Mindful Measures: Creating Item Banks of Mindfulness Using PROMIS® Methodology

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What is Mindfulness?

Mind Full, or Mindful?

Credit: Psychologist, Henck van Bilsen of the Cognitive Behavioral Therapy Partnership, The Coromandel, New Zealand
Why Measure Mindfulness?

• Mindfulness-based Interventions (MBIs) have been associated with a number of mental and physical health benefits:
  • Lower perceived and physiological stress$^{1,2}$
  • Lower depression and anxiety$^1$
  • Lower self-reported pain$^3$
  • Improved well-being$^1$
  • Improved coping ability and affect$^4$

• However, measuring mindfulness has remained a challenge.

What Makes Measuring Mindfulness So Hard?

There are several problems with current measures:

- Varying theoretical conceptualizations
- Psychometric issues
- Possible response shift
- Possible bias
- Pragmatic issues
In so many words...

• We still lack a comprehensive and standardized self-report measurement system for mindfulness.

• This makes it difficult to assess whether the health benefits associated with MBIs are due to increased mindfulness.

• COMMENCE uses PROMIS® methodology to create a precise and concise measurement system for mindfulness.
Aim 1: The development of new mindfulness item banks

Aim 2: Calibration of these new banks and score linking to legacy measures

Aim 3: Validation of new mindfulness short forms in ongoing MBIs
Aim 1: Item Bank Development

- A systematic literature search on mindfulness measures and constructs
- Online surveys with mindfulness teachers, practitioners, and researchers (n = 60)
- Six focus groups with mindfulness teachers and practitioners (n = 42)
Over 254 unique instruments were identified and coded, resulting in a pool of more than 4800 potential items.

The surveys and focus groups were coded and analyzed by multiple researchers using grounded theory methods.

This resulted in 80 unique descriptors that were sorted into unique groups using an online card sorting task.

We formed a working model of important concepts and began the processes of winnowing and binning items into banks.
<table>
<thead>
<tr>
<th>Cluster/Domain</th>
<th>Additional Descriptors</th>
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</thead>
<tbody>
<tr>
<td>01: Awareness</td>
<td>Awareness of body, environment, sensations, emotions, thoughts, judgment, reactivity, etc.</td>
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<tr>
<td>01: Attention/Concentration</td>
<td>Focus, noticing, absorption, observing, etc.</td>
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<tr>
<td>02: Acceptance/Allowance/Letting Be</td>
<td>Non-judgment, non-attachment, letting go, etc.</td>
</tr>
<tr>
<td>02: Non-reactivity/Pausing</td>
<td>Stepping back, patience, slowing down, decentering, distress tolerance, etc.</td>
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<tr>
<td>02: Flexibility/Perspective-Taking</td>
<td>Self-regulation, equanimity, balance, choice, intention, etc.</td>
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<tr>
<td>03: Ethics/Values</td>
<td>Ethical discernment, morality, living by values, being a better person, skillful actions, etc.</td>
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<tr>
<td>03: Open-heartedness</td>
<td>Empathy, kindness, metta, self-compassion, gratitude, joy, embodied presence, etc.</td>
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<td>04: Beginner's Mind</td>
<td>Curiosity, fascination, investigation, etc.</td>
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<tr>
<td>04: Wise/Clear-Mindedness</td>
<td>Insight, wisdom, clarity, discernment, etc.</td>
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<tr>
<td>04: Impermanence/Direct experience</td>
<td>Just being, present moment, seeing things as they are, changing continuously, etc.</td>
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<tr>
<td>05: Universality/Interconnectedness</td>
<td>Suspension of self, no separation, connection, etc.</td>
</tr>
<tr>
<td>05: Ease/Flow/Space</td>
<td>Lightness, boundlessness, spaciousness, openness, groundedness, etc.</td>
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<tr>
<td>Proposed Domains (Now)</td>
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<tr>
<td>--------------------------------</td>
<td></td>
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<tr>
<td>Awareness</td>
<td>Open-heartedness</td>
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<tr>
<td>Attention</td>
<td>Clear-Mindedness</td>
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<tr>
<td>Non-Reactive Acceptance</td>
<td>Interconnectedness</td>
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</tbody>
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What's Next?
Wrapping up Aim 1

- Item rewriting
- Write new items for descriptors that lack them
- Cognitive interviews to assess item clarity
Aims 2 & 3: Calibration and Validation

• Calibrate the new instrument on an online sample (n = 4200) and confirmed mindfulness experts (n = 500)
• Create computer adaptive tests (CATs) and short forms
• Link new mindfulness banks to legacy measures and create cross-walk tables
• Validate the new short forms on those completing an 8-week MBI (n = 250)
In Summary…

• Despite other advancements in MBI research, we still lack a standardized and comprehensive self-report system for mindfulness.

• COMMENCE responds to this lack by employing PROMIS® methodology to the creation of a new measurement system of mindfulness.

• This new measurement system will improve the rigor and reproducibility of MBI results and further advance MBI research.
Thank you for your attention!

Research team:

- University of Pittsburgh: Carol Greco, Paul Pilkonis, Mary Lou Klem, Natalia Morone, Lan Yu, Kelly Johnston, Nathan Dodds, Christine McFarland, Sarah Daehler

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