, such as sitting down and getting up, once thought to be simple, become a constant struggle (Duenas, Ojeda, Salazar, Mico, & Failde, 2016). This can lead to a reduction in physical activity due to kinesiophobia (i.e., the fear of movement or reinjury), and limited ability or failure to initiate life essentials such as daily hygiene, domestic upkeep, and social engagement (Duenas et al., 2016; Vlaeyen et al., 2007). Even when pain is not present, individuals are constantly scanning the environment for potential threats and obstacles, always ensuring that there is an escape route (Eccleston, 2011; Vlaeyen et al., 2007). This hypervigilance and heightened sense of fear cycles with catastrophizing thoughts about experienced or anticipated pain. Meaning the individual has negative thoughts about the experience or anticipated pain which causes an increased level of fear and intensified efforts to find and avoid potential threats. Subsequently, their heightened fear leads to more negative thoughts about their pain (Eccleston, 2011; Vlaeyen et al., 2007). In addition, many individuals with chronic pain experience insomnia or sleep interruptions caused by pain inference. Insomnia causes daytime fatigue which can increase pain flare-ups and the severity of pain experienced (Vlaeyen et al., 2007). The by-product of pain, hypervigilance, fear, and catastrophizing is social disengagement. Literature indicates that as many as half of chronic pain patients report their symptomology interfering with social events and having reduced contact with family (Duenas et al., 2016).

Moreover, these issues impact occupational duties and productivity. Several studies have shown individuals to incur issues with absenteeism (Duenas et al., 2016). For example, Duenas

et al. (2016) found that “In Spain, 24.4% of individuals who suffered from [chronic pain] requested sick leave the previous year” (p. 462). When present for work, they often have to reduce their workloads or accept alternative positions due to a reduction in productivity. Individuals with mild pain can have a decrease in productivity of 21.5% while those with moderate and severe pain may have a decrease of 26% and 42.9%, respectively. However, the pain endured, and the resulting deficits in work, often have occupation ending consequences (i.e., leaving their work and seeking unemployment or early retirement; Duenas et al., 2016). All of these life skill, social, and occupational impairments can leave patients finding ways to cope with their pain and/or feeling helpless (Vlaeyen et al., 2007).

Pain is one of the most common somatic complaints for which individuals seek treatment. Factors that influence the course and prognosis of chronic pain include: the etiology, psychological factors (e.g., beliefs about self and the condition, social support, other mental health issues, and the utilization of effective coping skills), and predisposing factors (e.g., heredity and socio-economic status). These aspects combine to dictate: (a) the development of a chronic pain disorder, (b) the severity of said disorder, and (c) the extent of pain behaviors (e.g., grimacing, avoidance, etc.; Vlaeyen et al., 2007). When the aforementioned factors align to create a chronic pain disorder, the effects infiltrate all aspects of the individuals’ life which may leave them with difficulty coping. Eccleston (2011) powerfully stated that “patients with chronic pain [are] people who are forced into unwanted egocentrism, dragged into the present with a focus on one’s own body, alarmed to danger, with no options, techniques or methods at their disposal to achieve escape” (p. 423).

Methods to cope with or escape pain can be divided into two categories, adaptive and maladaptive. The division between the categories is based upon their efficacy in alleviating the impact of symptoms. Adaptive coping behaviors include exercise, seeking professional treatment, and problem solving. Research has found that adaptive coping methods improve chronic pain outcomes. On the contrary, when maladaptive coping behaviors, such as avoidance of activity and catastrophizing are utilized, individuals that experience chronic pain have poorer prognoses (Morasco et al., 2013). For example, a study conducted by Mehta et al. (2015) found that, for individuals with chronic pain, avoidance behaviors significantly affected mood while both avoidance behaviors and anxiety sensitivity levels affected outcomes.

Posttraumatic Stress Disorder

Posttraumatic Stress Disorder (PTSD) is a long-term reaction to a sudden, unexpected distressing event. It may be thought of as a “sucker punch” that throws one off balance (Lankster, 2014). The diagnostic criteria for PTSD include hypervigilance, negative beliefs about one’s self and the world, flashbacks, nightmares, distressing memories and avoidance (American Psychiatric Association, 2013). Many of the symptoms of chronic pain align with those of PTSD and these disorders are commonly dual diagnosed (American Psychiatric Association, 2013; Cleveland Clinic, 2017).

It is estimated that one in five military veterans who meet the diagnostic criteria for PTSD have developed a chronic pain disorder (Asmundson, Coons, Taylor, & Katz, 2002). Furthermore, McFarlane and colleagues (1994), as cited in Asmundson et al. (2002), conducted a

study comprised of volunteer firefighters, they found that approximately 50% of those with PTSD also reported a chronic pain issue, versus an estimated 21% of those without PTSD (Asmundson et al., 2002). Amongst outpatient and community mental health patients, concurrent PTSD and chronic pain prevalence is approximately 20 to 30%. However, these rates may vary based on the chronic pain source (Asmundson et al., 2002). For instance, 10-50% of people experiencing fibromyalgia related to chronic pain are also diagnosed with PTSD, while approximately 34.7% of those with work-related musculoskeletal chronic pain are dually diagnosed (Asmundson et al., 2002).

According to Turk and Okifuju (2002), individuals who are dually diagnosed report a poorer quality of life and a greater severity of pain than those with chronic pain alone. In addition, these individuals have more risk factors; such as other psychiatric diagnoses and substance abuse (Morasco et al., 2013). A study by Morasco and colleagues (2013), found that chronic pain patients co-diagnosed with PTSD reported significantly more pain than those who were not dually diagnosed and reported more substance abuse (28% versus 11%). Additionally, the hyperarousal associated with PTSD was found to mediate pain symptoms (Morasco et al., 2013).

There are two well-known theories for the co-morbidity of PTSD and chronic pain. The Mutual Maintenance Model and the Shared Vulnerability Model posit differing positions regarding the high frequency of co-occurrence with these two disorders. Mutual Maintenance states “certain components of chronic pain (cognitive, affective, and behavioural [*sic*]) maintain or exacerbate symptoms associated with chronic pain” (Asmundson, et al., 2002, p. 933). Within this model the two disorders play off of one another, with the pain serving as a reminder of the trauma and the PTSD symptoms reigniting the pain (Asmundson et al., 2002). However, the Shared Vulnerability Model centers on causal issues. This model theorizes that factors predispose individuals to one or both of these disorders. Anxiety sensitivity, avoidance, and negative emotional states have been shown to be a few influencing factors (Asmundson et al., 2002).

Treatment and Coping

The most widely used treatment for comorbid chronic pain and PTSD is Cognitive Behavioral Therapy (CBT). Though there are variations in the structure of CBT that is employed, treatments generally have the following steps in common: (1) psychoeducation, (2) cognitive restructuring, (3) relaxation training, (4) sleep hygiene, and (5) coping skills (Otis, n.d.). Otis (n.d.) conducted a study which delineated a structured integrated treatment model comprised of 12 therapy sessions. Each of these sessions highlights a specific intervention aimed at concurrently addressing both diagnoses.

Session one focusses on educating the client on their diagnoses and in session two the patient works to make meaning of their pain and PTSD. In session three cognitive errors are discussed, and session four is cognitive restructuring. Session five centers on relaxation; while six is exposure therapy. During session seven pacing and pleasant activities are structured, in eight sleep hygiene is addressed, and nine safety and trusting relationships are brought to the forefront. The tenth session addresses issues of anger, power, and control, and the eleventh looks

at self-esteem and intimacy. The twelfth and final session centers on preventing relapse and planning for flare-ups (Otis, n.d.).

However, those who do not seek treatment, or for whom treatment is unavailable, tend to resort to the aforementioned maladaptive coping behaviors. Maladaptive coping strategies have been found to mediate the relationship between PTSD and chronic pain. Specifically, PTSD symptomology may predispose chronic pain patients to use maladaptive coping behaviors which is predictive of pain disability and poor prognosis (Morasco et al., 2013).

Alexithymia

When seeking treatment for chronic pain and PTSD, another comorbid issue, alexithymia, may complicate both communicating symptomology and receiving adequate treatment. The term “Alexithymia” was coined by Sifneos in 1973, from the Greek – a (lack), -lexis (word), -thymos (emotion), meaning “no words for feelings.” Alexithymia is a cognitive-affective regulation pattern. Originally classified as a somatoform disorder, alexithymia is not a DSM 5 diagnosis. Patients generally appear to have difficulty engaging with insight-oriented therapies, identifying and communicating emotions, as well as differentiating feelings from other physical sensations (Sifneos, 1975). Alexithymia is thought to be “a deficit in the ability to use cognitive mechanisms to understand and regulate emotions, with the result that the person experiences chronic dysphoria, impaired social relations, and physiological sensations of emotions that are misinterpreted as physical symptoms” (Keefe, Lumley, Anderson, Lynch, & Carson, 2001, p. 593; Taylor, Parker, Bagby, & Acklin, 1992).

Individuals with alexithymia may experience intense emotions, such as emotional outbursts, as well as a variety of somatic symptoms (De Gucht & Heiser, 2003; Taylor, Bagby, & Parker, 1997; Taylor et al., 1992). However, when these individuals are questioned about their emotional experience in the here-and-now, they are often unable to link their feelings with specific situations, identify and express higher-level emotions/affect, memories, or fantasies (Nemiah, Freyberger & Sifneos, 1976). Although alexithymia is thought to represent a dimensional personality trait, four salient features are present: 1) difficulty identifying emotions, 2) difficulty describing or expressing emotions to others, 3) having an externally oriented cognitive style, and 4) demonstrating limited capacity for imagination (Nemiah et al., 1976; Taylor, Bagby & Luminet, 2000).

Additionally, this impaired emotional capacity also disrupts an individual’s ability to maintain homeostasis through bodily sympathetic, hormonal, and immune changes (Keefe et al., 2001). This impaired emotional capacity can further be connected to chronic pain. Neurological imaging supports that individuals diagnosed with Alexithymia tend to exhibit reduced activation in the emotion related neural structures of the brain (i.e., limbic areas, prefrontal cortex; Kano & Fukudo, 2013). In addition, they have heightened activation in physiological neural structures of the brain important for detecting and processing sensations (i.e., insula, anterior cingulate, midbrain; Kano & Fukudo, 2013). These variations support that Alexithymia is a plausible mechanism underlying both somatic and dissociative symptoms, such as those experienced in both chronic pain and PTSD (Kano & Fukudo, 2013).

Due to these neurological variations and the resulting somatic and dissociative symptomatology, individuals with alexithymia have a limited ability to effectively cope with stressful situations and are predisposed to negative physiological and psychological concerns (Barbasio & Granieri, 2013; Lumley, Neely, & Burger, 2007; Lumley, Stettner, & Wehmer, 1996; Taylor et al., 1992). Over the past four decades, research has supported that alexithymia is a reliable characterological phenomenon that has been linked to a host of medical (e.g., irritable bowel syndrome, hypertension, gastrointestinal disorders) and psychiatric disorders (e.g., substance use disorders, eating disorders, PTSD, somatization; Fassino, 2010; Kojima, 2012; Taylor et al., 1997).

Alexithymia carries important implications for the impact of trauma. Herman (1997) described the core experience of trauma as “disempowerment and disconnection,” where the foundation of recovery is through empowerment of the self and renewed connections to others (Laskaris, 2016, p. 133). Similarly, alexithymia is understood as a disconnection of the self from one’s emotions and the external environment, such that emotional experiences are essentially “incomprehensible,” as they remain unlabeled and unexplained (Vanheule, Verhaeghe, & Desmet, 2010, p. 90). Laskaris (2016) highlighted the importance of considering the “social, emotional, and physical dimensions of trauma when working with Latinas/os” in her study (p. 46). Her findings support that individuals who have experienced trauma in the context of interpersonal relationships were more likely to exhibit alexithymia and somatic symptoms and had greater difficulty in identifying and expressing emotions. Laskaris identified that the clinical aim when working with individuals impacted by trauma and/or alexithymia, as well as those that tend to manifest their distress as physical symptoms (i.e., chronic pain), is to “foster reconnection with one’s emotions and provide language or methods of emotional expression, all while navigating the cultural values of social connection so that emotionality can be both healing and appropriate” (Laskaris, 2016, p. 47).

Across studies, elevated rates of alexithymia have been identified among various symptom clusters of posttraumatic stress, including dissociation, re-experiencing, acute stress response and hyperarousal, numbing, and somatization (Laskaris, 2016; Krystal, Giller & Cicchetti, 1986; Declercq, Vanheule, & Deheegher, 2010; McLean et al., 2006; Lanius et al., 2010; Taylor et al., 1992). Specifically, this disorder is thought to predict symptoms congruent with numbing and hyperarousal (Declercq et al., 2010). Furthermore, a persons’ inability to identify, communicate, and discern emotions from physical sensations is an important correlation to dissociation and an acute stress response to trauma (Declercq et al., 2010). These same processes are thought to account for elevations in physiological responses to stress, including somatic symptoms (e.g., pain; Krystal et al., 1986; Taylor et al., 1992). In all, strong associations exist between the key features of Alexithymia and the corresponding pain responses to trauma within the body (McLean et al., 2006). Moreover, it is hypothesized by the present researchers that this condition may be a link between chronic pain and PTSD.

Alexithymia in the role of Chronic Pain and PTSD

Alexithymia may contribute to the development and maintenance of chronic pain (Lumley, Radcliffe, Macklem, Mosley-Williams, Leisen et al., 2005; Mehling & Krause, 2005). Though the prevalence of these co-occurring diagnoses is currently unknown, several studies

have found a high prevalence of alexithymia in chronic pain patients (Di Tella & Castelli, 2016). These patients frequently exhibit many of the core features of alexithymia, such as problems in identifying and describing subjective feelings, impoverished imaginative abilities, and excessive preoccupation with physical symptoms and external events. Although several studies have found a high prevalence of alexithymia in pain patients, the manner in which alexithymia may influence pain experience is still unclear (Cox, Kuch, Parker et al., 1994; Sadock et al., 2003).

This correlation is demonstrated by research in pain populations that indicated the Difficulty Identifying Feelings scale of the Toronto Alexithymia Scale as the most consistent predictor of pain and pain-related dysfunction (Mattila et al., 2008). Shibata et al. (2014) found higher rates of alexithymia on this scale to be positively associated with pain intensity and interference, and negatively associated with vitality in a sample of individuals with neuromuscular disease and chronic pain (Hosoi, Molton, Jensen, Ehden, Amtmann et al., 2010).

Other researchers have proposed that the trait of negative affectivity creates a response bias that contributes to both a self-report of alexithymia and self-report of a negative outcome (pain interference, poor quality of life, etc.; Linden, Wen, & Paulhus, 1995; Hosoi, Molton, Jensen, Ehden, Amtmann et al., 2010). Makino and colleagues (2013) also found evidence indicating the effects of alexithymia on pain may be mediated by negative affect. This negative affect is highly correlated with trauma symptomology. As a result, individuals diagnosed with alexithymia and PTSD may experience intense emotional–physiological states (e.g., fear, anger, and dysphoria) that are poorly integrated with, and modulated by, higher-order verbal cognitive processing. Therefore, these individuals may report that they either do not know what they feel, or cannot feel anything at all (Taylor, Bagby, & Parker, 1997). Studies have identified increased rates of alexithymia among individuals with higher rates of exposure to trauma overall, in addition to experiencing negative psychological and physiological difficulties across the lifespan (Declercq, Vanheule, & Deheegher, 2010; Krystal, Giller, & Cicchetti, 1986; Lanius et al., 2010; McLean, Toner, Jackson, Desrocher, & Stuckless, 2006; Taylor, Parker, Bagby, & Acklin, 1992).

Current Treatment for Co-morbid Alexithymia, PTSD and Chronic Pain

According to Lumely, Neely, and Burger (2007), alexithymia may hinder the process and outcomes of many interventions for medical or psychiatric problems; such as PTSD and chronic pain. Individuals diagnosed with alexithymia tend to respond less favorably or more slowly to treatment modalities that focus on insight, emotions, or relationships (Lumely et al., 2007). This poorer response may result from the individuals' difficulty adopting a psychological perspective of their problem and difficulties developing a therapeutic alliance and use of traditional psychotherapeutic interventions (Lumely et al., 2007).

However, alexithymia does not appear to impair adherence to behavioral prescriptions and may even enhance adherence. Much like the aforementioned treatments for co-morbid chronic pain and PTSD, interventions that are behaviorally focused and/or structured, such as contingency management and Cognitive Behavioral Therapy (CBT) may be better suited to triply diagnosed patients than interventions that are insight-oriented, experiential, or relational therapies (Lumely et al., 2007; Otis, n.d.). In particular Acceptance and Commitment Therapy

(ACT) is a clinical intervention that may be beneficial in supporting patients diagnosed with chronic pain, PTSD, and alexithymia.

Acceptance and Commitment Therapy

Acceptance and Commitment Therapy (ACT) is a third wave Cognitive Behavioral Therapy (CBT) intervention that speaks to the nexus of these disorders. ACT is based on Relational Frame Theory, which falls under the umbrella of Contextual Behavioral Science (Hayes & Lillis, 2012). Simply put, this intervention operates under the theory that language and cognition influence one's ability to be mindfully in the moment and choose behaviors befitting to present circumstances (i.e., psychological flexibility). To this end, there are six processes which are seen to inhibit psychological flexibility: (a) lack of chosen values, (b) experiential avoidance, (c) cognitive fusion, (d) attachment to the conceptualized self, (e) inflexible attention, and (f) inaction, impulsivity, or avoidant persistence. The opposites of these processes facilitate psychological flexibility: (a) values, (b) acceptance, (c) defusion, (d) perspective taking/ sense of self, (e) flexible attention to the present moment, and (f) committed action (Hayes & Lillis, 2012).

Lack of chosen values is associated with a dominance of pliant, fused, or avoidant values. These values are prevalent due to the fact that “sometimes people care about things because they have to (fusion) or because otherwise they would feel anxiety or guilt (experiential avoidance) or because of simple compliance with the demands of others” (Hayes & Lillis, 2012, p. 58). Chosen values are just that, chosen. This set of values are defined by the individual's experiences, particularly the moments in their life which have emotionally affected them the most (Hayes & Lillis, 2012).

Patients diagnosed with PTSD and chronic pain often tend to recreate their life narrative to center around minimizing, avoiding symptoms, and traumatic experiences (Dahl, Wilson, Luciano, & Haynes, 2005; Vlaeyen et al., 2007). This “story” is magnified when physical sensations of emotions (i.e., alexithymia) is added. ACT assists the patient in re-identifying their values (i.e., developing a life compass) which allows them to detangle their emotions and thoughts to embrace a new narrative (Dahl et al., 2005). It is hypothesized that this unfolding of thoughts and emotions would not only decrease PTSD and chronic pain symptoms, but also significantly decrease the effects of alexithymia on their physical and emotional state.

As previously stated, part of the reality for these patients is both psychological and physiological avoidance. The avoidance of pain and stress is a part of basic human survival. However, when pain is a constant trigger to trauma and continued pain, avoidance becomes a daily part of life. When verbally expressing that pain is difficult, a person may become trapped in a physical, cognitive loop in which physical pain triggers psychological pain which, in turn, causes more physical pain (Eccleston, 2011; Vlaeyen et al., 2007). Experiential avoidance is an effort to moderate the triggering of an aversive experience by evading thoughts, situations, etc. Acceptance is choosing to embrace those experiences as they are, free of judgement and defenses (Hayes & Lillis, 2012).

Further, the overwhelming fear and triggering of symptoms in patients may be linked to cognitive fusion. Cognitive fusion is a process by which words carry more power than their literal meaning due to their association with a particular event or context (Hayes & Lillis, 2012). This phenomenon is particularly prominent amongst individuals diagnosed with chronic pain, PTSD, and alexithymia, as the enmeshment of the cognitive and the verbal present a unique challenge (Wasler, Westrup, & Haynes, 2007; Dahl et al., 2005). Defusion removes the power of these words by urging the client to be “continuously aware of the process of thinking, in order to increase the psychological distance between the person and their thoughts. . . [This] changes how the client interacts with or relates to thoughts, feelings and bodily sensations.” (Hayes & Lillis, 2012, p. 44-48). In terms of treatment, defusion allows there to be separation between the occurrence of thoughts of hopelessness, negative beliefs, and pain; and the acceptance of these thoughts as truth (Wasler et al., 2007; Dahl et al., 2005). As Dahl et al. (2005) stated “it is not about convincing clients that they are hopeless. It is something akin to laying down a heavy burden that cannot, and need not, be carried” (p.132).

The conceptualized self is the individual’s personal narrative about who they are and how they came to be that person. The issue with this narrative is that it is formed from a limited amount of information (i.e., one’s memories and their perspective), and is often finite. Identities such as “victim” and “pain sufferer” are often held by those who have experienced PTSD and chronic pain. Once this conceptualized self is formed the individual operates within that framework; how that version of self should feel, dress, think, and so on (Wasler et al., 2007). This concrete image of self, based on limited information can then become a cage, confining the person to their definition of self. Perspective taking sense of self gives one the flexibility to look at themselves from other perspectives; gaining new information and expanding their sense of self (Hayes & Lillis, 2012).

According to Hayes and Lillis (2012), attention is more than a skill. It is the modality in which an individual forms reality. Through attention to sensory experiences one creates their world. Unwavering attention (i.e., inflexible attention) to past traumas or future worries creates the experience of them in the present. Flexible attention gives the patient control over what they attend to, focusing on the present moment (senses, urges, thoughts, feelings), and therefore, the ability to gain control over their current reality (Hayes & Lillis, 2012).

Finally, Committed Action is the process of disassembling maladaptive behavioral patterns, and replacing them with behavioral systems that are based on the aforementioned chosen values. Inaction, impulsivity, and avoidant persistence are a few of the forms that maladaptive behavior may take particularly for patients diagnosed with alexithymia, chronic pain, and PTSD (Hayes & Lillis, 2012; American Psychiatric Association, 2013; Duenas et al., 2016).

Conclusion

In patients with PTSD, there is a higher prevalence of chronic pain than in the general population (Morasco et al., 2013). Additionally, patients with PTSD and chronic pain are often in more pain than those without PTSD (Asmundson et al., 2002). Symptomology is often escalated when alexithymia is a co-occurring disorder. The development of emotion processing skills, such

as the ability to identify, verbally express, and regulate one's emotional states, may be obstructed in individuals who have experienced trauma. A variety of factors, such as negative affectivity, intense emotional and psychological states, and impaired cognitive functioning, mediate the relationship between these three disorders (Linden et al., 1995; Hosoi, Molton, Jensen, Ehden, Amtmann et al., 2010).

With triply diagnosed patients, alexithymia can impede patients from seeking help and comfort from others, as well as it can interfere with the progress of treatment when particularly using insight-oriented interventions. At present there is a dearth of research on the commonality of these disorders co-occurring; however, the authors have observed a high frequency of these co-occurring disorders diagnosed within their respective practices. Additional research is needed to determine the prevalence of triply diagnosed patients. Moreover, future research may examine the effectiveness of psychological treatment for alexithymia. In general, there is voluminous research examining the construct of alexithymia as an important treatment-interfering variable that impacts the manifestation of psychological and physical symptoms; however, the research is limited in terms of addressing alexithymia within clinical practice (Lumley et al., 2007). Future research may consider evaluating potential treatment approaches that may reduce alexithymia, as well as better understand or target specific techniques that can be effective. For example, there is burgeoning research examining the effectiveness of somatic-based therapies for the treatment of trauma as a method to both guide clients with effective emotional expression, as well as reduce hypersensitivity to physical sensations in the body (Levine, 2010).

Research does identify that CBT interventions may be practical to use with individuals diagnosed with these disorders to address the barriers presented in these cases. Specifically, it is hypothesized that Acceptance Commitment Therapy (ACT) can accommodate the unique needs of this population in a manner that overcomes cognitive, verbal, affective, and physiological obstacles. Future research can be used to expand current findings to identify the validity of utilizing ACT with this population.

Finally, additional research is needed to examine the cultural implications of individuals experiencing chronic pain, PTSD, and alexithymia and how clinical interventions should be integrated into treatment in order to best meet the patient in the present moment.

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