



Effects of After-School Mindfulness on Urban, Elementary Students

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INTRODUCTION

The application of mindfulness practices in US school settings has steadily increased over the past 15 years (Semple et al., 2017). A number of studies have found positive effects of mindfulness on aspects of students' social-emotional functioning, including social competence and emotional well-being (Schonert-Reichl & Lawlor, 2010; Viafora et al, 2015). There is a need to examine the effects of school-based mindfulness on the psychosocial functioning of students of color, who are often at higher risk for poor mental health outcomes (Black & Fernando, 2014). Despite the widespread use of mindfulness in schools, there is little information regarding its implementation in the context of after-school programs. The present study seeks to address this gap by investigating the impact of mindfulness-based activities on children's ability to understand and regulate their emotions in an urban, elementary after-school program.

OBJECTIVES

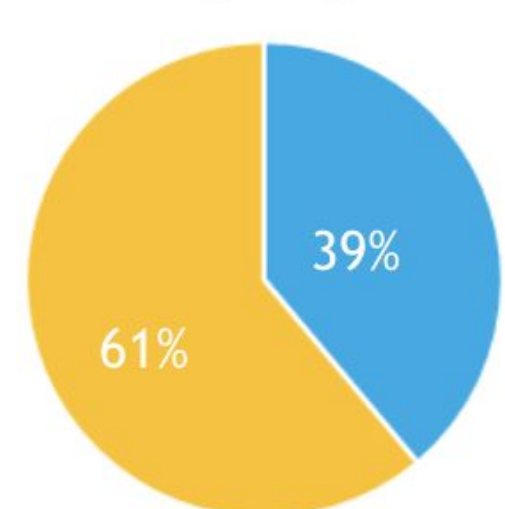
- Examine the utility of mindfulness practices in an after-school program
- Assess feasibility, logistics, and challenges of this program
- Determine if mindfulness has positive effects on children's emotional awareness, emotion management, social emotional skills, and communication abilities
- Describe specific roles that school psychologists can carry out in connection with mindfulness interventions, including best practices for direct implementation and teacher/staff consultation

METHOD

Participants

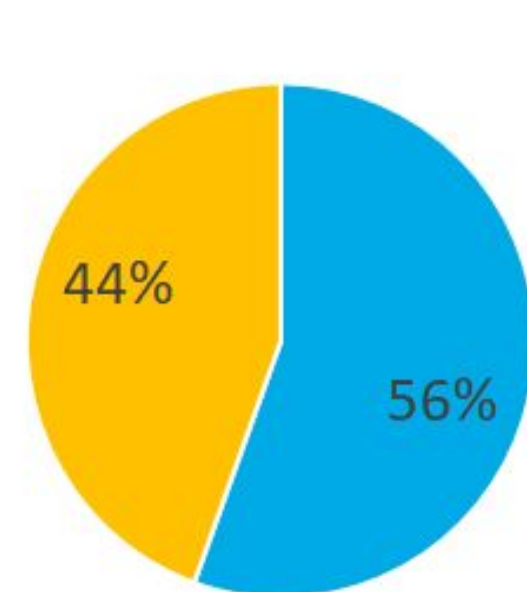
- Participants were 4th grade students (N = 18) enrolled in a special after school program in an urban school district in Northeastern US
- Majority bilingual, 17 Latinx, mean age: 9 yrs, 11 mos
- 14 completed activities and research measures
- All received free or reduced lunch

English Language Learners



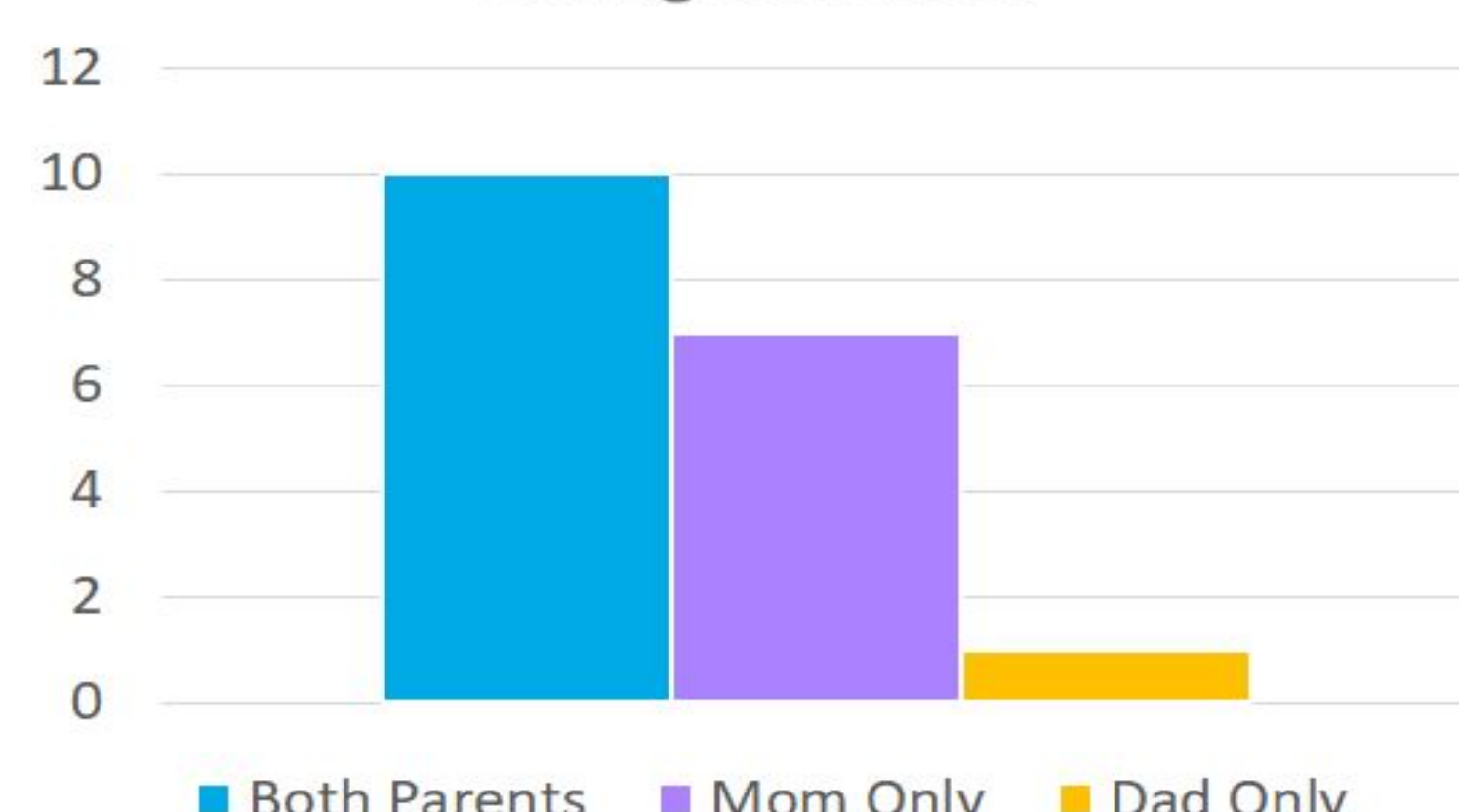
■ English Language Learner
■ Native English Speaker

Participant Gender



■ Male ■ Female

Living Situation



■ Both Parents ■ Mom Only ■ Dad Only

METHOD

Procedures

- Participants recruited through a specialized after-school program for students considered to have academic and/or social emotional risk.
- Mindfulness interventions done once per week for about 2 hours, from Jan. 2019– June 2019.
- Most interventions carried out in large-group format.
- Project did not use specific mindfulness curriculum, though each session involved a combination of physical activities, breathing exercises, sensory activities, and emotion awareness activities (usually with art-based component).
- 14 students completed surveys at baseline, mid-point, and at end-of-year.

Measures

Emotion Awareness Questionnaire (EAQ) (Rieffe et al., 2008): Developed for the purpose of understanding how children think and feel about their feelings.

- Includes 30 items and 6 scales supported by factor analyses: Differentiating Emotions, Verbal Sharing of Emotions, Bodily Awareness of Emotions, Not Hiding Emotions, Analyses of Emotions, Attention to Others' Emotions.

Children's Emotion Management Scales for Anger and Sadness (CEMS) (Zeman et al., 2001): Developed to assess children's self-reports of sadness and anger management

- 11 items for Sadness and 12 items for Anger. Anger & Sadness scales are each comprised of 3 subscales:
 - Inhibition/suppression of emotional expression; Dysregulated expression; Adaptive regulation/coping

Data Analyses

- Using SPSS, paired sample t-tests were conducted to look at potential changes in students' emotion awareness and emotion management skills between:
 - Baseline (January) & midpoint (March)
 - Midpoint & endpoint (March & June)
 - Baseline & endpoint (January & June)
- Analyzed all subscales of EAQ, CEMS Sadness, & CEMS Anger. Also analysed 24 items chosen by the researchers (11 EAQ, 6 CEMS Sadness, & 7 CEMS Anger items).
- Qualitative data regarding changes in the students' social-emotional functioning was also captured.

Our study suggests that mindfulness practices incorporated as part of after-school programs can have positive effects on some aspects of students' emotional functioning

RESULTS

Quantitative

EAQ

- Mean scores for EAQ subscales did not show significant change over time
- EAQ Item Analysis
 - Item 18 from Analyzing Emotions
 - "When I have a problem, it helps me when I know how I feel about it."
 - Scores increased from average 1.86 at baseline to 2.29 at endpoint (higher score indicates better analysis of emotions). $t = -2.48$ $p = .028$
 - Item 6 from Analyzing Emotions
 - "When I am angry or upset, I try to understand why."
 - Mean score decreased (opposite direction of expected) from baseline to endpoint (2.56 to 2.14) trending significance $t = 2.12$ $p = .054$

CEMS

- No significant changes in any scores for CEMS Sadness or CEMS Anger items
- Among mean scores for CEMS subscales, trending significance for decrease in Anger Dysregulated Expression (4.79 to 4.14) $t = 2.07$ $p = .059$

Qualitative

- Students showed increased communication about different emotions. Some students began to speak about more sensitive topics such as depression and suicide
- Mindful Coloring Activity: We provided students with mandalas to color, while being aware of your environment and experiences through silence
 - Initially, students were able to mindfully color for less than 2 minutes; by the end of the year, students could do this more than 20 minutes

ACTIVITY EXAMPLES

Art

- Mandala coloring
- Where do we feel it (e.g., anxiety) on our bodies (coloring)
- Creating a "calm down sandwich"

Writing

- How I show my feelings activity

Physical/Movement

- Breathing exercises, Yoga poses/exercise

Social

- Yarn activity - Pass/toss a ball of yarn and say something positive about yourself or others, connecting all the students in a "web"

Group Discussion

- Comparing activities done on "automatic pilot" to those requiring conscious effort and attention
- Students wrote down responses to the prompt "When I feel angry I..." and then engaged in a group discussion about the universality of emotional responding



DISCUSSION

Strengths of Project

- Support from the school administration
- Culturally accessible recruitment and consent materials
- Great enrollment (every child in the after-school program!)
- High participant engagement in activities

Challenges of Project

- Behavior and emotional management in groups
- Providing individualized attention
- Finding engaging activities well-suited for varied attentional/intellectual abilities
- Explaining mindfulness terms in age-appropriate language
- Navigating difficult topics such as depression and suicide

Research Limitations

- Small sample size
- Less rigorous research design
- Lack of uniformity in participation across project
- Measures do not have norms or cut-off scores
- EAQ has not been extensively used with US child populations
- Use of child self-report measures only:
 - Did kids understand meaning?
 - Items were read to kids and/or researchers helped clarify items.
 - Some items used language that might have been unfamiliar and/or possible cultural mismatch (e.g., "mope around")

Future Implications for Research and Practice

Research

- Question of how best to measure potential changes in students' social-emotional skills/functioning
 - Changes might be subtle and not easily detected through self-report measures
 - Use of additional assessments (teacher/parent reports), and/or control group

Practice

- Nature of activities: A mix of embodied, artistic, emotion-focused, and experiential activities was acceptable, but perhaps fewer activities would lead to increased skill development and mastery
- Format: Use of more standardized approach/curriculum is recommended
- Frequency: Increase dosage of mindfulness, i.e. year-long programming, may lead to better outcomes
- Mode of delivery: Consider logistics and benefits of small groups vs larger groups
 - Also important to consider follow-up for individual students who need more intensive social-emotional support
- School psychologists' role: Improve collaboration and involvement of school personnel, generalize activities and skills within classroom

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