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Home Assessment Modifications for Individuals with Autism Spectrum Disorder and Sensory Processing Disorder

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Home Assessment Modifications for Individuals with Autism Spectrum Disorder and Sensory Processing Disorders



By: Danielle Stelbasky, OTD/S



Mission and Vision

Mission: To create safer, more accessible homes and environments for children and young adults with disabilities.

Vision: Inclusion for everyBODY.



Identified Needs of Tucker's House

Why is there a need for specific home modifications for individuals with ASD and ASD-like behaviors?

• Growing population

- 1 in 54 children has been identified with Autism Spectrum Disorder (ASD) according to CDC's Autism and Developmental Disabilities Monitoring (ADDM) Network (Maenner et al., 2016).

• Wandering and drowning

- Drowning remains the leading cause of death for children with ASD and accounts for ~90% of deaths associated with wandering or bolting, for those aged 14 and younger (Autism Speaks, 2017, p.28).

• Caregiver burden

- 80% of caregivers of children with ASD report being "stretched beyond their limits" (Sharpley et al., 1997).
- There is a clear relationship between elopement, aggression, self-injury, and temper tantrums on caregiver stress.

• Environmental barriers due to sensory processing difficulties

- Typical homes are not suited for an individual w/ ASD or SPD, individuals may have difficulty regulating the following: visual, auditory, olfactory, tactile, vestibular, and proprioceptive systems

• Aggression, self-injury, and furniture damage

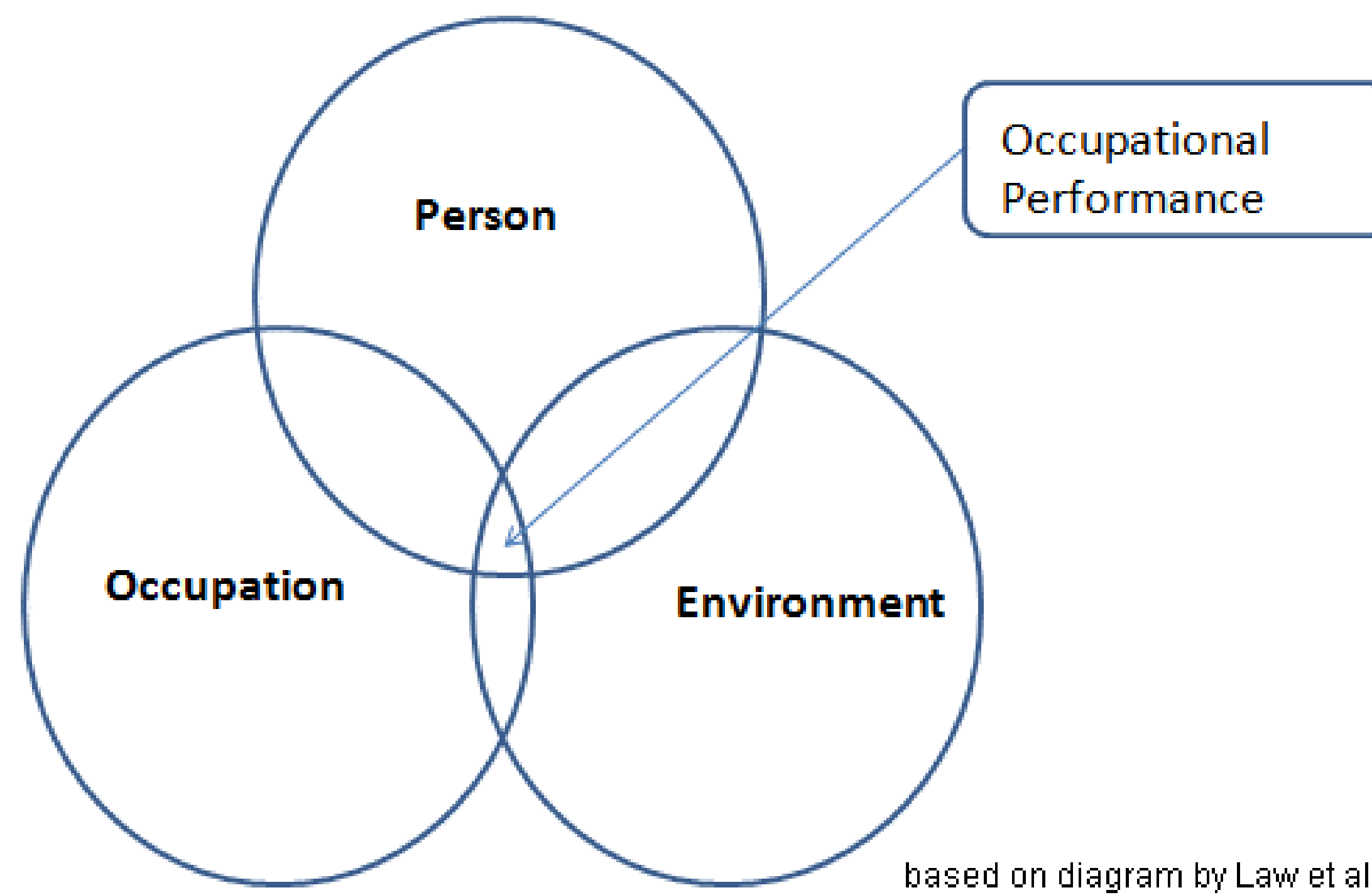
- 28% of 8-year-olds with ASD have self-injurious behavior (The Scott Center, 2019).

• ASD is considered long-term and "nondegenerative"

- Because these individuals grow to be adults, adapting and alleviating barriers in their home environment is important to focus on because they are growing and changing individuals

Goals of the Experiential Component

- Identify needs for design specific to clients with ASD and/or sensory processing disorders
- Create a caregiver survey specific to ASD
- Observe and participate in home assessments and modifications
- Investigate sensory regulating products and systems
- Relate viable solutions for individuals with sensory impairments to live efficiently and safely at home
- Enhance communication skills with clients through self-reflections
- Determine how to integrate sensory enriching and calming experiences into home environment
- Conduct phenological research for individuals with ASD and ASD-like behaviors
- By incorporating the PEO model, identify barriers in clients' homes and implement modifications to promote independence and occupational performance, to meet current AND future needs



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References Available Upon Request

Outcomes of the Project

- To reduce chance of wandering:

Modifications for Individuals w/ ASD and ASD-behaviors

Modifications (Picture, Price, Description) for Individuals with ASD

Challenges	Recommendations	Rationale
Elopement/wandering	<ul style="list-style-type: none">AlarmsVoice activated door alarmSensors on doors and windowsDurable FencingLocks & dead bolts, pool coversVisual signs & distractionElectric strikes for doorChild's room adjacent to parents with opening in betweenKeep pool toys/ interesting items out of poolAttractive distractions	<ul style="list-style-type: none">#1 concern for parents is child safety w/ wandering from home49% of children w/ ASD attempt to elope from their environmentDrowning remains leading cause of death for children w/ ASDVariable options for door locks allow freedom & control over environment, along with necessary safety for caregiver's peace of mindDoor strike interted w/ other safety systems will auto-unlock door in case of emergency or power outageAdjacent room, create opening between child & caregiver's room for night-time monitoringmake sure lock system meets current building code & fire code requirements" (see row "overall safety features of every house")
Fear of elopement	<ul style="list-style-type: none">Shoe tagsID braceletGPS locatorIf child uses a cellphone, use "Find my i-phone app" and "Find my Friends" app to see their location at all times	<ul style="list-style-type: none">Items used if individual has wandered from environmentIndividuals with ASD/ASD-like behaviors may be unable to communicate needs to strangers & law enforcementTracking technology to locate child for safety

- To reduce caregiver burden (reduce environmental barriers in own home to feel safe, more independent, and happy in own homes):

Modifications for Individuals w/ ASD and ASD-behaviors

Modifications (Picture, Price, Description) for individuals with ASD

Water play	<ul style="list-style-type: none">Faucets that direct water playWet room w/ floor drainSealed surfacesSolidly attached shower doorWall mounted toilet w/ tank built in wallNon-slip flooring- high friction index for all floor surfacesGrab bars w/ solid backingToilet lock	<ul style="list-style-type: none">Individuals w/ ASD/ ASD behaviors & or sensory processing difficulties, tend to enjoy water play, adapt environment to support individual's unique preferencesReduces floods & overall mess in bathroomSolid attachment for protectionSlip & fall preventionLess supervision required & less clean-up for caregiver
Access to general hazards	<ul style="list-style-type: none">Tempered balancing valves for hot waterLocked cabinets for toxins/chemicals and firearms/knivesArc-fault & ground-fault receptacles for outletsOutlet safety capsUnplug & store appliancesSafes	<ul style="list-style-type: none">Sensory & perception difficulties can lead to reduced sensitivities to touch, heat, sound, etc. leading to increased risks of scalding & electrocutionLimited higher-level cognitive skills (judgment & insight) with safety
Aggression	<ul style="list-style-type: none">General expansion of floor spaceExpand bathroom for safety outletQuiet space/ Safe roomAdequate circulation space2 safe exits from shared spaceCircular walking pathsKeep emergency contacts on hand (other caregivers, family members etc.), alert via group message if escalation occursTraining	<ul style="list-style-type: none">Cramped spaces become a barrier in environmentEnvironment can be modified to reduce triggers, support safety, & de-escalate situations, private place for safetySafety exits for caregiverOpen floor space for caregiver to have correct & safe posture for assistanceWalking path designed for pacing, stress relief, sensory regulation, avoiding social situations, & control over environmentKeep emergency contacts on hand as "in case of emergency"Group text to alert family members and other caregivers

- To reduce environmental barriers due to sensory processing difficulties:

Sensory Regulation Modifications for Individuals w/ ASD and ASD-behaviors

Sensory Modifications for individuals with ASD

Challenges	Recommendations	Rationale
Sensory Sensitive	<ul style="list-style-type: none">Soundproof child's bedroomVoice activated or flashing alarm system, rather than high-pitched alarmsVinyl flooring backed with foam and has a cushioned, flexible surface for sound reductionThick rugs throughout home to dampen soundQuiet room in homeAquariumLight dimmers for control over brightnessZoned HVAC systemsMove floor registers to wallsBackyard playground linear swingWeighted blanketNoise cancelling headphonesGive choices for eating & "First-then" schedulesMeditation tapes with choice of music and voices, use daily to establish a routine	<ul style="list-style-type: none">Individuals who are highly aware of surroundings become easily distractibleDiscomfort with sensation, provide individual with as much control over environment as possibleMay be hyperactiveDifficulty maintaining attentionSee-through aquarium for effective connections between rooms. The layer of water and aquatic life provides cover that allows individuals to interact in a more discreet way.Provide individual with schedules to promote independence with daily routine
Sensory Avoiding	<ul style="list-style-type: none">Vinyl flooring backed with foam and has a cushioned, flexible surface for sound reductionThick Rugs throughout home to dampen soundSolid deep color in bedroom, limited decorOpen floor plan & reduce clutterQuiet room in home	<ul style="list-style-type: none">Individuals who are more rigid in behavior can benefit from routine and structureIf individual overwhelmed easily by auditory, visual, and tactile input, provide sound reducing modifications