Mindfulness Based Stress Reduction and Chronic Pain

Agenda

- Introductions
- Chronic Pain
- Mindfulness-based Stress Reduction and Research
- What is mindfulness?
  - Experiential learning and dialogue
- Questions and ways forward
Descending Inhibitory Pathway
Mindfulness-Based Stress Reduction (MBSR)

Stress Reduction Clinic, UMASS Medical Center, established 1979

- 8-week program, 2 hours per week, plus a full day of practice
- Educational, not therapeutic orientation

What is Mindfulness-Based Stress Reduction?

- Offered at >700 medical centers in U.S. and around the world
- 35+ years of research in a wide range of chronic clinical ailments
- Has its own journal for new studies in the area

Categories of Mindfulness

- Vipassana Meditation originating in ancient Buddhist Traditions over 2 millennia ago
- Mindfulness Based Stress Reduction
- Mindfulness Based Cognitive Therapy
- Mindfulness Based Eating
MBSR and Research

Research Growing

University of Toronto

• MBCT is as effective as anti depressants in preventing relapse from clinical depression (Segal and Teasdale, 2000)
MBSR and Pain
• Zeidan, Martucci, Kraft, Gordon, McHaffie and Coghill, 2011
• Meditation reduced all subjects pain intensity by 11-70%
• Meditation reduced all subjects unpleasantness rating 20-93%

Pain Relief
• Meditation modulates pain through several brain mechanisms
• The first ....
• Meditation significantly reduced pain related afferent processing

Limbic System
• Primitive system
• Contains the amygdala and the thalamus
• Responsible for our emotional responses to situations in our lives
Widespread deactivation of thalamus during meditation
Filtering mechanism of ascending sensory information at the thalamic level
Operates as a gatekeeper between the thalamus and the cortex

Mindfulness meditation pain relief was directly related to brain regions associated with the cognitive processing of pain
Morone, Greco and Weiner, 2007
- Compared MBSR group with a control
- MBSR group displayed significant improvements in Chronic Pain Acceptance Questionnaire — Total score and Activities engagement sub scale
- Improved physical function

Kerr et al, 2011
- Mindfulness meditation can significantly increase anticipatory alpha modulation (7-14 Hz)
- Changes in alpha rhythm has been associated with enhanced filtering of inputs to the primary sensory cortex
- Alpha modulation thought to play an active role in gating thalamocortical sensory transmission
What is Mindfulness?

Awareness is Continuous

- The “triangle” of awareness:
  - Body sensations
  - Thoughts
  - Emotions
- But we don’t always bring attention to our awareness.
  - Much of the day, we’re on autopilot.
  - Attending to the body/breath brings us into the present moment immediately.

Autopilot....
Mindfulness Begins With Attention

• Jon Kabat-Zinn defines mindfulness as attention that is:
  • Intentional
  • Moment-to-moment
  • Non-judgmental

• Paying attention
• On purpose
• In a particular way
• Non-judgmental attention to present moment experience
Interwoven aspects of a cyclic process

- Intention
- Attention
- Attitude

Attention

- Observing moment by moment experience
- A return to things in themselves
- Attending to the contents of our consciousness, moment by moment

Attitudes

- Acceptance
- Nonjudging
- Openness
- Curiosity
- Trust
- Kindness
- Nonstriving
- Patience
- Letting go
- Gentleness
What happens in Mindfulness

• A shift in perspective
• Through meditation practice, intentionally paying attention with acceptance and openness (attitude) we experience a shift in perspective.

Re perceiving

• A shift in perspective

Re perceiving

• Rotation of consciousness
• Disidentify with the contents of consciousness and able to see freshly with objectivity and clarity
• Rather than be immersed in the drama of our story, we are able to stand back and witness it.
The phenomena contemplated are distinct from the mind contemplating them

- Daniel Goleman

Dis identify with contents of consciousness

- Reperceiving enables us to make what was the subject “my pain”, “my depression” into the object
- We realize that if I can see it I must be more than just it
- Dis-identify with the contents of mind

Resources

- MBSR British Columbia
  www.mbsr.bc.ca
- Center for Mindfulness in Medicine, Health Care and Society
  http://www.umassmed.edu/cfm/index.aspx
References


References Continued


“Compared to what we ought to be, we are only half awake.”

William James