



**KEYNOTE:
THURSDAY, JUNE 20, 2013**

Senses and Sensibilities: An Inside View on Sensory Issues

STEPHEN SHORE, EdD
Assistant Professor of Special Education, Adelphi University

Tracks: Educators/Clinicians, Family

ABSTRACT:

The variation in perception of sensory stimuli for many with autism often causes great discomfort and the information received may be not even be usable. The aim of this presentation is to enable susceptible individuals and those close to them to avoid and minimize the effect of sensory overload through easy to implement solutions, thereby enabling those with sensory issues to lead fulfilling and productive lives.

OBJECTIVES:

1. Participants will be able to experience what sensory overload may feel like for an individual on the autism spectrum.
2. Participants will be able to list at least three situations that might indicate that a sensory issue is present.
3. Participants will be able to learn how to develop and implement accommodations for sensory issues.
4. Participants will be able to become familiar with instruments for assessing for sensory issues.

Stephen Shore, EdD

was diagnosed with atypical development and strong autistic tendencies and considered too sick for outpatient treatment. Stephen was recommended for institutionalization. Nonverbal until four, and with much support from his parents, teachers, wife, and others, Stephen is now a professor at Adelphi University where his research focuses on matching best practice to the needs of people with autism. In addition to working with children and talking about life on the autism spectrum, he presents and consults internationally on adult issues pertinent to education, relationships, employment, advocacy, and disclosure as discussed in his books *Beyond the Wall: Personal Experiences with Autism and Asperger's Syndrome*, *Ask and Tell: Self-Advocacy and Disclosure for People on the Autism Spectrum* and the critically acclaimed *Understanding Autism for Dummies*. President emeritus of the Asperger's Association of New England and former board member of the Autism Society, Stephen serves in the Interagency Autism Coordinating Committee, Asperger's Syndrome and High Functioning Autism Association, United States Autism and Asperger Alliance and other autism-related organizations.

Senses and Sensibilities: An Inside View on Sensory Issues

Stephen Shore, EdD

**Senses and Sensibilities:
An Inside View on Sensory Issues**

Presented by
Stephen M. Shore, EdD
Tumbalaika@AOL.COM
www.AutismAsperger.net

**A little
about me...**

A LITTLE ABOUT ME
Introduction

The Autism Bomb — NOT

Loss of speech & tantrums
Self-stims
Environmental withdrawal

FedEx

THE AUTISM SPECTRUM

•• Autism Spectrum Disorder ••

Global Delay

Increasing Variability of Presentation

•• Autism Spectrum Disorder ••

••• Twice Exceptionality •••

Hossein, D. (1997). "Rosenzweig wedge". From Aspergers: What we have learned in the '90s conference in Westboro, MA. Used with permission

**A CLOSER LOOK AT MY
PLACEMENT ON THE AUTISM SPECTRUM — Adult**

Helping people with autism lead fulfilling and productive lives to their greatest potential

Stephen Shore

Sheltered Workshop for People with Asperger Syndrome

EXPERIENCING SENSORY ISSUES
• PROVIDING AN INSIDE VIEW •

Senses and Sensibilities: An Inside View on Sensory Issues

Stephen Shore, EdD

SENSORY OVERLOAD ACTIVITY

In groups of 5, each person plays a specific role. Start when given the signal.

Person #1: You play the role of a person with autism. Your job is to listen to what Person #5 is reading to you so you can take a test on the material. Try to ignore everyone else.

Person #2: Stand behind the student playing the part of someone with autism. Rub the edge of an index card (or piece of cardboard) against the back of their neck. You do not need to rub hard, but keep doing it over and over.

Person #3: Grab a book (any book will do), lean close to Person #1 and read in a loud voice the entire time.

Person #4: Pat Person #1 on the head and shoulder the entire time.

Person #5: Using a normal voice, read a paragraph to Person #1 then ask him or her questions about what you read. Do NOT try to drown out the other noises.

Have all the group members take a turn being Person #1.

- How did it feel to have so much commotion going on?
- Did it make you want to scream and run away?
- Was Person #1 able to concentrate on the paragraph being read?
- What might have helped?

Adcock, B., & Remus, M. (2006). Disabilities awareness activity packet: Activities and resources for teaching students about disabilities. Possibilities, Inc. p. 4. Available on February 19, 2011 at <http://www.vcu.edu/partnership/C-SAL/downloads/PDF/DisabilityAwarenessPacket.pdf>.

SENSORY OVERLOAD ACTIVITY

1. How did it feel to have so much commotion going on?

3. Was person #1 able to concentrate?

2. Did it make you want to scream and run away?

4. What might have helped?

Adcock, B., & Remus, M. (2006). Disabilities awareness activity packet: Activities and resources for teaching students about disabilities. Possibilities, Inc. p. 4. Available on February 19, 2011 at <http://www.vcu.edu/partnership/C-SAL/downloads/PDF/DisabilityAwarenessPacket.pdf>.

SENSORY ISSUES

What are they?

WHAT IS SENSORY PROCESSING DISORDER?

SENSORY PROCESSING

Making the World a More Sensorially Friendly Place

"Sensory integration is the neurological process of organizing the information we get from our bodies and from the world around us for use in daily life" (Kranowitz, 1998, p. 42).

According to Dr. Ayres, "Over 80% of the nervous system is involved in processing or organizing sensory input, and thus the brain is primarily a *sensory processing machine*" (Kranowitz, 1998, p. 42). The brain modulates this input which in turn guides our activity level. Activity may be mental, physical or emotional.

SENSORY PROCESSING

Making the World a More Sensorially Friendly Place

"Sensory integration dysfunction is the inability to process information received through the senses" (Kranowitz, 1998, p. 8).

... inefficient neurological processing. "The brain cannot analyze, organize, and connect -- or integrate -- sensory messages" (Kranowitz, 1998, p. 8).

Not brain damage but rather "indigestion" or a "traffic jam" of the brain (Kranowitz, 1998, p. 50).

Child may be hyper, hypo, or alternate between the sensitivities at any given time.

INNER AND OUTER SENSES

SENSORY VIOLATIONS

Vestibular: Hypo → Spinning/Hyper → Gravitational Insecurity
Proprioceptive: Deep pressure, Under mattresses, Weighted blankets
 Love airplanes but they mess w/Vest & Prop senses
 Brave little kids

Senses and Sensibilities: An Inside View on Sensory Issues

Stephen Shore, EdD

CHARACTERISTICS OF CHILDREN WITH AUTISM SPECTRUM CONDITIONS

Overly sensitive to loud noises...
 Bumps into people in line...
 Picky eater...
 Difficulty paying attention...
 Difficulty with hair washing and brushing...
 Problems with handwriting...
 Clumsy...
 Always "on the go" on the...
 Only likes certain types of clothing...

Adapted from Myles, Cook, Miller, Rinner & Robbins. (2000). *Asperger Syndrome and sensory issues: Practical solutions for making sense of the world*. Shawnee Mission, KS: Autism Asperger Publishing, P. 5.

SENSORY PROCESSING

Making the World a More Sensorially Friendly Place

SENSORY PROCESSING

Making the World a More Sensorially Friendly Place

Transmission of Sensory Information

- All sensory information (except smell), first enters brain through the - **Reticular Activating System (RAS)** (bundle of nerves atop the brain) stem, including the:
 - Medulla Oblongata
 - Pons Varolii
 - Midbrain
- Here information is sifted and decisions made whether a response is necessary and which information will be sent higher up (later) for further processing.

Adapted from Berger, D. (2012). *Music therapy, sensory integration, and the autistic child*. London: Jessica Kingsley Publishers

SENSORY PROCESSING

Making the World a More Sensorially Friendly Place

Approximately **75%** of sensory information is... **Discarded**

Adapted from Berger, D. (2012). *Music therapy, sensory integration, and the autistic child*. London: Jessica Kingsley Publishers

SENSORY PROCESSING

Making the World a More Sensorially Friendly Place

The remaining ~ 25% of information is transmitted from the **RAS** to the **Thalamus** and **Limbic System**.

The **Limbic System** is a sort of "ring" which includes the **Amygdala** and **Hypothalamus**.

If the information represents **danger**, then...

Adapted from Berger, D. (2012). *Music therapy, sensory integration, and the autistic child*. London: Jessica Kingsley Publishers

SENSORY PROCESSING

Making the World a More Sensorially Friendly Place

Activating the Fear Response

Hypothalamus
Pituitary
Adrenal
Axis...

In preparation for flight or fight survival response

Adapted from Berger, D. (2012). *Music therapy, sensory integration, and the autistic child*. London: Jessica Kingsley Publishers


Senses and Sensibilities: An Inside View on Sensory Issues

Stephen Shore, EdD

SENSORY PROCESSING
Making the World a More Sensorially Friendly Place

If the information is perceived as **not** threatening...

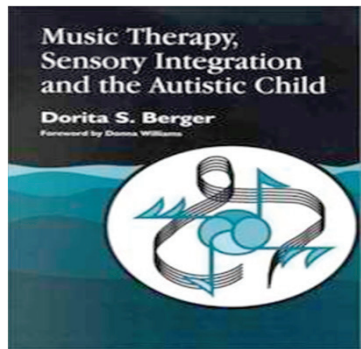
- Tagged in the order received by the **hippocampus** for additional processing
- Working memory
- Areas of the neo-cortex
- Permanent memory



Adapted from Berger, D. (2012). Music therapy, sensory integration, and the autistic child. London: Jessica Kingsley Publishers

SENSORY PROCESSING
Making the World a More Sensorially Friendly Place

Music Therapy, Sensory Integration and the Autistic Child
Dorita S. Berger
Foreword by Thomas Willmore



SENSORY PROCESSING
Making the World a More Sensorially Friendly Place

CASE STUDY

Keith: The Light Switcher


Seemingly at random during class, Keith would often run over to the light switch to turn it off. A frequent visitor of the principal's office his response was "I don't like those lights!"

TASK


You, as a member of Keith's team, please...

1. Arrive at a possible explanation of this behavior, and,
2. what might be done about it?

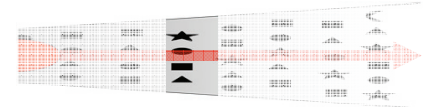
SENSORY PROCESSING
Making the World a More Sensorially Friendly Place




SENSORY PROCESSING
Making the World a More Sensorially Friendly Place Cont.



A CLOSER LOOK AT MY PLACEMENT ON THE AUTISM SPECTRUM — 6



AGE	6
E	Autism bomb hits
V	Putnam evaluation of atypical development, strong autistic tendencies & psychotic
E	Typical development
N	Withdrawal from environment
T	Rapid physical and motor development
S	Tantrums
	Enter Putnam Condition improves to neurotic
	The wonderful world of watch movies
	Echolalia and return of speech
	Eating baby food
	Kindergarten
	Social & academic difficulties
	Discovered making a mess of myself while eating BBQ chicken wings
	Loved cats but dogs...
	Yikes bikes!



Senses and Sensibilities: An Inside View on Sensory Issues

Stephen Shore, EdD

SENSORY PROCESSING
Making the World a More Sensorially Friendly Place

CASE STUDY

Robert: The Boy Who Threw Up in Gym

Upon entering the gym for physical education Robert would throw up. His aide would state "Throwing up in gym is unacceptable behavior. You need to go to time out."

TASK

You, as a member of Robert's team, please...

1. Arrive at a possible explanation of this behavior, and,
2. what might be done about it?

ASSESSMENT OF SENSORY ISSUES

SENSORY PROCESSING
Making the World a More Sensorially Friendly Place

SENSORY PROFILE BY WINNIE DUNN & CATANNA BROWN

Infants/Toddlers
A. Taste/Smell Processing
B. Movement Processing
C. Visual Processing
D. Touch Processing
E. Activity Level
F. Auditory Processing

Low Registration	Sensation Seeking
Sensory Sensitivity	Sensation Avoiding

SENSORY PROCESSING
Making the World a More Sensorially Friendly Place

SENSORY PROFILE BY WINNIE DUNN & CATANNA BROWN

<p>Low Registration</p> <ul style="list-style-type: none"> • High thresholds + passive self-regulation • Don't notice what is going on around them, because brain isn't activating enough • May be withdrawn or difficult to engage • Need extra sensory input to be able to participate in school activities 	<p>Sensation Seeking</p> <ul style="list-style-type: none"> • High thresholds + active regulation • Seekers add movement, touch, sounds, and visual stimuli to every life event to increase sensory input • May lack caution in play, display excitability, and engage in impulsive behavior
<p>Sensory Sensitivity</p> <ul style="list-style-type: none"> • Low thresholds + passive self-regulation • Tend to be more hyperactive, distracted, and easily upset • Have difficulty completing tasks as new stimuli keep capturing their attention • Frequent disruptions in routine make it difficult to learn 	<p>Sensation Avoiding</p> <ul style="list-style-type: none"> • Low thresholds + active self-regulation • Children actively work to reduce input in order to avoid discomfort • Resistant and unwilling to participate in activities, especially new ones

SENSORY PROCESSING
Making the World a More Sensorially Friendly Place

CASE STUDY

Jeri: The Girl Who Started Fights in Line

While waiting in line, ordered by height, Jeri would often hit other students and be accused of starting fights. Her usual response: "He or she bumped or hit me first!"

TASK

You, as a member of Jeri's team, please...

1. Arrive at a possible explanation of this behavior, and,
2. what might be done about it?

A CLOSER LOOK AT MY PLACEMENT ON THE AUTISM SPECTRUM — 13

13
Middle and high school
Finally getting it together but still often in left field
Discovering the band room
Time to focus more on people and not their bicycles

Interests, Relationships & Community

Senses and Sensibilities: An Inside View on Sensory Issues

Stephen Shore, EdD

TELESCOPING TO ADULTHOOD



SENSORY ISSUES & RELATIONSHIPS

- Dating?
- Hygiene?
- Intimate Relationships?

SENSORY ISSUES & EMPLOYMENT

SENSORY PROCESSING		
Making the World a More Sensorially Friendly Place		
Matching Needs to Possible Employment Positions		
Personal Characteristics	Preferred Job Attributes	Possible Positions
Deficit in verbal and nonverbal communication	Few communication requirements	Stock shelves
Challenges in socialization	Limited contact with public, more solitary job duties	Filing, sorting, stapling, paper shredding, after-hours cleaning
Unusual response to sensory stimulation	Provider of preferred sensory input, ability to avoid noxious sensory stimulation	Hanging clothes, washing cars (for those enjoying that type of tactile input)
Difficulty with change and transition	Few changes, stable work environment, little staff turnover, same work task all day	Small business, family business, assembly line

Adapted from Shore, S. & Rastelli, L. (2006). *Understanding autism for dummies*. New York: Wiley.

SENSORY PROCESSING		
Making the World a More Sensorially Friendly Place		
Matching Needs to Possible Employment Positions		
Personal Characteristics	Preferred Job Attributes	Possible Positions
Strong visual-motor skills	Requires good visual-motor skills	Small-parts assembly, manufacturing, printing
Behavior challenges	Few antecedents to challenging behaviors, with situations where possible problems don't endanger others	Situations where behavior doesn't cause dangerous situations; avoid factories or jobs using heavy machinery
Savant skills	Responsibilities capitalizing on these strengths	Matching stock numbers to packing lists, mathematically oriented positions for those with good math skills

Adapted from Shore, S. & Rastelli, L. (2006). *Understanding autism for dummies*. New York: Wiley.

Senses and Sensibilities: An Inside View on Sensory Issues
Stephen Shore, EdD

