Binge Eating as Nervous System Dysregulation Turned Habit: Regulating Our Nervous System Through Somatic Strategies

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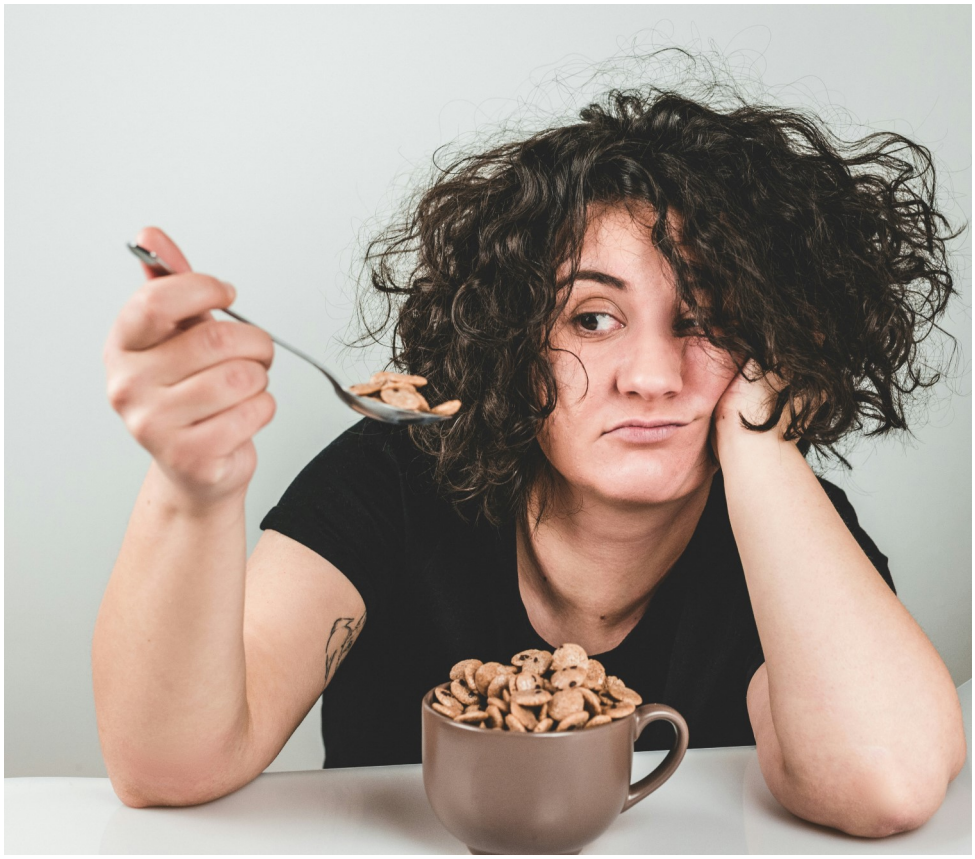
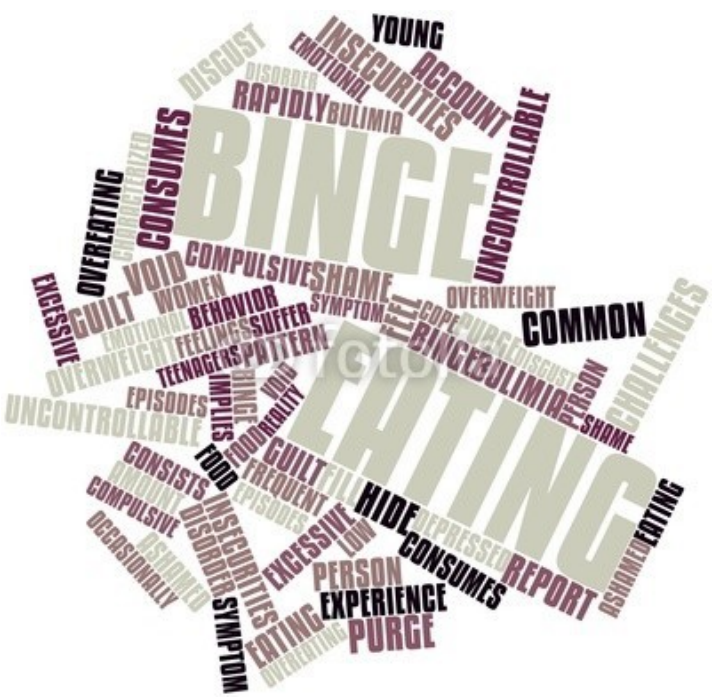
My Story

For over twenty years, my life was dominated by binge eating. Clinically speaking, Binge Eating Disorder (BED) is defined as a complex condition characterized by recurrent episodes of eating objectively large quantities of food, often rapidly and to the point of discomfort, accompanied by regret and shame. In real life, every decision I made revolved around avoiding or succumbing to the pattern. I crafted elaborate plans to stop bingeing that consistently failed, leading to cycles of shame and self-reproach. Opportunities were missed, relationships were shut down, and vast amounts of time, energy, and money were wasted on both bingeing and therapy. Despite my deep desire to stop, I found myself caught in a relentless cycle of bingeing, hiding food, and feeling utterly out of control. At my worst, I gained 100 pounds in three months, facing public humiliation and intense psychological pain.



My mother passed away in 2020 leaving me an orphan at age 38. Covid took the world by storm; I felt utterly alone, I was overcome by crashing waves of uncertainty and grief, and despite all my efforts, I was bingeing out of control.



My thoughts exposed raw vulnerabilities*: I've tried everything. I've done so many years of therapy, even intensive outpatient therapy; I've done neurofeedback, amino acid therapies, hypnosis, psychedelics, medication, support groups, special diets, no diets, reiki, acupuncture, everything under the sun. And all that exists is this eating disorder. I'm over this.*

This severe existential crisis led me to five weeks in residential treatment, questioning my life and genuinely scratching my head about what avenues I could pursue for recovery. I realized that despite my extensive participation in athletics and attempts to connect to myself, there was a lot of room to grow. A disconnection between my mind and body still permeated my existence. I wanted to learn how to deepen my embodiment. It was as a result of this crisis that I began to truly pursue the role of my body in the recovery process and enrolled in graduate school to support my study as an academic as well as an experiential journey.

Over time, I experimented with different body-based movements and meditations. The most effective for me were sensory strategies that emphasized the body's crucial role in self-regulation and healing. For individuals like me, BED is not merely a psychological issue. Insights from my studies in somatic psychology and occupational therapy suggest that binge eating is a somatic manifestation of nervous system dysregulation. Cognitive behavioral therapies and other modalities such as acceptance and commitment therapy, internal family systems, or dialectical behavioral therapy only helped me to a certain point. I made intellectual progress in understanding my origin story and where I could benefit from more flexibility in my thinking, but I found myself still returning to binge eating time and time again. Learning how to use my body as a resource helped me to self-soothe, resist dissociation, and self-regulate in ways that were powerful, free, and always available. In my experience, by embracing my body as a vital resource, the path to recovery became significantly clearer and more attainable.

Somatic Strategies for Regulating the Nervous System

Given that binge eating (whether it is a diagnosed disorder or occasionally happening in the moment) may be a result of nervous system dysregulation, I first want to say that the autonomic nervous system (ANS) plays a critical role in our responses to stress and trauma. Dysregulation in the ANS can lead to maladaptive coping mechanisms, such as binge eating. Dr. Stephen Porges' Polyvagal Theory explains that the ANS has three states: social engagement (ventral vagal), fight-or-flight (sympathetic), and shutdown (dorsal vagal). When the ANS is dysregulated, individuals may oscillate between these states, leading to behaviors aimed at self-soothing or survival (Porges, 2001). The nervous system heavily innervates the gut, and trauma often manifests in eating patterns used to regulate or calm a dysregulated nervous system. This understanding helps remove the stigma and shame associated with binge eating, revealing it as a coping mechanism rather than a moral failing (Apigian, 2017).

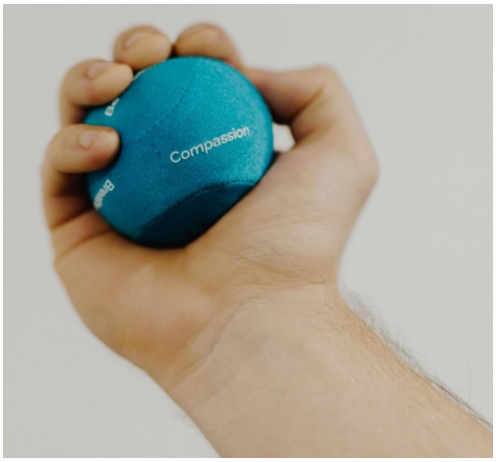
Somatic psychology focuses on the body's role in mental health, emphasizing the importance of bodily awareness and body-based interventions when working with issues that are frequently categorized in the cognitive domain, such as BED. Traditional (cognitive) interventions for BED may include filling out food logs, noting black-and-white thinking or cognitive distortions, discussing self-esteem, talking about past events or relationships, or discussing nutrition. Body-based (or somatic or sensory modulating) interventions are "bottom-up" strategies that use the senses: sight, sound, taste, hearing, touch, proprioception, the vestibular sense, and interoception to improve self-regulation (Hollands et al., 2015; O'Sullivan & Fitzgibbon, 2018). Examples are smelling certain scents, putting on noise-blocking headphones, layering a weighted blanket over the legs, rubbing a certain fabric on one's skin, chomping on ice, jumping, or a variety of self-selected proprioceptive, vestibular, or other sensory strategies. Proprioceptive input, in particular, seems to be particularly effective, due to its regulatory effect through its direct influence on the brain stem (Blanche & Schaaf, 2001). Furthermore, while proprioceptive input will be processed in real-time, changes in motor cortex excitability may persist for up to 90 minutes (Wolters et al., 2003).

Occupational therapy (OT) has long utilized sensory modulating strategies to help individuals regulate their nervous systems. Occupational therapists often offer their clients a menu of options they can choose from. These strategies, initially designed for children with sensory processing challenges, may be effective for adults with BED. Research has shown that sensory strategies can facilitate remarkable change at the nervous system level, aiding in achieving a more optimal level of physiological arousal and improving overall functioning (Champagne et al., 2010; Hollands et al., 2015; Moore, 2005). Interestingly, sensory modulation is a term well-known in occupational therapy yet little-known in somatic psychology.

Sensory modulating strategies offer a de-pathologizing, present-moment approach that provides immediate, tangible relief through sensory engagement. They do not require high levels of cognitive awareness, making them accessible and practical for individuals under stress. For example, when a client snuggles under a weighted blanket (weighing between 10 to 25 pounds, depending on their body weight), the weight is evenly distributed across their body, and the gentle pressure engages their proprioceptive system. Hence, they are more aware of their body in space, which appears to have a regulating effect. They often report feeling calmer and more secure. Other examples include listening to a relaxing audio or participating in a yoga session or rocking slowly in a rocking chair. The proper sensory input is inherently regulating and can help with stress management. This can enable the participant to further access emotional regulation strategies. Clients can learn grounding techniques such as pressing the soles of their feet into the floor and incorporating deep breathing exercises with meditation.

In my research, I am exploring the intersection of sensory modulating strategies with BED by piloting an intervention of body-based sensory strategies such as self-massage of the hands and legs, self-tapping of the arms and chest, gently bouncing the knees, and – a la occupational therapy – a variety of options that the user may select from. The hypothesis is that these body-based approaches may help reduce the intensity and frequency of binge urges by fostering self-regulation, enhancing embodied awareness, and providing alternative coping mechanisms. Sensory modulating techniques have proven transformative in other circumstances, helping individuals stay present and grounded during moments of craving and compulsion. My research aims to bring more understanding to how sensory modulating techniques may interact with compulsive eating patterns.

Qualitative studies in OT have shown that sensory modulation strategies enhance embodied awareness and provide a greater sense of control. Forsberg et al. (2024) found that participants in a group-based mental health program using sensory modulating strategies reported improved coping and sense of self. The study emphasized themes like building bodily awareness, embodied learning through doing, moving from passive to active strategies, and applying a practical toolbox of bodily-directed strategies, i.e., physical sensory aides like fidget spinners (plastic toys designed with a ball bearing in the center of a multi-lobed flat structure that spins around its central axis) and stress balls (typically a malleable toy, usually small enough to fit in your hand). People squeeze the ball, push their fingers into it, knead it, etc., to relieve stress and muscle tension, as well as 'tool-less' techniques such as abdominal breathing. The participants were able to implement the sensory modulating strategies, which contributed to a sense of self-empowerment and their understanding of how their body and mind may interact and how they can purposely implement strategies to change their state. Participants highlighted the ease of accessing and applying these strategies even during high-anxiety moments, distinguishing them from many traditional talking therapies (Forsberg et al., 2024).



Case Studies

Case Study 1: Integrating Sensory Modulation with Somatic Work

Sarah, a 35-year-old woman with a history of BED, sought therapy after traditional CBT failed to alleviate her binge episodes. Sarah learned to identify and regulate her nervous system states by integrating sensory modulating strategies from OT with somatic work. In the somatic work, her focus was on beginning to recognize early warning signs of urges to binge and realize what being regulated and dysregulated felt like in her body. She worked on bringing awareness to her bodily states and tracking her sensations: where they were located, what they might indicate, what thoughts might be there, how the sensations shifted, and how long they lasted. She was able to implement traditional OT techniques like using a weighted blanket when she began to notice she was stressed and engaging in rhythmic yoga movements, such as reaching her arms up and exhaling as she lowered her arms, repeating this for several minutes. She reported that these techniques helped her feel *in her body*, countering the dissociative pull that characterizes BED. Over time, Sarah reported a significant decrease in binge episodes and an improved sense of well-being.

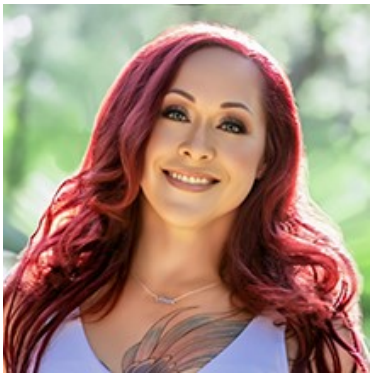
Case Study 2: Sensory Modulation in Group Therapy

In a group therapy setting, sensory modulating strategies were introduced to participants with various compulsive behaviors, including BED. Every week, different techniques were reviewed with the group using a sensory cart— a mobile cart with a host of items such as essential oils, plushy fabrics, weighted blankets/vests/stuffed animals, fidget toys, a vibrating ball, a sound machine, and visually evocative photos, such as serene landscapes, close-ups of textures, vibrant geometric patterns, or soothing pastel hues. Throughout the week, they were encouraged to practice the techniques and interact with the sensory cart as much as they wanted. The group reported enhanced coping mechanisms, reduced anxiety, and improved interpersonal relationships. Sensory modulation's practical, hands-on nature allowed participants to apply these strategies daily, leading to sustained improvements.

Conclusion

Viewing binge eating as a somatic manifestation of nervous system dysregulation opens new avenues for treatment. By integrating somatic strategies, we can offer practical, accessible, and effective interventions for individuals struggling with BED and other compulsive behaviors. These strategies may provide immediate relief and foster long-term self-regulation and embodied awareness.

About the Author



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