

Sensory Rooted Behavior

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What is Sensory Rooted Behavior?

- ▶ These are behaviors that arise from oversensitivities or undersensitivities of one or more of the senses. These behaviors can mimic behaviors that are due to other conditions such as ADHD, Anxiety, or Compulsive Disorders, just to name a few. These behaviors can also happen in children that have comorbid diagnoses in these areas of behavior. So, it may not always be clear when it is a sensory rooted behavior or not.



The Seven Senses

1. Proprioception
2. Vestibular
3. Touch
4. Taste
5. Smell
6. Visual
7. Auditory

Proprioception

- ▶ This is the sense that allows us to know where our body parts are without having to look at them.
- ▶ When kids have trouble with proprioception, we can see things like
 - Awkward or stiff movement
 - May seem physically weaker than other kids
 - Difficulty modulating force- too little & too much
 - Sensory Seeking - craves jumping off of things, crashing into things, bouncing
 - Chewing on clothes or objects more than other kids

Proprioception Difficulties can look like...

- ▶ Awkward or stiff movement = “Just a Clumsy Kid”
- ▶ May seem physically weaker than other kids = Quits or avoids physical activity
- ▶ Difficulty modulating force- too little & too much = Doesn't “want” to get dressed in the morning; Is aggressive towards others
- ▶ Sensory Seeking = Hyperactive; Not following directions
- ▶ Chewing on clothes or objects more than other kids = Pica; Immature

Vestibular

- ▶ This is the sense is based on receptors in the inner ear that give us information about movement, gravity, and vibration.
- ▶ When kids have trouble with the vestibular sense , we can see things like
 - Constantly on the move
 - Dislikes or craves activities that cause feet to leave ground or challenges balance
 - Hesitates or afraid to climb/descend stairs and playground equipment
 - Overly fearful or fearless of movement, heights, or falling
 - Gets dizzy easily or never gets dizzy
 - Carsick easily or falls asleep immediately in car

Vestibular Difficulties can look like...

- ▶ Constantly on the move = Hyperactive
- ▶ Dislikes or craves activities that cause feet to leave ground or challenges balance = Anxiety or Impulsivity
- ▶ Hesitates or afraid to climb/descend stairs and playground equipment = Anxiety or Poor Social
- ▶ Overly fearful or fearless of movement, heights, or falling = Anxiety or ADHD
- ▶ Gets dizzy easily or never gets dizzy = Neurological issue, Ear infection, Anxiety or Hyperactive
- ▶ Carsick easily or falls asleep immediately in car = Neurological issue, Ear infection, Anxiety or Sleep Problems

Auditory

- ▶ This is the sense of hearing. This sense is associated with the vestibular sense in that they are both housed in the inner ear, and are anatomically and physically connected. Hearing sounds also activates your gravity receptors, and the nerves of the auditory and vestibular system have the same nerve structure.
- ▶ When kids have trouble with the auditory sense , we can see things like
 - Have strong or no real reaction to loud or unusual noises
 - Not speak as well as other children of the same age or trouble with phonics & learning to read
 - Seem to ignore when name is called
 - Have a significant history of ear infections
 - Seem uncomfortable or distracted in a busy space
 - React to sounds that others don't hear
 - Unusually high or low voice volume

Auditory Difficulties can look like...

- ▶ Have strong or no real reaction to loud or unusual noises = Anxiety or Inattention
- ▶ Not speak as well as other children of the same age or trouble with phonics & learning to read = Speech Problems or Learning Delays
- ▶ Seem to ignore when name is called = Inattention or Defiance
- ▶ Have a significant history of ear infections = Immune Problems
- ▶ Seem uncomfortable or distracted in a busy space = Inattention
- ▶ React to sounds that others don't hear = Auditory Hallucinations or Anxiety
- ▶ Unusually high or low voice volume = Overly Boisterous or Shy

Tactile

- ▶ This is the sense of touch. This the largest sensory system with receptors all across the outer skin, but also lining the mouth, throat, digestive system, ear canals, reproductive organs, and all throughout the body.
- ▶ When kids have trouble with the tactile sense , we can see things like
 - Upset or not notice when hands, face, or clothing get dirty
 - Become anxious or crave walking barefoot on sand, grass, carpet, or linoleum. Also, toe walking.
 - Excessive complaining or resistance to getting dressed or certain textures of clothing
 - Avoid being touched by others, unexpectedly or by unfamiliar people
 - Feels pain more or less intensely than others
 - Strongly dislike grooming activities like brushing teeth, haircut, hair washed, baths, or nails trimmed

Tactile Difficulties can look like...

- ▶ Upset or not notice when hands, face, or clothing get dirty = OCD or Sloppy/Lazy
- ▶ Become anxious or crave walking barefoot on sand, grass, carpet, or linoleum; Also, toe walking = Anxiety, Autism or Noncompliant
- ▶ Excessive complaining or resistance to getting dressed or certain textures of clothing = Defiant
- ▶ Avoid being touched by others, unexpectedly or by unfamiliar people = Social problems, Autism, or Unaffectionate
- ▶ Feels pain more or less intensely than others = Tantrum or Aggressive
- ▶ Strongly dislike grooming activities like brushing teeth, haircut, hair washed, baths, or nails trimmed = Tantrum, Defiant

Visual

- ▶ This is the sense of seeing, but also includes ocular motor functioning. This sense manages things like visually following moving object, fixing gaze as one moves, sequential scanning, and refixating on different objects or points in space.
- ▶ When kids have trouble with the visual sense , we can see things like
 - Headaches or tiredness
 - Difficulty concentrating and pay attention
 - Skip word or lose place when reading
 - Poor handwriting or drawing skills
 - Have trouble copying from the board
 - Seem disinterested or overly distracted by objects in the environment

Visual Difficulties can look like...

- ▶ Headaches or tiredness = Neurological Issues or Poor Sleep
- ▶ Difficulty concentrating and pay attention = ADHD
- ▶ Skip word or lose place when reading = Dyslexia
- ▶ Poor handwriting or drawing skills = Fine Motor Delays
- ▶ Have trouble copying from the board = Cognitive Delay
- ▶ Seem disinterested or overly distracted by objects in the environment = ADHD or Autism

Taste & Smell

- ▶ These two are inextricably tied to each other. The sense of smell enhances the taste of food because it can detect about ten thousand odors, while the taste sense can really only distinguish five things: sweet, salty, bitter, sour, and umami.
- ▶ When kids have trouble with the senses of taste and smell , we can see things like
 - Avoid foods that other children enjoy
 - Limited food preferences
 - Crave or become upset by certain tastes or smells
 - Hold nostrils closed when “nothing smells bad”
 - Gag, get nauseated, or vomit easily

Taste & Smell Difficulties can look like...

- ▶ Avoid foods that other children enjoy = Defiance
- ▶ Limited food preferences = “Just a picky eater”
- ▶ Crave or become upset by certain tastes or smells = Tantrum or Defiance
- ▶ Hold nostrils closed when “nothing smells bad” = Melodramatic
- ▶ Gag, get nauseated, or vomit easily = GI Problems

So, How do You Know? Sensory vs Behavioral

It's Complicated...

Or

Maybe not...

Let's start with a better question



What can the BHP do about it?

- ▶ Briefly Evaluate- use screening tools and ask more questions
- ▶ Educate the Family
- ▶ Reframe Behavior
- ▶ Remember that it is usually a both thing- Sensory and Behavioral
- ▶ **TEAM UP WITH AN OCCUPATIONAL THERAPIST!!**
- ▶ Facilitate referral to OT

Assessment Tools



Winnie Dunn, PhD, OTR, FAOTA

Caregiver Questionnaire
7 to 35 months

FOR OFFICE USE ONLY

Calculation of Child's Age

Year	Month	Day

Test Date: _____

Birth Date: _____



Winnie Dunn, PhD, OTR, FAOTA

Caregiver Questionnaire
3:0 to 14:11 years

FOR OFFICE USE ONLY

Calculation of Child's Age

Year	Month	Day

Test Date: _____

Birth Date: _____

Age: _____



ADOLESCENT/ADULT
SENSORY PROFILE™
Catana Brown, Ph.D., OTR, FAOTA
Winnie Dunn, Ph.D., OTR, FAOTA



Winnie Dunn, PhD, OTR, FAOTA

Teacher Questionnaire
3:0 to 14:11 years

FOR OFFICE USE ONLY

Calculation of Child's Age

Year	Month	Day

Test Date: _____

Birth Date: _____

Age: _____

Student's First Name: _____

Student's Middle Name: _____

Screening Questions to ask when Considering an OT referral for Sensory Processing

Does your child:

- Easily become overly active and hard to calm down?
- Seem unaware of dangers and take excessive risks in play?
- Have difficulty paying attention or playing with toys for a reasonable time span for his/her age?
- Frequently bump and push other children or play too rough?
- Prefer fast-moving carnival or playground rides, or spinning equipment without seeming as dizzy as others?
- Frequently seek movement experiences at home such as: bouncing on furniture, rocking chairs, turning in swivel chairs, or turning upside down?
- Dislike certain food textures and avoid new food textures?
- Prefer certain clothing, complain about tags, and/or complain that clothes are too tight or itchy?
- Become upset when face, clothes, or hands are messy?
- Over-react or under react to pain/temperature?
- Tend to withdraw from a group or seem irritable in close quarters?
- Frequently seem withdrawn and unresponsive?
- Avoid swings or slides or use them with hesitation?
- Seem afraid to let his feet leave the ground or turn upside down (climbing up in a chair, jumping games or somersaults) when playing?
- Dislike trying new movement activities or have difficulty learning them?
- Have a tight, tense grasp on objects?
- Have difficulty getting over a temper tantrum?
- Have a poor frustration tolerance?
- Have difficulty playing with peers?
- Have difficulty falling asleep or waking up?
- Dislike changes in routine and have rigid rituals for daily tasks?
- Have difficulty with transitions?
- Have difficulty getting dressed?
- Have difficulty using hands to manipulate toys or manage clothing fasteners?
- Seem clumsy and bump into things easily?
- Eat in a sloppy manner?

Comments:

If these questions reveal areas of concern for a child's caregivers, an occupational therapy evaluation may be indicated for a comprehensive assessment of sensory processing and its potential impact on performance of functional activities.

Questions? Or Case Discussions



References

- ▶ Raising a Sensory Smart Child, By Lindsey Biel, M.A., OTR/L & Nancy Peske

