

## Site Description

- **Head Start (HS) & Early Head Start (EHS):** Federally-funded, nationally accredited early education programs providing free “early learning, health, and family well-being” services to low-income families<sup>1</sup>
  - HS & EHS are regulated at the federal level<sup>1,2</sup>
  - Educational services are provided to communities via local agencies, such as GLCAC<sup>2</sup>
- **Greater Lawrence Community Action Council (GLCAC):** Non-profit organization serving Lawrence, Andover, & Methuen, MA areas through programming, community resources, & assistance to individuals experiencing poverty
  - HS & EHS at GLCAC serves 500+ children annually at five different centers throughout the communities<sup>3,4</sup>
  - GLCAC Head Start centers focus on providing high quality services to “low income, high need, high risk children”<sup>4</sup>



## Population & Stakeholders

According to the 2022 Head Start Annual Report<sup>4</sup> based on cumulative enrollment of 556 students:

- 78% spoke Spanish as their primary language
- 46% qualified for services based on public assistance
- 19% received assistance for a disability

According to the Annual Report, among enrolled families:

- 70% are single parent households
- 62% received food assistance
- 18% received special education supports
- 15% received mental health support
- 9% were unhoused within enrollment year

**Stakeholders:** Head Start teachers, Head Start students, Mental Health & Disability (MH&D) manager, Education Supervisors, Occupational Therapy consultant

## Gap, Aims, & OT Role

**Gap:** Teachers & staff requested co-regulation resources to improve students’ participation, engagement, & success

**Aim:** Support implementation of sensory & emotional co-regulation resources & strategies by GLCAC Head Start teachers

**Occupational Therapy (OT) Student Role:** Create literacy-based lessons with embedded classroom strategies for sensory co-regulation & social-emotional learning to include in daily routines

## Foundational Tenets Supporting Program Development

**Sensory & emotional co-regulation for preschool-aged children (3-5 years) occurs through:**

- Existence of trusting relationships with adult caregivers<sup>5,6,7</sup>
- Positive adult assistance with regulating emotions when the child is dysregulated<sup>6,8,9</sup>
- Use of movement/physical activity to increase duration of students’ engagement<sup>10,11</sup>
- Teaching & using mindfulness-based strategies, specifically deep breathing<sup>12,13,14</sup>

**Additional tenets supporting preschool students’ learning success & co-regulation include:**

- Literacy-based education for preschool children<sup>15</sup>
- Awareness of higher occurrence of all sensory-related behaviors as common among children under age 5, regardless of diagnosis or disability<sup>16,17</sup>
- Teaching & practicing strategies for emotional & sensory regulation when the child is regulated, enabling the child to use them more successfully (with adult support) when dysregulated<sup>6,18</sup>

## Methods & Program Development

### Project Methods

- Establishment of positive rapport & relationships with teachers, staff, & students
- Classroom observations (daily routines, environmental features, teacher-student interaction)
- Development of lessons & materials acquisition via evidence-based, OT-informed approaches
- Review of children’s literature/books on sensory & emotional regulation
- Creation of 10 co-regulation toolkits
- Development of support materials for administrators & staff (available in English & Spanish)
- Implementation of toolkits in 4 pilot classrooms
- Gathering anecdotal teacher & administrator feedback

### Program Development Collaborators

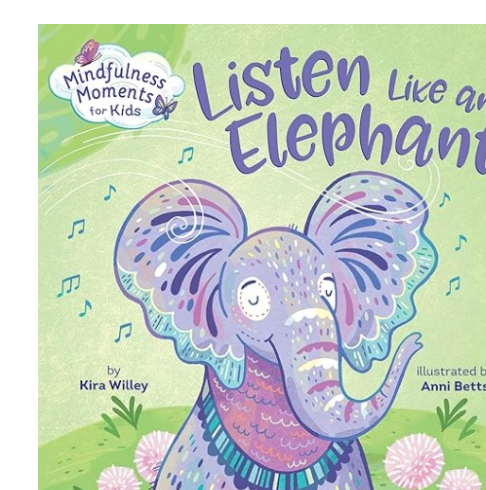
Classroom	Teachers	Mental Health & Disability (MH&D) Team
<ul style="list-style-type: none"> <li>• Classroom observations</li> <li>• Lesson plan implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; verbal feedback exchanges</li> <li>• Lesson plan revisions</li> </ul>	<ul style="list-style-type: none"> <li>• Case collaboration</li> <li>• Materials acquisition &amp; distribution</li> <li>• Consultation services</li> </ul>

## Curriculum Structure

- Single-page lesson plans (available in both English & Spanish)
- Lesson resources: age-appropriate co-regulation books, Hoberman sphere, breathing rainbow, yoga cards, animal walk cards
- 15-minute co-regulation lessons modeled in the classroom for teachers
- List of recommendations for implementation of co-regulation strategies across the daily routine (available in both English & Spanish)

**Lesson plans include 3 sections:**

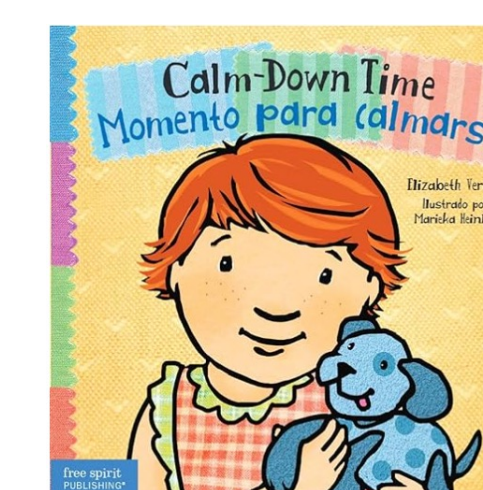
1. Mindful movement activity
2. Age-appropriate co-regulation book
3. Deep breathing strategy



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## Results

<b>Students</b>	Observed using Hoberman sphere with teachers to co-regulate after peer disputes
<b>Teachers</b>	Report success with use of breathing & movement strategies throughout daily routine
<b>MH&amp;D Manager</b>	Toolkits fill an essential gap for co-regulation strategies & education for teachers

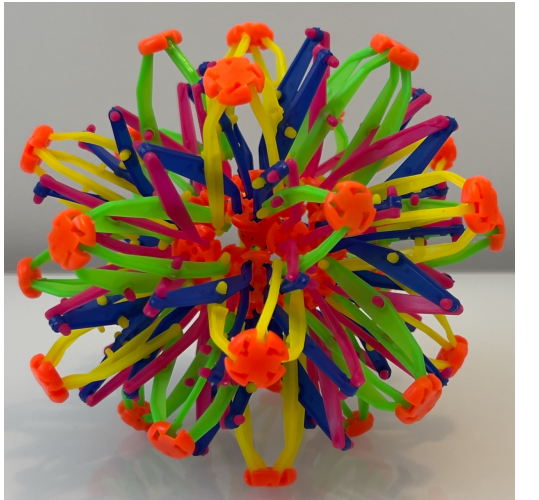
“School focuses on science, math, sharing, playing, everything. But how will the children receive the information if they’re not regulated? These tools help us fix that.”  
– MH&D Manager

“The lessons helped us by giving us support for when we needed [the children] to calm down with strategies that we could use in the classroom.”  
– Head Teacher

“The children learned how to manage their breathing when they need to be relaxed... by learning about the Hoberman sphere.”  
–Assistant Teacher

**Unexpected outcome:** Training & implementation of Hoberman sphere deep breathing strategy taught in **19 of 23 classrooms** across 4 centers, per site request

**Hoberman Sphere (“Breathing Ball”):** Deep-breathing strategy using expandable ball (Hoberman sphere), providing visual & tactile anchors for students to visualize inhaling & exhaling.



## Future Directions

- Of the 10 classroom co-regulation toolkits created: 4 kits provided to pilot classrooms & used in demo lessons 6 remaining kits will be distributed by MH&D Manager
- Toolkits will soon be made available to all Head Start classrooms (n = 23) across 5 centers
- MH&D team plans to conceptualize extension of developmentally appropriate co-regulation tools for EHS (ages 18 months-3 years)
- Plans for continued partnership between GLCAC & Tufts University Department of Occupational Therapy

**Acknowledgements:** This project would not have been possible without Martha Torres, Justine Donovan, & all GLCAC Head Start Case Management/Education Supervisors. Thank you for your support!

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