



Evaluating Sensory Function

Key Points



- Evaluation should look at the whole child.
- Try to observe the child in different environments- look at functional capability.
- OTs are assessing all the time.
- Understanding sensory functioning helps us understand behavior and motor skills.
- Evaluation provides a snapshot of that day.
- Strengths-based perspective

Sensoryhealth.org

A great resource for sensory information gathering

Sensory Awareness Infographics



Red Flags

Great information gathering tools



Infants and toddlers

- ___ Problems eating or sleeping
- ___ Refuses to go to anyone but their mom for comfort
- ___ Irritable when being dressed; uncomfortable in clothes
- ___ Rarely plays with toys
- ___ Resists cuddling, arches away when held
- ___ Cannot calm self
- ___ Floppy or stiff body, motor delays

Pre-schoolers

- ___ Over-sensitive to touch, noises, smells, other people
- ___ Difficulty making friends
- ___ Difficulty dressing, eating, sleeping, and/or toilet training
- ___ Clumsy; poor motor skills; weak
- ___ In constant motion; in everyone else's "face and space"
- ___ Frequent or long temper tantrums



Classroom Sensory Symptom Checklist

SCHOOL SENSORY MODULATION “RED FLAGS” CHECKLIST



Student: _____ Teacher: _____ Date: _____

Observe the child 2-3 times in different settings, with these items in mind over the course of a week. Rate the frequency of these behaviors- N never, S sometimes, F frequently. Add additional comments or observations in the blank areas or on the back.

Remember that it is normal for all people to be sensitive to certain sensations. Sensory modulation becomes a disorder only when it negatively impacts a person's life (i.e. ability to pay attention, learn, socialize, relax).

TOUCH:

Over-Responsive	Under-Responsive	Seeking
___ avoids expression of affection by teacher or peers/dislikes being touched	___ fails to notice food on face/need for tissue	___ excessive touching of objects and people
___ overreacts to minor cuts, scrapes	___ does not take notice of scrapes or bumps	___ chews on shirt sleeve, collar, or pencil
___ dislikes touching glue, paint, stickers, tape or objects that are wet and/or dirty	___ struggles with fine motor tasks	___ tends to use the mouth, not the hands, to learn about toys and other objects
___ difficulty tolerating close one-on-one instruction	___ unintentionally rough with peers during play	Notes:
___ outbursts during lining up, walking in a line, or group lesson	___ drools	
___ limited food preferences, avoids textures	___ stuffs too much food in mouth when eating	
___ appears agitated when touched		
___ can react aggressively to touch by others		

SCHOOL SENSORY MODULATION “RED FLAGS” CHECKLIST

VESTIBULAR (Balance and movement sense):

Over-Responsive	Under-Responsive	Seeking
___ distractible and easily loses visual attention, especially if the head is moved (ie when visual focus shifts)	___ always moving	___ needs to take frequent movement breaks
___ difficulty with visual tracking; easily loses place (e.g. spooning work, rolling mat evenly)	___ poor sitting balance in chairs and on floor and balance while changing the body's position	___ uses a self-stimulatory behavior with the head in order to maintain attention (e.g. head rocking)
___ dislikes the car/bus ride, frequently gets carsick	___ takes unnecessary risks on the playground and in the gym (poor safety awareness)	Notes:
___ fear and avoidance of the playground, gym and stairs	___ W sits	
___ does not like to move/chooses sedentary activities	___ seems floppy/ has low muscle tone	

PROPRIOCEPTION (Joint and muscle sense): Since proprioceptive input is always helpful, we do not have an Overresponsive section.

- ___ difficulty staying in one place; likes to take frequent movement breaks
- ___ stabilizes self against the furniture; for example, can “hook” arm around the chair to stay upright
- ___ “locks” joints to maintain posture
- ___ seems to prop the body up with arms
- ___ weak grasp, hands get tired when writing, writing hard on paper
- ___ frequently drops books, pencils, tools, dishcloth, chalk, etc...
- ___ tires easily, seen by lying on floor, difficulty making choice for next work, lying on table
- ___ uses self stimulatory behavior (repetitive toe tapping, rocking, throat clears, pacing, flapping) to maintain attention or relieve stress

SCHOOL SENSORY MODULATION “RED FLAGS” CHECKLIST

SMELL/TASTE:

Over-Responsive	Under-Responsive	Seeking
___ very sensitive to food smells, refuses to eat things that smell fine to you	___ likes strong odors such as perfume, cleaning products, gasoline	___ excessive need to smell items/people
___ notices smells others don't notice	___ likes highly spiced foods	___ licks inanimate objects, may try to chew or eat
___ plugs nose, avoids places with strong smells	___ may seem to disregard personal space of others (trying to smell people)	___ may seem to disregard personal space of others (trying to smell people)

INTEROCEPTION:

Over-Responsive	Under-Responsive
___ overreacts to small injuries	___ disregards small injuries
___ complains frequently of aches and pains	___ fails to recognize internal sensations (e.g. need to go to bathroom, need to eat, need to put on a sweater)
___ expresses severe distress about cold or hot weather	___ does not recognize the emotions of others
	___ has a hard time recognizing and expressing emotions

ADDITIONAL COMMENTS:

This checklist is based on information from:

Sensational Brain - Creators of Brain Works Products, www.sensationalbrain.com and Yack, E., Aquilla, P. & Sutton, S. (2002). *Building Bridges Through Sensory Integration* (2nd ed.). Las Vegas, NV: Sensory Resources, LLC.

SCHOOL SENSORY MODULATION “RED FLAGS” CHECKLIST

VISUAL:

Over-Responsive	Under-Responsive	Seeking
___ dislikes visually busy environments	___ difficulty with eye-hand coordination tasks (catching ball, tracing, writing)	___ seeks out and engages with shiny objects or objects that spin
___ bothered by bright lights, covers eyes, squints	___ difficulty with visual tracking, may lose place when reading	___ finger flicking in front of or in periphery of visual field
___ avoids eye contact	___ difficulty finding objects against a cluttered background	___ may look intently at people/objects
___ squints, rubs eyes	___ may get lost easily	Notes:
___ noticeable response/behaviors when walking from light to dark/dark to light	___ difficulty with number rods, putting map puzzles together and challenges with metal insets or geometric shapes	

AUDITORY:

Over-Responsive	Under-Responsive	Seeking
___ covers ears frequently or cries with loud or unexpected sounds	___ doesn't respond when name is called (no hearing deficit)	___ talks or makes noises constantly
___ easily distracted by background noise	___ says “what?” frequently even though hearing is fine	___ may speak in a loud voice to screen out incoming noise
___ distracted by noise; intolerance of background noise	___ frequently needs instructions repeated	Notes:
___ very sensitive to noises from other sources (eg the next classroom)	___ trouble learning to read	

Sensory Processing Measure, 2nd Ed



Introduction

The SPM-2 is a comprehensive assessment instrument with unique forms in each of five age levels: Infant/Toddler, Preschool, Child, Adolescent, and Adult. At each level, forms may be used independently or jointly to provide an overview of a client's sensory functioning across multiple environments and raters.

- Can sometimes miss still need to look at different environments and different people who know the child
- Sensory kids can be different in different environments
- Parents don't always und how to answer
- Many items vs few items/frequency/intensity
- Planning & Ideas and Social Participation as separate pieces

Example: Parent Questions SPM2 Preschool Home Form

This child...

TOUCH

21. Pulls away when touched lightly or unexpectedly.	Frequently	(3)
22. Is distressed by the feel of new clothes.	Never	(1)
23. Becomes distressed by having his or her fingernails or toenails cut.	Frequently	(3)
24. Seems bothered when someone touches his or her face.	Frequently	(3)
25. Avoids touching or playing with messy things, such as paint or glue.	Occasionally	(2)
26. Has an unusually high tolerance for pain, showing little or no distress at minor injuries.	Never	(1)
27. Dislikes brushing his or her teeth.	Never	(1)
28. Has trouble finding things in a pocket, bag, or backpack without looking.	Never	(1)
29. Fails to clean saliva or food from face.	Frequently	(3)
30. Complains that foods are "too hot" or "too cold."	Never	(1)

This child...

BODY AWARENESS

41. Seeks out activities that involve pushing, pulling, or dragging.	Frequently	(3)
42. Grasps objects, such as a pencil or spoon, too loosely or tightly to use easily.	Frequently	(3)
43. Uses too much pressure for a task, such as slamming doors or pressing too hard on the keyboard.	Frequently	(3)
44. Jumps a lot.	Frequently	(3)
45. Plays too roughly with peers.	Occasionally	(2)
46. Breaks things by pressing, pulling, or pushing too hard.	Occasionally	(2)
47. Puts too much food in mouth.	Never	(1)
48. Deliberately bangs head into objects or people.	Never	(1)
49. Spills or knocks over items.	Occasionally	(2)
50. Throws ball with too much or too little force.	Occasionally	(2)

This child...

PLANNING AND IDEAS

61. Has trouble figuring out how to carry several objects at the same time.	Never	(1)
62. Has difficulty putting belongings away in their proper places.	Occasionally	(2)
63. Fails to perform the proper sequence of actions in everyday routines, such as getting dressed or setting the table.	Occasionally	(2)
64. Fails to complete tasks with multiple steps.	Occasionally	(2)
65. Has difficulty correctly imitating movements, sounds, or expressions.	Never	(1)
66. Has difficulty copying a model when building with blocks or Legos.	Never	(1)
67. Has difficulty with tasks that require coordination of both hands, such as opening a container.	Never	(1)
68. Needs more practice than others to learn a new skill.	Never	(1)
69. Takes excessive time to complete routine tasks.	Occasionally	(2)
70. Has difficulty generating ideas for what to make or build, such as when playing with blocks or craft materials.	Never	(1)

This child...

SOCIAL PARTICIPATION

71. Plays with friends cooperatively, without lots of arguments.	Occasionally	(3)
72. Interacts appropriately with parents and other adults.	Frequently	(2)
73. Shares things when asked.	Frequently	(2)
74. Carries on a conversation without standing or sitting too close to others.	Frequently	(2)
75. Maintains appropriate eye contact during conversation.	Never	(4)
76. Joins in play with others without disrupting the ongoing activity.	Occasionally	(3)
77. Takes part in appropriate mealtime conversation and interaction.	Occasionally	(3)
78. Participates appropriately in family gatherings and outings.	Frequently	(2)
79. Is flexible when a routine is changed.	Occasionally	(3)
80. Cooperates while running errands with family members.	Frequently	(2)

Special Features

- Ability to identify sensory vulnerabilities by using individual item analysis
- Opportunities to look at function with input from a variety of raters (teacher, parent, individual self-report, other teachers/bus driver)
- Preschool (2-5 years) Home Form and School Form
- Child (5-12 years) Home Form and School Form AND School Environments forms (Art, Bus, Cafeteria, Music, Physical Ed., Recess)



Computer Scoring - Sample



FOR CLINICIAN USE ONLY

Score Report



Child
Home Form
Ages 5-12 years

SPM™-2

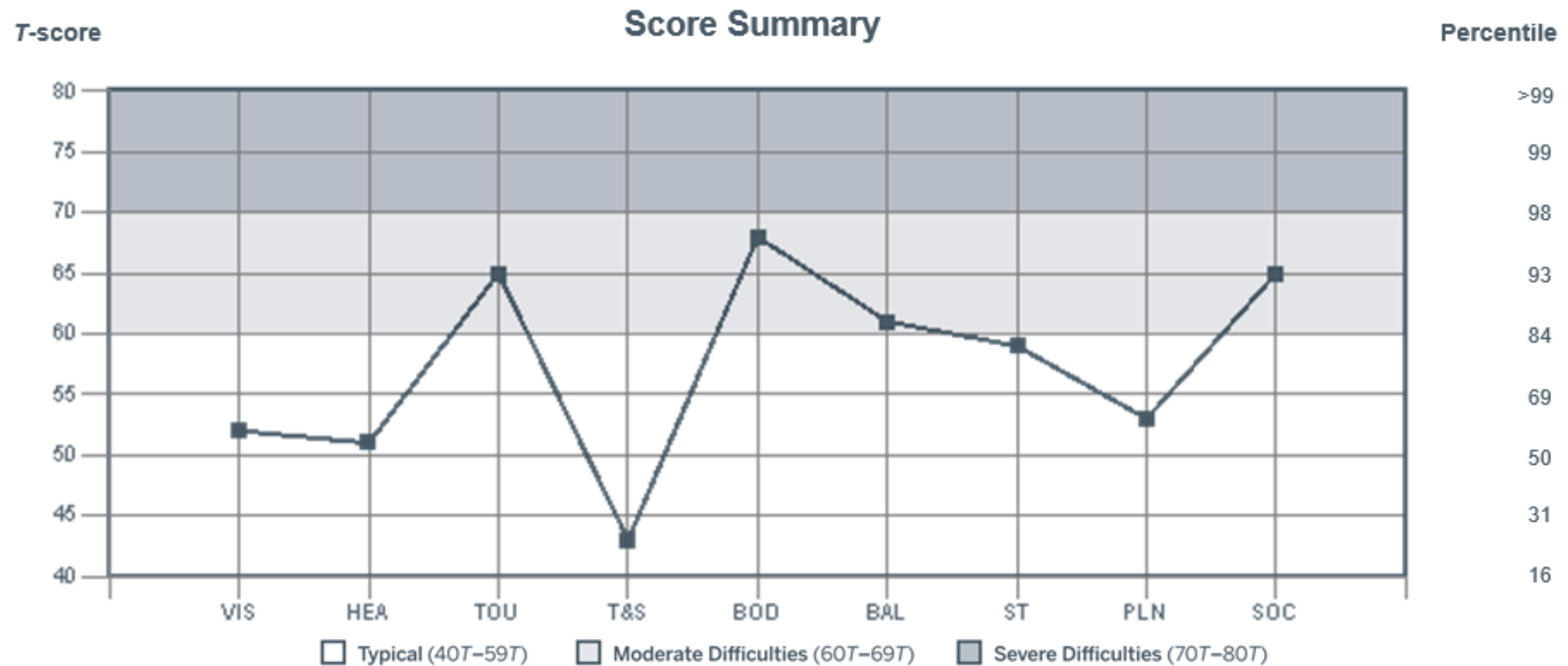
Sensory Processing Measure, Second Edition

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Name of child being evaluated	Gender	Date of birth	Date of testing	Age
<input type="text"/>	Male	<input type="text"/>	02/10/2024	7 years 1 month
School/Agency	Grade	Date of processing		
New Market Elementary School	1st	03/16/2024		
Rater's name	Rater's relationship to child being evaluated			
<input type="text"/>	Mom			

	VIS	HEA	TOU	T&S	BOD	BAL	ST	PLN	SOC	
Raw score	13	12	19	11	22	15	92	14	26	Raw score
T-score	52	51	65	43	68	61	59	53	65	T-score
%ile	58	54	93	24	96	86	82	62	93	%ile
Interpretive range	Typical	Typical	Moderate Difficulties	Typical	Moderate Difficulties	Moderate Difficulties	Typical	Typical	Moderate Difficulties	Interpretive range

VIS = Vision; HEA = Hearing; TOU = Touch; T&S = Taste and Smell; BOD = Body Awareness; BAL = Balance and Motion; ST = Sensory Total; PLN = Planning and Ideas; SOC = Social Participation



Interpretive Guide

The SPM-2 interpretive guide provides general guidelines to assist the user in developing an initial interpretation. As such, these guidelines give general interpretations that may be relevant to multiple age levels. Therefore, before making a final interpretation, the user should carefully review the multistep interpretive process detailed in Chapter 3 of the SPM-2 Manual (WPS Product No. W-706M). As with any assessment tool, no clinical decisions should be made solely on the basis of the SPM-2 without considering the widest possible range of information sources.

The following guidelines are based on the interpretive ranges associated with this client's *T*-score on each SPM-2 scale.

Typical range (*T*-score: 40–59)

A score in the Typical range indicates behavioral and sensory functioning within the average range. Although some behaviors may be scored above the median item score, problems are generally within the typical range of functioning for most people in that age level, represented by the standardization sample described in Chapter 4 of the SPM-2 Manual.

Moderate Difficulties range (*T*-score: 60–69)

A score in the Moderate Difficulties range indicates mild to moderate difficulties in behavioral or sensory functioning. When a client scores in the Moderate Difficulties range on any scale, it is important to examine the item responses to determine whether there is a consistent pattern of *Occasionally* and *Frequently* ratings, or whether the score is elevated due to a few *Always* ratings for one type of sensory processing issue. That is, the Moderate Difficulties range may indicate occasional negative reactions to a wide range of sensory inputs, or it may represent stronger negative responses to specific types of sensory stimuli or experiences. These item ratings may suggest specific sensory integration or processing vulnerabilities to target for intervention (e.g., over-reactivity to tactile stimulation).

Severe Difficulties range (T-score: 70–80)

A score in the Severe Difficulties range indicates a significant sensory processing or behavioral problem that may have a noticeable effect on the client's daily functioning. Depending on the overall SPM-2 results, such difficulties may manifest across multiple sensory systems and multiple environments. Therefore, in order to clarify which sensory integration or processing vulnerabilities are in most immediate need of intervention, it is important to identify individual item responses that elevated the client's score.



Touch

The TOU scale items measure a range of tactile processing challenges, such as over- and under-reactivity to tactile stimulation, tactile-seeking behaviors, and perception.

A score in the Moderate Difficulties range may indicate tactile perception difficulties impacting functional skills, especially performance of fine-motor tasks, such as buttoning or manipulating objects precisely. It may indicate occasional negative reactions to tactile inputs, such as avoidance of clothing with seams that contact the skin, or refusal of foods with certain textures. Any of these problems may interfere with the client's functioning across a range of environments.



Body Awareness

The BOD scale items measure body awareness, or *proprioception*, a client's ability to sense precisely both the static position and dynamic changes in the position of limbs, fingers, and other body parts.

A score in the Moderate Difficulties range may indicate difficulty in regulating the amount of force to use when managing objects, such as pressing too forcefully or too lightly on a pencil when drawing or writing. Clients who score in this range may appear uncoordinated or unaware of their body position. These difficulties may interfere with academic performance as well as social participation. Some clients may often seek out intense proprioceptive experiences, such as jumping or climbing. Additionally, proprioceptive-seeking behavior is often noted in individuals with over-reactivity in other senses. Such co-occurrence may not reflect a difficulty with proprioception so much as the use of intense proprioceptive inputs to minimize or block out other sensory inputs. Thus, the evaluator should examine items in the other sensory system scales to determine whether over-reactivity in those systems may be contributing to proprioceptive-seeking behaviors.

Balance and Motion

The BAL scale items measure a client's *vestibular* function, or their balance and equilibrium while sitting, standing still, or in motion. BAL items also measure over- or under-reactivity to sensations of moving through space.

A score in the Moderate Difficulties range may indicate occasional negative reactions to a wide range of vestibular inputs, such as nausea when riding in the backseat of a car or anxiety during activities that involve movement through space, such as walking down stairs or gentle swinging. For some individuals, it may represent stronger and more frequent negative responses to a few specific vestibular experiences. It also may indicate vestibular difficulties that interfere with postural control and skillful, well-timed movement through space. Alternatively, a score in the moderate range may also reflect under-reactivity, manifested as seeking intense or prolonged vestibular stimulation, such as frequent rocking, swinging, or other kinds of intense experiences involving movement through space, such as bouncing or jumping.

Social Participation

The SOC scale items measure a person's participation in social activities in the home, community, or school. The item content addresses general social participation, including items referring to specific aspects of verbal and nonverbal communication, conflict resolution, and flexibility in peer and social interaction.

A score in the Moderate Difficulties range is likely to indicate some difficulties participating with others at home, school, work, and in the community. Maintaining friendships may be difficult. When the SOC score is in the Moderate Difficulties range, it is important that the evaluator identify and reflect on the specific items that contributed to the elevated SOC scale score, in order to gain insight into the kinds of situations that are problematic for the client. Further, it is imperative that the clinician consider how the client's ability to engage with others may be influenced by challenges with sensory processing and/or praxis. Often, difficulties in social-relational skills are related to problems with sensory processing or praxis. For example, a client with an elevated score on SOC may also have elevated scores on one or more of the sensory systems and/or praxis scales. However, a client's score on the SOC scale may also be elevated for reasons unrelated to praxis or sensory integration and processing, for example, communication disorders, very shy temperament, or history of trauma. In interpreting the SOC score, the evaluator should consider the other SPM-2 scores in addition to medical, developmental, cognitive, and environmental factors that may have an impact on social functioning.

Interpretation

Modulation – Social/Emotional

- Window of tolerance
- Arousal state/autonomic/activation
- Sensory responsivity and recovery
- Quality of movement

Discrimination-Skills/Postural

- Perceiving and understanding subtle differences
- Postural adjustment and ability to maintain upright and respond to gravity



Thank you

Erin Taylor and Barbara Luborsky

Send me your phone # so I can add you to the CoP Ghana WhatsApp group where I will share a link to a list of resources from each of today's presenters related to today's presentations.

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