Mindfulness in the Workplace

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Behavior Drives Health

Defining Health

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”

-Has not been amended since adoption in 1948

Perhaps we could amend by adding the goal of maintaining well-being even in the presence of disease and infirmity

http://www.who.int/about/definition/en/print.html
What is Mindfulness?

“What paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally”
– Jon Kabot-Zinn

- Mindfulness can be practiced in a variety of settings
  - Sitting
  - Standing
  - Walking
  - Eating
  - Working

Kabat-Zinn, 2004
What is **Mindfulness**?

**Key brain training activities:**
- focusing attention on thoughts, emotions, and body sensations
- simply observing them as they arise and pass away without judgment

**Examples mindfulness practices:**
- Meditation
- Progressive relaxation
- Yoga (some), Tai-Chi

Kabat-Zinn, 2004
What are the **Benefits** of mindfulness?

Range of psychological/cognitive benefits:

• Reduced psychological symptoms (depression, anxiety)

• Reduced emotional reactivity/enhanced behavioral regulation

• Enhanced attentional skills

• Increase in compassion and altruistic behavior

Bohlmeijer, 2010; Keng, 2011; Weng, 2013; Jha, 2013
What are the **Benefits** of mindfulness?

- Some evidence for enhanced coping in response to stressors
  - Supportive of “Broaden and Build” theory of positive emotions
  - May lead to enhanced Resiliency

Garland, 2010
What are the **Benefits** of mindfulness?

Mindfulness may extend life in groups living with disease

- Practiced 8.5x/ week (recommended session= 20 minutes)

Schneider, 2012
What are the **Benefits** of mindfulness?

Mindfulness may extend life in the general population

- Those who report practicing yoga in previous 12 months had a **lower risk of mortality**

- Hazard Ratio = 0.57  
  (95% CI = 0.36-0.92)

(Kachen, unpublished data)
How does mindfulness work?

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Exemplary instructions</th>
<th>Associated brain areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attention regulation</td>
<td>Sustaining attention on the chosen object; whenever distracted, returning attention to the object</td>
<td>Anterior cingulate cortex</td>
</tr>
<tr>
<td>2. Body awareness</td>
<td>Focus is usually an object of internal experience: sensory experiences of breathing, emotions, or other body sensations</td>
<td>Insula, temporo-parietal junction</td>
</tr>
<tr>
<td>3.1 Emotion regulation: reappraisal</td>
<td>Approaching ongoing emotional reactions in a different way (nonjudgmentally, with acceptance)</td>
<td>(Dorsal) prefrontal cortex (PFC)</td>
</tr>
<tr>
<td>3.2 Emotion regulation: exposure, extinction, and reconsolidation</td>
<td>Exposing oneself to whatever is present in the field of awareness; letting oneself be affected by it; refraining from internal reactivity</td>
<td>Ventro-medial PFC, hippocampus, amygdala</td>
</tr>
<tr>
<td>4. Change in perspective on the self</td>
<td>Detachment from identification with a static sense of self</td>
<td>Medial PFC, posterior cingulate cortex, insula, temporo-parietal junction</td>
</tr>
</tbody>
</table>

Holzel, 2011
How does mindfulness work?

- Mindfulness changes brain structure (and function)

8 weeks of sustained practice (27 min/day) increases grey matter density in several regions of the brain

Holzel, 2011
Assessed rapid time-dependent genomic changes during one 15 minute meditation session of among experienced practitioners (n=26) and also in novices before and after 8 weeks of relaxation response training (n=26).
How does mindfulness work?

Mindfulness changes short-term gene functioning

Energy metabolism, mitochondrial function, insulin secretion, telomere maintenance

Inflammatory response, stress-related pathways

Bhasin, 2013
Prevalence of worker mindfulness practices in the US

Mindfulness practices growing rapidly among workers in the US

But not all workers are equally exposed.

http://www.bbc.co.uk/news/business-21244171
US Workers: Meditation

- Service Workers
- Laborers and Helpers
- Operatives
- Craft Workers
- Administrative Support Workers
- Sales Workers
- Technicians
- Professionals
- Officials & Managers

2002 vs 2007

Percent

0 5 10 15 20 25
US Workers: Yoga

Bar chart showing the percent of US workers in various categories for the years 2002 and 2007:

- Service Workers
- Laborers and Helpers
- Operatives
- Craft Workers
- Administrative Support Workers
- Sales Workers
- Technicians
- Professionals
- Officials & Managers

Legend:
- 2002
- 2007
### Prevalence of worker mindfulness practices: the NHIS

<table>
<thead>
<tr>
<th>Lifetime Use of Meditation in Workers*</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Collar</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td>0.75</td>
<td>0.59-0.96</td>
</tr>
<tr>
<td>Farm</td>
<td>0.80</td>
<td>0.32-1.97</td>
</tr>
<tr>
<td>Service</td>
<td>1.03</td>
<td>0.86-1.24</td>
</tr>
</tbody>
</table>

*Adjusted for: age, gender, race, and education
Prevalence of worker mindfulness practices: the NHIS

<table>
<thead>
<tr>
<th>Lifetime Use of Yoga in Workers*</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Collar</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td>0.45</td>
<td>0.33-0.60</td>
</tr>
<tr>
<td>Farm</td>
<td>---</td>
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</tr>
<tr>
<td>Service</td>
<td>0.84</td>
<td>0.70-1.02</td>
</tr>
</tbody>
</table>

*Adjusted for: age, gender, race, and education
Prevalence of worker mindfulness practices in the US

Mindfulness practitioners already embedded in many workplaces!

- Reaching out to these employees to inform the design of a more mindful workplace

- Potential pool for train-the-trainer intervention models.

- US-based questionnaire available online:
  Download file: qalthealt.pdf at:
Proven (evidence-based) Mindfulness Interventions

Mindfulness-based Stress Reduction (MBSR)

- Strongest evidence base for improving psychological health/reducing stress reactivity
- 8-week program effective in clinical & non-clinical populations

Fjorback, 2011; Grossman, 2004; Bohlmeijer, 2010
Proven (evidence-based) mindfulness interventions

Mindfulness-based Cognitive Therapy (MBCT)

- UK/US intervention drawing from MBSR specifically designed to prevent relapse in those with a history of depression

- NHS- approved intervention
- Probably not a viable option for workplace delivery

Fjorback, 2011; Piet, 2011; Kuyken, 2012
Benefits of Worker Mindfulness Practices

Most of the available studies in literature limited:
– number of subjects evaluated
– quality of the research designs

- MBSR--- effective in diverse workplace settings?
  - Dose– promising but mixed results so far
  - Delivery format

Wolever, 2012; Malarkey, 2013; Mackenzie, 2006; Klatt, 2009
One Good Workplace Example

Effective and Viable Mind-Body Stress Reduction in the Workplace: A Randomized Controlled Trial

Ruth Q. Wolever
Duke University School of Medicine

Kyra I. Robinet
Aetna Inc.

Elizabeth R. Mackenzie
University of Pennsylvania

Catherine A. Kusnuck
Headlands Consulting

Brings together scientists, the private sector, and employer.

Real challenges to make the science sound and ethical

Perfect storm of opportunity? Aetna exec claims 11:1 ROI

Wolever, 2012; http://www2.macleans.ca/2013/04/21/the-battle-for-buddha/
One Good Workplace Example

- Sophisticated research design comparing workplace-feasible mindfulness offerings + examination of delivery approaches (n=297)

Wolever, 2012
# Benefits of Worker Mindfulness Practices

<table>
<thead>
<tr>
<th>Outcome Measures</th>
<th>Control (n = 53)</th>
<th>Mindfulness (n = 96)</th>
<th>Yoga (n = 90)</th>
<th>F</th>
<th>η²</th>
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<tbody>
<tr>
<td>PSS</td>
<td></td>
<td></td>
<td></td>
<td>8.89***</td>
<td>.07</td>
</tr>
<tr>
<td>Pre</td>
<td>23.52 (.52)</td>
<td>24.72 (.38)</td>
<td>24.93 (.40)</td>
<td></td>
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<tr>
<td>Post</td>
<td>19.34 (.86)</td>
<td>15.86 (.64)</td>
<td>16.74 (.66)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current pain</td>
<td></td>
<td></td>
<td></td>
<td>3.56*</td>
<td>.03</td>
</tr>
<tr>
<td>Pre</td>
<td>1.44 (.30)</td>
<td>1.82 (.22)</td>
<td>2.24 (.23)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>1.38 (.24)</td>
<td>1.21 (.18)</td>
<td>1.24 (.18)</td>
<td></td>
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<tr>
<td>HRV Coherence ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>-.25 (.07)</td>
<td>-.33 (.05)</td>
<td>-.30 (.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>-.12 (.05)</td>
<td>.02 (.04)</td>
<td>.33 (.04)</td>
<td></td>
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</tbody>
</table>

- Most examined components not significantly different from the control group
- Each point on the PSS scale associated with nearly $100 increase in medical costs in this workforce

Wolever, 2012
UK Resources for Bringing Mindfulness into the Workplace

Brings together:
- Teacher training opportunities
- Review of emerging mindfulness research
- Listings for mindfulness courses offered to the public

http://www.exeter-mindfulness-network.org/
UK Resources for Bringing Mindfulness into the Workplace

- Website sponsored by the Mental Health Foundation
- Search feature allowing users to locate local mindfulness offerings
- Online PSS test and Access to online mindfulness course with preliminary evidence of efficacy

http://bemindful.co.uk/

(Krusche, 2012)
UK Resources for Bringing Mindfulness into the Workplace

Brings MBSR into the workplace

http://www.mindfulness-works.com/index.php
UK Resources for Bringing Mindfulness into the Workplace

Breathworks specialises in helping people to:

- reduce work related stress and the impact it has on health
- self-manage any health condition(s) they may have
- reduce the suffering associated with their health condition(s)
- return to work after periods of sickness
- transition back into activity, creativity and productivity.

We also help people to:

- stay at work with greater resilience and better self awareness
- return to work happily, willingly and voluntarily

http://www.mindfulnessworks.co.uk/index.html
UK Resources for Bringing Mindfulness into the Workplace

Work With Mindfulness
Tuning people to themselves and each other.

We offer [mindfulness training and consultancy for organisations](http://workwithmindfulness.com/index.htm) in the UK and internationally. Mindfulness is an awareness-based approach to life that helps people relate skilfully with circumstances. It means paying attention to thoughts, feelings, body sensations, others and the environment in a way that cultivates understanding, helps manage difficulties, and leads to wise choices. Rooted in ancient traditions of meditation, mindfulness has become the subject of increasing [scientific study](http://workwithmindfulness.com/index.htm) in recent years, and research is showing it helps people manage many situations more effectively, including at work.
A Tentative Mindful Workplace Agenda

- Well established mindfulness interventions already in UK workplaces
  - Research on these interventions making it to peer-reviewed literature?
  - Are research partnerships viable?
    - The collision of priorities?
    - Practical limitations with respect to research design and funding
  - Process evaluation focus?
A Tentative Mindful Workplace Agenda

Process Evaluation of a Workplace Health Promotion Intervention Aimed at Improving Work Engagement and Energy Balance

Jantien van Berkel, MA, Cécile R.L. Boot, PhD, Karin I. Proper, PhD, Paulien M. Bongers, PhD, and Allard J. van der Beek, PhD

Objective: To evaluate the process of the implementation of an intervention aimed at improving work engagement and energy balance, and to explore associations between process measures and compliance. Methods: Process measures were assessed using a combination of quantitative and qualitative methods. Results: The mindfulness training was attended at least once by 81.3% of subjects, and 54.5% were highly compliant. With regard to e-coaching and homework exercises, 6.3% and 8.0%, respectively, were highly compliant. The training was appreciated with a 7.5 score and e-coaching with a 6.8 score. Appreciation of training and e-coaching, satisfaction with trainer and coach, and practical facilitation were significantly associated with compliance. Conclusion: The intervention was implemented well on the level of the mindfulness training, but poorly on the level of e-coaching and homework time investment. To increase compliance, attention should be paid to satisfaction and trainer-participant relationship.

(van Berkel, 2013)
# A Tentative Mindful Workplace Agenda

<table>
<thead>
<tr>
<th>Type of Data</th>
<th>Items</th>
<th>Resources</th>
<th>Measurement</th>
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<tbody>
<tr>
<td>Process</td>
<td>Reach</td>
<td>Information about demographics of the workers of the participating organizations and questionnaire</td>
<td>Assessment of proportions and representation of subgroups</td>
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<tr>
<td></td>
<td></td>
<td>Questionnaire</td>
<td>Self-reported use/dose</td>
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<tr>
<td>Compliance</td>
<td>Mindfulness training</td>
<td>Face-to-face interview with trainer</td>
<td>Open-ended questions</td>
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<tr>
<td></td>
<td>E-coaching</td>
<td>Questionnaire</td>
<td>10-point scales (1, lowest score; 10, highest score) 3-point scales (1, too little; 3, too much) 7-point scales (1, totally agree; 7, totally disagree)</td>
</tr>
<tr>
<td></td>
<td>Fruit</td>
<td>Face-to-face interviews with participants</td>
<td>Open-ended questions</td>
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<td>Buddy system</td>
<td></td>
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<tr>
<td>Fidelity</td>
<td>Materials</td>
<td></td>
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<tr>
<td>Judgment</td>
<td>Adherence to protocol mindfulness training and e-coaching</td>
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<td></td>
<td>Barriers for adherence to protocol</td>
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<td>Satisfaction</td>
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<td>Extent</td>
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<td>Usefulness</td>
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<td>Worth time investment</td>
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<td></td>
<td>Quality</td>
<td></td>
<td></td>
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<tr>
<td>Context (barriers and facilitators)</td>
<td>Individual</td>
<td></td>
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<tr>
<td></td>
<td>Social</td>
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<tr>
<td></td>
<td>Organizational</td>
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</tr>
<tr>
<td></td>
<td>Provider</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intervention</td>
<td></td>
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</tbody>
</table>
Perceived organization and supervisor support for participating in the intervention was positively correlated with compliance.

Trainer/coach relationship associated with higher satisfaction and compliance

Given the association between compliance and satisfaction:

- Organizational context should not be ignored and that program development should include the involvement of employer and employee.

(van Berkel, 2013)
A Tentative Mindful Workplace Agenda

Need for a focus on employer needs:

- Are workplace mindfulness interventions cost-effective?
- Can they accelerate return-to-work (long term sick absence)?
- Can they prevent cases of long term absence?
- Can they improve productivity?
A Tentative Mindful Workplace Agenda

Eyes on the prize: reach and sustainability

- Optimizing effectiveness by matching person to practice
  - No easy task

- Continuous qualitative research to address sustainability
“Take-Away”

- Research on the **beneficial health effects of mindfulness practices** well established

- Research on the benefits of establishing **workplace mindfulness offerings** more limited, but suggestive of benefits to the employee and possibly, employer

- **Resources** for establishing mindful workplaces particularly **strong in the UK**

- Just beginning the journey!
Thank you

Plot twist. Waldo finds himself.
References


References


References


