

ACN 10th Annual Symposium "Global Strategies for Integrating and Interpreting Cognition" Rodondo Beach

**Featured Speaker and Afternoon Workshop
November 7th, 2014**

The Sensory Connection to Cognition

This November I had the honor of presenting at the 10th Cognitive Symposium dedicated to strengthening the knowledge and clinical application of the Allen Disabilities Model and the promotion of the "best ability to function" in persons with cognitive impairments and their caregivers.

I am a longtime supporter and also researcher of the Cognitive Disabilities Model and I feel the information this model provides regarding our clients is essential to assuring the best treatment possible. Whenever I provide trainings on sensory approaches to treatment, part of my mission is to educate participants on the importance of understanding a person's level of cognition in order to provide the proper cues, environment, emotional support, and physical support necessary for that person to follow through with coping strategies and sensory interventions.



Sensory and Cognition

Key Themes

Our best treatment can result from embracing both the Cognitive Disabilities Model and sensory approaches to treatment.

These models share many similar strategies to help the cognitively challenged such as the use of environmental cues, reducing noise and excessive activity, making a person feel safe, maintaining routines, and helping people to enjoy simple pleasures. (Pollard, 2005) (Allen & Blue, 1998)

Sensory strategies can be used to support cognition including positioning a person to improve their visual field, providing sensory snacks, using oral motor strategies, using weighted items to decrease anxiety and to promote security, and enhancing brain function through strong sensory input activities. (Moore, 2005)

The lower the "level" of cognition the more people are influenced by sensory input from their bodies and the environment. These influences can be positive or negative. Our job is to emphasize positive input in order to promote feelings of safety and improve function. (Pollard, 2005)

Global cognition requires effective sensory modulation. When the ability to self-regulate is compromised, global cognition is compromised. The reverse is also true, as cognitive capacities diminish, the ability to self-regulate is diminished as well. (Champagne, 2010a)



Stress impacts cognition. Recent research by Stephen Porges emphasizes our need to “rethink” the stress response system. We now know that there has been an evolution of this system and that as evolved beings our first response to threats should be appraisal and communication. When that doesn’t work we resort to less energy efficient “fight or flight” responses and if that doesn’t work we resort to the old vagal system and “freeze.” (Porges, 2011, 2009, 2008)

This research suggests that we should respond to crisis or escalating emotions by bringing a person to a safe place, lowering our voice, encourage vocalizations such as humming or playing or listening to music. Additionally we should stimulate the neural circuits related to social engagement including the muscles of the ears, orienting responses, and suck, swallow, breathe sequences. (Porges, 2011, 2009, 2008)

Trauma impacts cognition. Use “universal precautions” and presume that every person you work with might have experienced trauma. Trauma causes chaos in the brain that can last for decades, it makes the sensory system make faulty adjustments, primitive responses prevail, communication is suppressed and the person becomes less dependent on communication and cognitive strategies and more dependent on sensory responses. (Macy, 2007) (Van der Kolk, 1994 & 2006)

“Circuit breaker” strategies to help a person to calm down include deep abdominal breathing, walking or pacing, humming, tossing a Koosh ball, using the “spandex hug,” or rocking.

People with compromised cognition and special needs require quiet times for re-charging as well as strong sensory input breaks to help the brain function better.

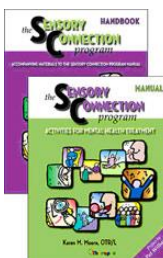
Non-tool based sensory strategies with strong input include chair push-ups, foot-flexes, pacing and walking, joint compression, kneel/stands, stamping the feet or loudly clapping the hands or rhythmic slap/clap activities.

Sensory snacks include fidget widgets, scented lotions, spritz of peppermint aromatic spray, cup of tea, Ogzz or strobe wand, mouth tools (gum, lollipop).

Environment counts! Positive effects can be re-assurance of safety, improved attention and focus, increased interest, comfort and calm and cooperative behaviors. Negative effects can be overstimulation, agitation, fear, confusion, hallucination, and acting out behaviors.

Remember to smile. Stephen Porges claims that “The most efficient stress reducer might just be a smile. Engaging socially with others triggers neural circuits that calm the heart, relax the gut, and switch off fear.”

Sense-ability Group Workshop



The Sense-ability Group is one of the two group approaches offered in *The Sensory Connection Program: Activities for Mental Health Treatment Manual and Handbook*. The *Sense-ability Group* designed for people with moderate to severe cognitive challenges and developmental disabilities (ACLS 3.8 – 4.8) and has even been adapted for use with young children. It can also be adapted for people with high cognitive levels (ACLS 5.0 – 5.8).

Over the two hours of this workshop participants engaged in a variety of activities for all of the stages of the Sense-ability Group.

Group Activity 1:

The challenge for the first group activity is to decide what ACL Levels are appropriate for the various activities within the stages as a "mock" Sense-ability Group . We did this informally as the group progressed. I added suggested levels based on my personal experience.

Stage 1: The Attending Stage

Hoberman Sphere (4 & 5)

Balancing Bird (3 observe, 4 & 5)

Balloon Game (4 & 5)

Jacob's Ladder (4 & 5)

Ribbon Wand (3 observe, 4 & 5)

Bouncy ball with tail (3, 4, & 5)

Stage 2: The Moving and Breathing Stage

Stage 3: The Conversing Stage

Recognition and Comments. Acknowledge each patient by name and ask for his or her comments on the relaxation experience. (4 & 5) Would you need to make any adaptations for the different Levels? (Level 3 can respond to name and appreciate acknowledgement)

Stage 4: The Sensing Stage – 4 minutes

Beanbag Tapping (3 with assist, 4 & 5)

Parachute (3 may drop hold, 4 & 5)

Exercise band rowing (4 & 5)

Walk and slap activity (mid to high 4's and 5)

Stage 5: The Acting/Interacting Stage

Indoor Bocce (4 & 5)

Ring toss (3 with cues, 4 & 5)

Bucket Game (4, too easy for 5)

Hot Potato Game (4 & 5)

Stage 6: The Learning Stage

Universal Gestures (4 & 5)

Sensory Input Game (4 & 5)

Coping Through the Senses Game (5)

Getting To Know You Game (3, 4, & 5)

Thinking About Feelings Game (4 & 5)

Thumb-ball Game (4 & 5)

Self-Regulation Song Activity (3 with support, 4)

Strategizing for Self-Regulation Game (5)

Self-Esteem Tree (4 & 5)

Non-Tool Sensory Activity Game (4 & 5)

What To Do When the Brain Is Fuzzy Game (4,5)

Sports Matching Game (3 modified, 4 & 5)

Group Activity 2:

Think about how you would adapt these activities for a group of high functioning veterans.

We did not have time for this additional activity. Participants were very much engaged in exploring additional activities and options. I added my suggestions for the following stages.

Stage 1: The Attending Stage

What novelty items do you suggest?

Herbs from the garden, collection of sea shells, model of a plane or antique car, Hoberman sphere, balancing bird

Stage 4: The Sensing Stage

Can you suggest any other strong sensory input activities?

Simple exercises with a heavy medicine ball, jump rope, exercises on Bosu Ball.

Stage 5: The Acting/Interacting Stage

Think of some other indoor target game activities that would be appropriate for this population.

Indoor versions of popular "tailgate games" would be perfect including corn bag toss and Ladderball. There is a new game out called Kam Jam that looks like it would be fun. Indoor dart games also work well.