

Mindfulness & Resilience

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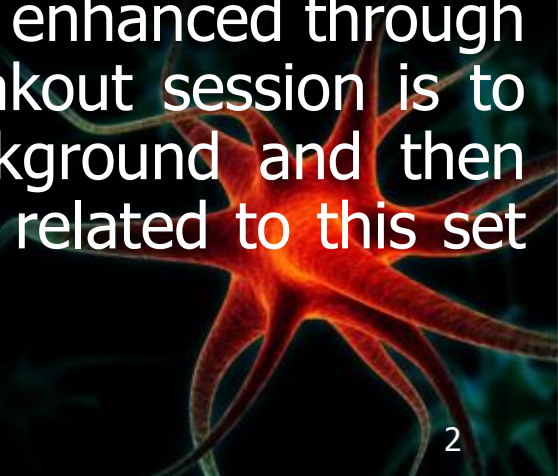
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Picture taken after Nevola Symposium in 2012

MINDFULNESS PRACTICES & THEIR ROLE IN RESILIENCE & WELLNESS

Mindfulness practice has positive effects on wellness, which might be summarized by helping to reduce emotional and physiological reactivity and facilitating a quicker return to baseline. Some of these effects may involve enhancing resilience, mediated partially through observable changes in neural pathways and structures such as reduced reactivity of the amygdala, improved connections between the prefrontal cortex and the amygdala, and influences on cortisol, inflammation and cytokines. Sense of purpose is another area that may be related to resilience and may be enhanced through a meditation practice. The goal of this breakout session is to provide brief conceptual and research background and then engage participants in a couple of exercises related to this set of tools for resilience and wellness.



AGENDA

- 1) Definitions: Resilience & Mindfulness
- 2) Mindfulness & resilience:
 - a) Meditation & Physiological Reactivity
 1. Goleman & Davidson
 2. Leung et al.
 3. Pascoe et al.
 - b) Mindfulness & Mechanisms of Resilience (2019, Chin et al., *Health Psychology*).
 - c) Sense of Purpose. Davidson et al., Jacobs et al.
- 3) Experiential



WHAT IS RESILIENCE?

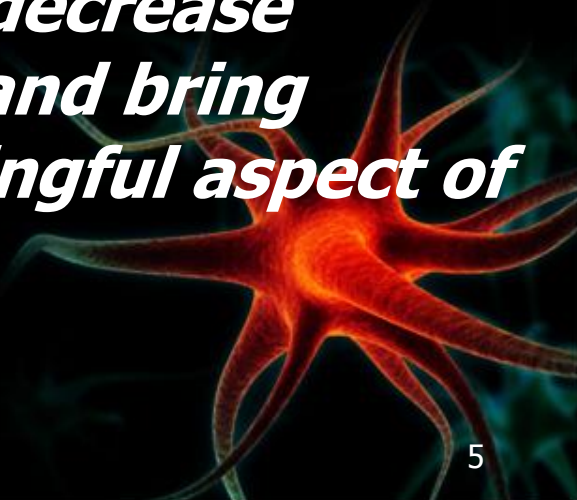
“the capability of a strained body to recover its size and shape after deformation caused especially by compressive stress. ” Merriam-Webster



WHAT IS RESILIENCE?

Mayo Clinic:

- 1) "Resilience...ability to adapt well and recover quickly after stress, adversity, trauma or tragedy. ...better able to maintain poise and a healthy level of physical and psychological wellness in the face of life's challenges.
- 2) "You can develop resilience by learning to train your attention on more-positive aspects of your life. *You use purposeful, trained attention to decrease negative thoughts in your mind and bring greater focus on the most meaningful aspect of an experience.*" [emphasis added]



WHAT IS MINDFULNESS?

- 1) "Mindfulness means maintaining a moment-by-moment awareness of our thoughts, feelings, bodily sensations, and surrounding environment, through a gentle, nurturing lens." Greater Good Science Center, U.C. Berkeley
- 2) "Mindfulness means paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally." Jon Kabat-Zinn
- 3) "Mindfulness is the basic human ability to be fully present, aware of where we are and what we're doing, and not overly reactive or overwhelmed by what's going on around us." Mindful.org

GOLEMAN & DAVIDSON

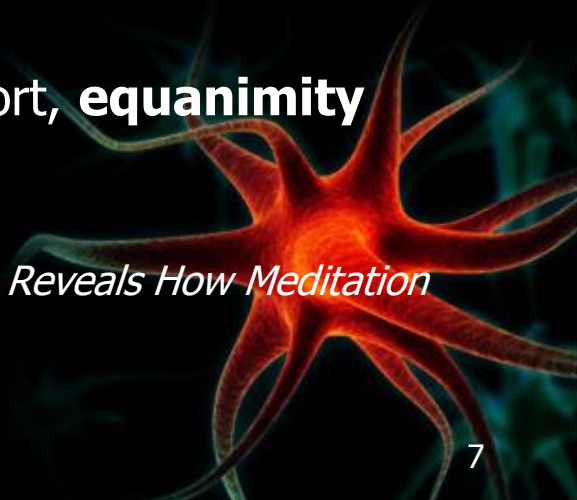
"...the ability to manage distress (which depends upon the connectivity between the prefrontal cortex and amygdala) will be greater in long-term meditators... The good news is that this resilience can be learned..."

Davidson and team had subjects watching photos ranging from people in extreme suffering (burn victims) to cute bunnies:

"...when Richie's group divided the seasoned meditators into those with the least hours of practice (lifetime average 1,849 hours) and the most (lifetime average 7,118), the results showed that the more hours of practice, the more quickly the amygdala recovered from distress.

This rapid recovery is the hallmark of **resilience**. In short, **equanimity** emerges more strongly with extended practice."

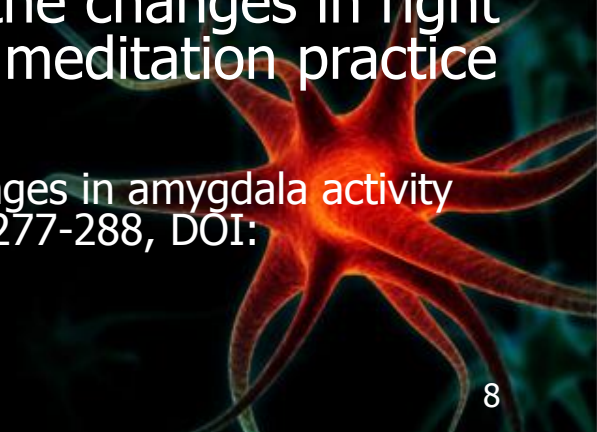
Goleman, Daniel; Davidson, Richard J. (2017). *Altered Traits: Science Reveals How Meditation Changes Your Mind, Brain, and Body* (pp. 97-98).



COMPASSION MEDITATION & AMYGDALA ACTIVITY

- 1) Leung et al. (2018) looked at amygdala activity of those randomly assigned to either compassion meditation or relaxation training.
- 2) "...the ABCM (Awareness-Based Compassion Meditation) group exhibited significantly reduced anxiety and right amygdala activity during negative emotion processing than the relaxation group."
- 3) The ABCM subjects who had the most compassion practice showed the greatest reductions in right amygdala activity during negative emotion processing.
- 4) Since "participants performed the emotion processing task in a non-meditative state, it appears likely that the changes in right amygdala activity are carried over from the meditation practice into the non-meditative state."

Mei-Kei Leung et al. (2018) Meditation-induced neuroplastic changes in amygdala activity during negative affective processing. *Social Neuroscience*, 13:3, 277-288, DOI: 10.1080/17470919.2017.1311939

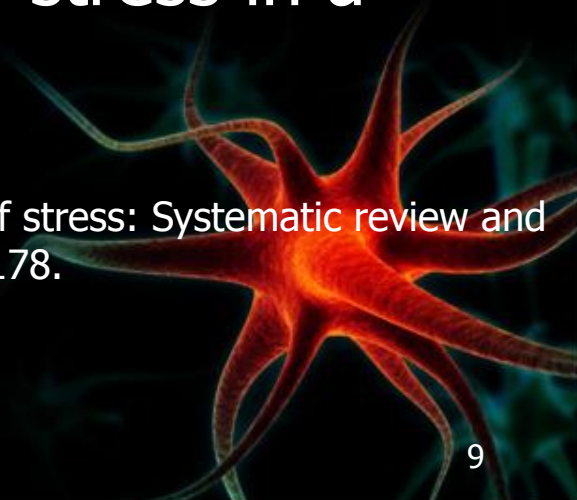


MEDITATION & PHYSIOLOGICAL REACTIVITY

- 1) Meta-analysis focused on studies that included an active control group.
- 2) ...When all meditation forms were analysed together, meditation reduced cortisol, C - reactive protein, blood pressure, heart rate, triglycerides and tumour necrosis factor-alpha. Overall, meditation practice leads to decreased physiological markers of stress in a range of populations.

Pascoe et al. (2017). Mindfulness mediates the physiological markers of stress: Systematic review and meta-analysis. *Journal of Psychiatric Research*, Vol 95, Dec 2017, 156-178.

<http://dx.doi.org/10.1016/j.jpsychires.2017.08.004>



MINDFULNESS MECHANISMS FOR RESILIENCE (2019)

- 1) Dismantling study comparing:
 - a) awareness + acceptance skills (8-week MBSR)
 - b) awareness only (8-week)
 - c) No tx control.
- 2) Combination of awareness + acceptance → increases in nonjudgment and decreases in stress ratings.

Chin, Creswell, et al. (2019, May 23). Psychological Mechanisms Driving Stress Resilience in Mindfulness Training: A Randomized Controlled Trial. *Health Psychology*. Advance online publication. <http://dx.doi.org/10.1037/hea0000763>



SENSE OF PURPOSE

“There are tantalizing results that indirectly support meditation’s role in resilience. A collaboration between Richie’s lab and the research group directed by Carol Ryff looked at a subset of participants in a large, multisite, national study of midlife in the United States. They found that the stronger a person’s sense of purpose in life, the more quickly they recovered from a lab stressor. **Having a sense of purpose and meaning may let people meet life’s challenges better, reframing them in ways that allow them to recover more readily.** And, as we saw in chapter three, meditation seems to enhance well-being on Ryff’s measure, which includes a person’s sense of purpose.” [emphasis added]

Goleman, Daniel; Davidson, Richard J. (2017). *Altered Traits: Science Reveals How Meditation Changes Your Mind, Brain, and Body* (pp. 92-93).

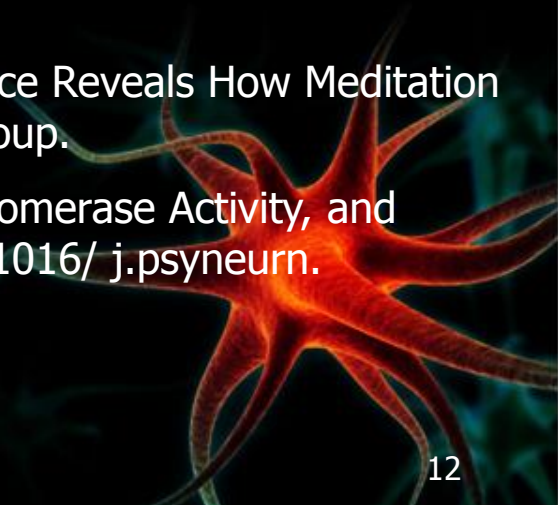


SENSE OF PURPOSE

“...after a three-month meditation retreat (about 540 hours total), those practitioners who had strengthened a sense of purpose in life during that time also showed a simultaneous increase in the activity of telomerase in their immune cells, even five months later. This enzyme protects the length of telomeres, the caps at the ends of DNA strands that reflect how long a cell will live. It’s as though the body’s cells were saying, stick around— you’ve got important work to do.”

Goleman, Daniel; Davidson, Richard J. (2017). *Altered Traits: Science Reveals How Meditation Changes Your Mind, Brain, and Body* (p. 57). Penguin Publishing Group.

Tonya Jacobs et al., “Intensive Meditation Training, Immune Cell Telomerase Activity, and Psychological Mediators,” *Psychoneuroendocrinology* 2010; doi: 10.1016/ j.psyneurn. 2010.09.010.



Let's Do Something Experiential



A photograph of a forest path in autumn. The path is covered in fallen orange and red leaves. The trees on either side have vibrant autumn foliage in shades of orange, red, and yellow. The lighting is soft, creating a warm and serene atmosphere.

**We're all just walking
each other home.**

~ Ram Dass