Co-Creating the Future of Patient Centered Care

Integrative Treatment Strategies for Patients Experiencing Chronic Pain

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Learning Objectives

• As a result of participating in this section, participants will be able to:
  – Adopt a perspective on chronic pain as a chronic disease process resulting in maladapted nervous systems (CNS, ANS & ENS).
    • From this perspective, participants will identify opportunities to reframe the evaluation and treatment approach used with this challenging patient population.
  – Reflect upon the impact of self-compassion, attention and beliefs of both providers and patients on creating patient-centered care.
  – Experience the comfort of inducing the relaxation response to demonstrate the benefit of including relaxation techniques in the patient plan of care.
IASP Taxonomy

- **Pain**: An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.

- **Noxious stimulus**: A stimulus that is damaging or threatens damage to normal tissues.

Definitions

- **Chronic pain**: is pain that occurs on at least half the days for six months or more.

- **High-impact chronic pain**: is associated with substantial restriction of participation in work, social, and self-care activities for six months or more.

Source: HHS National Pain Strategy, 2016

Chronic Pain

- 1/3 of US adults
  - Slightly more common in women
  - Increases with age
- Correlated with indicators of poor socioeconomic status
- Most common sources
  - Low back pain
  - Osteoarthritis

A moral imperative.

“Effective pain management is a moral imperative, a professional responsibility, and the duty of people in the healing professions.”

Source: HHS National Pain Strategy, 2016

• preventing the transition from acute to chronic pain should be a top clinical priority.

• the existing clinical (and research) silos prevent cross-fertilization of ideas and best practices.

• increasingly constrained by a reimbursement system that discourages interdisciplinary practice.

Source: Institute of Medicine Report: Relieving Pain In America, 2011

• Chronic pain is a biopsychosocial condition that often requires integrated, multimodal, and interdisciplinary treatment, all components of which should be evidence-based.

• Self-management programs can improve quality of life and are an important component of acute and chronic pain prevention and management.

• Chronic pain has a distinct pathology, causing changes throughout the nervous system that often worsen over time. It has significant psychological and cognitive correlates and can constitute a serious, separate disease entity.

Source: HHS National Pain Strategy, 2016
"We need to change cognitions, beliefs and fear BEFORE engaging a movement-based approach of therapeutic exercise, manual therapy pacing and graded exposure. This cognitive restructuring is done via T.N.E." (Louw, Diener et al 2011)

"PT should address faulty cognitions" ………
Fear, 
Catastrophization  Perception 
Depression  Emotions 
Yellow, Red & Blue Flags, 
Central Sensitization

Discussion: what tools are in your box to address these issues?

“Pain is inevitable. Suffering is optional”.
Can we learn to exercise our options by teasing apart our direct sensory experiences from our reactions to them?
Source of Suffering?

“The contradiction between the subject’s conscious knowledge that the pain is not associated with the environment and the brain circuitry that continuously make such associations may be the core cognitive/emotional source of the suffering that chronic pain patients experience.”


Healing

Healing is the personal experience of the transcendence of suffering.


The second arrow is optional…

"Avoid that second arrow by simply experiencing discomfort without reacting to it.

We do this by being mindful — cultivating a patient, non-reactive, curious, welcoming attitude towards anything in our experience that seems unpleasant.

We can also adopt this attitude towards anything that’s pleasurable. We call this attitude equanimity. Equanimity isn’t a state of non-feeling. It’s a state of freedom from habitual patterns of thought and emotion that lead to further pain. When we experience this freedom we become happier."

http://www.wildmind.org/texts/the-arrow
Default Mode Network (DMN)

- Source of the autobiographical sense of the self.
- Responsible for the mentally sustained image of oneself.
- DMN is positively altered with meditative practices
  - Less self centered
  - More aware of both interoceptive and exteroceptive cues.


Are we looking out for Catastrophe?

- An individual’s idiosyncratic beliefs will determine the extent to which pain is catastrophically interpreted.
- A catastrophic interpretation of pain gives rise to physiological (arousal), behavioral (avoidance), and cognitive fear responses.
  - The cognitive shift that takes place during fear enhances threat perception (e.g., by narrowing of attention) and further feeds the catastrophic appraisal of pain. (Gatchel et al., 2007, p. 603)
- Catastrophic thinking patterns are linked to fear avoidance beliefs.
  
  Source: Institute of Medicine Report: Relieving Pain In America, 2011

Chronic Hyperarousal

- A psychophysiological condition defined by
  - increased body and brain metabolic rates, elevated heart rate,
  - elevated core body temperature,
  - increased high frequency EEG,
  - elevated nighttime cortisol,
  - decreased serum melatonin,
  - nocturnal sympathetic activation
  - general over-activation of the hypothalamic-pituitary axis (HPA)

  (Bonnet, 2010; Riemann, 2010).
Are we consciously helping patients cultivate Self-efficacy?

- **Self-efficacy**
  - is a psychological construct related to that of
  - *Believing* that one can perform a task or respond effectively to a situation predicts pain tolerance and improvements in physical and psychological functioning.

- Research therefore suggests that “a primary aim of CLBP [chronic low back pain] rehabilitation should be to **bring about changes in catastrophic thinking and self-efficacy**” (Woby et al., 2005, p. 100).

  *Source: Institute of Medicine Report: Relieving Pain In America, 2011*

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Are we paying sufficient attention to social history?

- Adults who have faced multiple “adversities” or suffered from anxiety or depression in childhood have a statistically significant increase in the risk of developing arthritis (Von Korff et al., 2009).

  - Responses to pain (physical, emotional, and cognitive) are generally learned in childhood, and these learned responses are important in understanding how adults cope with persistent pain.

  *Source: Institute of Medicine Report: Relieving Pain In America, 2011*

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Socio-emotional Function

- Researching amygdala and hippocampus in relation to early life stress (ELS)
  - Abuse, poverty, maltreatment
    - can compromise development, with higher amounts of adversity linked to behavioral problems.

    - conflicting results on consistency of tissue volume changes across population samples of varied ages.
      - Smaller amygdala volume reported in children exposed to ELS

How are we assessing patient's psychoemotional state?

• Numerous studies have shown the impact that emotions—in part the product of temperament and in part the result of background and acculturation—can have on the experience of pain, both acute and chronic (Turk and Monarch, 2002; Vlaeyen and Crombez, 2007; Fernandez and Kerns, 2008).

• Negative emotions can increase the perception of chronic pain, while pain has a reciprocal effect on mood states.

Source: Institute of Medicine Report: Relieving Pain In America, 2011

Are we asking our patients what THEY BELIEVE is the source of their complaints?

• Beliefs about pain are acquired over a lifetime of experiences and cultural exposures.

• Beliefs, anticipation, and expectation are better predictors of pain and disability than any physical pathology (Turk and Theodore, 2011).

Source: Institute of Medicine Report: Relieving Pain In America

Compassionate, Collaborative Care (CCC)

Attributes & Behaviors:

• Directs and focuses one’s attention
• Recognizes nonverbal cues
• Actively listens
• Elicits information—shows interest in the whole person
• Nonjudgmentally values each person
• Asks about emotions, concerns, distress

Integrating Compassionate, Collaborative Care (the “Triple C”) Into Health Professional Education to Advance the Triple Aim: Chronic Care and Outcomes, Aims, and Quality: A Team Approach, Martha E. Gaines, JD, LLM, Kathy McBurney, MS, and Beth A. Lown, MD, FCAP, with Sharon M. Acosta, PhD, and Melinda A. Williams, MD.
Compassionate, Collaborative Care (CCC)

Attributes & Behaviors:

- Responds to emotions, concerns, distress
- Shares information and decision making
- Demonstrates trustworthiness
- Communicates with colleagues and adjusts actions
- Practices self-reflection
- Attends to relationships
- Attends to one’s own well-being and resilience

Belief Activation & Placebo Power

- Belief Activation
  - “the deliberate use of placebo effect tools by both patients and clinicians to catalyze healing.”
- Placebo
  - Is not subjective
  - harnesses our innate healing mechanisms
- Research has repeatedly demonstrated our mind has the ability to help our body make medicine.
  - placebo medication
  - can improve objective measures such as C-reactive protein, liver enzymes, pulmonary function, white blood cell count, postprandial glucose & brain glucose metabolism, dopamine, pCO2 levels, beta adrenergic activity of the heart, opioids, cortisol levels.

Recognize the power of “VOMIT”

Victim
Medical Imaging Technology

Belief Activation Methods

Good communication is the hallmark of a therapeutic relationship and improves patient outcomes

- Patient expectations
- Goal Activation
- Patient Preferences and Sense of Control
- Classical & Social conditioning
- Conditioned placebo substitution
- Creating a healing environment
- Practitioner expectancy
- Spirituality and Religious Belief
- Emotional care
- Telecebo effect
  - “exteriorization of intentions, thought and emotions from a clinician to a patient”
- Minimizing the Nocebo effect
The Art of Integrating

“Strategy without tactics is the slowest route to victory.
Tactics without Strategy is the noise before defeat.”
Sun Tzu

Non-judgmental attention to present moment experience.

- Presents an alternative to cognitive efforts to control emotion
- Directs attention to transitory nature of experience
- Reduces automatic negative self-evaluation
- Engenders empathy and self-compassion
Muscle Tension & Anxiety

• A diagnostic feature of GAD
• Increases the intensity of worry experienced
• Reducing muscle tension leads to fewer worry episodes.
• Increased reactivity to physiological sensation is a hallmark of anxiety disorder.
• IE (interoceptive exposure) appears helpful in reducing anxiety sensitivity

Interoception: Definition

• The process of receiving, assessing and appraising internal body signals
  – An iterative process requiring interplay between perception of bodily sensations and cognitive appraisal for response
  – Shaped by our experiences
  – Thought to be related to self-regulation
    • Valuable feedback for homeostasis
      – Relevant to stress resilience

Interoception-Harmful or helpful?

• Maladaptation of Sensation
  – Cataprophizing
• Adaptive
  – Mindfulness training to sort bodily sensation from narrative and cultural experience interpretation
MUS (medically unexplained symptoms)

- Increasingly being explained by dysfunctional modulation of interoceptive signals from top-down cognitive processing
- Thought to account for 1/3 of medically relevant symptoms reported in primary care!


Interoception: Predictive Coding Model

- Inner body sensation is subject to comparison between present versus expected sensation
  - Motivation to resolve any discrepancies
    - Evolutionary advantage to promote adaptive behaviors?
- Could body focused contemplative practices enhance our awareness of this discriminatory process?
  - Afford opportunity for an alternative regulatory response
    - Eg responding to restlessness with eating habit vs exploring source of restlessness

Farb 2015. Interoception, contemplative practice and health. Frontiers of Neuroscience

Predictive Coding Model & Contemplative Practices

- Suffering is presumed to be related to interoceptive dysregulation, which is why there is so much attention to the body in practices.
  - Attention attracted to the body may delay our habitual patterns of cognitive appraisal
    - Space may be created to restructure integration of our interoceptive cues.

Farb 2015. Interoception, contemplative practice and health. Frontiers of Neuroscience
Predictive Coding Model & Contemplative Practices

**Body-focused practices:**
- Shift focus from perceptual inference to active inference
- Increase bottom-up integration of sensory information
- Widen field of acceptable sensory experience
  - Reduce ability of prior experience to trigger PE

Farb 2015. Interoception, contemplative practice and health. Frontiers of Neuroscience

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Yoga is the practice of tolerating the consequences of being yourself.

—Bhagavad Gita

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Yoga Journal

Lead from the heart
This is who we treat
Attune
To yourself
To your patients

Ancient wisdom for self-directed neuroplasticity

The thought manifests as the word.
The word manifests as the deed.
The deed develops into habit and the habit hardens into character.
So watch the thought and its ways with care and let it spring from love, born out of the concern for all human beings.
As the shadow follows the body, as we think, so we become.  
from the Dhammapada
How Your Brain Perceives You

To assist in presencing, strategically bring attention to these places: Clap/shake, knead floor, lick inside mouth, buzz lips etc.

Experientials

Presencing using homonculus

Music while holding heart space.

Shelf Meditation