

# 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

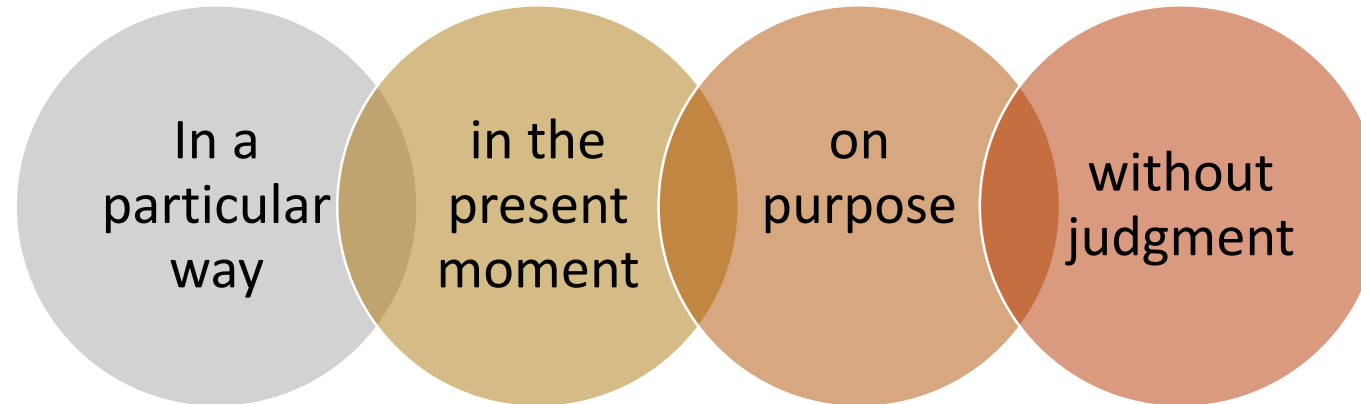


# What is Mindfulness?

## A Definition

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*To pay attention....*



(Kabat-Zinn, 1994)

# Responding vs. Reacting



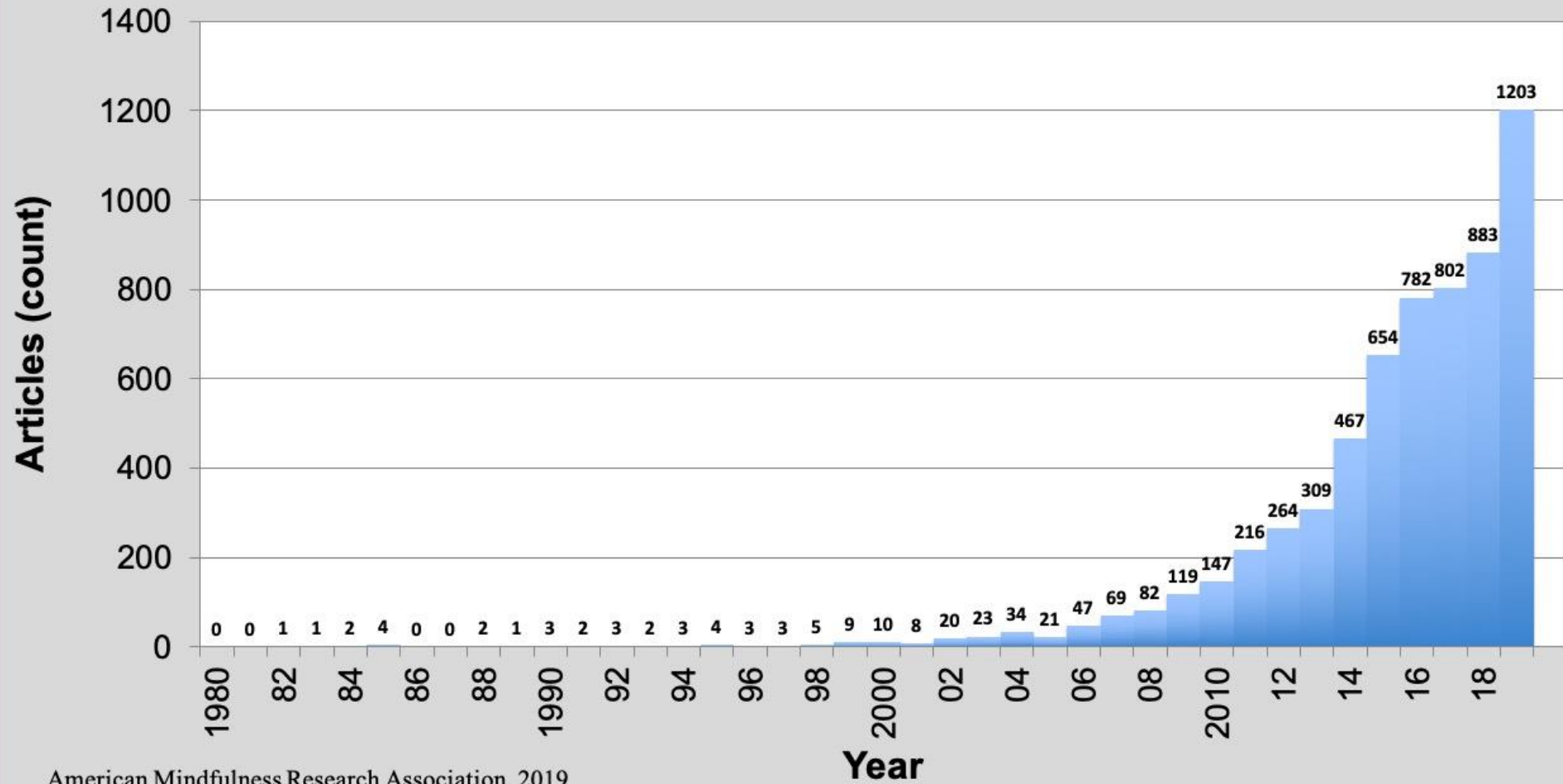
Between stimulus and response there is space. In that space is our power to choose our response. In our response lies our growth and freedom.

- *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

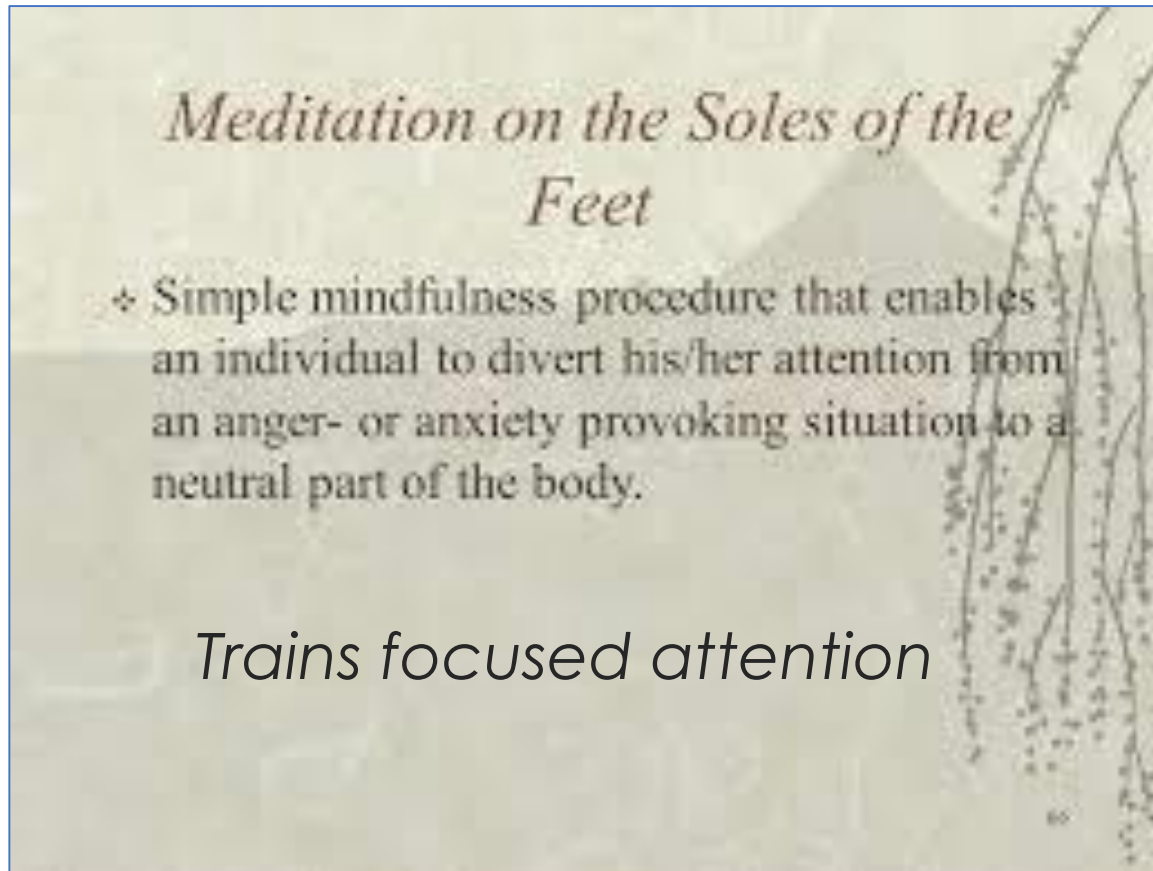
## **Additional recommendations for MBIs in schools:**

- 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 4<sup>th</sup> and 5<sup>th</sup> grades
  - Diagnosis of ASD
  - IQ score above 85
  - High teacher ratings of challenging behavior (SESBI-R)

# Method: Experimental Design

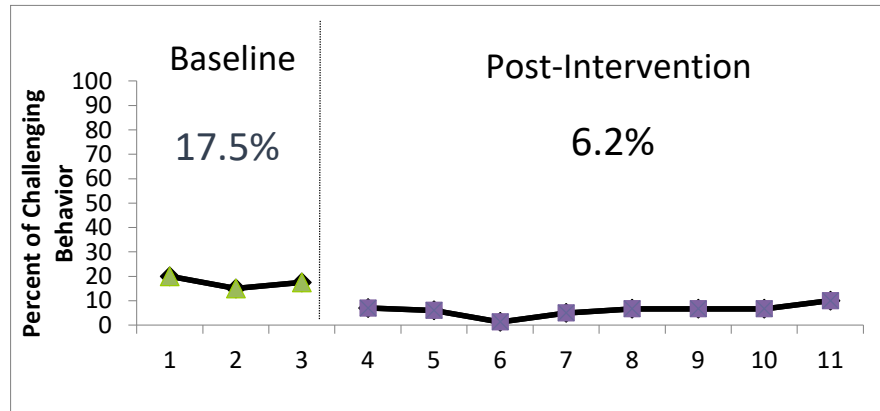


- Multiple baseline design across three participants (Barlow, Nock, & Hersen, 2009)
- Students assigned to their SoF intervention phase order based on their schedules
- Baseline observations began at the same time for all students in a specific targeted context
  - Each student started SoF once a stable baseline was achieved (after 3, 6, and 9 observations)

# Observed Challenging Behavior

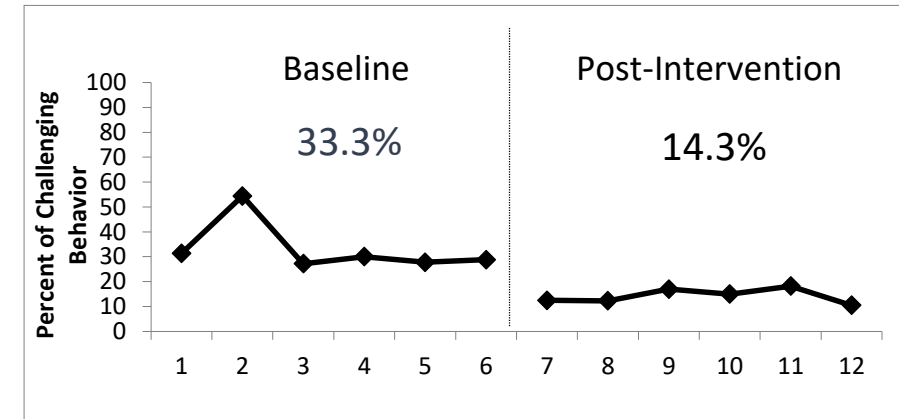
**Ed**

65%  
reduction



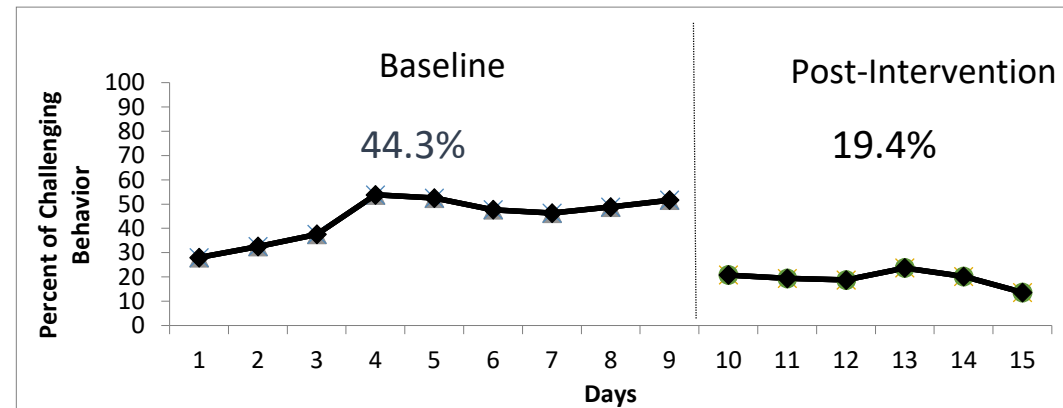
**Jian**

57%  
reduction



**Gil**

NAP for all  
students  
was 100%

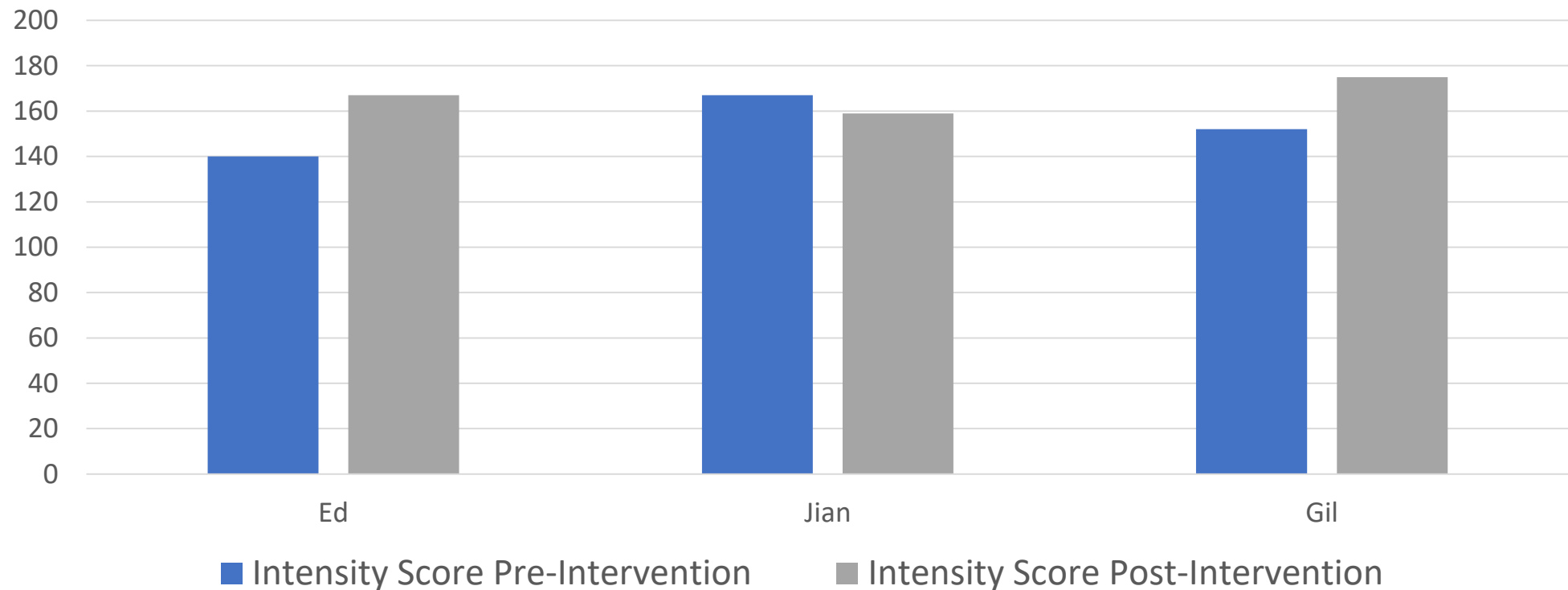


56%  
reduction



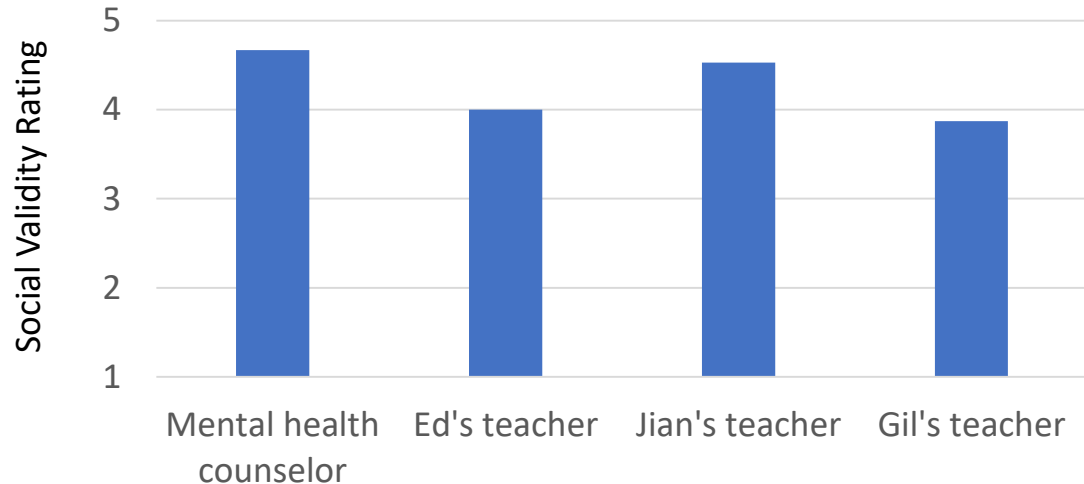
# Teacher Ratings of Challenging Behavior

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



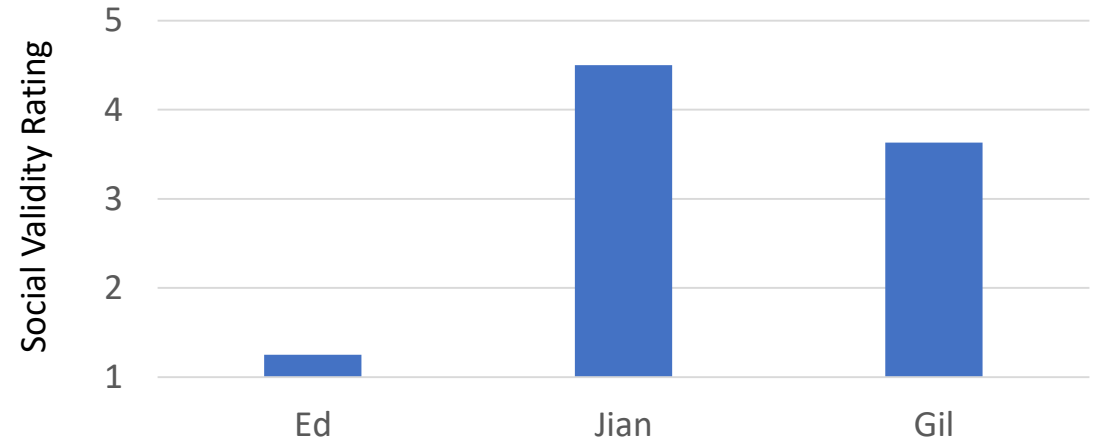
# Social Validity Data

## 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

# 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
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- Mental health counselor
- Special education and classroom teachers
- School psychologist
- Students
- Parents

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