Exploring the Use of Attachment and Polyvagal Theory with People in Chronic Pain: A Relational Approach for Counsellors and Healthcare Workers

by

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Abstract

Pain is a form of survival. When we experience pain, we are reminded of past events or situations that were harmful, we are motivated to heal, and we are taught through the endless interplay between our mind and body what to avoid in the future (Cohen et al., 2021; Katz et al., 2015). Pain exists to teach us and keep us safe (Cohen et al., 2021). This relationship between pain and safety has inspired curiosity to explore the use of polyvagal and attachment theories with individuals experiencing chronic pain.

My desire for an in-depth examination of these ideas stems from over thirty years in healthcare practicing Chinese Medicine working with people experiencing pain and witnessing how interactions in systems of care can and inadvertently do influence and oftentimes worsen mental health through the process, all of which deplete resources further and perhaps unnecessarily. Through examining the theoretical foundation of polyvagal and attachment theories, I aspire to present a more humanistic and socially just approach to how we engage with individuals who are suffering daily and being diagnosed, treated, and/or pathologized. This paper reviews current theories of attachment and polyvagal and their respective contributions to the experience of chronic pain and somatic symptom disorder. A biopsychosocial approach to pain and working with chronic pain is a foundational pillar in this paper. The difference between knowing versus embodying these two theories and a biopsychosocial lens is a key consideration when exploring success with pain.

Keywords and their abbreviations: attachment theory (AT), biopsychosocial (BPS), chronic pain (CP), emotionally focused therapy (EFT), polyvagal theory (PVT), somatic symptom disorder (SSD)

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Chapter 1: Introduction

The International Association for the Study of Pain (IASP) defines chronic pain as pain that persists or recurs for longer than three months with no biological cause and no adaptive purpose (Kang, et al., 2023). The World Health Organization's (WHO) 11th revision of the International Classification of Diseases (ICD-11) added chronic pain as its own independent diagnosis, with further subcategories of chronic primary pain (the pain experience itself is the problem) and secondary pain (secondary to some other primary disease or process in the body) (Health Canada, 2021).

Individuals seek counselling for a number of narratives, needs, or wishes and the reason for their visit. One might be assigned to work with an individual through an agency as part of healing from an injury or illness or discharge process of care if working with an agency or insurance company. Any story is filled with material to explore when considering an individual's nervous system and sense of safety. If their pain is persistent, must we assume their experience is pathological? If they come to us to care for this pain, should we only focus on the pain?

A biopsychosocial model takes into consideration every aspect of an individual, including the mind and body, and examines biological, psychological, and social factors that contribute to pain (Bevers et al., 2016). The idea of caring through a biopsychosocial lens speaks to the inherent need to not only talk or read about this approach but also to embody it within us so that we can relate to it in others. From this viewpoint and personal experience, I am curious to explore how attachment theory and polyvagal theory can be used both independently and together to work with individuals experiencing pain. I want to know what it means to embody these theories within our work from our own personal exploration and care to that of the systems

we work within and/or deliver from–essentially, to appreciate that a biopsychosocial lens recognizes that pain is a swinging door between many rooms.

Background on Chronic Pain and Its Impact on Individuals

Chronic pain and suffering are increasing globally (Korzinski, 2019) as is our understanding of pain and the multifaceted ways in which our body, mind and spirit interact with our inner and outer worlds. According to the Angus Reid Institute, approximately one third of Canadians are suffering pain (Korzinski, 2019), which totals nearly 8 million people or one of every five individuals who that are living with pain that lasts longer than 3 months (Kang et al., 2023). Those suffering most with chronic pain include seniors, people living in poverty, people with mental health or substance use disorders, people in the trades and transportation industry, veterans, Indigenous Peoples, racialized communities, individuals with sexual or gender diversity, individuals who have experienced past trauma or violence, those with disabilities, and women (Health Canada, 2021). When considering pain through a biopsychosocial lens, the possibility of improved care for those suffering most could be improved through both individual and systemic changes.

Somatization, more recently rephrased as somatic symptom disorder, is a medical term used as a diagnosis to explain symptoms of pain that are not biologically verified, are considered to have no adaptive value, and are not validated by medical tests (Katz et al., 2015). The diagnosis is often made by eliminating other causes of pain through current testing procedures. The fifth edition of *the Diagnostic and Statistical Manual of Mental Disorders* (DSM-V) has renamed this diagnosis as somatic symptom disorder (SSD), which involves one or more physical symptoms accompanied by an excessive amount of time, energy, emotion, and/or behaviour related to the symptom that results in significant distress and/or dysfunction, and does

not have any known pathology to explain it (D'Souza & Hooten, 2023). While a diagnosis of SSD can support closure for those searching for answers when medical tests do not find cause, this diagnosis can also compromise trust and therapeutic alliance by directly or indirectly implying fault or blame (Katz et al., 2015), with the added stigma and sequela attached to being told pain experience is all in one's head (Wu et al., 2023). Dualism views pain as distinct and separate, while somatization refers to patients experiencing, communicating, and seeking care for symptoms disproportionate to pathological findings. Models of care that embody a relational perspective of pain as opposed to a dualistic and compartmentalized approach are necessary. A history of dualistic thinking, which separates physical experiences from mental or emotional or mind-body differentiation, is rooted in this problem and is central to the purpose of this paper.

I wish to examine the evolution of our understanding and interactions with people in chronic pain, as many systems still operate from what I view to be a predominately power-centered hierarchy where blame and shame are often the underbelly of interactions. An alternative response to chronic pain management proposes the inclusion of a humanistic approach that deconstructs the medicalization of pain, co-regulates with the people we work with, and inspires their internal resilience and sense of connection. I am curious to explore how, as caregivers, embodiment and awareness of our own attachment needs, and nervous system states can work with others to support safety and connection and reduce fear and pain response.

The dance of managing and living with chronic pain is mired in an outdated tendency to pathologize experiences rather than listen to these experiences and use them as pathways towards improved well-being. Recognizing that mind-body dualism is an outdated approach, I propose an implementation of care that prioritizes a biopsychosocial model with awareness of attachments, trauma, and co-regulation at the forefront to improve outcomes with this population.

At its most basic level this paper aims to support that–given that pain and/or injury carry a level of trauma, trauma dysregulates our nervous system, and poor attachments influence perception of safety and connection–it is reasonable to hope that interacting with people in pain through a more relational approach will foster safety and alliance and will create better outcomes for people experiencing chronic pain. I hope to shift the narrative of supporting those in pain from telling them what *they* have to change to heal, to explaining what *we* have to change to support them to heal best. To do so requires that we, the caregivers, share the responsibility to change our healing practices as much as those we hope to support. This is what it means to practice from an embodied state - where we are priming ourselves to recognize our own physical and emotional states and how we influence the people we work with.

Importance of Improving Healing Outcomes for Chronic Pain Sufferers

The importance of improved outcomes for individuals with chronic pain (CP) or with SSD can be appreciated when we recognize how, oftentimes, quality of life is compromised for these individuals as well as their families and social networks. Chronic pain impacts not only the physical experience of life for individuals but compromises emotional wellbeing, financial security, ability to work and contribute, and ability to socialize, build, and maintain community. Chronic pain can isolate individuals and compromise their ability to be in relationship with others (Zale et al., 2013). Chronic pain surpasses both heart disease and cancer combined in terms of cost (Cohen et al., 2021). Suffering is among the most harmful aspects of living with chronic pain as it permeates one's entire being and impacts physical and emotional health and outlook (Coren, 2016). It is plausible that suffering will decrease as some of the many variables of pain are regarded and tended to with the overarching themes presented in polyvagal and attachment theories.

Identifying the interplay of our mind and body and the recent advances in medical research and imaging have highlighted how complex chronic pain is–that it is a field in healthcare ever evolving and redefining itself (Cohen et al., 2021). Consequently, the challenge in diagnosing and working with chronic pain demands individualized care as each person is a complex matrix of systems that influence and are influenced by one another (Cohen et al., 2021). Just as humanistic approaches in psychotherapy have demonstrated the value of person-centered care, a similar customized approach in our interactions with chronic pain clients acknowledges a person's makeup and allows for context, thereby supporting their individual processing of pain, physically and relationally, with the people in their lives and in their experience of care (Naye et al., 2023; Zale et al., 2013). Through tending to each person's unique attachments and trauma response, resiliency factors are more likely to be identified which can serve as a protective factor against unnecessary tests, procedures, and costs not only to the individual but to the healthcare system as well. The onboarding of these theories in working with individuals supports their own relationships, which has added potential in healing outcomes (Ainsworth,1979; Bowlby,1978; Cohen et al.,2021; Johnson,1998; Johnson & Campbell, 2021; Porges & Dana, 2018).

Among the most tragic examples of iatrogenic illness in pain management is the introduction, promotion, and subsequent withdrawal of prescribed opioids for pain (Dassieu et al., 2022). A substantial number of people who use substances are doing so to medicate for chronic pain due to a lack of proper pain care (Health Canada, 2021). Several factors have contributed to the massive increase in opioid-related injuries and deaths over the last twenty years. The increased availability of opioids and the increase in prescribing of opioids to people, especially those at risk of substance use disorder; the introduction of fentanyl, its high doses and risk of death; socio-economic influences of substance use such as racism, trauma, or poverty

(Health Canada, 2021); and the scarcity of barriers to access non-opioid alternatives for treating pain–all are reasons to reevaluate and individualize care that begins from an attachment-based trauma-informed lens. Pain continues to be on the rise, and despite what has been thrown at CP for treatment, it is not helping. Based on statistics, CP has been getting worse the more we do for it (Ashar et al., 2022). As noted in a pain task force report, Despite widespread decreased opioid prescribing, and investments in a continuum of harm reduction, treatment, and prevention initiatives, there are record high numbers of overdose deaths in Canada. We must urgently address untreated pain as a driver of this crisis (Health Canada, 2021).

As the economics of suffering become ever more apparent and the trajectory of chronic pain escalates in the world, the impetus to improve our understanding of how the body experiences pain continues to grow exponentially. This intersection of pain, economics, substance use, our evolving understanding of addiction and trauma, and a desperate need to reduce deaths have created a perfect opportunity to emphasize that healing begins by establishing safety and reducing fear. Healing could benefit greatly from an integrated response to pain that values the role of psychotherapy rather than having medicine be the only gatekeeper. Current research suggests that pain is a threat to the social self (Zajacova et al, 2021) and this information is a beautiful entry point for mental health providers to consider what more could be done to support these individuals and the world they live in.

Overview of Polyvagal Theory and Attachment Theory

Attachment theory (AT) was introduced in the 1950s by a British psychologist named John Bowlby (Bowlby, 1978). His theory centers on the early bonds in our childhood and how these relationships position individuals to interact with other beings throughout their life. Attachment theory stems from the reality that we are completely dependent on our primary care

givers in order to survive while we grow and develop towards independence. This dependency on our primary caregivers drives an innate need for establishing deep bonds with others, which subsequently influences the social and emotional expectations and relationships we all experience as adults.

Polyvagal theory (PVT) provides an interesting and neuroscientific perspective to study feelings of safety and to implement and understand neuroanatomy and neurophysiology (Porges, 2022). This perspective identifies pathways in our nervous system that can influence the response to threat reactions and help to calm these defensive responses by communicating cues of safety. Feelings of safety allow us to connect with our environment and those around us without feeling or expressing threat and vulnerability. The intersection of PVT with trauma, pain, nervous system response, and safety presents some hopeful and powerful opportunities to work with nervous system regulation and support in individuals experiencing CP.

It is important to appreciate the overlap between polyvagal theory and attachment theory as both offer explanations of the connection between safety and health. In terms of supporting chronic pain, the importance of connection, security and reassurance are all important factors that promote healthy outcomes and could be better prioritized as the leading lens in how we receive all people experiencing pain. If we are not speaking to these attachments and nervous systems that are designed to promote well-being, how can we ever change the experience of pain?

Significance and Purpose of This Review

The motivation to write this paper stems from over thirty years of working in healthcare as an allied health practitioner offering acupuncture and herbal support to individuals who are experiencing chronic pain.

Over these decades, I have observed too many individuals who have not experienced supportive interactions with healthcare providers, insurance companies, peers or family, particularly when their chronic pain cannot be medically imaged or identified from conventional tests. By default, these individuals become pathologized as experiencing somatic symptom disorder (SSD) and historically have been dismissed from further medical support while they continue to suffer physically, as well as in the other aspects of their life that pain depletes. The greatest tragedy to date has been the opioid epidemic and its history tied to pharmaceutical companies selling pain relief at a cost higher than anyone could have imagined (Dassieu et al., 2022). What I have witnessed repeatedly is how difficult it is for people to resource themselves and recover from pharmaceutical treatment when it no longer helps or never did. Nothing about this makes sense; nor does it invite the many inner resources we have that can promote a better outcome. It isn't the clients that need to change how they manage their pain. It is all of us who work with them that need to prioritize alliance, safety and connection so that fear can abate, and the body can find its resources. We know better, and now it is time to do better.

Chapter 2: Literature Review

Chronic pain (CP) is one of the leading causes of disability and effects an average of one in five people in their lifetime (Health Canada, 2021). Approximately 85 percent of cases of CP are considered primary, which means there is no known peripheral or external cause or origin, yet most of if not all treatments continue to target peripheral areas only (Ashar et al., 2022). Beyond its impact on the quality of life of the individual and their socioeconomic wellbeing, chronic pain has been linked to addiction and opioid dependence, as well as mood and anxiety disorders (Dassieu et al., 2022) which creates a busy intersection for a multitude of treatment and care providers to consider. People with persistent pain are more likely to come to the attention of therapists for treatment to address the many additional challenges of CP, such as mood problems, substance abuse, or relationship difficulties. This literary review uses a bottom-up approach to working with chronic pain and explores the intersection of chronic pain and the diagnosis of SSD from a biopsychosocial perspective of care through the theoretical lenses of attachment theory (AT) and polyvagal theory (PT). Searching academic, peer- reviewed journal articles and those that integrated attachment and/or polyvagal theory with chronic pain was the method used for this review. The databases searched included ProQuest, EBSCO, PsychINFO, psychARTICLES, Google Scholar, and PubMed. To focus the search, the following keywords were used: *culture, embodiment, polyvagal theory, attachment theory, chronic pain, SSD, EFT, and biopsychosocial*. Studies that provide integration and comparisons of larger data sets were given special consideration, including reviews, meta-analyses, and meta-syntheses. Research articles written by professionals whose initial work was referenced in several publications were included whenever possible, and recent work was also given priority.

Polyvagal theory focuses on the role of the vagus nerve which is one of the longest nerves in the body and runs from the brainstem to the belly. It is an important part of the autonomic nervous system, regulating the body's response to stress and establishing safety (Porges, 2022). Similarly, attachment theory has evidenced the many ways in which our various attachments can influence our sense of security in the world, and how we both give and receive support or connection. With trauma being a cause and a symptom of many chronic pain conditions, this review explores the ways in which these two theories might offer significant resources in improving the experience of individuals living with chronic pain.

A biopsychosocial lens is implemented to both recognize, appreciate, and emphasize the multifactorial influences of pain including, but not limited to, psychological, social isolation, disability, trauma, age, gender, sexual orientation, culture, socioeconomic status and stigma (Mescouto et al., 2023). The increase in CP and the variety
of health care services that these people will seek
demonstrates how critical it is to comprehend and manage chronic pain using an approach that take s interpersonal factors into account (Cohen, 2023). This multidimensional approach benefits all people dealing with chronic pain, whether experiencing it firsthand, living with an individual that is suffering, or treating those living with the impact of chronic pain.

Chronic Pain and Somatic Symptom Disorder

Two sub-themes to consider when evaluating chronic pain (CP) are the challenges and benefits of using a diagnosis of somatic symptom disorder (SSD), and the potential for improved healing outcomes and quality of life with the inclusion of humanistic therapy.

The history of diagnosing SSD has its roots in the diagnosis of hysteria and can be traced back to possession of spirits from ancient Egyptian and biblical records, through the Middle

Ages where pain without known cause was related to witchcraft and sorcery, to the subsequent introduction of Freud's psychoanalytic theory and description of conversion disorder (North, 2015). By the mid-twentieth century, hysteria was routinely defined as multiple, recurrent, unexplained physical symptoms presenting in many different organ systems (Purtell et al., 1951, as cited in North, 2015), with a heavy lineage of blaming the womb for displacing the internal workings of women in states of hysteria (Durns, 2022; North, 2015; Paulon, 2022). Paulon (2022) and Sobennikov et al. (2020) dive deeply into the historical roots of this diagnosis and its use in describing and eventually diagnosing individuals whose experience falls outside the constructs of medicine as it evolved. Paulon (2022) does a particularly thorough job of tracing the origin of somatization to hysteria and highlights the implication and consequent diagnosis of people, primarily female, along with a clear explanation of how hysteria and eventually somatization entered the world of psychiatry. Through detailing the construction and consequent and slow deconstruction of somatization and its link to hysteria, the article details the importance of narratives in systems and the influence allies with power in systems can have on knowledge production and validations (Paulon, 2022). Critics of this diagnosis share concern over the history of its inception being rooted in hysteria, the influence of misogyny in the medical field through history, and the recent shift in the medical field to rename hysteria to SSD in the 1980s (Walker, 2019). Walker (2019) discusses the lineage of diagnosing somatization and acknowledges its inception as a diagnosis based on judgement and a total lack of statistical method. The subjectivity of this diagnosis has evolved with the creation of technology and the ability to generate multivariate statistical methods to characterize and predict symptoms (Walker, 2019), though judgement has, to some degree, remained an embedded component to this diagnosis despite the addition statistical information (Wu et al., 2023). From a social justice

lens, this poses serious considerations when gender, culture and economics intersect with a default diagnosis. Cultural bias creating standards of normal versus abnormal, lack of thorough evaluation of said bias, and pathologizing normal human experience without context and, in instances, hard science are among the greatest concerns surrounding the use of the DSM. Lanzara et al. (2019) conducted a systematic review which analyzed the relationship between migration and somatization by generating a qualitative data synthesis of original research articles on the topic. These findings, along with an additional cross-sectional study by Nakkas et al. (2019) are among the articles located that use combined statistical models to examine the impact of culture, pain, and ability to understand and communicate the layered ways in which pain is perceived and expressed between genders and cultures. An additional concern is that pathologizing chronic pain negates aspects of normal human experience and consequently can isolate or 'other' individuals experiencing what is now considered to be a normal interplay between body and mind. This is where the inclusion of humanistic or person-centered approach, which recognizes each individual as a whole or all chronic pain has the potential to embrace all beings holistically and bridge the gap that has long been in place with respect to health, culture and resources.

Challenges with diagnosing SSD can be significant given it is dependent on presenting symptoms or failure to find physical cause through medical assessment. It is a default diagnosis. There are many implications of the diagnosis of SSD, and it is worth considering the roots of this term derived from the diagnosis of hysteria. Establishing a diagnosis of SSD is primarily based on the exclusion of other positive test results, and by default, constructing a pathology that claims mental health as a causative factor (Ball, 2022).

Despite the stigma that physical pain with a psychiatric diagnosis may have, the benefits of an SSD diagnosis can be helpful in creating a treatment plan for individuals who are experiencing chronic pain with an unidentified source. The diagnosis can support individuals with resources and community to explore the mind-body connection and identify areas of challenge and struggle that may have been overlooked. Aamland et al. (2017) conducted a study using data generated from a focus group to identify key areas of benefit when working with medically unexplained physical symptoms (MUPS). Though the study group consisted of only 24 Norwegian general practitioners that knew each other and consisted of more than double the number of male GPs, the study does demonstrate how qualitative information can be translated numerically and can generate information that is useful to improve future care. Through sharing positive outcomes, this particular study emphasized the importance of alliance with physicians and care providers which consequently encourages sustainable responsibility and creative solutions, enabling them to better manage and support patients with chronic pain. An additional study is one by Singh et al. (2023) in which researchers made a conscious effort to recruit participants through word of mouth or snowball sampling methods. While this style of research has its shortcomings in terms of bias, it does allow for the study of populations that can be hard to access and therefore can help to represent marginalized groups that might otherwise be overlooked. Additionally, maximum diversity was supported by recruiting participants from various socio-economic, occupational, and educational groups. This study demonstrates how diagnosis and treatment of challenging issues can foster better research and understanding in arenas of health care by continuing to reach further to represent nondominant groups and to increase relational strength in caring for others. Without the diagnosis, individuals and their friends and families risk suffering further with fewer resources and less support.

One study of interest by Falahatdoost et al. (2020) built upon previous research around insecure attachment style and its positive relationship with somatization. A descriptive correlational approach was used to demonstrate the relationship between attachment styles and somatic symptoms with the mediating role of emotional processing. The results indicated that when reciprocal attachment issues were controlled, they served as protective factors against challenges in emotional processing and somatization of difficult emotions (Falahatdoost et al., 2020).

A two-wave longitudinal study by Pinto et al. (2023) aimed to investigate the interaction between cumulative adversity (total amount of adverse and traumatic experiences), posttraumatic stress symptoms (PTSS)and somatization symptoms in adolescents. The results demonstrated a strong interaction between cumulative adversity and adolescents suffering from somatization symptoms (Pinto et al., 2023). This speaks to the economic benefit for all involved that navigate SST, particularly if data such as this can be used to mitigate future escalation of pain through the support of attachment repair and healthier emotional experiences.

Through another longitudinal study that spanned five years, Glaus et al. (2022) further affirmed the effects of intergenerational transmission of somatization in the context of interpersonal violence (IPV) and related maternal PTSD. Maternal PTSD is defined as the experience or witnessing of trauma during pregnancy or birth with lasting consequences. The results of this study offer further support around qualitative assessment in individuals and the interventions that can be implemented when relationships such as PTSD and somatic symptoms are correlated.

Attachment Theory and Chronic Pain

“An individual's response to any real or perceived separation from or loss of an attachment figure (Bowlby, 1982), particularly in the face of threat, has been shown to instigate a predictable series of responses designed to reinstall the bond and facilitate an adaptive response to environmental demands” (Bowlby, 1988, as cited in Steill et al., 2007, p. 62). This quote offers food for thought in terms of recognizing our innate need for security though attachment when pain threatens our life experience. There are four main categories of attachment style documented that are based on childhood experience and relationship with primary caregivers. As infants, we are completely dependent on our caregivers to survive, and as we develop, we are shaped to expect what we are provided with. The four recognized styles of attachment are secure, anxious-resistant (also known as anxious-ambivalent), anxious-avoidant, and disorganized attachment (Ainsworth,1979; Bowlby,1978).

The golden standard for a healthy adult experience is known as secure attachment. Securely attached individuals are typically privileged with responsive, available and consistent caregivers who foster safety, comfort, reassurance and love. Not surprisingly, these are all markers of a relaxed and peaceful nervous system and a calm resting state (Failo et al, 2019). The other three forms of attachment identified result from bonds that are not secure and comforting or were not reliable. Anxious-resistant attachment is a style of interaction that can generate a very high need for connection or dependency with separation anxiety being a major feature (Scheidt & Waller, 2015). Separation anxiety refers to intense fear of being separated from one's mother or other primary caregiver and can be present in childhood and/or evolve into adult separation anxiety disorder (ASAD) (Bozkir, 2022).

According to Shear et al. (2006), adults with ASAD experience higher rates of divorce, unemployment and work failure, and lower education levels and likelihood to marry compared to

healthy controls. Anxious-resistant attachment style can make it difficult for an individual to feel soothed and connected, despite a high drive for the opposite. The third form of attachment style, called anxious-avoidant, typically presents as an individual who moves away from caregivers or seems distant or detached and prefers to self-soothe and minimize closeness (Failo et al, 2019). The final style of attachment theory, disorganized-attachment is as it sounds: the individual is typically an inconsistent combination of anxious and avoidant, at times dissociated or confused, and reactive with others. This style has been linked to individuals who have grown up in identified circumstances known to have negative impacts on development and commonly referred to as adverse childhood experiences (ACES) (Zhang et al., 2023). When superimposed with the long and arduous world of healthcare and its continued and evolving understanding of the human body, it is important to appreciate the role of all healthcare providers and the alliance they foster. One example of this was demonstrated in a study by Pfeifer et al. (2019) comparing chronic pain outcomes between those that received treatment as usual, those who received care from someone that had received basic attachment training, and a third group identical to the second with the addition of knowing the attachment style of the person they were working with. Those in the second group surpassed the other two, which demonstrates the strength of alliance and connection over all else. We can provide a safe haven–or not. The availability, quality of response, and sensitivity offered to another are all hallmarks of a secure attachment style which have been proven to support comfort, confidence and subsequently resilience (Romeo et al., 2017). Alternatively, lack of consistency, availability or sensitivity is linked to the development of insecure attachments, which is a key consideration of this paper and its future hopes for improved outcomes.

Attachment Theory, Pain Perception, and Coping Mechanisms

The first model that examined attachment and pain response was written in 1982 by Kolb, describing “pain complaining” as an attachment behaviour learned in childhood to elicit support from an adult caregiver (Meredith et al., 2008). This model emphasized that regardless of cause, these repeated cries for help from those living with CP were to be regarded by practitioners as a type of insecure attachment stemming from a lack of childhood security. Kolb (1982) suggested that “shopping” for interventions was a form of attachment searching and could arise from an inability to establish a secure therapeutic alliance with health care providers (Meredith et al., 2008). Although the model by Kolb made some significant claims, it was decades before the relationship between attachment style and CP were revisited and worthy of expanded research. In response to reviewing the literature and research of Anderson and Hines (1994), Kolb (1982), Meredith et al. (2008) and Mikail et al. (1994) presented the attachment diathesis model of chronic pain. The main feature of this model is that it shows the reciprocity that exists between pain and attachment. The study identified clearly that the relationship of our attachments and how we receive and perceive the experience of pain is like a swinging door that can exit and enter from either direction. Specific findings from the work of Meredith et al. (2008) confirmed that those with insecure attachment styles are more likely to experience CP. Aspects of insecure attachment styles that were found to predispose individuals to CP included depression, maladaptive ways of coping, fear of a serious disease, and catastrophizing pain. A key finding in this study was that although attachment style itself did not create CP directly, the attachment style for some individuals predisposed them to comorbidities that contribute to chronic pain and significantly influence the ways that individuals elicit support from others, which can and often does add to the experience of CP (Meredith et al. 2008). The model brought forward by Meredith et al. (2008) marks a notable change in the

approach to attachment and pain. While former studies explored attachment and its direct influence on pain, the attachment diathesis model of chronic pain emphasized the psychological factors inherent in certain attachment styles, such as depression or anxiety, and the influence of those factors on CP. One study by Meredith et al. (2008) evaluated 99 participants with chronic pain both before and after receiving treatment for pain. Two key dimensions of attachment were identified as being significant in depression both before and after treatment. Comfort with closeness was more influential than relationship anxiety in the outcome of depression for individuals receiving treatment for CP. Seeking comfort and security from an attachment figure in the face of physical or psychological stress or threat is a survival strategy. This strategy of survival helps to restore an individual's psychological and physical balance, consequently supporting adaptation to and coping mechanisms with the presenting stressor (Steill et al., 2007). Considering the impact that a close and comfortable connection has on decreasing depression, the results of this study are significant in relationship to the standards of care for chronic pain to date and the potential that adult attachment theory may have in complementing and improving pain treatment programs, and how individuals with chronic pain are received and supported through care.

Meredith's work (2008) highlights the attachment dimensions of comfort with closeness and relationship anxiety with depression. Attachment anxiety was associated with lower pain thresholds, depression, increased stress and catastrophizing, and a decreased control over pain. These studies highlight the ripple effect that attachment has on our life lens, its psychological influence, and how that profile intersects with pain experience and subsequent care.

An additional component of attachment and its relational influence on pain is the impact that pain has on interactions with others based on attachment style. The review by Romeo et al.

(2017) found that, although studies demonstrate a relationship between attachment and pain response, most failed to explore how these attachment needs impact interpersonal relationships and how that impact adds to the influence of chronic pain. Studies following 2008 increased awareness on the relational influence of attachment which marked the next leap in appreciating that pain is influenced by many dimensions. These studies emphasized the powerful relationship of an individual's social network, care team, or community as influencers of pain, both in perception and coping mechanisms. For example, Brend et al. (2013) note that secure attachments are consistently associated with positive outcomes for children. Most significantly, the attachment styles of substitute caregivers can impact the attachment styles of children in their care. The information demonstrates the sensitivity our attachments have and the ways in which they can be maintained, worsened, or improved by those caring for an individual.

Attachment theory recognizes how our early experiences and dependency on our caregivers influence and shape our expectations and behaviours in our relationships throughout our lives. A literature review of nine papers by Romeo et al. (2017) indicated that there was not a direct relationship between chronic pain intensity and attachment but did find a relationship between attachment style and coping strategies. For example, anxious attachment was found to influence self-worth, which, combined with anxiety or worry, tended to increase the likelihood of catastrophizing pain. Likewise, avoidant attachments were found to resist seeking or receiving care compared to other attachment styles. While direct correlations were not found in this literature review, there were strong associations made between attachment styles and coping strategies that included high anxiety levels with stronger stress responses leading to exaggerated pain experience. The data from this study highlighted that attachment influences the coping strategies that individuals have in response to chronic pain (Romeo et al., 2017).

Attachment Theory and Its Application Clinically with Chronic Pain

The work by Meredith et al. (2008) and Romeo et al. (2017) demonstrate the evolution and significance of considering adult attachment theory in both the assessment and treatment of chronic pain and the significance of how these assessments are conducted with each individual. Assessing attachment style at the onset of working with people's pain can help identify individuals who may be inclined towards dysfunctional responses (Martínez, 2012). As mentioned earlier, Pfeifer et al. (2019) found that therapeutic alliance trumped this and remained most influential long term, which emphasizes the strength of an embodied biopsychosocial lens. With proper training and support, tending to these attachment styles can influence outcomes. In their literature review, Romeo et al. (2017) identified a use of attachment theory in treating chronic pain patients. While attachment style was not found to have a direct influence on chronic pain, there was a strong correlation found in the ways that interpersonal relationships and reciprocity within those relationships influenced pain. The relational importance of an insecure attachment style becomes a mediator for experiencing anxiety, catastrophizing, seeking care, receiving care; these factors then determine what kind of care may be best (Romeo et al. 2017). The clinical importance of this centers around the knowledge and response of those tending to individuals in chronic pain. Considering the use of attachment theory to ease chronic pain lends itself to the idea of co-regulation and supportive environments that foster reassurance or security to lessen anxiety and, thereby, pain.

Chronic pain evolves in the context of an interpersonal relationship that affects and is affected by a dynamic and reciprocal exchange. For some forms of insecure attachment, intrapersonal coping mechanisms create relational exchanges that alter interpersonal dynamics and consequently can assist or perpetuate the experience of CP. For example, some individuals

that struggle with attachment may have difficulty expressing their experience of pain which can alter the way they interact with those around them. These altered interactions can create barriers in relationship that could otherwise be considered supports. Family support is linked to a lower probability of acute pain turning into chronic pain, and family tension is a significant component associated with the escalation of chronic pain (Woods et al., 2019). Seen in this light, it may be appropriate to prioritize family relationships in pain treatment methods to stop pain from developing and getting worse, and it may be equally appropriate to prioritize attachment sensitivity and the importance of establishing alliance within systems of care that interact with CP. This would involve the integration of psychotherapy in the medical world and, equally, an appreciation in the world of therapy as to how pain presents and remains medically.

A particular style of attachment theory that is backed with considerable research is emotionally focused therapy (EFT). EFT evolved in the mid-1980s as a method of supporting couples. Sue Johnson and Les Greenberg developed and tested EFT in 1985 and released the first guide for EFT in 1988. EFT was influenced by the work of Carl Rogers and Fritz Perls and an appreciation of the strong influence of present-
moment emotional experience to create meaning and shift behavior (Johnson et al. 2005). By integrating systems theory– which claims behaviour and meaning-
making cannot be understood outside the context in which they occur–with experiential therapy, an “experiential-systemic" approach was created. Viewed through this lens, challenges are recognized as patterns of interaction rather than from one individual, and
emotion is understood as not only an experience that occurs within a person but
also as a component of the larger system that creates and structures interactions (Johnson, 1998).

EFT is an evidence-based approach focusing on emotions, attachment needs, and relationship dynamics to positively support people and their "family" by utilizing and tending to attachment styles. Emotionally focused therapy (EFT) is a structured style of work that encourages exploration and understanding of attachment needs and the emotions that accompany them, with a focus on improving bonding and communication between individuals. EFT systematically addresses distress in close relationships and could be a valuable consideration as part of care and support programs for people experiencing CP (Steill et al., 2007), particularly due to the larger systems that structure and consequently influence interactions for those living with CP.

The goal of EFT is to help people/partners synchronize or reconnect while strengthening their bonds with one another. By emphasizing the importance of being receptive to one's partner during times of pain, EFT fosters the development of these safe relationships in treatment (Johnson, 2019). Previous studies show that EFT helps couples deal with depression, PTSD, and health issues by significantly improving sexual satisfaction, forgiveness, and attachment styles (Wiebe & Johnson, 2016).

The focus that EFT places on attachment, emotional connection, and decrease in threat response speaks to and integrates our nervous system and the vital role it plays in our safety and experience of pain. With an understanding of attachment theory and its role in pain and the importance of safety, an additional theory lends itself to new ways of working with individuals in CP.

Polyvagal Theory and Chronic Pain

Polyvagal theory is a theory developed by Stephen Porges in the 1990s with a focus on the role of our vagus nerve in regulating our response to the world around us (Porges, 2018).

This theory posits that, when we feel safe, our nervous system is able to support our homeostasis, which supports health and encourages growth and recovery, while simultaneously allowing us to be open to others without feeling threatened or vulnerable (Porges, 2022). According to Porges (2011), the vagus nerve is a common survival mechanism that exists in all vertebrates and dates back over five million years. The oldest branch of the vagus nerve is called the dorsal motor nucleus. It is an unmyelinated region of the brainstem and is the most basic site of vagus nerve origin. When this part of the nervous system detects danger, it immobilizes itself to increase its chances of survival. Claiming to be dead or completely shutting down one's behavior are two ways this immobility can manifest. The second branch that Porges (2011) identifies is influenced by the sympathetic nervous system and speeds up the heart and metabolism. This pathway encourages the body to go into "fight or flight" mode as a result of the sympathetic reaction. In the event that the person detects a threat that is not immediately fatal, this area of the nervous system will be activated in order to ascertain whether it is best to fight or run. A person's sympathetic nervous system goes into overdrive when they are in a state of fight or flight (Porges, 2011). An increase in blood pressure and heart rate is part of the body's acute stress response, which mobilizes the muscles to be ready to be used.

An evaluation of environmental safety triggers the activation of the third and most complex system, the ventral vagal complex (VVC), also known as the social engagement system, by the limbic system (Porges, 2011). The VVC can sense safety by facial expressions, calming vocalizations, and attentive listening. The VVC promotes actions that involve social involvement while suppressing the limbic system's reactionary defenses. This part of the sympathetic nervous system limits the second part's reaction to danger by seeking social connection and consolation when we are upset (Porges, 2011). Theoretically, the VVC is more responsive to perceived social

support in regulating the body's threat response when there is a secure attachment (Porges, 2011). By calming the sympathetic nervous system, the VVC avoids the harmful overactivity of the threat response system, which can damage the brain and body. When thinking about chronic pain, this poses some interesting perspectives on attitudes and treatments that many are exposed to. Establishing a secure attachment bond allows for the necessary connection to alleviate the body's fear response. In order to acquire efficient emotional regulation capacities, PVT states that activation of the social engagement system and the subsequent secure connection it seeks are necessary (Porges, 2011).

Our feelings of safety reflect an autonomic and organic process that involves our neurophysiology and has helped us to survive by relying on social connections that have the ability to regulate our system and discourage harmful costly defense responses (*Understanding Polyvagal Theory*, 2012). The introduction and implementation of polyvagal theory and its intersection with trauma and violence challenge conventional approaches to counselling and self-help to lessen generalized pathologizing, and instead recognize the individual as unique in their experiences and nervous system responses (Porges, 2022). Porges (2022) states that our need to obtain safety is not only a conscious subjective experience, but rather an objective and scientifically measurable process that is deeply embedded and regulated by our autonomic nervous system (ANS) dating back to over 4 million years ago; it is as inherent to our survival as breathing (*Understanding Polyvagal Theory*, 2012). A main feature of polyvagal theory is the recognition that our nervous system is constantly moving through states of awareness and, in a healthy and adjusted individual, the ANS can dance between movement and interaction, and rest and recover with ease and the assurance of safety. When considering individuals with adverse childhood experiences (ACES), chronic stress, or history of trauma, the ANS, specifically our

ventral nervous system, becomes dysregulated or broken in some respects. It can become stuck in a state of survival where perception is easily shifted from connect to protect (Polyvagal Institute, 2021). Significantly, this response happens physiologically and neurologically for us in the same way our body knows to breathe or keep our heart beating. It is not something we are conscious of unless we bring the patterns to conscious awareness and then work with our body to reestablish safety and connection so that our ventral vagus system will rewire itself. This response has been highlighted as one of the most significant attributes of our human system: the need and ability to engage and receive feedback through our social emotional lens. It is considered by many to be the most important distinguishing factor of being human. The social engagement system relates to the projection and reception of cues of safety between humans (and other mammals) that signal a lack of threat and presence of safety (Porges, 2022). Polyvagal theory places a strong emphasis on the need for emotional regulation in interpersonal interactions, which is an important consideration given our current culture, demographics and lack of social connection experienced by many of those previously identified as being most impacted with chronic pain (Health Canada, 2021). Dana (2018) states that coregulation is recognized by polyvagal theory as a biological necessity in order to exist. We feel secure enough to enter relationships and build trustworthy relationships when our autonomic states are reciprocally regulated by another (Conroy, 2021). The body's warning signals from the sympathetic nervous system and the ensuing physiological escalation are calmed in coregulation. Seen in this light, our healthy existence depends on social engagement and connection with others too to feel safe and regulated.

The vagus nerve is the longest and most widely distributed cranial nerve in the body, and it controls many systems, such as the immune, endocrine, circulatory, and autonomic systems,

and is therefore an important part of maintaining balance. From this perspective, the relationship of the vagus nerve to chronic pain will be explored.

Polyvagal Theory, Pain Processing, and Stress Responses in Chronic Pain

A number of physical and mental health conditions, such as gastrointestinal disorders, fetal growth restriction, traumatic stress, and autism spectrum disorder, can be better understood through the application of polyvagal theory (Billeci et al., 2018; Kolacz & Porges, 2018; Kolacz et al., 2019).

Research by Lumley et al, (2011) has shown brain mechanisms that distinguish affective pain from sensory pain dimensions, demonstrating the connection between emotion and pain. Emotions significantly influence the understanding, assessment, and treatment of persistent pain, with greater pain linked to emotional stress and limited emotional awareness impacting mental, behavioral, and physical health (Lumley et al., 2011). Studies have documented that neural pathways can differentiate between differing dimensions of pain, link emotion and pain, and can generate central nervous system pain sensitization (Lumley et al., 2011). The paper by Lumley et al. (2011) highlights the importance of emotional communication, empathy, attachment, and rejection. Traditionally in the world of pain, emotion has been viewed as less meaningful or important than physical expression or cause, and negative emotion has often been viewed as pathological and requiring control or fixing, which is a common approach of cognitive behavior therapy. These approaches have assumed that pain response is mentally driven and can be controlled from the top down. A comprehensive assessment of the efficacy of cognitive behavioral therapy (CBT) in the management of chronic pain among adults was conducted by the Cochrane review (Williams, 2012). Consisting of 42 studies and 4,788 participants, the review examined the differences between CBT and behavior therapy. Comparing post-treatment CBT to

active controls, the analysis revealed that CBT had marginally positive effects on catastrophic ideation and disability. Moderate improvements in catastrophizing, marginal improvements in pain and disability following treatment, and marginal improvements in mood maintained at follow-up were observed with CBT in comparison to treatment as usual or the waiting list. An interesting outcome of this study demonstrated that on subsequent assessments, these effects largely dissipated, indicating minimal long-term effectiveness of CBT; the review concluded that CBT had weak effects in improving pain, but only immediately post-treatment, and did not last (Williams, 2012). Polyvagal theory presents an evolutionary model that views emotion as having the potential to support our awareness and guide and motivate adaptive behavior (Lumley et al., 2011). It embraces our emotions as an important expression of and response to our experience, a gatekeeper of sorts that is not always conscious. Emotional processes strongly influence emotional states as well as mental, behavioral, and physical health (Lumley et al., 2011). From the lens of PVT, emotions and physical experience are recognized as having an intricate relationship to respond to and protect from stress (Porges, 2022), which is significant when considering the conventional treatment environment that many people in chronic pain are exposed to and the influence this may have on their vagus nerve and need to protect or seek safety.

Polyvagal Theory and Interventions to Support Chronic Pain Experience

Persistent pain requires careful consideration, evaluation, and treatment due to emotional factors and the role they play in the input and output of pain experiences and signals. Polyvagal theory offers a new perspective on the importance of feelings of safety in human health and wellbeing (Porges, 2023). It emphasizes the role of the autonomic nervous system in regulating mental and physical health, social relationships, cognitive processes, and behavior.

Polyvagal theory (PVT) has been applied to chronic pain in numerous ways. Kolacz and Porges (2018) suggested that irregular heart rhythms may be the cause of long-lasting pain and functional gut problems, and this study implied that the vagus nerve might play a part in these conditions. This suggests that vagal function is related to how bad the pain is. In another study, Shao et al. (2023) explored how vagus nerve stimulation (VNS) can be used to treat chronic pain and how pain can change vagus activity and the way neurons and the immune system talk to each other. Given the relationship that the vagus nerve shares with emotions, this poses an interesting perspective on the ability of the vagus nerve to influence what we feel. All these studies together suggest that polyvagal theory may offer potential non-drug ways to treat chronic pain and pose a new level of consideration around ethics of care when working with individuals and the influence our systems have on one another.

Polyvagal theory helps us understand how autonomic states affect our mental and physical health (Porges, 2023). It gives people who have been through long-term illness or danger a voice and plans a positive path to better mental and physical health. The work of Porges demonstrates that greater pain is related to emotional stress and limited emotional awareness, expression, and processing.

Integrations of Attachment and Polyvagal Theory in Chronic Pain

Understanding the complex interplay between trauma, nervous system response, and attachment can inform therapeutic interventions aimed at improving mental health outcomes for individuals with a history of traumatic experiences and CP (Avalos, 2021). A study by Garland (2012) shows that pain has many distinct aspects. Pain is more than just a feeling of pain. It is a biopsychosocial experience. Seen in this light, the physical problem at the injury site is important but not enough to explain the complicated process by which sensorimotor information is turned

into the physical, mental, emotional, and behavioral reaction known as pain. In people with chronic low back pain, the amount of tissue damage may not match the level of pain they are feeling, there may be no structural damage unhealed, and there are likely to be physical signs that are mostly not organic (Garland, 2012). It would be too easy to think that people who are suffering from this or other chronic conditions are lying or somatizing their pain. Whether there is inflammation, damaged tissue, or a loss of function, the nervous system's processing is what causes pain (Ashar, 2022; Garland, 2012). In this way, all pain is real for the person, regardless of cause or findings. However, pain can cause hypervigilance, danger assessments, hormonal responses, and avoidant behavior, no matter where it comes from, and as noted above–pain can and does influence the way we connect and interact with others. In this way, all pain is mental. Science and research may have a challenging time putting pain into groups, but in the brain, these groups don't matter. Pain is a psychological and bodily condition at its core. Garland (2012) emphasizes

the complexity of pain, which is determined by the interplay of numerous cognitive, affective, phy siological, and behavioural mechanisms.

The review by Garland (2012)

emphasizes the intricate relationship between neurobiological and psychological elements in the re gulation of pain. It underscores the importance of employing a biopsychosocial approach when ev aluating and managing pain in clinical settings, particularly when dealing with chronic pain patients. Emotional regulation problems worsen other mental health conditions and life satisfaction.

Emotional regulation skills and attachment security show a positive correlation, suggesting that coregulatory experiences can contribute to the development of emotional

regulation. Polyvagal theory underpins the relationship between emotional regulation and attachment. In a 2017 paper by Flores and Porges, Porges observes that PVT extends attachment theory to social engagement systems and refers to the innate evolutionary mechanism through which humans assess safety in any given circumstance as "neuroceptive." According to PVT, social engagement is maximized if safety is identified. On the other hand, defense mechanisms kick in when danger is sensed, encouraging either the immobilization of freeze or the mobilization of fight/flight in an effort to survive and stay safe. Much like our attachment dynamics, this process is not conscious or learned but rather part of our evolution for survival, as per PVT.

Living with pain can be an exercise in vulnerability and endurance (McCarthy, 2023), which this author promotes as an opportunity to improve connection to others. Pain can make our lives smaller but also offer another language and experience that connects us with others. Pain, too, can be a form of co-regulation. McCarthy (2023) comes from a strong narrative base and has examined the negative narrative of pain in the social and medical worlds. McCarthy proposes relating to pain as a proper entity we are in a relationship with and to examine the aspects of our lives that can be positively shaped by what pain asks. Pain asks us to accommodate it, but it can also shape itself within our lives, which is a significant narrative to consider when exploring the space of pain in our world (McCarthy, 2023) and when we are working with people experiencing chronic pain. There is an opportunity in pain and when it is considered from a relational lens as McCarthy suggests, the opportunity to integrate AT and PVT in care seems more than appropriate. According to Flores and Porges (2017), PVT is an evolutionary model that explains our autonomic nervous system's innate capacity to preserve equilibrium via reciprocity and synchronization of in-person social interactions.

The notion of being in a relationship with pain further invites considering the previously mentioned attachment approach of emotionally focused therapy. EFT's approach recognizes that couples or individuals do not always move in unison as they work through patterns of conflict or challenge, and this theory of care aims to reframe their interactions by focusing on their attachment needs, which activates the ventral vagus nerve to promote connection (Johnson, 2004; Porges, 2011). From a polyvagal standpoint, it is possible that the attachment focus of EFT stimulates the ventral vagus system, which calms the sympathetic nervous system and lessens danger reactivity (Porges, 2011). People who have been for counselling using EFT are less likely to be set off by limbic reactions as they have learned how to become more comfortable in their attachment with others (Johnson et al., 2005). It is no longer necessary for the body to defend itself from harm when it feels the protection from a stronger attachment (Porges, 2011). Because of this increased sense of safety, a person can be more adaptive and flexible when dealing with challenging emotions or stressful situations, which improves their capacity to control their emotions.

EFT has been shown to be successful in addressing issues of race, religion, gender identity, and sexual orientation across cultural boundaries (Cohen, 2023; Linhof & Allan, 2019; Furrow & Bradley, 2011). The literature demonstrates EFT's effectiveness in a variety of demographics and with many varied issues. By emphasizing a biopsychosocial perspective, the combination of physiology and the counselling process also fosters a more holistic approach suitable for wellbeing, providing a new avenue for mental health practitioners to advocate. (Sweeney et al., 2020).

Gaps In Literature Future Recommendations and Applications

It is important to recognize the ways that research can be improved so that future work can support growth. Emotional states, particularly depression, anxiety, and anger, are important responses to pain. However, there is a lack of information on pain and emotional processes, emotional modulation of pain, and the role played by emotional states in neurobiological and social research on pain. Much literature already presented has demonstrated the effects of EFT; however, it is crucial for clinicians who wish to use EFT to learn more about the reasons for its success given what is known about coregulation. Conroy (2022) invites clinicians to investigate the concept of emotional regulation and how expanding it can improve clients' lives.

There are still not enough studies on adult separation anxiety disorder, making comparison difficult. There are limited studies on the correlation between ASAD, attachment styles, childhood traumas, dissociative disorder, and temperament in literature (Bozkir et al., 2022).

EFT has a growing body of evidence-based research and is scientifically supported in its work, but it has not been studied directly in the realm of chronic pain itself. Future considerations for exploring would include both quantitative and qualitative studies of the ways in which EFT can improve the experience of chronic pain sufferers. Future research should also consider larger, more diverse sample sizes, particularly in regard to gender, sexual orientation, and sociodemographic areas based on the information we have on those most impacted with CP (Health Canada, 2021). The latter is particularly important when we consider the impact that opioid prescriptions have had on chronic pain sufferers and the loss of many people's lives as a result of addiction to prescriptions (Health Canada, 2021).

From a biopsychosocial lens that acknowledges the ways PVT suggests we coregulate with one another, it would be interesting to see more research examining the negative reaction or

response that many have towards our more marginalized populations, and the influence that has on attachment and nervous system responses for those with chronic pain. Much research emphasizes the ways in which CP suffers are impacted by their own mental and emotional history, yet little speaks to the influence of care providers' attitudes and behaviors or the larger systems that have been created that CP sufferers must operate within. It would be prudent when working with CP individuals to explore and consider the ethics of what healthcare providers should be tending to within themselves, given the ways that PV theory has noted we influence each other. More integrated access to counselling support in the field of CP to work with attachments and nervous system regulation could be most meaningful and influential in working towards improving the quality of life for these individuals. Building on integrating the measurements of pain, attachment theory, specifically EFT, and nervous system response that polyvagal measurements have offered could drastically expand data and link existing evidence-based approaches in a new way that could offer more support than the commonly recommended CBT approaches (Ashar et al., 2022).

More research could be done both linking the use of these theories in measurements already established for chronic pain, and also possibly linking new ones. Based on the research reviewed, however, the integration and embodiment of a biopsychosocial lens with CP is a future that seems imperative.

Chapter 3: Conclusion

This capstone examines how chronic pain can be improved or worsened by systemic, social, and relational processes. It also explains why adopting a more systemic and relational approach to treatment may be beneficial for the individual experiencing pain, those who are in relationship with said individuals, and the broader systems and economics involved with managing chronic pain, which despite best efforts has continued to escalate (Ashar et al., 2022). When exploring the intersection of chronic pain with history, economics, marginalization and the sensitivity of attachment and polyvagal theories, context has become a central figure in the outcomes. A well-documented example of this is the work by Coates and Wade (2007) and their focus on dominant discourse and the ways in which it can skew what is most important and needed in establishing a secure and positive working alliance with another. According to Wade (2007), when taken out of context, human suffering and unfavorable outcomes might be interpreted as individual deficiencies or diseases that require medical care. This has unquestionably been the history of work with chronic pain, and, in fact, today's present diagnosis of SSD has its roots in Freud's definition of hysteria (Paulon, 2022), and often continues to remain embedded in the conversations and attitudes that many health care providers share with individuals that are suffering.

The shortfalls of implementing a humanistic counseling approach with all chronic pain clients are varied. Among the greatest is cost and accessibility, with the potential for subjective interpretations of pain experienced by therapists. An additional consideration is the influence of culture and pain and the varied perspectives that are shaped by people's background, narratives and cultural or religious view around pain. A study by Lanzara et al. (2019) highlights the textures of culture and communication when it comes to giving and receiving information around

pain and its context. In terms of utilizing a humanistic approach, this study examined the relationship between migration and somatization, using a systematic review analyzing the qualitative data synthesis of original research. The study was in response to the vague nature of somatization and the compounding factors that can influence somatic response for individuals who are dislocated, and/or unable to give and receive information adequately to contextualize their experience. The results pay special attention to social, cultural, and linguistic differences. The need for consistency in training and understanding chronic pain is highlighted through an additional study by Darnall et al. (2017), where the impact of insurance agencies and their understanding of pain become central. The lack of consistency in understanding pain from a mental health perspective compromises access to proper care for many individuals that could benefit from the support that counselling has to offer. Additionally, lack of consistency between therapists and their training poses additional areas of struggle in providing consistent measurable care with the variety of people needing service. The dance in standardizing individuality poses one of the greater challenges to this idea.

Viewing individuals as a problem lessens or excuses the duty of those in positions of power and privilege to improve social interactions and to recognize their influence on the outcomes (Wade, 2007). I return to my own positionality as a health care worker and the 30 years of experience in resisting this narrative on behalf of the clients stuck in the middle of insurance claims as one small example.

The common factors in chronic pain are many, with trauma being among this most prevalent. This leads to the importance of understanding trauma and tending to it with the above to make use of attachment systems and the power of co-regulation to embody awareness both internally and in the external environment. The positionality of this is not an *either-or* but, rather, *both* and

despite what medical diagnosis tells us. The separation of nervous system response in the treatment of pain is part of the issue. Historically, with the best of intentions, the biological lens had taken the lead and made mental health (SSD) the default for chronic pain rather than honoring both as equal influences in the experience of trauma and the healing of pain. Mind-body dualism and SSD are controversial concepts that view pain as caused by biological or psychological factors. If we could invite psychotherapy into the medical world and also invite biology into the counselling room, the integration could truly embody a biopsychosocial lens of healing.

In considering the clinical application of making use of attachment and polyvagal theories with CP, the research indicates some key findings. First and foremost, the relational aspect of attachment theory has been explored both from an interpersonal and intrapersonal lens (Cohen, 2023). The results have demonstrated the reciprocity of relationship experience relative to attachment styles and the influence this has on increasing or decreasing positive outcomes (anxiety, depression, catastrophizing, seeking and receiving care) (Romeo et al, 2017). The opportunity to assess individuals from an attachment lens and work with their individual need to negate poor outcomes with pain (anxiety, catastrophizing) has been explored and presents encouraging evidence to consider reprioritizing the language we use with pain and the relationships we regard when doing so.

The research presented in this paper highlights the role of trauma in the experience of pain, the relationship our nervous system has with our experience of pain, and the power of coregulation with both positive and negative outcomes being possible. Additionally, and perhaps most poignantly, the articles reviewed highlight the integrated and holistic influence of a biopsychosocial approach, and how the embodiment of this in all care providers and for all

individuals–those seeking care and those providing care–organically supports the variables of attachment and their interplay with our nervous system and experience of pain. Seen in this light, care of others begins before we even step into their room. What could happen if we had more personal awareness of our own attachment needs and nervous system responses when we are trying to support others?

The benefit of including psychotherapy in partnership with medical care for pain and the importance of assessing physical ailments in our counselling clients has been well demonstrated in this paper. Rather than continuing to separate beings further with more tests, more theories and more appointments, the information we receive from the body could be received as language that we communicate with respectfully. Again, chronic pain and its relationship with attachment and safety is a door that swings both ways.

Limitations and Constraints

Despite its widespread use and presenting benefits, there are critics of PVT that suggest the model cannot be accurately tested as a scientific theory that can generate data because it has too many vague ideas and not enough specific predictions. Critics of the theory state Porges made a scientific leap in his theory of our vagus nerve and social engagement (Ley, 2022). In Porge's study, respiratory sinus arrhythmia (RSA), which is called “vagal tone” in PVT, is used to measure dysfunction and demonstrate how strongly mental health is connected to the vagus nerve. A review of the research on the link between RSA and psychopathology, on the other hand, found weak and unclear links between the conditions (Beauchaine et al., 2019, as cited in Ley, 2022). While many, critics included, have appreciated what PVT has brought to the forefront of our awareness and its ability to makes sense of responses in a way that externalizes

them or allows for an individual to gain a deeper and less attitude-based understanding of their behavior or feelings, the use of PVT in therapy is still considered by some to be experimental. Therefore, therapists should be clear in their understanding of anatomy, physiology, neuropsychology and, most importantly, be clear with people that this is a theory in the works and is not yet fully embraced as evidence based (Ley, 2022).

Currently, there is also no data that has specifically applied EFT with individuals in chronic pain. However, when we examine the attachment information available and consider it for chronic pain therapy, it lends itself to exploring further and considering how EFT may impact pain, even if as a secondary benefit to working with other issues that are more often than not tangled up with pain. A meta-analysis by Spengler et al. (2022) found that 70 percent of couples using EFT will have improved their issues and be without their original "symptom" at the conclusion of treatment, which far outweighs the statistics that CBT has evidenced for long-term management of chronic pain (Williams et al., 2012). In writing this, I deeply appreciate how our dominant discourse continues to use a dualistic voice with separation of mind and body and that the integration of both is considered unique as opposed to the norm. I aspire to see that script flipped, where it is less common to separate ourselves in care and we no longer need to create unique styles of somatic therapy to integrate our body and mind. However, Spengler et al., (2022) underscored the need for more diverse participant recruitment in EFT studies to evaluate the generalizability of EFT, particularly considering sociocultural characteristics such as sexual orientation, gender identity, racial, and ethnic identities. Generally, the majority of study participants in the references for this paper were privileged with dominant culture, gender and socio-economic resources by comparison to the greater number of individuals we know are without these opportunities. When considering this in the context of

systems that most people in pain must navigate, it seems that integrating attachment and polyvagal theories in care could benefit everyone, and possibly their pocketbook.

Alternative Action and Future Research Using Emotionally Focused Therapy

In reviewing the literature, a counselling style of personal interest is EFT, for it harnesses the emotional and somatic components of pain and fear and transitions them by offering individuals, couples or families an opportunity to consciously work with their attachment style and needs. By exploring awareness of feelings in a safe and supportive environment, communication, validation and reassurance of said needs become a conscious aspect of shifting experiences and promoting resilience. Through the process of inquiry, invitation and emotional expression and experiencing, EFT has done an exceptional job in placing itself within the system of evidence-building, creating scientific data to support its work and continued expansion. A meta-analysis by Spengler et al. (2022) revealed that EFT had medium-to-large effect sizes in treating a range of presenting problems, indicating that it is an evidence-based treatment with a 70 percent symptom-free rate at the conclusion of treatment. While there are not any direct studies on the ways in which EFT can alter the experience of CP, it is a hopeful style of care that captures the science of our body, nervous system and deep attachment needs all of which are notably connected to the experience of CP. In making a small leap to consider how this theory could be applied clinically, there is room for integration with most chronic pain care providers. Through a process known as coregulation, social connections create emotional exchanges between individuals that support emotional stabilization and synchronicity (Butler & Randall, 2013). Skin temperature, electrodermal activity, and heart rate are a few examples of psychophysiological measurements that show this synchronicity (Palumbo et al., 2017 and demonstrate how stable attachments increase the likelihood of coregulatory experiences, which broaden emotional

regulation. The clinical approach of EFT is well-established and has been evidenced for its ability to increase secure connection (Spengler et al., 2022).

A trauma-informed, embodied model of treatment, such as EFT, could be considered a treatment option in previously dysregulated autonomic systems in pain. Given that we know a felt sense of safety encourages restoration of our natural homeostasis, this would be the "safe haven" that Johnson (1998) references repeatedly in her EFT theory and work. One of the hallmarks of EFT is that it is both evidence based and provides a clear and structured system and process with which to begin work with individuals or couples.

The importance of our nervous system and its influence on how we experience pain has been highlighted previously, along with the ways that pain can impact our ability to connect with others. To encourage more coregulatory experiences between couples, EFT aims to concentrate on past experiences that influence how people operate and hinder the satisfaction of attachment requirements. By providing individuals with a safe and theoretically structured opportunity to respond in their most vulnerable moments, EFT therapists work to help their clients have corrective emotional experiences (Brubacher, 2017, as cited in Conroy, 2021). A clear set of five macro-interventions has been created by Johnson and is referred to as the EFT Tango, which has recently been modified for use with individuals and is referred to as the EFIT Tango (Johnson & Campbell, 2021). Through a sequenced set of interventions used by the therapist, the therapist and the person are invited to "dance" together based on attunement and mutual resonance (Johnson & Campbell, 2021). We have learned that this dance is part of coregulation and collectively can net an improvement in variables that impact pain based on what we know of our nervous system. Through processes such as mirroring, deepening emotion, creating an engaged emotional encounter, processing it and then integrating and validating it, context is recognized,

explored and reshaped to strengthen and empower each person's inner narrative and experience (Johnson & Campbell, 2021). EFT therapists make sure they are reachable, receptive, and actively involved in the process (Johnson, 2004). By having more sensitive and responsive talks with an individual about topics that previously elicited a threat response, clients enhance their attachment relationship in the last stage (Johnson, 2004). Individuals or couples can then negotiate life experiences in a more positive and connected way, which highlights the flexibility of secure attachment and balanced synchronization with people, their partners and families, as well as their partners in care.

Based on the information collected from the literature review, we know that attachment plays a role in the experience of CP from more than one angle, and that the coregulatory skills of a perceptive therapist can work intentionally with an individual in CP to improve their regulatory state and increase their window of tolerance by supporting them with safety and alliance as they sit through the emotional and somatic experiencing of new thresholds. Having a positive experience such as this may seem obvious for those privileged with a safe and secure attachment style in their childhood, but as has been well documented in this review, those with less predictable or supportive childhoods could be experiencing a level of safety within their pain that is new and never before experienced or recognized as a neural pathway (Porges, 2022, 2023).

Considerations for Counsellors

Among the many considerations for therapists, the most significant from this review highlights the importance of an embodied awareness of attachments and nervous system states and, most importantly, avoiding the dualism of body and mind that has too long compromised care of the whole person. This means that while we encourage medical providers to increase their connection and availability to people in pain, we must also be very mindful as therapists to listen

to the body with equal value to the expression of thoughts and feelings. Collaboration with care providers is crucial in order to integrate the separation of care that has been a standard for too long. We know from the literature reviewed that a safe and empathetic connection that fosters validation, support and respect is a necessary foundation for change of chronic pain. Helping people to connect with underlying emotions from trauma, attachment wounds, nervous system dysregulation or maladaptive coping is a vital component of therapy to address the contributions to chronic pain and engage in relational change. This is where learning specific interventions such as EFT can bridge the separation of mind and body and instead integrate both and use the information to resource new experiences that may lessen nervous system stress in future. Interventions such as reflection, validation and restructuring of negative emotional patterns are a key approach used in EFT to promote emotional regulation and healing (Johnson & Campbell, 2021). Assessment of an individual's emotional states, attachment patterns and history of trauma or adverse childhood experiences (ACES) can highlight areas of work and provide a platform for therapists to use psychoeducation and assist people in developing a deeper understanding of the ways their body is impacted by their emotions and history.

A deep and thorough understanding of PVT is pivotal in recognizing the physiological and emotional responses of those in CP. Anchoring into this theory can assist counsellors in creating interventions and supporting individuals to learn about self-regulation and the many techniques that can be implemented to help with emotional and physiological responses to pain.

Perhaps the most important consideration for counsellors and any others working with people in CP is tending to our own history of attachment and nervous system regulation. We know from the studies reviewed that coregulation is powerful and, equally, attachment history

can heavily influence nervous system responses. In order to provide the best opportunity for healing, individuals will benefit from working with therapists that are grounded, mindful, and aware of their attachment styles and patterns and tending to them personally in order to support others. Among the most important recommendations is self-care of counsellors and the importance of maintaining a healthy, regulated nervous system with emotional resilience and support. We are influencing our clients through our own systems as much as we are attempting to with our theoretical approach. The importance of this extends to the larger network of systems and cultures within these systems and to appreciating that attachment and nervous system influences must first be acknowledged in ourselves before we can even begin to think about the changes that others might benefit from.

Summary and Conclusions

Research indicates that establishing secure attachments through the EFIT process of change could lead to less physiological reactivity and more emotional coregulation (Conroy, 2021; Johnson & Campbell, 2021; Spengler 2022), shown by synchronous and coregulating changes in skin temperature, electrodermal activity, and heart rate variability (Kolacz & Porges, 2018). When diagnosing and treating pain, it is worthy to integrate the awareness of this attachment with individuals and to appreciate the strength of coregulation and the importance of consistency and stability in their care and connection. If an individual does not feel seen and supported, how are they supposed to lean into care and healing?

Personal Reflections

I began the process of this capstone with a tension over the lack of just care I have witnessed and experienced firsthand when conventional care cannot understand suffering. In exploring the magnitude of influence that our attachment history has on our emotional and self-regulatory tone

within our body and in expanding that influence through the lens of PVT, I recognize the double bind of my position and the need to tend to my own traumas, wounds and regulation further and continuously. If nothing else, this mindset models what I aspire to invite the larger systems of care to prioritize in their hiring, training, and culture in the workplace. Though we continue to acknowledge and reject limiting theories from long ago–where the body belonged to medicine, and the mind belonged to church–failure to integrate our own stories within ourselves perpetuates the dualism that has caused so many problems.

It is fascinating to review the research from today's lens of 2024 and to see the way in which the whole person is being deconstructed into parts that are then considered maladaptive or dysfunctional. I am curious to ask, who decides that pain is not real for another person who is experiencing it, and who are we to override another's reality? If we are leading with biology alone and place it at the top of the hierarchy, then we are suggesting that these predisposing factors are of a lesser value despite the same end result, which is important when we remember the statistics, the trajectory of pain, and the costs on all levels.

Having been grounded for over thirty years in an ancient approach of Chinese medicine, I reflect on its holistic and integrated theory that prioritizes little and rather views all aspects of health, physical and psychological, as a fluid and constant dance of environments. Along with many other healing systems around the world, the body and mind are not separated, and therefore the whole person and all of their struggles are assessed and cared for as a unique web of variables that affect and are affected by the inner and outer environments they are exposed to. There is no grand separation as compared to our still current Western approach.

Among the many cultural considerations reflected on regarding CP, the greatest I recognize from this review is our own culture biases that continue to shortchange the way we

work with clients and pain in our Western culture and how we miss the embodiment through a biopsychosocial lens that other cultures of healing offer or lead with. In this way of colonial unfolding, we created brick and mortar structures that cemented the divide of mind and body, which we have been struggling from since. It is in this regard that there is a loss of relational connection, community, opportunity for positive social engagement and connection. I mention this as a continuing reminder for us to all acknowledge our blind bias, based on what has been familiarized. What are we adopting as our own template for care with the way that we work and the environment we aim to cultivate and for what purpose? As embodiment takes the lead, our own recognition of attachment wounds and needs coupled with nervous system awareness and regulation, we begin the supportive healing before we even meet the clients. If we appreciate the evidence and data that is in existence currently and weave back together the tapestry of being, it is reasonable to imagine that our current and ever-growing numbers and narratives around pain could change for the better.

In closing these reflections, I pose questions to all of us. How can our own personal awareness and ongoing assessment of attachment wounds/needs and nervous system regulation positively influence and regulate those we work with that experience chronic pain? Where is the crossover with chronic pain and depression or anxiety or other mood disorders? Where can we meet? I am curious to explore how embodiment and awareness of our own attachment needs and vagal tone can work with others to support safety and connection and reduce fear and pain response.

Final Overview and Thoughts

In reviewing the literature on chronic pain, there is no doubt that the narrative around working with chronic pain has changed dramatically. As noted by Ashar et al. (2022), since the

growth of medical imaging, there are many statistics that have helped to differentiate primary chronic pain from secondary chronic pain–the latter of which is typically the response to a primary issue. While the attempts to work with pain have been expanded to integrate body and mind as one unit, delivery is the focal point of my paper and where I witness the lack. With the best of intentions, the delivery of working with primary pain continues to come from powered system that implies fault or failure.

Looking forward, both attachment theory and polyvagal theory focus on the idea that the body is constantly trying to maintain a state of balance and is responding to environmental cues in order to do so. Gaining insight into these reactions enables us to assist others in the comprehensive management of their pain by implementing targeted approaches like emotionally focused therapy, that respect the relational power of care, employ therapeutic methodologies, and include self-therapeutic practices and active listening abilities.

It is critical to integrate this with the knowledge exemplified above regarding the impact that trauma has on our body and how frequently shame is an embedded response for people who have already suffered. Understanding the multifaceted ways that our body experiences pain is not enough. Given what we know of nervous system influence and the importance of attachments, the delivery of care is where change is most needed with a true embodiment of biopsychosocial awareness. This is our work as care providers; not solving the cause and stating the cure. Our work is to meet others in their pain and lead their systems to a new place of resilience and awareness where they are rewriting their own story and deconstructing the stories from their past– stories of fear, harm, loneliness, failure, abandonment, hopelessness, shame into ones of worthiness and importance in the community and world.

All systems of care need to shorten in hierarchy and broaden their reach to work together. In conclusion, I encourage that a shared decision-making and a person-centered approach are necessary for defining, preventing, and managing side effects in the treatment of chronic pain (Dassieu et al., 2022).

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