Mindfulness to Address Chronic Stress and Burnout: An Educational Imperative

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Outline
- Physician stress and burnout: Today’s reality
- Physiology of stress response: Scientific insights
- Mind-body Medicine: Ancient tools for modern issues
- Lessons Learned: Cause for optimism

Take Home Messages
- Chronic stress and burnout are serious issues that are widely prevalent in society, but especially in physicians, and preceded by declines in empathy and well-being during medical training.
- Medical schools have a responsibility to prepare their graduates for the rigors of the profession by developing curricular interventions that help students and faculty manage stress, foster empathy and build resilience, and incorporating those interventions into the culture of the institution.

How does burnout manifest?
- Emotional Exhaustion
- Depersonalization
- Low Sense of Personal Accomplishment
- Lack of Empathy

“Burnout is a response to chronic stressors that wear on a person over time—not acute ones such as a big event or a big change.”
- Christina Maslach, PhD

Maslach et al. Job Burnout
Ann Rev Psychol 2001, 52:397-422
1 in every 2 physicians experiences burnout

And not just physicians...

All healthcare professionals exhibit high rates of burnout


Clinical implications of burnout

- More errors
- Adversely affects physician-patient relationship
- Decrease in quality of care


From the Canadian Medical Association 2014
The Science of Resilience

“The American Psychological Association defines resilience as “the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of threat”

“Resilience is the ability to bend but not break, to bounce back and sometimes even to grow when faced with adversity”

“Resilience is not limited to an elite few... anyone can learn to become more resilient”

Key Elements of Resilience

- Positive emotions (optimism and humor)
- Emotion regulation (fear, anger, etc)
- Coping style (active/approach vs passive/avoidant)
- Social support
- Cognitive flexibility (positive explanatory style, positive reappraisal, and acceptance)
- Spirituality
- Moral code (including altruism)
- Resilient role models
- Purpose and meaning (mission, patriotism, colleagues)
- Training (physical, psychological and spiritual)

Individual factors of resilience include:
- the capacity for mindfulness,
- self-monitoring,
- setting limits
- attitudes that promote constructive and health engagement with (rather than withdrawal from) the often-difficult challenges at work.


Neural Connections
Cognitive-Emotional-Autonomic
So, the mind and body are connected, but...

**how is this related to Mindfulness?**

And can it impact on stress and burnout?

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**Mindfulness means:**

“paying attention in a particular way; on purpose, in the present moment, and without judgment”

Jon Kabat-Zinn

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**Intervention**

- An intensive phase (2.5 hr/8 wk)
- All day (7 hr) session (week 6-7)
- A maintenance phase (10 monthly)

Each Session

- 15 min didactic material (weekly)
  - Awareness, burnout, self-care
- Formal mindfulness meditation
- Body scan
- Sitting meditation
- Walking meditation
- Mindful movement
- Narrative Exercises:
  - Appreciative Inquiry

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**Maslach Burnout Scale**

![Graph showing emotional exhaustion over time with significant reductions](image)


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**Jefferson Scale of Physician Empathy**

![Graph showing total empathy over time with significant increases](image)


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**Baer Mindfulness Scale**

![Graph showing total mindfulness over time with significant increases](image)

Conclusion 1

Practicing mindfulness can reduce burnout and increase empathy

Why and how would mindfulness do that?

Stress Response

Effect on the Hypothalamic-Pituitary-Adrenal Axis

“Fight-or-Flight” Response

Physiology of the Stress Response

Importance of the return to baseline

- Sustained cortisol impairs feedback regulation: Implications for coping with novel stressors
- Chronic stress impairs memory, learning
- Differentiate chronic stress from acute stress

What can help us get back to baseline?
Mind-body Medicine

Mind-body Medicine: Therapies
- Meditation
- Imagery
- Biofeedback
- Autogenic Training (self-hypnosis)
- Breathing Techniques
- Exercise
- Yoga, Tai Chi
- Group Support

What is Mindfulness Meditation?
- Intentional self-regulation of attention conducted without judgment and focused on observation of the present moment.
- When we are able to focus on just what is happening in the present moment, our minds cannot be anxious, worried or distressed about other issues

Benefits of Mindfulness Meditation

Physiological Benefits
- Decrease in hypertension
- Decrease in heart rate
- Decreased levels of cortisol
- Reduced sympathetic arousal
- Strengthened immune system
- Reduced levels of pain

Psychological Benefits
- Reduced stress level
- Decreased anxiety
- Decreased depression
- Improved confidence and concentration
- Undercuts processes such as worry and rumination
- Increased peace of mind, optimism and self-worth

Conclusion 2
Mindful practice utilizes our mind-body connection to de-stress ourselves and bring our stress hormones back to baseline. An effective “re-boot”
...participating in an abbreviated mindfulness training course adapted for primary care clinicians was associated with reductions in indicators of job burnout, depression, anxiety, and stress.

Clinicians rating themselves as more mindful engage in more patient-centered communication and have more satisfied patients.

Decline in Empathy in Medical School

Students with burnout were more likely to report engaging in 1 or more unprofessional behaviors than those without burnout, 35.0% vs 21.9%; odds ratio [OR], 1.89; 95% confidence interval [CI], 1.59-2.24.
Competency-Based Medical Education

1. Effective Communication
2. Basic Clinical Skills
3. Using Basic Science in the Practice of Medicine
4. Diagnosis, Management and Prevention
5. Life-long Learning
6. Self-Awareness, Self-Care, and Personal Growth
7. Social/Community Contexts of Healthcare
8. Moral Reasoning and Clinical Ethics
9. Problem-solving

Mind-Body Medicine Program at Georgetown U School of Medicine

Goal
To increase student understanding of self-awareness and self-care by providing a unique experiential and didactic introduction to Mind-Body Medicine

Format of groups:
- 10 students and 2 faculty facilitators per group
- Participants (voluntarily sign up for the course) meet once a week for 2 hours for 11 weeks per semester for this “journey of self-discovery”

Structure of Each Session
- A safe environment must be created that adheres to certain guidelines
  - confidentiality, respect, compassionate listening, non-judgment
  - Check-in (sharing of new reflections and insights)
  - Introduction of a new mind-body medicine skill
  - Process the experiential exercise (sharing insights)

Skills and Experiences
- Meditation (mindfulness/awareness, concentrative)
- Guided Imagery (several types)
- Autogenic training/biofeedback
- Art (emphasis on non-cognitive approaches)
- Music (used in meditation and imagery sessions)
- Movement (shaking, dancing, exercise)
- Writing (journals, dialogues, service commitment)
- Group support

Outcomes

Perceived Stress (Perceived Stress Scale)
Mindfulness (Freiburg Mindfulness Inventory)
Empathy (Interpersonal Reactivity Index)

Post-Course Perceived Stress

- Baseline PSS
- Mindfulness T2
- Other

54% 25% 21%
Higher mindfulness scores were positively correlated with lower perceived stress scores. Improvements in communication between colleagues, increased sense of connection with students and colleagues, increased empathy, and heightened self-confidence.

Implementation and Scope of the Mind-Body Medicine Skills Program

Over 14 years

- >100 trained faculty facilitators (clinicians, scientists, educators)
- >2,200 medical students participated
- >300 graduate students (MS and PhD)
- >50 nursing students
- >200 students (Law, Business, Foreign Services Schools at GU)
- >70 faculty participants (including from curriculum committee)

Over 300 groups and over 3,000 participants

Embraced by the School of Medicine as essential for a core competency (self-awareness and self-care)

Institutions Implementing Programs in Mind-Body Medicine

- Georgetown University School of Medicine medical students, residents
- University of Cincinnati College of Medicine (medical/allied health)
- Oregon Health and Sciences University (medical students)
- University of Washington (medical students)
- University of Vermont (medical students)
- University of North Dakota Medical School (medical students)
- University of Essen-Duisenberg Medical School, Germany (medical students)
- University of Liverpool, UK (medical students)
- Texas College of Osteopathic Medicine (medical students)
- Stanford University, Anesthesia Residency Program
- University of Western States (chiropractic and other CAM professions)
- Oregon College of Oriental Medicine (acupuncture and DAOM)
- Mid-Sweden University, Sweden (nursing students)
- Ben Gurion University School of Nursing, Israel (faculty retreat)
Lessons Learned

- Physician stress and burnout is a serious issue and is preceded with cynicism and the decline of empathy in medical students

- Mind-Body Medicine reflects the physiologic interface between mind and body and represents the “physiology of de-stress”

- Approaches that can modulate stress and reverse these trends include:
  - Mindful practice
  - Enhancing self-awareness and self-care
  - Finding meaning in work

- These elements must be actively fostered at our academic health centers both in the curriculum and in the culture

Next Steps

- Establish a faculty/student task force to ascertain the degree of faculty and student stress and burnout at your institution

- If there is consensus that a problem exists, then there should be a collaborative effort to implement suitable interventions

- Recognize that the status quo is unacceptable

- Important that the participants not feel marginalized

- Develop innovative programs, assess, report and disseminate

COURAGE