If you are viewing this course as a recorded course after the live webinar, you can use the scroll bar at the bottom of the player window to pause and navigate the course.

This handout is for reference only. It may not include content identical to the powerpoint. Any links included in the handout are current at the time of the live webinar, but are subject to change and may not be current at a later date.
Sensory Processing and Anxiety in Adults: Using Sensory Strategies to Improve Occupational Performance

Nicole R. Quint, Dr.OT, OTR/L
April, 2016

Hypothesis of the SPD/Anxiety Relationship and OT’s Role

- There is an indicated link between sensory processing styles and anxiety
- Anxiety, when excessive, can impair occupational participation and performance
- Occupational therapists can easily incorporate sensory-based strategies into treatments to address anxiety, which results in increased participation and/or performance

http://www.additudemag.com/slideshow/36/slide-10.html
Objectives

1) Participants will be able to detail the correlation between sensory processing and anxiety from current research evidence.

2) Participants will be able to assess clients to obtain appropriate information to guide sensory strategy implementation to manage anxiety.

3) Participants will be able to identify appropriate sensory-based strategy interventions for adult clients with anxiety, based on sensory processing style, for specific occupational performance needs.

4) Participants will be able to determine appropriate adult clients as having sensory-based anxiety that interferes with occupational performance.

Introduction:

Anxiety:

- Driven by biological, genetic, psychosocial factors
- Reactive response from threatening/harmful stimuli resulting in autonomic responses
- Normal, can serve as motivator
- Becomes problematic when interferes with occupational participation or performance

- 18.1% of adults in US diagnosed each year
- “Fight, flight, freeze”
- Response of sympathetic component of the autonomic nervous system

https://www.quora.com/Can-consciousness-exist-without-sensory-inputs
Sensory Processing:

- **Ability to register and modulate sensory information and to organize this sensory input to respond to situational demands**

- **Modulation**: ability to notice and regulate stimuli and respond in appropriate manner

- **Neurophysiological processes related to modulation of input are habituation and sensitization**

---

**Sensory Processing Concepts**

(Dunn, 2007)

---

**Brain processes multiple sensory modality inputs**

- Proprioception
- Vision
- Auditory system
- Tactile
- Olfactory
- Vestibular system
- Interoception
- Taste
- *Activity level*

---

**Sensory Processing: Sensory inputs**

Mangeot et al., 2001

---


http://nasadica.hr/nasadica_wp/wp-content/uploads/2015/06/sensory-integration-circle.png
Sensory Processing: Process
(Dunn, 1997)

- **Habituation**
  - Occurs when a person perceives a stimulus as familiar and therefore, reduces their response to it

- **Sensitization**
  - Occurs when person perceives a stimulus as novel, important, or potentially harmful, it creates a heightened response

- Habilitation and sensitization used interchangeably
- patterns of interchange = thresholds, which vary from person to person
- thresholds develop through experience + genetic endowment

Dunn’s Sensory Processing Model
(Dunn 1997; 2001; 2007)
Dunn’s Sensory Processing Model

- Neurological thresholds (vertical axis)
- Behavioral responses to threshold (horizontal axis)

Results in Four styles

- Everyone has one style; spectrum of threshold and behavioral responses intensities
  - According to Dunn, knowing your individual sensory style is important when considering how and why your environment will affect your daily occupational performance

http://classes.kumc.edu/sah/resources/sensory_processing/learning_opportunities/concepts/sp_concepts_main.htm
Low Registration: Missing Information

- **HIGH** sensory thresholds
- **PASSIVE** self regulation strategy
- Behaviors:
  - May seem disinterested, self-absorbed, dull in affect
  - Do not notice what is going on around them
  - Tend to miss cues that might guide behaviors

- **HYPOTHESIS:** Most daily activities lack sufficient sensory intensity to meet thresholds and passive strategies lead to state of being oblivious to activities

Sensation Seeking: Obtaining Information

- **HIGH** sensory thresholds
- **ACTIVE** self regulation strategy
- Behaviors:
  - Enjoy and create extra sensory input for themselves
  - Active, exciting, continuously engaged and engaging

- **Hypothesis:** Engage in active strategies to obtain increased input as a means to meet the high sensory threshold
Sensory Sensitive: Detecting Information

- **LOW** sensory thresholds
- **PASSIVE** self regulation strategy
- Comorbidities: ADHD, Social Communication Disorder (formerly known as Asperger Syndrome)
- Behaviors:
  - Distractible, hyperactive, possibly complainers
  - Notice more sensory events and comment about them
- Hypothesis: Low thresholds enable them to have an increased rate of noticing what is going on around them in environment and use passive strategies that allow things to happen rather than removing themselves, thus the complaining/commenting

Sensory Avoiding: Bothered by Input

- **LOW** sensory thresholds
- **ACTIVE** self regulation strategy
- Comorbidities: ASD, Schizophrenia, OCD
- Behaviors:
  - Rule bound, ritual driven, uncooperative
  - Utilize behaviors to limit sensory input
- Hypothesis: Limit sensory opportunities because unfamiliar sensory input is “threatening” to nervous system or at least, difficult to interpret or organize
Review: Sensory Styles?

Relationship Between Anxiety and Sensory Processing

What's happening?
Kinnealey & Fuiek (1999)

- Explore whether sensory-defensive adults had more symptoms of anxiety, depression and pain
- N=32 (21-48 years)
- Significant differences between sensory-defensive and non-defensive adults in anxiety and depression, but not pain
- Anxiety has been clinically associated with sensory defensiveness in children for a long time and now this study supports in adults
- Sensory defensiveness might be an unrecognized contributing or confounding factor in adults with anxiety
- Social or physical isolation and reduced sensory stimulation (coping mechanism) can have deleterious effects on functioning

Engel-Yeger, Dunn (2011)

- Examined the relationship between sensory reactivity in daily living situations and trait and state anxiety in healthy adults
- N: 135
- Age: 27 average
- Adolescent/Adult Sensory Profile and Spielberger's State-Trait Anxiety Inventory
- Findings:
  - Sensory hypersensitivity and low registration showed elevated trait anxiety and state anxiety (sensitivity and avoiding highest)
  - Men with lower registration more elevated trait anxiety than women
  - Greatest state anxiety within sensation avoiding
Engel-Yeger, Dunn (2011) Continued

- These sensory styles use negative coping strategies: avoidance, resistance, and have increased ANS activity
- Low neurological thresholds can result in time-consuming strategies that tax emotional and cognitive energy, and might be affected by gender
- Authors suggest that anxiety might be both a causative and resultant factor of extreme sensory processing patterns

OT implications:
- intervention with people who express enhanced anxiety levels should refer to their sensory profile for a better understanding of contribution
- Needs to employ a cognitive method to help develop expectations
- Person needs to understand which sensory stimuli might trigger anxious reactions
- OT should assist person in constructing explicit environmental conditions, routines and activities to affect participation and elevate self-esteem and wellbeing

Hoffman & Bitran (2006)

- 1st study examining sensory-processing sensitivity among individuals with social anxiety disorder (SAD)
  - N: 89
  - Mean age: 30 (18-74)
  - Average education: 15.41 years

Preliminary findings:
- Suggest that sensory-processing sensitivity associated with generalized SAD
- Relate to harm avoidance, behavioral inhibition to avoid punishment, novel stimuli, and non-reward
- Relationship between amygdala activation threshold

continued
Jerome & Liss (2004)

- **Purpose:** Investigate relationships between 4 sensory processing styles with adult romantic attachment style and coping style
- **N:** 133
- **COPE scale, A/ASP, Experiences in Close Relationships Scale**

- **Findings:**
  - Sensory sensitivity relates to relationship anxiety, coping style is focusing on/venting
  - Sensory avoiding results in relationship avoidance but no coping relationships identified
  - Low registration correlates with relationship anxiety and relationship avoidance, coping with denial and disengagement
  - Seeking relates to secure attachment
  - Seems to be contradiction in Dunn’s model

Schupp, Junghofer, Weike & Hamm (2003)

- Investigated emotional facilitation of sensory processing within visual cortex
- **N:** 20 psych students
- Pleasant vs unpleasant stimuli (images), subject categorizing, electrophysiological data with scalp EEG

- **Results indicated that the emotional content of visual cues facilitates sensory encoding of stimuli (reflexive rather than voluntary)**
- Understanding that this reflexive indicates sensitivity in limbic activity
Neal, Edelmann & Glachan (2010)

- Examined relationships between tendencies toward mental health problems, latent dimensions of behavioral inhibition, and sensory-processing sensitivity
- N: 234
- Beck Depression Inventory II, Beck Anxiety Inventory, Highly Sensitive Person Scale, Retrospective Self-Report of Inhibition, Social Phobia and Anxiety Inventory
- Higher levels of anxiety associated with increased self-reported sensory sensitivity to environment (SS and SA)
- Unable to identify if sensory processing causative or consequence of anxiety

Evidence

- Association between sensory overresponsive type and limbic overresponsivity
- Association between low registration (underresponsive type) and limbic overresponsivity
- Spinal cord connected to amygdala via hypothalamus
- Amygdala initiates emotional arousal from environmental stimuli and coordinates behavior to the autonomic nervous system, resulting in stress and anxiety
- Sympathetic nervous system may over respond to touch, sound, visual stimuli, and movement
- Sensory over responsiveness linked to different EEG recording, increased cortisol (Lane et al. 2010)
Conclusions

- Adults who are overresponsive to environmental stimuli describe everyday life as overwhelming due to:
  - Frequent isolation
  - Coping time
  - Inability to cope with demands
  - Difficulty with coping strategies

- Knowledge about your sensory processing pattern will have a positive effect on everyday life and occupational performance. Sensory sensitivity may lead to problems with social demands.

- OT can address via cognitive strategies, sensory processing education, and environmental modifications.

Assessment
Adolescent/Adult Sensory Profile®

- Brown & Dunn (2002)
- 60 item questionnaire
- Results: quadrant scores (sensory processing style), supplement for individual sensory input
- Age range: 11 years and older

Example

- “Joe Bloggs”
- 4 quadrant scores

QUADRANT RAW SCORES/CLASSIFICATIONS

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>Raw Score</th>
<th>Cut Score Range</th>
<th>Cut Score Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Low Registration</td>
<td>40-75</td>
<td>36-44</td>
<td>More Than Most People</td>
</tr>
<tr>
<td>2. Sensation Seeking</td>
<td>36-75</td>
<td>32-42</td>
<td>Less Than Most People</td>
</tr>
<tr>
<td>3. Sensory Sensitivity</td>
<td>30-75</td>
<td>25-41</td>
<td>Similar to Most People</td>
</tr>
<tr>
<td>4. Sensation Avoiding</td>
<td>23-75</td>
<td>27-41</td>
<td>Similar to Most People</td>
</tr>
</tbody>
</table>

Ages 18.0 to 64.11: Classifications are based on the performance of individuals without disabilities (n = 496).
Sample Interpretation of Scores

- Needs further assessment in seeking and low registration (high threshold styles)
- Sensitivity and avoiding are WNL
- Hypothesis: High threshold quadrants indicate individual may not create additional sensory stimuli
  - JOE indicated difficulty in: coping with noisy environments which impacts socializing and anxiety levels
  - Strengths: detecting, not necessarily bothered by input
  - Difficulties might be in: missing information and obtaining

Interpretation of Quadrant

- Joe can benefit from more intensity in sensory experiences during daily life
  - Decreasing predictability of routines
  - Increases ability to attend and sustain attention to tasks and activities of daily life

- Joe can benefit from employing strategies that support exploration/interaction with sensory environment
  - Should address client’s temporal contextual needs
  - Slowly add in experiences for safe exploration
+ Pattern Grids

What is Joe’s quadrant for
- Taste/Smell?
- Movement Processing?
- Visual Processing?
- Touch Processing?
- Activity Level?
- Auditory Processing?

+ Pattern Grids: Joe’s Results

<table>
<thead>
<tr>
<th>Input</th>
<th>Quadrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taste/Smell</td>
<td>Low Registration*</td>
</tr>
<tr>
<td>Movement Processing</td>
<td>LR/Sensitive*</td>
</tr>
<tr>
<td>Visual Processing</td>
<td>Seeking</td>
</tr>
<tr>
<td>Touch Processing</td>
<td>Sensitive</td>
</tr>
<tr>
<td>Activity Level</td>
<td>Seeking</td>
</tr>
<tr>
<td>Auditory Processing</td>
<td>Avoiding</td>
</tr>
</tbody>
</table>

Question: Where should we try to increase activity level to support auditory and anxiety?
+ Anxiety Control Questionnaire

- ACQ

Please note there is also a pediatric version that is standardized.

+ Intervention: Sensory-based Strategies
Evidence for Treatment: Education

**Wong et al. (2010)**
- Effectiveness of 30 min educational intervention re: pain, coping strategies and breathing exercises (surgical patients with pre-post method)
- N=63 (quasi-experimental)
- Significant lower levels of anxiety and better self-efficacy

**Finkelstein et al. (2007)**
- Effectiveness of stress reduction program for medical students (10 sessions)
- N=46
- Anxiety decreased significantly, sustained for 3 months s/p

Evidence, Continued

**Van Straten et al. (2008)**
- Web-based self help intervention to reduce anxiety, burnout, depression, 4 week program
- N=107 (treatment group)
- Effective for depression and anxiety and enhancing QoL

https://s-media-cache-ak0.pinimg.com/736x/f5/1c/d4/f51cd43084e0b853426ada52a575e07f.jpg
AOTA: OT and SI for Adults


Sensory-based Strategies

May-Benson (2009)
- Adults with SPD often report high anxiety, depression
- Can have history of PTSD or trauma
- May have tried years of counseling
- Often find OT through child services
- Considerations: Adults might not want SI clinic (peds)
- Tx: emphasize sensory diet, home program
  - Consultation model can be effective
  - Sensory and motor based tx

Champagne & Stromberg (2004)
- Sensory-based approaches and multisensory rooms to use within inpatient psych settings
- Can be used as alternatives to seclusion and restraints
Interventions (AOTA)

- Remedial
- Accommodations/Adaptations (including environmental modifications)
- Sensory strategies/diet within daily routine
- Education

P.A.L. Approach

- **P**: Plan (sensory input(s))
- **A**: Access (or limit)
- **L**: Learn strategy within daily routine
### Low Registration High Scores (Brown & Dunn, 2002)

<table>
<thead>
<tr>
<th>Taste/smell</th>
<th>Movement</th>
<th>Visual</th>
<th>Touch</th>
<th>Activity Level</th>
<th>Auditory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unfamiliar foods into diet</strong></td>
<td><strong>Use weights and large movements before refining</strong></td>
<td><strong>Label drawers, cabinets</strong></td>
<td><strong>Use visual cues to notice touch</strong></td>
<td><strong>Come to meetings prepared with questions/ agenda, etc</strong></td>
<td><strong>Request others to slow down/ repeat prn</strong></td>
</tr>
<tr>
<td><strong>Use care with hot liquids</strong></td>
<td><strong>Use stair rails, bars, etc</strong></td>
<td><strong>Take notes for later review</strong></td>
<td><strong>Set water heaters at lower temps</strong></td>
<td><strong>Ask for summaries/ restate most important points</strong></td>
<td><strong>Record important information</strong></td>
</tr>
<tr>
<td><strong>Smoke detectors need to be checked consistently</strong></td>
<td><strong>Use anti-skid bathmats</strong></td>
<td><strong>Use mirrors to check personal appearance</strong></td>
<td><strong>Pay attention to weather reports for dress</strong></td>
<td><strong>Use lists/ reminders/ agendas/ calendars, etc</strong></td>
<td><strong>Ask for written output of info</strong></td>
</tr>
<tr>
<td><strong>Wear non-skid shoes</strong></td>
<td><strong>Place objects (keys) in consistent, obvious location</strong></td>
<td><strong>Add texture to objects to notice off/on</strong></td>
<td><strong>Talk yourself through a task for sequence</strong></td>
<td><strong>Explain or repeat info back to confirm</strong></td>
<td><strong>Use watch/ phone alarm for reminders</strong></td>
</tr>
<tr>
<td><strong>Remove clutter from walking paths</strong></td>
<td><strong>Change colors, fonts, etc to decrease habituation</strong></td>
<td><strong>Write things down or talk it through before executing task</strong></td>
<td><strong>Use watch/ phone alarm for reminders</strong></td>
<td><strong>Use watch/ phone alarm for reminders</strong></td>
<td><strong>Use watch/ phone alarm for reminders</strong></td>
</tr>
</tbody>
</table>

### Sensation Seeking High Scores (Brown & Dunn, 2002)

<table>
<thead>
<tr>
<th>Taste/Smell</th>
<th>Movement</th>
<th>Visual</th>
<th>Touch</th>
<th>Activity Level</th>
<th>Auditory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chew gum, eat mints</strong></td>
<td><strong>Incorporate movement in activities (pass out items in group)</strong></td>
<td><strong>Use bright colors and bold shapes</strong></td>
<td><strong>Incorporate touch activities with others (dancing) or environment (gardening)</strong></td>
<td><strong>Look for group activities</strong></td>
<td><strong>Incorporate sounds into daily tasks</strong></td>
</tr>
<tr>
<td><strong>Use scented/ menthol soaps, cleaners</strong></td>
<td><strong>Engage in physical activity before thinking/ attention tasks</strong></td>
<td><strong>Use bright lighting</strong></td>
<td><strong>Use textured objects</strong></td>
<td><strong>Find opportunities for self-expression/ creativity</strong></td>
<td><strong>Use background noise</strong></td>
</tr>
<tr>
<td><strong>Wear perfume or body sprays</strong></td>
<td><strong>Choose activities that involve bending over and/ or inconsistent speeds</strong></td>
<td><strong>In meetings, sit where you can change visual perspective easily</strong></td>
<td><strong>Go barefoot</strong></td>
<td><strong>Do tasks in novel ways</strong></td>
<td><strong>Find or create activities where it's acceptable to make noise or it's in environment</strong></td>
</tr>
<tr>
<td><strong>Use spices/ Choose new foods</strong></td>
<td><strong>Use textured creams, lotions, menthol</strong></td>
<td><strong>Incorporate novelty into routine</strong></td>
<td><strong>Use textured creams, lotions, menthol</strong></td>
<td><strong>Incorporate novelty into routine</strong></td>
<td><strong>Use textured creams, lotions, menthol</strong></td>
</tr>
</tbody>
</table>
### Sensory Sensitive High Scores (Brown & Dunn, 2002)

<table>
<thead>
<tr>
<th>Taste/smell</th>
<th>Movement</th>
<th>Visual</th>
<th>Touch</th>
<th>Activity Level</th>
<th>Auditory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use scents you enjoy</td>
<td>Use rocking chairs to calm</td>
<td>Use systematic scanning methods</td>
<td>Use deep-pressure in lieu of light touch</td>
<td>Use breaks, time-outs</td>
<td>Reduce volume/amount of stimuli</td>
</tr>
<tr>
<td>Identify preferred flavors and incorporate them daily</td>
<td>Limit amount of steps when learning new movement-based activity</td>
<td>Cover/visually block out extraneous information</td>
<td>Use heavy blankets on bed</td>
<td>Self-talk to stay focused</td>
<td>Limit info/steps provided at one time</td>
</tr>
<tr>
<td>Introduce new smells and tastes gradually</td>
<td>Select movement activities that allow you to keep head upright/constant speed (bike vs. crossfit)</td>
<td>Organize drawers, closets, etc to limit frustration with finding items</td>
<td>Wrap self in blanket</td>
<td>Break tasks into smaller parts, write out steps and check off (to do list)</td>
<td>Ask person to give you cues if you are drifting/losing focus</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sensory Avoiding High Scores (Brown & Dunn, 2002)

<table>
<thead>
<tr>
<th>Taste/smell</th>
<th>Movement</th>
<th>Visual</th>
<th>Touch</th>
<th>Activity Level</th>
<th>Auditory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sauce on side</td>
<td>Consider if elevators, escalators, high places are going to make you uncomfortable</td>
<td>Wear sunglasses</td>
<td>Self-advocate for personal space to others</td>
<td>Avoid congested areas, busy times</td>
<td>Diminish background noise</td>
</tr>
<tr>
<td>Use unscented cleaners, soaps, etc</td>
<td>Use stairs when able</td>
<td>Time out for eyes to decrease visual stimulation</td>
<td>Select clothing fabrics that are benign</td>
<td>Maintain consistency, limit disruptions</td>
<td>Use quiet area to focus; close the door</td>
</tr>
<tr>
<td>Negotiate choosing restaurant</td>
<td>Take a break during physical activities; avoid bending over</td>
<td>Use dim or natural lighting/dark</td>
<td>Position fans/vents so not blowing directly at you</td>
<td>Give permission and set time to be alone, quiet time</td>
<td>Use white noise or calming, repetitive sounds to limit distracting sounds</td>
</tr>
<tr>
<td>Routine and repetition</td>
<td>Remove clutter</td>
<td>Wear gloves during IADLs</td>
<td>Limit large group exposure</td>
<td>Use earplugs/headphones</td>
<td></td>
</tr>
</tbody>
</table>
**Low Score Interventions**

- LR: bland flavors/scents; neutral colors; repetitive movement; rocking chair; consistent routine and settings/people; repetitive and predictable or nature-based sounds

- Sensitive: add spices/scents to distinguish food/store; use instruction for movements, engage in unpredictable exercise; add color to written info; use textures; use light touch; sensory diet; vary sounds and rhythm; ask for repeats

- Avoiding: check diet for problematic foods; check if smells are overwhelming; take breaks/use mindfulness; create space with limited visual input; ask if you are avoiding others’ personal space; create quiet time

- Seeking: try scents, foods; try new exercise classes and be mindful; rearrange furniture; use new colors; go for massage, use textured bathing items; vary routine; play music while doing activities; attend concerts

- Brown & Dunn (2002)

---

**Goal Attainment Scaling**

- Strategy to identify changes in academic and social behavior

- Individualized, Criterion-referenced
**GAS Framework**

1. Identify concerns
2. Analyze concerns
3. Plan instruction
4. Construct GAS
5. Implement instruction
6. Evaluate instruction via GAS results

**GAS Methodology**

1. Select target behavior
2. Describe target behavior outcome in objective terms
3. Develop 3-5 descriptions of probable outcomes from *least favorable* to *most favorable*
+ Ratings

- Use numerical ratings for descriptive levels (3-5)
- Ex: 5 point scale
  +2 (best)
  +1
  0 (no change)
  -1
  -2 (worst)

+ Options for Ratings

- Frequency
- Quality
- Development
- Usage
- Timeliness
- % Complete
- Accuracy
- Effort
- Engagement
+ **Frequency** (Never–Sometimes–Very Often–Almost Always–Always)
+ **Quality** (Poor–Fair–Good–Excellent)
+ **Development** (Not Present–Emerging–Developing–Accomplished–Exceeding)
+ **Usage** (Unused–Inappropriate Use–Appropriate Use–Exceptional Use)
+ **Timeliness** (Late–On Time–Early)
+ **Percent complete** (0%–25%–50%–75%–100%)
+ **Accuracy** ( Totally Incorrect–Partially Correct–Totally Correct)
+ **Effort** (Not Attempted–Minimal Effort–Acceptable Effort–Outstanding Effort)
+ **Amount of Support Needed** (Totally Dependent–Extensive Assistance–Some Assistance–Limited Assistance–Independent)
+ **Engagement** (None–Limited–Acceptable–Exceptional)

---

**GAS: Strengths/Limits**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time efficient</td>
<td>Lacks norm-referenced data</td>
</tr>
<tr>
<td>Individualized</td>
<td>Subject to bias</td>
</tr>
<tr>
<td>Non-invasive</td>
<td>Global/less discrete</td>
</tr>
<tr>
<td>Multiple informants</td>
<td>Research primarily in rehabilitation not academics</td>
</tr>
<tr>
<td>Can be self-assessment</td>
<td></td>
</tr>
<tr>
<td>Inexpensive</td>
<td></td>
</tr>
<tr>
<td>Minimal skills required to implement</td>
<td></td>
</tr>
</tbody>
</table>
**Template**

<table>
<thead>
<tr>
<th>Action steps</th>
<th>Length of time (day, week, etc)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GAS</strong></td>
<td>1</td>
</tr>
<tr>
<td>+2 (much more than expected- 11+ lb)</td>
<td></td>
</tr>
<tr>
<td>+1 (more than expected-10 lbs)</td>
<td>x</td>
</tr>
<tr>
<td>0 (as expected-5 lbs)</td>
<td>x</td>
</tr>
<tr>
<td>-1 (somewhat less than expected-1-4lb)</td>
<td></td>
</tr>
<tr>
<td>-2 (much less than expected-0 lb)</td>
<td></td>
</tr>
</tbody>
</table>

**Date:**

**GOAL (0):** Lose 5 pounds

---

**Case Study Examples**

---

[continued]
Case 1: “Kate”

- 30 year old female; dx: obesity, HTN
- C/O not being able to get business off ground and instead settles for low paying job beneath her skill level
- Stress keeps her from participating in activities, disrupting sleep, causing marital stress

A/ASP Results:
- Low Registration (29) = Similar to Most
- Sensation Seeking (46) = Similar to Most
- Sensory Sensitivity (58) = ++ Much More than Most
- Sensation Avoiding (57) = ++ Much More than Most

Inputs:
- Vision: Sensitive
- Auditory: Low Registration
- Activity Level: Sensitive
- Movement: Avoiding
- Taste/Smell: Avoiding
- Touch: Sensitive
**Intervention:** “Kate”

- **P:** Sensitive, Avoiding
  - *Goal: Engage in desired activities with husband 2 times a week, minimum of 1 hour each.*
- **A:** Limit input in all areas except auditory
- **L:**
  - Sensory style and anxiety relationship
  - Sensory adaptations
  - Environmental modifications

**Kate’s Goal Attainment Scale**

<table>
<thead>
<tr>
<th>+2: Engage in 3 or more activities for over an hour</th>
<th>Week 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>+1: Engage in 2 activities for 90 min each</td>
<td>Movie with heavy blanket Dinner out at small, calm restaurant</td>
</tr>
<tr>
<td>0: Engage in activity with husband 2x/week for minimum 60 min each.</td>
<td></td>
</tr>
<tr>
<td>-1: Engage in 1 activity with husband for 60 min</td>
<td></td>
</tr>
<tr>
<td>-2: Engage in activity with husband for less than 60 min *</td>
<td></td>
</tr>
</tbody>
</table>
Intervention Specifics

Sensory Adaptations
- Work Tasks/IADLs
  - Systematic scanning
  - Cover extraneous info
  - Organize areas and label
  - Take breaks
  - Break tasks down/plan/ to do list
  - Ask for examples, repeat info to speaker
  - Use alarm for reminders
  - Record information
- Exercise/Mobility
  - Avoid head down/bending
  - Use repetition
  - Use stairs
- Relationship
  - Use deep pressure, heavy blankets
  - Wrap self in blanket daily during daily breaks one time (15-20 minutes)
- Environmental Modifications
  - Eliminate background visual stimuli
  - Organization of home, work
  - Lighting
  - Sound considerations
  - Quiet area with limited sensory input (smells, heavy blanket, darkness, etc)

Case 2: “Andres”

- 37 year old male graduate student
- C/O anxiety affecting social participation, dating (performance and participation) as well as work performance as health care professional, becoming more isolated at home
- Has been diagnosed with chronic depression, ADD, generalized anxiety disorder (no meds)
Case 2: “Andres”

- **A/ASP Results:**
  - Low Registration (59) = ++ Much More than Most
  - Sensation Seeking (43) = Similar to Most
  - Sensory Sensitivity (25) = - Less Than Most
  - Sensation Avoiding (58) = ++ Much More than Most

- **Inputs:**
  - Vision: Low Registration
  - Auditory: Low Registration/Seeking
  - Activity Level: Avoiding
  - Movement: Low Registration
  - Taste/Smell: Avoiding
  - Touch: Avoiding

Intervention: “Andres”

- **P:** Avoiding, LR

  *Goal: Be able to engage in daily work meetings without becoming irritable.*

- **A:** Access + limit

- **L:**
  - Sensory style and anxiety
  - Sensory adaptations
  - Environmental modifications
  - Social adaptations
**Andres**

<table>
<thead>
<tr>
<th>Sensory Adaptations</th>
<th>Environment/Social Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>??</td>
<td>??</td>
</tr>
</tbody>
</table>

**Type of Client**

- Any adolescent/adult with anxiety or anxious personality that interferes with participation or performance
- LD/SPD/ADHD
- ASD spectrum
- Mental health conditions (see Tina Champagne's work)
- Trauma
- Musculoskeletal
- Occupational issues without diagnosis
- SO MANY MORE...
My current research results (work in progress...)

Questions?
References


