IS IT SENSORY OR BEHAVIOR?
Practical Strategies for Improving the Academic and Behavioral Success of Your Students with Sensory Processing Dysfunction

Presented by
Amy Okeze M.Ed., OTR
TIES Conference Eugene, OR
April 14, 2014

Introductions
You….Me….We

Learning Targets
• Gain an understanding of behavior through Social Cognitive Theory.
• Gain understanding of the neuro-biological basis of behavior from Sensory Integrative Frame of Reference.
• Learn the skills needed for academic and behavioral success in areas of cognition, executive functioning and social competency.
• Learn sensory, social & behavioral strategies for school success.
Let’s Pour the Foundation…

Social Cognitive Theory

&

Sensory Integrative Frames of Reference

Social Cognitive Theory says humans have the ability to...
Symbolize, Plan,
Learn Vicariously,
Self-reflect
&
Self-Regulate

Social Cognitive Theory says, Human function is the result of the interaction of...

[Diagram showing the interaction of Personal, Behavior, and Environment]
It also says...

“What People think, believe and feel affects how they behave.” Bandura 1986

Cognitive Skills

- Attention
- Concentration
- Perception
- Logical Thinking
- Memory
- Receptive
- Sequential
- Rote
- Short Term
- Long Term

Executive Functioning Skills

**Response Inhibition** think before acting
**Working Memory** holding info in memory while performing complex tasks (inserts past learning)
**Self-Regulation of Affect** ability to manage emotions in order to achieve goals, complete tasks or control behavior
**Sustained attention** maintain attention in spite of distractibility, fatigue or boredom (Concentration)
**Planning/Prioritization** decision making about what is important to focus on to reach a goal or complete a task.
Assessment of Cognitive Skills

BRIEF- Behavior Rating Inventory of Executive Function; Gerard A. Gioia, PhD, Peter K. Isquith, PhD, Steven C. Guy, PhD, and Lauren Kenworthy, PhD
Assists with educational planning for children with disorders of executive function
Age Range: 5-18
Individual administration, 10-15 to administer, 15-20 to score

WISC-III- Wechsler Intelligence Scale for Children-David Wechsler
Intelligence test for children 6-16 years that can be completed without reading or writing. Individual administration takes 60-85 minutes and results in an I.Q. score that represents general cognitive ability.

SSIS- Social Skills Improvement System-Rating Scales- Gresham & Elliot
Age Range 3-18 Completed by teacher and parents. Three scales, social skills, problem behaviors and academic competence. (autism rating)
Takes 10-25 minutes to complete.

Application

We can teach strategies:

• Improve student’s academic skills and self-regulatory practices. (behavior)
• Improve student’s emotional states and correct faulty self-beliefs and habits of thinking (personal factors)
• Alter the school and classroom structures that might undermine student success (environmental factors)

Amy’s mantra... “Your brain controls everything you say and do”.

Mind

Body
Sensory Integrative FOR

**Frame of Reference** that focuses on the influence of accurate processing and integration of information from all sensory systems to the development of function and the acquisition of skills.

Framework

- Hierarchically organized. Information comes up through the lower brain structures, through limbic system and on to pre-frontal and frontal cortex.
- Sensory input must be registered before the higher cortical centers formulate a response.
- The brain seeks out stimulation to organize and center itself. (RAS... levels of alertness)
- CNS is totally interactive and interdependent.
- Plasticity is real. The brain has the ability to be influenced by ongoing activity without loss of function.
- Normal human development occurs sequentially.

Postulates of Sensory Integrative Framework of Reference

- Integration of sensory input is holistic... all systems influence each other and the whole.
- A child’s behaviors are influenced by the state of the CNS. Unless the underlying neurological problems are addressed, the resultant behaviors will continue.
- The quality of function of the sensory systems determines the quality of adaptive responses.
- Meaningful registration of sensory input must be accurate and reliable for integration to occur.
- Each time an adaptive response is made, the brain gets a message to keep that neural connection.
Postulates of Sensory Integrative Frame of Reference

- A child needs to be self-directed to act in the environment for the greatest potential of change to take place in sensory systems. (e.g. climb a tree)

- The adaptive responses the child has become the upper limit of the recorded abilities when assessing for growth. In other words…. use strengths to build success!

- Difficulties with sensory processing and integration of input manifests in two ways, how one reacts (modulation) and how one functions.

Postulates of Sensory Integrative Frame of Reference

- Intervention is specific to the underlying deficits, not the observable behaviors. As the child is better able to make an adaptive response, behavior becomes more organized.

- A child’s behavior can be modified through appropriate controlled sensory input that elicits adaptive responses.

- Input from several sensory systems may be needed to achieve an adequate registration level or integration for an adaptive response.

Patterns of Response

- A body’s response to sensory events is cumulative over time.

- Moderate reactivity is optimal. Maladaptive responses are exaggerated, either under-responsive or over-responsive.

- A child in sensory overload looks similar to a child who is under-responsive or has sensory registration problems.
If the brain were so simple that we could understand it...we would be so simple that we couldn’t.

~ Lyall Watson

Impact of Sensory Processing on Behavior and Academic performance

❖ We can use an understanding of the neurobiology of behavior as a basis for evaluating sensory processing.
❖ We can use an understanding of the neurobiology of behavior to “treat” disordered sensory processing.
❖ Improved sensory processing eliminates many secondary problems that often become the focus of special services.

B. Hanschu 1997

It’s easy as ...
1. Interview
2. Observe
3. Evaluate
1. Interview
Ask teachers, parents, all staff who interact with the student, and student (if applicable)
△ Developmental History?
△ Learning concerns?
△ Strengths?
△ Behavior concerns?
△ Social Interactions (school & home)?
△ Differences across settings in the school environment?
△ Bus ride to and from school?
△ Eating & sleeping patterns?
△ Likes and Dislikes?

2. Observe in the Student’s Natural Environment...the classroom
See Handout #6

3. Evaluate-Using a Standardized tool
△ Sensory Profile-School Companion
△ Sensory Processing Measure
Other common signs of sensory dysfunction to observe:
• Silliness/giddiness
• Noise making
• Aimless running
• Pacing
• Self-injurious behaviors
• Complete shut down
• Sleepiness
• Self-absorbed
What is “fight or flight”?

- A.K.A. Fight-Flight or Freeze
- Primitive inborn response from the ANS for survival
- Excessive stress-internal or external
- Genetic wisdom to protect us from physical harm
- Chemical release...be ready to fight or run
- When alerted, everything in immediate environment is perceived as a threat to survival
- Bypasses our rational mind (Steel door)...no access to frontal lobe.

Break...10 minutes

Come together...
Allows US...

• To understand behavior as a form of communication
• To know that the mind-body connection is real (neuro-biological/cognitive)
• To trust that we can effect change by adapting the environment, the task or the individual
• To teach strategies that enable students to maximize their independence

General Thoughts on Behavior

• Recognize behavior as a form of communication
• Behavior change is a biological event that requires persistence over time
• Pro-social skills are necessary for positive behavior
• Must rule out physiological/medical cause of behavior

How Behavior Impacts Learning

Positive
- Actively engaged in learning
- Demonstrates independent work skills
- Takes personal responsibility for actions
- Applies problem solving skills across settings and people

Negative
- Distracting to learning (self and others)
- Disruptive
- Destructive
Behavior & Learning

• When behavior requires a disciplinary action or is of a Frequency, Intensity & Duration to be distracting, disruptive or destructive in the school environment... we are required to conduct a Functional Behavior Analysis (FBA)

• Federal Law, IDEIA (2004) says, “A functional behavioral assessment and positive behavioral strategies and interventions, strategies and supports must be provided to address behaviors that impede learning, to prevent the behavior from recurring and assure progress in the general education curriculum.”

What is an FBA?
Functional Behavior Assessment

• Originates from applied behavioral analysis, which is the science of predicting and controlling behavior.

• Focus is on the observable relationship of behavior to the environment

The Basic FBA Process

✓ identify Antecedents,
✓ target Behavior,
✓ resulting Consequences,
✓ determining the cause (function) of behavior,
✓ choosing a replacement behavior
✓ develop a Behavior Intervention Plan (BIP)
Behavior is communication... are we listening?

Common Presenting Behaviors

- Active Non-Compliance
- Classroom Disruption
- Difficulty with Transitions
- Physical Aggression
- Disrespect
- Interpersonal Problems
- Physical Aggression
- Verbal Aggression
- Passive Resistance

Needs that DRIVE Behavior...

What function does it serve???
Possible Functions

- Attention (adult/peer)
- Protection
- Escape/Avoidance
- Power/Control
- Affirmation (reassurance and acknowledgement)
- Affiliation (seeks to share common interests)
- Acceptance
- Sensory (seek/avoid)
- Gratification
- Tangible Reward

Research on behavior provides guidelines for interventions which are:

» Implement interventions least to most

» Must be systematic, intentional and specific

» Test accuracy of behavior hypothesis and change if necessary

» Direct teaching of social skills

» Model and provide multiple opportunities for practice

» Check for generalization across settings of the school

» Measure change (frequency, intensity and duration)

» Reinforcement must be meaningful

TOOLS FOR MEASURING BEHAVIOR CHANGE {data, data, data}

» Observation

» Student self-monitoring and evaluation

» Behavior Rating Scales

  Frequency Recordings (how often)

» Time Samples (how long)

» Attendance/Discipline data

» Anecdotal reports
The Goal of Intervention

Sensory Strategies + Social & Behavioral Interventions = School Success

Let’s Talk Strategies

Practical Strategies for Success
For the most effective and lasting behavioral change resulting in improved academic performance... all interventions must be implemented systematically, consistently and data based. !!
**Sensory strategies**

**What Do we want them to do?**

• Regulate arousal levels
• Increase ability to attend and decrease distractibility
• Decrease anxiety
• Increase comfort level in school environment
• Increase positive interactions with peers and adults
• Improve communication of needs and wants
• Improve performance of a variety of skills
• Increase independence

---

**SUCCESS WITH SENSORY STRATEGIES ...**

... is dependent on **accurate** assessment and **consistency** of implementation of selected strategies.

---

1. **Implement a Sensory Diet**

   • *A sensory diet refers to sensory based activities, therapeutic equipment, household objects, toys or foods that have been selected to meet a person's sensory needs and is available to that person on a daily basis.*
2. Schedule Movement Activities

- “Movement integrates and anchors new information and experience into our neural networks.” (Hannaford, 1995)
- Brain Breaks (see handout)
- Errands for teacher (envelope to the office)
- Stretching and relaxation.
- Rolling, jumping, bouncing on therapy ball or mini-trampoline, swings, dancing, marching etc...
- Animal walks

3. Make environmental/classroom accommodations

- Organize a “womb” space or a quiet corner
- Provide headphones with calming music
- Utilize natural or low lighting (lamps vs. overhead fluorescent lights)
- Bean bag chair, large pillows, blankets
- Fidgets, tubing, theraband, squeeze balls or weighted balls
- Oil or sand timers

4. Heavy Work

- Push ups, sit ups, hand stands
- Tug of war
- Jumping jacks
- Wheelbarrow walking
- Catching/throwing weighted ball or therapy ball
- Assign classroom or school jobs e.g. empty recycling bins, crush cans, carry/stack crates, stack library books, move chairs/desks
5. Seat Work

- Allow student to chew on straws, tubing, jerky.
- Suck on sour candy or chew gum
  
  Give students who tap a mouse pad or shelf liner to use on top of desk
- Provide therapy balls, t-stool or move-n-sit cushion.
- Use theraband or bungee cord around chair legs for student to push on with feet
- Allow student and perhaps the entire class to perform isometrics in the classroom, such as:
  - Wall push-ups
  - Wall squats
  - Jogging in place

6. Getting to and from school

- Attach theratubing/theraband/chew tube to backpack
- Add weight to the backpack
- Headphones and mp3 player
- Prepare a calming activity as student gets off the bus, allow student to choose

7. Teach self-regulation strategies

- Self-regulation is the nervous system’s ability to attain, maintain, and change levels of arousal or alertness (Williams, 1994)
- Arousal is a term used to indicate level of alertness. A normal level of alertness is necessary for sustaining attention, impulse control, frustration tolerance and to maintain emotional stability.
- 1. Student must be able to identify his/her own level of arousal (how the body feels) and emotions such as happy, sad, anxiety, stress, frustration etc...
- 2. He/she must be able to select a strategy that will change how they feel to achieve a calm and alert state.
- 3. Teach relaxation e.g. progressive muscle relaxation, deep breathing, visualization, positive self-talk.
Teach self-regulation strategies (con’t)

- Current curricula exist to teach self-regulation at pre-school, primary, intermediate and secondary levels, such as,

- Pre-school- Primary: How Does Your Engine Run? The Alert Program For Self-Regulation (Williams & Shellenberger, 1994)

- Primary-Intermediate: The Incredible 5 pt. Scale (Kari Dunn-Buron & Mitzi Curtis) *can be adapted to 3 pt scale for younger students
- The Way to A (Hunter Manasco)

- Secondary: A 5 Is Against the Law! Social Boundaries: Straight Up! An honest guide for teens and young adults by Kari Dunn

8. Use strategies to assist with task initiation and completion due to decreased motor planning

- Help student identify steps needed to begin and complete the task. Have them repeat or write down the steps

- Provide shorten tasks so student can feel instant success.

- Use a time timer or sand timer to give them visual representation of time

- Use a visual to have them check off steps as they are completed

- Give one direction at a time

- Minimize visual and auditory distractions

- Practice with tasks (art projects, puzzles) that require assembling parts to create an object. Challenges students’ ability to use strategies for organizing parts as they relate to the whole.
SOCIAL COMPETENCE IS...

- A person’s ability to get along with other people
- how one solves interpersonal conflicts
- the ability to apply self-control

5 Social Competencies
Social competence refers to the skills necessary to be accepted and fulfilled socially.

1. Planning and decision making
2. Interpersonal competence
3. Cultural competence
4. Able to resist negative peer pressure
5. Solves problems non-violently

*Based on work done at Search Institute on 40 Developmental Assets*

SKILLS FOR SOCIAL SUCCESS BASED ON WORK BY GOLSTEIN ET AL.
Research says...schools will be more successful in the educational mission when they integrate efforts to promote children's academic, social and emotional learning.

-Elias et.al. 1997

Social Behavioral Strategies

- Strategies in these three areas overlap with the goal being that the student will become self-organizing, proactive, self-reflecting and self-regulating resulting in:
  - Students actively engaged in learning
  - Demonstrate independent work skills
  - Take personal responsibility for actions
  - Apply problem solving skills across settings and people

Social Behavioral Strategies

- Personal
- Behavioral
- Environmental
1. Personal Strategies

Identify emotions- accurately match internal feeling with outward expression

- Feelings Faces & Wheel
  - Use pictures from magazines, videos, mirrors to teach reading no-verbal cues and matching to emotions

Communicate needs & wants: Ability to recognize need for ... help, a break or extra time

- Teach student to use pro-social skills to communicate needs to others

  Self-Monitoring - measurement of one's own behavior, effective tool for behavior change
  - Use daily sheet that is specific for each target behavior
  - Compare student's responses against teachers responses

  Self-reflection:
  - Reflection (aka Metacognition) - the ability to reflect on one's own behavior, ability to look at how you solve problems, self-monitor/self-evaluate
  - Daily use self-monitoring sheet
  - Have student write in journal daily and reflect on progress toward personal goals
Self-Advocacy

- Self-Advocacy: the ability to understand and effectively communicate one’s needs to other individuals.
- Teach, model, practice and reinforce how to positively communicate and negotiate with others

Time Management

- Make to do list
- Break long assignments into chunks and assign time frames for each chunk
- Plan for transition time
- Provide a 5, 4, 3, 2, 1 minute verbal reminders for transition

Organization

- Organizational skills:
- Use a daily checklist or planner to track assignments
- Use visual calendar to track long term assignments, due dates etc.
- Use daily visual schedule
- Ask for written directions whenever possible

2. Behavioral Strategies

Teach problem-solving strategy-

- Preschool: Tucker Turtle Takes Time to Tuck & Think
- Primary: The Way to A by Hunter Manasco
- Intermediate/Secondary: 5 step model
Teach Routines

- How to ask for help
- How and when to sharpen pencils
- When and what to throw away and where
- How and when to ask for bathroom breaks
- How and when to turn in homework
- How to organize materials in/out of desk
- How to line up
- How to walk in the hallway
- How to prepare for recess
- How to play at recess
- What to do during free time

Antiseptic bouncing

Process to remove a student in NON-PUNITIVE way from an environment where he/she is having difficulty.

Have student deliver a note, envelope, lunch count or the like to main office or another designated classroom

Walk-no talk

Walk with the student without talking. If the student is escalated, he/she will over react to anything the adult says, so allow the student to say whatever without fear of discipline or argument. Stay calm and show no reaction.

Proximity Control

Proximity Control

Rather than calling attention to an unwanted behavior, simply stand next to the student

Signal Interference

Using a pre-determined non-verbal signal with student upon onset of behavior precursors. May be eye contact or a "secret" signal that student & teacher agree on.

Touch Control

Sometimes all that is needed is a gentle touch... use with caution

Defusing Tension through Humor

Using a joke or humorous remark to break tension. Be careful to not use sarcasm and be sure student understands the humor.
More strategies….

Consistent Routine

Visual Schedule clearly posted

Pre-warnings of changes to routine

Interest Boosting
Take time to investigate student’s personal areas of interest and incorporating them into assignments and incentives

Redirection
Direct students’ attention to something other than the problem

Home Base
Designate a place in the school building that is “safe” for the student. A place where they go to calm and regain control. An alternate setting where student can go to complete work. Set up so that student checks in at start of day or throughout the day. So trusting relationship with the adult so that student identifies that the home base is a place to go when anxiety gets too high or student is very distracted.

Empathic understanding and restating direction/rule
Acknowledge that you understand the difficulty the student may be having and restate the behavioral expectation without emotion. Use calm but firm voice and brief concise words. Do not engage in debate or power struggle as this only tends to escalate both student and teacher.

Environmental Strategies
Create quiet corner within classroom for calming
A bean bag, rocking chair or pillows create a space for relaxation and calming

Create organized work space
• Designate separate work space for different activities with a complete set of materials in each area

• Minimize clutter on desktop, use baskets or chair buddies for materials
  e.g. Study carrell
Provide Structure to Daily Routine

- Recess Menu:
  - Play hopscotch 4 times
  - Try to jump rope 18 times without stopping
  - Do 15 jumping jacks
  - Put a game on 4 squares
  - Make up a dance!
  - You and a friend play 1 spy.
  - Sing a song and look at the words. What do you see?
  - Do a soccer half 46 with 3 other kids. Try to make 5 goals.

Accommodations/Modifications

- Modify requirements to match student’s work pace
- Reduce number of problems on a page by indicating which problems student must complete by circling or highlighting
- Change short answer questions to true-false or multiple choice
- Allow student to dictate answers into tape recorder or to a scribe
- Allow student to use computer or portable word processor for written assignments

Use of Effective Reinforcements

- What is reinforcement... any action or object which follows a behavior that increases that behavior.
- Matching Law-the effect of the reinforcement has to match the effect of the behavior
- Use positive, meaningful reinforcement for the behavior you want.
- Force Choice Reinforcement Survey and others (www.interventioncentral.org)
We must teach behavior just like reading, writing and math or any other subject in school.

Use research/evidence based curricula and interventions.

Teach Pro-Social Skills

• Research tells us that, “students who are taught a fully developed repertoire of social skills pay better attention to speakers, work more cooperatively with others, ask for assistance when needed and behave more responsibly.”  (Elliott, 2008)

• Research also tells us that there is a direct correlation between social behaviors and academic performance

What are Social Skills?

• Socially acceptable learned behaviors used to promote positive interactions while simultaneously discouraging negative interactions

• Example: listening, asking for help, saying thank you, etc...
• See Skillstreaming
Social Skills Instruction
• SDI for Social/Emotional/Behavioral Needs
  May qualify in either category. Students with behavioral challenges typically have social skills deficits.
  Long term outcomes for students who do not receive remediation in social skills are continued cycles of failure, peer rejection, poor academic outcomes and adjustment problems into adulthood.

Systematic vs. Incidental
• Direct Instruction
  • I do, we do, you do
• Modeling
• Role Playing
• Practice!

Teachable Moments
Behavior Management System
Clear and Explicit Behavior Expectations
Positive Reinforcement

Systematic & Incidental Instruction
• Both explicit instruction and “teachable moments” are needed for students to acquire and develop social skills.
Which skills to target?

- Evaluation/assessment ought to result in clear deficits that require SDI in Soc/Emotional or Behavior categories.
- Psychs using SSIS, BRIEF, BASC-2 and other evaluative tools to provide skills to target.
- SLP data regarding pragmatic language and communication skills
- OT information about Sensory processing as it relates to behavior
- Add Skillstreaming Checklist and you have plenty of data to accurately design SDI.
- Include focus for post-secondary outcomes.

Curricula for Social Skills Instruction

- See Handout #4

Goldstein’s ProSocial Skills (Skillstreaming)

- Beginning Social Skills:
  - Listening
  - Starting a Conversation
  - Having a Conversation
  - Asking a Question
  - Saying a Thank You
  - Introducing Yourself
  - Introducing Other People
  - Giving a Compliment
Advanced Social Skills:
- Asking for Help
- Joining In
- Giving Instructions
- Following Instructions
- Apologizing
- Convincing Others

Dealing with Feelings:
- Knowing Your Feelings
- Expressing Your Feelings
- Understanding Feelings of Others
- Dealing with Someone Else’s Anger
  - Expressing Affection
  - Dealing with Fear
  - Rewarding Yourself

Alternatives to Aggression:
- Asking Permission
- Sharing Something
- Helping Others
- Negotiating
- Understanding Self-Control
- Standing Up For Your Rights
- Avoiding Trouble with Others
- Keeping Out of Fights
Dealing with Stress:
- Making a Complaint
- Answering a Complaint
- Being a Good Sport
- Dealing with Embarrassment
- Dealing with Being Left Out
- Standing Up for a Friend
- Responding to Persuasion
- Responding to Failure
- Dealing With a Contradictory Message
- Dealing with an Accusation
- Getting Ready for a Difficult Conversation
- Dealing with Group Pressure

Planning Skills:
- Deciding on Something to Do
- Deciding What Caused a Problem
  - Setting a Goal
- Deciding on Your Abilities
  - Gathering Information
- Arranging Problems by Importance
  - Making a Decision
- Concentrating On a Task

www.socialthinking.com
- A system of teaching “social thinking and related social skills” was pioneered by Michelle Garcia Winner beginning in the mid 1990s.
- It is best taught to students with near normal to way above normal verbal intelligence who have language skills. This is a language-based learning approach.
Core philosophies of social thinking:

- We “think with our eyes” to figure out other people’s thoughts, intentions, emotions, plans, etc.
- Our thoughts and emotions are strongly connected. How we think affects how we feel, how we behave affects how others think and feel.
- We think about people all the time, even when we have no plans to interact with them.
- We adjust our own behavior based on what we think the people around us are thinking. (This is how we drive our cars!)

Social thinking Con’t...

- As part of our humanity, each of us is on a daily quest to avoid each other’s “weird thoughts.”
- We constantly consider people around us and adjust our behavior to help people have “normal thoughts about us.”
- Social thinking, therefore, plays into our academic world, requiring us to think about the motives and intentions of people we read about in literature, history... even math problems.
- Social thinking is abstract and difficult to discuss since it is something we usually learn intuitively.

Social Thinking Con’t

To help us all to think about it, MGW developed social thinking “scaffolds.”:

4 Steps of Communication
4 Steps of Perspective Taking
I LAUGH MODEL
Social Thinking vs. Isolated Social Skills

• When people learn how to think differently and flexibly they can think anywhere. This is different from just teaching a social skill.

• Individuals taught only the “skill” often will only perform that skill in the environment in which they learned it.

Generalization

• After learning a skill, students need extensive amounts of time to practice the skill, across a variety of settings, and with lots of positive reinforcement along the way.

• Social skill instruction becomes embedded within daily instruction, across curriculum, and school settings.

• Must seek out help from general education staff to collect data.

Thank you for listening!!!

Contact Information:

Amy Okeze
okezeal@gmail.com