

Sensory modulation as an intervention for clients with a dual diagnosis of borderline personality disorder and disordered eating

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Session overview

- Why consider this approach?
- What does sensory modulation have to offer?
- The group programme & aims
- The benefits of strategies
- The barriers to strategies
- And considering how to balance these two areas

Sensory processing & BPD

- Increased hyper-responsivity to sensory input
- Deficient habituation of the amygdala
- Altered neurological thresholds
- Sense of disconnection with own body

Bilek et al 2019, Brown et al 2009, Löffler et al 2022, Matson et al 2021

Sensory processing & disordered eating

- Evidence of decreased body scheme and proprioception
- Higher levels of hyper-sensitivity (particularly with anorexia nervosa)
- Elevated sensitivities in relation to gustatory, vestibular and somatosensory processing
- Decreased interoceptive awareness

Perey & Cook-Cottone 2020, Riva & Dakanalis 2018, Sahib et al 2018

Sensory modulation

“the ability to self-organize and regulate reactions to sensory inputs in a graded and adaptive manner . . . and adapt to environmental changes”

Champagne 2011, p252

“When the flow of sensations is disorganised life can be like a rush hour traffic jam”

Ayres 2005

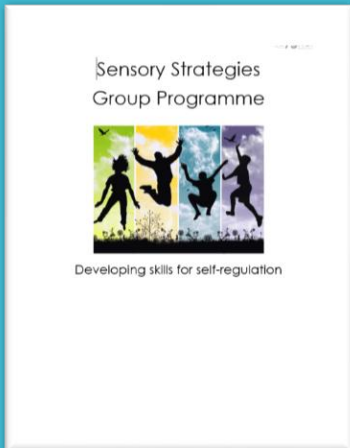
Principles of sensory modulation

- “a bottom up approach to self-regulation” (Hollands et al 2015)
- Using sensory inputs to alter physiological arousal
- Supporting feelings of safety and control
- Important part of trauma-informed care



Champagne et al 2010, Hollands et al 2015, O’Sullivan & Fitzgibbon 2018

A sensory strategies group programme



Considering the impact of sensory input on arousal levels



Developing understanding of current responses and strategies



Trialling of strategies in relation to each of the senses



Identifying ways to proactively manage responses & regulate arousal

Peer learning & sharing of strategies



Group content



Implementing sensory plans

Sections of the plan:

- Sensory environments
- Sensory strategies
- Communication strategies
- Support needed
- When to use strategies

Combined with a sensory box or kit to support accessibility of strategies.

Considering the therapeutic programme

What are the sensory benefits of the different activities?

- Yoga
- Gardening
- Progressive muscle relaxation
- Making sensory items
- Projects to adapt the environment
- Kneading dough



The benefits of sensory strategies

- Helps to give back control
- Self-directed and personalised
- Provides an alternative to self-harm
- Improves sense of connection with the body
- Reduction in distress

The barriers to sensory strategies

- Balancing meeting sensory needs with physical health risks
- Complexity of inter-related factors

Proprioception has the most direct impact on the brain stem with increased benefits for self-regulation and increasing body awareness but . . .

- It requires muscle tension and the more intense the better
- How do you access this when there is a need to limit physical activity?

Balancing ways to meet sensory needs

- Graded introduction of strategies
- Consideration of dietary intake and physical observations alongside strategy use
- Identifying activities that provide muscle stretch and deep pressure tactile input

Recommendations for practice

- Take the time to identify individualised responses and patterns
- Consider the sensory impact of the environment
- Remain open to strategies within all the senses
- Create a plan to support strategy use

And further study is needed to identify ways to maximise access to the “power senses” in a safe but effective way.

References

Ayres, A. J. (2005) *Sensory Integration and the child*. Western Psychological Services.

Bilek, E., Itz, M.L., Stossel, G., Ma, R., Berhe, O., Clement, L., . . . Tost, H. (2019). Deficient amygdala habituation to threatening stimuli in borderline personality disorder related to adverse childhood experiences. *Biological Psychiatry*, 86(12), 930-938. doi. 10.1016/j.biopsych.2019.06.008.

Brown, S., Shankar, R. and Smith, K. (2009) Borderline personality disorder and sensory processing impairment. *Progress in Neurology and Psychiatry*, 13, 10-16.

Champagne, T., Koomar, J. and Olson, L. (2010) Sensory processing and evaluation in mental health. *OT Practice*, 15(5), CE1-CE7.

Champagne, T. (2011) *Sensory modulation and environment: essential elements of occupation*. Australia: Pearson.

Hollands, T., Sutton, D., Wright-St Clair, V., et al. (2015) Māori mental health consumers' sensory experience of Kapa Haka and its utility to occupational therapy practice. *New Zealand Journal of Occupational Therapy*. 62, 3-11.

Löffler, A., Kleindienst, N., Neukel, C., Bekrater-Bodmann, R. and Flor, H. (2022) Pleasant touch perception in borderline personality disorder and its relationship with disturbed body representation. *Borderline Personality and Emotion Dysregulation*, 9(3), <https://doi.org/10.1186/s40479-021-00176-4>.

Matson, R., Kriakous, S. and Stinson, M. (2021) The experiences of women with a diagnosis of borderline personality disorder (BPD) using sensory modulation approaches in an inpatient mental health rehabilitation setting. *Occupational Therapy in Mental Health*, 37(4), 311-331.

O'Sullivan, J. & Fitzgibbon, C. (2018) *Sensory modulation resource manual: changing how you feel through your senses*. Sensory Modulation Brisbane.

Perey, I. & Cook-Cottone, C. (2020) Eating disorders, embodiment, and yoga: a conceptual overview. *Eating Disorders: the Journal of Treatment and Prevention*, 28(4), 315-329.

Riva, G. & Dakanalis, A. (2018) Altered processing and integration of multisensory bodily representations and signals in eating disorders: a possible path toward the understanding of their underlying causes. *Frontiers in Human Neuroscience*, 12(49), doi.org/10.3389/fnhum.2018.00049.

Sahib, S.K. et al (2018) Interoception and mental health: a roadmap. *Biological Psychiatry*, 3(6), 501-513.