Wellbeing and Mindfulness for The Health Professions Educator

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Sept 13-14, 2022 – TEACH Education Grand Rounds
OUTLINE

• Individuals, the universal stress response, and resilience

• Physician wellbeing vs Workplace Wellness

• Enhanced Stress Resilience Training (ESRT) and evidence of benefits

• How individual wellbeing skills influence systems and culture
4:30am – Wake up
5:30am – Hospital
6-7:00am – Round
7:30am – OR
6:00pm – Sign out
7-8:00pm – Round
8:30pm – Home

(-) 5h for sleeping
4 HOURS LEFT to:
Eat
Slower
Study
Practice
Exercise
Socialize

5 years
2 days off in every 14
48 weeks per year
Adapting to Stress – Thriving Despite Adversity

Masten, Am Psychol, 2001
Not all stress is the same

**CHALLENGE**
Good stress

High Resources

**THREAT**
Toxic stress

High Demands

Yerkes-Dodson, 1908

- **CHALLENGE**:
  - Good stress stimulates adaptation and mastery

- **THREAT**:
  - Toxic stress causes biopsychological and cognitive degeneration

**SEVERE STRESS**
Triggers survival
You can’t control the ocean, but you can learn to ride the waves.....

“Calm seas never made a good sailor.” ~ Franklin Delano Roosevelt
Targeting a Central Mechanism

THE MASTER-SWITCH

PFC

FEEDBACK

STRESS

Hypothalamus

Pituitary Gland

Adrenal Glands

Cortisol

Stress & the HPA axis

McEwen, Neuropsychopharma, 2015

Lebares, JAMA NetW Open, 2019
Feeling Good vs Being Well

“More than physical health and housing. Well-being refers to the quality of a person’s relationships, their positive emotions, sense of resilience, realization of their potential, and overall satisfaction with life.”

- Feeling good IS personal and often situational
- Wellbeing has established criteria, is constitutional, persistent and flexible

JAMA Internal Medicine | Special Communication | PHYSICIAN WORK ENVIRONMENT AND WELL-BEING
The Business Case for Investing in Physician Well-being

Tait Shanafelt, MD; Joel Goh, PhD; Christine Sinsky, MD

Introducing Patient Safety and Clinician Wellbeing

US Centers for Disease Control
Conceptual Model of Physician Professional Wellbeing vs Burnout
National Academy of Medicine, Action Collaborative on Clinician Wellbeing and Resilience, 2017

Carayon, JAMA, 2019
Theoretical Framework

Job Demand Resource Theory

Support

The Upward Spiral of Positive Emotions

Demand

Control

Work Satisfaction

POSITIVE EMOTIONS
Joy, Love, Contentment, Interest, Happiness

BROADEN
Expands Inventory of Thoughts and Actions

BUILD
Develops Physical, Mental and Social Resources

TRANSFORM
Advances Personal Growth and Creates More Positive Emotions

Broaden-and-Build Theory

Bakker, Occup Health Psychol, 2017

Fredrickson, PNAS, 2001
# Mindfulness as an Intervention?

<table>
<thead>
<tr>
<th></th>
<th>TOTAL BURNOUT</th>
<th>STRESS</th>
<th>ANXIETY</th>
<th>DEPRESSION</th>
<th>SUICIDALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HIGHER MINDFULNESS</strong> (Decreased Odds)</td>
<td>4.0</td>
<td>6.7</td>
<td>4.8</td>
<td>3.8</td>
<td>4.0</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Lebares, JACS, 2018
Mindfulness Training

Mindfulness is the cognitive process of bringing one's attention to experiences occurring in the present moment and learning to observe those experiences without reacting.

A way of training the mind to sustain its focus
And training the mind to open its awareness

Training in a different way of perceiving.....

And a different way of responding.....

Specifically developed through the practice of meditation
“Between stimulus and response there is a space. In that space is our power to choose... In our response lies our growth and our freedom.”

- Viktor Frankl (1905-1997)
Mindfulness and Mental Skills Training

Stefanidis, Am J Surg, 2017
Anton/Lebares, JSR, 2020

Adler, J Appl Psychol, 2015
Fitzwater, Sport Exerc Perform Psychol, 2018
Mindful Surgeon
Enhanced Stress Resilience Training (ESRT)

Attention
(Ability to sustain focus, but also to direct awareness)

Meta-Cognition
(Ability to see beyond personal perspective and reframe)

Emotional Regulation
(Ability to notice emotions, but also to respond without reactivity)
Feasibility
Efficacy:
Mindfulness & Executive Function

Mindfulness

- CAMS-R
- EXAMINER score
- Time Point

- Control vs. ESRT-1

Global Executive Function

- Time Point

- Control vs. ESRT-1

- p=0.003*
  Cohen's d = 1.03

- p=0.02*
  Cohen's d = 0.78

- p=0.01*
  Cohen's d = 0.89
Efficacy: Burnout

Emotional Exhaustion

- Control
- ESRT-2

p=0.03*
Cohen's d = 0.67

p=0.01*
Cohen's d = 0.81

Depersonalization

- Control
- ESRT-2

p=0.03*
Cohen's d = 0.69
Neural Substrates of Mindfulness

dl-PFC

PCC/Precuneus

Efficacy of Mindfulness-Based Cognitive Training in Surgery
Additional Analysis of the Mindful Surgeon Pilot Randomized Clinical Trial

Carter C, Lebraes, MD; Eliezer V, Guara, BS; Maria Piana, BS; Lee F, Sugrue, MD, PhD; Adams M, Staffaore, PhD; Kevin L, Delucchi, PhD; Joel H, Kramer, PsyD; Nancy L, Amher, MD, PhD; Michael W, Harris, MD, MPH

Lebraes, JAMA NetW Open, 2020

Kral/Davidson, Soc Cog Aff Neurosci, 2019
Efficacy: Physiologic stress

- Proinflammatory and beta-adrenergic (SNS) signaling pathways
- In Controls > 1.5-fold increase
- In ESRT >50% reduction
Internal Curriculum

• 5 weekly, 1-hour classes
• Graded daily practice
• Booster sessions
• Course Manual
• Conceptual framework
• Applied skills
• Bespoke app
Kolb’s Experiential Learning Cycle

- Learning involves acquiring abstract concepts through new experiences and being able to flexibly apply them across a range of situations.

Kolb, 1984
How Do Surgeons Practice Mindfulness?

Daily meditation
- Impatience
- Frustration
- Intolerance
- Anxiety

Less reactive

Appreciations and gratitude
- Focus on what we love

Increased productivity
- Job satisfaction

Transition meditations
- Leaving work at work
- Richer time off

Thought re-framing
- Demoralization
- Negativity bias
- New approaches to old problems
Something more going on...
COVID & Remote ESRT

REMOTE ‘ESRT’ COURSES

PACIFIC
THURSDAY, 7PM
Start 4/16

MOUNTAIN
THURSDAY, 5PM
Start 4/16

CENTRAL
TUESDAY, 4PM
Start 4/14

EASTERN
TUESDAY, 7PM
Start 4/14
Real-life Application

Assessment of Anxiety at the start of COVID-19 (April 2020)

- 72 Respondents (73%)
  - ESRT: n = 29 (40%)
  - Non-ESRT: n = 43 (60%)

### Anxiety level by ESRT exposure status.

<table>
<thead>
<tr>
<th>ESRT Status</th>
<th>Low Anxiety</th>
<th>High Anxiety</th>
<th>Total</th>
<th>% High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Trained</td>
<td>34</td>
<td>9</td>
<td>43</td>
<td>20.9%</td>
</tr>
<tr>
<td>Trained</td>
<td>28</td>
<td>1</td>
<td>29</td>
<td>3.4%</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>10</td>
<td>72</td>
<td>13.9%</td>
</tr>
</tbody>
</table>

*p = 0.036

Independent of PGY level, gender, age, number of hours worked in previous month, +/- children or partner, high exposure risk setting

Greenberg, Acad Med, 2021
Impacts on Systems

Psychological interventions to foster resilience in healthcare professionals

Enhanced stress-resilience training for surgical trainees

A Systematic Review of Interventions to Improve Humanism in Surgical Practice

Mindfulness in the OR: A Pilot Study Investigating the Efficacy of an Abbreviated Mindfulness Intervention on Improving Performance in the Operating Room
Impacts on Culture

Emotional Intelligence competencies

“[When] implemented through program-level interventions such as ESRT and …:

1) **psychological safety** that fostered growth mindsets

2) **a cohesive community** founded on vulnerability and experiences shared using a common language

3) **public opportunities for expanded learning**

….. seen as a **competitive advantage** for recruiting new residents. “
Concerning Associations:
- Personal accomplishment and attrition
- Anxiety and Suicidal Ideation
- Emotional exhaustion and clinical performance
- Depersonalization and pt experience

Mediation Pathways:
- MF influence mediated through PWB and Stress

New Questions:
- Do we need different measures of workplace factors?
- Is Demand the most relevant factor in our environment?
- What elements of Demand are mutable?
- How might we directly target other elements?
Innovations Take Time

A Cultural Sea Change: Mindfulness for Surgical Residents
jamanetwork.com
SUMMARY

• Mental skills training to mitigate overwhelming stress has strong evidence of biopsychosocial benefits across high stakes professions

• Physician wellbeing is one part of Workplace Wellness but systems and culture must be addressed as well

• Workplace Wellness in medicine is an innovation. Expect disruption and challenge, but history shows us we just need to work together and stay the course.
Thank you

https://CarterLebares.org

https://MindfulSurgeon.ucsf.edu