Winter 2017 IAMSE Web Seminar Series:
Creating a Culture of Well-being at an Academic Health Center

January 5
Colin West, MD, PhD
Physician burnout - causes, consequences, and a structure for solutions

January 12
Stuart Slavin, MD, MEd
Strategies for promoting personal health & wellness and leading change at the individual level

January 19
Catherine Pipas, MD, MPH
The Importance for Incorporating Mind-Body Medicine in Medical Education

January 26
Aviad Haramati, PhD

February 2
Michael Krasner, MD

Physician burnout
and distress – causes, consequences, and a structure for solutions

Physician stress and burnout are serious issues that are widely prevalent and preceded by declines in empathy and well-being during medical school.


The Imperative for Incorporating Mind-Body Medicine in Health Professions Education

Aviad Haramati, PhD
Professor of Physiology and Medicine
Director, Center for Innovation and Leadership in Education (CENTILE)
Co-Director, CAM Graduate Program
Georgetown University School of Medicine
Washington, DC USA

Visiting Professor, Faculty of Health Sciences
Ben Gurion University of the Negev, Beer Sheva, ISRAEL

Outline

- Stress and burnout in medical trainees: Today’s reality
- Physiology of stress response: Scientific insights
- Mind-body Medicine at GU: Ancient tools for modern issues
- Lessons Learned: Time for Courage and Leadership

Take Home Messages

- Physician stress and burnout are serious issues that are widely prevalent and preceded by declines in empathy and well-being during medical school.

Take Home Messages

- Physician stress and burnout are serious issues that are widely prevalent and preceded by declines in empathy and well-being during medical school.
- 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.
Medical students begin medical school with better mental health indicators than age-similar college graduates in the general population.

These findings, coupled with other studies that demonstrate high rates of distress among medical students, support existing concerns that the learning environment and training process contribute to the deterioration of mental health in medical students.

Among the 433 responders (33%), prevalences of self-reported symptoms were: burnout (46%), depression (27%), and anxiety-related (29%).
52.8% of medical students who responded had elements of burnout. 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).

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 of an individual to respond to stress in a healthy, adaptive way such that personal goals are achieved at minimal psychological and physical cost; resilient individuals not only ‘bounce back’ rapidly after challenges but also grow stronger in the process.”

Epstein & Krasner 2013

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

Steven Southwick, MD 2015

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.

Mindfulness refers to:

"the awareness that emerges through paying attention in a particular way, on purpose, in the present moment, and without judgment, to the unfolding of experience from moment to moment"

Jon Kabat-Zinn

**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

**Maslach Burnout Scale**

- Emotional exhaustion
  - Baseline
  - Preintervention
  - 8-Week
  - 12 Months
  - 15 Months

**Jefferson Scale of Physician Empathy**

- Total Empathy
  - Baseline
  - Preintervention
  - 8-Week
  - 12 Months
  - 15 Months

**Baer Mindfulness Scale**

- Total Mindfulness
  - Baseline
  - Preintervention
  - 8-Week
  - 12 Months
  - 15 Months
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

**Burnout**

Cognitive Reappraisal
Positive Psychology
Reflection
Appreciative Inquiry
Finding Meaning in Work
Mindfulness Meditation

**Resilience**

Effect on the Hypothalamic-Pituitary-Adrenal Axis

“Fight-or-Flight” 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 to back to baseline?
Mind-body Medicine: Therapies
- Meditation
- Imagery
- Biofeedback
- Autogenic Training (self-hypnosis)
- Breathing Techniques
- Exercise
- Yoga, Tai Chi
- Group Support

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Why is Mindfulness Meditation Effective in Reducing Stress?

- Intentional self-regulation of attention conducted without judgment and focused on observation of the present moment.

What is Mindfulness Meditation Effective in Reducing Stress?

- 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
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Physiological Benefits
- Decrease in hypertension
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- Reduced levels of pain

Physiology of “de-stress”

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

Physiology of “de-stress”

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”

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
Competency-Based Medical Education

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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

Nancy Harazduk, MEd, MSW
Director, Mind-Body Medicine

Objective

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

Objectives

- To increase student understanding of self-awareness and self-care
- To increase self-awareness of emotional, physical, mental, social and spiritual aspects of one’s life
- To increase personal self-care through guided experiences and daily practice.
- To foster non-judgmental, supportive collegial relationships

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, free movement, exercise)
- Writing (journals, dialogues, service commitment)
- Group support
Mind-Body Medicine Program
at Georgetown U School of Medicine

Outcomes

Perceived Stress (Perceived Stress Scale)

Mindfulness (Freiburg Mindfulness Inventory)

Empathy (Interpersonal Reactivity Index)

### Perceived Stress Scale (PSS)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>P-value</th>
<th>Effect size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-MBM</td>
<td>18.2 ± 6.0</td>
<td></td>
<td></td>
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<tr>
<td>Post-MBM</td>
<td>13.7 ± 5.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>-4.5 ± 5.7</td>
<td>&lt; 0.001</td>
<td>0.76</td>
</tr>
</tbody>
</table>

### Mindfulness (FMI)

<table>
<thead>
<tr>
<th></th>
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<th>P-value</th>
<th>Effect size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-MBM</td>
<td>36.4 ± 6.4</td>
<td></td>
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<tr>
<td>Post-MBM</td>
<td>42.5 ± 5.5</td>
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<tr>
<td>Difference</td>
<td>6.1 ± 5.8</td>
<td>&lt; 0.001</td>
<td>0.96</td>
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</table>

### PANAS

#### Positive Affect

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>P-value</th>
<th>Effect size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-MBM</td>
<td>34.2 ± 5.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-MBM</td>
<td>38.1 ± 5.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>3.9 ± 5.2</td>
<td>&lt; 0.001</td>
<td>0.67</td>
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#### Negative Affect

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>P-value</th>
<th>Effect size (d)</th>
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<tbody>
<tr>
<td>Pre-MBM</td>
<td>21.7 ± 6.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-MBM</td>
<td>18.7 ± 5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>-3.0 ± 5.2</td>
<td>&lt; 0.001</td>
<td>0.45</td>
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### Bivariate Analysis with the Change in Mindfulness (FMI)

<table>
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<tr>
<th></th>
<th>r</th>
<th>P-value</th>
<th>n</th>
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</thead>
<tbody>
<tr>
<td>ΔPSS</td>
<td>-0.627</td>
<td>&lt; 0.001</td>
<td>117</td>
</tr>
<tr>
<td>ΔPANAS Positive</td>
<td>0.443</td>
<td>&lt; 0.001</td>
<td>116</td>
</tr>
<tr>
<td>ΔPANAS Negative</td>
<td>-0.474</td>
<td>&lt; 0.001</td>
<td>116</td>
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### Promoting self-awareness and reflection through an experiential Mind-Body Skills course for first year medical students

**Abstract**

Background: This research examines change in self-awareness and attitudes in an 11-week mindfulness course for first year medical students.

Methods: This study uses a qualitative content analysis approach to data analysis. The data are 452 verbatim responses from 72 students to six open-ended questions about the students’ experiences and attitudes after a mindfulness skills course. These questions prompted students to articulate changes in mindfulness, compassion, empathy, and their future use of mindfulness skills.

Results: The data revealed five central themes in students’ responses: connections, self-discovery, stress relief, learning, and self-confidence.

Conclusions: Mind-body skills groups represent an experiential approach to teaching mind-body techniques that can enable medical students to shift their awareness and attention to their own experiences and to use those experiences to better understand the medical needs of their patients.

### Multivariate Analysis with Mindfulness (FMI)

<table>
<thead>
<tr>
<th>Post-Course (T2)</th>
<th>Overall Model Variance</th>
<th>Stand. β</th>
<th>Unique Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSS Baseline</td>
<td>$R^2 = 0.46^*$</td>
<td>0.40</td>
<td>$R^2 = 0.21^*$</td>
</tr>
<tr>
<td>PANAS Positive</td>
<td>$R^2 = 0.48^*$</td>
<td>0.43</td>
<td>$R^2 = 0.12^*$</td>
</tr>
<tr>
<td>PANAS Negative</td>
<td>$R^2 = 0.50^*$</td>
<td>0.61</td>
<td>$R^2 = 0.08^*$</td>
</tr>
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</table>

* $p < 0.001

### Themes:

- Connections
- Self-discovery
- Stress Relief
- Learning: New Skills and Academic Achievement
- Insights into Medical Education

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**The Impact of Mind-Body Medicine Facilitation on Affirming and Enhancing Professional Identity in Health Care Professions Faculty**

Nicholas Talman, Nancy Harauchi, M.D., M.S.H., Cristina Ruhl, M.A., Kristi Graves, Ph.D., and Anat Haravani, Ph.D.

**Abstract**

Problem: Mind-body medicine (MBM) experiences affect medical students’ stress and foster self-awareness. Previous studies reported decreases in experienced stress and increases in mindfulness—changes that are associated with increased empathic concern and other aspects of professional identity. This study examined MBM facilitation and described the impact of an MBM course on the faculty’s identity.

Approach

Acad Med 90:780-784, June 2015

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Approach

Acad Med 90:780-784, June 2015

...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

- >120 trained faculty facilitators (clinicians, scientists, educators)
- >1,400 medical students participated
- >360 graduate students (M&S and PhD)
- >120 nursing students
- >800 students (Law, Business, Foreign Services Schools at GU)
- >70 faculty participants (including from curriculum committee)

Over 300 groups and over 3000 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/5 colleges)
- University of Alabama at Birmingham School of Medicine (medical students)
- Oregon Health and Sciences University (medical students)
- University of Washington (medical students)
- University of North Dakota Medical School (medical students)
- Charite University Medical School, Germany (medical students)
- University of Essen-Duisenberg Medical School, Germany (medical)
- 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)

Faculty Training in Mind-Body Medicine

November 3 – 6, 2016

Educating for Enhanced Self-Awareness and Self-Care

Originating at Georgetown University School of Medicine, this experiential program provides faculty at health professional schools with the training, tools, and strategic thinking necessary to implement mind-body medicine skills in their institutions.

During a three-day weekend retreat on Maryland’s Eastern Shore, faculty will be introduced to meditation, guided imagery, biofeed-back, breathing techniques, and other mind-body approaches that can alleviate stress and foster self-awareness and self-care. Participants will experience the power of these approaches firsthand while learning how to lead mind-body groups for students.

The program includes seven group sessions, several individual activities, short didactic presentations, and daily yoga. Participants are provided with all course materials, enabling them to launch similar programs in their institutions after the retreat.

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Our data and experience suggest that self-care in the form of mindfulness-based stress management and lifestyle programs can improve student wellbeing, even during high stress periods.

Lessons Learned

- Faculty 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
- There are many effective approaches to creating wellness groups, mind-body medicine is just one of several
- Important that the participants not feel marginalized
- Develop innovative programs, assess, report and disseminate
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COURAGE

www.aamc.org/wellbeing

http://www.acgme.org/What-We-Do/Initiatives/Physician-Well-Being

Special Thank You

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