Mindfulness:
At the Intersection of Healthcare Professional Wellness and Patient Centered Care

2016 Annual Spring Symposium on Addressing Wellness and Burnout in Health Sciences Professionals

Maryanna Klatt, Ph.D., Associate Professor, Family Medicine, OSUWMC

June 1, 2016 1-2:15pm
1069 Graves Hall

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER
I am a mindfulness teacher/researcher—what I do is explore ways to help people become aware of how we are living.

The reason that this matters is because it impacts our own ability to function, how we deliver patient care, and the type of life we want to live.
My professional goals:

1. To expose that it is our **REACTION** to stress that is the foundational key to resiliency building, and to,

2. Offer mind/body resiliency tools that can be implemented at the worksite, in classrooms, to individuals where we spend our days
Patient’s Health = Cathedral?
Are You Flourishing?

- Flourishing means to be happy, functioning well, and socially healthy.
- Other components include managing stress, achieving intimacy, and working productively.
- This is essential for a long life and positive contributions to society.

“Work life conditions play a role in both Compassion Satisfaction and Compassion Fatigue”

Are you building a wall?
...or building a cathedral?

Are you cleaning the floor?
...or engaged in patient health?

Will every day seem like you’re building a cathedral? No.
Does your body know the difference between different types of stress?

Nope.

- Physiological similarity between the stress response to **real** vs. **perceived** stress, **external** vs. **internal** stressors
- It all comes down to our internal response to stress, whether it originates internally or externally
The **physiological consequences** of chronic stress impede health and performance:

- Impacts telomere length, aging (Epel et al, 2009)

- Influences epigenetics, which genes get expressed (Stankiewicz et al, 2013)

- Weakens immune status and increases inflammation (Vitlic et al, 2014)

- Slows wound healing (Gouin & Kiecolt-Glaser, 2011)
What is Mindfulness?

“Mindfulness means paying attention in a particular way: On purpose, in the present moment, and nonjudgmentally.”

What is Mindfulness Meditation?

• It is non-judgmental, moment to moment awareness of the present moment. It means paying attention to what you are doing, while you are doing it. Non Mystical. **Waking up to the life you are living.**

• The underlying hypothesis is that **increasing attention regulation skills** may have positive benefits for people that want to cope better with aspects of their life they may not be able to control…
  • Chronic illnesses
  • Stressful jobs
  • Difficult people

...AND those wishing to be in their lives. **LEADERS in our own lives!**
Mindfulness intends to help you:

- Become aware of your habitual reactions to stress: **Noticing**
- **Cultivate** healthier, more adaptive ways of responding to stress
- **Practice flexibility**: to try out a flexible state of mind, one in which we are aware of the present moment without judgment
Mindfulness: A Preemptive approach to building resilience- not something we do... but an approach to living. A habit of being in each moment and letting the moment happen...

It is part of a toolkit of protective factors.
How does Mindfulness work?

- Impacts our **nervous system**
- Changes in **brain function**
- Improving the ability to **pay attention**
Hölzel et al.\(^1\) demonstrated that mindfulness-based stress reduction decreased levels of perceived stress.

Changes in perceived stress correlated significantly with reductions in bilateral amygdalae gray matter density as observed in MRI imaging.

How Meditation Changes the Brain and Body

By Gretchen Reynolds

February 18, 2016

fMRI: changes in the activity in the brain that processes stress reactivity and calm: 4 mos later—lower IL6 levels

(Creswell et al 2016)
How does it do that?

Invites us to stay AWARE of the present rather than spending our entire lives:
(1) distracting ourselves
(2) thinking about the past
(3) strategizing for the future
TIMELINE OF INQUIRY:

2004 Developed and tested a one hour/week mindfulness based intervention (MBI) for the workplace……..2016…Retrospective Look at Health Care Utilization
Developed a Pragmatic Mindfulness program to be delivered at the worksite:

<table>
<thead>
<tr>
<th>Year(s)</th>
<th>Working Population</th>
<th>Outcomes of interest (* p&lt;.05)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>The Ohio State University Faculty &amp; Staff</td>
<td>Perceived Stress*, Mindfulness*, Sleep Quality*, Cortisol</td>
</tr>
<tr>
<td></td>
<td>n = 48</td>
<td></td>
</tr>
<tr>
<td>2007-2009</td>
<td>The Ohio State University Faculty &amp; Staff</td>
<td>Biomarkers of inflammation (p=.08) for BMI &lt; 35, CRP* when BMI &lt;30</td>
</tr>
<tr>
<td></td>
<td>n = 180</td>
<td></td>
</tr>
<tr>
<td>2010-2011</td>
<td>Danish Bank Employees</td>
<td>Work Engagement*, Perceptions of well-being/stress at work *</td>
</tr>
<tr>
<td></td>
<td>n = 72</td>
<td></td>
</tr>
<tr>
<td>2010-2011</td>
<td>The Ohio State University Surgical Intensive</td>
<td>Feasibility of a work place mindfulness intervention for SICU personnel, stress reduction*,</td>
</tr>
<tr>
<td></td>
<td>Care Unit Personnel</td>
<td>Salivary α-amylase levels reduced*, work engagement*, correlated changes in mRNA*</td>
</tr>
<tr>
<td></td>
<td>n = 32</td>
<td></td>
</tr>
<tr>
<td>2010-2012</td>
<td>Older adults</td>
<td>Brain function changes* and mindfulness</td>
</tr>
<tr>
<td></td>
<td>n=28</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>The Ohio State University Neonatal Intensive</td>
<td>Resiliency increase*, stress reduction, Salivary α-amylase levels, work engagement, correlated</td>
</tr>
<tr>
<td></td>
<td>Care Unit Personnel</td>
<td>changes in mRNA</td>
</tr>
<tr>
<td></td>
<td>n=34</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>Resilient Cancer Survivorship</td>
<td>Resiliency increase*, stress reduction*, Better sleep quality*</td>
</tr>
<tr>
<td></td>
<td>n=25</td>
<td></td>
</tr>
</tbody>
</table>
Adaptable to a Variety of Environments and Occupations

Workers work out before shifts
*Columbus Dispatch Oct 3, 2011
Building the NEW JAMES

POLICE Departments

City of Columbus
Refuse Collection
Stressors in the SICU?
SICU Needs Assessment Results:

- **Sleep Habits:**
  - On average, takes 25 minutes to fall asleep (up to 2 hours)
  - On average 6.6 hours of sleep per night

- **Sleep Difficulties:**
  - 29% not able to get to sleep within 30 minutes
  - 65% wake in middle of night or early AM more than once per week (35% > 3 times per week)
  - 38% taking prescription or OTC sleep meds
  - 23% with trouble sleeping due to pain
  - 18% report trouble sleeping due to bad dreams
Prevalence of Stress and Burnout before Intervention:

Stress: Perceived stress scale
Burnout: Emotional exhaustion on the Maslach Burnout Inventory
Possible on a busy intensive care unit?

RCT with 32 participants:
- 87% females
- 69% nurses
- 14.7 years of experience
- 11.5 years working in the SICU

Average age was 44 years
Might these interventions reduce Healthcare Utilization and Cost?
Primary Outcomes of interest 5 years out:

- Total Cost of Care
- Number of Primary Care Visits
- Number of Hospital Admissions
- Number of Prescriptions
- Cost of Prescriptions
Results:
Why Might this be??

% Chance for Hospital Admissions

1 year pre 1 year post 2 year post 3yr post 4 yr post 5 yr total post

EDU MIM PSMatch3

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER
Primary Care Visits:

- Control
- EDU
- MED

Primary Care Visits over time:
- 1 year pre
- 1 year post
- 2 year post
- 3yr post
- 4 yr post
- 5 yr total post

Graph shows the increase in primary care visits over time for different groups.
Mindfulness publications by year, 1980 - 2012

Mindfulness and Physicians

Have you ever felt like this before?
Mindfulness and self-compassion are associated with better sleep and increased resilience in health professionals, according to an OSU study (Kemper, Mo, & Khayat, 2015).

For staff nurses, practicing yoga/mindfulness consistently, 2-3x/week outside of work hours led to better sleep and decreased work stress (Fang & Li, 2015).


Under chronic stress…

…would you be able to remember the way out?
Stress and Memory

• Article published March 2nd, 2016: Long Term Stress Erodes Memory

• OSU researchers Dr. Jonathan Godbout and Dr. John Sheridan demonstrated connection between chronic stress and short-term memory loss

• Mice who had previously mastered the escape route of a maze could not recall how to escape the maze after chronic exposure to stress

• Evidence of inflammation in brain that was brought on by response to external stressor

• Conclusion: post-stress memory trouble is linked to brain inflammation caused by immune system

Under chronic stress…

NO

...would you be able to remember the way out?
OSU Research 2016: Do you see why I do research on patient care units?!

There are SAFETY implications to chronic stress.

NYTIMES
Doctors Strive to Do Less Harm by Inattentive Care
By GINA KOLATA FEB. 17, 2015
Intention of OSUMC Mindfulness Expansion:

- High stress
- Job
- Higher work engagement
- Less Burnout
- Attention to clinical skills
- Enhanced Patient Engagement
- Increase Patient safety outcomes

Compare 2 units in the Ross Heart Hospital:
Changes from one year to the next, with the intention of impacting culture change shown at various levels....
Quality, Patient Safety and Patient Satisfaction Indicators

Proposed comparison of indicators between MIM and Control unit:

- Ventilator Associated Events, Probable (VAE)
- Central Line Blood Stream Infections
- C-diff infections
- Hospital Acquired Pressure Ulcers
- Staff Engagement
- Patient Satisfaction
Salient elements of success:

- Administrative Support
- Nurse Managers Commitment
- Unit pre-assessment
- Space for intervention

Why are we at the tipping point:

- Administration now invested
- Mindfulness/yoga movement widely accepted as stress reducing
What causes stress at work?

- Other people
- Too many tasks expected in too little time, with less resources
- Time management
- Lack of communication
- Lack of control
- Trying to live up to expectations
- Absence of fairness
What do people want?

- Change my reactions to situations
- To practice patience with patients, coworkers, family, friends
- Maintain a better work-life integration
- Learn how to say “no” when necessary
- Quality time for self
- To prioritize and handle the many demands of job/life
- Better focus / concentration
- Be more calm and present for my day-to-day life
It will be easier when…….

- I get a promotion
- I have a less demanding workload
- I have some work/life balance
- I…….
- My coworkers…..
- My company…..
Many people live their lives as hurricanes, living at the periphery, out of control: continuous partial attention. Life = reacting to crisis after crisis.
What we fail to realize is that at the center, the eye of every hurricane is a place of calm, quiet.
The goal is to see that there are tools to help us return to the “Eye of the Hurricane”:

To create habits of space & quiet, and to increase the likelihood that you can stay centered, regardless of what is going on around you.
The Science of Resilience

- Resilience means adapting well in the face of stress or adversity.

- Mindfulness training encourages resilience by regulating emotions. This means allowing the individual to selectively **attend** to positive or relevant negative information and to simultaneously **dismiss** irrelevant negative information.

  “Compassion Satisfaction [which is a component of resilience] was found to be inversely associated with Compassion Fatigue and burnout”

Anderson Cooper puts down the mobile devices to meditate and report on what it’s like to try to achieve “mindfulness,” a self-awareness that scientists say is very healthy, but rarely achieved in today’s world of digital distractions.
“Studies show a sense of shared purpose and community support are keys to resilience.”

Making stress management and mental wellness a priority on campus – utilizing faculty, technology, and other resources – can prove effective in improving medical student resilience.

Students begin medical school with better-than-average mental health profiles

However, this is a time when students experience many “firsts” due to the highly pressured environment: chronic anger, discord with family/friends, pervasive cynicism

Thus, mental health status tends to flip as education progresses, and persists through practice

Burnout rates among physicians are on the rise, while those of other professions remain flat.

Changing the culture and environment, therefore, is vital.

Mindfulness is needed on Two levels:

1. **Individual**: Being aware of how we **BOTH construct & react** to the events of our lives

2. **Structural**: What changes could we make to encourage changes in our institutions/society
Mindfulness helps overcome burnout.

- As a caregiving professional, experiencing pain vicariously can have physical and psychological effects, and can lead to compassion fatigue and burnout (Showalter, 2010).
  - In 2012, 45.8% of physicians in the US exhibited at least one symptom of burnout, by 2015 it is 51% (Shanafelt, 2015).

Healthcare professionals who completed a 8-week MBSR program reported decreased perceived stress and greater self-compassion, in addition to greater satisfaction with life, decreased job burnout, and decreased distress (Shapiro, 2005).


Mindfulness could make you a better doctor...

- “Mindfulness mediation is reported to develop and enhance a person’s capacity to feel both self-compassion and empathy for others. Self-compassion has been demonstrated to protect against anxiety and promote psychological resiliency” (Kearney, 2009).

A before-and-after study of 70 physicians demonstrated that participation in a mindfulness intervention resulted in “short-term and sustained improvements in well-being and attitudes associated with patient-centered care” (Krasner, 2009).


Mindful clinicians are more resilient and provide greater patient-centered care, experiencing less depersonalization.

In turn, patients reported feeling better understood by their healthcare provider (Dobkin, 2016).
Finding solutions to stress involves walking through this together!