Purpose:

The aim of this study was to identify safe and effective strategies to empower chronic pain patients to self-manage their pain rather than relying solely on medication.

Background and Significance: Chronic pain affects quality of life and prevents patients from engaging in and enjoying their normal activities. According to the Johnson (2016), Chronic pain management begins when patients are taught to set realistic goals for pain relief. Patients need to be engaged in the management and treatment of their pain and multidisciplinary approaches need to be considered. Goals should not only focus on reducing pain severity, but on improving functionality and quality of life.

One possible alternative to address this problem is Mindfulness. Mindfulness is the practice of increasing one’s ability to stay consciously aware of the present moment. Mindfulness can help calm the fear that pain awakens (Jacob, 2016). Through daily practice, a person learns to direct their conscious awareness giving them the choice where to focus their attention. The practice calms the nervous system, emotions and automatic negative thoughts, and has been shown to be effective in decreasing both stress and pain. According to Vidyamala Burch, founder of Breathworks mindfulness, primary pain is the physical sensations sent from the source of injury to the brain. Secondary pain is the minds reaction to the pain which can amplify the pain and cause suffering. Secondary reactions include the thoughts, feelings, emotions, and memories associated with the pain and can lead to anxiety stress, worry, depression and feelings of hopelessness and even exhaustion (Burch, 2008). In practicing mindfulness, primary pain can be separated from the secondary pain (Reiner, Tibi, & Lipsitz, 2013). Mindfulness meditation can be used to shift chronic pain treatment from a “biomedical disease model” to a “patient-centered” model focused on “patient engagement in daily self-management” (Jacob, 2016). Versatility and cost-effectiveness makes mindfulness meditation an attractive self-management option (Khusid & Vythilingam, 2016). While there are countless mindfulness studies in the literature, this study is unique in that one of the mindfulness practices was to use evidenced-based modalities, such as heat, ice, relaxation, and distraction, with the subject being mindful of the effects in successfully managing their pain. This study did not specifically focus on pain levels; instead, it focused on how successful each subject felt they were at managing their pain. This was an eight-week study that showed clinically and statistically significant changes in the subjects’ ability to manage pain.

Methods:

This chronic pain study was a prospective, two group, control- and experimental-group design comparing mindful self-regulation of pain to medical treatment as usual. Fifty-four subjects were enrolled in the study. Quantitative and qualitative data were collected from the subjects.

A total of eight classes were conducted by the principal investigator trained in teaching mindfulness. The subjects had the option to attend the sessions either virtually or in person. The Integrated Theory of Behavioral Health Change learning theory (ITHBC) was used. Because ITHBC includes activities such as goal setting, self-monitoring, reflective thinking, decision making, and planning for and engaging in specific behaviors, journals were kept during the intervention. The subjects recorded five to six days a
week the methods used, the length of the mindfulness practice, their self-reflections, and a 0-10 Likert-scale-based daily assessment of how effective they were at managing their pain.

**Measurement:** To measure the success, the following valid and reliable instruments were used upon enrollment and 8 weeks later for the control and intervention groups: The Pain Management Inventory, the Chronic Pain Experience Instrument, and the West Haven-Yale Multidimensional Pain Inventory.

**Results:** The mindfulness intervention group had statistically significant changes in several areas. On a 0-6 Likert scale, pain severity decreased from 4.01 to 2.86 (p = .0001). On a 0-10 Likert scale, subjects rated themselves on how effective they were at managing their pain, which improved from 4.62 to 7.40 (p= .001). The most helpful complementary methods chosen by the subjects were temperature therapy, exercise, paced activities, prayer and meditation, rest and relaxation, recreational distraction and massage. Multiple composite scores from the Chronic Pain Experience Instrument improved: the total chronic pain experience score improved from 49.72 to 81.33 (p=.001), the function score improved from 13.24 to 20.40 (p=.008) and the helplessness score improved from 13.56 to 20.40 (p=.008).

**Conclusion:**

While subjects experienced both clinically and statistically significant improvements, learning mindfulness and self-regulation is not a “quick fix”. The subjects experienced a clinically significant temporal gradient of upward trend in Effectiveness (of managing their pain) Scores which became statistically significant around week 6. As healthcare providers, we need to change our perspective on pain from throwing more and more medication at the problem to empowering patients with as many tools as possible to self-manage their pain. This pilot study will help reinforce alternatives available to aid in that objective. I believe nursing can lead the way in this critical change of perspective, and this conference is able to reach out to those nurses.

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**Title:**

Chronic Pain and the Effects of Self-Regulation and Mindfulness

**Keywords:**

Chronic Pain, Mindfulness Techniques and Self-Regulation

**References:**


**Abstract Summary:**
Chronic pain affects quality of life and prevents patients from engaging in and enjoying life. This presentation will highlight the positive effects of mindfulness techniques in patients with chronic pain. As healthcare providers, it is imperative to empower patients with tools to self manage their pain.

**Content Outline:**

I. Introduction - Background and Significance of chronic pain

II. Purpose and Method of the study will be outlined

III. Results of the study will be discussed

IV. Implications for practice will be proposed

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**Professional Experience:** Dr. Leveille is the Nurse Scientist for Baylor University Medical Center (BUMC) and also has Nursing Research responsibilities for Baylor Health Care System (BHCS) through the Office of the Chief Nursing Officer. Dr. Leveille received her Master’s in Nursing and PhD in Nursing from the University of Texas at Arlington. Dr. Leveille’s 25 years of nursing experience has focused on Cardiology and Cardiovascular surgery and she has practiced as an Acute Care Nurse Practitioner for 14 years in these settings.

**Author Summary:** Currently, as a Nurse Scientist, Dr. Leveille assists nurses in conducting research projects in various stages of the research process. Baylor University Medical Center currently has over 40 nursing initiated studies in progress in which Dr. Leveille has facilitated the research process. She participated as a Research Team member for this research study.

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