

Overview of Sensory Integration and Processing and Occupational Therapy's Role (Part 1)

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All relevant financial relationships have been mitigated



About Me

- Clinical Doctorate in occupational therapy from Indiana University
- LEND 2023-2024 Alumni
- Current Roles
 - The Down Syndrome Center of Puget Sound
 - Harborview Medical Center
- Interest: OT in emerging areas of practice, community-based OT, trauma-informed clinical therapy practices, using OT to promote equity

Objectives

- 1) Provide a concise and accurate definition of sensory processing
- 2) Define occupational therapy's unique role in sensory regulation
- 3) Understand the two main occupational therapy frameworks that inform current sensory processing interventions
- 4) Recognize OT assessment tools to assist in identifying sensory dysregulation
- 5) State common symptoms/ characteristics of sensory processing dysregulation

Occupational Therapy

- the therapeutic use of everyday life occupations with persons, groups, or population to support occupational performance and participation (AOTA, 2020)

- work across the lifespan

- evaluate, analyze, and diagnose occupational challenges

- provide occupation-based interventions to address occupational challenges



- **FUNCTION** and **PARTICIPATION** in meaningful activities
- Areas of occupation
 - ADLs
 - IADLs
 - Work and Education
 - Play
 - Sleep and Rest
 - Leisure
 - Social Participation

What is Sensory Progressing?



- How we interpret and interact with the world around us
- Aid in our participation through interpretation of stimuli
- Three "hidden" senses:
 - Vestibular
 - Proprioception
 - Interoception

"The experience of being human is imbedded in the sensory events of everyday life" (Dunn, 2001)

Ayres Sensory Integration Theory

- Sensory Integration: how we organize sensory information
 - All sensory systems are related
- Ayres Sensory Integration (ASI): play-based method that uses active engagement in **sensory-rich activities** to elicit the child's adaptive responses and improve the child's ability to successfully perform and **meet environmental challenges** (Watling, R., & Hauer, S. (2015))
- vestibular, proprioceptive, and tactile sensations
- clinic settings with specialized equipment
- aims to change internal neurophysiological processing of sensation to promote observable change in sensory responsiveness and functional behavior (Watling, R., & Hauer, S. (2015))

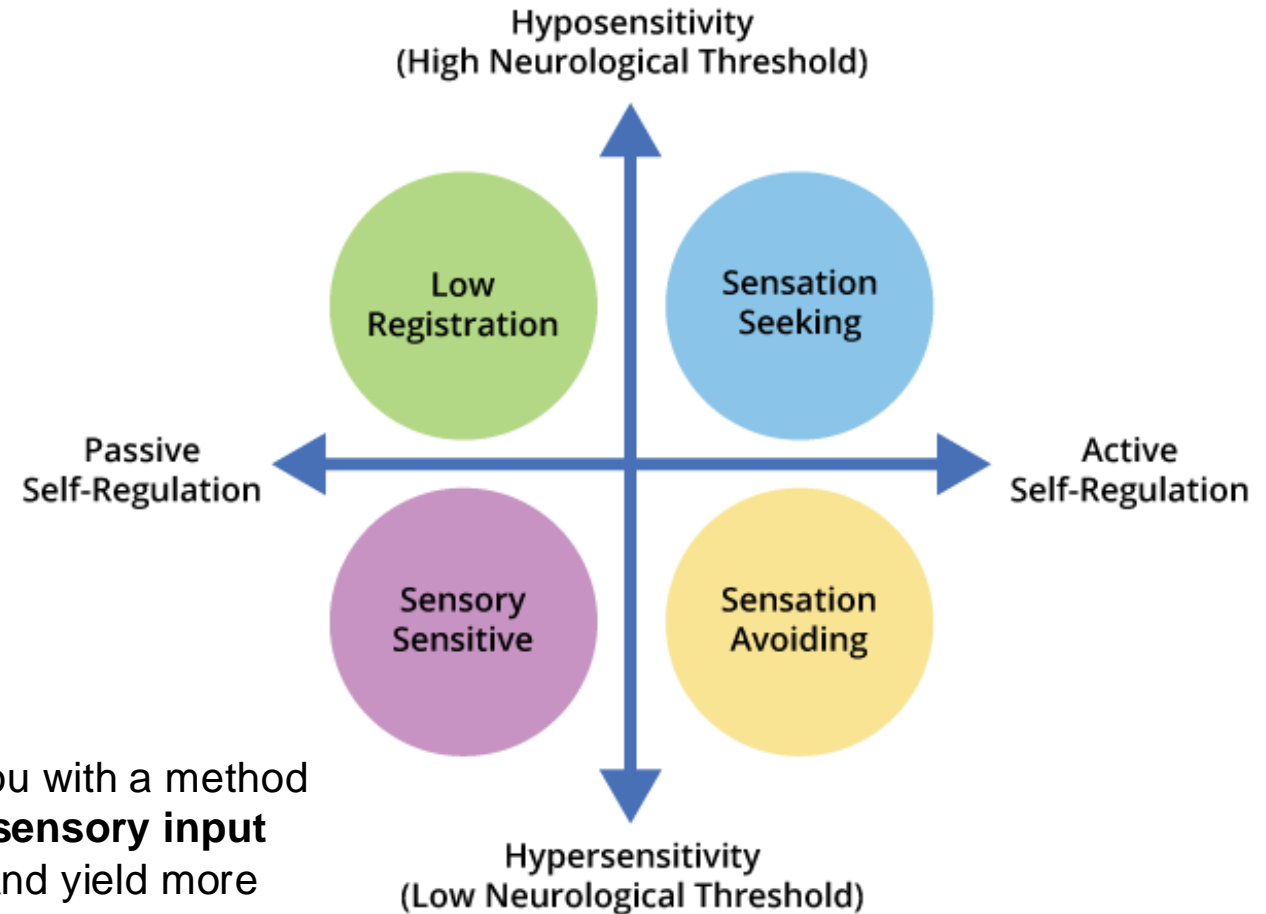
ASI Theory Fidelity Principles

- 1) ensuring physical safety
- 2) presenting a range of sensory opportunities (specifically, tactile, vestibular, and proprioceptive)
- 3) using activity and arranging the environment to help the child maintain self- regulation and alertness
- 4) challenging postural, ocular, oral, or bilateral motor control
- 5) challenging praxis and organization of behavior
- 6) collaborating with the child on activity choices
- 7) tailoring activities to present the just- right challenge
- 8) ensuring that activities are successful
- 9) supporting the child's intrinsic motivation to play
- 10) establishing a therapeutic alliance with the child

(Watling, R., &
Hauer, S., 2015)

Dunn's Sensory Processing Framework

- "Sensory processing patterns are reflections of who we are: These patterns are **not a pathology that needs fixing**" (Dunn, 2001)
- Sensory processing patterns can be characterized in four quadrants:
 - 1) low registration
 - 2) sensory seeking
 - 3) sensory sensitivity
 - 4) sensory avoiding



"Knowing about your own sensory processing patterns provides you with a method for managing daily life; knowing about **your needs and limits on sensory input** enables you to increase or decrease input to support your needs and yield more successful outcomes" (Dunn, 2001)

Symptoms of Sensory Processing Disorders

Sensory Sensitivity:

-overwhelmed =sensory avoiding, but limited active self-regulation keeps them from responding

-sensory overload: irritability, being short tempered, or demanding

Sensory Avoidant

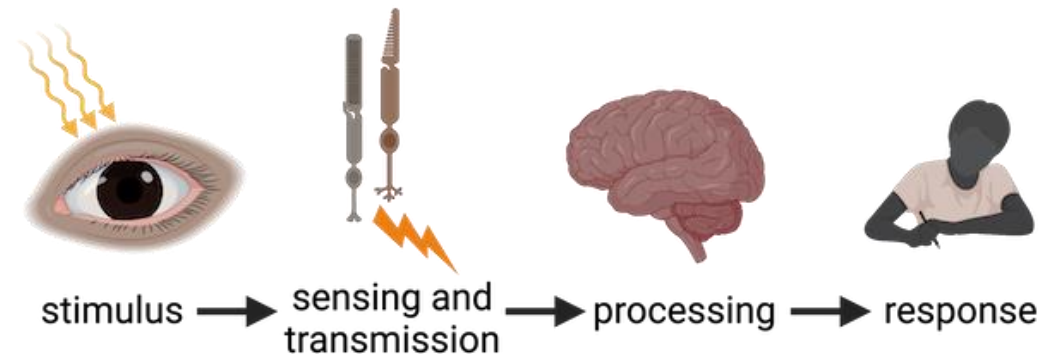
-hiding and covering their ears when things get loud, crowded, and overwhelming

Sensory Seeking:

-extensive smelling or touching of objects
-high levels of activity
- limited of awareness of space (e.g., crashing into things)
- high distractibility (loses track of daily tasks)

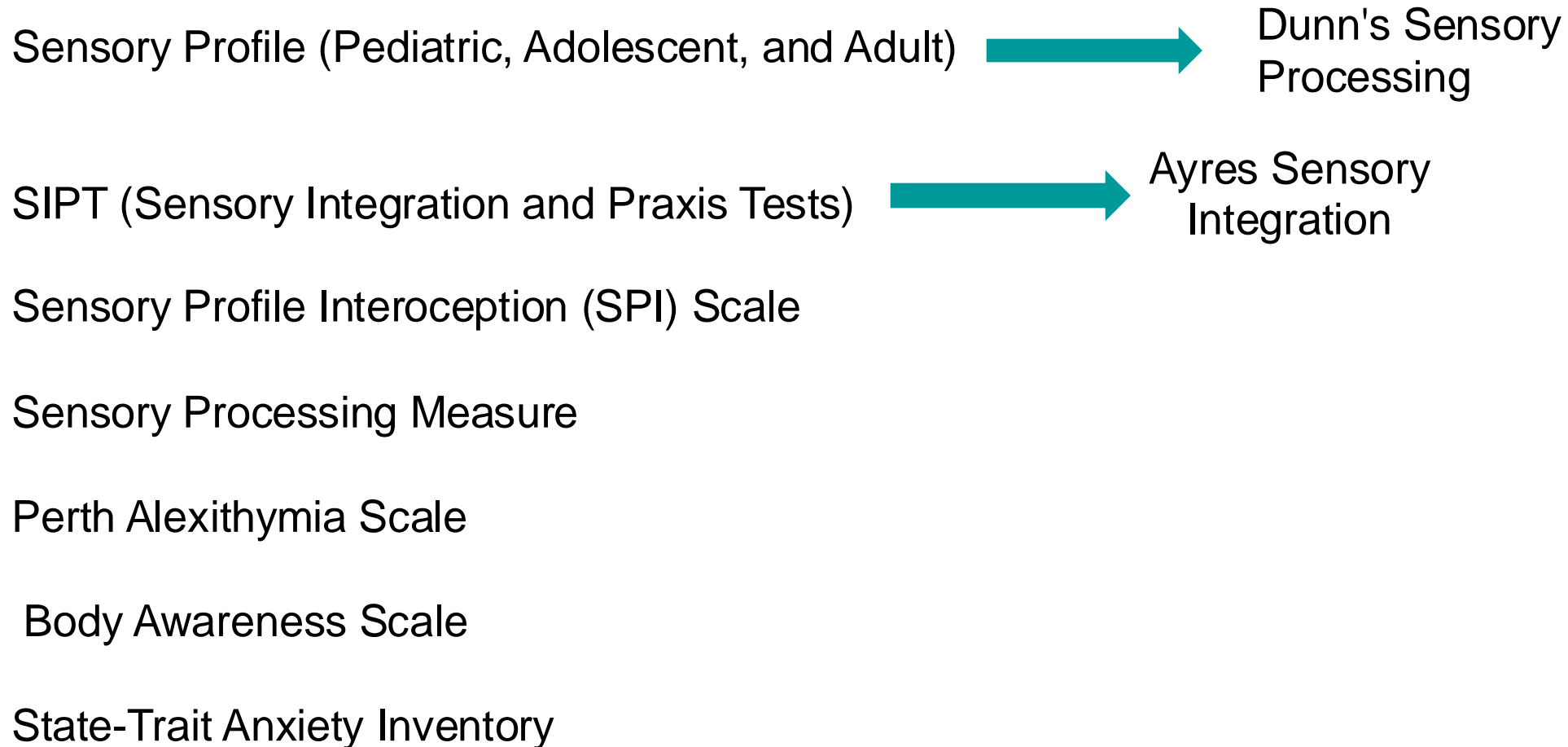
Low Registration:

-Unresponsive to situations
-have to work hard to get their attention



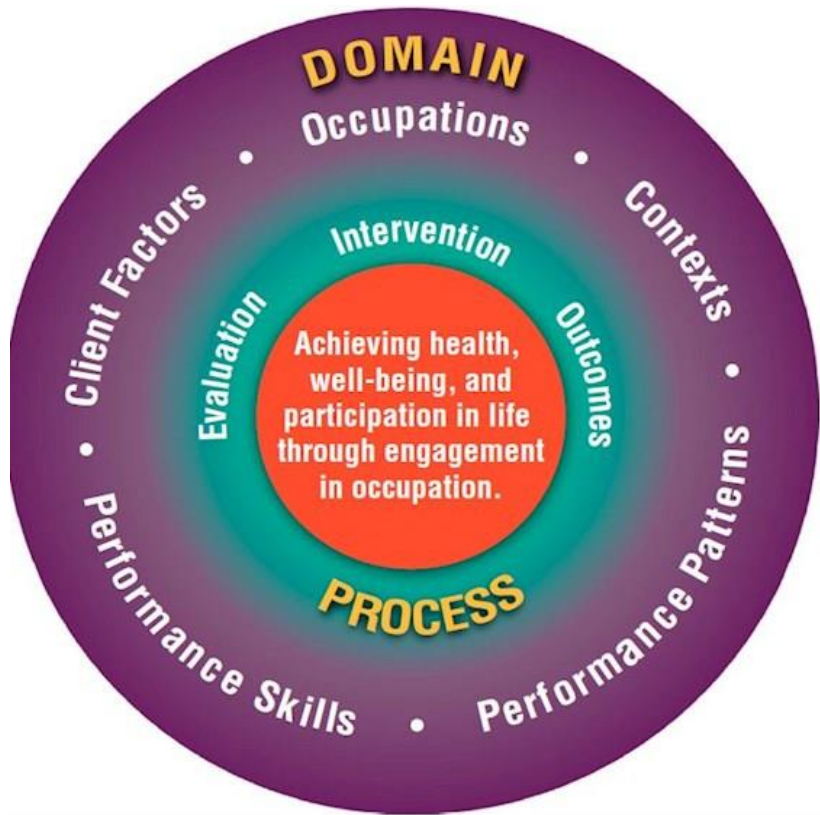
(Agostine S, Erickson K and D'Ardenne C ., 2022)

OT Assessment Tools



OT's Role

The OT Process



-Evaluate how sensory input within the environment affects the child's performance and participation

-strategize intervention to address sensory needs as well as provide education / training to parents and caregivers

-record and analyze outcomes

(AOTA, 2020)

References

Agostine S, Erickson K and D'Ardenne C (2022) Sensory Experiences and Children With Severe Disabilities: Impacts on Learning. *Front. Psychol.* 13:875085. doi: 10.3389/fpsyg.2022.875085

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Questions

THANK YOU!

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