USE OF A SENSORY-BASED INTERVENTION TO IMPROVE ON-TASK BEHAVIOR OF AT-RISK ELEMENTARY STUDENTS

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Occupational Therapy

Living Life to Its Fullest!

SETTING & BACKGROUND

River's Edge Montessori Pre-K -6th School

- In one of Ohio's "Big-8" urban districts
- Over 520 students:
  - 100% economically disadvantaged
  - 18% with limited English
  - 15% with special education services
- Multiple grade classrooms (1st-3rd, 4th-6th), hands-on materials, and independent learning

Background

- Inattention and hyperactivity behaviors are increasing amongst children
- Children with attention deficits are at-risk for suboptimal school and life performance
- Urban youth inconsistently access and maintain medical and behavioral treatments
- Off-task behaviors are the main reason teachers seek support
- Mild inattentive and hyperactivity behaviors often go undiagnosed and untreated
- Under the RtI model, OTs' collaborate to support any student and reduce referrals

(Basch, 2011; Dunn, et al., 2009; Fedewa & Erwin, 2011; Froehlich et al., 2007; Knippenberg & Hanft, 2004; Peck et al., 2005; Reeder et al., 2011)

PICO QUESTION

Does use of a sensory-based intervention program improve on-task behavior of at-risk elementary students?

SIGNIFICANCE TO OT

- Improves student engagement & school performance
- Builds collaborative approaches in school-based practice
- Promotes OT as a stakeholder to provide early intervention services
- Expands use of sensory-based strategies in classroom settings
- Broadens the role of Occupational Therapy
- Augments evidence-based approaches to apply sensory-based interventions in classrooms

LITERATURE REVIEW

Critically Appraised Topic Portfolio:

- 34 quantitative and qualitative articles from 2000-2014
- Research Designs: Four -Level I, 12 -Level II, 10 -Level III, six -Level IV, and two -Level V
- Global Journals: AJOT, BJOT, CJOT, SJOT

Literature Themes

Children with attention difficulties, may also have underlying sensory processing deficits that often go unnoticed
(Dunn & Bennett, 2002; Miller et al., 2007)

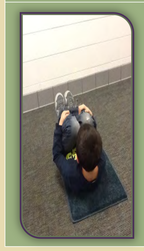
Vestibular and proprioceptive stimulation calms and improves the attention of the over-responsive and sensory-seeking student
(Fedewa & Erwin, 2011; Pfeiffer, et al., 2008; Schilling et al., 2003)

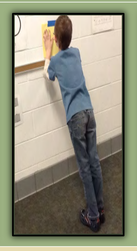
Short-term sensory and movement based interventions improves on-task behavior and enhances academic achievement
(Hill et al., 2010; Lin et al., 2012; Oriel et al., 2011)

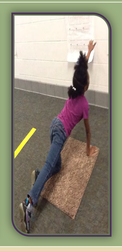
DESIGN & IMPLEMENTATION

Participants:	*S'cool Moves Program Design*	*Outcome Measures*
Students: n=12	Small Group Session 1 x/week	2 Quantitative
Teachers: n=2	Perform Strategies in Class 3 x/week	2 Qualitative

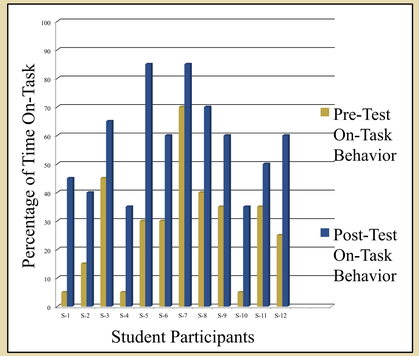
Week 1	*Week 2*	*Week 3*	*Week 4*	*Week 5*	*Week 6*
Pre-Testing 2 Quantitative Measures	Proprioception & Vestibular	Bilateral Coordination & Vestibular	Vision	S'cool Moves Review Game	Post-Testing: 2 Quantitative & Qualitative Measures
Focus Poster & Calming Strategies	Blending Bands & Heavy Work Posters	Posters & Bean Bag Activity	Posters & Visual Cards	Student Choice	Student Choice

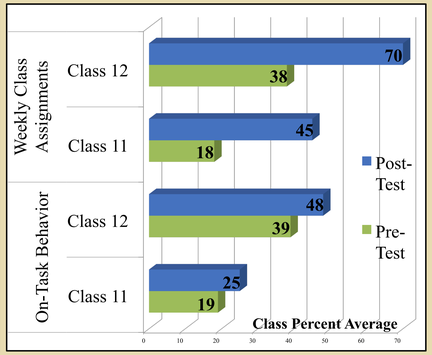


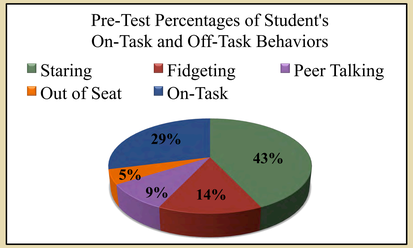


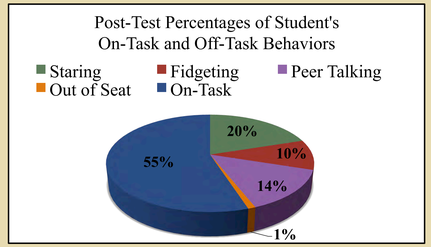


OUTCOMES



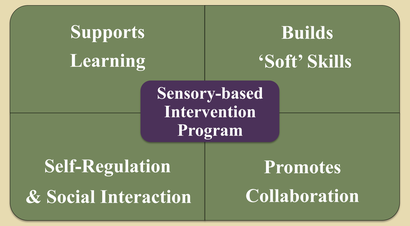






Qualitative Outcomes and Themes:

"It helps me use my brain."
"I am listening better."
"I like school now."
"I did not get any color changes the last few weeks."
"A few students performed more class work and a few started to make improvements."



SUMMARY

- Sensory-based interventions can improve student's on-task behavior and classroom performance in short periods of time
- Sensory-based strategies contribute to a holistic, early intervention approach to assist students with attention deficits in the classroom
- Collaboration reinforces understanding and adherence to the application of sensory-based strategies within the classroom setting