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## Interoception and Expressive Writing in Expressive Arts Therapies: A Trauma-informed Approach – Literature Review

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**Interoception and Expressive Writing in Expressive Arts Therapies:  
A Trauma-informed Approach – Literature Review**

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### **Abstract**

Journal writing is a popular intervention to bring into therapeutic work with groups and individual clients, particularly within applications of expressive arts therapies. Yet often participants become resistant when encouraged to explore more challenging episodes of their lives through writing, even though studies have shown that excavating these events is precisely what benefits health and wellbeing through expressive writing applications. This literature review provides a deeper understanding of the role of interoception and mindful, contemplative movement on unlocking the stories our bodies hold. An arts-based, autoethnographic practice informed the selection of literature. This paper investigates the theoretical connections to similar therapeutic orientations such as narrative therapy; applications such as writing the trauma narrative; how interoceptive awareness aids in accessing implicit memory. Findings in the literature also identify how integrating interoceptive training can aid in emotional regulation and in titrating and tolerating discomfort when engaged in evidence-based expressive writing protocols toward healing outcomes. A review of existing applications within expressive arts therapies reveals many natural entry points for bringing the language of the body – sensory awareness – into cognition to support the expressive writing process.

*Keywords:* interoception, sensory awareness, expressive writing, expressive arts therapy, trauma-informed, body memory, implicit memory, somatic writing

Interoception and Expressive Writing in Expressive Arts Therapies: A Trauma-informed  
Approach – Literature Review

**Introduction**

This paper will examine the ways in which the body can play a distinct role in expressive writing, from harvesting themes to aiding in emotional regulation. It is intended to highlight how bringing embodied approaches into the process of expressive writing can enhance the outcomes of writing toward healing outcomes. This capstone thesis specifically investigates the relationship between the writing and paying attention to what the body has to share via the language of physical sensation. Central to this investigation is the question of how interoception, the awareness of physical sensations, can be utilized as a source for locating and investigating personal narrative themes for wellbeing and therapeutic outcomes in an expressive arts therapy practice, through a trauma-informed, expressive writing approach. The review of literature that follows has been informed by an arts-based autoethnographic method. Contemplative, somatic inquiry layered onto expressive writing that explores the “self-experience” has been a cornerstone of the processes of identifying topics within the literature and then analyzing the relative concepts.

By engaging in a review of the literature on these topics, I hope to provide a deeper understanding of the role of interoception and mindful, contemplative movement on unlocking the stories our bodies hold. This investigation will allow for further development of methodology for embodied expressive writing protocols in both teaching and clinical practice. In addition, it will help to locate theory to inform my own intermodal arts-based experience. It will clarify the benefits of integrating an embodied approach to expressive writing, highlighting a specific intermodal process within Expressive Arts Therapies, in which the intention is healing through accessing, attending to and making sense of the narratives that shape concepts of self and the world. Finally, learning more about the importance of interoceptive training as a means to not

only tune in to sensory awareness, but also to locate and respond to artistic and embodied impulses, will highlight the importance of bringing the body into an expressive writing practice.

Expressive writing does not require the application of any formal style or concern for grammar, punctuation, or any particular organizational style to be imposed. Expressive writing has similarities to what many people may be familiar with as journaling or journal writing, in which the writer is encouraged to engage with their inner voice and to document their own thoughts and feelings. Expressive writing could also be categorized with the style of *freewriting* identified Peter Elbow in the 1970s as the early stage of the writing process in composition and rhetoric studies, and a term which gained mainstream popularity from the general public through the writings of Natalie Goldberg in the 1980s and 1990s, in which the writer is encouraged to engage with first thoughts, without editing and to keep the pen moving in order to maintain a flow of thoughts, feelings and ideas and descriptions. These qualities are consistent with the expressive writing (EW) framework implemented in James Pennebaker's research over the past 30 years; an evidence-based model that established expressive writing leading to improvements in physiological health and wellbeing. What distinguished Pennebaker's EW protocol from freewriting in his studies was his application of these freewriting qualities to engage with distinct topical categories: writing about a neutral subject or writing about one of the participant's most challenging experiences. The outcomes consistently revealed benefits to health and wellbeing when participants wrote about challenging experiences by exploring both the explicit, logistical details of events in their writing, along with the associated thoughts and feelings that the writer experienced surrounding the event or when writing about the event (Pennebaker, 1997; Pennebaker & Beal, 1986). An examination of expressive writing is relevant to expressive arts therapy. Informal writing about what one feels, senses, or imagines is often employed as a stage within the intermodal process. Expressive arts therapists can benefit from increased understanding of what can come up when writing prompts invite reflection upon their challenging life experiences and particularly for individuals with trauma history.

This capstone thesis will review literature that examines the efficacy of expressive writing as a source of enhanced wellbeing. It will explore the theoretical connections to similar therapeutic orientations such as narrative therapy, the foundation of which is verbalizing the stories we tell ourselves, especially the hard to tell stories that often provide opportunities to examine stories that lead to self-limiting beliefs. What is meant by the term *hard stories* are of those events that occur in which physical and/or emotional distress was experienced as it occurred and in which the telling can return one to fresh feelings of distress. This will lead to a discussion of literature that examines how trauma can inhibit verbalization of hard stories, through looking at ways in which traumatic experiences can impact brain activity and function, including memory and chronology, as well as relative nervous system responses. Trauma studies since the publication of Bessel van der Kolk's (2014) seminal book *The Body Keeps Score* have emphasized the need for inclusion of body-based protocols in trauma treatment. A deeper understanding of the phrase *body memory* will emphasize the importance of engaging interoceptive awareness, in order to access and give expression to hard stories. And finally, a consideration of principles and applications from the expressive arts therapies that allow for interoception to emerge, will position arts-based approaches as tailored to safely and appropriately begin accessing and working with hard stories in an action-based, layered approach to expressive writing.

My interest in this topic has roots far back in my personal experience with loss, and with an embodied writing practice that I instinctively assembled toward processing and transforming grief. In turn, my personal practice led me to the development of a somatic writing course that I offer as part of an undergraduate expressive arts therapy curriculum at Lesley University. My course emphasizes mindfulness and somatic, body-based processes to locate personal themes; to this end my classroom utilizes the expressive writing (EW) protocols evaluated and studied over 35 years by James Pennebaker and colleagues, relative to directly disclosing details of one or more emotionally challenging life events. Pennebaker's (1997) collective findings conclude

that writing about both the details of the event and feelings associated with it for at least 4 days (consecutive or non-consecutive) for 20 minutes per day result in positive physiological and psychological states.

Pennebaker's model has similarities to writing the *trauma narrative* within therapeutic environments. As a literary/art object, the style of the writing most closely resembles the memoir genre. I expected my students could draw upon movement and mindfulness practices for tapping into themes to identify those meaningful hard stories to work on, and also that experimenting with elements of the writing craft would be motivation enough to dig into it. I anticipated that they would be able to rely on the learning of those techniques as a means of managing their own well-being during the writing process. Yet in several instances, my students reported that they felt challenged by writing about difficult and traumatic experiences. And when the writing brought them into painful territory, either they felt ill-equipped to deal with their emotional responses or they simply stopped writing and avoidance set in.

Sara Baker (2009) depicts a similar experience facilitating an on-going outpatient writing course for cancer patients and survivors who identify either their cancer diagnosis or their treatment, as trauma. Baker (2009) focuses on the resistance she witnessed when shifting her facilitation from imaginative writing approaches of the first half of her course to the direct writing on the traumatic event utilizing Pennebaker's EW protocol (p. 16). The participants in Baker's course expressed a desire to return to imaginative writing. The connections I saw across Baker's facilitation experiences and my own left me wondering: what gets in the way of writing about hard stories? Is it simply a resistance to the subject and how can I work with this resistance in people who have a desire to heal from those events? Or was it something more: an inability to frame those events and their emotions in language?

My own impulse when the writing gets hard is to get out of my head and into my body. What then is the role of the body in writing, and how could I teach students and clients (and myself) to trust the generative and artistic impulses that come from listening to the stories we

hold in our bodies that are ready and waiting to be expressed? I wondered if the integration of an intermodal arts process that engaged the body would support the journey into writing, leading to more successful therapeutic outcomes that bypass retraumatization in the writing process. By taking an autoethnographic position to this literature review, one that includes the body in an arts-based approach, I can rely on self-experience with the process as a source to navigate the various threads of literature that together inform an embodied expressive writing.

### **Literature Review**

#### **What is Interoception?**

The term interoception has been used for at least the past century. But perhaps it was Alan Fogel, a regular *Psychology Today* columnist, professor of psychology and bodyworker, who reengaged current use to the term with the field of psychology. Fogel (2009) provided a simple and elegant conceptualization of the term as “the ability to feel one’s own body states and emotions” (p. 39). Other authors in the field of body-oriented psychology who have subsequently written on the subject of interoception define the term more narrowly, solely including awareness of sensation arising from the functioning of particular body systems.

Ceunen et al. (2016) highlighted the development of the term interoception over the past century to include much more than it did from its point of origin. These authors highlighted the lack of consensus on a precise definition of the term. They offered a history of the concept of interoception by looking at both the etymology and the shifting history of what has been thought to be the physical origin of interoceptive information over time. For the purpose of this paper, I will be using their definition of interoception as the “subjective perception of the body state” (p. 11). These perceptions can range in terms of the types of body states of which one may become aware. Drawing from illustrations of interoception documented during my own arts-based research sessions (journal notes demarcated by italics), interoception may bring awareness of physical qualities including comfort or discomfort:

*Evoking inquiry yielded awareness of pain location between shoulder blades, beneath sternum. Movement on the floor massaging “old wound,” noticing frustration arise. Giving way to sadness felt in frontal chest, sensed as ache.*

Of note in this example, is the way that interoceptive awareness may also engage a correlation between any physical sensations that are available for noticing and what particular emotions may be present. Interoception may also make available kinesthetic awareness, how the body is situated in space and how it is available for movement. With the following journal note example, physical awareness correlates with the arrival of personal insight:

*Knees bent in a supine twist, I practiced grabbing and letting go to create windshield wiping movements to the other side, slowly at first. I noticed the grab could come from multiple locations within the pelvis and greater strength coming from deeper center. I played with initiating the side-to-side movement of the knees from the inner balls of the hips. I played with initiating from more proximal to the spine, the psoas muscles, then with the upper pelvic floor. I researched when to let go: when the movement range was complete. Letting go sooner, when the knees were pointing up to the ceiling, allowed for greater speed, for more time spent in the release. I played with different locations from which to let go, from where. Outer hip? Sacral spine? . . . I could let the grab be the parental insertion and the let go be the stepping back and letting that insertion land. I need to step back more quickly – grab, release and let go from the experience. Release myself more quickly, I think, than I have been. Letting go is good for my kids . . .*

When utilizing the term interoception, different academic fields may be more or less interested in which precise bodily locations the perceptions are originating from. A somatic or body-oriented psychology framework distinguishes perception originating from either locations within the organism (intero) such as viscera and nervous system, or *exteroception*, meaning sensory input that is stimulated from outside of the organism.

Dance/movement therapist and author Christine Caldwell (2018) has coined the term *bodyfulness*, possibly in response to a need for a new term to encompass awareness of physical sensations, regardless of whether the sensation originates in the viscera/organs, which we may track as “hunger, thirst, sexual arousal and feeling hot or cold . . . queasiness, sleeping, breathing and heart rate” (p. 217). Caldwell identifies these sensations as interoception. However, it is of note that she maintains *proprioception* (a term she uses interchangeably with *kineasthesia*) to distinguish “sensations of movement, body position and orientation in space”

(p. 216). Sensory neurons that allow us to perceive these kinesthetic or proprioceptive sensations are primarily located in the joints, the muscles and within the inner ear (p. 56). Caldwell's research moves the language of interoception and awareness of body states into a more specific criteria of origin location for these discussions.

A special issue on interoception was published at the beginning of 2021 in *Trends in Neurosciences*. In the article by Chen et al. (2021), the term interoception is identified as referring to "the representation of the internal states of the organism, and includes the processes by which it senses, interprets, integrates and regulates signals from within itself" (p. 3). While recent research in psychology has tended to narrow the definition of interoception over time, other fields such as neuroscience has broadened the definition. Chen et al. provided for the term interoception to include a "bidirectional" communication between body and brain, "that encompass(es) the complex interplay between the brain and other organs that is necessary to monitor and regulate internal states" (2021, p. 4). This represents a movement toward a more holistic understanding of the body's role in processing experience and the body's role within it as integral to processing experience across various stages.

### **Hard Stories to Tell**

Pennebaker's studies of the health and wellness benefits of disclosure in expressive writing reflect a commonly considered value in processing the trauma narrative as an element of psychotherapy. Despite the resistance I've experienced with students in my expressive writing classroom and confirmed by Baker's experience with Cancer patients writing hard stories, there is plenty of support for creating cohesive narratives of our most emotionally challenging experiences for producing positive mental health outcomes. Narrative Therapy is a field of counseling psychology that asserts the value to examining our stories. By exploring how, through our adversities, we have constructed ways of coping, self-concepts and relational dynamics, we can discover more about the beliefs and values embedded within the stories we live by (White and Epston, 1990). The benefits of revealing and organizing stories of our most

challenging experiences include providing “critical distance,” giving order to experience, increasing self-awareness and understanding identity, which can lead to agency and empowerment (Guilfoyle, 2015, p. 98). These benefits can extend to the expressive arts therapies, where storytelling is often utilized for self-exploration. But it is important to understand that before one can craft stories with fresh interpretations that lead to preferred sense of self and place in the world, people must be able to access the stories they are holding and share them within the therapy setting. This is where disclosure can become complicated for those with stories of trauma: in the ability to recall what we think of as “narrative” order — a chronology of an event or events – and in access to the language to describe or render those narratives.

Narrative therapist Michael Guilfoyle (2015) considered the topic of the *unstoried experience*. He describes these as “experiences so powerful that they eject us from the stories of our lives, overwhelming our narrative capacities to contain and organize experience...” (p. 95). He points to the traumatic nature of some life events creating a rupture in one’s ability to bring memories forward in a chronological, linear fashion. Guilfoyle’s case of Kyle illustrates this with a young man dealing with mood symptoms, but not initially coming to therapy presenting with a particular traumatic event or story. Eventually he was able to provide clues, which over time Guilfoyle as the therapist was able to construct and reflect back as a story of sexual and physical abuse Kyle had been victim to at the hands of a trusted family minister for a span of years. Guilfoyle explains how this narrative reconstruction was not something Kyle could have done on his own as he lacked ““*phenomenological coherence*” (quoting Neimeyer, Herrero, & Botella, 2006, p.132, italics in the original)” of the experiences (Guilfoyle, 2015, p. 96). It is here that the limits of what we can expect from cognition become clear, in unearthing the story and tolerating what it brings with it, for long enough to learn about it. As Guilfoyle shows us with Kyle, thinking and talking are not always the best ways to inquire. Many have written about the need for integrating within the psychotherapeutic process of trauma recovery, the somatic systems of the body in bringing forth and understanding sensory information, such as physical

sensations and impulses, imagery, sounds that evoke stories of the past and of the present moment. These can be revealed as triggers, PTSD fragments or flashbacks, or habituated responses. This is as important in writing as it is in a talk therapy session.

### **Expressive Writing and Disclosure**

#### ***Verbalization and the Trauma Brain***

Bessel van der Kolk's 1994 study aids in understanding why someone may be limited in the use of language to discuss past trauma. Van der Kolk's participants underwent neuroimaging while listening to a script that recounted details of their past traumatic experiences. The interesting finding relative to disclosure was the decrease in activity of the Broca's area compared to baseline activity. This is a region of the cortex that is responsible for speech (Van der Kolk, 2014, p. 42). Van der Kolk asserts that "without a functioning Broca's area, you cannot put your thoughts and feelings into words...Broca's area went offline whenever a flashback was triggered" (2014, p. 43). This sounds a lot like Guilfoyle's case of Kyle, who could not access the language to share his traumatic experience in narrative therapy sessions. In consideration of Guilfoyle's illustration beside Pennebaker's EW protocol that requires the ability to organize detailed thoughts and feelings of traumatic experiences into words on the page begs the question: how can trauma survivors be expected to reliably access their feelings or memories through language? Pennebaker's research has also shown that another way to express traumatic experiences is through the body.

Clinical psychologist and dance/movement therapist Anne Krantz joined Pennebaker to conduct a study with college undergraduates that offered a glimpse into the potential of bringing the body into the expressive writing protocols. The study examined expression of traumatic experience through distinct interventions with three groups; one through movement, another through movement and then in written form, and the third to simply engage in physical exercise. Both groups of movers and exercisers felt happier but "only the movement-plus-writing group showed significant improvements in physical health and grade point average. The mere

expression of a trauma is not sufficient. Health gains appear to require translating experiences into language” (Pennebaker, 1997, p. 164). While the researchers do not connect the relationship between physical health and mental health here directly, the importance of these findings is that the group who expressed trauma through movement and then wrote about the trauma were the only ones who experienced long-term gains, not simply the immediacy of mood improvement. Physical health improvement was charted over time and may implicate enhanced functioning of the immune system, often a benefit from stress reduction. Higher GPA may have correlated with the decrease in stress, better positioning one for learning and the adoption of healthy choices around study habits and sleep. The authors go on to say that “people who benefitted from writing began with poorly organized descriptions and progressed to coherent stories by the last day of writing” (Pennebaker, 1997, p. 165). This is significant in terms of what known about trauma’s impact on accessing memory and verbalizing it. The participants Pennebaker identifies as those who benefitted from the writing were the same ones who were able to express through an embodied approach first. Those individuals were then able to translate the experience with greater cognition and language-based coherence. How does starting with movement, a physical expression, extend this benefit to the expressive writing about traumatic events? In order to untangle this finding, we need to look at not only how trauma impacts language but also memory.

### ***Trauma, Memory, and Body Memory***

Not only do traumatic experiences compromise language centers in the brain, but they also impact the ability to produce memories of those experiences in a coherent manner. When traumatic experiences occur, if nervous system arousal is high enough, a series of chemical reactions can impact brain functions including those of the thalamus that is involved in both sensory communication and in regulating states of consciousness. The thalamus in tandem with the hippocampus, is responsible for “storage and integration of incoming information . . . as a result, the imprints of traumatic experiences are organized not as coherent logical narratives but

in fragmented sensory and emotional traces: images, sounds and physical sensations” (van der Kolk, 2014, p. 178). In this way, having experienced trauma can impact an individual’s ability to access or trust in their explicit or logistical memory, as well as their potential to feel safe paying attention to their physical sensations as sensory and emotional *traces*, which can elicit the same type of arousal as the initial traumatic experiences. If the explicit systems of the brain cannot be relied on in these instances to organize and bring coherence to events, we can look to the memories that are stored in the body. For this, interoception is at play.

Psychiatrist and philosopher Thomas Fuchs (2012) presents an examination of the breadth of what can be contained within the term *body memory*, through a lens containing all memories that involve sensory information and processing, as well as how one has experienced that sensory information. Fuchs draws upon Proust’s Madeleine cookie experience as a useful illustration for contextualizing of body memory to include the “totality of body capacities, habits and dispositions” (2012, p. 10); not only recalling the bodily sensations associated with the event, but also the way that sensory information made us feel, behave and respond. Fuchs identifies a variety of types of body memory, all of which are categorized as implicit memory, and their relevance within therapeutic approaches. These include procedural, situational, intercorporeal and incorporative memory (Fuchs, 2019 pp. 13-14). Providing this detailed breakdown of memory types brings a more comprehensive, holistic view into the parts of ourselves that are implicated in our memories and thus involved in accessing the stories we hold. Within an expressive writing framework, through applying intermodality to the writing practice by adding a layer of body-based approaches, not only can we draw upon Pennebaker’s basic protocol of writing about logistics of a singular troubling event (explicit), and the associated feelings (implicit), but through the body we may also gain access to the experience of something we encountered many times (situational), our subjective sense of past relational interactions or patterns (intercorporeal), and even bodily patterns we recognize as adopted from the modeling of others (incorporative) (Fuchs, 2019 pp. 13-14).

***Implicit Memory, Enactment and the Emotional Experience***

Caldwell (2016) distinguished explicit and implicit memory in terms of temporality. She identified explicit memory as conscious, fact-based and located in time, (p. 256). She defined implicit memory as “nonconscious activities such as how to perform actions (like riding a bike), habit formation and classical conditioning,” and identified those types as not located in a time distinct from the moment of recall, “*remembering is in the doing* – the memory IS the action in the present moment, and past and present are therefore not different from one another” (p. 257). Caldwell’s depiction of implicit memory has relevance to what is known about traumatic memory and PTSD *flashbacks*, both generated from memories of the past but re-experienced by what is occurring in the present moment.

Movement-based approaches provide opportunities to explore a variety of actions and gestures to mine for associations that are rooted in what we do with our bodies versus what we can will with our language or declarative sections of the brain. Enactment is an important element with expressive arts therapies. Caldwell explained enactment as relying on “sensorimotor experiences;” each sensory record or “sensory engram” is associated with past repetitions of the act – remembering how it felt to do it” (p. 258). In order to compose a narrative that would fit the criteria of the Pennebaker model of EW for healing outcomes, a write that can draw from not just the explicit, chronological details of an experience but also the associated feelings and emotions is more likely to unfold when sensorimotor experience is involved. Greater descriptive access becomes available to *flesh out* the feeling memories through the engagement of the sensory cortex and re-enacted in the body through the movement action.

Caldwell (2016) also connected enactment of sensorimotor experiences with emotions: Enacting an implicit memory, functionally the same as retrieving it, will call up the emotions that were encoded with it. The emotion will be experienced as a present moment event, but is equally an act of emotional remembering” (cited from Feldman

Barrett, Niedenthal & Winkielman 2005; LeDoux 1996). So where explicit memory uses time and chronology as a marker, implicit memory is marked by emotion. (2016, p. 259) Pennebaker understood that writing about an experience by drawing upon the explicit and implicit memory details was leading to healing outcomes in the participants who managed to do it in their writing – but his research neglected to examine how certain participants were achieving access to the implicit content. To follow our bodily impulses down the path toward movements and gestures that stimulate awareness of associations and feelings we have stored in the body requires the ability to pay attention to bodies' sensations, which also requires an ability to tolerate those sensations. Expressive arts therapist Cathy Malchiodi (2019) references “the healing potential of embodied somatosensory communication, which naturally relaxes the mind’s control and begins to tap a deeper level of implicit experience.” She offers for consideration the bottom-up approach detailed within the Expressive therapies continuum (or ETC) framework as a way to access traumatic experience by “working with [the] clients’ implicit, somatic-sensory experiences (lower brain) before tackling emotions (limbic brain) and narratives (higher brain)” (2019).

### ***Autoethnographic Illustration: Accessing Implicit Memory***

In the arts-based research practice I employed throughout the writing of this paper, for bringing the body into my expressive writing, I engaged in a sequential process. Consistently, I started by activating awareness of my internal landscape by directing my attention to the state of my body in the present moment and did so before beginning any movement. Next, I would check in with my breathing patterns and the quality of my breath. I would scan my body for areas where I might be holding tension, followed by noticing the body parts that were making contact with the floor, my clothing, or any other surface. These steps initiated an inquiry of what I was able to sense or not, and the impulse to move could germinate from this inquiry into my present-moment bodily state. Subsequent movements could then bring about more sensory information and seed new avenues for inquiry and experimentation. This process is what

allowed me to continue to follow the thread of interoception, able to tolerate physical discomfort for long enough for me to bring curiosity to it, respond to it. In turn, that curiosity allowed for movements to unfold which eventually uncovered a body memory. Paying attention to my physical sensations provided a trail of breadcrumbs to the implicit memory, similar to Jung's (1997) concept of active imagination, for accessing the unconscious.

*. . . awareness of pain location between shoulder blades, beneath sternum. Movement on the floor massaging "old wound," noticing frustration arise. Giving way to sadness felt in frontal chest, sensed as ache. Impulse to clear it by front and back pendulating movements...twist, reach, extend through fingers, sweeping upper arm bones. Releasing tension from the back increased presence of ache/sadness in frontal chest . . . clearing movements of upper extremities become waving, sustained and increased waving, into the arrival of the fully-formed phrase: I was drowning in the boat.*

To be clear, the memory was not of a literal drowning, but a fragmented, reorganization of a dream I had in my youth. My best friend died of cancer when I was 16 years old. She had suffered for several years and I had experienced my own difficulties from accompanying her on her journey. The original dream had occurred a few months after her death and in it, my friend floated to me in a rowboat at night, in the bay where we'd spent our summers together. She said the words "I called you." At the time of the original dream, I interpreted these as a confirmation that she had granted me a visitation when transitioning, something I'd sensed at the time. These details of the original dream were always available to me, vividly; this was not a repressed memory of this dream at the time of this movement and writing session thirty years later.

However, the image of the dream that came to me during the movement and writing session was like a different movie. In this movie, I was the one in the boat, I was waving my arms, as I was in the present moment movement. The phrase that emerged – I was drowning in the boat – an insight that I couldn't have arrived at previously. It was the memory of *how I felt* as a 16-year-old who lost her best friend, who needed help processing the grief, and how it felt to not receive the help I needed. The untangling of the movement association, the implicit memory and the explicit memory of the dream into the organized presentation I can offer came only through the expressive writing that ensued as the next layer of the practice:

*I was drowning in the boat. I waved my arms but no one saw me. The ones who noticed looked away in disgust. They weren't used to seeing me ugly. And so I stopped showing it. I went to bed instead. Eulogy. Goodbye to me. To the girl in the green turtleneck who didn't know who could hold her. And her hard feelings.*

*Who was in the boat in the bay? Which girl floated in through the plum moonlight, across the rippling water of the dream? Was it her or was it me? I called you, she said. No one was there. Did I call her in the hospital? Why didn't she take me there to see her? To touch her to say goodbye? She had to come to me in a boat on the lake, months after. I waved and waved my arms and my mother never saw me. She still never sees me and now...she never will.*

The memory of the feeling of that time, coupled with the conceptual content that came through the writing, clarified for me which loss I was still grieving from that period of my early life. I was not that I was still stuck in processing of losing my best friend. I had grieved her. What I had not processed was the loss I felt from the neglect of my parents during this difficult period time; the isolation and disconnection I felt as I sensed that my emotional responses to grief were not acceptable to my family, nor taken seriously. The result of bringing the body and writing together reoriented me to what needed healing. It changed the story I had been telling myself for decades.

As profound as these results may seem, it is important to highlight the role that my previous training in movement with sensory awareness played. From my own experience, I am certain that I could not have tolerated the painful sensations and emotions of this session when I was a young adult experiencing depressive episodes and prone to physical dissociation. Yet at the time of this particular arts-based session, I could rely upon twenty years of a regular movement practice that engages somatic awareness. My training aided in my ability to notice what I was sensing physically and follow those impulses in the session that lead to enhanced ability to tell a new story. This warrants discussion on the important role of interoceptive training in successful expressions of traumatic experience.

### **A Need for Interoceptive Training in Trauma-informed Expressive Writing Protocol**

#### ***Role of the Brain and Sympathetic Nervous System in Sensing and Perceiving***

What parts of the body are responsible for interoceptive ability and how are they

impacted by trauma? Van der Kolk cites evidence of “abnormal activation of the Insula,” a region of the cerebral cortex that “integrates and interprets input from internal organs -- including the muscles, joints and balance (proprioceptive) system - to generate the sense of being embodied” (2014, p. 249). Chen et al. confirm that currently gaps in understanding of the neural networking related to interoception remain, yet the significant involvement of the insula in a variety of interoceptive processes is recognized. The insula is also involved in arousal of the sympathetic nervous system. The implications of impaired functioning of the insula can include what is viewed as characteristic of those suffering from a variety of trauma diagnoses: dissociation (the feeling of an inability to inhabit one’s body) and difficulty regulating a hypervigilant nervous system. This indicates a need for interoceptive training in any protocols that would include disclosure of traumatic experiences in a therapeutic process, including expressive writing, as van der Kolk elegantly points out, “the full story can be told only after those structures are repaired and after the groundwork has been laid: after no body becomes some body” (2014, p. 249).

A 2019 study was conducted with 66 young adults from Luxemburg and Germany to measure the impact of early childhood trauma on interoceptive accuracy; “perception of bodily signals” (Schaan et al., 2019, p. 2). The purpose of the study was to investigate the relationship between early childhood trauma and interoceptive accuracy (IAc), particularly when exposed to stress. An experiment designed to induce a stress response required participants to keep their hand in a cold-water bath for a period of time while their behavior was videorecorded. Pre and post measurements included both physiological responses including heart rate and cortisol levels taken via saliva sample, as well as participant’s self-count of their heart-beat and psychological ratings recorded. Results indicated that increased childhood trauma correlated to lower interoceptive accuracy: “the more childhood trauma participants reported, the more difficult it was for them to perceive their heartbeat after the stressor” (Schaan et al., 2019, p. 6). This finding did not extend to the physiological responses including heart rate and cortisol

levels, indicating that stress exposure did not impact those reporting childhood trauma more significantly on a physiological level, but at the interoceptive level: an increase in trauma history equated with a decrease in ability to perceive one's physiological state.

The ability to perceive stress is an important competency to practicing expressive writing that discloses emotionally disturbing events or scenarios. A 2014 quantitative study with a group of 246 college students examined the efficacy of emotional disclosure through expressive writing. From a bio-informational framework, expressive writing is meant to serve as a way to access emotional memory networks (Konig et al., 2014, p. 345). Konig et al. (2014) highlighted "positive association between greater physiological responding during exposure and better therapeutic outcomes has also been found in written emotional disclosure," and correlated physical responding to increased heart rate measurements. Participants were divided between an expressive writing group and a neutral writing group, and each group segmented into three categories of training: response training (including physiological and behavioral responses), stimulus training and no training. All groups followed a modified version of Pennebaker's evidence-based model for expressive writing (20-minute periods three to four times over a few weeks). The expressive writing group was prompted to write consistently in each session on "the most traumatic, upsetting experience of your entire life...with as much emotion and feeling as possible" (Konig et al., 2014, p. 349). Findings revealed emotional disclosure led to greater heart rate response than neutral writing, with particular significance in the response training participants, focused on behavioral and physiological responses to the traumatic situations which they were writing about.

Expressive writing protocols that engage disclosure of painful or traumatic events and associated emotions via access to the emotional memory network do produce long-term outcomes relative to enhanced wellbeing. Yet writing about a traumatic experience and focusing on the behaviors and physical response associated with the event can lead to a stress-inducing experience in the moment (similar to what was employed in the 2019 stress study by Schaan et

al.). It follows that the stress that can ensue when revisiting past traumatic events through written reflection may have similar implications upon somatic awareness and interoceptive accuracy. Further, it has been shown that individuals with early childhood trauma may demonstrate lower interoceptive accuracy, which in turn equates to lessened awareness of physical awareness and in turn lower efficacy in emotional regulation.

This information suggests consideration for expressive writing protocols that are designed to enhance somatic awareness and improve interoceptive accuracy. Integrating interoceptive training can aid in emotional regulation, and to titrate and tolerate the current evidence-based expressive writing protocols toward healing. Van der Kolk discusses working with clients whose language center is halting their ability to share about their traumatic experiences verbally while in a therapy session. He gives examples borrowed from Peter Levine's experiential work with trauma including establishing "islands of safety" within the body (2014, p. 247). He illustrates an opportunity for training interoceptive ability by inviting the client to perform a simple hand movement, then follows with "asking her to focus" [her attention on the physical sensations that accompany moving] the hand... so that she can feel herself separate from the trauma" (2017, p. 247). Here he offered the client an option to detour from the challenge of bringing cognitive order to the past and the impending stress response of the struggle she experiences in doing so, by way of sensing her body in present moment awareness, bringing regions of the brain such as insula back online.

Somatic trauma therapist Babette Rothschild (2017) postulates that processing traumatic memory is not necessarily what everyone who has experienced trauma needs for recovery and that rushing into traumatic memory processing may be detrimental to an individual's wellbeing. Training in accessing interoceptive states may help the individual to gauge whether they are ready to access implicit memory and to write about their traumatic experiences. Rothschild (2012) is a proponent of engaging those with trauma history in 'getting moving' to aid in stress reduction, combat the freeze response of the sympathetic nervous system and to increase

muscle tone aiding in a sense of agency and containment. She also advocates in the development of a 'mindful gauge' or becoming attuned to one's own physiological signals or arousal states such as changes in heart rate as a key to trauma recovery (Rothschild, 2012). As a precursor to the writing, moving *with* a mindful gauge could be a safe way to approach Caldwell's (2014) reenactment, or connecting with the implicit body memories and associations, identifying what one feels ready to explore, by applying self-inquiry into the present moment state of the body. Movement with a mindful gauge may also serve as a way to transition to the writing act in a way that supports minimizing stress chemicals, keeping arousal in check, providing the proper conditions for the hippocampus to organize the memories and experiences for the writing act.

### **Limitations of the Expressive Writing Framework**

James Pennebaker's original paradigm for expressive writing may have been too narrow to warrant its descriptive label as "expressive" in a broad sense. Sophie Nicholls, who uses writing techniques in her therapy practice, argued this to be the case, citing problems with the theoretical and methodological model of Pennebaker's EW protocols, evidenced by looking qualitatively at the implementation of the model in the healthcare system (2009). Nicholls found that the research supporting Pennebaker's research claims were too tightly focused on one stage in the writing process (similar to what is commonly known as the freewriting stage) and suggested that studies need to be conducted that engaged participants in other stages and techniques of creative writing craft, for the possibility of broader and more complex outcomes. Nicholls called for designing "tasks for a developmental creative writing process [that engage] felt, bodily approaches" (2009, p. 175). She connected this application to Gendlin's *felt sense* and suggested that while Pennebaker attributed a theory of cognitive change to his limited expressive writing protocol, it may have been the case that his participants happened to be accessing a felt, bodily writing. Nicholls considered this cognitive change may be explained as something akin to Antonio Damasio's neuroscientific research on the 'core' sense of self that is

largely preverbal and remains intact even among “a more conceptual and learned sense of self,” and that Pennebaker’s 20-minute freewriting tasks may have helped participants tap into the core self, leading to cognitive outcomes that had less to do with the benefits of disclosure (2009, p. 173).

In terms of genre, Panhofer et al. (2014) detailed the limits of the narrative form in accessing and describing embodied experience in terms of identity development that is either connected or disconnected from a lived bodily experience. Panhofer’s 2009 study with dance/movement therapists engaging in a sequence of writing, dancing/moving, then writing again, revealed more nuanced and richer symbols of the bodily lived experience post-movement coming through metaphor, more conducive to employing poetry writing forms than a traditional narrative form (pp. 314-316). The authors of this study identified that implicit in the creation of metaphor involves “understanding one domain of experience in terms of a very different and more concrete experience” (pp. 317-319). Thus, there is meaning making of one’s lived experience at play in the generation of symbolic representation that becomes available through the embodied experience. This move toward symbolic/poetic language implicates genre considerations and harkens back to Nicholls (2009) critique of Pennebaker’s studies of the 80’s and 90’s as too limited in scope to the methods of data collection and the theoretical approach to single stage or form of writing, calling for a broader approach to the types of writing and stages of creative writing and associated techniques.

### **Applications of Interoception in the Expressive Arts Therapies**

Expressive arts therapist Cathy Malchiodi advocated for arts-based approaches to supporting the development of trauma narratives and in particular approaches that involve movement. Malchiodi (2020) suggested that the “emergence of sensory narratives that may be more prevalent and powerful than explicit, linear ones are unique to trauma memory” (p. 246). This is because embodied narratives are not subject to the language limitations imposed upon the communication systems by traumatic experiences, previously discussed in this paper.

Malchiodi (2020) indicated that “tapping into those sensory layers of communication permits natural relaxation of the mind’s control and a deeper level of implicit experience to emerge that actually enhances verbal communication (Malchiodi, 2003, 2019)” (p. 250). This means that by integrating approaches that connect sensory awareness with writing about trauma, the writer can access more, and with less distress in the process and more ease in the externalizing.

Dance/movement therapist Jennifer Tantia (2014) highlighted how the sensory communication that Malchiodi talked about may not be so easy to connect with for individuals who have a history of trauma and view their bodies as unsafe places (p. 95). For these individual’s Tantia uses a sensitive and scaffolded approach to begin the shift from dissociation to awareness of their body. She indicated that although mindful attention can feel like too much for someone who has experienced trauma, she does not rule out embodied approaches to working with this population (2014, p. 105). Tantia recommended engaging mindfulness attention in a sequence when working with traumatized individuals: “(1) attention to environment; (2) attention to body boundary; and (3) attention to sensation within the body” (2014, p. 96). Creating smaller steps toward a sense of safety with embodiment can lead to creativity, spontaneity and empowerment in Dance/movement work with traumatized individuals, Tantia showed, qualities that lead to a fuller range of physical expression and could extend the same to the subsequent writing on the page.

Dance/movement therapist Zoe Avstreich brings authentic movement into her work and referred to the form as an embodied mindfulness awareness practice (2014, p. 141). The authentic movement form emphasizes a specific aspect of mindful awareness-- cultivating the inner witness. In authentic movement, the inner witness can become an important attitudinal stance. Once one feels safe and secure in accessing interoceptive information through mindful awareness, true to its name, the witness is there to simply observe and notice, not judge. Avstreich reported that “impulses and images of the unconscious” may arise from an embodied state (2014, p. 139) with the presence of an inner witness. She pointed out that in the dyadic

nature of the practice when there is a mover and a witness, the witness provides “a gift of nonjudgmental presence to another” and does so with “a willingness to be present, to be receptive . . . to learn from whatever arises, to relinquish answers and to be totally attentive to the present moment” (2014, p. 141). It is this gift of nonjudgmental presence, receptivity and willingness to learn that is worth cultivating within ourselves and toward ourselves when we are engaging in excavating the hard stories, memories and associations that the body has been holding, when one is ready to explore them. It is important to note that the traditional form of authentic movement practice typically reserves time after the movement for writing, sharing verbally or the application of other arts modalities. Avstreich stated that this step is meant to support “the integration of direct experience into consciousness” (2014, p. 140). While it may not be necessary to rigidly follow Pennebaker’s protocols for expressive writing here in order to process the experience by imposing a narrative form, it does seem important to advance the making of the unconscious conscious through intermodal transfer of moving to writing.

Focusing is a therapeutic method established by Eugene Gendlin and when applied as a framework within the expressive arts therapies it is called *Focusing-oriented Art Therapy (FOAT)*. As a method, FOAT directs mindful attention to be applied to artmaking for therapeutic outcomes (Rappaport, 2014). Mindful awareness of the body states, what could be thought of as directing interoceptive attention, is highlighted within FOAT. The FOAT *check-in* approach, where focusing attitude and felt sense are employed, may be seen as similar to the concept of cultivating the inner witness. Here, an attitude of “friendliness” or non-judgment is invited so one can be open to felt sense, “one’s inner bodily sense of an experience, feeling, or issue” (Rappaport, 2014, p. 195). Art therapist Laury Rappaport explained where this cultivation of attitude, and self and bodily awareness may lead in a FOAT check-in approach:

Taking time, the Focuser is invited to see if there is a “symbol/handle” (Gendlin 1981, p. 44)—a word, phrase, image, gesture, or sound—that matches the felt sense. The Focuser checks it or “resonates” it for a sense of rightness. After, the Focuser is invited

to express the felt sense handle/symbol through expressive arts. From a felt sense, a word or phrase naturally unfolds into writing or poetry; an image into art; a gesture into movement or dance; and a sound into music, voice, or sound exploration. (2014, p. 195)

Again, there is overlap between the FOAT approach and authentic movement, where cultivation of the inner witness supports access to images or symbols from the unconscious. And in both cases, bringing awareness to interoceptive states is a precursor to accessing unconscious content. Within this FOAT approach, there is also a move toward transfer of arts modality, spending more time of focused awareness to the felt sense insight.

Pat Allen's Open Studio Process (OSP), while centered on visual artmaking, engages a similar ritual to Authentic Movement and FOAT. Allen's process recruits the focusing of attention and responding to impulses through the visual art-making activity. In Allen's OSP, the intermodal transfer that follows is specific to writing about the experience. This stage of OSP is called *witness writing* (Allen, 2014, p. 56). During witness writing, insights from the art activity are harvested in an intermodal next step. By using a similar freewriting style akin to Pebnnebaker's paradigm where the participant does not concern themselves with grammar, editing or structure of the write, witness writing can evoke our implicit insights and provide a container for holding them still for personal examination:

Often the words come in highly poetic forms, almost a sort of personal code that speaks to all present on a sub-cognitive level. Witness writing is the means by which we traverse the liminal space between the experience of merger with images and materials that occur in artmaking and the re-emergence and integration of the experience into the flow of our lives. Artmaking takes us into the place of all possibilities but eventually a particular image shows up; now we must get to know it, engage in dialogue, discern its meaning to us (Allen, 2014, p. 56).

For the process I adopted in my own arts-based research for this Capstone thesis, I leaned on Allen's OSP but replaced the visual art activity typical conducted within a group

setting with authentic movement on my own. My expectation in doing so was relative to Caldwell's ideas about enactment, that entering into free, expressive movement would provide me with variety of movements, postures, and gestures that may bring associations from my lived experience to the surface. Paired with embodied mindful awareness, being available for interoceptive information on my bodily state, I might navigate any unconscious material with both the welcoming and non-judgmental nature of the witness and the safety of Rothschild's mindful gauge. A distinct feature of Allen's process is that it is initiated with setting an intention for the session, meant to "guide the work" of the artist (2014, p. 53). Inviting stillness and minimizing distractions in the intention stage paves the way to accessing interoceptive awareness. The intention is set in writing, "defining, requesting, and also setting the boundaries of the art experience one seeks" (Allen, 2014, p. 53). In my own practice I have modified this intention as an inquiry, posing a question for potential discovery.

***Illustration: Interoception in an Art-based process***

The following excerpts from the expressive writing of one of my weekly arts-based research practices offer an example of tracking interoceptive information and following the impulse, leading to some implicit content, stories of what it felt like, symbolic and verbal recall, and recognition of stories I had been holding. The inquiry I used for initiating the practice: *What is the story of attachment that my body still needs to share?* (Note: for this practice session, I utilized a guided mindful movement prompts from a virtual Gaga style movement experience).

*Early on in the movement: flashes. My dad. This memory that comes to me occasionally: sleeping over at his apartment in bed with him. I don't know my age – maybe 6 or 7 - probably before Nana died. I always remember laying behind him and he had his back to me. The room was dark, but the digital alarm clock had bright orange numbers and a pulsing starburst, metronoming the seconds going by. In the orange glow, I thought my dad's ears had changed into something creature-like: pointy at the top. And he already looked a lot like Dr. Spock on Star Trek. I thought he'd changed into something maybe to be scared of. I've always had that as the singular memory of going to stay with him. Was that the only time I stayed at his apartment? I can't remember anything about the place except that room and an open front porch in the daytime. Do I only remember this one time because it is attached to the emotion of fear? And if so, what does that mean?*

*I wonder how much I am not consciously aware of with my childhood and parents' divorce. How will I piece that together now that people have died, disowned me and are mentally disappearing?*

*There was a movement prompt to sense tickling up. My spine moves like in being tickled, then like squirming. I remember tickle; I was a very ticklish kid. My feet especially, but also strange places like my kneecaps. I've always had a weird relationship to being tickled. It would feel like healthy touch, fun, affectionate at first, but could instantly change to feeling that I didn't have control over the situation. Feeling powerless. I would regain that control by threatening to pee.*

*A prompt came to play with all muscles as resting rubber, just sensing at first, the potential to stretch. Moving with the resting rubber dynamic then rotating to open the faucet, exploring different rotations, parts to twist and open. . . I sensed my resisting muscles. I saw my mother's "beet red" face and clenched fists. Not in anger though, this was her stance of fear, like digging in her heels/fists in. I'd forgotten this stance, this posture of hers. I started sensing in my hips and wrote on the board "when I rotate the faucet open there is so much stuck." It's like a clog. Can I sense my potential, but have the experience that it is "clogged" like a pipe, a drain? Can I move through it and claim my potential? If I do, will it change my life?*

In the beginning of the witness writing referenced above, I was reporting the early phase of movement and sensing, but the inquiry is still fairly cognitive. The explicit memory is familiar. But as I keep tracking my bodily state through movement, the emotional content becomes available. I remember not just the externalized memory, but what it felt like to stay at my dad's apartment as a young child: *fearful*, even though my father was a gentle person who never raised his voice or his hand. The period of time, the divorce of my parents as a young child, the transition of having to see my father in a strange new apartment. Through bodily awareness, I remembered the fear. A new movement dynamic (tickle) moves and shapes me in different ways. There is not a distinct, singular memory here but flashes of repetitive experiences and bodily behaviors (situational implicit memory). And the memory of what tickling led to feeling like: *powerless*. When I pick up the suggestion of exploring a quality of heavy rubber and the action of turning the faucet, I go to my body and find resistance, both physical resistance and mental. I tolerate it by inviting interoceptive awareness and curiosity: where is this sensation located (hips) what does it feel like (sticking, clogged). An image arrives while I am exploring the bodily state of resistance that has no declarative, explicit connection to the movement prompt – nothing like resting rubber, nor an open faucet. My mother's fear stance. Her beet red face, clenched fists, heels dug in. *Beet red* is a phrase she uses frequently and in the moment of the

movement and the writing, the sound of her voice saying it was a part of the movie. Again, not a distinct, singular memory but repetitive experience of being around someone else's patterned bodily behavior (intercorporeal implicit memory). And the implicit memory of what it felt like to be in close proximity to my mother's fear stance: *resistance*.

As this particular practice continued to unfold, I tracked interoceptively and chose movements that eschewed resistance, or worked with it to release muscular tension, engage whole body movements, bring more joy and expression to the stories I wanted to tell with my body. This approach resulted in the final phrase I documented: *When I let go to stretch I come alive*.

The transformative aspects of this example arrive through multiple transfers: of moving to writing, sensing to feeling, unconscious to conscious, inquiry to witnessing, noticing to expressing. Cultivating a welcoming awareness to bodily states makes up one half of each of these transfer relationships.

### Discussion

The history and debate around psychotherapy creating or fabricating repressed or false memories has less relevance in the context of body memory as implicit content explored in Fuchs' (2012) writing. Exploring challenging experiences through body awareness is not tied to mining for situations that happened to an individual that they subsequent hid away in the deep recesses of their memory, but in recalling the bodily sensations associated with troubling events. My arts-based autoethnographic examples illustrate the value in expressing memories of the ways in which that sensory information made me feel, behave and respond. When I waved my arms in the movement, imagining myself on the boat, the movement was a symbol and it unearthed the phrase in the writing that followed – *they weren't used to seeing me ugly. . . so I stopped showing it. . . I went to bed instead*. Locating this sentiment in the witness writing brought about a personal insight. It was not the event of my friend's death I had pushed down, it was the feelings I had relative to the event that were too painful: feelings that my emotions were

somehow too big, messy and ugly for the adults to be able to face with me. And so I *went to bed instead*, to hide the feelings, a coping mechanism to manage that my feelings were being rejected by my caretakers. It is the memories of these feeling and responses I had which I could not have previously examined through writing solely about the event of her death. These feelings were felt in my cells and listening to my body through its language of sensation allowed them to return from under the bedcovers.

The illustration drawn from my own arts-based practice showcased what interoceptive training affords when integrating expressive protocols. This is relevant for trauma-informed practices in processing experiences and particularly within the context of expressive arts therapy, where journaling or journal writing is a ubiquitous element of intermodal processes. Fortunately, expressive arts therapy provides an ideal setting for interoceptive training. Many established protocols among the art therapies employ related processes for tuning into the body and allow for interoception to emerge. Protocols such as witnessing, focusing and intention-setting and witness writing, and for following the creative/artistic instincts that arise from accessing implicit content, and position arts-based techniques as tailored to safely and appropriately begin accessing and working with hard stories in layered approaches to expressive writing. This is an important area for future study, to measure outcomes of layering somatic awareness techniques with writing applications for enhancing verbal and cognitive processing.

It would also be a beneficial addition to engage studies that measure both expressive writing protocols like Pennebaker's – along with as Nicholls (2009) noted – those that engage participants in other stages and techniques of creative writing craft. Expressive arts therapy already engages the use of poetry, drama and scene work, myth and other genres for therapeutic use. Examining the distinct outcomes that come from the application of various writing forms when enhanced by interoceptive training, and particular therapeutic benefits of bringing the body into various stages of the writing process such as revision would serve as a

valuable addition to trauma-informed practice. Bringing expressive arts therapy methodology into the full range of applications in which the body's language precludes acts of writing opens up access and avenues to our experiences through sensing, feeling, recalling and expressing.

### **Conclusion**

This project set out to develop a deeper understanding of the role of interoception and mindful movement on accessing the stories our bodies hold with regard to producing expressive writing for healing outcomes. Speculating on the resistance that occurs when individuals are asked to write about the hard stories of their lives provided connections to the ways that a traumatic past can impact the nervous system with the threat of fresh fear responses from old triggers. Findings from the literature highlighted how nervous system arousal negatively impact one's motivation to reflect on challenging events, as well as the inhibition the language center of the brain on organizing and verbalizing cohesive narratives of those events and other key areas in the retrieval of both explicit and implicit memories. Interoception was shown as a way to bring the implicit memories stored in our bodies to our conscious awareness by tapping into awareness to notice perceptions of physical sensations. Activating interoception has shown to bring the insula back online, providing access to body memories, or implicit content. Neuroscience views interoception as the body's part in processing experience, which certainly warrants the inclusion of the physical awareness in any protocols for retrieving, reflecting upon and expressing one's past experiences.

The findings of this autoethnographically-informed literature review will help refine the curriculum of my Writing from the Body course with undergraduate expressive arts therapy students. I plan to weave interoceptive training into the early sessions of the course, and developmentally through every stage of expressive writing. This could aid participants in gauging their readiness for disclosure based on awareness of what their bodies feedback in terms of nervous system and physiological states. Training interoception in stages can ground states of arousal so that over time, body awareness may be a place of safe inquiry. I will also

provide for choice of materials, modalities and genres in the personal narrative assignment, allowing for expressive writing to serve as a simply one part of the process. While bringing embodied insight into cognition is a valuable component of an expressive writing protocol to benefit wellbeing, production of a coherent narrative of a past traumatic event need not be the required artifact to meet those outcomes.

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**THESIS APPROVAL FORM**

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**Student's Name: Julianne Corey  
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**Title: Interoception and Expressive Writing in Expressive Arts Therapies: A Trauma-  
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In the judgment of the following signatory this thesis meets the academic standards that have been established for the above degree.

**Thesis Advisor: Dr. Ara Parker**

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