



## Assessing Sensory Processing Patterns:

Explore Resources, Techniques, Key Insights, and Methodologies for Evaluation

# Assessing Sensory Processing Patterns

---

- **The Four-Quadrant Model**
- **A Look at Balance and Movement Senses**
- **Is It a Sensory Processing Disorder or Something Else?**
- **What Are the Risk Factors for Sensory Processing Difficulties?**
- **What's Included in a Comprehensive Evaluation?**
- **What Is It Like to Live with Sensory Processing Differences?**
- **What Interventions Could Make a Difference?**

We are exposed to vast amounts of sensory information every day. Light and dark, colors and textures, sounds of all sorts, pain in different intensities, varied tastes and smells. And those are just the senses we associate with the world around us. There are other, quieter senses—those that help us perceive where our bodies are in space, how they're moving and balancing as we sit, walk, run, swim, or dance.

Perhaps unsurprisingly, people don't all sense things in the same way. For some, certain sensations are acute, even overwhelming. For others, sensations are harder to detect. How people interpret and respond to sensory information is also highly individual. When people's environments don't match well with their sensory needs, the result can be discomfort, emotional dysregulation, and difficulty with daily activities, including learning and interacting with others. It's important to point out that, while sensory processing differences are common in neurodiverse children, neurotypical children and adults also experience sensory processing differences (Dean et al., 2022).

The good news is that we have reliable tools for learning about people's sensory patterns. That means we can become more aware of individual needs, making more precise adjustments to environments and developing people's coping skills so they have what they need to function well throughout the day.

### ***Sensory Processing Terms: Disorder vs. Difference***

*The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM 5-TR) and the International Classification of Disease, 11th Revision (ICD-11) do not recognize sensory processing disorder as an independent condition (van den Boogert et al., 2022). Even so, many health professionals and researchers use the term sensory processing disorder to describe children and adults who have "clinically significant difficulties regulating their response to sensation in a way that interferes with daily life activities and routines as well as learning" (Passarello et al., 2022).*

Though sensory differences have been linked to several neurodevelopmental, mental health, and medical conditions, they can also be viewed as part of the natural diversity of human beings.

**Learn more:** [Self-regulation and Coping Across the Life Span](#)

## The Four-Quadrant Model

In 1963, Dr. Jean Ayres, a groundbreaking occupational therapist, coined the term *sensory integration* to describe the way different people respond to sensory stimuli within and around

them. Her work centered on the experiences of children with learning differences and developmental disorders. Since then, other researchers have built on this work, expanding our understanding of sensory integration and sensory processing.

Occupational therapist Dr. Winnie Dunn developed a model of sensory processing that describes the intersection of two factors: our neurological thresholds (how intense a stimulus must be for us to perceive it) and our behavioral responses (how passively or actively we tend to respond to sensory information).

Dunn's model groups people into one of four quadrants, according to the interaction of their sensory thresholds and their behavioral responses. Behavioral responses are attempts to self-regulate. They occur on a continuum from passive to active. Passive strategies might include: not noticing a stimulus or feeling overwhelmed by it. More active strategies might include stimming or moving to another space. People can respond to sensory stimuli in ways that are helpful to them, or they can respond in ways that disrupt their ability to function.

## Sensory Profiles

### Low Registration

- High Neural Thresholds
- Passive Responding Strategies

Sensory stimuli must be more intense for people with low registration to recognize or process them. They may appear uninterested or less responsive.

### Sensory Seeking

- High Neural Thresholds
- Active Responding Strategies

Sensory seeking people may not recognize or process sensory stimuli and may actively seek more of it. They may appear impulsive or clumsy.

### Sensory Sensitivity

- Low Neural Thresholds
- Passive Responding Strategies

People with sensory sensitivity may be easily overwhelmed, experiencing extra stress and anxiety while in stimulating environments.

### Sensory Avoiding

- Low Neural Thresholds
- Active Responding Strategies

Some highly sensitive people actively remove themselves from overwhelming situations or attempt to close out the stimuli (Costa-López et al., 2021).

Another way to describe these differences is over-responsiveness, under-responsiveness, or sensory craving (Passarello et al., 2022).

Our thresholds and responses aren't the same for all kinds of sensory information. In other words, how someone responds to noise isn't necessarily the same way they respond to touch. Place matters, too. People may respond to a sensation differently at school or work than they do at home, where they may have a greater sense of support and control.

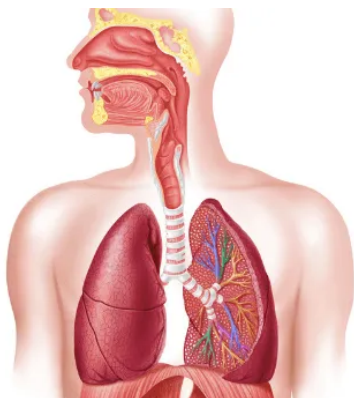
Numerous studies show that being highly sensitive or responsive can lead to stress, fatigue, and a lower quality of life. Sensory processing difficulties have been associated with:

- attachment insecurity (Kerley et al., 2023);
- executive attention dysfunction (Anquetil et al., 2023);
- sleep disturbance and low sleep quality (Rajaei et al., 2020);
- anxiety and depression (Chang et al., 2022); and
- higher risk of occupational burnout (van den Boogert et al., 2022).

On the positive side, high sensitivity has also been linked to empathy, awareness of opportunity, and a sharp sense of humor, among other valuable traits (Costa-López et al., 2021). People with high sensitivity can also be excellent observers of subtlety, enabling a “rich inner life” and greater resilience, researchers say (Gulla & Golonka, 2021).

► **Research and Resources:**

## A Look at Balance and Movement Senses



When elementary school students learn about sensory information, they focus on vision, hearing, taste, touch, and smell. As clinical professionals, you may be tasked with assessing several other important senses, and you may need to explain them to patients, students, and families.

## **Interoception**

Interoception is the ability to recognize, interpret, and integrate your own body's internal signals. These signals are sometimes categorized as:

- visceral (related to your heart, breath, digestion, or need to use the restroom, for example);
- homeostatic (related to your body temperature, cell activity, or mechanical stress); or
- somatic (information related to your muscles, joints, or skin).

Because interoception allows you to sense and interpret signals from within your own body, it is at the heart of the mind-body connection. It can affect your ability to move and to feel the physical effects of emotion (Harrison et al., 2019). Interoception also includes your view of how good you are at detecting and interpreting these internal signals.

Any number of conditions can disrupt your interoceptive ability, including mental health or neurodevelopmental conditions. Interoception may be involved in derealization and depersonalization experiences. It may also be linked to a tendency to feel disgust, which is a symptom some people experience with obsessive-compulsive disorder (Bragdon et al., 2021).

**Learn more:** [How Practitioners Can Help with Disrupted Interoception](#)

## **Proprioception and the Vestibular System**

While interoception involves sensing and responding to internal cues, proprioception involves both internal and external signals. Proprioception is your awareness of where your body and limbs are in space. This sense works together with your vestibular system to ensure that you can coordinate movements and maintain your balance as you move.

When you turn your head, for example, the neurons in three canals within each of your ears detect the speed and direction of your movement. They send reflex signals to help reorient your gaze and stabilize your posture. Even with movements you don't consciously initiate—such as your response to forces like gravity—your body repositions itself. The vestibular system is sometimes characterized as “head-centered,” while proprioceptive signals are characterized as “body-centered” (Zobeiri & Cullen, 2022).

Many health conditions, and even mental health conditions, are associated with changes in proprioceptive feedback, including these:

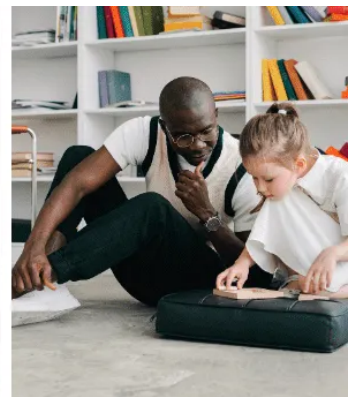
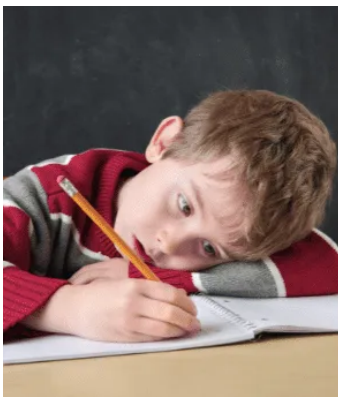
- Developmental coordination disorder (Tran et al., 2022)
- Autism (Shafer et al., 2021)
- Rheumatic disorders (Konarzewski et al., 2023)
- Age-related changes (Ferlinc et al., 2019)
- Pain (Efstathiou et al., 2022)
- Stroke (Yu et al., 2021)
- Schizophrenia (He et al., 2022)

Some researchers are exploring whether proprioceptive processing differences could also play a role in dyslexia (Laprevotte et al., 2021), but more research is needed to understand the relationship between the two.

Proprioceptive and vestibular feedback contribute to the mental process known as praxis. Praxis is the process of thinking about, planning, sequencing, and carrying out actions. It's a skillset that is vital for daily functioning.

► **Research and Resources:**

## Is It a Sensory Processing Disorder or Something Else?



Sensory processing difficulties often overlap with other psychological, cognitive, and medical conditions. Autistic people and those with other neurodevelopmental conditions often have sensory differences. And sometimes sensory processing differences underlie functional difficulties and behavioral conditions.

As you are building a comprehensive evaluation to explore sensory issues, you may want to assess for other conditions that could be present. Identifying specific sensory issues and co-occurring conditions will help you plan effective interventions that respond to the full range of your student's or patient's needs.

## **ADHD**

Sensory processing differences are not part of the diagnostic criteria for attention-deficit/hyperactivity disorder (ADHD). Even so, children with ADHD often experience and respond to sensations in atypical ways (Rani et al., 2023).

In a 2023 study that compared sensory processing in children and teens with and without ADHD, researchers found significantly higher scores in all four types of sensory integration (sensory sensitivity, low registration, sensation avoiding, and sensation seeking) in those with ADHD (Panda et al., 2023).

There is some evidence that the type of ADHD someone has could be linked to the type of sensory differences they experience. [Panda et al.](#) found that children with the inattentive variety of ADHD tended to under-respond to sensations, while children with the hyperactive or combined type were more likely to be extra-responsive. Researchers pointed out that these sensory differences were often “sub-clinical” and could only be detected through a “detailed, objective evaluation” (Panda et al., 2023).

A 2022 study looked at the relationship between executive function, ADHD symptoms, and sensory integration differences in 228 children with ADHD. The study showed that difficulties with vestibular (balance) perception were linked to inattention, hyperactivity, and impulsivity symptoms. Balance difficulties were also linked to inhibition and working memory deficits. Proprioceptive difficulties and sensory hypersensitivities were linked to inattention symptoms and problems with shifting attention from one task to another. Researchers concluded that the functional differences in sensory integration might be linked to impaired executive functioning—leading to the behaviors we associate with ADHD (Li et al., 2022).

## **Autism**

Just as there are differences in the ways neurotypical people sense, interpret, and respond to sensory information, there are sensory differences in autistic people. The *DSM 5-TR* lists these possible characteristics of sensory difference in autism:

- Hyper- or hypo-reactivity to sensory input
- Unusual interest in sensory aspects of the environment
- Fascination with smelling or touching objects
- Intense interest in lights or spinning objects

- Strong responses to or rituals involving specific sounds, smells, or textures
- Apparent indifference to pain, heat, or cold (APA, 2019)

One noteworthy consideration: In at least one study, autistic people were less likely to fall into the “sensation seeking” category (Neufeld et al., 2021).

It’s important to understand these sensory differences because they might be the cause of emotional upset, difficulties with daily functioning, challenging eating patterns, aggression, fear, or sleeping problems (Kirby et al., 2022). It’s also important to notice and track sensory patterns from infancy, since there’s some evidence that low and high sensory thresholds with “steep increases” may predict more autistic traits by school age (Chen et al. 2022).

## **Visual Differences**

Visual processing differences are detectable in autistic infants, and autistic children may later seek out or avoid visual stimuli that are particularly strong. Researchers have wondered whether these visual differences might be related to other characteristics of autism, such as differences in eye contact, joint attention, and recognition of facial expression, body movements, and emotion.

Researchers have pointed out that visual processing differences could keep autistic people from observing social cues and behaviors, which might, over time, impact social cognition and relationships.

## **Auditory Differences**

In a similar way, sensory differences related to sound exist for many autistic people. Studies have shown that some autistic people:

- show an enhanced ability to perceive pitch;
- experience greater sensitivity to loud sounds;
- have difficulty orienting toward sound;
- work harder to filter out unimportant noises; and
- have trouble recognizing emotional changes in people’s speech.

There may also be some differences in how autistic people process speech. For example, studies have shown that autistic babies do not orient as readily toward mother’s speech and may also have a delayed auditory brainstem response to phonemes—the basic units of speech.

Researchers say it’s possible that these auditory processing traits could influence how much social learning takes place (Thye et al., 2018).



## **Touch Differences**

As is true of auditory and visual differences, sensory needs involving touch may affect social learning and relationships. Some autistic individuals have discomfort while wearing certain fabrics, an aversion to being touched by other people, and other tactile preferences. A 2023 study showed that autistic people with tactile processing differences tended to have less social motivation and less enjoyment of social interactions (Bang & Igelström, 2023).

There is some evidence that autistic people may experience different sensitivities to heat and pain. Some individuals have greater sensitivity to painful experiences; others report less sensitivity to pain sensations. How autistic people show or express pain can also vary from what's typical. That could mean they don't get the pain management care they need. More research is needed to understand the different mechanisms involved in these pain sensitivity variations (Bogdanova et al., 2022).

**Learn more:** [Understanding ASD + ADHD](#)

## **Developmental Coordination Disorder**

Developmental Coordination Disorder (DCD) is a neurodevelopmental condition that alters the ability to plan and carry out physical movements. It affects around 6% of children from five to 11 years of age.

Sensory differences interact with DCD in complex ways. People with DCD often need a higher degree of sensory input to recognize and respond to two types of stimuli—touch and proprioception. Researchers are still learning about the mechanisms involved, but one possibility is that it may have to do with low muscle tone.

When a child with DCD contracts a muscle, it may not generate enough force to activate muscle spindles, which are stretch detectors. As a result, children with DCD may be less aware of the position of their joints, especially those farthest from their centers. That can lead to balance problems (Tran et al., 2022).

In addition, visual, proprioceptive, auditory, and vestibular signals can be harder to integrate and analyze in the brain. For some people with DCD, it may be harder to tell one sensory experience from another. As a result, they may be more easily overwhelmed by sensations and may avoid situations where they will have to deal with intense sensory experiences. Researchers think the need to avoid sensations could lead to difficulty with motor coordination tasks (Tran et al., 2022).

## **Obsessive Compulsive Disorder**

Young people with obsessive compulsive disorder (OCD) experience more sensory processing difficulties than those who don't have the condition. When people with OCD have sensory

difficulties in more than one area, their symptoms increase in severity—especially those symptoms related to symmetry and ordering (Cervin, 2023).

Some studies have suggested that the inability to tolerate certain sensory experiences leads people to relieve the resulting anxiety by using compulsive behaviors. For example, an aversion to certain textures or odors may underlie someone’s food-related rituals (Tal et al., 2023). People with OCD can be sensitive to any type of sensory information (Moreno-Amador et al., 2023).

## **Anxiety Disorders**

When researchers analyzed symptoms in young people with anxiety disorders, they found an increased likelihood of having sensory processing difficulties. Having more than one sensory processing difference also increased the severity of panic and social anxiety symptoms (Cervin, 2023).

When researchers have looked at childhood sensory processing difficulties, they’ve found a correlation with anxiety disorders later in life. Studies suggest that high levels of sensory processing difficulty bring about emotional dysregulation, which can then develop into an anxiety disorder. Having trouble regulating emotion seems to be a key predictor for the development of general anxiety disorder (McMahon et al., 2019).

## **Tourette Syndrome**

People with Tourette Syndrome (TS) often experience sensory processing differences, especially sensory hypersensitivity. Researchers think the process of sensory gating—the ability to filter out irrelevant sensory data—may be disrupted in people with TS.

It may be that sensory processing difficulties are also related to a phenomenon called the premonitory urge—the intense need to move or act, which many people with TS find uncomfortable. More research is needed to clarify the neural and physiological mechanisms that underpin sensory differences in TS (Isaacs et al., 2020).

► **Research and Resources:**

# What Are the Risk Factors for Sensory Processing Difficulties?



One element of a comprehensive evaluation strategy is assessment of risk factors for sensory processing disorders. You may not always have access to medical records, school records, or deep family history, but in cases where you do, the background information can help complete the picture.

**Genes.** Sensory processing differences appear to have a genetic basis, and they tend to run in families (Taylor et al., 2018).

**Birth conditions.** Multiple pregnancies, pregnancy complications, C-section and preterm deliveries, and low birth weight are all associated with a higher risk of sensory processing differences. Researchers think that the long-lasting stress of these birth conditions might affect sensory development in different ways, including differences in volume in areas of the brain dedicated to detecting and processing sensory information (Ptak et al., 2022).

**Childhood caregiving adversity.** There is some evidence that early caregiving adversity could raise the risk for “low-level” sensory processing challenges, especially sensory over-responsivity. In this context, sensory processing challenges may add to the risk for worse mental health outcomes in children and teens with early caregiving adversity (Méndez Leal et al., 2023).

**Trauma.** Repeated exposures to trauma early in life can change a child’s neuroanatomy in the sensory cortex of the brain and in the limbic system. Those changes mean a child may misinterpret sensory stimuli, which can, in turn, change how they feel, act, and manage their emotions.

For example, when researchers studied a group of children who had been repeatedly exposed to nearby missile strikes for over a decade, they found post-traumatic stress symptoms as well as sensory over- and under-responsiveness. Researchers pointed out that it is “common for a person to fluctuate between diminished awareness to environmental stimuli and hypersensitivity or avoidance” (Yochman & Pat-Horenczyk, 2019).

A subset of people with trauma histories will develop sensory modulation disorder. Their reaction to sounds, sights, or other input is out of proportion to the actual stimuli, making it hard to adapt to their environments. Symptoms of sensory modulation disorder may show up as:

- disorganization;
- impulsiveness;
- distractibility;
- emotional dysregulation;
- anxiety;
- avoidance of movement;
- insecurity; or
- over- or under-response to sensory information (Joseph et al., 2021).

**Learn more:** [Healing Trauma with Place-Based Social-Emotional Learning](#) and [When the Whole School is Trauma-Trained](#)

► **Research and Resources:**

## What's Included in a Comprehensive Evaluation?



Researchers and health care providers agree that because sensory processing differences are complex, a comprehensive assessment strategy is needed (Passarello et al., 2022). Assessing sensory processing on its own could mean overlooking a broader developmental condition such as autism or ADHD. Assessing sensory processing once, without follow-up, could result in pathologizing differences that may change over time. Sensory issues that appear during early childhood sometimes resolve as children mature, for example.

Here are a few other suggestions to help you build a comprehensive evaluation:

### **Assess across environments.**

It's important to gather information from a variety of participants who can shed light on sensory experiences and functioning in as many environments as possible: at home, on the playground, in class, on the bus, in the cafeteria—even while driving. Using an assessment tool such as the Sensory Processing Measure, Second Edition (SPM™-2) can guide you through this process.

### **Check social participation.**

Sensory processing differences can interfere with social relationships or limit a person's interest in social activities. For example, in one study, autistic children with auditory filtering difficulties found it harder and less enjoyable to participate in social activities outside of school (Loh et al., 2021). Because social interactions are an important part of overall wellbeing, it's a good idea to identify and address any mismatches between sensory needs and environmental conditions which could lead to less, or less satisfying, social participation.

### **Consider assessing mental health.**

The relationship between sensory processing and mental health conditions is a complex one. On one hand, some mental health conditions are associated with sensory processing difficulties (van den Boogert et al., 2022). On the other hand, ongoing sensory processing differences can make it harder to function day to day, which may lead to depression and anxiety symptoms (Paquet et al., 2022).

Researchers are still studying the interactions between sensory processing and mental health, and more research is needed to clarify how they affect each other. Including mental health assessment in your evaluation could help you identify the full range of concerns expressed by your patients or students and their families.

**Learn more:** [The WPS Guide to Assessing Depression in Children and Teens](#)

## **Adopt a strengths-based approach.**

An evaluation identifies needs and challenges, to be sure. But a comprehensive evaluation also identifies and leverages people's strengths—including their personal abilities, goals, and interests, along with their supports and cultural assets. In a 2019 panel discussion, autism experts and allies described several benefits to a strengths-based approach (Urbanowicz et al., 2019). They said using strengths-based language in reports and planning strengths-based interventions could help stakeholders:

- discover what is meaningful and motivational;
- collaborate with patients and students in goal-setting and planning;
- plan engaging social and therapeutic activities;
- validate each person's lived experience; and
- empower people, building self-confidence and self-efficacy.

Panel participants encouraged practitioners to consider environmental barriers, in addition to strengths and needs.

## **Use a variety of trusted, validated assessment tools.**

Depending on the goals and characteristics of the person in your care, you may need to use several different types of assessments. The assessments listed below may be useful to you and the other members of your assessment team at various stages in your evaluation.

### **Sensory Processing and Sensory Development**

- [Sensory Processing Measure, Second Edition \(SPM™-2\)](#)
- [SPM-2 Quick Tips™](#)
- [Goal-Oriented Assessment of Lifeskills \(GOAL™\)](#)
- [Beery-Buktenica Developmental Test of Visual-Motor Integration, Sixth Edition \(Beery VMI\)](#)
- [Peabody Developmental Motor Scales, Third Edition \(PDMS-3\)](#)
- [Test of Visual Perceptual Skills 4th Edition \(TVPS-4\)](#)
- [Wide Range Assessment of Visual Motor Ability \(WRAVMA\)](#)
- [Motor-Free Visual Perception Test-4 \(MVPT-4\)](#)
- [Sensory Integration and Praxis Tests \(SIPT\)](#)
- [Developmental Test of Visual Perception, Third Edition \(DTVP-3\)](#)
- [Bender Visual-Motor Gestalt Test, Second Edition \(Bender-Gestalt II\)](#)
- [Test of Gross Motor Development, Third Edition \(TGMD-3\)](#)
- [Educational Assessment of School Youth for Occupational Therapists \(EASY-OT\)](#)

## Autism

- Autism Diagnostic Observation Schedule, Second Edition (ADOS®-2)
- Monteiro Interview Guidelines for Diagnosing the Autism Spectrum, Second Edition (MIGDAS™-2)
- Autism Diagnostic Interview–Revised (ADI®-R)
- Childhood Autism Rating Scale, Second Edition (CARS™ 2-ST and CARS™ 2-HF)
- Social Responsiveness Scale, Second Edition (SRS™-2)
- Autism Spectrum Rating Scales (ASRS)
- Gilliam Autism Rating Scale, Third Edition (GARS-3)

**Learn more:** [The WPS Guide to Autism Assessment](#)

## ADHD

- Conners, Fourth Edition (Conners 4)
- Conners' Adult ADHD Rating Scales (CAARS)

**Learn more:** [ADHD Assessment Resources](#)

## Adaptive Behavior and Executive Functioning

- (ABAS®-3) Adaptive Behavior Assessment System, Third Edition
- Behavior Rating Inventory of Executive Function, Second Edition (BRIEF2)
- Behavior Rating Inventory of Executive Function–Preschool (BRIEF-P)

## Mental Health Support

- (ABAS®-3) Adaptive Behavior Assessment System, Third Edition
- Conners Comprehensive Behavior Rating Scales (Conners CBRS)
- Children's Depression Inventory, Second Edition (CDI 2)
- Revised Children's Manifest Anxiety Scale, Second Edition (RCMAS™-2)

WPS [Assessment Consultants](#) can help you plan a comprehensive assessment strategy that addresses the complexities of sensory processing.

► **Research and Resources:**

## What Is It Like to Live with Sensory Processing Differences?



Discussing what it's like to have sensory processing differences, as well as what it's like to support those who have them, is a critical piece of the assessment process. It can help you see which areas matter most to each person, allowing you to plan interventions that will have a bigger impact on quality of life.

In 2021, a group of [researchers](#) interviewed people with sensory processing sensitivity to identify the core characteristics of the condition. People in that study described their experiences like this:

- *"Well, at my work...we naturally have rather bright lights...but then if one of those bright lights might shine on my face in that particular spot, I would step aside, because I know it might cut really deep and would need to be processed, so to speak."*
- *"I actually don't go to large events in large venues anymore. I do that very rarely because I know I can actually only take it for like an hour or something."*
- *"People who are constantly clicking their pens, oh, please stop. I can't stand it. I get incredibly annoyed...I just go off like a firework. I just get angry and rebellious and then I'm like: Cut that out."*
- *"I would like to be able to relax more, that is, in the evenings. I am constantly in 'hurry up' mode."*



In a 2022 study that sought to describe sensory processing differences in autistic children, parents reported these experiences to Daly et al.:

- *"It's not just the loudness. It's the intensity. He perceives it so clearly that he goes into the moment. He can't separate himself from it."*
- *"I'm not sure if it [touch] is exactly painful or not. But it's definite he feels it differently than we do, that's for sure."*
- *"We've got a swing that she can go and take herself on whenever she's feeling stressed out. The vestibular stimulation on the swing helps a lot to calm her down."*

With respect to proprioceptive differences, autistic adults described experiences like these to Gowen et al.:

- *"For me, it's about the overall amount of the sensory input. And that could be, it could be social, as well, but just the amount that I'm having to process. And it seems like my coordination is one of the first thing[s] to go out the window, when my brain is too full."*
- *"I was concentrating on picking this thing up on the floor. And so what was happening with my other hand, completely oblivious."*
- *"If something is very dynamic and fluctuating, that's, again, a point where the clumsiness starts to set in."*
- *"Everything you do is more deliberate, so is more exhausting because of the extra concentration involved."*

In another study, researchers spoke with parents about the challenges of parenting a child whose sensitivities affected meals for the whole family (Cunliffe et al., 2022). Several themes emerged from the study:

- Needing to control the sensory surroundings
- Coping with stigma and the disapproval of others
- Finding ways to stay positive and move forward

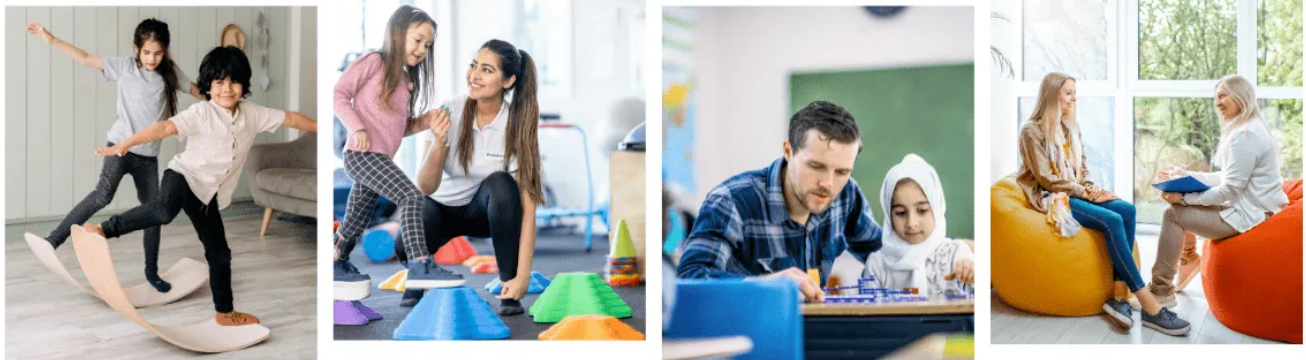
Here's what some of the parents said:

- *"I'd say it was frustrating. It was the fact that if you cook something, it's time-consuming. She will literally say, 'I am not eating that,' and she'll walk away."*
- *"I took him to the doctor, but he just didn't listen to what I was telling him...like, 'Oh, he's growing and healthy. There's nothing wrong. He will grow out of it.'"*
- *"We would go shopping with him, let him choose and look around at what he likes the look of, and that's a build-up, so rather than just cooking it and him eating it, I'm trying to involve him to hopefully spark his interest."*

- *"I've found people in online groups and the relief is immense. It's like...it's not just us."*
- *"Go with what your child needs and find the routine that works for you. That effort is worth it."*

► **Research and Resources:**

## What Interventions Could Make a Difference?



The most widely accepted interventions for sensory processing difficulties are those that fall under the umbrella of sensory integration therapies. Typically carried out by occupational therapists in school and clinical settings, these therapies aim to create tactile, proprioceptive, and vestibular experiences, often using play-based activities and equipment to improve sensory integration. These experiences may involve multiple senses at the same time: wearing weighted vests, enjoying fabric swings, spreading shaving cream on desktops.

Research verifying the effectiveness of sensory integration therapy is limited. Some studies show positive outcomes; others show no effect or a negative effect. More high-quality research is needed to understand which individual therapies are effective (Camarata et al., 2020). At least one study involving children who received occupational therapy services for sensory integration showed good follow-up results: As adults, many scored in the "typical" range for sensory processing (May-Benson et al., 2023).

When planning interventions, you may want to consider these principles and practices:

### **Collaborate with a multidisciplinary team.**

Sensory processing issues affect people's emotions, their bodies, their relationships, their education, and their ability to function in lots of different areas of life. For that reason, they benefit from a holistic, cross-dimensional intervention approach (Joseph et al., 2021).

Evaluation and intervention teams often include a range of health and education professionals, including:

- Occupational therapists
- Speech–language pathologists
- School psychologists
- Clinical psychologists
- Teachers
- Nurses
- Recreational, art, and music therapists
- Neurologists
- Social workers

### **Consider culture as you plan.**

Every culture has unique perspectives on mental health, the expression of needs, and resilience. In some collectivist cultures, for example, interventions that require individuals to take sole charge of their needs may not feel comfortable. As you take personal, medical, and educational histories, you may want to gather information about cultural and familial backgrounds, attitudes toward mental and physical health conditions, and feelings about the interventions you're proposing. In one study, Japanese students with high sensitivity benefitted more than others from an intervention process that had been modified to reflect their cultural values (Kibe et al., 2020).

### **Include recommendations for environmental modifications.**

Limiting interventions to those that focus on individual strengths and needs may only solve part of the problem. Some researchers point out that it's equally important to address the features of environments and activities that keep sensitive people from participating in them (Dean et al., 2022). In classrooms, for example, these environmental stimuli can create learning barriers for many students, including those with sensory processing differences:

- Irrelevant social noise (speech)
- Glare from too much sunlight or fluorescent lighting
- Overly decorated spaces
- Crowding that results in bumping or touching other students (Mallory & Keehn, 2021)

### **Explore the SPM-2 Quick Tips™ guide.**

One intervention resource to consider is Sensory Processing Measure, Second Edition (SPM-2) Quick Tips, developed by Diana A. Henry, MS, OT/L, FAOTA. The SPM-2 Quick Tips provides case studies, guidance for report-writing, and hundreds of practical, easy-to-implement strategies for addressing a variety of sensory needs in these areas:

- Vision
- Hearing
- Taste and smell
- Touch
- Body awareness
- Praxis
- Balance
- Social participation

**Learn more:** [SPM and SPM-2 Quick Tips Case Study: What's Behind Johnny's Behavioral Challenges in Class](#)

**View:** [Behind the Scenes of the SPM-2 Assessment & SPM-2 Quick Tips](#)

▶ **Research and Resources:**