Mindfulness 101
What? Why? How?

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Objectives

- Define mindfulness and describe how it is practiced/taught
- Articulate which conditions mindfulness has been found beneficial in the treatment of
- Develop resources for helping their patients access mindfulness-based therapies if interested
Meditation

- Very broad with many different varieties
- Transcendental Meditation (TM)
  - Funded lots of research
  - Comes out of Hinduism
- Mindfulness Meditation
  - Many varieties - focusing attention on the present moment with an object of concentration
  - Comes out of Buddhist tradition
  - Mindfulness Based Stress Reduction - MBSR
Recent Developments

- Introduction of eastern traditions into American culture
- Resurgence of interest in Mind-Body Medicine
- Science is catching up
- Mounting evidence
- Inner attitudes, emotions and beliefs impact our physiology
Psychoneuroimmunology

- Research on PNI
  - Term first coined by Dr. Robert Ader in 1980’s
  - The brain and body communicate with each other in a multidirectional flow of information
  - Using hormones, neurotransmitters, neuropeptides and cytokines
  - Evolving field of study regarding how “stress” on the organism is impacting our body through the nervous and immune systems
  - Stress can be defined as the “non-specific response of the body to any demand for change” Hans Seyle
  - Stress on the body creates a demand for bringing the body back into balance
Psychoneuroimmunology

- Evolutionarily stress resulted in “fighting” or “fleeing”…either of which discharged stress and homeostasis was restored
- In today’s environment of constant stress there is frequently not a return to homeostasis
- This enhanced sympathetic tone as compared to parasympathetic leads to the release of stress hormones which can cause damage to the body over time
- Stress = activation of the sympathetic nervous system – release of norepinephrine
  - Blood Flow to extremities is decreased
  - Heart rate and blood pressure increase
  - Salivation and digestion are reduced
  - Pupils dilate
  - Kidney excretion diminishes
Psychoneuroimmunology

- If the stress or perceived threat continue:
  - SNS impulses from hypothalamus cause secretion of more catecholamines
  - Hypothalamus starts secreting corticotrophin releasing factor leading to stimulation of cortisol production
  - Cortisol increases vascular tone elevating blood pressure, suppressing immune function and increasing blood sugar concentration

- If the stress or perceived threat continue:
  - Continuous release of cortisol inhibits growth hormone
  - Leads to inhibition of bone growth (increased osteoporosis), muscle wasting, and damage to hippocampal cells where memories are stored/formed
  - Chronic stress stimulates the immune system leading to worsening of autoimmune diseases and also suppresses immune function leading to increased risk of things like URI (complex)
History of Thoughts

- **Psychoanalysis** – thoughts are linked to deeper emotions and meanings
- **First Wave** – Behavioral Therapy
  - Behaviors respond to stimuli and are conditioned
    - BF Skinner and Pavlov’s Dog
- **Second Wave** – Cognitive Behavioral Therapy (CBT)
  - Look at what beliefs and thoughts are informing a client’s behaviors in the present moment
  - Thoughts are just thoughts and can be conquered and stopped
  - Based on habitual patterns of thinking
Waves of CBT

- Third Wave – Branching off of CBT
  - Thoughts aren’t worth our attention but should just be noticed and let go of
  - Past 5-10 years
  - Shifting focus
    - Away from rationally contesting maladaptive cognitive patterns
    - Towards developing a posture of mindfulness in relating to one's thoughts and emotions
  - Many new techniques
    - Mindfulness Based Cognitive Therapy (MBCT)
    - Acceptance and Commitment Therapy (ACT)
    - Dialectical Behavior Therapy (DBT)
Mindfulness

- **Mindfulness** means paying attention in a particular way; on purpose, in the present moment, and non-judgmentally.

Jon Kabat-Zinn

Creator of Mindfulness Based Stress Reduction
"Mindfulness"
What do we mean when we suggest “mindfulness” as a tool?

- State of mindful awareness
  - Some people are more mindful at baseline

- Cultivating a home practice to strengthen mindful awareness

- Structured program that teaches mindful awareness
Mindfulness-Based Stress Reduction

- Structured course to teach a standardized secular based mindfulness practice
- Arose out of the Vispaccana Buddhist tradition arising out of northern India
- Introduced into western medical settings by Jon Kabat-Zinn at the U Mass Medical Center
- Because of the standardization this introduction launched the revolution in research around mindfulness
Mindfulness-Based Stress Reduction

- 8 weeks of 2.5 hour sessions and one day silent retreat
- Key elements include:
  - group format (20-30 participants)
  - non-goal orientation (told to set aside reason for being there)
  - active engagement
  - various mind-body techniques (yoga, meditation with focus on the breath, body scan)
  - didactic material (focuses on effects of stress on health and illness)
  - encouragement of practice outside of group (asked to commit to 45 minutes a day, 6 days a week)
Growth of Mindfulness Programs

- MBSR has now been adapted to a variety of specific conditions

- Some concern surrounding fidelity of structure and ability to compare these different programs across research and population groups
Warp and Weft

- **Warp – Fixed strings on a loom**
  - Grounded in contemplative traditions, science of psychology, medicine and education
  - Underpinned by a model of the human experience which addresses the causes of human distress and the pathways of relieving it
  - Develops a new relationship with experience characterized by present moment focus, decentering and an approach orientation
  - Supports the development of greater attentional, emotional and behavioral self-regulation, as well as positive qualities such as compassion, wisdom, equanimity.
  - Engages the participant in a sustained intensive training in mindfulness meditation practice, in an experiential inquiry-based learning process and in exercises to develop insight and understanding

Warp and Weft

- Weft – the strings that vary in texture and color
  - Components of the individual adaptations that seek to address concerns specific to a population
  - The core essential curriculum elements are integrated with adapted curriculum elements, and tailored to specific contexts and populations
  - Variations in program structure, length and delivery are formatted to fit the population and context
  - Teachers with expertise in the population being served

Mindfulness in Therapy

**1st Generation Approaches**
- Considered mindfulness based
- Mindfulness Based Stress Reduction (MBSR) and Mindfulness Based Cognitive Behavioral Therapy (MBCT)
  - Both teachers and participants are seeped in a practice of mindfulness and the program grows out of that foundation

**2nd Generation Approaches**
- Considered mindfulness inspired
- Acceptance and Commitment Therapy, Compassion Focused Therapy, Dialectical Behavioral Therapy, Mindful Self-Compassion Therapy, aspects of Positive Psychology
  - Emphasis on acceptance, meta-cognition, and how people relate to their experiences
  - Have mindfulness elements included
How does mindfulness work?

- Large systematic review looked at what factors mediate the effects of mindfulness
  - Mindful awareness
    - Moderate Consistent evidence
  - Repetitive Negative Thinking
    - Repetitive thinking about negative experiences that is difficult to disengage from and intrusive
    - Moderate Consistent evidence
  - Cognitive and Emotional Reactivity
    - Two small RCT's provided strong but preliminary evidence
  - Self-compassion
    - Preliminary but inconsistent evidence

MBCT

- First adaptation of MBSR
- Developed by Zindel Segal, Mark Williams and John Teasdale
- Took MBSR and added elements of Cognitive Behavioral Therapy
- Usually taught by licensed therapists
- Teasdale and Segel
  - Applied program to patients treated for Major Depression
  - 112 patients randomized to MBCT vs usual care
  - Relapse rates in MBCT group = 47%
  - Relapse rates in UC group = 60%

Physician Well-being

- Krasner and Epstein
  - Adapted the original MBSR program for physicians
  - 8 week program with weekly 2.5 hour sessions and one 7 day silent retreat
  - Monthly follow up sessions for one year
    - Session Content: didactic presentation (on stress, awareness, perception filters, mood/emotional regulation), formal mindfulness practice, narrative/appreciative inquiry exercises, discussion
  - RCT looked at 70 physicians
    - Measured before, during and after program
    - Showed improved mood, decreased burnout, increased mindfulness, increased empath and patient centered-ness
Chronic Pain

- Kabat-Zinn
  - 1st study on MBSR was 51 patients all referred for chronic pain conditions (1982)
  - At end of 8 week program:
    - Decreased pain severity as measured by Total Pain Rating Index showed decrease by 51%
    - Decrease in number of body parts described as painful
    - Decrease in impact of pain on quality of life
    - On average 1/3 of problematic medical symptoms ceased to be so at end of course
    - Negative affect decreased by 50% overall all patients by end of cycle and maintained 7 months out

Chronic Pain

- Cherkin
  - 264 patients with chronic low back pain (defined as greater than 3 months)
  - Randomized to receive MBSR vs CBT vs usual care
  - MBSR structured similar to original 8 week group
  - CBT group also 8 weeks following standardized CBT for pain protocol
  - MBSR and CBT both statistically significant reductions in pain, decreased impact on QOL, improvement in mood as compared to usual care

Chronic Pain

- Veehof
  - Meta-analysis of Acceptance and Mindfulness based interventions for Chronic Pain
  - 25 studies were included
  - Across all types
    - Moderate effects: decreased anxiety and pain interference
    - Small effects: pain intensity, depression, disability and QOL
  - Sub-group analysis showed larger effect from ACT protocols then MBCT and MBSR which were greatest in the areas of depression and anxiety
Other promising areas of mindfulness research

- Effective in improving the health status of those suffering from psychological symptoms in cancer\(^1\), rheumatoid arthritis\(^2\),

- Improvements in blood pressure and glycemic control\(^3\)

- Improvements in fatigue associated with HIV\(^4\),

- Improves depressive symptoms and fatigue in MS\(^5\)

- Significant benefits for patients with alcohol and substance dependence – Mindfulness Based Relapse Prevention\(^6\)

Resources

- Refer to a structured MBSR/MBCT class
- Online MBSR through Center for Mindfulness at Umass
  - (add website link)
- Workbooks for a variety of conditions available
  - Depression, Anxiety, Chronic Pain
- Apps for pad/pods etc
  - Headspace
  - 10% Happier
  - Insight Timer
Summary

- Mindfulness is proving effective for a variety of conditions

- Interventions studied have larger more consistent amount of meditation (2.5 hrs weekly with 20-45 minute daily home practice)

- Challenging to convince patients of worthiness

- Trying in small at home doses might spark an interest that leads a patient to further practice