

INTRODUCTION

Background

- Many factors contribute to student participation and success in school, including their life outside of the classroom.
- Students exposed to childhood poverty and/or trauma often experience impaired school-related functioning.
 - e.g., behavioral issues, social and emotional concerns, academic impairment (Berger, 2019; Compassion International, n.d.)
- Sensory and emotional regulation strategies can improve student self-regulation and attention.
 - This can help reduce disruptive behaviors during school and enhance student education and social participation (Roberge & Crasta, 2022).

Significance

- Homewood Children's Village (HCV) is a non-profit organization that offers programs and services for children and families to address the complex challenges facing Homewood's youth (Homewood Children's Village, 2024).
- HCV has partnered with Lincoln Elementary School (LES), a public city school for students preK-5, to provide support and resources.
 - 84.5% of enrolled students at LES were from low-income families during the 2022-2023 school year (PA Public Schools, 2022).
- Despite the pre-existing support that HCV and LES provide to their students, a gap was identified in social emotional learning.
- Staff at HCV and LES expressed a need to address disruptive student behaviors and their impact on school participation.

OBJECTIVES

Objective 1:

Design and implement an evidence-based emotional regulation program using sensory strategies for students at Lincoln Elementary School to decrease disruptive behaviors.

Objective 2:

Provide caregiver education on the sensory and emotional regulation strategies to promote carryover into the home environment to further facilitate development and improve overall occupational performance of students.

METHODS

Needs Assessment

- Completed a Needs Assessment with site mentors at LES and HCV to identify the sites' needs. Two major needs identified:
 - Improve student emotional and sensory regulation skills to decrease schooltime behavioral disruptions
 - Increase caregiver involvement to promote carry-over into the community and at home

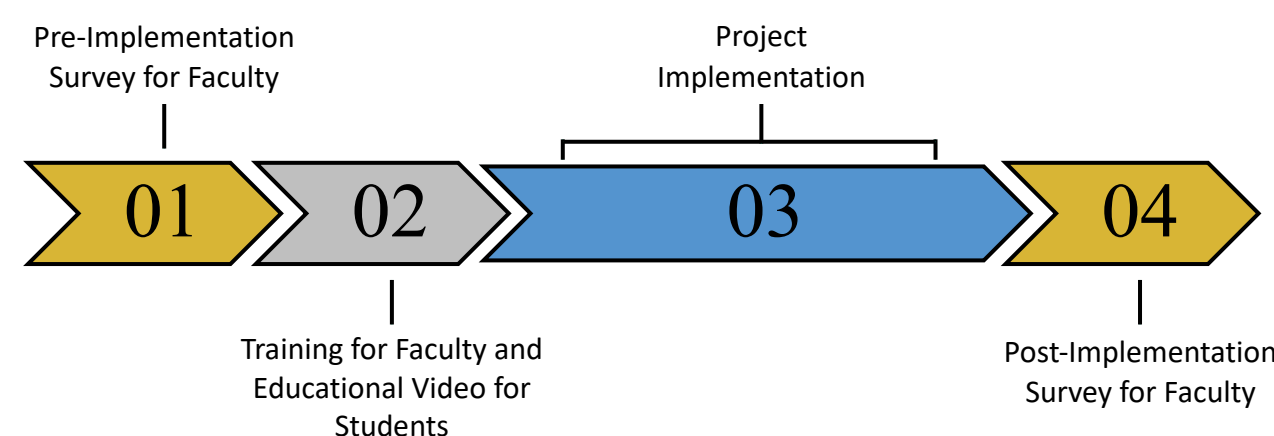
Participant Inclusion/Exclusion Criteria

- Homeroom classrooms of grades K-5 within Lincoln Elementary School (initially 10 classrooms)
- Specialty classrooms or classrooms without permanent teachers **NOT** included
- Two teachers went on medical leave prior to implementation, resulting in 8 classrooms included in the project

Project Components

Objective 1			Objective 2
Sensory Walkways	Zones of Regulation® Mural	Sensory Bins	Caregiver Education
Implemented sensory walkways on all three floors of the school.	Created a mural depicting a road map of the Zones of Regulation® to assist students with identifying feelings and identifying if they need a tool.	Provided each homeroom classroom and counselor's office with four sensory bins that aligned with the Zones® and included appropriate sensory tools to help students with regulating emotions.	Provided caregiver education on emotional regulation and sensory strategies at a community event.
Created a ticket system in each classroom to represent a hall pass when a student leaves the classroom for walkway use. This also notified faculty that students had permission to use the walkway.	Implemented in the cafeteria which served as a highly trafficked area by all students during school and at before/after school care programs.	Created a poster of the Zones® to hang next to the bins to assist students with identifying emotions.	Created handouts on emotional regulation and sensory strategies to carryover at home and in the community.

Data Collection Overview



PROJECT COMPONENTS



Sensory Walkways



Zones of Regulation® Mural



Sensory Bins

RESULTS

Teacher Perception of Project Impact on Students

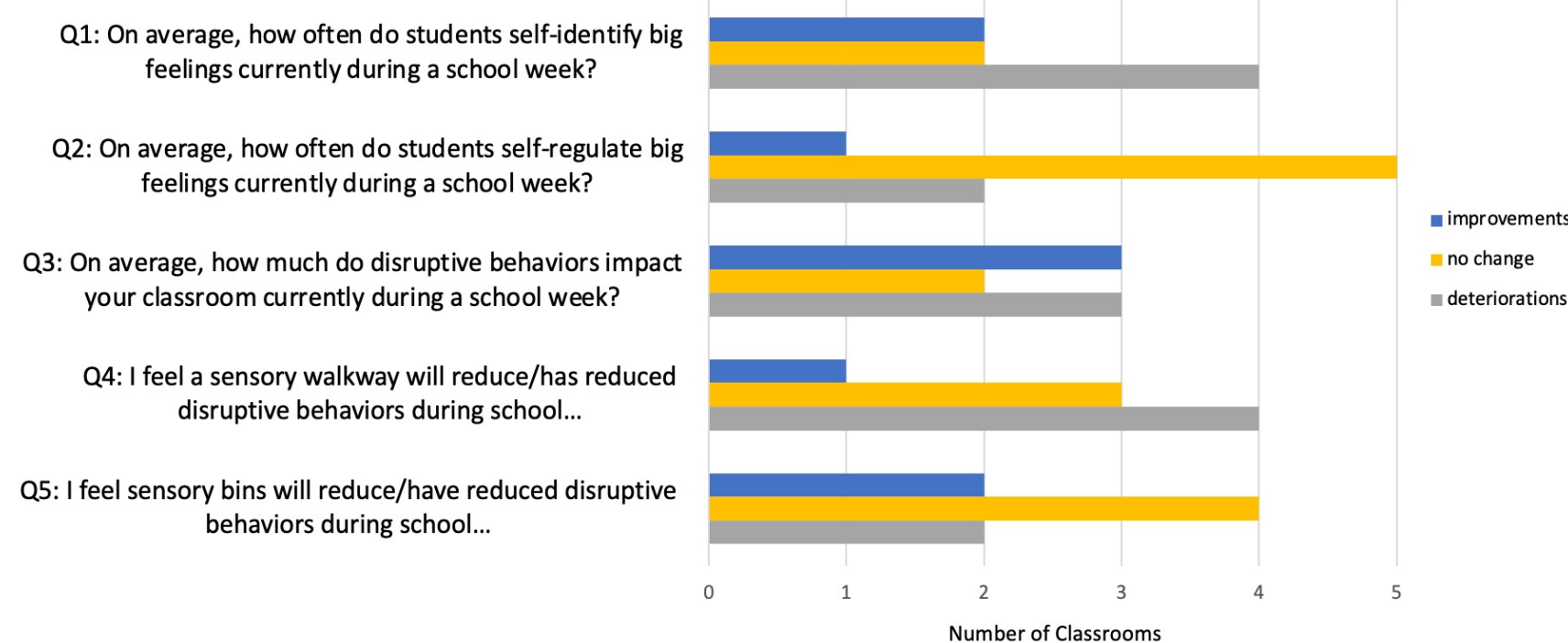


Figure 1. Bar graph showing differences in pre and post data from Likert scale surveys completed by teachers.

Anecdotal Remarks from the Site

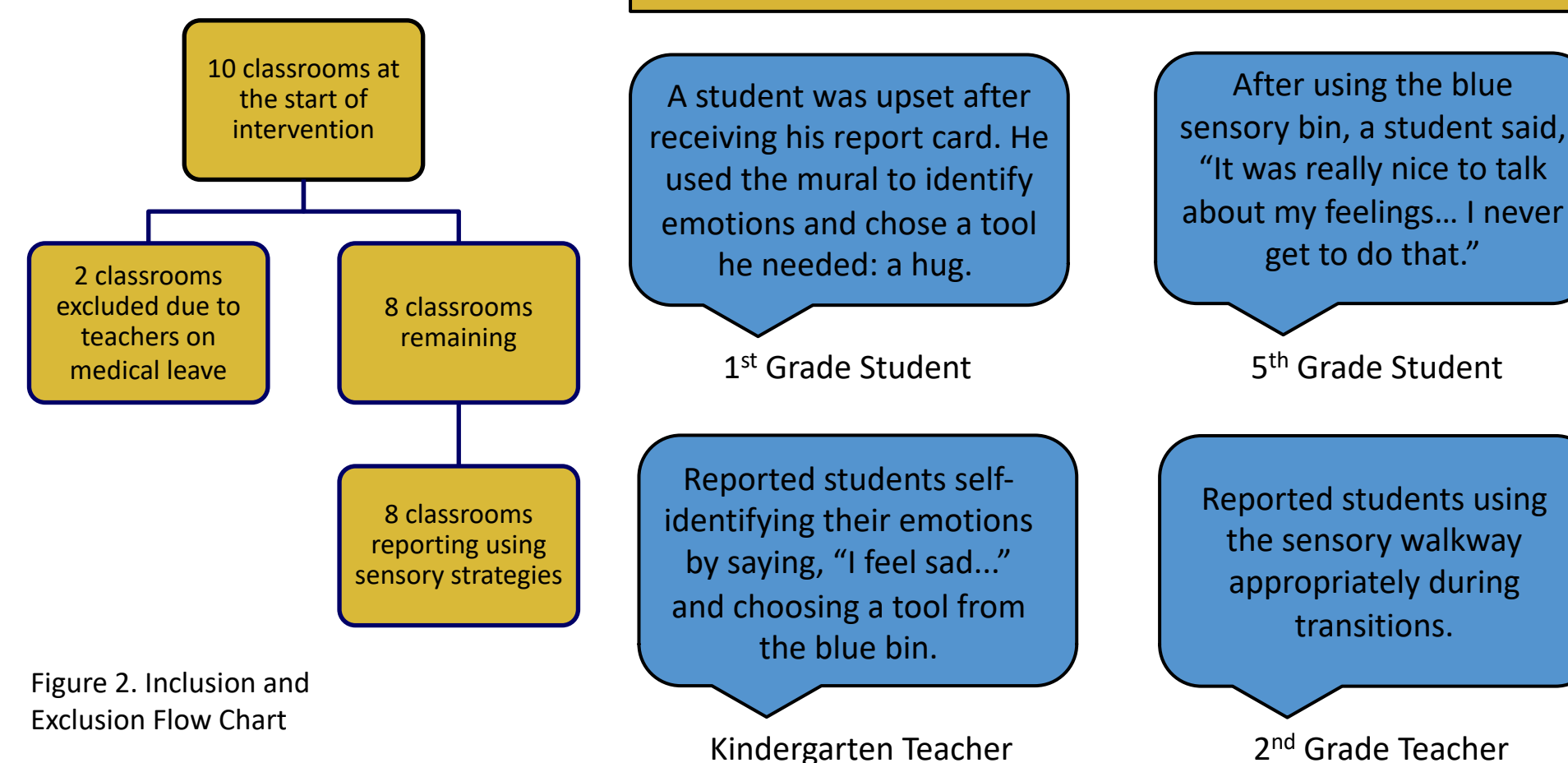


Figure 2. Inclusion and Exclusion Flow Chart

DISCUSSION

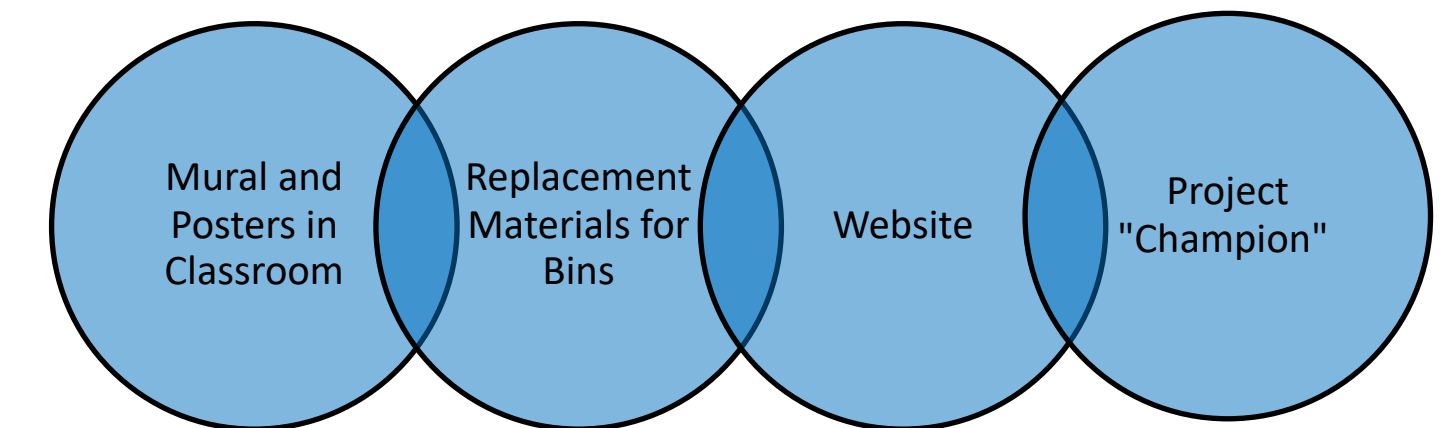
Limitations

- Short project timeframe
- Limited adoption of project
- Minimal opportunities for caregiver education

Project Takeaways

- The effectiveness of project components varied between classrooms due to teacher implementation, student needs, classroom support, etc.
- 80% of classrooms implemented sensory strategies
- The intervention had a positive impact on students and teachers based on anecdotal evidence

Sustainability Plan and Next Steps



IMPLICATIONS FOR FUTURE PRACTICE

- Occupational therapists possess a unique skill set to enhance educational participation
- An occupational therapy lens can be used in schools to determine sensory and emotional needs of students
- Occupational therapy sensory strategies for enhancing emotional regulation are feasible to implement within classrooms and schools
- Sensory strategies provide consistency and structure which can promote self-regulation of students, including children in underserved communities

ACKNOWLEDGEMENTS

Thank you to the staff, students, and participants at Homewood Children's Village and Lincoln Elementary School. Thank you to everyone who donated to the project throughout the year – it would not have been possible without you! Additional thanks to Larette McCoy, Raymond Robinson, and Monica White for their support throughout the entire capstone experience as our site mentors. Special thanks to Erin L. Mathia, CScD, MOT, OTR/L for supporting this capstone experience.

REFERENCES

- Berger, E. (2019). Multi-tiered approaches to trauma-informed care in schools: A systematic review. *School Mental Health, 11*, 650-664. <https://doi.org/10.1007/s12310-019-09326-0>
- Compassion International. (n.d.). *Children and poverty: Effects of poverty on child development.* <https://www.compassion.com/poverty/effects-of-poverty-on-children.htm#:~:text=They%20are%20at%20higher%20risk,sense%20of%20helplessness%20and%20hopelessness.>
- Homewood Children's Village. (2024). *Mission, Vision, Values.* <https://hcvpgh.org/about/mission-vision-values/>
- PA Public Schools. (2022). *2022-2023 Public schools percent low income [Data set].* PA Department of Education <https://www.education.pa.gov/DataAndReporting/LoanCanLowIncome/Pages/PublicSchools.aspx>
- Roberge, N., & Crasta, J. E. (2022). A systematic review of sensory interventions for children with autism: The effects on attention and self-regulation. *The American Journal of Occupational Therapy, 76*(1), 7610510189p1-7610510189p1. <https://doi.org/10.5014/ajot.2022.76S1-PO189>