Mindfulness-Based Intervention for Students with ASD and Challenging Behavior

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Agenda

• What is mindfulness?
• Mindfulness in schools
• Mindfulness in ASD populations
• Common methodological limitations
• Results of my study
• Factors to consider in implementation
• Areas for future research
What is Mindfulness?
A Definition

To pay attention:....

In a particular way, in the present moment on purpose without judgment

(Kabat-Zinn, 1994)
Responding vs. Reacting

Between stimulus and response there is space. In that space is our power to choose our response. In our response lies our growth and freedom.

- Unknown
Let’s Try It!
"Mindfulness" journal articles published by year: 1980-2019

American Mindfulness Research Association, 2019
Source: goAMRA.org
Mindfulness in Schools

• MBIs studied across grade levels and tiers – mostly Tier 1, also Tier 2 (Bender, Roth, Zielenski, Longo, & Chermak, 2018)

• Improved cognitive performance & resilience to stress (Zenner et al., 2014), decreased behavioral problems & psychopathology (e.g., anxiety), and increased prosocial traits (e.g., social skills, self-regulation) (Felver et al., 2016)

• Most effective when administered by school staff (Carsley, Khoury, & Heath, 2017)
Mindfulness in Individuals with ASD

• Allows for self-management of behavior and emotion difficulties
  • Particularly important for children

• Decreased stress, anxiety, depression, rumination, aggression and increased social responsiveness and positive affect
  (Cachia, Anderson, & Moore, 2016)
Common Methodological Limitations

- Heterogeneity of mindfulness-based interventions
- Lack of assessment of intervention fidelity
- Lack of social validity measures
- Lack of diverse outcome measures

Additional recommendations for MBIs in schools:
- Including students with identified disabilities
- Reporting participant characteristics

(Felver et al., 2016)
Meditation on the Soles of the Feet (SoF)

- Brief intervention taught in 5 days
- Reduction in observable target behaviors (e.g., aggression)

(Singh et al., 2011a, 2011b)
Meditation on the Soles of the Feet (SoF)

Let’s try it!
My Study

- Examines whether individually-delivered SoF by school staff reduces observable challenging behavior in students with ASD

- First assessment of SoF in children with ASD in a school setting

- Adds natural intervention agents and students with a specific identified disability

- Addresses methodological limitations of MBI research
  - SoF specifically trains focused attention
  - Intervention fidelity measure
  - Social validity measures
  - Diverse outcome measures (observations, rating scales)
  - Reported participant characteristics (age, ethnicity, IQ)
Hypotheses

1. Significant decrease in observable challenging behavior after delivering the SoF intervention to children with ASD

2. Social validity ratings will indicate acceptability and ease of use in schools
Method: Setting and Participants

• **Setting:** Private special education school in New York City

• **Natural intervention agent**
  • Mental health counselor designated to the school
  • Masters in Mental Health Counseling, interned at the school the previous year

• **Students**
  • Three 9-10 year old children between 4th and 5th grades
  • Diagnosis of ASD
  • IQ score above 85
  • High teacher ratings of challenging behavior (SESBI-R)
Method: Experimental Design

• Multiple baseline design across three participants (Barlow, Nock, & Hersen, 2009)

• Students assigned to their SoF intervention phase order based on their schedules

• Baseline observations began at the same time for all students in a specific targeted context
  • Each student started SoF once a stable baseline was achieved (after 3, 6, and 9 observations)
Observed Challenging Behavior

Ed

Baseline: 17.5%
Post-Intervention: 6.2%
65% reduction

Jian

Baseline: 33.3%
Post-Intervention: 14.3%
57% reduction

Gil

Baseline: 44.3%
Post-Intervention: 19.4%
56% reduction

NAP for all students was 100%
Teacher Ratings of Challenging Behavior

Raw Scores for SESBI-R Teacher Ratings of Challenging Behavior Across Study Phases for Each Student

- Intensity Score Pre-Intervention
- Intensity Score Post-Intervention
Social Validity Data

**School Staff Ratings**

- All staff reported SoF was fair, reasonable, and effective in improving the specific student’s challenging behavior.
- Post-intervention feedback session indicated positive views of SoF.

**Student Ratings**

- Jian & Gil’s experience was positive.
  - Acceptable, effective, feasible (feasibility rated higher by Jian).
- Ed reported a negative experience.
  - Not acceptable, effective, feasible.

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**Social Validity Rating**

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<tr>
<th>Mental health counselor</th>
<th>Ed’s teacher</th>
<th>Jian’s teacher</th>
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**Social Validity Rating**

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Factors to Consider in Implementing SoF

**Strengthening Effectiveness**
- Structured and concrete sessions
- Behavioral reinforcement plan
- Accommodations for attention

**Limiting Effectiveness**
- Consecutive sessions
  - More flexibility in timing of intervention
- Too few sessions to learn and master SoF
  - More sessions and push-in from interventionist for skills generalization
Implications for Schools

• SoF as a resource-, time-, and cost-efficient intervention for schools

• May need to be individualized for students with ASD, as well as schools

• Potentially easier to teach, utilize, and research than heterogeneous MBIs
Areas for Future Research

- **Maintenance:** Follow-up data to measure long-term effects and sustained benefits

- **Stimulus Generalization:** Are students using SoF outside of sessions at school, and at home/in the community?

- **Response Generalization:** Examine SoF’s effects on other DVs relevant to ASD (e.g., anxiety)

- Group delivery of SoF in schools

- Compare SoF to other evidence-based interventions to reduce challenging behavior in students with ASD

- Examine SoF as part of multi-component PBS intervention
Acknowledgments

• Lauren Moskowitz, my dissertation mentor
• Josh Felver, for training in school-based SoF and additional support
• Mental health counselor
• Special education and classroom teachers
• School psychologist
• Students
• Parents
References


