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Opioid Use Reduction: A Narrative Medicine and Trauma-Informed Approach to Occupational Therapy in Chronic Pain Management

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A Capstone Project Entitled

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By

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Abstract

Background: The campaign to treat pain as a fifth vital sign exacerbated the use of prescription opioids for chronic pain treatment. Prescription opioids are highly addictive substances that have resulted in the staggering number of overdose-related deaths. In an effort to combat the opioid epidemic, alternative pain management strategies via an interdisciplinary approach must be implemented in clinics throughout the country. Through a narrative medicine and trauma informed approach, practitioners can provide holistic, client-centered treatment for individuals with chronic pain.

Objective: A three-part educational series was designed to increase occupational, physical, and speech therapists' knowledge of narrative medicine, trauma-informed care, and chronic pain management strategies. A toolkit was developed for both practitioners and chronic pain patients that contained resources for best practices in chronic pain management. These alternative pain management strategies were presented in an effort to reduce the use of prescription opioids. Leaders in the community, such as the Mayor and a State Representative, were made aware of this project through collaboration with this student.

Conclusion: The pain management toolkit was utilized by therapists as a resource for patients with chronic pain. Therapists' knowledge of narrative medicine and trauma-informed care increased. Through collaboration with the hospital and the community, occupational therapy was received as an integral part of pain management and an alternative treatment to prescription opioids within this community.

Keywords: occupational therapy, chronic pain, pain management, narrative medicine, trauma-informed care

Literature Review

Dr. Hershel Jick, Jane Porter, Dr. Russell Portenoy, and Dr. Kathleen Foley's publications unintentionally fueled what today is known as the public health crisis of the opioid epidemic. In 1980, Dr. Hershel Jick and Jane Porter published a paragraph in the New England Journal of Medicine that, out of 12,000 patients who had at least one dose of a narcotic painkiller, only four cases resulted in addiction (Quinones, 2015). Six years later, in 1986, Dr. Russell Portenoy and Dr. Kathleen Foley published their findings on the treatment of chronic pain in 38 patients. Dr. Portenoy and Dr. Foley stated that opioid pain relievers (OPRs) could be prescribed safely on a long-term basis (Kolodny et al., 2015). Since then, OPRs have been marketed as a conventional treatment strategy for the management of chronic pain. Chronic pain is classified as persistent or occurring pain that lasts longer than three months (Rolf-Detlef et al., 2015). It is subjective and influenced by an individual's moods, emotions, and perceptions (Breivik, Collett, Ventafridda, Cohen, & Gallacher, 2006).

Opioids are highly addictive substances because they induce euphoria, or positive reinforcement (Kolodny et al., 2015). Prescription OPRs include, but are not limited to, OxyContin, Vicodin, Norco, Percocet, and Demerol. Heroin is in same class as these prescription OPRs. When an individual discontinues the prolonged use of these drugs, it produces dysphoria, or negative reinforcement (Kolodny et al., 2015). The prolonged use results in structural and functional changes in regions of the brain that control impulse, affect, motivation, and reward in an individual (Upadhyay et al., 2010).

Pain as a Fifth Vital Sign

In 1995, the American Pain Society introduced the campaign "Pain is the Fifth Vital Sign." This campaign encouraged health care professionals to treat pain comparable to body

temperature, pulse rate, respiration rate, and blood pressure. It counselled a more aggressive approach for the use of OPRs in treatment of non-cancer patients suffering from chronic pain (Campbell, 1996). One year later, Purdue Pharma introduced OxyContin to the pharmaceutical market. Even though OxyContin contained a high amount of oxycodone, an extremely addictive substance, Purdue Pharmaceuticals misled the medical community by advertising that due to its time-released formula, OxyContin was not an addictive drug (Quinones, 2015). A few decades later, the rate of prescription OPR use had increased rapidly nationwide. According to Gatchel, McGeary, McGeary, and Lippe (2014), the estimated cost of chronic pain treatment in the United States was $560-635 billion and as of 2011, over 60% of patients with non-cancer pain were prescribed OPRs.

As a result of over-prescription of OPRs, there has been an escalation in the amount of opioid-related addiction and deaths nationwide. From 1997 to 2011, there was a 900% increase in individuals seeking treatment for opioid addiction (Kolodny et al., 2015). Between the years 2000 and 2014, death from prescription OPR-related overdoses increased from 1.5 to 5.9 deaths per 100,000 people (Compton, Jones, & Baldwin, 2016).

The Relationship between Prescription OPRs and Heroin

Heroin is pharmacologically comparable to prescription OPRs. Both heroin and prescription OPRs produce their action through endogenous opioid systems, resulting in a burst of dopamine released that is coupled with the high associated with the use of these drugs (Compton, Jones, & Baldwin, 2016).

Doctors are now less willing to prescribe prescription OPRs for pain treatment. The efforts to reduce prescription OPR use and overdose are associated with reports of increased rates of heroin use and overdose-related deaths (Compton, Jones, & Baldwin, 2016). Since 2007,

there has been a 145% increase in heroin use (Compton, Jones, & Baldwin, 2016). Heroin users are 2.9 times more likely to abuse or have dependence on opioids, and by the year 2013, heroin use was 40 times more likely for an individual with prior prescription opioid abuse or dependence (Compton, Jones, & Baldwin, 2016).

The Biopsychosocial Approach

In 2016, the Surgeon General called on health care professionals to help address the epidemic of opioid abuse in the United States. Health care professionals should be educated on treating pain safely and effectively, screening patients of opioid use disorder, providing them with evidence-based treatment, and discussing and treating conditions such as chronic illness (American Occupational Therapy Association, 2016).

The biopsychosocial model is the overarching model for the treatment of pain. This model promotes pain and disability as "a complex and dynamic interaction among physiological, psychosocial, and social factors that perpetuate or worsen one another, resulting in chronic and complex pain syndromes" (Gatchel, McGeary, McGeary, & Lippe, 2014, p. 120). The goal is to incorporate physical treatment with cognitive, behavioral, and emotional interventions (Gatchel, McGeary,McGeary, & Lippe, 2014).

Using a biopsychosocial approach for the treatment of pain acknowledges that persistent pain is the result of central nervous system dysregulation (Roth, Geisser, & Williams, 2012). There are a variety of psychological and social factors that relate with the biological foundations of symptoms that lead to disability. Psychological factors interact with cortical mechanisms of pain perception and therefore have a direct impact on the way the brain processes pain (Roth, Geisser, & Williams, 2012). Understanding how the disability of pain limits or impacts social factors such as ADLs, relationships, social participation, cultural factors, work history, family

environment, and environmental stressors complete the understanding of an individual using the biopsychosocial model (Roth, Geisser, & Williams, 2012).

Narrative Medicine and Patient Empowerment

Pain is a subjective experience; thus, it is important for health professionals to utilize narrative medicine and patient empowerment when treating patients. Established by Dr. Rita Charon, narrative medicine promotes the power of storytelling and invites the health practitioner to be moved by the story of illness (Rosti, 2017). It encourages empathy, reflection, profession, and trust. Using narrative medicine facilitates better communication between the health practitioner and the patient, as the health practitioner is able to understand the issues that impact an individual and how they perceive and deal with those issues (Rosti, 2017).

In an individual with pain, a narrative evaluation will assess the impact that the pain has on the patient's daily activities and quality of life (Rosti, 2017). Attention and narrative competence are demonstrated during the narrative evaluation. Attention refers to the ability to absorb and demonstrate active listening when a patient is telling their story (Charon, 2005). This leads to the health professional comprehending what is expressed by the patient through narrative competence: "ability to listen to the narratives of the patient, grasp and honor their meanings, and be moved to act on the patient's behalf" (Charon, 2001, p. 1897).

The health practitioner performs representation privately. It produces reflection through text for the clinician to discover thoughts, feelings, and perceptions, hence promoting narrative knowledge. Narrative knowledge is "what one uses to understand the meaning and significance of stories through cognitive, symbolic, and affective means" (Charon, 2001, p. 1898). It develops the role of the therapeutic practitioner identifying and interpreting their own emotional responses to patients (Charon, 2001).

Narrative medicine is parallel to patient empowerment. An individual is empowered when they have the knowledge, skills, attitudes and self-awareness necessary to influence their own behavior to improve the quality of their lives (Anderson & Funnel, 2010). It promotes the ability for patients to have the authority to make decisions for their treatment and care and the right to be primary decision makers (Barrie, 2011). Patient empowerment in pain management treatment is important because it allows for the patient to be aware of their values, needs, goals, and expectations regarding pain (Barrie, 2011).

Trauma-Informed Care and Chronic Pain

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), individual trauma results from "an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being" (SAMHSA, 2014, p. 7). SAMHSA (2014) describes event(s), experience of event(s), and effect as three determinants of trauma. Events can refer to the actual or extreme threat of physical or psychological harm (SAMHSA, 2014). These can occur once or repeatedly over time. The experience of these events determines how the individual will assign meaning to the event (whether or not it is traumatic) and how it disrupts the individual physically or psychologically (SAMHSA, 2014). The assigned meaning can be influenced by an individual's cultural beliefs, availability of social supports, or the developmental stage of an individual (SAMHSA, 2014). Lastly, the adverse effects of trauma may occur immediately or have a delayed onset. Examples of adverse effects include an inability to cope with normal stresses and strains of daily living, inability to trust and benefit from relationships, and affected

cognitive processes such as memory, attention, thinking, and emotional dysregulation (SAMHSA, 2014).

The trauma-informed approach recognizes that all people in an organization must have a basic realization about trauma and how it can impact individuals, be able to recognize the signs of trauma, and then respond appropriately by applying the six key principles identified by SAMHSA. (SAMHSA, 2014) The people in the organization must be able to also recognize the signs of trauma (SAMHSA, 2014). The trauma-informed approach also includes resisting re-traumatization of patients and staff. (SAMHSA, 2014).

The six key principles of trauma-informed care are safety, trustworthiness and transparency, peer support, collaboration and mutuality, empowerment, voice, and choice, and cultural, historical, and gender issues. Safety should be established so that patients and staff feel physically and psychologically safe (SAMHSA, 2014). Trustworthiness and transparency is aimed to maintain trust with clients and family members (SAMHSA, 2014). Peer support helps to establish safety and hope, trust, the therapeutic relationship, and uses the individual's narrative to promote recovery (SAMHSA, 2014). Collaboration and mutuality place importance on the process of healing in relationships that are meaningful in the sharing of power and decision-making (SAMHSA, 2014). Empowerment, voice, and choice reflect the belief that patients are collaborated with in goal setting and decision making to determine their plan of action needed to improve their quality of life (SAMHSA, 2014). Cultural, historical, and gender issues must be treated equally, as an organization must offer treatment to any individual no matter their race, ethnicity, sexual orientation, age, religion, or gender identity (SAMHSA, 2014).

Research suggests that individuals who experience trauma are more likely to develop chronic pain (Jones, Power, & Macfarlane, 2009; McBeth et al., 2007; Scarinci, McDonald-

Haile, Bradley, & Richter, 1994; Young-Casey, Greenberg, Nicassio, Harpin, & Hubbard, 2008). After trauma, the nervous system is stuck in a state of heightened reactivity. Therefore, when a patient with a history of trauma becomes injured or ill, their nervous system is already in a state of persistent reactivity, and they are more likely to develop chronic widespread pain. Around 90% of women with fibromyalgia and 60% of individuals with arthritis (Walker et al, 1997), 76% of patients with low back pain (Schofferman, Anderson, Hines, Smith, & Keane, 1993), 66% of women with chronic headaches (Domino & Haber, 1987), and 56% of women with chronic pelvic pain (Walling et al., 1994) report past histories of trauma.

An Interdisciplinary Approach

The interdisciplinary approach has demonstrated to be an effective strategy for successful pain management. Interdisciplinary treatment consists of "coordination of services in a comprehensive program and frequent communication among health care professionals all providing care" (p.120) at the same facility (Gatchel, McGeary,McGeary, & Lippe, 2014). An interdisciplinary team should include at least two physicians, a clinical psychologist, a physical therapist (PT), an occupational therapist (OT), and additional health care providers as needed (Gatchel, McGeary,McGeary, & Lippe, 2014). Patients who have participated in interdisciplinary programs reported improved outcomes across a range of domains such as pain severity and interference with pain function and maintained their gains at one year follow up (Oslund et al., 2009).

Interdisciplinary programs base their treatment with a functional restoration approach. A functional restoration addresses the physical, psychological, and vocational challenges during a patient's recovery (Gatchel, McGeary,McGeary, & Lippe, 2014). An individual's goals should

aim to restore physical functional capacity and psychosocial performance (Gatchel, McGeary,McGeary, & Lippe, 2014).

Occupational Therapy's Role in Pain Management

Chronic pain is a complex diagnoses that impacts all areas of functioning. It can lead to a loss of independence, loss of participation in meaningful roles, decreased engagement in everyday activities, difficulties with sleeping, anxiety, depression, social isolation, and overall reduced quality of life (American Occupational Therapy Association, 2002). Occupational therapy can empower individuals to achieve satisfying performance in self-care, productivity, and leisure to support recovery, health, wellbeing, and social participation, and is therefore a necessary component to any rehabilitation program (Hill, 2016).

Within the treatment team, the occupational therapist is able to enable individuals to achieve satisfying performance via activity management in meaningful occupations, regardless of pain and fatigue. Activity management includes activity analysis, skill development, activity adaptation, ergonomics, problem-solving, prioritizing, planning, energy conservation, and pacing of activities (Hill, 2016). An occupational therapist works with an individual to develop coping strategies to help them manage their sleep, mood, and stress (Hill, 2016). Examples of coping strategies may include relaxation techniques through mindfulness meditation, yoga, deep breathing, auditory distraction, and visualization techniques. Increased assertiveness and communication skills are also developed through occupational therapy (Hill, 2016).

Pain is a diagnosis that impacts those of all ages, at any time during the life span. The broad spectrum of OT as a profession with its diverse skill set, allows for OTs to provide pain management in diverse areas of practice. Whether the setting is pediatrics or hospice care, an occupational therapist will identify specific activities or behaviors that aggravate pain (American

Occupational Therapy Association, 2002). Once these are identified, the occupational therapist will provide activity modifications by teaching the individual or caregivers methods for decreasing the frequency and duration of pain (American Occupational Therapy Association, 2002). These methods may include the use of adaptive equipment during occupations such as dressing, bathing, and toileting. The implementation of these activity modifications may decrease an individual's depence on or use of prescription OPRs. An occupational therapist also assess the context and environment that surrounds an individual. Assessing these two areas increases functional performance for daily activities at work and home (American Occupational Therapy Association, 2002).

Occupational therapists can also offer Lifestyle Redesign, an intervention that is often excluded from traditional interdisciplinary programs. Lifestyle Redesign focuses on promoting patient development of healthy self-care routines and habits to prevent and manage chronic conditions (Uyeshiro Simon & Collins, 2017). Through the use of various modules, patients were able to receive education on implementation of behavior changes into their daily routines. These modules included eating and sleeping routines, physical activity, stress and mood management, energy and fatigue management, activities of daily living (ADLs), instrumental activities of daily living (IADLs), home management, body mechanics and posture, transportation, socialization, paid or unpaid work, establishing a baseline, pain “flare-up” planning, assertive communication, and pain communication (Uyeshiro Simon & Collins, 2017). Uyeshiro Simon and Collins (2017) suggest that with LifeStyle Redesign, overall quality of life for those living with chronic pain improves.

The purpose of this doctoral capstone experience (DCE) was to promote occupational therapy’s role in providing non-pharmaceutical pain management strategies and to educate health

practitioners on implementing narrative medicine and trauma-informed care into their treatment approach. Through the use of a holistic treatment process and non-pharmaceutical pain management strategies, occupational therapists play an important role in providing safe and alternative treatment for chronic pain.

Screening and Evaluation

A needs assessment was conducted within the first four weeks of the doctoral capstone experience. The purpose of the needs assessment was to perform systematic collection, assembly, analysis, and dissemination of information related to the evaluation and treatment of individuals with chronic pain (Scaffa & Reitz, 2014). The findings of the needs assessment set the priorities regarding needs, how to address those needs, and assisted with proposing a plan to implement the best solution for developing and delivering this project (Scaffa & Reitz, 2014).

Community Profile

The opioid crisis is unique because it affects individuals of all ages, races, socioeconomic statuses, and education levels. This diversity becomes evident when looking at the impact of prescription opioid use and overdoses of a county in the Midwest. At the beginning of 2016, two local hospitals treated 130 patients for drug overdoses in the first 113 days of the year (Bangert, 2017). In 2013, it was reported that there were 71 opioid prescriptions per 100 residents ("Lafayette sues opioid," 2017). From 2004 to 2013, there were 149 accidental drug overdose deaths (Bangert, 2017). Non-fatal emergency department visits due to opioid overdoses increased 75% from 2011-2015 (Bangert, 2017). As of 2016, 25-34 year olds made up the largest number of drug overdose deaths in the county, with 9.91 deaths per 100,000 people. Of all the overdose deaths in 2016, 9.04 per 100,000 people were due to opioids and 5.31 per 100,000

people were due to heroin, with 81% male and 19% female (Indiana State Department of Health, 2016).

In an effort to reduce the amount of prescription opioid use, alternative therapies should be offered to chronic pain patients. The hospital network where the doctoral capstone is taking place advertises alternative treatments for pain management. According to their Pain Management website, they provide interventions such as disc decompression or fusion, dry needling, epidural steroid injections, facet joint injections, infusion pumps, intercostal nerve blocks, joint/bursa injections, occipital nerve blocks, peripheral nerve injections, spinal cord stimulators, trigger point injections, and Xolair injections. There was not any information about therapy's role in providing pain management. While those alternatives provide pain relief, it is not the most comprehensive, holistic, evidence-based approach to treating individuals with chronic pain.

Data Collection

A survey (Figure 1A) was emailed to all physical therapists, occupational therapists, athletic trainers, speech-language pathologists, and massage therapists within the hospital network. The purpose of the survey was to gain an understanding of health practitioners' knowledge of narrative medicine, pain management evaluations and interventions, and screens for opioid abuse prior to the implementation of the doctoral capstone experience.

Two lead physical therapists were also contacted via email and interviewed about their intervention approaches for the following pain diagnoses: chronic pain, fibromyalgia, back pain, and migraines. For chronic pain, the intervention approaches they identified were dry needling, exercise, electrical stimulation through use of a home TENS unit, and possible Hivamat (a deep oscillation device). These interventions are all dependent upon the location of the pain. For

fibromyalgia, they identified deep breathing, diaphragmatic release, craniosacral therapy, cupping, myofascial stretching, neuro-reeducation of muscles, exercise, recommendations for swimming, electrical stimulation, and possible dry needling. For back pain they identified dry needling, exercise, manual therapy techniques such as mobilizations and soft tissue mobilization, electrical stimulation, positional release, cupping, direct muscle release, neuro-reed, craniosacral therapy, imagery, tai chi, and Hivamat. For migraines they identified craniosacral therapy, manual therapy with mobilizations, cupping, yoga style body positioning stretching, low light/quiet rooms, manual traction, trigger point release, and dry needling.

The information collected from the therapist surveys was used to guide the best possible strategy for implementing non-pharmaceutical, interdisciplinary pain management evaluation and treatment.

Data Analysis and Interpretation

Eight surveys were returned prior to the implementation of the doctoral capstone experience. Results from the pre-survey indicated that discomfort with the topic of narrative medicine was high. There was a lack of an evidence-based protocol for chronic pain patients and knowledge surrounding a way to screen patients at risk for substance abuse. The majority of therapists were not familiar with supports in the community for chronic pain patients. The majority of therapists did not feel that they had the right tools to offer the most effective pain management strategies. Refer to Figure 2A for survey results. These findings indicated the need for education on narrative medicine, evidence-based chronic pain management strategies, and increased support for chronic pain patients within the community.

In addition to the likert scale, an occupational therapist and physical therapist different from the two lead therapists were contacted via email, and identified current protocols for pain

management as using the Hivamat, manual techniques, and kinesiotaping. The physical therapist stated their approach was very manual-based, while the occupational therapist stated her interventions included a lot of education on adapting and increasing awareness of positioning; however, there is no specific protocol for this. The physical therapist identified community resources such as Alcoholics Anonymous, contacts with Narcotics Anonymous, and referrals to psychotherapists and psychiatrists. Patient compliance was identified as a barrier to success of a patient's treatment. The was a lack of education on psychosocial interventions, and knowing when and how to refer the chronic pain therapy patient to other services such as Behavioral Health and the Healthy Living Center.

Problems Related to Occupational Performance

According to a group of occupational therapists, limitations of occupational performance in chronic pain patients includes pain behavior that prevents engagement in activities, a lack of knowledge about pain mechanisms and strategies to deal with pain, occupational imbalance in work, leisure, and home, emotional stress and depression due to pain, and physical or environmental strain resulting in limitations in occupational performance (Skjutar, Schult, Christensson, & Mullersdorf, 2009). The implications from this provided the guidelines for designing intervention approaches by OT practitioners. An individual who has a treatment plan that is client-centered and focuses on addressing limitations in occupational performance will have better functional performance outcomes and increased quality of life (Skjutar, Schult, Christensson, & Mullersdorf, 2009).

Implementation Phase

Diverse responses across professions from the surveys indicated the hospital network did not have an interdisciplinary approach to pain management. There was a lack of education and

knowledge of treatment providers on an evidence-based approach to pain evaluation and treatment. The responses supported the need for education on narrative medicine, evidence-based pain management evaluation and treatments, how to refer to other services within the organization, and the education of a screening tool to identify at risk patients for opioid abuse.

The needs assessment results guided the strategies that would be utilized during the DCE to promote education, staff development, and service provision. The DCE consisted of a series of three educational sessions delivered to staff and management. Trauma-informed care was added after the needs assessment was completed, and the screen for the at risk substance abuse was removed from this project. The first presentation was narrative medicine, the second was trauma informed care, and the third was chronic pain and the pain management toolkit. These topics were chosen after collaboration with the supervisors to educate the staff not only on treating just the physical aspects of chronic pain, but to learn how to evaluate, treat, and respond to the psychosocial aspects as well.

Leadership and Advocacy

Leadership was a skill necessary to be successful in implementing the strategies for staff development and service provision throughout the DCE. At the beginning of the DCE, the occupational therapy student and supervisors collaborated on objectives and goals to be achieved at the end of the experience. These objectives and goals provided the student with the direction and focus of the experience. It is important to note that throughout the 16 week period, objectives were modified to better implement the end goals. This required flexibility and adaptation to the projects to better accomplish the modifications.

The literature review conducted on narrative medicine, trauma-informed care, and chronic pain was a self-led process. The student presented the research and updates on the

project to supervisors in weekly meetings. The meetings required this student to prepare the tasks for the coming week. This collaboration guided the doctoral capstone timeline and allowed for the occupational therapy student to independently work on the implementation strategies. The presentations delivered to the staff were created and delivered by the occupational therapy student. The goal of the presentations by the occupational therapy student was to promote an open environment for interdisciplinary communication through education opportunities.

Advocacy to leaders in the community was also a component of this DCE. This student met with the Mayor of Lafayette, Tony Roswarski, and Representative Sheila Klinker who serves in the House of Representatives from the Lafayette area. Both meetings involved education on what occupational therapy is, where OTs work, an explanation of the DCE, and how OT is an evidence-based treatment for chronic pain management. The goal of these meetings was to increase knowledge of the occupational therapy profession within leaders of the community. These leaders are now allies of the profession and understand the benefit of including OT services as an alternative to prescription opioids.

Staff Development

Staff development was implemented via direct and consultative service provision approaches. A direct service approach consists of small groups having contact with the OT (Dunn, 1988). The direct service approach was used through interactions with therapists of different professions (physical, occupational, and speech therapy) in small groups during presentations. Each presentation was 50 minutes to an hour long. Staff were encouraged to participate throughout the presentations by asking questions and providing suggestions about their ideas on implementing narrative medicine and trauma informed care into chronic pain treatment.

A consultative approach provided expertise that was used to facilitate the appropriate environment towards the needs of the therapists and patients to implement the narrative medicine and trauma informed approach to chronic pain (Dunn, 1988). Colleague consultation addressed the needs of other professionals (physical, occupational, and speech therapy) to improve their skills and knowledge in chronic pain evaluation and treatment, narrative medicine, and trauma informed care. The consultative approach was also used while working with Behavioral Health and the Healthy Living center to form a referral relationship for each service provided.

Session 1: Narrative Medicine. The first presentation topic was narrative medicine. Staff received education on the definition of narrative medicine, narrative evaluation, attention, representation, patient empowerment, and emotional intelligence. After the explanation of narrative medicine, staff members participated in a close reading. Close readings are a thoughtful, critical analysis of a text that focuses on significant details or patterns in order to develop a deep, precise understanding of the text's form, craft, and meanings (Wasmuth, 2017). They encourage the health professional to listen to their own observations, observe their initial responses and see how their experiences affect our relationships (Wasmuth, 2017). Therapists read the poem "Ode to the Chronically Ill Body" by Camisha Jones, then free-wrote to the response "Chronic pain impacts someone by…" for five minutes. Once five minutes passed, therapists were invited to participate in an open discussion (length varied) sharing their reaction and analysis of the poem.

One of the most important aspects of narrative medicine that the supervisors wanted to portray to the staff was acting on the patient's behalf. The Stages of Change from the Transtheoretical Model of Change was presented. A therapist must be able to identify their own willingness to change their attitude and approaches to chronic pain patients before they can

identify their patients' readiness to change. The five stages consist of precontemplation, contemplation, preparation, action, and maintenance and relapse prevention (Zimmerman, Olsen, & Bosworth, 2000). For example, a therapist who is in the precontemplation stage is not seriously thinking about changing their treatment approach to utilizing narrative medicine and trauma-informed care in an individual with chronic pain. If the therapist is unable to change, then the likelihood of the patient remaining compliant throughout treatment may decrease. If the therapist is in the preparation stage, they have made an attempt to incorporate narrative medicine into their chronic pain treatment approach. Thus, they can assist their patients in a more effective manner in implementing change and modifications in their patients' lives. Once a therapist can identify their own willingness to change, they can collaborate with their patients on their own willingness to change. A patient who is in the contemplation stage has considered changed their behavior and lifestyle to better compensate chronic pain. The therapist will work with the patient to move throughout the stages of change.

Through incorporating narrative medicine, patient satisfaction should increase. Patients who feel their health professionals demonstrate empathy are more likely to remain complaint during their treatment, have greater outcomes, and an overall increase in quality of life (Merritt Hawkins, 2018). A total of 12 narrative medicine presentations were delivered.

Session 2: Trauma-Informed Care. The second topic was trauma-informed care. The OT student collaborated with an experienced OT, with a heavy background in mental health services, to develop this presentation. This presentation emphasized the importance of changing the question from "What is wrong with him/her" or "Why are they behaving that way" to "What has happened to him/her?" If healthcare professionals do not look at someone's narrative and do not have an understanding of the role of trauma and how it may impact their current state, we

will not be effective in our treatment. The SAMHSA definition of trauma was presented to the therapists as "an event, series of events, or set of circumstance that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being" (Substance Abuse and Mental Health Services Administration, 2014, p. 7). Examples of trauma include combat, domestic violence, sexual assault, natural disasters, terrorism, historical trauma, amputation, automobile accident, and a new diagnoses. Understanding trauma and trauma-informed care will provide effective services needed to understand life situations that may contribute to the person's current problems, problems faced by patients may be related to traumatic life experiences, and people who have experienced trauma are more sensitive to situations that remind them of the people, places, or things involved in their traumatic event. Appendix A outlines the impact trauma has on the individual's biological and psychosocial systems. This was included in the powerpoint.

Therapists participated in a second close reading. A clip from the movie "Cake" was shown. In this clip, Claire, played by Jennifer Aniston interacts with Nina, played by Anna Kendrick. Claire was in a car accident that resulted in the death of her son and the development of chronic pain accompanied by an addiction to pain medicine. Nina had previously passed away from suicide. Nina is sitting on the train tracks and Claire walks over to her and lies down on the tracks. She discusses what her "last thoughts" would be, and then gets up when she hears Silvana, her assistant, calling out her name. Silvana is very frustrated with Claire and expresses that openly. The prompts for therapists were: How can you identify trauma in a patient?, Think of a difficult patient that you have had. If your patient was in Claire's shoes, would you have

done anything differently?, and How will trauma (known or unknown) impact treatment or plan of care?" Therapists were invited to share their responses in an open discussion.

After the close reading, the other OT presented the rest of the powerpoint. He went over the signs and symptoms of someone with trauma, as well as what to look for in the clinic. These included a patient who fails to progress, consistently arrives late, no shows or cancels frequently, is not compliant or does not follow their home exercise program, has a flat affect, is vague in symptom reporting, their pain response is not consistent with their diagnoses, and they have lack of "investment" or decreased motivation in treatment. He then presented the "Do's" and "Don'ts" what to do when a patient has trauma or reveals trauma in their past. Table 1 outlines these.

This session ended with four different scenarios, developed by the student and the OT practitioner. This prompted clinical reasoning from the therapists to analyze a situation and how they would respond in said situation. A total of nine trauma-informed care presentations were delivered.

Session 3: Chronic Pain. The final part of the educational series was a presentation over chronic pain. Misconceptions and corrections of chronic pain were discussed with therapists. Common misconceptions include that the health professional is the best judge of existence of a patient's pain, the health professional must believe what the client says about pain, and that there is no reason for someone to be in pain if no physical cause is found (McCaffery & Pasero, 1999). Best practice of chronic pain includes the patient's self-report as the most reliable measure of the existence of pain, the standard of pain rating should be the patient's report and the clinician should accept and respect the self-reported rating, and that pain is a complex diagnoses and not all causes of pain can be physically determined (McCaffery & Pasero, 1999).

The current state of chronic pain treatment and desired state of chronic pain treatment were evaluated with the therapists in attendance. The current state consists of a referral to physical therapy, general evaluation with a pain scale rating of 1-10, manual therapies, suboccipital release, progressive muscle relaxation, gentle exercises, and occasionally craniosacral therapy. The desired state was outlined as including a narrative evaluation, potential referrals to OT, massage therapy, Behavioral Health, and the Healthy Living Center when appropriate. Pain should be evaluated with a functional pain scale and assessed both before and after the treatment session. The shift to the functional pain scale, rather than numerical, allows for a more comprehensive evaluation process through understanding the implications pain has on an individual's daily occupations. This student created a functional pain assessment adapted from the ratings of the Functional Pain Scale and Balance your Life pie. Refer to Appendix B.

In order to establish a true interdisciplinary approach, the scope of practice of PT, OT, and speech-language pathology were reviewed. This promoted staff education on the roles each profession has with chronic pain patients. The goal was to specifically help physical therapy know when to refer to OT or massage therapy. For the purpose of this DCE, the role of OT was heavily presented on. For chronic pain, an occupational therapist can identify activities that aggravate pain, perform an activity analysis, and modify specific activities, teach methods to decrease duration of painful episodes, promote function in daily activities, act as part of the interdisciplinary team, and educate and demonstrate adaptive equipment to assist with tasks such as reaching, dressing, bathing, and household chores (American Occupational Therapy Association, 2002). Occupations were then reviewed. This promoted physical therapists knowledge of basic and instrumental activities of daily living that chronic pain patients may be experiencing difficulty in performing; and therefore, to refer these patients to OT. These

included bathing and showering, toileting, dressing, functional mobility, personal hygiene and grooming, sexual activity, pet care, driving and community mobility, health management and maintenance, financial management, home establishment and management, meal preparation and cleanup, safety, shopping, rest and sleep, job performance, leisure, and social participation (American Occupational Therapy Association, 2014).

While the outpatient staff incorporated a variety of physical evidence-based treatments, not all avenues of chronic pain treatment were being utilized, specifically psychosocial interventions. The benefits of mindfulness through yoga and meditation, lifestyle redesign, sleep interventions, craniosacral therapy, massage therapy, relaxation and visualization with guided imagery, theories of gratitude, mirror therapy, cognitive-behavioral therapy, therapeutic listening, and coping skills were introduced. These interventions were outlined in the pain management toolkit available to therapists.

A third close reading was conducted. The subject of the close reading was the spoken word poetry “I am NOT black, you are NOT white.” by Prince Ea. This poem outlines the effects labels have on different populations and society. Therapists watched the poem and responded to the prompt: “How do labels influence you treat your patients? What labels are associated with chronic pain patients? How can we change them?”. Once the five minutes of free writing was complete, therapists were invited to participate in an open discussion.

The presentation also reviewed the referral processes and guidelines for both the Behavioral Health Department and the Healthy Living Center. Educating therapists on how to refer to other specialities increases the ability to treat the chronic pain patient in a client-centered, holistic way. A total of four presentations were delivered.

Pain Management Toolkit. The pain management toolkit was available to all therapists and other health professionals, such as nurses, no matter the setting they are worked in. Staff would find this toolkit via a network folder on the shared drive. Contained in the toolkit are folders that included evidence supporting various interventions for chronic pain, scripts for guiding patients in meditation, yoga, relaxation, and guided imagery, an energy conservation handout, a yoga home exercise plan, handouts for patients of what they can do at home and what they may receive at the outpatient therapy clinic in terms of pain management, a worksheet for patients to document their pain symptoms as a resource to take to the doctor, a sleep hygiene tip sheet, and a change plan worksheet to outline the changes they want to make and barriers that may prevent this change. The toolkit resources will be finalized via the hospital organization.

Discontinuation and Outcome Phase

The discontinuation phase began during the 14th week of the doctoral capstone experience. A survey was distributed to the therapy staff via email and at the last educational session to determine the effects of the educational series. This survey was modified from the original survey to better correspond with the capstone experience. Refer to Figure 1B for the survey. Twenty-four surveys were received back; however, four were excluded because they were not complete.

Post-survey results indicated that there was an overall increase in knowledge of narrative medicine, evidence-based pain management strategies, sufficient knowledge in trauma-informed care, increased knowledge in community resources, and an increase in having the right tools for pain management (See Figure 2B). Suggestions for how to better implement narrative medicine and trauma-informed care included an interdisciplinary approach (such as including nursing), specific protocols with practicing therapeutic support and listening, simulations for clinicians as

training tools, and continued discussion of evidence-based practice. It should be noted that due to inconsistent sample size, the pre-education and post-education surveys were not completely related. Eight therapists returned the pre-education survey, while twenty-four returned the post-education survey.

Quality improvement involves "systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups" (U.S. Department of Health and Human Services: Health Resources and Services Administration, 2011, p. 3). For the purposes of this capstone experience, the health care services included entire therapy staff and the targeted patient group was individuals with chronic pain. The educational series was designed to improve the quality of treatment provided by therapists through incorporating narrative medicine and trauma-informed care to individuals with chronic pain. Each educational presentation involved open discussions, whether through a close reading or statements made during the presentations. Through these discussions, the managers and this student were able to gain knowledge about what the therapists needed to feel successful in implementing these strategies. Staff suggested things such as more time for documentation and consistency of care. All of these have been taken into consideration by the management team as to how they can be implemented to daily care.

Sustainability of this education will be conducted by a subcommittee of two OTs, two PTs, and one speech-language pathologist. The topics of narrative medicine and trauma-informed care will be incorporated into therapists' annual competency reviews. The education will be provided from the powerpoints used in the DCE.

Overall Learning

The experiences gained from the DCE are invaluable to the occupational therapy profession as an entry-level practitioner. This student had the opportunity to work with various health professionals and leaders in the community and increased knowledge on the importance of advocacy, collaboration, and open communication through various interactions.

The purpose of this doctoral capstone experience was to promote OT as an alternative treatment to prescription OPRs for patients with chronic pain. Because chronic pain patients have an increased likelihood of past traumatic events, trauma-informed care, along with narrative medicine, provides a way to promote patient empowerment in treatment. As the pre-study suggested, therapist knowledge in narrative medicine and evidence-based chronic pain management strategies were limited. Through the implementation of this capstone experience, knowledge in narrative medicine and trauma-informed care increased overall within the therapy department.

The collaboration between Behavioral Health and the Healthy Living Center was an integral part of the capstone experience. Collaboration occured in person through meetings as well as electronically. Early on in this experience, it was learned that there was a lack of understanding between Therapy Services, Behavioral Health, and the Healthy Living center as to how each service could benefit from one another. Meeting with each department, this student was able to educate on how a dynamic diagnoses like chronic pain could benefit from the services provided within each area. In order to establish a relationship between services, a document was created that states conditions and diagnoses, therapy interventions, and the referral process for therapy services. This document will be used by Behavioral Health and the Healthy Living Center to assist in referring their patients to therapy services. This student also educated the therapy staff through a presentation and creation of a referral tree of the referral process and

the services and groups provided by Behavioral Health and Healthy Living that therapy patients could benefit from.

Collaboration was also essential in developing the pain management toolkit. Multiple meetings with physical therapists and occupational therapists were held to gain a greater understanding of the current process of pain management in therapy services. The goal was to create an interdisciplinary tool that provided all therapists, no matter their specific skill set, with the information needed to deliver effective, evidence-based interventions to patients with chronic pain.

Advocacy was an important and unique opportunity during this capstone. This student had the opportunity to meet with the Mayor and State House Representative. The meetings with the Mayors were attended by the student and supervisors. During these meetings, alternative therapy services provided by Franciscan Health and how they can help to combat the opioid crisis in Lafayette and West Lafayette were discussed. Representative Klinker and Mayor Roswarski were very interested in understanding occupational therapy in a new light by understanding OT's role in chronic pain management and mental health. They were willing to support the profession in any future needs. This student learned that there is no reason to not reach out to leaders in the community about the benefits that occupational therapy services can provide. The best way to advocate for the profession is to educate those who have influence over policy.

Not only was this student involved in discussing this capstone with community leaders, but also had the opportunity to attend internal meetings within the hospital network aimed to reduce the use of prescription opioids. These meetings were attended by physicians, nurse practitioners, case managers, pharmacists, and were lead by a business team leader. An A3 form

was completed in the first meeting to create a plan on how to analyze current use of prescription opioids and the overall goals of this initiative. This specific form is used to understand the background of the improvement goal (reduction in use of prescription opioids), the current conditions (how are opioids currently being used in the hospital system), specific goals (trying to accomplish alternatives to prescribing opioids), an analysis of the current and desired state, barriers that may limit success of the goals, plan for improvement (incorporating alternative therapies - such as OT), and follow-up (LeanProject, n.d.). While attending these meetings, this student learned how change occurs within a large hospital organization. In order for change to be successful, the current state must be analyzed (in this case the process of prescribing opioids) and then the future state is created. This student was able to advocate for therapy's role in this process by educating the committee about alternative approaches to pain management.

In order to advance any health profession, research must be conducted. The hospital network was provided with an opportunity for research on TENS units. The opportunity came about through contacting a professor at Purdue University who was able to refer this student to a biomechanical engineer professor. Through phone call meetings, we were able to identify clinical problems with TENS units. Purdue University will create a team of engineers that will develop a research protocol for the use of TENS units with specific diagnoses with this hospital network providing the data.

The DCE was more than this student ever could have imagined. This student was able to develop a project with the support of the supervisors and faculty mentors that will have a lasting impact on the OT career. Not only did this student have an impact within the hospital and therapy clinic through education on narrative medicine and trauma-informed care, but this

student was able to work with leaders in the community about the integrating occupational therapy as a viable treatment option for pain management.

There is a substantial need in today's society for alternative treatment options for individuals with chronic pain. Providing these alternative treatment options aims to reduce the dependence on opioids for pain relief. This capstone was successful in increasing overall knowledge of narrative medicine and trauma-informed care of staff within a therapy department. Knowledge of chronic pain management increased; however, it is still important for evidence-based treatment approaches to be utilized in the future. In order to use a true interdisciplinary approach, occupational therapy must be included in pain management programs and clinics. Promoting occupational therapy's role in chronic pain management, with a narrative medicine and trauma-informed approach, may help alleviate the need for opioid use with chronic pain patients.

References

American Occupational Therapy Association. (2014). Occupational therapy practice framework: Domain and process (3nd ed). *American Journal of Occupational Therapy, 68*(Suppl. 1), -S48. http://dx.doi.org/10.5014/ajot.2014.682006

American Occupational Therapy Association. (2015). T*he role of occupational therapy in palliative and hospice care*. Retrieved from https://www.aota.org/~/media/Corporate/Files/AboutOT/Professionals/WhatIsOT/PA/Facts/FactSheet_PalliativeCare.pdf

American Occupational Therapy Association. (2016). *Surgeon general calls on health care professionals to combat opioid abuse*. Retrieved from https://www.aota.org/Publications-News/AOTANews/2016/combat-opioid-use-epidemic-surgeon-general.aspx

American Occupational Therapy Association. (2002). *Chronic pain*. Retrieved from https://www.aota.org/About-Occupational-Therapy/Patients-Clients/Health-and-Wellness/Pain.aspx

Anderson, R. M., & Funnel, M M. (2010). Patient empowerment: myths and misconceptions. *Patient Education and Counseling, 79*(3), 277-282.

B. Taylor, personal communication, March 20, 2018

Bangert, D. (2017, December 22). City sues drug makers for opioid crisis "ravaging Lafayette;" county considers following. *Journal and Courier.* Retrieved from http://www.jconline.com/story/news/2017/12/22/city-sues-drug-makers-opioid-crisis-ravaging-lafayette/977075001/

Barrie, J. (2011). Patient empowerment and choice in chronic pain management. *Nursing Standard, 25*(31), 38-41.

Breivik, H., Collett, B., Ventafridda, V., Cohen, R., & Gallacher, D. (2006). Survey of chronic pain in Europe: Prevalence, impact on daily life, and treatment. *European Journal of Pain, 10*(4), 287-333.

Campbell, J. (1996). APS presidential address. *The Journal of Pain, 5*(1), 85-88. doi: 10.1016/S1082-3274(96(80076-6

Centers for Disease Control and Prevention (CDC). (2011). Vital signs: overdoses of prescription opioid pain relievers---United States, 1999-2008. *Morbidity and Mortality Weekly Report, 60*(43), 1487-1492.

Charon, R. (2001). Narrative medicine: A model for empathy, reflection, profession, and trust. *The Journal of American Medicine Association, 286*(15), 1897-1902.

Charon, R. (2005). Narrative medicine: Attention, representation, affiliation. *NARRATIVE, 13*(3), 261-270.

Compton, W. M., Jones, C.M., & Baldwin, G. T. (2016). Relationship between nonmedical prescription-opioid use and heroin use. *The New England Journal of Medicine, 374*(2), 154-163. doi: 10.1056/NEJMra1508490

Covington, Stephanie. (2017, September 14). *3 steps to becoming a trauma and gender responsive organization*. [Webinar]. Retrieved from https://event.on24.com/eventRegistration/console/EventConsoleApollo.jsp?&eventid=1487728&sessionid=1&username=&partnerref=&format=fhaudio&mobile=false&flashsupportedmobiledevice=false&helpcenter=false&key=89BF794F37726508B0671C4362E3A2C5&text_language_id=en&playerwidth=1000&playerheight=650&overwritelobby=y&eventuserid=197921555&contenttype=A&mediametricsessionid=161236014&mediametricid=2135572&usercd=197921555&mode=launch

Domino, J. V., & Haber, J. D. (1987). Prior physical and sexual abuse in women with chronic headache: Clinical correlates. *The Journal of Head and Face Pain, 27*, 310-314.

Dunn, W. (1988). Models of occupational therapy service provision in the school system. *The American Journal of Occupational Therapy, 42*(11), 78-723.

Gatchel, R. J., McGeary, D. D., McGeary, C. A., & Lippe, B. (2014). Interdisciplinary chronic pain management: Past, present, and future. *American Psychological Association, 69*(2), 119-130. doi: 10.1037/a0035514

Hill, W. (2016). The role of occupational therapy in pain management. *Anesthesia and Intensive Care Medicine, 17*(9), 451-453.

Indiana State Department of Health. (2016). *2016 fatal opioid overdose demographic*s. Retrieved from http://in.gov/isdh/files/Tippecanoe_2016_MortInfo.pdf

Johnson, E. M., Lanier, W. A., Merrill, R. M., Crook, J. Porucznik, C. A., Rolfs, R. T., & Sauer, B. (2013). Unintentional prescription opioid-related overdose deaths: Description of decedents by next of kin or best contact, Utah, 2008-2009. *Journal of General Internal Medicine, 28*(4), 522-529. doi: 10.1007/s11606-012-2225-z

Jones, G. T., Power, C., & Macfarlane, G. J. (2009). Adverse events in childhood and chronic widespread pain in adult life: Results from the 1958 British Birth Cohort Study. *Pain, 143*, 92-96.

Kolodny, A., Courtwright, D. T., Hwang, C. S., Kreiner, P., Eadie, J. L., Clark, T. W., & Alexander, G. C. (2015). The prescription opioid and heroin crisis: A public health approach to an epidemic of addiction. *Annual Review of Public Health, 36,* 559-574.

Lafayette sues opioid companies for addiction crisis. (2017, December 22). Retrieved from http://www.wlfi.com/content/news/Lafayette-sues-opioid-companies-for-addiction-crisis-465926103.html

LeanProject. (n.d.). *A3 reporting and problem solving*. Retrieved from http://www.leanproject.com/what-we-do/key-components/lean-tools-techniques/a3-more-description/

McBeth, J., Silman, A. J., Gupta, A., Chiu, Y. H., Morriss, R., Dickens, C., King, Y., & Macfarlane, G. J. (2007). Moderation of psychosocial risk factors through dysfunction of the hypothalamic-pituitary-adrenal stress axis in the onset of chronic widespread musculoskeletal pain: Findings of a population-based prospective cohort study. *Arthritis & Rheumatism, 56*, 360-371.

McCaffery, M. & Pasero, C. (1999). *Pain: Clinical manual* (2nd ed.). St Louis, MO: Mosby.

Merritt Hawkins. (2018). *Physician recruiting and emotional intelligence: Going beyond IQ and "Type A" personalities*. Retrieved from https://www.ihaconnect.org/_layouts/15/WopiFrame.aspx?sourcedoc={F60F40E8-A884-4A2A-96C0-864B177583E7}&file=MHA%20Whitepaper_Emotional%20Intelligence.pdf&action=default&DefaultItemOpen=1

Odell, S. & Logan, D. E. (2013). Pediatric pain management: The multidisciplinary approach. *Journal of Pain Research, 6*, 785-790. doi: 10.2147/JPR.S37434

Oslund, S., Robinson,R. C., Clark, T. C., Garofalo, J. P., Behnk, P. Walker, B., . . . Noe, C. E. (2009). Long-term effectiveness of a comprehensive pain management program:

Strengthening the case for interdisciplinary care. *Proceedings (Baylor University Medical Center), 22*(3), 211-214.

Quinones, S. (2015). *Dreamland: The true tale of America's opioid epidemic.* New York, NY: Bloomsbury Press.

Rolf-Detlef, T., Winfried, R., Barke, A., Aziz, Q., Bennett, M., Benoliel, R.,…Wang, S. J., (2015). A classification of chronic pain for ICD-11. *International Association for the Study of Pain, 156*(6), 1003-1007. doi: 10.1097/j.pain0000000000000160

Rosti, G. (2017). Role of narrative-based medicine in proper patient assessment. *Support Care Cancer, 25*(1), S3-S6. doi: 10.1007/s00520-017-3637-4

Roth, R. S., Geisser, M. E., & Williams, D. A. (2012). Interventional pain medicine: Retreat from the biopsychosocial model of pain. *Translational Behavioral Medicine, 2*(1), 106-116. doi: 10.1007/s13142-0110-0090-7

Scaffa, M. E., & Reitz, S. M. (2014). *Occupational therapy in community-based practice settings.* Philadelphia, PA: F. A. Davis Company

Scarinci, I. C., McDonald-Haile, J., Bradley, L. A., & Richter, J. E. (1994). Altered pain perception and psychosocial features among women with gastrointestinal disorders and history of abuse: A preliminary study. *The American Journal of Medicine, 97*, 108-118.

Schofferman, J., Anderson, D., Hines, R., Smith, G., & Keane, G. (1993). Childhood psychological trauma and chronic refractory low-back pain. *The Clinical Journal of Pain, 9*, 260-265.

Skjutar, A., Schult, M-L., Christensson, K., & Mullersdorf, M. (2009). Indicators of need for occupational therapy in patients with chronic pain: Occupational therapists' focus groups. *Occupational Therapy International, 17*(2), 93-103 doi: 10.1002/oti.282

Substance Abuse and Mental Health Services Administration. (2014). *SAMHSA's concept of trauma and guidance for a trauma-informed approach*. Retrieved from https://store.samhsa.gov/shin/content/SMA14-4884/SMA14-4884.pdf

U.S. Department of Health and Human Services: Health Resources and Services Administration. (2011). *Quality improvement*. Retrieved from https://www.hrsa.gov/sites/default/files/quality/toolbox/508pdfs/qualityimprovement.pdf

Upadhyay, J., Maleki, N., Potter, J., Elman, I., Rudrauf, D., & Knudsen, J.,…Borsook, D. (2010). Alterations in brain structure and functional connectivity in prescription opioid patients. *Brain: a journal of neurology, 133*(7), 2098-2114. doi: 10.1093/brain/awq138

Uyeshiro Simon, A. & Collins, C. E. R. (2017). Lifestyle Redesign for chronic pain management: A retrospective clinical efficacy study. *American Journal of Occupational Therapy, 71,* 7104190040. https://doi.org/10.5014/ajot.2017.025502

Walker, E. A., Keegan, D., Gardner, G., Sullivan, M., Bernstein, D., & Katon, W. J. (1997). Psychosocial factors in fibromyalgia compared with rheumatoid arthritis: II Sexual, physical, and emotional abuse and neglect. P*sychosomatic Medicine, 59*, 572-577.

Walling, M. K., Reiter, R. C., O'Hara, M. W., Milburn, A. K., Lilly, G., & Vincent, S. D. (1994). Abuse history and chronic pain in women: I. Prevalences of sexual abuse and physical abuse. *Obstetrics & Gynecology, 84*, 193-199.

Wasmuth, S. (2017). *Narrative Medicine* [PowerPoint slides].

Young-Casey, C., Greenberg, M. A., Nicassio, P. M., Harpin, R. E., & Hubbard, D. (2008). Transition from acute to chronic pain and disability: A model including cognitive, affective, and trauma factors. *Pain, 134*, 69-79.

Zimmerman, G. L., Olsen, C. G., & Bosworth, M. F. (2000). A ‘stages of change’ approach to helping patients change behavior. *American Family Physician, 61*(5), 1409-1416.

Tables

Table 1

Do's and Don'ts of Responding

Do's	Don'ts
Invite conversation	Touch without spoken permission.
Allow expression of emotions	Talk about your own trauma or anyone else's.
Allow silence	Make promises you cannot keep.
Listen, Listen, Listen!	Get too close – maintain emotional, personal boundaries.
Invite conversation	Ask too many questions.
Allow expression of emotions	
Ask "What can I do for you now?"	
Ask "What has helped you to feel better in the past?"	
Offer options to feeling better and healing that you have available (refer to therapist, get ice water, take outside for fresh air).	
Provide choices.	
Inform them of the treatment. What will happen next.	
Ask if it is okay to touch them.	
Provide privacy	
Be able to say "I don't know" When asked "Why?" No guessing as to motives.	

Note: This table was presented to therapists during the Trauma-Informed Care presentation. An OT who works on the psychiatric unit developed this list. (B. Taylor, personal communication, March 20, 2018).

Figures

My name is Kersten Laughlin and I am an Occupational Therapy student from the University of Indianapolis. I am completing my Doctoral Capstone Experience here at Franciscan Health, and I am focusing on promoting non-pharmaceutical pain management strategies via PT, OT, ST, AT, and Massage Therapy, while educating health practitioners on narrative medicine. I am interested in understanding the health practitioner's perspective about the current approach to pain management.
Please respond to each statement correspondingly.

1 2 3 4 5

Strongly Disagree Disagree Neutral Agree Strongly Agree

1. I am familiar with narrative medicine and know how it can be applied to individuals with chronic pain.
1 2 3 4 5

2. I have an evidence-based, current protocol for an individual with chronic pain.
1 2 3 4 5
Explain:

3. I am familiar with using a screening tool to detect an individual who may be at risk for opioid abuse.
1 2 3 4 5
Screening Tool Used (if applicable):

4. I am aware of resources in the community, such as support groups, for this population.
1 2 3 4 5
Examples of Resources:

5. I feel I have the right tools to offer the most effective pain management strategies.
1 2 3 4 4
Explain:

Figure 1A: Pre-survey that was sent out to therapy staff via email prior to education series.

It has been a pleasure working with all of you for my Doctoral Capstone Experience. Your feedback on this survey is greatly appreciated.

Please respond to each statement correspondingly.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. I am familiar with narrative medicine and know how it can be applied to individuals with chronic pain.

1 2 3 4 5

Explain:

2. I have an evidence-based, current protocol for an individual with chronic pain.

1 2 3 4 5

Explain:

3. I am familiar with the trauma-informed care approach and know what signs and symptoms to be aware of that may represent trauma.

1 2 3 4 5

Explain:

4. I am aware of resources in the community, such as support groups, for this population.

1 2 3 4 5

Examples of Resources:

5. I feel I have the right tools to offer the most effective pain management strategies.

1 2 3 4 5

Explain:

6. What are your suggestions on how to best implement narrative medicine and trauma-informed care?

Figure 1B: Post-survey that provided to therapy staff after implementation of educational series.

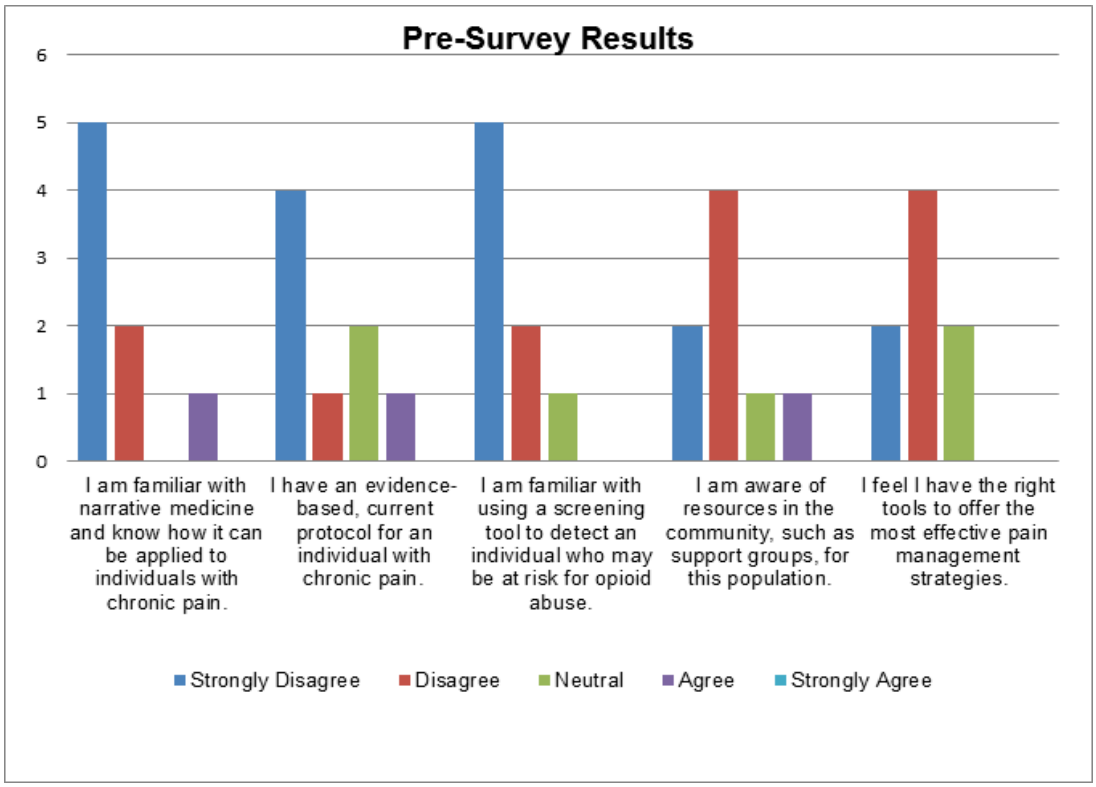

Figure 2A: Results from surveys administered to therapy staff prior to education series.

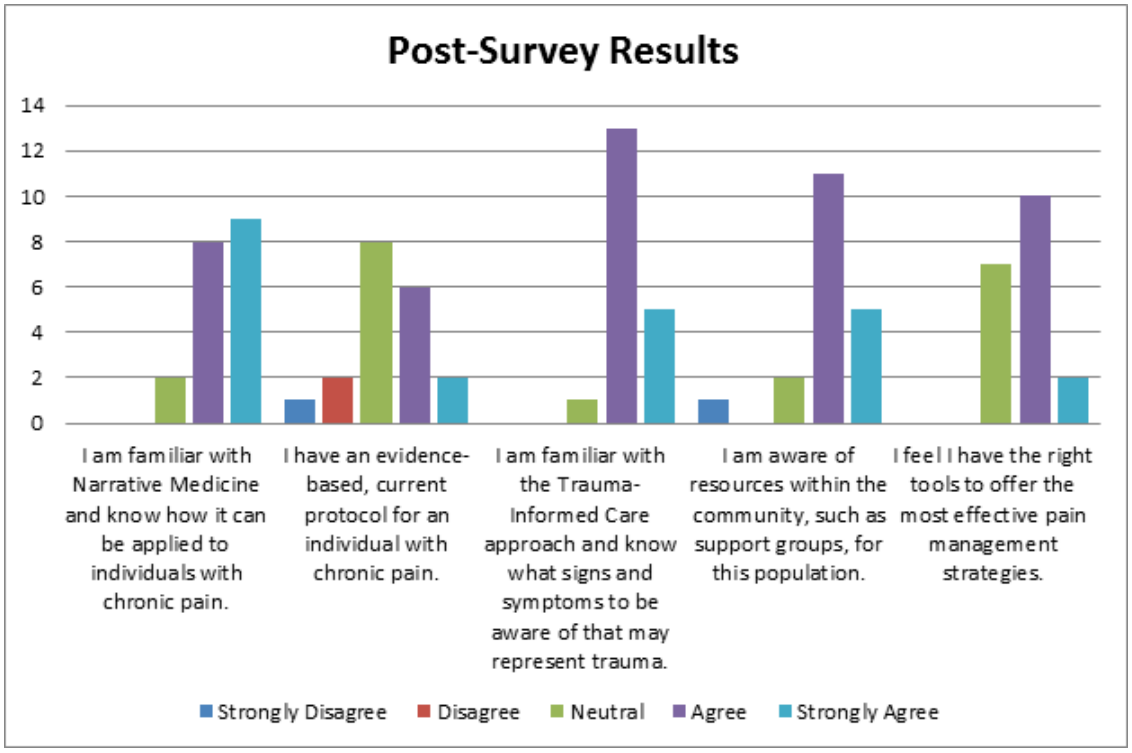

Figure 2B: Results from post-survey that was sent to therapy staff after attending educational sessions.

Appendix A


(Covington, 2017)
Traumatic Event
Overwhelms the physical and psychological coping skills
Response to Trauma
Fight, Flight, or Freeze
Altered state of consciousness, body sensations, numbing, hypervigilance, hyperarousal, collapse
Sensitized Nervous System
Changes in the Brain
Brain-Body Connection
Psychological and Physical Distress
Current stressors, triggers, sensations, images, behaviors, emotions, memories
Emotional and/or Physical Responses
Retreat
Isolation
Dissociation
Depression
Anxiety
Harmful Behavior to Self
Substance Use Disorders
Eating Disorders
Deliberate self-harm
Suicidal Actions
Physical Health Issues
Lung Disease
Heart Disease
Obesity
Chronic Pain
Harmful Behavior to Others
Aggression
Violence
Rages
Threats

Appendix B

Visualize Your Pain

Using the following colors, color code your pain at the corresponding time of day. Try to identify activities that make your pain worse or better. Completing this will give you a visual representation of how pain is impacting your daily activities.

Black: Intolerable and intense. You are unable to do anything or verbally communicate because of the pain.

Red: Intolerable. You are not able to perform activities such as using the telephone, watching TV, or read.

Orange: Intense, strong, piercing pain; however, you are able to use the telephone, watch TV, or read.

Yellow: Tolerable. The pain does prevent some activities but you have learned to adapt to it during activities.

Green: Tolerable and does not prevent any activities.

Blue: No pain experienced.