

4-15-2021

## Sensory Processing, Chronic Pain, and Recovery from Substance Use

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### Recommended Citation

Ruth, C., MacDermott, S., Cohill, B., & Park, K. (2021, April 15). Sensory Processing, Chronic Pain, and Recovery from Substance Use. Poster presented at the Virtual OTD Capstone Symposium, University of St Augustine for Health Sciences. Retrieved from <https://soar.usa.edu/otdcapstonesspring2021/8>

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# Sensory Processing, Chronic Pain, and Recovery from Substance Use

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## BACKGROUND

1 in 4 people in residential substance use treatment settings have chronic pain. Those with chronic pain have worse drug and alcohol treatment outcomes and higher rates of relapse compared to those without pain or with reduced pain (Ilgen et al., 2020). The complicating factors of trauma, mental health diagnoses, addiction, and chronic pain require a holistic and client-centered approach that focuses on the empowerment and self-awareness aspects of recovery (Wallis et al., 2018). Sensory processing techniques target the physiological symptoms and the psychological aspects of both chronic pain and mental health conditions (Brown, 2002). OTs have the unique skill set and training to use these techniques to adapt environments and tasks to fit the sensory needs of individuals (AOTA, 2017). However, there is a gap in the literature supporting the need for sensory processing techniques as non-pharmacological chronic pain interventions within a substance use treatment setting.

## PROBLEM STATEMENT

Emerging research is showing unique sensory trends in individuals with mental health conditions and OTs have a distinct skill set to address sensory processing through client-centered intervention. However, more evidence-informed treatment is needed for substance use and chronic pain.

## PURPOSE

### Learning and Outcome Objectives:

- Research Question: What are the sensory processing patterns of those with co-morbid chronic pain and in recovery for substance use?
- Based on the above research questions findings develop a sensory-based OT program to enhance client's self-management of both substance use and chronic pain to promote recovery and long-term sobriety.



Acknowledgement: Special thanks to Leslie Bardin MS OTR/L and Caitlin Belvin MOTR/L

Scan QR code for a complete list of references

## PART I: DESCRIPTIVE STUDY

### METHODS

Individuals receiving services at Scottsdale Providence Recovery Center (PHP and IOP) were verbally recruited to participate in a descriptive study. Each participant read and agreed to the informed consent and individually completed three self-report assessments. All assessments were scored according to their respective manuals.

### ASSESSMENT TOOLS

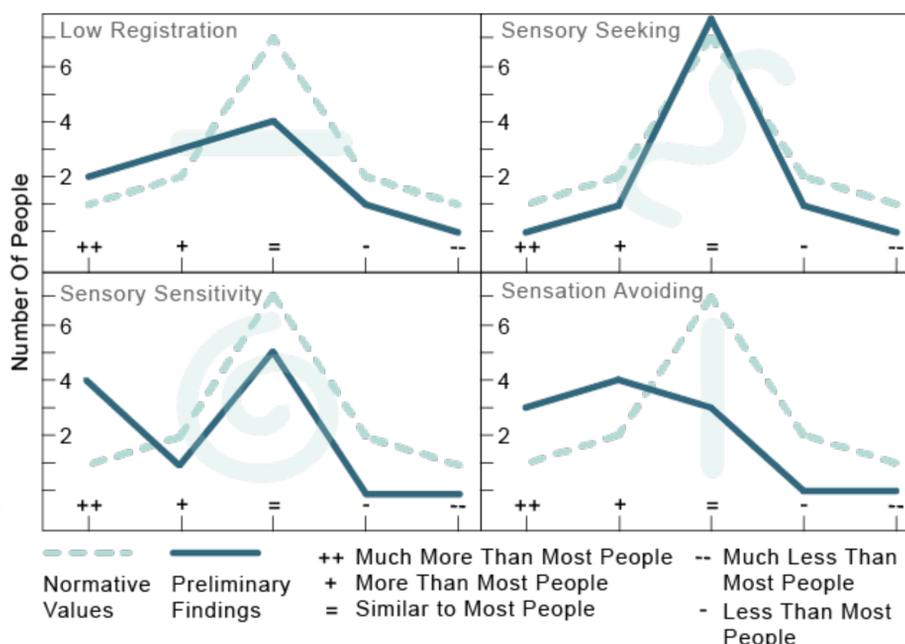
- AASP asks about responses to sensory stimuli (Brown & Dunn, 2002).
- The BPI asks about pain location, severity, interference, and treatment (Cleeland, 1991).
- PROM uses a ruler to measure recovery, utilizing the corresponding question to begin assessment and goal setting (Barbic, 2015).

## PART II: PROGRAM DEVELOPMENT

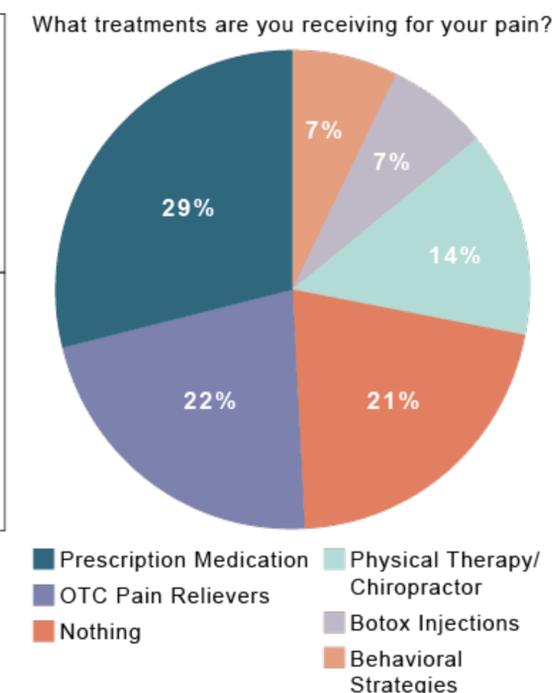
The descriptive study informed a five-week sensory based OT Group. Results of the AASP and PROM highlighted the need for groups on sensory modulation and stress management. The goals of the group are as follows: (1) Facilitating Self Awareness (2) Self-shaping, Exploring, Planning and Practicing (3) Self-Regulation and Positive Change (4) Repertoire Expansion (Champagne, 2017), (5) Stress Management.

## RESULTS

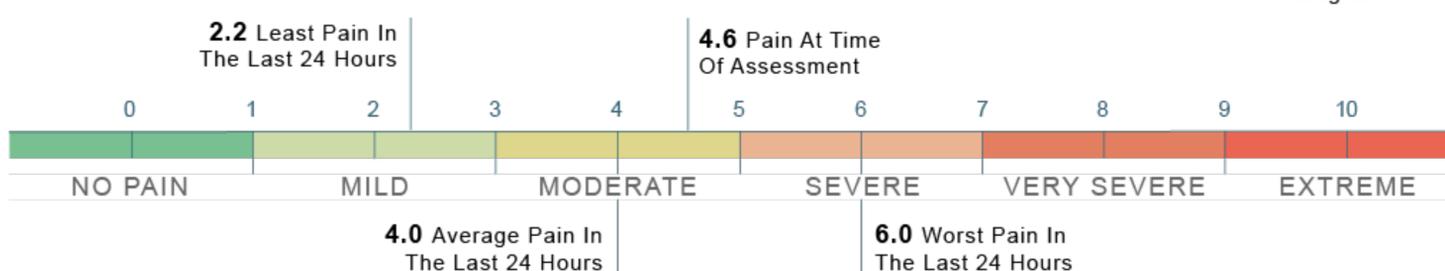
Adolescent/Adult Sensory Profile (AASP)



Current Pain Treatments



Brief Pain Inventory (BPI)- Pain Severity



Personal Recovery Outcome Measure (PROM)



A total of ten participants completed all three assessments, 60% were male, with the average age being 30 years old.

## CONCLUSIONS & IMPACT

From the preliminary findings, individuals with co-morbid chronic pain and substance use may have atypical sensory processing in areas of sensation sensitive, sensation avoiding, and low registration, compared to the normative sample. Low neurological thresholds were identified in visual, touch, activity, and auditory input. While taste, smell and movement input was identified as having high neurological thresholds. For all input an active response was identified according to the AASP Pattern Grids. Individuals within this clinical setting in general were not receiving non-pharmacological treatment for their pain. With pain fluctuating between mild (2.2/10) and severe (6.0/10) throughout the day. Results of the PROM were an average of 21/30. Item 21 states "I can manage stress". This information can inform future OT interventions and assessments within this population.

Occupational therapists should assess individuals sensory processing patterns as a best practice for evaluation and care of individuals with co-morbid chronic pain and substance use. Occupational therapists can use these findings to:

- advocate for enhanced clinical spaces in order to support clients' unique sensory needs
- educate clients and their families on sensory strategies to adapt/modify their roles, routines, rituals, and habits for life participation
- enhance trauma-informed approaches when addressing clients' psychosocial needs.