

# Pause, Breathe, and Feel

## *A Body Psychotherapy Approach to Working with Perseveration*

Meridith L. Antonucci

### ABSTRACT

Perseveration – a rigid, habitual pattern of repetitive thoughts – is a common symptom of depression, anxiety, and other mood-related emotional disorders. Perseveration, including rumination and worry, has historically been challenging to treat clinically. Most therapeutic treatments for perseveration are currently comprised of top-down, cognitive therapeutic techniques and the use of pharmacological methods to reduce symptomatology. Perseveration can have cognitive, affective, and somatic impacts on individuals. Sustained perseverative thinking can lead to adverse health conditions connected to cardiovascular, autonomic, and endocrine systems. A theoretical body psychotherapy model, *Pause, Breathe, and Feel*, which addresses somatic regulation and interoceptive experience, is proposed to work with perseveration. Using body psychotherapy interventions like breathwork in counseling can help clients interrupt perseveration's cyclical pattern by learning to be present, utilizing their interoceptive capacities, and identifying specific areas of their bodies to promote emotion regulation and self-regulation.

**Keywords:** body psychotherapy, somatic psychology, perseveration, rumination, worry, conscious breath, emotion regulation, somatic regulation, and self-regulation

Received: 12.05.2020

Revised: 14.09.2020

Accepted: 23.09.2020

International Body Psychotherapy Journal  
The Art and Science of Somatic Praxis

Volume 19, Number 2,  
Fall/Winter 2020/2021, pp. 64-78

ISSN 2169-4745 Printing, ISSN 2168-1279 Online

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his paper examines two types of perseverative cognition – rumination and worry – as well as the current predominant modalities, particularly cognitive and verbal therapies, used to address it. Perseverative cognition or thinking is a rigid, habitual pattern of repetitive thoughts (Brosschot *et al.*, 2006). Rumination and worry have historically been subsumed under the category of repetitive negative thinking (RNT), and have been pathologically associated with depression and anxiety, respectively. Cognitive therapies, including rumination-focused cognitive behavioral therapy and mindfulness-based cognitive behavioral therapy, have been shown to be useful in the treatment of RNT and perseverative cognition, but cannot fully address the physiological symptoms (Gerin *et al.*, 2006; Glynn *et al.*, 2002; Ottaviana *et al.*, 2016).

The field of psychotherapy tends to focus on top-down, cognitive therapeutic techniques. This paper offers a clinical alternative to working with perseverative cognition that offers somatically-oriented approaches largely missing in the field. It offers an exploration of utilizing body psychotherapy as a specific clinical modality to work with perseveration. Body psychotherapy aims to facilitate integration of the body and mind to promote the overall health of clients. Unlike cognitive and verbal clinical approaches, the theoretical model offered in this paper incorporates the physical body and the nervous system in the treatment of perseveration. This paper explores body psychotherapy interventions, including intentional breathing, present-moment awareness, Interoception, and utilizing specific areas of the body to promote emotion regulation. Use of these body psychother-

“  
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abstract thinking about  
potential threats or stressors.”

apy interventions can help promote self-regulation of the nervous system, which could allow individuals who perseverate to use alternative strategies to reduce stress or effectively respond to stressors.

## Review of the Literature

### Perseverative Cognition: Rumination and Worry

Historically, literature on rumination and worry placed these cognitive processes into the category of repetitive negative thinking (RNT). In order to remove the assumed negative valence, this author chooses to refer to rumination and worry as perseverative cognition or perseveration. Perseverative cognition or thinking has most commonly been defined as a rigid, habitual, or cyclical pattern of repetitive thoughts (Brosschot *et al.*, 2006). It is often conceptualized as incessant thinking about potential stressors – regardless of whether they are anticipated for the future or have happened in the past – that has physiological effects on the body's systems and stress responses (Brosschot *et al.*, 2006). The content of perseveration often involves some perceived threat. Brosschot *et al.* (2010) argue that, in daily life, people experience the most stress-related physiological activity not by actually experiencing stressful events, but instead by *thinking* about them, which often lasts longer than the stressful event itself.

Psychopathology has historically been viewed as the study of mental illness or mental distress, and looks at the causes, components, and consequences of psychological disorders. Much of perseverative cognition literature repeatedly references traditional pathology definitions and understandings. For instance, rumination is most often associated with major depressive disorder (MDD) whereas worry is most often associated with generalized anxiety disorder (GAD) (Fresco *et al.*, 2002; Nolen-Hoeksema *et al.*, 2008; Watkins *et al.*, 2005; Watkins, 2004, 2008). Perseverative cognition is often considered a “hallmark” feature of depression and anxiety symptomatology (Wanmaker, 2015, p. 310). Anxiety and depressive disorders are highly comorbid, which also suggests that rumination and worry are often associated with one another (McEnvoy *et al.*, 2013). Siegel (2012) offers a reframe of psychological disorders and pathology by suggesting each symptom of each disorder shows “chaos or rigidity that results from impaired integration” (p. 4-5). Siegel's (2012) concept of interpersonal neurobiology states that integration links different aspects of a system and is seen as the “definition of good health” (pp. 4-3). Aligning with Siegel's (2012) framing, this paper posits perseveration as potentially creating chaos or rigidity versus integration.

Rumination and worry have similar features and are often associated with “unpleasantness” (Wahl *et al.*, 2019, p. 46). However, rumination and worry differ in their pathological associations, orientation to time, content focus, sense of certainty, and perceived ability to control

as well as potential intention behind the thoughts (Nolen-Hoeksema *et al.*, 2008; Watkins, 2005). Rumination is often associated with “uncontrollability,” whereas worry is associated with “abstractness” (Wahl *et al.*, 2019, p. 46). Rumination is associated with depressive symptoms and tends to have a past-oriented focus, whereas worry is associated with both depressive and anxious states and tends to have a future-oriented focus (Hong, 2007; Kertz *et al.*, 2012; Nolen-Hoeksema *et al.*, 2008; Watkins, 2005, 2008).

Rumination and worry also share similar cognitive processes, but involve different thought content. Rumination content tends to focus on themes relating negatively to loss, self, and others, whereas worry content tends to focus on themes relating negatively to time, upcoming events, and perceived future threats or distress (Nolen-Hoeksema *et al.*, 2008). Ruminators seek to utilize cognition, consciously or unconsciously, to gain insight whereas worriers seek to utilize cognition, consciously or unconsciously, to prepare for potential threat or distress (Lyubomirsky *et al.*, 2015; Nolen-Hoeksema *et al.*, 2008; Querstret, 2013; Watkins, 2005, 2008).

Engaging in rumination or worry is sometimes considered constructive or a normative response to stressors (Watkins, 2008). Perseverative cognition is commonly considered to be maladaptive and more likely to be associated with pathological disorders when the repetitive thoughts are relatively uncontrollable or focused on distressing content, whereas perseverative cognition is typically considered adaptive when the thinking helps problem-solve, increase preparedness, or decrease distress (McLaughlin, 2011).

### Understanding Rumination

Rumination is commonly defined by its passive, repetitive, and perseverative qualities. It has a cyclical quality to it and can cause a seemingly “downward spiral” (Lyubomirsky *et al.*, 2015, p. 7). Nolen-Hoeksama (1991) defined rumination as “behaviors and thoughts that focus one's attention on one's depressive symptoms and on the implications of those symptoms” (p. 569). Rumination can worsen negative affect, such as hopelessness, which can lead to and extend depressive episodes (Nolen-Hoeksema, 1991, 1998; Nolen-Hoeksema *et al.*, 2008). Since ruminating often leads to inaction and more perseveration, Nolen-Hoeksema (1991) conceptualized rumination as a maladaptive style of regulating emotions and responding to distressing material or experiences. Gross (2013) states emotion regulation is recruiting a process to “up- or down-regulate either the magnitude or duration of the emotional response” (p. 359).

Response style theory proposed rumination is both triggered by depressive mood and simultaneously prolongs depressive symptoms because rumination facilitates further cognitive biases and more repetitive thinking, which inhibits adaptive strategies that aim

to problem-solve and interrupt the perseveration (Nolen-Hoeksema & Morrow, 1991). Similarly, Koster *et al.*'s (2011) impaired disengagement hypothesis argues that rumination occurs due to real or perceived incongruity between one's goals and one's current state, which creates more negative, self-focused thoughts and sometimes existential questions like, "Why aren't I not good enough?" that can further distract and impair problem-solving for the ruminator (Nolen-Hoeksema, 1991; Nolen-Hoeksema *et al.*, 2008; Nolen-Hoeksema *et al.*, 1993).

Literature often divides rumination into two subtypes – brooding and reflection (or pondering) (Nolen-Hoeksema *et al.*, 2008; Treynor *et al.*, 2003; Wanmaker, 2005). Brooding is viewed as an abstract and passive focus on one's challenges and suffering, leading to its association with depression in both the short- and long-term because it prolongs cyclical perseveration (Treynor *et al.*, 2003). Reflection or pondering, on the other hand, is viewed as a self-referential or self-reflective process in which one engages in cognitive problem-solving with the intention of reducing perseveration and one's suffering. Reflection is related to depression in only the short-term because it more commonly promotes effectual problem-solving, which can interrupt perseverative patterns (Treynor *et al.*, 2003). Self-reflection is a more adaptive style of emotion regulation because it aims to glean insight, problem-solve towards resolution, or change behavior (Lyubomirsky *et al.*, 2015; Nolen-Hoeksema, 1991; Nolen-Hoeksema *et al.*, 2008).

### Understanding Worry

Similar to rumination in its repetitive quality, worry has been defined as a "chain of thoughts and images, negatively affect-laden and relatively uncontrollable," which tends to have a future-oriented focus (Borkovec *et al.*, 1983, p. 9). Worries are often intended to help strategize or mentally problem-solve for anticipated threats, or to create a sense of control over circumstances or situations, particularly when the outcome is perceived as uncertain and negative (Watkins, 2008). Borkovec *et al.*'s (1998) cognitive avoidance model proposes that worry is a cognitive strategy that aims to control the physiological arousal associated with anxiety and fear-inducing mental imagery or thoughts, but, in actuality, usually obstructs emotional processing and emotion regulation. Worries are conceptualized as perseverative cognition that are commonly composed of "inaccurate expectations and beliefs" (LaFreniere & Newman, 2019, p. 7). The cyclical and repetitive nature of worrying could make worrying more distressing than the actual stressor or anticipated event.

Although worry is common in most individuals, if it becomes chronic and uncontrollable, it is most commonly associated with GAD and with abstract versus concrete thinking (Kertz *et al.*, 2012; Makovac *et al.*, 2018). Individuals experiencing GAD have been shown to use their worry to try to control emotional or physiological

arousal as well as increase perceived preparedness (Makovac *et al.*, 2018). Worrying is considered maladaptive if the repetitive thought process exacerbates the initial worry or leads to a negative affect state, rather than creating a sense of control or preparedness for the worrier. For example, worrying about something the individual has no control over is seen as maladaptive because there is no potential for more preparedness or mitigation of the concern. Worry can cause increased negative mood, cognitive functioning challenges, and physiological disturbances (Borkovec *et al.*, 1998).

Conversely, worries that are viewed as "objective, controllable, and brief" are considered "constructive" (Watkins, 2008, p. 163) or adaptive, and signal awareness of an imminent danger or a potential threat (Tallis & Eysenck, 1994). Worry can be viewed as constructive or adaptive if the worry leads to action that helps mitigate the concern. For example, repeated worries about affording rent might encourage an individual to work another shift for additional income in order to afford rent.

### Physiological Effects of Perseverative Thinking

The perseverative cognition hypothesis suggests that repetitive internal thoughts can impact psychology and physiology almost as if actually facing an environmental stressor (Brosschot *et al.*, 2006). Perseveration can activate one's sympathetic nervous system or fight-or-flight response regardless of whether the perceived threat is real or imagined (van der Kolk, 2014), and can cause physiological activity long after or long before stressful events occur because perseveration tends to be associated with past and future time orientations. It is therefore not surprising that perseverative cognition has been extensively shown to increase physiological stress responses, which can lead to adverse health conditions connected to cardiovascular, autonomic, and endocrine systems (Brosschot *et al.*, 2006; Cropley *et al.*, 2017; Gerin *et al.*, 2006; Glynn *et al.*, 2002; Ottaviani *et al.*, 2016; Schwartz *et al.*, 2000; Querstret, 2013; Zoccola *et al.*, 2008). Sustained perseverative thinking has the potential to result in prolonged sympathetic activation, which could lead to increased heart rate (Cropley, *et al.*, 2017), blood pressure (Gerin *et al.*, 2006; Glynn *et al.*, 2002), and elevated stress hormones like cortisol (Ottaviana *et al.*, 2016). Sustained perseveration may also result in long-term physiological consequences like cardiovascular disease and other chronic health conditions (Querstret, 2017). Thus, perseveration can impact an individual's nervous system and physical body in addition to affecting their cognition, which is potentially dangerous because the health and strength of one's nervous system is strongly correlated to good overall physical health (Seigel, 2012).

### Perseveration and Neuroplasticity

Perseveration can affect brain structure. Neuroplasticity is the brain's ability to change. Changes in neural path-

ways and synapses occur because of various factors, such as behavior, experiences, or environment (Siegel, 2012). Using attention to alter brain activity can also alter the brain's architecture (Siegel, 2012). Hebb's (1949) neuroscientific saying "neurons that fire together, wire together" is frequently used when discussing neuroplasticity. Neural connections that are perceived as essential or useful are strengthened, whereas neural connections that are perceived as unessential or not useful are removed through synaptic pruning.

According to Siegel (2010), we can get stuck in a habitual pattern if we utilize or access only one synaptic pathway, which can "limit our potential" (p. 38). Perseveration can be viewed as a recurring pattern, and the synaptic pathways of ruminations or worries can become strengthened and reinforced through repetition. Conversely, the synaptic pathways of adapting or self-regulating may be weakened because they are rarely utilized in someone prone to perseveration. Instead, focusing one's attention on different or alternative ways of thinking and being may help transform the brain's structure, and potentially lead to new ways of experiencing or relating (Siegel, 2012).

## Current Clinical Modalities Used for Perseveration

It is important to establish effective treatment options for perseveration because perseveration increases vulnerability to mood-related emotional disorders like anxiety and depression (McLaughlin *et al.*, 2007; Watkins, 2008), and is considered transdiagnostic, meaning it is a present symptom in many different emotional disorders (Ehring & Watkins, 2008; McLaughlin, 2011; Sauer-Zavala *et al.*, 2017; Spinhoven, 2015).

### Cognitive Behavioral Therapy

Cognitive behavioral therapy (CBT) is based on the premise that changing the way one thinks about something has the potential to change one's feelings and behaviors. Cognitive, verbal therapies rely on the theoretical foundation of correcting cognitive distortions in order to reduce the individual's mental, emotional, and physiological symptoms of the negative or maladaptive thinking (Beck, 1979). CBT aims to correct or reframe one's unrealistic, hyperbolic, or exaggerated thoughts or ways of thinking to reduce symptomatology (Beck, 1979).

Currently, CBT is the predominant clinical modality used to treat unipolar depression (Hvenegaard, 2019). Research from randomized control trials shows CBT is an effective treatment for depression; however, less than half of patients experience remission from symptoms (Hvenegaard, 2019). Querstret *et al.*'s (2017) meta-analysis of the effects of clinical treatment on reducing perseverative cognition found that CBT and mindfulness-based interventions can be effective in decreasing rumination and worry.

### Rumination-Focused Cognitive Behavioral Therapy

Due to rumination's strong association with depression, depression treatment should target rumination to potentially make treatment more effective (Hvenegaard, 2019). Watkins (2008) tailored CBT to place specific emphasis on reducing rumination and created rumination-focused cognitive behavioral therapy (RFCBT), which was "designed to coach individuals to shift from unconstructive rumination to constructive rumination, through the use of functional analysis, experiential/imagery exercises and behavioral experiments" (Watkins, 2008, p. 318). Within the proposed RFCBT framework, rumination is seen as a method of avoidance. It uses functional analysis to facilitate more constructive approaches and to help individuals acknowledge their rumination can be viewed as useful or not. If the rumination is considered unhelpful, RFCBT teaches individuals to shift to a more helpful style of thinking, including the use of imagery to reconstruct previous positive or more helpful mental states or ways of thinking.

### Mindfulness-Based Cognitive Therapy

The concept of mindfulness has been extensively researched. The core of mindfulness, which has been described as a practice as well as a state of mind, is learning to focus one's attention on present-moment experience in a nonjudgmental way (Kabat-Zinn, 1990). Many mindfulness theories claim that a state of present-moment awareness can also enhance self-regulation in the presence of negative emotion (Siegel, 2012). Mindfulness-Based Cognitive Therapy (MBCT) combines concepts from CBT with mindfulness practices, and encourages individuals to notice cognitive patterns non-judgmentally (About MBCT, n.d.).

### CBT Worry Techniques

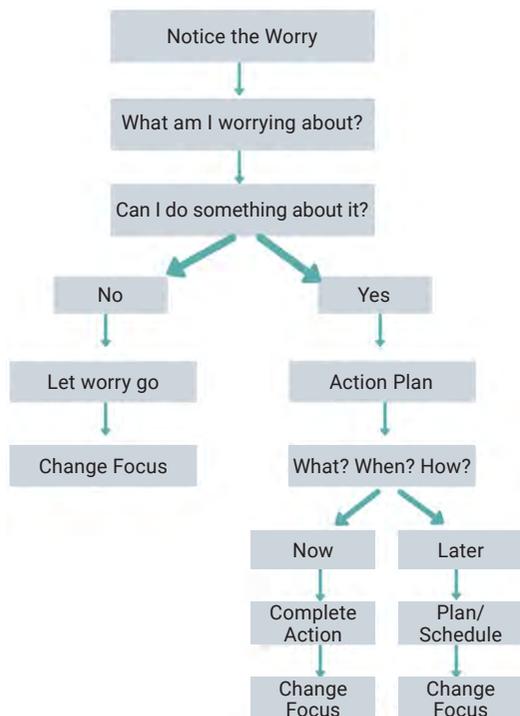
The Worry Outcome Journal (WOJ), a CBT intervention, is for clients experiencing GAD to document their worries, evaluate and rate the costs associated with the worries (such as distress or distraction), and record the actual outcomes of events or interactions they were worrying about (LaFreniere & Newman, 2019). LaFreniere & Newman (2019) found that 94% of the worrisome predictions in clients' WOJs did not come true, which suggests that worries and actual outcomes are often incongruent. The WOJ aims to illustrate that worries are often inaccurate and cause more unnecessary stress than benefit (LaFreniere & Newman, 2019).

A worry map (see Figure 1 below), another CBT tool, is intended to engage the brain to change the thought if the worry's outcome is perceived to be unchangeable. For example, an individual worrying about outside judgment is encouraged to stop worrying (through changing the thought) because they cannot control the other person's opinion. This approach implies a hierar-

chy of mind over body, and assumes the mind is in control of the body and behavior.

## Understanding Body Psychotherapy

Body psychotherapy is a branch of psychotherapy and a form of somatic psychology. Caldwell (1996) states that “soma” refers to the body and “psyche” refers to the mind. The “body reflects the mind, and the mind reflects the body” (Aposhyan, 2004, p. 12). At its foundation, body psychotherapy is a therapeutic mental-health approach that acknowledges and incorporates the concept that mind and body are integrated. An underlying body psychotherapy understanding is that physical and mental health are interconnected. A body psychotherapy approach addresses and includes a client’s body as an integral aspect in their overall health and wellbeing (Caldwell, 1996). This could potentially include exploring physical movements of and in the body, awareness of the body and its sensations, breathing practices, and nervous system regulation. Caldwell (1996) refers to the body’s way of communicating as “body speech,” which includes sensation, breath, and movement (p. 4). Body psychotherapy utilizes body-centered approaches and techniques to “assess and treat psychological distress and support the process of change and transformation” in clients (Shapiro, 2013, p. 43).



**Figure 1** Example of a Cognitive Behavioral Therapy Worry Map

## Benefits of Using Body Psychotherapy to Work with Perseveration

Body psychotherapy aims to make the body a resource as well as a tool to interrupt the cyclical pattern of repetitive perseveration. As argued, the symptoms of perseveration affect cognition, and can negatively impact the cardiovascular, autonomic, and endocrine systems (Ottaviani *et al.*, 2016). Since perseveration can impact physiology, the body can affect one’s cognitive and affective states. Thus, offering a therapeutic approach that includes the physical body in treatment through breath, present-moment awareness, interoception, and utilizing specific areas of the body to promote self-regulation can be helpful in reducing perseverative thinking, and can also add generally to the field of psychotherapy.

### Top-down versus Bottom-up Processing

Top-down processing ultimately uses cognition to form perceptions whereas bottom-up processing uses perception through the senses to inform cognition. For instance, Siegel (2012) offers an illustrative example of someone seeing a rose; the bottom-up experience senses the rose “as if it were the first time” with openness and curiosity, whereas the top-down experience recognizes it as a red flower and identifies it as a rose based upon a coalesced summary of previous experiences with roses. Top-down processing utilizes knowledge, anticipation, and judgement based on previous experiences (Siegel, 2012). Many top-down approaches to mental health tend to pathologize, whereas bottom-up approaches tend to promote wholeness and integration (Caldwell, 1998, 2018). Utilizing the five basic senses – sight, hearing, taste, smell, and touch – can help direct one’s attention to the present moment through bottom-up processing (van der Kolk *et al.*, 2014).

Caldwell (2018) states top-down processing is when behavior is modified through awareness of thoughts and perceptions, whereas bottom-up processing utilizes the body and somatic movement to change behavior. Bottom-up processing includes somatic regulation and interoceptive experiences, such as sensing and experiencing the petals of the rose flower (van der Kolk *et al.*, 2014). Most perseveration treatment modalities are cognitive, verbal therapies utilizing top-down processing. For example, encouraging perseverative thinkers to acknowledge, contemplate, and then alter a thought. As argued, for more effective treatment working with perseveration and its range of cognitive, emotional, and physiological symptoms necessitates utilizing both top-down and bottom-up approaches in order to facilitate healing by reducing or, in some cases, eliminating symptoms (Ogden *et al.*, 2006; Schwartz, 2018; van der Kolk, 2014).

## Body Psychotherapy Interventions Used for Working with Perseveration

### Breath

Body psychotherapists have been integrating breath into clinical sessions since the field's origin (Hendricks, 1991; Lowen, 1975; Smith, 1985; Victoria & Caldwell, 2013). Reich's work clearly exhibited his belief that physical and psychological suffering was the result of people restricting their breathing, which created muscular armor or energetic blocks (Lowen, 1975). Underlying the integration of breath into counseling is the speculation that breathwork can reduce physiological as well as psychological distress (Caldwell, 2013; Fogel, 2009). Breath is an integral aspect of lived experience, and can modulate the autonomic nervous system, which has the key objective of keeping people safe from danger (Fogel, 2009).

Breathing is an unconscious process that sustains life and can be made conscious through one's awareness. Breath is typically considered conscious when one's attention is placed on the breath and the breath becomes more "smooth and balanced" (Caldwell, 2013, p. 94). Intentional or conscious breathing can potentially interrupt one's unconscious and passive state, like rumination or worry, through present-moment and somatic awareness, as well as promoting self-regulation and emotion regulation (Hendricks, 1991; Ogden *et al.*, 2006). Caldwell (2013) argues that unconscious breath "relies on imprinted patterns" that might have stemmed from genetics or early development. Breathing has a lot of variability based on factors like one's physiology, lung capacity, genetic predisposition, and trauma history. Victoria & Caldwell (2013) elucidate the complexity and nuance of potential contraindications of various breath interventions in some individuals with trauma histories.

Literature shows the positive effects of intentional breathing practices on physical, psychological, and emotional health (Farhi, 1996; Fogel, 2009; Kuppasamy *et al.*, 2017; Pramanik, 2010; Saraf, 2016), including integrating intentional breathwork or breathing practices into clinical counseling sessions (Caldwell, 2013; Hendricks, 1991, 1995; Vialattea *et al.*, 2009). There are potential positive psychological effects of breathwork, including mood elevation, negative emotion reduction, and increases in positive emotion, emotion regulation, and building the capacity for social engagement (Caldwell, 2013). The physical effects of breathwork can have significant influence on psychological well-being due in part to the vagus nerve and specifically increased vagal tone (Caldwell, 2013; Hendricks 1991, 1995; Vialattea *et al.*, 2009). The vagus nerve is a primary contributor to the parasympathetic branch of the nervous system, which provides humans the opportunity to rest and digest (Porges, 2011). Increased vagal tone correlates to more adaptive responses to stress, whereas de-

creased vagal tone correlates to staying in a state of fear, or being more negatively affected by stressors. More increased vagal tone means mammals can enter into a parasympathetic response to stimuli more quickly after a stressful situation.

A person experiencing stress or perseveration will most likely not consciously choose how to breathe, because there is likely dysregulation of the nervous system. Practicing conscious breathing can help clients handle stressful situations, including moments of perseverative thinking, in a more adaptive and healthy manner (Caldwell, 2013). According to Caldwell (2018), "good breathing" is said to consist of three aspects – inhale and exhale balance, easeful flow of breath, and to be adaptive to changing circumstances internally and externally (p. 68). Conscious breath may help to interrupt the cyclical pattern of perseveration because of its support of nervous system regulation, and thus its promotion of adaptive strategies and responses.

### Present-Moment Awareness

Bringing awareness to the present moment can potentially interrupt the cyclical pattern of being cognitively future- or past-oriented through worry or rumination, respectively. According to Cardaciotto *et al.* (2008), present-moment awareness is the "continuous monitoring of experience with a focus on current experience rather than preoccupation with past or future events" (p. 205) that can help create "adaptive stress-responses" – versus more avoidant strategies like distraction or denial (Donald *et al.*, 2016, p. 30). Present-moment awareness can help broaden the range of possible responses to stress, which makes the responses more likely to be adaptive and effective. Similarly, Caldwell (1996) explains that remembering and planning can happen in the past and future, whereas action can only happen in the present.

Since rumination tends to have a past-oriented focus and worry tends to have a future-oriented focus, the person ruminating or worrying is most likely not engaged with the present moment (Hong, 2007; Nolen-Hoeksema *et al.*, 2008; Watkins, 2005, 2008). The physical body structure exists in the present, whereas one's brain can leap forwards into the hypothetical future or jump backwards into the already-lived past. The nervous system of a person experiencing rumination or worry may be activated, as if the individual is actually experiencing a stressful event as they mentally relive or anticipate it. Put differently, the brain has a challenging time discerning between a real or imagined threat (Pascual-Leone *et al.*, 1995; Siegel, 2012). Perseverating about threats can cause the brain and nervous system to function as if they need to be actively engaged in handling the perceived threat. Thus, intentionally experiencing the present moment can potentially interrupt the habituated pattern of perseveration's future- or past-orientation.

## Interoception

Interoception helps people understand what is happening inside their bodies (Siegel, 2012). Interoception enhances awareness of self as well as the capacity for empathy (Siegel, 2012). When functioning properly, interoception receptors inside one's organs send information about what is happening internally to the brain, which then regulates vital bodily functions. The body receives messages before the brain registers them; interoception informs the brain of hunger, thirst, digestion, breathing pace, and heart rate, which suggests that noticing inner sensations is vital for the body's ability to care for itself (Caldwell, 2018). Learning to listen to the body and building somatic awareness can improve self-regulation (van der Kolk, 2014).

When any muscle in the human body is not used it may atrophy, whereas when it is used and engaged regularly, it strengthens. The same principle applies to building interoceptive ability. It is possible to train one's attention to focus on noticing, feeling, and sensing one's internal sensations or noticing one's "internal landscape." Mindfulness has also been conceptualized as training one's attention to intentionally focus on their internal and external experiences that are occurring in the present moment (Deyo *et al.*, 2009). Siegel (2012) refers to turning attention inward on sensations, emotions or thoughts as "time-in," and views it as fundamental to establishing mental well-being (p. 25-2).

## Somatic Anchors

Focusing, a specific psychotherapeutic technique, aims to increase one's awareness of and sensitivity to internal sensations, or felt sense (Gendlin, 1981). Felt senses are often linked to an individual's experiences of issues, tensions, or unclear situations. By focusing one's attention – cognitively and somatically – the felt sense can glean insight and promote change. Caldwell (2018) suggests the concept of mindfulness has "centralize[d] and valorize[d]" the mind and thinking, which has perpetuated the separation of our minds and bodies (p. xxi). Instead, she proposes a new concept, "bodyfulness," which, like Gendlin's (1981), incorporates bottom-up body-centered practices with more traditional contemplative top-down mindfulness practices (Caldwell, 2018, p. xxiii). Bodyfulness could also be described as somatic mindfulness.

Building on Gendlin's (1981) concept of focusing and Caldwell's (2018) concept of bodyfulness, locating somatic anchors is the act of bringing awareness and attention

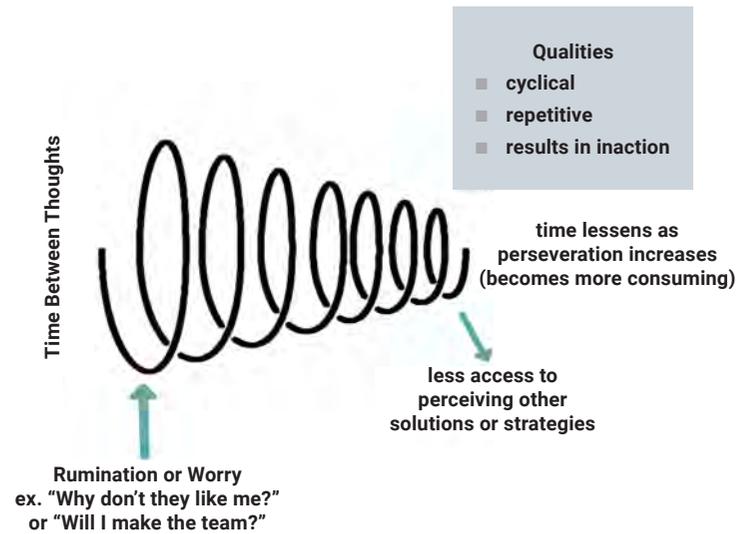


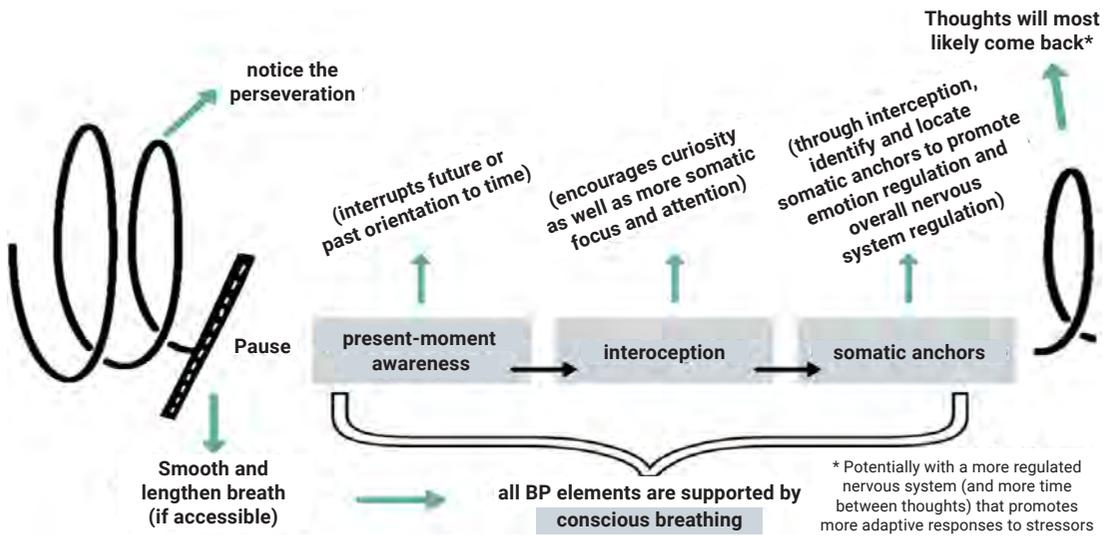
Figure 2 Depiction of Perseveration's Qualities

to specific areas of the body in order to help promote emotion regulation. Utilizing one's attention or attentional skills to notice somatic sensations, including sensations occurring in the internal landscape, can potentially help someone regulate. For example, this author frequently places her attention on her sitting bones (ischial tuberosities) and lengthens her breath in order to down-regulate her nervous system and feel more grounded.

Koster *et al.*'s (2011) impaired disengagement hypothesis suggests that rumination is largely correlated to the inability to move one's attention away from negative emotional material. Thus, Koster *et al.* (2011) propose adding training or interventions focused on improving attentional control, in addition to cognitive therapies focused on verbal interventions, in order to reduce ruminative thought patterns. Similarly, Martin and Tesser (1996) propose that ruminative thinking can be interrupted through distraction or detachment from the ruminator's goal or perceived attainment of the ruminator's goal. Noticing, sensing, and feeling somatic anchors can become an active and engaged process or skill that one builds through the practice of attentional control, and can help interrupt or reduce perseveration (Koster *et al.*, 2011).

## Using Body Psychotherapy to Work with Perseveration

Perseveration is a cyclical and repetitive (Lyubomirsky *et al.*, 2015) feedback loop or spiral ultimately leading to more perseveration (as seen in Figure 2). The time between perseverative thoughts can shorten as the feedback loop continues. The spiral can be seen as leading to inaction because the individual perseverating tends to place more focus on the perseveration, and less focus on possible strategies to address the perceived stress-



**Figure 3** *Pause, Breathe & Feel: A Body Psychotherapy Model for Working with Perseveration*

or. The synaptic pathways of rumination or worry can become strengthened through repetition, whereas the synaptic pathways of adapting, self-regulating, or thinking creatively can be weakened or pruned through lack of use.

Utilizing the aforementioned body psychotherapy interventions can interrupt perseveration’s cyclical pattern and strengthen synaptic pathways that encourage emotion and self-regulation. Since perseveration can affect physiology, this body psychotherapy model (see Figure 3) rests on the foundation that regulating the nervous system can affect one’s cognition. CBT’s worry maps (Figure 1) attempt to interrupt perseveration’s cyclical pattern through a top-down and unidirectional approach that places the mind in control of the body and behavior. Perseveration and its top-down nature can be viewed as facilitating types of thoughts suggesting worst-case scenarios, whereas bottom-up approaches could help create space for innovation or utilizing adaptive strategies. This model offers a bidirectional approach that encourages a dynamic relationship between mind (noticing perseveration) and body (emotion and self-regulation) in order to interrupt or shift the cycle of perseveration.

This model is also bidirectional in its promotion of top-down and bottom-up processing. The underlying support of this model is conscious breath, which occurs when one’s attention is intentionally placed on the breath, and the breath typically becomes smoother and longer (Caldwell, 2013). Breathwork is a top-down and bottom-up process; the breath can be consciously controlled to allow direct access to the autonomic nervous system (Mulloy, 2019). Caldwell (2018) states “breathing can be a powerful agent in creating both physical and psychological regulation (Caldwell, 2018, p. 71). Emotional steadiness and positive feelings can be facilitated

through good breathing habits (Caldwell, 2018; Siegel, 2012). Choosing to make the breath intentional can help clients move from inaction to action and passivity to engagement, as well as potentially interrupt unconscious and passive states like perseveration. Conscious breath also facilitates and supports all the body psychotherapy interventions in the model – experiencing the present moment, utilizing the sense of interoception, and locating somatic anchors.

### Applications

This body psychotherapy model can be used as an educational resource for therapists and other clinicians to help guide and support their clients experiencing perseveration. Once therapists have supported clients through utilizing this model and clients illustrate some familiarity with its elements, they can be encouraged to practice and embody the model independently. To support clients in safely exploring this model, understanding one’s scope of practice as a clinician is crucial. Clinicians utilizing this model should have some previous training and knowledge of somatically-oriented psychotherapeutic practices and techniques. Additionally, this model will most likely be more effective if used after therapeutic rapport has been established and cultivated in the therapeutic relationship.

This model can be used on its own, or another possible application is to embed it into a CBT worry map after “Notice the Worry” (see Figure 1) since this model builds on the cognitive acknowledgement of perseveration. Awareness of a pattern is critical in order to change the pattern. Noticing or naming the action of perseverating is a typical CBT intervention, and is also the first step in this model. Once there is awareness of the perseveration, the individual perseverating is encouraged to pause and notice their breathing. If it is

accessible to and safe for the individual, the model encourages consciously smoothing and lengthening the breath, which can support present-moment awareness and interrupt the pattern of future or past orientation to time (Caldwell, 2018). It is important to state that, during this process, the therapist is also utilizing skills to self-regulate in order to modify the use of the body psychotherapy interventions and trajectory of the session to best support the client (Ogden *et al.*, 2006). The therapist can even utilize the elements of this model to help support regulating their own nervous system so that the client can co-regulate with the therapist. The therapist and their regulated autonomic nervous system act as an external regulator of the client's autonomic nervous system, which can facilitate emotional stability and physical health (Schwartz, 2018).

If it is accessible and appropriate, conscious breath becomes an integral support throughout this model and process. Learning to consciously smooth and lengthen the breath can also support more curiosity about what is happening internally for the individual. Using interoception or noticing one's "internal landscape" can potentially help an individual bring their focus more inward (versus outward on external forces or feared outcomes) and locate somatic anchors, which can promote emotion regulation as well as self-regulation of the nervous system. An individual is more likely to access or consider a broader range of possible responses to stress or stressors when the nervous system is regulated. This might allow the individual who is ruminating or worrying to become more self-reflective, and consider alternative responses to stressors that might be more adaptive or effective.

Different specific interventions might be utilized for each step of the process in this model. For instance, guiding the client to consciously breathe might look like encouraging them to lengthen their exhale, or could look like offering a more formal breathing technique. A clinical example of this approach in action is a therapist working with a client expressing repeated worry about the anticipated outcome of a future election. In this example, the body psychotherapy approach might look like the therapist guiding the client to:

- Notice the worry or the narrative associated with the worry, such as "I worry for my safety if \_\_\_\_ wins."
- Pause – i.e., the therapist's intentional highlight or reflection of the client's worry facilitates a pause in the client's verbal content.
- Lengthen and smooth their breath, if accessible and deemed safe based on client history – i.e., the therapist may softly and supportively verbally count the client's breath to make the inhale, pause after the inhale, exhale and pause after the exhale, each four counts.
- Increase awareness of the present moment through conscious breath and utilization of the senses – i.e., the therapist inviting the client to use their eyes to

scan and track their physical space, including noticing colors, shapes, objects, entrances, and/or exits.

- Increase somatic awareness – i.e., the therapist verbally inviting the client to scan their body for somatic sensations, notice placement or posture of the body, or allowing intuitive movements to occur through the body.
- Identify somatic anchors that promote emotion regulation – i.e., the therapist verbally guides the client to locate literal or figurative areas of their body that help them feel more calm or steady, such as the feet or, more figuratively, the heart center.

Overall, the model aims to help the individual perseverating glean insight, problem solve, increase preparedness, or decrease distress (McLaughlin, 2011). Combining conscious breathing, present-moment awareness, interoception, and somatic anchors can help interrupt and slow the cyclical pattern of perseveration. The elements of the model might be explored in the order listed in Figure 3, or explored more creatively. For instance, a clinician might support a client in building their interoceptive capacity for multiple sessions before guiding a client to locate somatic anchors, or vice versa. Bodies can become helpful tools in establishing new neural pathways that reduce perseveration and instead promote self-regulation. Reducing focus on stressful events that have either happened in the past or might happen in the future also helps to reduce many physiological effects associated with prolonged sympathetic activation, like cardiovascular disease (Cropley *et al.*, 2017; Querstret, 2017). Pausing and noticing the present moment can allow for an interruption in ruminative and worrisome cycles by reducing future and past focus. Interoception can help bring more awareness to cognitive, affective, and somatic patterns. Interoception and increased attentional control can increase the capacity to pause and reflect, instead of attaching to perseverative cyclical cognitive patterns. Locating somatic anchors can help regulate emotion and the nervous system. All of these aspects can allow for more space between impulse and action, as well as more time spent in the present.

### Specific Applications

This body psychotherapy model is intended to be a supportive tool for individuals experiencing perseveration. For rumination, in particular, this model aims to support the client in gleaning useful insight through self-reflection with a regulated nervous system (Lyubomirsky *et al.*, 2015; Nolen-Hoeksema *et al.*, 2008). Gleaning insight may help change one's behavior or help promote adaptive strategies to problem-solving (Fresco *et al.*, 2002). Distraction has been shown to help reduce ruminative thoughts (Nolen-Hoeksama, 1998). This model can help distract someone from ruminating by encouraging them to build their attentional control through focusing on the present moment, utilizing interoception, and locating somatic anchors (Koster *et al.*, 2011).

For worrying, in particular, this model aims to support the client in experiencing a sense of control through emotion regulation. Worrying obstructs emotion regulation, which seems to exacerbate abstract thinking about potential threats or stressors (Borkovec *et al.*, 1998). Inviting the client to notice, sense, and feel what is happening in their “internal landscape” through interoception and locating somatic anchors encourages more focus on what is concretely happening in the moment in the body sensationally, versus abstract, cognitive worries about the future. Additionally, this model supports emotion regulation and self-regulation of the nervous system, which can help a person experiencing worries strategically and adaptively increase their preparedness for perceived threats (Fresco, 2002). Increased preparedness might feel like a sense of control, which worriers aim to experience, consciously or unconsciously (Watkins, 2008).

### Potential Contraindications

If smoothing and lengthening the breath are not accessible to the client, bringing awareness or attention to the breath (noticing without changing it) can also help to regulate emotion (Doll *et al.*, 2016). For some clients, changing and bringing awareness to the breath might be challenging, inaccessible, or even contraindicated (Levine & McNaughton, 2014; Mulloy, 2019; Ogden *et al.*, 2006). For instance, some clients with histories of trauma might experience more dysregulation of the nervous system (Mulloy, 2019). It is also contraindicated for some clients whose bodies are not considered safe due to trauma or dissociative disorders. In any of these circumstances, it is important for the therapist or clinician to continuously monitor the client’s cognitive, affective, and somatic experiences throughout the session to modify the interventions used and support the client’s safety. Additionally, this model is contraindicated for use with highly dysregulated clients, and is instead most likely to be effective with clients who are able to modulate their arousal and have some somatic awareness.

### Discussion

Through the lens of neuroplasticity, this model aims to support the brain’s ability to change and establish new neural pathways that intentionally interrupt the pattern of perseveration through focusing one’s awareness and attention on the BP interventions. Focusing one’s attention on alternative ways of thinking may help transform the brain’s structure, and lead to new ways of experiencing or relating (Siegel, 2012). Through practicing this body-centered psychotherapeutic model, the objective is to establish new neural pathways that reduce perseveration and instead promote self-regulation and adaptive strategies to manage stressors. Moreover, this model aims to promote overall health by reducing the physiological effects of perseveration that often result due to prolonged sympathetic activation, like cardi-

ovascular disease or other chronic health conditions (Cropley *et al.*, 2017; Querstret, 2017).

This model does not claim to end perseveration completely. Instead, this model is intended to help individuals lengthen the time between perseverative thoughts and grow the range of possible responses to perceived stressors to include more adaptive and effective alternatives. Caldwell (2018) proposes that “contemplative practices help us break the cycle of suffering,” like the cyclical patterns of perseverative cognition (p. 9). Perseveration can be viewed as a habituated avoidant strategy; rumination can be viewed as a strategy in search of insight, whereas worry can be viewed as a strategy in search of control. This model is intended to help generate a range of new adaptive strategies stemming from a regulated nervous system and sense of curiosity.

### Multicultural Considerations

Historically, the mental health field was predominantly formed by white Euro-American society, norms, values, and beliefs, which can be potentially problematic or harmful while working with diverse or marginalized groups of people (Sue & Sue, 2016). Systemic oppression may affect an individual’s propensity to persevere. Individuals experiencing racism, classism, sexism, ableism, ageism, heterosexism, or any type of oppression might be put into circumstances that potentially exacerbate perseveration (Sue & Sue, 2016). For instance, someone who considers themselves queer might be more likely to persevere on disclosure of their sexual orientation at work than a heterosexual-identified counterpart. Clinicians must understand their own personal biases in order to work with clients in culturally aware and sensitive ways.

### Conclusion

This paper aims to examine utilizing body psychotherapy interventions to work with perseveration and its cognitive, affective, and somatic effects. Perseverative cognition is commonly included as a symptom in both depression and anxiety. Thus, understanding and addressing perseveration is highly relevant to improving the field of psychotherapy. This body psychotherapy model, “Pause, Breathe, and Feel,” encourages therapists to support their clients in creating a dynamic relationship between their minds (noticing perseverative thinking) and bodies (emotion and self-regulation). The integration of the physical body and nervous system in therapeutic treatment of perseverative cognition is largely missing in the field of psychotherapy, which mostly focuses on top-down, cognitive therapeutic techniques. Using body psychotherapy interventions like breathwork in counseling can help clients interrupt perseverative thinking by learning to be present, utilizing their interoceptive capacities, and identifying specific areas of their bodies to promote emotion regulation and self-regulation.

While this paper addresses gaps in the literature, it is important to consider limitations and further research ideas. One limitation is that this model speaks broadly of perseveration, while rumination and worry have overlapping and also distinct features. Another limitation is not specifying how to use this model with various psychological disorders; nor does it provide an in-depth discussion on contraindications of using breathwork in clinical sessions. The model also assumes some familiarity with somatic psychology and somatic approaches to mental health care. The therapist is assumed to have some knowledge and training in facilitating somatically-oriented psychotherapy sessions, including tracking hypo- or hyperarousal of clients' nervous systems. The client is assumed to have some somatic awareness, as well as a sense of safe access to their bodies and internal sensations.

This paper was developed to contribute a somatically-oriented approach to working with perseveration to the field of psychotherapy. However, it is only the beginning of the discussion on integrating more body-based

approaches into clinical mental healthcare. Addressing the physical body and nervous system in clinical treatment is essential for effective care. Future research should consider isolating rumination and worry in order to elucidate their distinct features and somatic effects in more depth. Additionally, anxiety and depression, although often present together, have distinct features. Further research might consider using this model to work with perseveration and anxiety, depression, and co-morbid anxiety and depression. Future research might also explore perseveration in various populations and sociocultural identities to better understand if there are differences or similarities across cultures and lived experiences.

## Acknowledgements

Thanks to Naropa University, Courtney Law, Marissa Angeletti, and Heather Caldwell for supporting the writing of this manuscript.



**Meridith L. Antonucci, MA** is a body-centered psychotherapist, experienced yoga teacher (E-RYT 500), and yoga therapist in training. Meridith works with a variety of clients in her private practice, Repattern Therapeutics, based in the state of Colorado. She integrates body awareness and movement with traditional talk therapy to help clients regulate their nervous systems and build greater awareness of their mental, emotional, and physical patterns, including unpacking where their beliefs and patterns originate. Meridith's work rests on the foundation that we all deserve to feel at home in our bodies and to live fulfilling lives. Meridith holds a Master's in Clinical Mental Health Counseling with a concentration in Somatic Counseling & Body Psychotherapy from Naropa University and a B.A. in Sociology from Colorado College. She lives in Denver, CO with her wife, cat, and dog.

Website: [www.repatterntherapeutics.com](http://www.repatterntherapeutics.com)

Email: [hello@repatterntherapeutics.com](mailto:hello@repatterntherapeutics.com)

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