Bringing Acceptance and Mindfulness into the Lab: Methodological Issues for Consideration

Peter M. Vernig, Tiffany Parcell, and Susan M. Orsillo

Suffolk University 
Boston, Massachusetts

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Goals

- Overview of the constructs
- Brief review of current literature and relevant methodology
- Unanswered questions and recommendations for future research
Acceptance and Mindfulness Based Therapies

- **Many promising interventions:**
  - DBT (Linehan, 1993a, 1993b)
  - ACT (Hayes, Strosahl, & Wilson, 1999)
  - MBCT (Segal, Williams, & Teasdale, 2002)

- **Growing support for efficacy and effectiveness in treatment literature** (e.g., Bach & Hayes, 2002; Gifford et al., 2004; Hayes, Masuda, Bissett, Luoma, & Gueffero, 2004; Orsillo, Roemer, & Barlow, 2002; Teasdale et al., 2000)

- Many are multi-faceted treatment packages

- Further study of underlying mechanisms is needed
Proposed Mechanisms

- Traditional cognitive and behavioral elements
- Mindfulness
  - Changing relationship with internal experiences (Segal, Williams & Teasdale, 2002)
  - Attention/awareness and acceptance (Bishop et al., 2004; Brown & Ryan, 2004)
  - Describing/labeling, non-judging, and nonreactivity to inner experiences, and acting with awareness (Baer et al., 2006)
Components

- Psychological flexibility (Hayes, 2004)

- Acceptance/Mindfulness
  - Acceptance – awareness and embracing of internal experiences
  - Defusion – undermining the believability and behavioral regulatory function of inner events
  - Self as context – transcendent sense of self
  - Contact with the present moment – observation and nonjudgmental contact with internal and external experiences

- Behavior Change
  - Values – areas of life one cares about
  - Committed action – willingness to make changes in the service of a valued goal
Translational Research on Acceptance and Mindfulness

Laboratory analogues allow for study of mindfulness and acceptance in a controlled laboratory setting

No Manipulation

1. Pre-Measurement
2. Acceptance/Mindfulness Manipulation
3. Comparison Manipulation(s)
4. Concurrent Measurement
5. Task
6. Post-Measurement
<table>
<thead>
<tr>
<th>Studies Currently in the Literature</th>
<th>N</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campbell-Sills, Barlow, Brown, &amp; Hofmann (2006)</td>
<td>90</td>
<td>Anxiety and mood d/o</td>
</tr>
<tr>
<td>Eifert &amp; Heffner (2003)</td>
<td>60</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Feldner, Zvolensky, Eifert, &amp; Spira (2003)</td>
<td>48</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Levitt, Brown, Orsillo, &amp; Barlow (2004)</td>
<td>60</td>
<td>Panic d/o</td>
</tr>
<tr>
<td>Arch &amp; Craske (in press)</td>
<td>60</td>
<td>Nonclinical Adults</td>
</tr>
<tr>
<td>Feldner, Zvolensky, Stickle, Bonn-Miller, &amp; Leen-Feldner (2006)</td>
<td>80</td>
<td>Nonclinical Adults</td>
</tr>
<tr>
<td>Leen-Feldner, Zvolensky, &amp; Feldner (2004)</td>
<td>95</td>
<td>Nonclinical Adolescents</td>
</tr>
</tbody>
</table>
Manipulations

- Methodology derived from Hayes et al. (1999)

- Focus:
  - Acceptance of negative experiences (e.g., Campbell-Sills, Barlow, Brown, & Hofmann, 2006; Eifert & Heffner, 2003; Levitt, Brown, Orsillo, & Barlow, 2004)
  - Attention and awareness (e.g., Feldner, Zvolensky, Eifert, & Spira, 2003; Leen-Feldner, Zvolensky, & Feldner, 2004; Feldner, Zvolensky, Stickle, Bonn-Miller, & Leen-Feldner, 2006; Arch & Craske, in press)
Manipulations

➤ Form

- **Psychoeducational** – Rationale is presented on the limitation of control efforts and acceptance/mindfulness is presented as an alternative (e.g., Campbell-Sills, Barlow, Brown, & Hofmann, 2006; Feldner, Zvolensky, Eifert, & Spira, 2003; Leen-Feldner, Zvolensky, & Feldner, 2004; Feldner, Zvolensky, Stickle, Bonn-Miller, & Leen-Feldner, 2006; Levitt, Brown, Orsillo, & Barlow, 2004)

- **Experiential** - Presentation of poem or metaphor (e.g., Campbell-Sills, Barlow, Brown, & Hofmann, 2006; Levitt, Brown, Orsillo, & Barlow, 2004)

- **Participatory**
  
  - Active exercises – Chinese finger trap (e.g., Eifert & Heffner, 2003)
  
  - Breathing (e.g., Arch & Craske, in press)

➤ Goal

- Coping strategy for challenge

- State induction/elicitation
Control/Comparison Manipulation

- **Alternative strategies**
  - Diaphragmatic breathing (e.g., Eifert & Heffner, 2003)
  - Unfocussed attention (e.g., Arch & Craske, in press)

- **Opposite strategies**
  - Emotion suppression (e.g., Campbell-Sills, Barlow, Brown, & Hofmann, 2006; Feldner, Zvolensky, Eifert, & Spira, 2003; Leen-Feldner, Zvolensky, & Feldner, 2004; Feldner, Zvolensky, Stickle, Bonn-Miller, & Leen-Feldner, 2006; Levitt, Brown, Orsillo, & Barlow, 2004)

- Worry Induction (e.g., Arch & Craske, in press)

- **Neutral controls**
  - National Geographic (e.g., Levitt, Brown, Orsillo, & Barlow, 2004)

- **No manipulation**
Mode of Presentation

- **Interactive** (e.g., Eifert & Heffner, 2003)
  - Time intensive
  - Training is critical
  - Concerns about standardization

- **Taped**
  - Standardization
  - Must consider the characteristics of the presenter
  - Manipulation checks for accuracy of comprehension
The Task/Challenge

- **Physiological arousal**
  - CO$_2$ inhalation (e.g., Eifert & Heffner, 2003; Feldner, Zvolensky, Eifert, & Spira, 2003; Feldner, Zvolensky, Stickle, Bonn-Miller, & Leen-Feldner, 2006; Levitt, Brown, Orsillo, & Barlow, 2004)

- **Presentation of emotionally evocative stimuli**
  - International Affective Picture System (IAPS; Lang, Bradley, & Cuthbert, 2005) (e.g., Leen-Feldner, Zvolensky, & Feldner, 2004, Arch & Craske, in press)
  - Emotionally evocative video clips (e.g., Campbell-Sills, Barlow, Brown, & Hofmann, 2006)
Outcomes Assessed

- **Psychological distress**
  - Subjective Units of Distress Scale (SUDS; Wolpe, 1958)

- **Physiological arousal**
  - Psychophysiological response – skin conductance, heat rate, respiration, temperature
  - Self-report

- **Affect**
  - Self Assessment Manikin (SAM; Bradley & Lang, 1994)

- **Behavior**
  - Willingness to engage in more tasks
  - Latency to begin additional tasks
Issues for Consideration and Future Directions

- Which components deserve future study?
  - Dismantling of mindfulness elements

- What alternative comparison groups might be of interest?
  - Growing literature on the negative effects of suppression
  - Can acceptance/mindfulness tasks be compared to brief analogues of other therapeutic constructs (exposure, progressive muscle relaxation, etc.)

- What other measurements can be used?
  - Changes in attention, response to shifting contingencies
Issues for Consideration and Future Directions

- **Hypothesized outcomes**
  - In a lab context, will acceptance/mindfulness increase or decrease felt emotion, arousal?
  - Short-term effects of manipulation vs. long-term effects of mindfulness

- **External validity of the tasks**
  - Can manipulation of values be assessed in lab?

- **Investigation of constructs of acceptance and mindfulness in other populations**
  - Substance misuse
  - Parent-child interaction
  - Other studies on this panel
References


