12-1-2022

Adaptive Seating

Julie Jones
University of the Pacific

McKayla Wallace
University of the Pacific

Marisa Given
University of the Pacific

Nisha Rustia
University of the Pacific

George Cardenas
University of the Pacific

ADAPTIVE SEATING

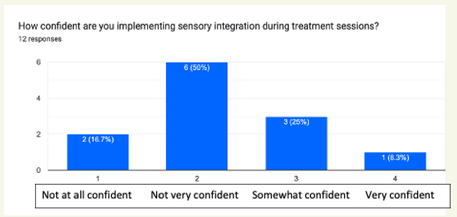
Mission Statement: *To educate SLPs on delivering pediatric speech services that will enhance client rapport, sensory regulation, attention, and learning through the use of adaptive seating.*

OVERVIEW

- The RiteCare Childhood Language Center is a non-profit, community-based program that provides free Graduate student led speech-language pathology (SLP) services to children in the Stockton area.
- While gathering data from SLP students, their supervisors, and current literature, there is an identified need for sensory integration education for SLP students.
- This AT product can support the community by extending the attention span of children with various vestibular or executive functioning needs.
- Common examples of adaptive seating include wiggle seats, wobble chairs, and therabands.
- Educating SLPs on how to use adaptive seating will increase their productivity and confidence going into pediatric settings.

PROBLEM STATEMENT

Children's sensory needs are impacting their ability to attend to their speech language pathology treatment sessions in a meaningful and effective way. There is a gap in the education for SLPs on sensory integration which limits their ability to recognize the challenges and know how to support them in a productive way.



REVIEW OF LITERATURE

Evidence-Based Research

- Researchers found that alternative seating accommodations, such as wiggle seats, can significantly help children improve their attention and engagement during school-related activities (Gochenour & Poskey 2017; Pfeiffer, 2008; Seifert & Metz, 2017).
- Adaptive seating allows students to shift weight in different directions and offers deep pressure and vestibular input (Pfeiffer, 2008; Seifert & Metz, 2017).
- Some adaptive seating options have "nubs" on one side to offer tactile input if desired (Seifert & Metz, 2017).
- Research has also found improvements in children's self-modulation and classroom participation while promoting in-seat behavior (Morgus et al., 2018).
- Adaptive seating was found to improve balance, posture, and core strength which results in a calming effect to improve behavior (Seifert & Metz, 2017).
- Fedewa and Erwin (2011) found that adaptive seating improved attention for those with ADHD and undiagnosed hyperactivity.

PREVALENCE

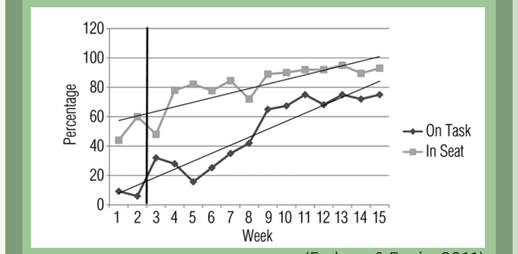
- SLPs treat children with language and communication delays who oftentimes have an existing primary diagnosis such as: Autism (ASD), Down Syndrome, or Attention Deficit Hyperactivity Disorder (ADHD).
- 1-3% of children in the United States have an Autism diagnosis.
- 1 in 6 children have sensory processing difficulties.
- 80-100% of children with Autism have sensory processing difficulties.

TECHNOLOGY SOLUTION

- Clinical observations of speech sessions revealed patterns of children struggling with short attention spans, meltdowns and dysregulated behaviors.
- SLP Survey data collection and interviews revealed the SLPs did not posess the knowledge or confidence in identifying or supporting sensory processing challenges.
- The review of the literature provided a compilation of evidence-based research promoting the positive impact of adaptive seating on children's attention spans and self regulation.

Universal Design Strategy

Implementing adaptive seating options for all children can allow universal opportunities for self regulation and sensory integration to support all forms of learning.



(Fedewa & Erwin, 2011)

SEATING DESCRIPTION

Adaptive seating can replace a chair or modify it to meet the posture and sensory needs of the child.

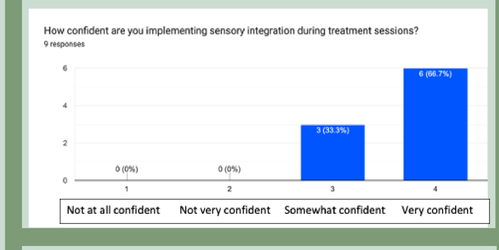
- Wiggle seats are Inflatable textured disc shaped cushions 12-15 inches in diameter that can be placed on a chair seat.
- Yoga ball seats are bouncy balls with stability feet to replace a chair.
- Wobble stools replace a chair.

OCCUPATIONAL IMPACT

- The primary occupation in focus for children in an SLP session is communication. Being dysregulated or having a short attention span due to hyperactivity prevents children from being able to focus on this occupation.
- Use of adaptive seating impacts the child's attention span, sensory processing, and willingness to participate in the treatment session.
- For children with specific sensory needs, use of adaptive seating can help to regulate their body's internal environment and response to stimuli, allowing them to stay calmer.
- The SLP is able to focus on the tasks that they have planned to address language and communication rather than focusing on regulating or calming the child.

FUTURE IMPLICATIONS

- Impact curriculum at UOP in educating SLP students on sensory integration in practice
- Continued education and lecture on sensory processing for undergraduate and graduate SLP students
- Improve overall quality of care through education of SLPs



RESOURCES

Fedewa, A.L., & Erwin, H.E. (2011). Stability balls and students with attention and hyperactivity concerns: Implications for on-task and in-seat behavior. *American Journal of Occupational Therapy, 65*(4), 393- 399. https://doi.org/10.5014/ajot.2011.000554

Gochenour, B. & Poskey, G. (2017). Alternative seating systems for students with attention difficulties: A systematic review. *American Journal of Occupational Therapy. 71*(4_Supplement_1), 7111505149p1. doi: https://doi.org/10.5014/ajot.2017.71S1-PO6145

Morgus, K., Benson, J., Brown, E.D., & Smitsky, D. (2018) Effects of alternative seating on attention and in-seat behavior for children with autism. *American Journal of Occupational Therapy, 72*(Supplement 1). https://doi.org/10.5014/ajot.2018.72S1-PO3023

Pfeiffer, B., Henry, A., Miller, S., & Witherell, S. (2008). Effectiveness of Disc 'O' Sit cushions on attention to task in second-grade students with attention difficulties. *The American Journal of Occupational Therapy, 62*(3), 274–281. https://doi.org/10.5014/ajot.62.3.274

Schilling, D.L., Washington, K., Billingsley, F.F., & Deitz, J. (2003). Classroom seating for children with attention deficit hyperactivity disorder: Therapy balls versus chairs. *The American Journal of Occupational Therapy, 57*(5), 534-541. https://doi.org/10.5014/ajot.57.5.534

Seifert, A. M., & Metz, A. E. (2017). The effects of inflated seating cushions on engagement in preschool circle time. *Early Childhood Education Journal, 45*(3), 411-418. https://doi.org/10.1007/s10643-016-0797-7

COST STRUCTURE

Theraband; <$5 each

Wiggle Seats; $15-25

Yoga Ball Chair; $30-40

Wobble Stool; $80

Zenergy Chair; $200+

$ $$ $$$

Presented by: Julie Jones, McKayla Wallace, Marisa Given, Nisha Rustia, & George Cardenas