


Sensory Profile 2 Overview

Assessing Sensory Strengths and Challenges



Presented by: Lynsey Psimas, PhD

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About the Author


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Sensory Profile 2 Overview

Age Range:
Birth – 14:11



Administration Options:
Paper-and-pencil or online through Q-global™

Completed by:
Caregiver and/or teacher


Scoring Options:
Manual Scoring or Q-global™

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Sensory Profile 2 Forms

- Infant Sensory Profile 2:** Birth-6 months
- Spanish available
- Toddler Sensory Profile 2:** 7-35 months
- Spanish available
- Child Sensory Profile 2:** 3-14 years
- Spanish available
- Short Sensory Profile 2:** 3-14 years
- Spanish available
- School Companion Sensory Profile 2:** 3-14 years

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What is the Sensory Profile 2?

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What is the Sensory Profile 2?

- Family of assessments
 - Evaluate sensory processing in children
- Helps identify the effect of sensory processing on **functional participation** in a child's:
 - Home
 - School
 - Community

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Sensory Profile 2 Overview

What is the Sensory Profile 2?



- A set of judgment-based caregiver or teacher questionnaires.
- Information collected helps formulate hypotheses.
- Parents and/or teachers (with regular contact with the child) complete the questionnaire.
- Patterns of responses indicate the child's sensory processing patterns.

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Sensory Processing is NOT a unitary construct

Everyone falls somewhere on EACH continuum

Name

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Appropriate Uses of SP2



- Contribute to determining eligibility for services.
- Data provides information for intervention planning within a multi-tiered model of support.
- Data provides a vehicle for discussion.
- Data are combined with other data (ex. Siblings)
- NOT designed to document progress.



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Added Data for Diagnoses



- *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5) criteria for Autism Spectrum Disorder includes:
 - Manifestation of “hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment”
 - (American Psychiatric Association [APA], 2013)
- The Sensory Profile 2 provides a data-based way to document this criteria.

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What's new on the SP2?

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Sensory Profile 2: What's New?



- Infant, Toddler, Child, Short, and School Companion combined in one kit, with one manual
- Updated content
- Shorter administration time (reduced number of items except Toddler Form)
 - Infant: 36 -> 25
 - Child: 125 -> 86
 - School: 62 -> 44
 - Short: 38 -> 34
- Greater consistency between forms
- Infant and Toddler record forms now on two separate forms

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Sensory Profile 2: What's New?



- Ability to score online via Q-global
- Ability to compare responses across caregivers with new multi-rater report in Q-global.
- Percentile rank added for an additional level of analysis
- Expanded upper age range to 14:11 on Child, School Companion, and Short Forms

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Sensory Profile 2: What's New?



- No longer separate score sheets: Score summary included on questionnaire
- Questions were carefully reviewed to improve readability (remove double negatives)
- Increased validity and reliability studies
- Weighting on questions: "Almost Always" = 5 instead of 1

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Example Items & Icon Key



Item	Icon	Item Description	Almost Always	Frequently	Half the Time	Occasionally	Almost Never	Does Not Apply
11	SK	only pays attention if I speak loudly						
12	RG	only pays attention when I touch my child (and hearing is OK)						
13	SN	startles easily at sound compared to same-aged children (for example, dog barking, children shouting)						
14	RG	is distracted in noisy settings						
15	RG	ignores sounds, including my voice						
16	SN	becomes upset or tries to escape from noisy settings						
17		takes a long time to respond to own name						

ICON KEY	
SK	Seeking
AV	Avoiding
SN	Sensitivity
RG	Registration
	No Quadrant

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New Ratings (1-5)



When presented with the opportunity, my child...

Almost Always	responds in this manner Almost Always (90% or more of the time).
Frequently	responds in this manner Frequently (75% of the time).
Half the Time	responds in this manner Half the Time (50% of the time).
Occasionally	responds in this manner Occasionally (25% of the time).
Almost Never	responds in this manner Almost Never (10% or less of the time).
Does Not Apply	If you are unable to answer because you have not observed the behavior or believe that it does not apply to your child, please check Does Not Apply .

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52% of original items are included in the ISP2

Items used in Original but Not Used in SP2	Items used in Original & SP2	New items in SP2
	GENERAL	
child is active throughout the day	stays quiet and calm in an active setting compared to other babies	needs the same routine to stay content and calm
behavior deteriorates when the schedule changes	reworded	acts in a way that interferes with family schedules and plans
has difficulty getting to sleep and is easily awakened	reworded	requires help to get to sleep
	is unaware of people coming in or leaving the room	sleeps more than other babies
	is irritable compared to other babies	only pays attention when I touch my baby (and hearing is OK)

TOUCH PROCESSING		
Items used in Original but Not Used in SP2	Items used in Original AND in SP2	New items in SP2
seems unaware of wet or dirty diapers	becomes upset when having nails trimmed	needs to be swaddled or wrapped to relax
resists being held		is startled by texture differences (for example, on grass, on carpet, on blankets)
becomes agitated when having hair washed		
avoids getting face/nose wiped		
resists being cuddled		

When all babies engage in a behavior, it does not discriminate

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Sensory Profile 2 Overview

Table 3.15 Sensory Profile 2 Quadrant, Sections and School Factors by Form	SDP		SDP		SDP		SDP	
	0-6 months	7-35 months	36-42:11 years	43-49:11 years	50-56:11 years	57-63:11 years	64-70:11 years	71-77:11 years
Quadrants								
Seeking/Seeker		x	x	x	x	x		
Avoiding/Avoider		x	x	x	x	x		
Sensitivity/Sensor		x	x	x	x	x		
Registration/Bystander		x	x	x	x	x		
Sensory sections								
Total Score	x							
General Processing	x							
Auditory Processing	x							
Visual Processing	x	x	x	x	x	x		
Touch Processing	x	x	x	x	x	x		
Movement Processing	x	x	x	x	x	x		
Body Position Processing	x	x	x	x	x	x		
Oral Processing	x							
Behavioral sections								
Interpersonal Responses Associated With Sensory Processing		x						
Conduct Associated With Sensory Processing		x						
Social Emotional Responses Associated With Sensory Processing		x						
Attentional Responses Associated With Sensory Processing		x						
School factors								
School Factor 1								
School Factor 2								
School Factor 3								
School Factor 4								

Scores: Raw Score based cut scores, percentile ranges, and descriptive categories for:

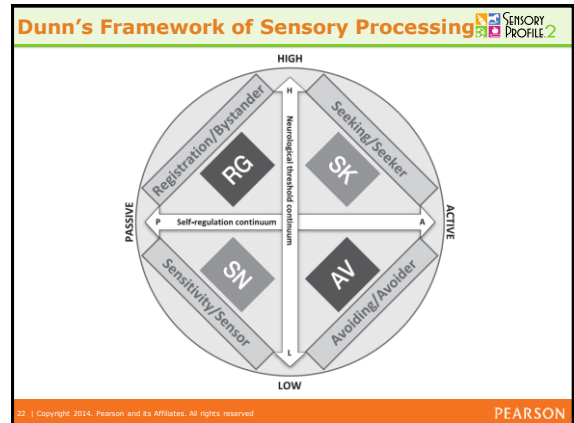
1. Sensory Patterns Summary (Quadrants)
2. Sensory and Behavioral Sections
3. School Factors (School Companion only)

Table 3.16 Child Sensory Profile 2 Quadrant and Section Cut Scores	← Less Than Others		Just Like the Majority of Others	More Than Others →	
	Much Less Than Others	Less Than Others		More Than Others	Much More Than Others
Quadrants					
Seeking/Seeker	0-6	7-19	20-47	48-60	61-95
Avoiding/Avoider	0-7	8-20	21-46	47-59	60-100
Sensitivity/Sensor	0-6	7-17	18-42	43-53	54-95
Registration/Bystander	0-6	7-18	19-43	44-55	56-110
Sensory sections					
Auditory	0-2	3-9	10-24	25-31	32-40
Visual	0-4	5-8	9-17	18-21	22-30
Touch	0	1-7	8-21	22-28	29-55
Movement	0-1	2-6	7-18	19-24	25-40
Body Position	0	1-4	5-15	16-19	20-40
Oral		0-7	8-24	25-32	33-50
Behavioral sections					
Conduct	0-1	2-8	9-22	23-29	30-45
Social Emotional	0-2	3-12	13-31	32-41	42-70
Attentional	0	1-8	9-24	25-31	32-50

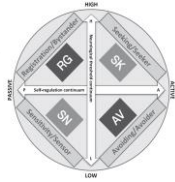
Note: Blank cell denotes no scores available for this range.



Theoretical Foundations



- ### Combination of sensory events
- 1. Sensory System Scores**
 - General, Auditory, Visual, Touch, Movement, Body Position, Oral
 - 2. Behavioral Scores**
 - Behavioral, Conduct, Social Emotional, Attentional
 - 3. Sensory Pattern Scores**
 - Seeking/Seeker, Avoiding/Avoider, Sensitivity/Sensor, Registration/Bystander
 - 4. School Factor Scores** (School Companion only)
 - Supports, Awareness, Tolerance, Availability

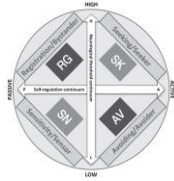
- ### Sensory Sensitivity
- **Passive** response to a **low threshold**
 - Easily respond to sensory stimuli
 - Notice things other people don't notice
 - Highly aware of their surroundings
 - Distractible
- 

Sensory Profile 2 Overview

Sensation Avoiding



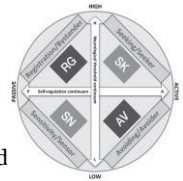
- **Actively** counteract a **low threshold**
- Intentional withdrawal or blocking of sensation
- Use of rituals and routines
- Overwhelmed by sensory-rich environments
- Good at creating structured and supportive environments



Low Registration



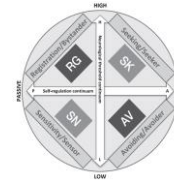
- **Passive** response with a **high threshold**
- Miss available sensory input
- Spacey, clumsy
- Under-responsive or slow to respond
- Can focus in distracting environments
- Flexible, comfortable in wide range of environments



Sensation Seeking



- **Behavioral response** to counteract a **high threshold**
- Enjoys sensory rich environments
- Creates sensation
- Easily bored
- Trouble tolerating low stimulus environments

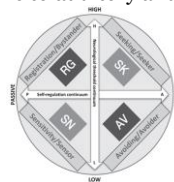


Clinical Profiles

Profile: Autism/Asperger



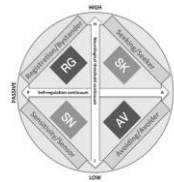
- More likely to exhibit behaviors in:
 - Sensation seeking, low registration, and sensory sensitivity
- Especially sensitive to auditory and oral motor input



Profile: Older adults



- Low scores on Sensation Seeking
- High scores on Low Registration with cumulatively higher scores as people age from 60 – 70 – 80.



Sensory Profile 2 Overview

Attention Deficit Hyperactivity Disorder

- Differences across all quadrants
- May be more reflective of a modulation problem

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Scoring the Sensory Profile 2

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Cut score and Classification System

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Administration/Scoring Time

- Paper and web-based Administration**
 - Infant Sensory Profile 2: 5 to 10 minutes
 - Toddler Sensory Profile 2: 10 to 15 minutes
 - Child Sensory Profile 2: 15 to 20 minutes
 - Short Sensory Profile 2: 5 to 10 minutes
 - School Companion (SP2): 15 minutes
- Scoring**
 - Manual Scoring: Approx. 15 minutes
 - Web-based administration and scoring: 0 minutes
- Enhanced Assessment and Planning Report**
 - Adds approx. 15 to 30 minutes to completion time

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Sensory Profile 2: Q-global Scoring

- Reporting Options in Q-global:**
 - Score Report
 - Item Analysis Report
 - Assessment & Planning Report
 - Helps determine next-steps based on results
 - Multi-rater Report
- Administration Options in Q-global:**
 - Ability to administer on-screen in the office, or remotely by sending a link by email through Q-global

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Q-global example

QUADRANT SCORE SUMMARY

Quadrant	Raw Score	Percentile Range	Classification
Seeking/Seeker	41	9-64	Just Like the Majority of Others
Avoiding/Avoider	72	97-99	Much More Than Others
Sensibility/Sensor	53	87-96	Much More Than Others
Regulation/Dylander	70	97-99	Much More Than Others

SENSORY AND BEHAVIORAL SECTION SCORE SUMMARY

Sensory Section	Raw Score	Percentile Range	Classification
AUDITORY Processing	27	86-99	More Than Others
VISUAL Processing	16	31-62	Just Like the Majority of Others
TOUCH Processing	17	97-99	Much More Than Others
MOVEMENT Processing	14	8-85	Just Like the Majority of Others
BODY POSITION Processing	37	97-99	Much More Than Others
ORAL SENSORY Processing	15	8-67	Just Like the Majority of Others
Behavioral Section	Raw Score	Percentile Range	Classification
CONDUCT associated with sensory processing	27	85-96	More Than Others
SOCIAL EMOTIONAL responses associated with sensory processing	56	97-99	Much More Than Others
ATTENTIONAL responses associated with sensory processing	24	7-84	Just Like the Majority of Others

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Sensory Profile 2 Overview



RELIABILITY AND VALIDITY

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Normative Information



- 2012-2013 – Stratified sample
- 1791 - Total children
- 337 - Children rated on both child and school forms
- 774 children with disabilities
- Approx. 10% of sample - children with disabilities
- Data collected both digitally and paper/pencil

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Reliability Studies



- Test-Retest Reliability
- *“Consistency of a measure from one time to another”*
 - Caregiver = .83 - .97
 - School = .66 - .93
- Inter-Rater Reliability
- *“Degree to which different raters give consistent estimates of the same phenomenon”*
 - Caregiver: Mostly in .70s and .80s
 - Teacher: Mostly in .70s, .80s and .90s

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Validity Studies



- Previous Sensory Profiles
- BASC-2 PRS and *SP2 Child/Short* forms
- BASC-2 TRS and *SP2 School* form
- SSIS parent and *SP2 Child* form
- SSIS teacher and *SP2 School* form
- Vineland-II and *SP2 Infant/Toddler/Child* forms
- School Function Assessment and *SP2 School* form

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Spanish Validity



- Spanish caregiver forms for:
 - Infant
 - Toddler
 - Child
 - Short
- Validation with 138 Spanish speaking families
- 3 summary scores with differences (Social Emotional, Conduct, Registration)
- **Advice:** Use English cut scores, but Spanish cut scores available for further analysis

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Clinical Comparison Groups



- Discrimination for clinical groups was key for development
- Infant and Toddler forms
 - Developmental Delays
- Child and School Companion forms
 - Autism
 - ADHD
 - Dual diagnosis of ADHD/ASD
 - LD
 - Giftedness
 - Intellectual Disabilities
 - Down Syndrome
 - English as additional language
 - Other vulnerable conditions

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SENSORY PROFILE 2

Intervention Planning

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Intervention Planning

- Whole chapter on intervention planning to address the ‘what next’ question
- Whole chapter on case studies to address different scenarios
- *Assessment and Planning Report*
 - Main function is to support the clinician in relating findings from the questionnaire[s] to participation.

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Intervention Strategies (Table B.1)

Table B.1 Intervention Strategies for Children With More Than Other's SEEKING Scores

THE CHILD	Visual	Auditory	Tactile	Movement	Oral/Taste/Smell	Body Position	General
<p>Visual</p> <p>Select bright colors or abstract shapes and forms.</p> <p>Use bright lighting.</p> <p>Look for environments with lots of visual interest and activity.</p> <p>Vary where the child sits in the classroom.</p> <p>Talk to the child about what you see, ask what he or she sees.</p>	<p>Incorporate sounds in daily activities (e.g., humming, play music) while doing tasks.</p> <p>Use background noise.</p> <p>Encourage work and leisure activities done in or around with a variety of textures.</p> <p>Ask questions such as "What do you hear?" and "What do you see?"</p> <p>Provide toys that make sounds while playing with them.</p> <p>Discuss with the child what you hear, see, and what he or she hears.</p> <p>Use textured fabrics, objects, or toys.</p>	<p>Choose activities that incorporate touch with others (e.g., dancing, massage) with the appropriate age-appropriate (e.g., grooming, clothing).</p> <p>Select clothes, furniture, or materials with a variety of textures.</p> <p>Ask questions such as "What do you feel?" and "What do you see?"</p> <p>Use textured fabrics, objects, or toys.</p>	<p>Incorporate movement in activities (e.g., sit on a ball, have the child pass things out, and the child bring).</p> <p>Use textured objects.</p> <p>Use objects, not people.</p> <p>Ask the child to carry things during transitions (e.g., after getting into the car).</p> <p>Provide extra steps for the child to perform tasks.</p> <p>Vary routines.</p>	<p>Use a "who's" chart on the wall.</p> <p>Talk to the child about what he or she smells.</p>	<p>Use a "who's" chart on the wall.</p> <p>Talk to the child about what he or she smells.</p>	<p>Look for group activities.</p> <p>Find opportunities for self-expression.</p> <p>Incorporate novelty into the child's daily routine.</p>	

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SENSORY PROFILE 2

CASE STUDIES

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Case Study: Arnie

- 11 years old, 5th grade
- *Teacher concerns:*
 - Not available for learning
 - Gets upset with his group for not understanding him
 - Frequently leaves the group and refuses to rejoin them
 - Arnie spends more and more time alone when not required to work on projects

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Case Study: BASC-2 TRS

- EXTERNALIZING Behavior:
 - Hyperactivity: 40%ile
 - Aggression: 98%ile
 - Conduct Problems: 85%ile
- INTERNALIZING Behavior:
 - Anxiety: 70%ile
 - Depression: 99%ile
 - Somatization: 30%ile

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Case Study: Observations



OT Observation:

- Arnie works well when teacher sends him to library
- Intolerance for small groups, especially when students are enthusiastic about ideas

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Case Study: SCSP2 Quadrants



Seeking/Seeker

-Arnie is *just as interested* in sensory experiences as the majority of other students

Avoiding/Avoider

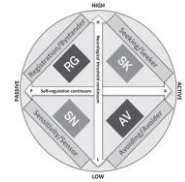
-Arnie is *much more likely* to be overwhelmed by sensory experiences than other students

Sensitivity/Sensor

-Arnie detects about the *same amount* of sensory cues as the majority of other students

Registration/ Bystander

-Arnie notices sensory cues *just like the majority* of other students



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Case Study: SCSP2 Sensory and Behavioral Sections



Auditory processing

- Arnie responds *much more* to sounds than other students.

Visual processing

-Arnie responds to sights *just like the majority* of other students.

Touch processing

Arnie responds to touch *just like the majority* of other students.

Movement processing

Arnie responds to movement *just like the majority* of other students.

Behavioral responses

Arnie exhibits behaviors associated with sensory processing *much more than other students*.

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Case Study: SCSP2 School Factors



School Factor 1 (Need for External Supports)

Arnie needs the *same amount of support* as the majority of other students

School Factor 2 (Awareness and Attention)

Arnie is *just as alert and active* in the learning environment when compared to the majority of other students

School Factor 3 (Tolerance)

Arnie has *many more challenges* tolerating changes in the routine than other students

School Factor 4 (Availability)

Arnie is *much more detached* from learning than other students

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Case Study: Conclusions



- Arnie is experiencing Sensory **AVOIDING**, linked with **Aggression** and **Depression**, and has challenges **Tolerating** changes and is less **Available** for learning.
- Fleeing groups is likely related to an increased number of students in the classroom making more noise as they interact about their projects.

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Case Study: Interventions



- Focus on decreasing sensory experiences in daily activities, and focusing on Arnie's sensory strengths.
- Limit large group exposure and find opportunities for small groups or one-on-one interaction
- Use white noise or calming, repetitious sounds to drown out distracting noises
- Limit long unstructured time (recess)/provide alternatives (quiet place)
- Present information visually rather than verbally to minimize noise and speak to Arnie's preference to review information in this way
- Manage Depressive and Aggressive behaviors

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Sensory Profile 2 Overview

Case Study: Kaleb



- Age: 2.5
- Male
- Difficulty with Self-calming:
 - Since 6 months old
 - Always cried while being held and when riding in a car
 - Withdrew when upset by “shutting down”
 - Stopped interacting with parents and favorite toys
- Developmental team (developmental pediatrician, OT, and developmental psychologist) diagnosed *Regulatory Disorder*
- Self-calming has improved, but continues to have limited diet and resists self-care activities (bathing, brushing teeth, etc).

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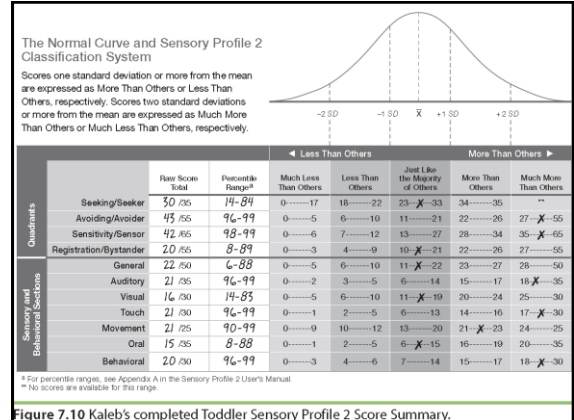


Figure 7.10 Kaleb's completed Toddler Sensory Profile 2 Score Summary.

Case Study: Interventions



- First focus on mealtime
 - Introduce new foods on a separate plate
 - Do not force him to eat
- Morning routine
 - Didn't want teeth brushed, nails clipped, or baths
 - Deeper water for calming touch
 - Try different washcloths and hand positions
 - Warm bathroom ahead of time
- Calming touch
 - Did not like cuddling (mother recoiled)
 - Hold Kaleb firmly while putting on lotion, drying him off

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Case Study: Intervention Outcomes



- Would eat chicken and noodles
- Bath time smiling and reclining on foam sponge; preferred bath “pouf”
- Would let parents hold him to read a book

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Summary



- 4 products now combined into one manual
- Expanded age range to 14:11
- No need to purchase separate forms, scoring summary included
- No double negatives!
- Shorter questionnaires
- Strong theoretical constructs
- Web-based administration and scoring
- Links sensory processing to participation through Assessment and Planning Report
- Strengths-based assessment; positive psychology

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Thank you!



For more information...

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