Mindfulness: A New Frontier in Healthy Aging

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Objectives

- Define and discuss mindfulness and Mindfulness-Based Stress Reduction (MBSR)
- Review what we know about the use of mindfulness and MBSR for improving mental and physical health
- Explore the opportunities for the use of mindfulness and MBSR for healthy aging
What is healthy aging?
Mindfulness

“Intentionally focusing one’s attention on the experience occurring at the present moment in a nonjudgmental or accepting way”

(Kabat-Zinn, 1990)
Mindfulness-Based Stress Reduction

Program Developed at the Stress Reduction Clinic at the University of Massachusetts Medical Center

“The regular, disciplined practice of moment-to-moment awareness or mindfulness, the complete “owning” of each moment of your experience, good, bad, or ugly. This is the essence of full catastrophe living.”
Mindfulness-Based Stress Reduction

- MBSR teaches a non-reactive approach to experience including difficult or painful situations

- The focus is on accepting what you are experiencing in your inner and outer world with nonjudgmental awareness

*Uses a stance of compassion, interest, friendliness and open-heartedness toward the experience observed in the present moment, regardless of how adverse it may be*  (Baer, 2006)
Experiential:

A Moment of Mindfulness

Mindfulness is being present where you are – right in this very moment
Why is it so difficult to be present in our life?

I long, as does every other human, to be at home where ever I find myself.

Maya Angelou
The Perils of Perception
Stress

&

The Body, Mind and Emotions

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Stress

An unpleasant/unhealthy physical, emotional and mental response to a real or perceived danger.
Stress has an adverse effect on the brain and the physical body
# Physiological Changes

<table>
<thead>
<tr>
<th>Physical Effect</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased heart rate &amp; breathing</td>
<td>Provides fuel and oxygen for quick energy</td>
</tr>
<tr>
<td>Rise in blood pressure</td>
<td>Prepare muscles for strenuous action</td>
</tr>
<tr>
<td>Release of adrenaline &amp; other hormones</td>
<td>Increase blood clotting mechanisms to protect against blood loss</td>
</tr>
<tr>
<td>Release of sugars &amp; fats into the circulation</td>
<td>Improve sight &amp; hearing and other protective actions</td>
</tr>
<tr>
<td>Tensing of the skeletal muscles</td>
<td></td>
</tr>
</tbody>
</table>
Stress Really Does Make You Sick!

Cardiovascular Disease  Gastrointestinal Disorders  
Diabetes  Immune Disorders  
Hypertension  Chronic Fatigue Syndrome  
Metabolic Syndrome  Sensory Modulation of Pain
Effects of Stress on Mental Health

- Depression
- Anxiety
- Mood disorders
- Insomnia
- Impaired memory
Short-Term Versus Long-Term Solutions to Stress
Experiential: A Moment of Mindfulness

Little breath, breathe me gently,
row me gently,
for I am a river I am learning to cross.

W.S. Merwin
Research on Mindfulness

- Chronic pain
- Symptom management in cancer treatment & other chronic conditions
- Phototherapy for psoriasis
- Anxiety disorders
- Depression
- Stress reduction
- Enhanced immune response
- Stress reduction for family caregivers of people with dementia
- Improve diabetes management
Research Results

- Improved mood
- Decreased depression
- Decreased anxiety
- Improved sleep
- Improved immune response
- Decreases in physiological stress responses such as cortisol
- Changes in brain functioning (neuroplasticity)
- Decreases in medical symptoms & pain perception
- Marked improvement in overall wellbeing
The Balance Study

A randomized controlled trial of 78 family caregivers for people with dementia comparing MBSR to community caregiver education & support (CCES)

Outcomes looked at stress, mental health, depression, anxiety, burden and compassion

Measures at baseline, 2 months and 6 months

This project was supported by Award #R21-AT003654 from The National Institutes of Health- NCCAM

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Balance Study: Outcomes

Perceived Stress by Intervention and Time

- CCES
- MBSR

Baseline, 2 months, 6 months
Balance Study: Outcomes

Depression by Intervention and Time

- CCES
- MBSR

Baseline 2 months 6 months
Balance Study: Outcomes

Mental Health / Wellbeing by Intervention and Time

Baseline 2 months 6 months

MBSR

CCES
Balance Study Results

Results also showed statistically significant benefits at both 2 and 6 months for MBSR on self-compassion \((p<.05, p<.04)\); with a trend toward improvement in mindfulness \((p<.06, p<.08)\)

State anxiety, perceived burden and social support improved significantly in both groups
Diabetes is a serious and progressive chronic condition made worse by the metabolic and psychosocial effects of stress

A pilot study on the use of MBSR for improving patient management of diabetes as measured by HbA1c, perceived stress, anxiety, depression, mental health and self-efficacy

This project was supported by Award # K23-AT003919 from the National Institutes of Health - NCCAM
**Results: Diabetes Outcomes**

<table>
<thead>
<tr>
<th>DM Outcomes</th>
<th>PRE (M/ SD)</th>
<th>POST (M/ SD)</th>
<th>Change / d</th>
<th>P significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1c</td>
<td>9.18 (1.17)</td>
<td>8.37 (1.28)</td>
<td>-.79*</td>
<td>.0004</td>
</tr>
<tr>
<td>Problem Area in Diabetes Scale</td>
<td>30.28 (2.73)</td>
<td>18.34 (0.14)</td>
<td>-.71*</td>
<td>.002</td>
</tr>
<tr>
<td>Diabetes Empowerment Scale</td>
<td>3.42 (0.14)</td>
<td>4.09 (0.11)</td>
<td>.80 *</td>
<td>.000</td>
</tr>
</tbody>
</table>

*D = Cohen’s D effect size*
Results – Mental Health

PRETEST MBSR Course POSTTEST

Perceived Health
- 46.1 → 51.9
  \( d = 0.69 \)

Anxiety
- 40.4 → 31.4
  \( d = -0.66 \)

Stress
- 16.4 → 11.62
  \( d = -0.76 \)

Depression
- 7.7 → 3.94
  \( d = -0.62 \)

\( d: \) Cohen’s D effect size, \( p < .01 \)
**Results – Mental Health**

- Significant increase in coping engagement and problem solving coping \((D=.52, p=.00)\)
- Significant increase in social support \((D=.38, p=.02)\)
- Significant increase in self-compassion \((D=.33, p=.03)\)
Conclusions from My Research

- MBSR is more effective at decreasing stress and depression and improving mental health in family caregivers than a standard educational intervention and performs just as well in improving anxiety, social support and perceived burden.

- MBSR may offer a safe and effective method for helping people better manage their diabetes and improve their mental health.
Opportunities for Healthy Aging

Improvements in Physical Health:
- increased immune response
- decreased cortisol and its negative effects
- improved management of chronic disease

Improvement in Mental Health
- decreases in stress & its consequences
- decreases in depression & anxiety
- decreases in rumination & worry
- improved sleep
- improved mood
Opportunities for Healthy Aging

*Improvements in Cognitive Function*
- improved attention and concentration
- improved brain function – increased gray matter and cortical thickness
Opportunities for Healthy Aging

A regular mindfulness or MBSR practice can have long-lasting and significant effects leading to enhanced well-being and health.

Mindfulness of the present moment from a non-judgmental and accepting stance leads to increased attention control, self-awareness and emotional stability.
Final Thoughts

Coming Home to Yourself

The Potential of Mindfulness