

SENSORY AND SELF-REGULATION

March 28, 2012

Indianhead Federated
Library System Workshop

Emily Bedford

Our Senses

- External (Environmental) Senses
 - Tactile – Touch
 - Auditory – Sound
 - Visual – Sight
 - Gustatory – Taste
 - Olfactory - Smell

Our Senses (cont.)

- Internal (Body Centered) Senses
 - Interoceptive – internal organs
 - Regulates hunger, thirst, digestion, body temperature, sleep, mood, heart rate, state of arousal
 - Vestibular - Inner ear
 - Movement of our body through space, balance
 - Proprioceptive – Muscles, joints
 - Body position and movement of our body parts

Sensory Processing

- The neurological procedure of organizing the information we take in from our bodies and the world around us for use in daily life

-Carol Stock Kranowitz

Sensory Processing (cont.)

- Reception – physically receiving the sensation
- Detection – Noticing the sensation
- Integration- information from 1 or more senses connect in the brain
- Modulation – regulation of input
- Discrimination – telling the difference between stimuli
- Postural responses – movement and position
- Praxis – coordinated and voluntary action

Sensory Processing (cont.)

- Our central nervous system is constantly focusing, screening, sorting, and responding to sensory information
- Think of the actions you do every day, and how many different steps these actions require, the focus it demands
 - Ex.) putting on a coat

Sensory Bombardment

- I need you to find a partner. Then number off 1 and 2.
- #1 Tap on the table with one hand and wave other hand in front of #2's face as you read the next slide while eating two marshmallows at the same time
- #2 Face back of the room so you cannot see the power point. You need a piece of paper and pen to take notes with your non-dominant hand. I will ask you some questions after the exercise.

#1 Read out Loud

- It took only 6 months, an amazingly short period, for Rosie Mack, age 3, to change dramatically –so dramatically that progress in the general curriculum was not just a phrase but a reality. IN a word, the challenge was to help Rosie behave in such a way that she could be included in a preschool with students who do not have disabilities. Rosie’s behavior was rather typical for a preschooler with Autism. She needed to learn appropriate behavior, how to comply with safety instructions and other directions, and how to express her needs and choices other than by acting out.

#2 Answer questions

- What was the name and age of the child with autism?
- What was the dramatic change?
- How long did it take the child to change?
- What was the challenge?
- What did the child need to learn?

Discussion

- This is similar to how many people with autism describe what it is like to be in any kind of group situation
- It often doesn't take as much as it did here to make a person autism feel this level of sensory bombardment.

Temple Grandin

- “The clamor of many voices, the different smells, perfume, cigars, damp wool caps or gloves – people moving about at different speeds, going in different directions, the constant noise and confusion, the constant touching was overwhelming.”
 - Grandin and Scariano, 1986, p.29

Sensory Processing Disorder - Definition

- A disorder of the neurological system in which the sense are not fully brought together and recognized as a sum total by the brain
- 1 or more of the senses are not being interpreted properly
- Sensory input is unreliable, inconsistent, or threatening

Sensory Problems

- Overly sensitive to touch, movement, sights, or sounds
- Under-reactive to sensory stimulation
- Unusually high/low activity level
- Coordination problems
- Delays in academic achievement or activities of daily living
- Poor organization of behavior
- Poor self-concept

Sensory Problems (cont.)

- When a child suffers from sensory integration disorder, problems in learning, motor development, or behavior may occur
- Our behaviors will be driven by sensory information. If we don't get enough information, or if we misinterpret the meaning of sensory information, we will seek more information
- These behaviors can be a sign of what area of integration the child is having difficulty with

1. Overly sensitive to touch, movements, sights, or sounds

- Distractible
- Withdrawing when touched
- Avoiding certain textures, clothes, or food
- Fearful reaction to ordinary movement activities
- Sensitive to loud noises

2. Under-reactive to sensory stimulation

- Seeks out intense sensory experiences, such as body whirling, falling, and crashing into objects
- Crave physical input
- May fluctuate between under- and over-responsiveness

3. Unusually high/low activity level

- Constantly on the move
- Slow to get going, fatigue easily

4. Coordination Problems

- Poor balance
- Difficulty learning a new task that requires motor coordination
- Appears awkward, stiff, or clumsy

5. Delays in academic achievement or activities in daily living

- Problems in academic areas, despite normal or above-average intelligence
- Difficulty with fine motor tasks such as handwriting, tying shoes, using scissors, buttoning, and zipping clothes

6. Poor organization of behavior

- Impulsive
- Distractible
- Lack of planning in approach to tasks
- Not anticipate results of actions
- Difficulty adjusting to new situation
- Difficulty following directions, especially multi-step directions

7. Poor self-concept

- May appear lazy, bored, or unmotivated
- May avoid tasks
- May appear stubborn or troublesome

Sensory Integration Therapy

- Provides therapeutic activities to facilitate child-directed treatment sessions
- Encourages and assists the child in choosing activities that provide the appropriate amount of sensory input
- Self-confidence is often the first change noticed!

Self-Regulation

- The ability to change our alert state so we can match the activity we are required to perform or that we wish to perform
- We have the ability to get excited and have high energy, and we have the ability to slow down, get quiet
- We can regulate our emotions and our body

Self-Regulation (cont.)

- Most of us stay in the “just right” place most of the time
- Some of us have to work harder at staying just right than others
- The harder you have to work at this, the less you will be able to handle additional stimulation/demands

What gets in the way of self-regulation?

- Frustration
- High stress
- Fatigue
- The environment doesn't match the child's needs
- Health
- Sensory processing problems

What can I do to make
story time a successful
experience for children
with Autism?

Environment

- Room Design
 - Color- blues, peaches: avoid red, yellow, orange
 - Simple, clean cut lines: avoid clutter
 - Small spaces: tents, reading corner with bean bag chairs
 - Avoid florescent lighting, natural light is best

Environment (cont.)

- Limit the amount of visual materials on the walls and ceilings
- Make sure all materials have an organized and labeled place where they belong
- Light Covers, or low lighting
- Quiet Area, away from open windows and doors
- Comfortable Temperature
- Limit distractions
 - Wear neutral clothing
 - No perfume
- Variety of seating
 - Chair(with a theraband, or a disc-o-sit), carpet square, bean bag/hug chair, exercise ball, T-chair

Smells

- Be aware of perfumes
- Aroma therapy – vanilla smells, cinnamon

Schedule

- Children with sensory integration difficulties will benefit from a predictable schedule
- Each session, outline the schedule of activities for the story time
- As activities are completed, remove them from the visual schedule and put in an “all done” envelope
- Have children transition between activities with consistent cues, such as a song

Accommodations

- Seating Arrangements –theraband, disc-o-sit, stool for feet
- Visual Schedule of Group
- Visual representation of expectations
- Structure, Structure, Structure!
- Quiet area for the child to regroup and become organized
- Ample space to prevent accidental touching
- Sensory Basket - hand fidgets, gum or hard candy, weighted vest/lap belt
- Visual Timer
- Adapted Stories

Sensory Basket

- Noise-blocking headphones
- Portable CD player
- CD of calming music (Calming rhythms from “The Strong Institute, Mozart, Vivaldi)
- Puzzles
- Bubbles, bubble machine
- Gum
- Vibrating toys

Sensory Basket (cont.)

- Glitter Wand
- Image Captor
- Weighted vest or lap band
- Variety of fidgets
 - Koosh ball, spiked ball, foam ball, yuck ball, rubberband ball

Quiet Area

- Tent with pillows or bean bags
- Soft music, classical such as Mozart or Vivaldi, Calming Rhythms
- Access to sensory basket items
- Weighted blanket, or beanbag to cover up with
- Exercise ball – roll over ball, roll ball against child for pressure
- Previously adapted books to review (could also be done in group time)

When in Doubt?

- Oral Motor
 - Chew on gum, crunchy snacks, chewlery,
 - Blowing Bubbles
 - Deep breathing, focusing on blowing all your air out
 - Songs
 - Water bottle with thick straw to chew, suck fluid through straw
- Heavy Work
 - Hold up the wall, X-crawls, carry books

Last minute Tips!

- Use a consistent approach – use same wording, schedule, songs, etc to build in predictable routines
- Use modeling, demonstration, and repetition
- Use a visual timer, warn ahead of time for transition or changes in routine
- Visual schedule for group activities, and also individual activities (mini-schedules)
- Consistent, clearly labeled, and organized place to store materials

Last minute Tips!

- Provide time after giving directions or asking a questions for students to process. Try counting to 10 before additional prompting
- Engage parents in the process
- Have a clear plan for when behavior occurs, keeping in mind the anxiety curve
- Simple, step-by-step directions

Summary

- Sensations are important for normal development
- We all need to use sensory tools to self-regulate
- All children will benefit from this approach

Bibliography

- www.nationalautismresources.com
- Nancy Lawton-Shirley, OTR (Points of Stillness)
- The Out-Of-Sync Child
 - Carol Stock Kranowitz
- Answers to Questions Teachers Have About Sensory Integration
 - Jane Koomar, Carol Stock Kranowitz, and Stacey Szklut
- Thinking in Pictures: My Life with Autism
 - Temple Grandin