Restraint Reduction through Sensory Modulation

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The American Nurses Association promotes registered nurse participation in reducing patient restraint and seclusion in health care settings. Restraining or secluding patients either directly or indirectly is viewed as contrary to the fundamental goals and ethical traditions of the nursing profession, which upholds the autonomy and inherent dignity of each patient (ANA, 2012).

Regulatory standards from The Joint Commission require staff to be able to demonstrate strategies to identify staff and patient behaviors, events, and environmental factors that may trigger circumstances that require the use of restraint or seclusion as well as the use of nonphysical intervention skills (TJC, 2010).

Given the safety, ethical, professional, regulatory, and legal standards related to reducing restraint, it is imperative that alternative, evidence based strategies be employed throughout our health care settings.
Seclusion and Restraint Reduction through Sensory Modulation

- This requires a culture shift!

- National Executive Training Institute Seclusion and Restraint Reduction Initiative (2003-present)
  - 6 Core Strategies (EBP)
  - Trauma Informed Care
  - Recovery Model
  - Why Sensory Modulation?

- MA State Initiatives

- International Initiatives
  - [http://www.tepou.co.nz/initiatives/sensory-modulation/103](http://www.tepou.co.nz/initiatives/sensory-modulation/103)
6 Core Strategies

- Leadership toward organizational change
- Use of data to inform practice
- Workforce development
- Use of seclusion and restraint prevention tools
- Full inclusion of service users and families
- Debriefing

(USDHHS, 2003; NASMHPD 2003-present).
The experience of being human is embedded in the sensory events of our everyday lives.

-Dunn, 2001
What is Sensory Modulation?

- “The capacity to regulate and organize the degree, intensity, and nature of responses to sensory input in a graded and adaptive manner to achieve and maintain an optimal range of performance and adapt to challenges in daily life”

  (Miller, Reisman, McIntosh, and Simon, 2001, p. 57)

- Ability to self-regulate or adapt one’s responses to sensory and motor stimulation in an adaptive manner.

- Self-regulation is the ability to attain, maintain, and change one’s arousal level for a task or a situation.
  - It allows us to function and feel comfortable in different situations and environments.

- This approach involves providing sensory based therapy tools or creating appropriate environments that engage the user’s senses for emotional regulation to reduce the build up of agitation and prevent the escalation of aggression.
The Sensory Connection to Behavior

- Our senses give us information about the physical experiences of our body and our environment. Activities that involve the senses can help us change our mood or state of being.

- All of us have unique system tendencies and preferences we use to self-organize. This is why it is essential that we build engaging relationships with our patients to better understand their sensory needs.

- A person may need to do something to “regulate” their level of alertness by introducing something that is perceived by that person as calming or alerting.
Sensory Systems

External Senses

- Vision
- Hearing
- Taste
- Smell
- Touch
- Oral Motor

Internal Senses

- Vestibular (Balance)
  - It’s our personal GPS telling us where we are in time and space.
- Proprioceptive (Kinesthesia)
  - A sense of one’s own body and body movements provided by the muscles and joints.
- Deep Pressure Touch
# Sensory Input can be Calming or Alerting

<table>
<thead>
<tr>
<th>Calming</th>
<th>Alerting</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Helpful when we are stressed, anxious, or need to relax.</td>
<td>■ Helps to energize us or increase our ability to</td>
</tr>
<tr>
<td>■ Slow</td>
<td>■ pay attention.</td>
</tr>
<tr>
<td>■ Soft</td>
<td>■ Fast, quick paced</td>
</tr>
<tr>
<td>■ Familiar</td>
<td>■ Loud</td>
</tr>
<tr>
<td>■ Simple</td>
<td>■ Novel</td>
</tr>
<tr>
<td>■ Repetitive</td>
<td>■ Complex</td>
</tr>
<tr>
<td>■ Rhythmic</td>
<td>■ Unexpected</td>
</tr>
<tr>
<td>■ Positive Associations</td>
<td>■ Non-rhythmic</td>
</tr>
<tr>
<td>■ Pronounced</td>
<td>■ Pronounced</td>
</tr>
</tbody>
</table>

- Calming: helpful when we are stressed, anxious, or need to relax.
  - Slow
  - Soft
  - Familiar
  - Simple
  - Repetitive
  - Rhythmic
  - Positive Associations

- Alerting: helps to energize us or increase our ability to pay attention.
  - Fast, quick paced
  - Loud
  - Novel
  - Complex
  - Unexpected
  - Non-rhythmic
  - Pronounced
Reviewing the Senses

Olfaction

**Calming**
- Soothing scented candle (vanilla, lavender)
- Mild fragrances
- Herbal teas
- Scented bath powder or shower gels
- Scented Lotions
- Cedar filled pillow
- Positive associations

**Alerting**
- Candles with crisp strong scent (lemon or peppermint)
- Strong fragrances
- Perfume
- Noxious odors
- Room fragrance spray
- Citrus scents
- Negative Associations
Reviewing the Senses

**Taste**

**Calming**
- Mild
- Sweet
- Chocolate
- Sweet fruits like apples and grapes
- Pleasant tastes
- Chicken noodle soup
- Herbal teas
- Oatmeal and brown sugar

**Alerting**
- Spicy
- Sour candy
- Bitter
- Strong peppermints
- Distasteful foods
- Lemonade
- Pickles
- Coffee
Reviewing the Senses

Oral Motor

Calming
- Sucking or resistive chewing
  - Hard candy
  - Thick liquid through a straw
  - Sweet orange slices
  - Lollipops
  - Chewing gum

Alerting
- Crunchy
  - Popcorn
  - Pretzels
  - Raw vegetables
  - Cereal
  - Crushed Ice
# Reviewing the Senses

## Vision

<table>
<thead>
<tr>
<th>Calming</th>
<th>Alerting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft colors</td>
<td>Bright Colors</td>
</tr>
<tr>
<td>Dim lighting</td>
<td>Bright lighting</td>
</tr>
<tr>
<td>Natural Lighting</td>
<td>Flashing lights</td>
</tr>
<tr>
<td>Watching fish in an aquarium</td>
<td>Modern Art</td>
</tr>
<tr>
<td>Bubble lamps</td>
<td>Video games</td>
</tr>
<tr>
<td>Serene paintings</td>
<td>Messy and cluttered room</td>
</tr>
<tr>
<td>Clean and sparsely finished room</td>
<td></td>
</tr>
</tbody>
</table>
## Reviewing the Senses

### Auditory

<table>
<thead>
<tr>
<th>Calming</th>
<th>Alerting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft and slow music</td>
<td>Loud noises</td>
</tr>
<tr>
<td>Quiet</td>
<td>Rock music</td>
</tr>
<tr>
<td>Familiar sounds</td>
<td>Fast tempo or offbeat</td>
</tr>
<tr>
<td>Humming</td>
<td>Fire alarms</td>
</tr>
<tr>
<td>Singing quietly</td>
<td>Thunder</td>
</tr>
<tr>
<td>Repetitive or rhythmic sounds (drum beat)</td>
<td>Whistling</td>
</tr>
<tr>
<td>Nature sounds</td>
<td>Changing sounds (city streets)</td>
</tr>
<tr>
<td>Meditation tapes</td>
<td>Hand held instruments</td>
</tr>
</tbody>
</table>
Reviewing the Senses

**Touch**

**Calming**
- Firm touch on shoulder
- Using a heavy quilt or weighted blanket
- Neutral warmth
- Squeezing a stress ball
- Foot roller
- Use of hand lotions
- Beanbag tapping
- Massage

**Alerting**
- Unexpected touch
- Light touch
- Feeling something prickly or squishy
- Cool room
- Use of “fidgets”
- Snapping a rubber band on wrist
- Use of ice
### Reviewing the Senses

**Proprioceptive**

<table>
<thead>
<tr>
<th>Calming</th>
<th>Alerting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow and rhythmic</td>
<td>Quick</td>
</tr>
<tr>
<td>Sustained</td>
<td>Jarring</td>
</tr>
<tr>
<td>Joint compression or isometrics</td>
<td>Jerky</td>
</tr>
<tr>
<td>Weight lifting or sports</td>
<td>Jogging</td>
</tr>
<tr>
<td>Yoga, Tai Chi, or stretching</td>
<td>Aerobics</td>
</tr>
<tr>
<td>Walking</td>
<td>Boxing</td>
</tr>
<tr>
<td>Gardening</td>
<td>Jumping Jacks</td>
</tr>
<tr>
<td>Pushing heavy objects or adding weight</td>
<td></td>
</tr>
</tbody>
</table>
## Reviewing the Senses

### Vestibular (Balance)

<table>
<thead>
<tr>
<th>Calming</th>
<th>Alerting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocking</td>
<td>Jogging</td>
</tr>
<tr>
<td>Swinging</td>
<td>Fast Dancing</td>
</tr>
<tr>
<td>Stable</td>
<td>Movement Activities</td>
</tr>
<tr>
<td>Slow</td>
<td>Spinning quickly</td>
</tr>
<tr>
<td>Using a glider chair or</td>
<td>Bouncing</td>
</tr>
<tr>
<td>rocker chair</td>
<td>Jumping</td>
</tr>
<tr>
<td>Walking</td>
<td></td>
</tr>
<tr>
<td>Pacing</td>
<td></td>
</tr>
</tbody>
</table>
When is calming needed?

- **Emotional Signs**
  - Anxiety
  - Agitation
  - Euphoria
  - Anger
  - Mania
  - Over excitation
  - Fear
  - Panic
  - Overwhelmed

- **Physical Signs**
  - Tense posture
  - Fidgeting
  - Increased breathing
  - Increased heart rate
  - Sweaty palms
  - Increased energy
  - Hyperactivity
  - Sleeplessness

- **Behavioral Signs**
  - Hyper-vigilant
  - Intrusive
  - Noisy
  - Disruptive
  - Frustrated Easily
  - Over active
  - Distractible
  - Poorly self-controlled
When is alerting needed?

- **Emotional Signs**
  - Sadness
  - Hopelessness
  - Numbness
  - Discouragement
  - Feeling suicidal
  - Having flashbacks
  - Trouble with disassociation

- **Physical Signs**
  - Low energy
  - Slouched posture
  - Lethargy
  - Sleepiness

- **Behavioral Signs**
  - Lack of interest
  - Withdrawal
  - Pre-occupation
  - Self-injurious behaviors
  - Poor orientation
Sensory Diet

- Menu of strategies that are strategically integrated into daily routines to support health, wellness, and the recovery process.
  - Includes prevention and de-escalation focused interventions

- “Each person’s sensory diet is an important self-organizing concept and needs to be considered in the identification of individual crisis prevention strategies for use at critical times” (Champagne, 2003).

- For example, if an individual wishes to watch a relaxing video tape at night to prepare for sleep but is prohibited from doing so by institutional rules, he or she may experience increased agitation or distress. If these needs are understood as part of the individual’s sensory diet and as self-organizing activities, options can be made available” (Champagne and Stromberg, 2004).
Individual Sensory Preferences and Diet

- How do your own sensory preferences influence your actions and relationships with others?

- Self-awareness of our own patterns and habits helps us better understand how we respond to people, life situations, and our environment.

- What is calming or alerting to you?

- What is your ultimate work or home setting?
  - Quiet? Dark? Music?

- What is a part of your personal “sensory diet” that you use daily in response to stressful life situations and events?
Common Sensory Issues in Mental Health Patients

- People with mental illness may experience hyper or hypo sensitivity to particular sensations including touch, light, noise, and vestibular input.

  - How does this impact our patients?
    - Strong clothing preferences or avoidances.
    - Aversion to showers.
    - Discomfort with surprise touch (hugging, hand shaking).
    - Poor balance.
    - Sensitivity to visual stimuli like bright lights and contrast.
    - Distracted when other people are talking.
    - Sensitivity to loud noises or sounds.
    - Extreme food preferences.
    - Difficulty learning new skills.
    - Discomfort in crowded places.
    - Frequently feeling anxious/tense.
    - Need to maintain own space.
    - Avoiding routine medical procedures (shots, dentist).
Promoting Recovery

- Building the capacity for:
  - Increased Resiliency
  - Development
  - Occupational Participation
  - Health and Wellness
  - Quality of Life

- Gives patients a concrete strategy to help themselves in the future, not just a temporary fix with PRN medication.

- Allows staff to develop a therapeutic rapport and helps foster a sense of safety and containment in the physical environment.
Trauma Informed Care

- Collaborative care that recognizes the high prevalence and pervasive impact of trauma and attachment-related difficulties within their client population and provides care that addresses the whole system (person, family, organization) to help support the recovery process. 
  

- Appreciation for the high prevalence of traumatic experiences among consumers

- An understanding of the profound neurological, biological, and social effects of trauma and violence.

- Care that recognizes and addresses trauma-related issues, is collaborative, supportive, and skilled.

  (NASMHPD, 2003-present)
Trauma Informed vs. Non-trauma informed Care

**Trauma Informed**
- Staff understands the function of the behavior (self-injury, rage, compulsions)
- Objective, neutral language
- Recognition of culture and practices that are re-traumatizing
- Power/control issues minimized-constant attention to culture of care and individualized approach

**Non-Informed**
- Most behavior seen as intentionally provocatively (attention seeking)
- Labeling language (manipulative, needy, attention-seeking)
- “Tradition of toughness” or primarily a behaviorist approach valued as best care approach
- Rule enforcers- compliance focused
Ourselves: the Caregivers

- Identify our own sensory, trauma, and attachment experiences.

- Seek assistance as needed.

- Create our own sensory supports and tool kits.

- Consider your schedule (how many patients with severe emotional disturbances, etc. do you see per day/per hour, etc).

- Find ways to embed sensory based strategies into your daily routine.

- Practice, practice, practice what we preach.
Implementation in Behavioral Health

- A sensory modulation program was developed and implemented on the inpatient behavioral health unit in 2016. The process utilized a team collaborative approach with input from patients, nursing, occupational therapy, quality management, infection control, clinical practice committee, employee health, environmental services, and the department of facilities and engineering.
Results

- Results suggest that the use of sensory modulation is an effective strategy for decreasing restraint and seclusion episodes on an inpatient psychiatric unit.

- Results suggest that the use of sensory modulation is an effective strategy as in decreasing employee workplace violence related injuries and lost or restricted work days due to injury.

- Sensory modulation provided an innovative approach that strengthened the therapeutic alliance between staff and patients. This approach assisted both the provider and the patient in the utilization of the patient’s preferred crisis prevention methods which decreased the need for seclusion and restraint.
References

- AOTA 2014, Occupational Therapy's Role with Restraint and Seclusion Reduction or Elimination, Fact Sheet.
References continued


- TJC 2010, The Hospital Accreditation Standards. Provision of Care, Treatment, and Services. Standards PC.03.05.01 through PC.03.05.19