

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 Selye
- ▶ Stress on the body creates a demand for bringing the body back into balance

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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 clients 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 ones thoughts and emotions
 - ▶ Many new techniques
 - ▶ Mindfulness Based Cognitive Therapy (MBCT)
 - ▶ Acceptance and Commitment Therapy (ACT)
 - ▶ Dialectical Behavior Therapy (DBT)



Mindfulness



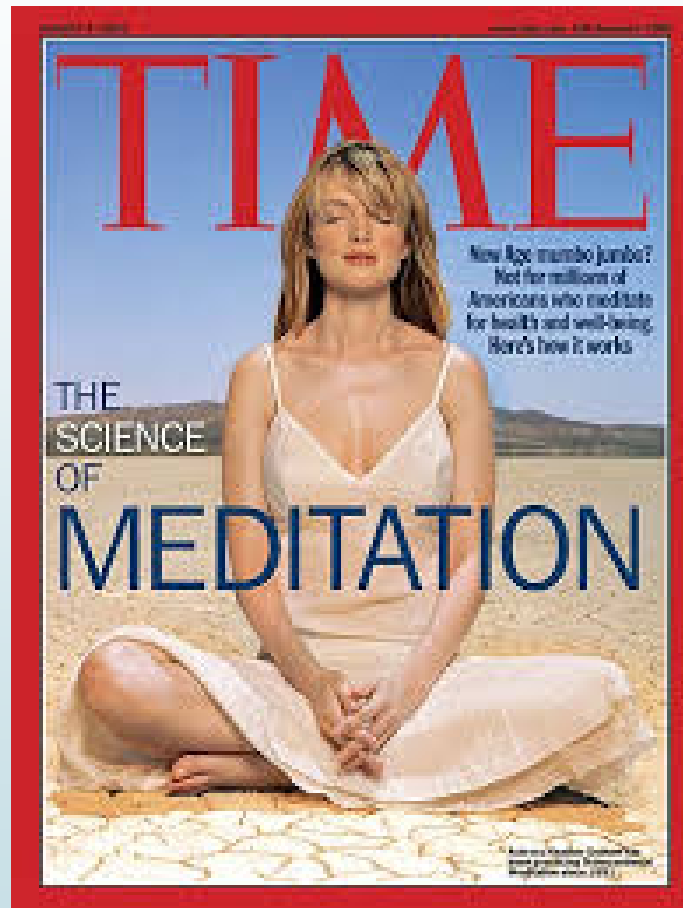
- ▶ **Mindfulness** means paying attention in a particular way; on purpose, in the present moment, and non judgmentally


Jon Kabat-Zinn

Creator of Mindfulness Based Stress
Reduction



“Mindfulness”



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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

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Mindfulness-Based Stress Reduction

- ▶ Structured course to teach a standardized secular based mindfulness practice
- ▶ Arose out of the Vispassana 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

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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)

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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 steeped 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 than 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 cancer¹, rheumatoid arthritis²,
- ▶ Improvements in blood pressure and glycemic control³
- ▶ Improvements in fatigue associated with HIV⁴,
- ▶ Improves depressive symptoms and fatigue in MS⁵
- ▶ Significant benefits for patients with alcohol and substance dependence – Mindfulness Based Relapse Prevention⁶

1. Greenlee, H., et al. *JNCI Monographs*, 2014. 2. Nyklíček, I., et al. *Journal of Psychosomatic Research*, 2015. 3. Rosenzweig S, et al. *Alternative Therapies in Health and Medicine*, 2007. 4. Gayner, B, et al. *Journal of Behavioral Medicine*, 2012. 5. Grossman P, K. L. et al. *Neurology*, 2010. 6. Brewer, J. A., et al. *Psychology of Addictive Behaviors*, 2013.



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