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The Impact of Occupational Therapy Involvement in Response to Intervention (RtI) and Multi-Tiered System of Support (MTSS)

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Introduction

The goal of this project was to increase awareness of the scope of school-based occupational therapy and provide beneficial strategies to embed into classrooms to improve occupational performance of various academic-related skills. The following question was explored: In the school setting, how does involvement of occupational therapy practitioners in the response to intervention (RtI) and multi-tiered system of supports (MTSS) process impact outcomes for students?



Site Description

- Hillsborough County Public Schools (HCPS) and Caminiti Exceptional Center.
 - Tampa, FL
 - HCPS mission statement: To provide an education that enables each student to excel as a successful and responsible citizen.
- Population of approximately 224,000 students across 304 schools.
 - Seventh largest school district in the United States.
 - Serves students from Pre-K through 12th grade.
- This project targeted the focus areas of program development and education.
- Mentor: Karen Aiken
 - District lead for occupational therapy and physical therapy.

Figure 1
HCPS logo



Summary of Needs Assessment

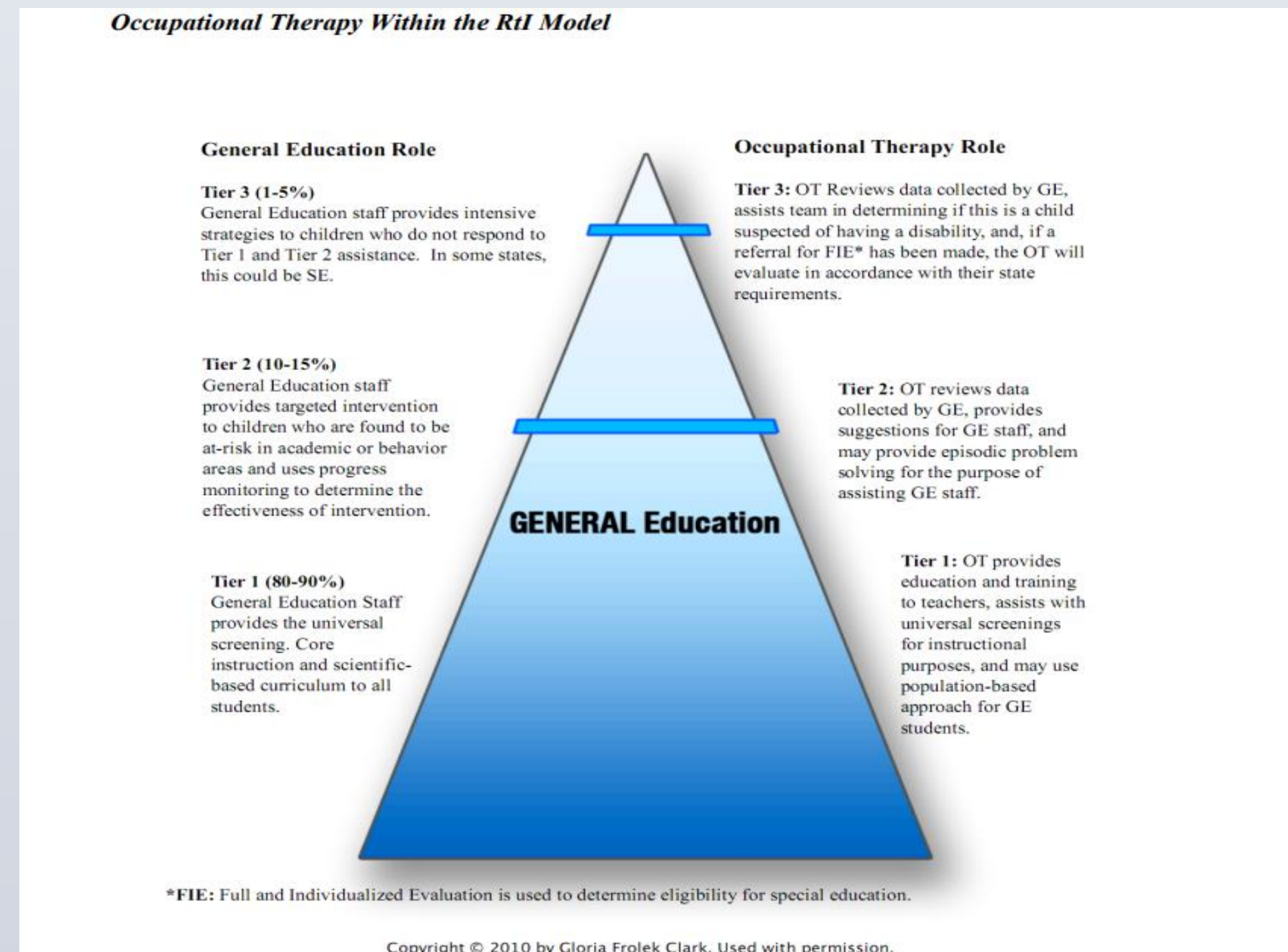
- Therapists desired a more efficient document to use when providing instructional strategies for teachers following an informal classroom observations.
- High influx of informal observation requests.
- Need for increased follow-through of provided instructional strategies for teachers.
- Provide additional educational resources for teachers.



Literature Review Summary

- Occupational therapists (OTs) can provide consultation to community planning agencies, multidisciplinary teams, and teachers as a method of providing indirect services (AOTA, 2020)
- Time, decreased understanding of the scope of practice for clinicians, and lack of a defined MTSS-RtI process were the main barriers identified by teachers.
 - Bolton & Plattner (2019), found that 46% of teachers within their survey demonstrated only a partial understanding of the scope of services of OTs.
 - Edick et al. (2022) found that approximately 66% of the teachers in their study reported wanting an increase in the amount of formal collaboration time with OTs.
- Therapists noted decreased involvement in RtI, lack of understanding of school-based therapy responsibilities, and increased time spent on documentation were all challenges associated with facilitating MTSS-RtI processes.
 - According to Corley et al. (2021), documentation accounted for approximately half of the clinician's time whereas 20% of their time was spent on participation in MTSS.
 - Participation in RtI was not viewed by therapists as a clearly defined role within the school setting (de Sam Lazaro & Riley, 2022).

Figure 2
Occupational Therapy Within RtI Model



Note: From "AOTA practice advisory on occupational therapy in response to intervention" by the American Occupational Therapy Association, 2011 (<https://www.aota.org/practice/practice-settings/-/media/e7371c748756467ba101d6966bb98eb2.ashx>). Copyright 2010 by Gloria Frolek Clark.

Capstone Project Description

- The purpose of my capstone project was to design teacher and school staff resources, training, and education addressing typical development, age-related expectations, and strategies to imbed activities that support motor development into the general curriculum.
- Observation of occupational therapists within the school setting.
 - Shadowed several clinicians during treatment sessions to understand the primary methods of service delivery within the district.
 - Attended IEP meetings.
 - Observed informal classroom observations.
- Revision of current MTSS-RtI documents.
 - Updated the instructional strategies form to reflect needs of therapists and made it more easily accessible in its digital format.
 - Created a data collection tool for teachers to use when trialing instructional strategies.
- Creation of extended and condensed versions of teacher trainings focused on handwriting skills.
 - Described essential developmental milestones and foundational skills
 - Provided strategies and hands-on activities relating to skills such as legibility, letter formation, and spacing.
- Designed quick references for therapists to provide to teachers.
 - Strategies for pencil grasp, handwriting legibility, and scissor skills, and differentiation between sensory and behavioral concerns.

Figure 3
Handwriting Legibility Quick Reference

If the student's writing looks like this...	Guiding Questions	Concern	Strategies
	<ul style="list-style-type: none"> Do they start writing in front of the left margin? Do they increase their indentation as they progress down the page? 	Alignment	<ul style="list-style-type: none"> Highlight the margin Place a manipulative on the margin Fold along the margin to signal starting place
	<ul style="list-style-type: none"> Does the student differentiate between uppercase and lowercase sizing? Are their letters appropriately sized for the given space to write? 	Letter sizing	<ul style="list-style-type: none"> Individual boxes for each letter Highlight the baseline Use a window strip to signal how big each letter should be

Learning Objectives Achieved

- Review current district training and demonstrate a strong understanding of the RtI process.
- Demonstrate a well-developed understanding of the collaboration between occupational therapists, the student, educators, and parents during the therapeutic process.
- Observe therapists within kindergarten and pre-kindergarten classrooms to gain insight regarding service delivery methods.
- Create resources that target fine motor, visual motor, and visual perceptual skills to support school tasks (i.e., pre-writing skills, handwriting, manipulation of school tools, etc.) and elaborate on the role of occupational therapy within the school setting by 07/28/23.

Figure 4
Updated Instructional Strategies Form for Occupational Therapists

Area of Concern: Pre-Writing/Handwriting Skills and Tool Use: Strategies recommended Not an area of concern

Behavior

- Provide cues and reminders to do their best work.
- Provide a writing checklist as a visual cue to review their work for proper spacing, appropriate letter sizing, etc.
- Allow for additional time to perform quality work.
- Allow for short written assignments to focus on quality over quantity.

Positioning for Writing

- Angle paper to the left or right when writing in accordance with hand dominance.
- Use a slant board/ring binder for better hand positioning and/or visual attention.
- Ensure stabilization of forearm and upper (first) finger side of hand on table surface when writing, provide tactile and/or intermittent physical prompts as needed.
- Ensure feet are flat on the floor, lower disk and desk or provide footrest.
- Ensure proper seating with hips back into the chair and facing square to the desk.
- Ensure paper stabilization with non-dominant hand while writing.

Pencil Grip

- Use shorter writing tools (ex: broken crayons, golf pencils, Pip Squeak markers, etc.).
- Incorporate resistive pinch activities into curriculum (ex: clothespins, snap cubes, Play-Doh, Legos/Duplo's, etc.).
- Use of a pencil grip

Scissor Skills

- Use loop, spring, or adapted scissors.
- Ensure "thumbs-up" position of both hands during cutting activities.
- Ensure elbow is tucked in close to the body when cutting.

Instructional

- Allow use of provided adaptive paper.
- Provide visual model of letters/numbers on desk.

Use the attached data sheet to document the student's response to interventions. If additional support is requested, summarize results of data here.

Implications for OT Practice

- There is a lack of research regarding successful occupation-based MTSS-RtI initiatives, clinician viewpoints pertaining to barriers to inclusion in this process, and teacher knowledge about the role of therapists within the school setting.
- Participation in MTSS-RtI is an integral role of occupational therapists within the school setting.
- It is important for both clinicians and teachers to acknowledge the full scope of occupational therapy practice within this setting to promote optimal outcomes for students.
- Shifting from a caseload to a workload model can assist in the facilitation of therapist involvement within the MTSS-RtI process.

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References available upon request.