



Increasing Education on Sensory Rooms in the Alabaster School System

Emma Cox, OTD; Dr. Megan Carpenter, PhD, OTR/L
Department of Occupational Therapy | University of Alabama at Birmingham
Dr. Merry Grace Harper, OTR/L | Alabaster School System

Introduction

- Sensory processing** is how the brain and body perceive, interpret, and respond to sensory input (Mallory & Keehn, 2021).
- Children with ASD** often experience sensory challenges that affect attention, behavior, social participation, and academic performance (Clément et al., 2022).
- Sensory rooms (Multi-Sensory Environments)** provide tactile, auditory, visual, vestibular, and proprioceptive stimuli to help regulate emotions and behavior (Unwin et al., 2021; Atari, 2024).
- Benefits of sensory rooms** include decreased repetitive behaviors, improved attention, enhanced learning, and increased social engagement (Unwin et al., 2021; Pierce, 2022).
- Training gaps exist**, as many school staff lack formal education on proper sensory room use, which limits effectiveness (Kaiser et al., 2020).
- Occupational therapists** play a key role in educating staff to ensure sensory rooms benefit all students, not just those with ASD or sensory processing difficulties.

Methods

- Project:** The project focuses on providing an educational program that educates teachers in Alabaster schools on the proper use of sensory rooms.
- Format:** The program is delivered through a PowerPoint presentation with narrated slides, demonstration videos, and additional resource materials.
- Goal:** The goal is to equip teachers with the knowledge needed to implement sensory rooms effectively in their classrooms.
- Participants:** Participants include 20–30 English-speaking teachers from intermediate, middle, and private schools that currently have sensory rooms, with no additional exclusion criteria.
- Recruitment:** Recruitment occurred through the school occupational therapist and email invitations.
- Pre- and Post-Surveys:** Pre- and post-surveys were used to measure confidence, knowledge, perceived benefits and barriers, and participant feedback on the training.
- Outcome:** The expected outcome was to determine whether the educational program improves teacher preparedness and supports the proper use of sensory rooms

Results

- A total of 24 participants were invited to the training, and 15 completed both the training and the post-survey.
- Results demonstrated that 53% of participants found the training extremely useful, while 47% found the training very useful.
- Participants also evaluated the accessibility and clarity of the training materials. 57% reported that the materials were extremely accessible and easy to follow, and 41% rated them as very accessible.
- When asked about their likelihood of recommending the training to colleagues, 59% of teachers stated that they were extremely likely to do so, whereas 41% reported being somewhat likely.
- Additionally, 59% of teachers reported feeling extremely confident in applying what they learned to their professional settings and 41% indicated that they were very confident in implanting the strategies presented during the training.

•Demonstrated in Table 1

Discussion

- Purpose & Effectiveness:**
 - The online training increased teachers' knowledge and confidence in using multisensory environments (MSE)
 - Teachers reported a stronger understanding of MSE concepts, benefits, and practical classroom strategies.
- Occupational Therapy's Role:**
 - Occupational therapists bridge research and practice by assessing sensory needs, recommending MSE components, and educating teachers (Schaaf et al., 2013; Clark et al., 2019).
 - They support the safe and structured use of sensory rooms to improve students' regulation, engagement, and participation.
- Intervention & Content:**
 - The training consisted of a free online module that provided evidence-based guidance on sensory processing and MSE utilization.
 - It was developed through a literature review and consultation with school-based occupational therapists.
 - Participant feedback indicated improved understanding and confidence.
- Limitations:**
 - The small sample size (24 invited; 15 completed post-survey) limits generalizability.
 - Reliance on self-reported surveys may introduce bias.
 - The post-survey captured short-term knowledge rather than long-term implementation.
 - The digital format restricted hands-on practice, and prior teacher experience varied.
- Implications for OT Practice:**
 - These findings highlight occupational therapists' critical role in educating school staff on sensory-based interventions (Clark et al., 2019).
 - Training helps teachers implement evidence-based MSE strategies effectively, supporting functional participation.
- Future Research:**
 - Future studies should include larger and more diverse teacher populations across varied school settings.
 - Longitudinal research is needed to track retention of training and real-world classroom implementation.
 - Studies should compare training formats (online, in-person, and interactive) and incorporate hands-on practice.
 - Additional research should examine the impact of teacher training on student behavior, emotional regulation, and engagement.

Conclusion

- The online training increased teachers' knowledge and confidence in using multisensory rooms.
- Collaboration with occupational therapists ensured that the training content was accessible and evidence-informed.
- Participants reported that the module was useful, clear, and applicable to their practice.
- These findings support the need for continued sensory-focused training and future research on long-term impact.

References

Atari, R. (2014). Rawan Atari - The influence of Multi-Sensory Environment on physiological response in children with autism spectrum disorders and children with special health care needs. *Marquette University*. https://epublications.marquette.edu/cgi/viewcontent.cgi?article=1000&context=mcnair_2014

Clark, G. F., Watling, R., Parham, L. D., & Schaaf, R. (2019). Occupational Therapy Interventions for Children and Youth With Challenges in Sensory Integration and Sensory Processing: A School-Based Practice Case Example. *American Journal of Occupational Therapy*, 73(3), 7303390010p1. <https://doi.org/10.5014/ajot.2019.733001>

Clément, M.-A., Lee, K., Park, M., Sinn, A., & Miyake, N. (2022). The need for sensory-friendly “zones”: learning from youth on the Autism Spectrum, their families, and autistic mentors using a participatory approach. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.883331>

Kaiser, L., Potvin, M.-C., & Beach, C. (2020). Sensory-Based interventions in the school setting: Perspectives of paraeducators. *The Open Journal of Occupational Therapy*, 8(3), 1–11. <https://doi.org/10.15453/2168-6408.1615>

Mallory, C., & Keehn, B. (2021). Implications of sensory processing and attentional differences associated with autism in academic settings: An integrative review. *Frontiers in Psychiatry*, 12(12). <https://doi.org/10.3389/fpsy.2021.695825>

Pierce, T. (2022). *Sensory Rooms: Increasing Preschool Students' Focus and Sensory Rooms: Increasing Preschool Students' Focus and Engagement in the Classroom Engagement in the Classroom*. https://nwwcommons.nwciova.edu/cgi/viewcontent.cgi?article=1431&context=education_masters

Schaaf, R. C., Benevides, T., Mailloux, Z., Faller, P., Hunt, J., van Hooydonk, E., Freeman, R., Leiby, B., Sendekci, J., & Kelly, D. (2014). An Intervention for Sensory Difficulties in Children with Autism: A Randomized Trial. *Journal of Autism and Developmental Disorders*, 44(7). <https://doi.org/10.1007/s10803-013-1983-8>

Unwin, K. L., Powell, G., & Jones, C. R. (2021). The use of Multi-Sensory Environments with autistic children: Exploring the effect of having control of sensory changes. *Autism*, 26(6), 136236132110501. <https://doi.org/10.1177/13623613211050176>

Acknowledgement and Contact Information

SPECIAL THANKS TO: Dr. Carpenter, Dr. Harper, and the staff and participants from the Alabaster School System for assisting with this project.
CONTACT INFORMATION: Emma Cox, OTS eac3@uab.edu

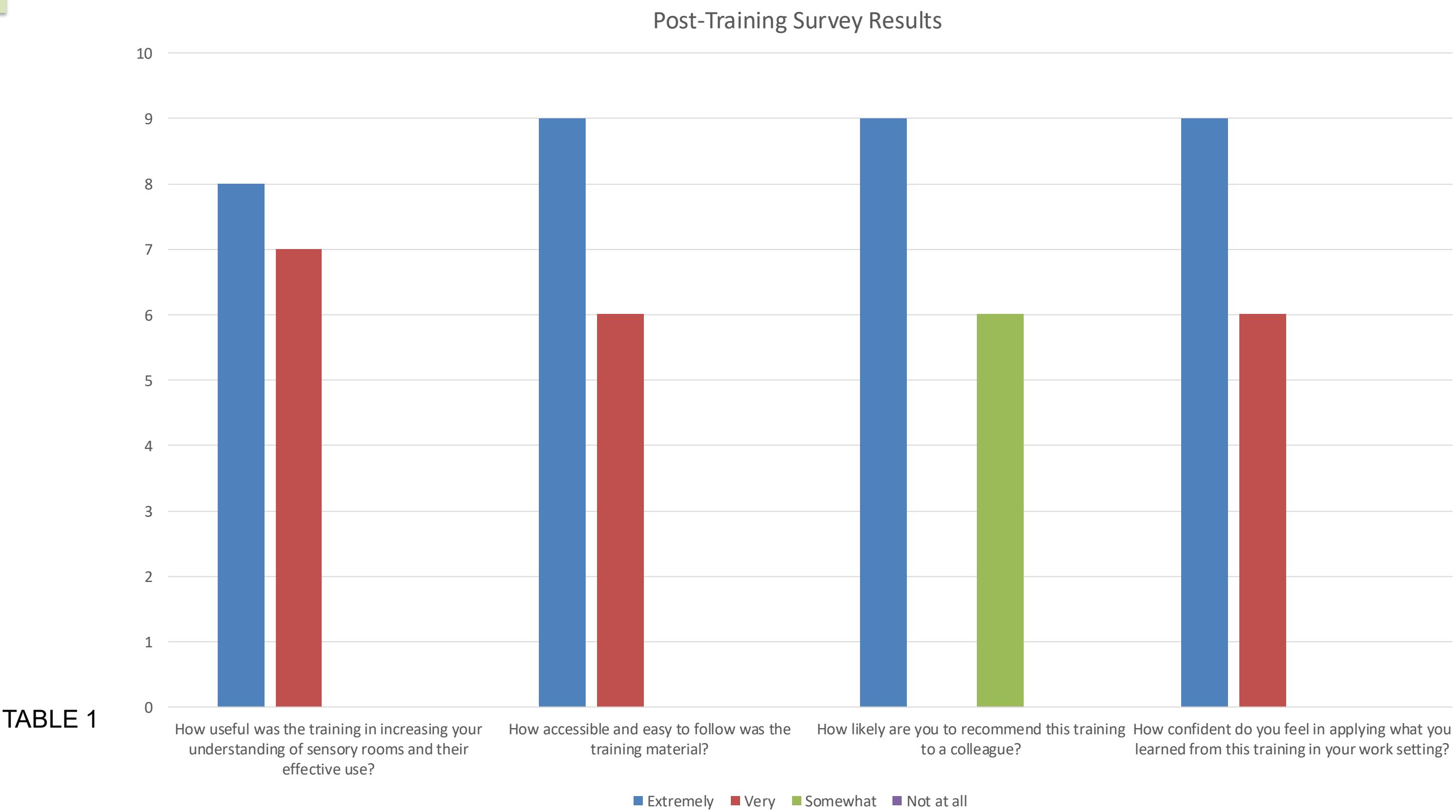


TABLE 1