Journal of Transformative Touch

Manuscript 1040

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Introduction

The predominance of anxiety is currently at record levels. There is a growing need for non-pharmaceutical approaches to help alleviate and decrease the harmful effects of anxiety on an individual and collective level. Before the COVID-19 pandemic, nearly 301 million people globally (World Health Organization [WHO], 2023) and 40 million people in the United States experienced an anxiety disorder in any given year (Anxiety & Depression Association of America [ADAA], 2023). Reports now show the recent pandemic triggered a 25% increase in the prevalence of anxiety and depression worldwide (WHO, 2022). Given that many anxious people do not seek treatment (Stein et al., 2021), these statistics do not begin to reflect the full extent of the population impacted by anxiety.

Anxiety is an insidious emotional experience and can include worry, fear, panic, dread, lack of concentration, and physical distress such as rapid heart rate, fatigue, insomnia, stomach and muscle aches, and unexplained pains. These symptoms often interfere with daily activities such as work, education, and relationships (National Institute of Mental Health [NIMH], 2023). When anxious, we cannot think, communicate, or connect effectively with others (Dana, 2021). People with anxiety may frequently exhibit intense reactions to trivial events due to overwhelm. According to Levine (1997) and Dana (2021), overwhelm can trigger a sympathetic nervous system response, reducing the ability to respond appropriately to life circumstances. One practical solution to build resiliency and reduce overwhelm may be receiving skilled touch.

Bessel van der Kolk, professor of psychiatry at Boston University School of Medicine, says, "Touch is the most elementary tool we have to calm down" (2014, p.216). In addition to pharmaceutical and psychotherapeutic approaches, the role of skilled, conscious touch needs careful investigation as a holistic therapeutic option for reducing anxiety levels and symptoms. Safe touch, also called neuroaffective touch, is therapeutically and psychologically significant in that it supports a higher level of internal reorganization (LaPierre, 2006). The visceral sense of safety, established through the therapeutic use of touch, allows positive changes by releasing held tension in the bodymind and opening new, meaningful possibilities for personal health and relationships. By calming the bodymind, the opportunity may become available for a wider view of connection and belonging, which helps combat anxiety and depression (Siegel, 2023). This mixed methods study explores the feasibility of using skilled touch (ZB) to decrease anxiety.

Zero Balancing (ZB) is a holistic, neuro-regulating, bodymind touch therapy rooted in Western and Eastern healing principles, with a whole-person perspective that the mind and body are inextricably intertwined. ZB promotes postural alignment by balancing areas of held tension with gentle pressure and traction into the bones and joints. Zero Balancing also influences meridian points and channels to facilitate the energy flow available for self-reorganization and healing. Developed by Dr. Fritz Smith, MD, in the 1970s, ZB is practiced by healthcare professionals such as physical, occupational, and massage therapists, chiropractors,

acupuncturists, nurses, medical doctors, and psychotherapists trained and certified through a worldwide Zero Balancing Association.

To the authors' knowledge, this study is among the first of its kind to explore and illuminate how touch therapies, such as Zero Balancing, can help individuals more effectively manage the feelings and symptoms of anxiety.

Methodology

This study explores the following:

Research Question:

How does Zero Balancing support individuals with anxiety to manage their physical, mental, and emotional health?

Hypotheses:

We hypothesize that Zero Balancing will lower perceived anxiety symptoms in individuals experiencing anxiety and that Zero Balancing will lower the perceived severity of generalized anxiety.

Participants:

This study recruited a convenience sample of twenty individuals experiencing various types and levels of anxiety to participate in a four-week treatment series. Inclusion criteria were participants being 18 years or older, out of high school, experiencing anxiety, and able to attend all four weekly Zero Balancing sessions.

Design:

The researchers utilized a concurrent mixed-methods phenomenological research design to honor the holistic nature of bodywork and the participants' lived experiences. Both clinical researchers collected data from January to September 2022. Each participant received one Zero Balancing session weekly for four weeks at the certified practitioners' clinics, totaling 80 sessions for the entire study. Every participant worked with the same practitioner throughout the whole study. Participants completed all consent forms, demographic information, and presession assessments at the initial visit. Each session followed the Zero Balancing protocol performed by clinical researchers who were certified Zero Balancing practitioners. No sessions were videotaped.

Assessment:

Patient self-reported symptoms are of crucial importance when monitoring their anxiety levels and felt experiences. Using objective assessment of subjective experiences is needed when researching the effects of treatments on anxiety (Rose, 2014). Anxiety levels and symptoms were gathered via pre/post session *Hamilton Anxiety Rating Scale (HAM-A)* and the *General Anxiety Disorder-7 item Scale (GAD-7)*. Face-to-face, semi-guided, video-recorded interviews were conducted with the participants immediately after the final Zero Balancing session.

Analysis:

The quantitative aspect of this study included pre/post assessments reported with descriptive statistics and a paired samples t-test (one-tail). Qualitative data was transcribed verbatim and assessed for themes. All findings are reported in the aggregate.

Institutional Review Board Approval:

This study was approved by the Institutional Review Board at Eastern Illinois University.

Results

Sample

The sociodemographic characteristics of the sample appear in Table 1 (see Appendix A). The ages ranged from 24-80, with the majority (n=19) being Caucasian and female (n=16). All participants had a minimum of some college, and the majority (n=16) have experienced anxiety for 6+ years and (n=14) have an anxiety diagnosis by a practitioner.

Quantitative

A paired sample t-test (one-tail) was conducted on both the HAM-A and GAD-7 to determine if Zero Balancing is effective in reducing anxiety symptoms and overall general anxiety.

GAD-7- Generalized Anxiety

The average pretest score was 10.45, and the post-test score was 5.7. The mean difference score around the severity of generalized anxiety (M=4.75, SD=5.34, N=20) was significantly greater than zero, t(19)=3.97, one tail p=.0004, providing evidence that Zero Balancing reduced the severity of anxiety. A 95% confidence interval (C.I.) about generalized anxiety is (2.25, 7.25).

HAM-A - Perceived Anxiety Symptoms

The average pretest score was 16.8, and the post-test score was 9.7. The mean difference score for the severity of perceived anxiety symptoms (M=7.1, SD=6.98, N=20) was significantly greater than zero, t(19)=4.54, one tail p=.0001, providing evidence that Zero Balancing is effective at lowering perceived anxiety symptoms. A 95% confidence interval (C.I.) about perceived anxiety scores is (3.83, 10.37).

HAM-A Participants' Perceived Symptom Decline

Participants reported a decline in their following anxiety symptoms: depressed mood (59%), difficulty in concentration (47%), fears (50%), somatic muscular issues (50%), and tension (49%).

Qualitative

Four major themes emerged from the participants: regulation, relational ease, resiliency, and wholeness (see Table 2). Regulation refers to the general neuroregulation of the autonomic nervous system and is the capacity to regulate oneself. Feeling comfortably at home in oneself is self-regulation; feeling comfortable in our social ecosystem is co-regulation, and both are necessary for an individual to function well in life. "Resilience is the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands"

(American Psychological Association [APA], 2022 para.1). Relational ease is the ability to communicate easily with others in family, work, and social settings. It is the capacity to be in the social engagement or ventral vagal state of our nervous system where we feel safe, comfortable, resourced in our social ecosystem, and able to be a resource for others (Dana, 2021). The researchers consider wholeness as the sense of feeling connected, coherent, and unified within the self and larger world on the physical, psychoemotional, and spiritual levels.

Discussion

Current research is investigating the connection between the brain and the body around mental health pathology. Many of the symptoms of mood disorders, including anxiety disorders, could be interpreted as dysregulation in the brain-body interaction, where the body's circuitry is overloaded and burned out, preventing our systems from course correcting (Romo-Nava, 2023). When looking at the mindbody connection, touch is considered one of our major senses but is still one of the least researched (Montagu, 1971 as cited in Field, 2010). This study begins to address the lack of research examining the healing potential of safe, skilled touch therapies.

For years, studies have documented positive physiological and biochemical effects of touch, showing decreases in blood pressure, heart rate, and cortisol levels (Heinrichs et al., 2003; Henricson et al., 2008; Dana, 2021). Research has also shown that touch's calming or relaxing effect may signal safety at the neurobiological level. Tactile perception, processed in the insular cortex, regulates the amygdala and dampens the stress response (Eckstein et al., 2020). Furthermore, receiving tactile stimulation in a relaxing, pressure-based therapy, such as Zero Balancing, may increase vagus nerve activity, causing a decrease in physiological responses, including regulating the autonomic nervous system (Dreisoerner et al., 2021). This prior research illuminates why receiving safe, skilled touch, like Zero Balancing, decreases anxiety symptoms such as depressed mood, difficulty in concentration, fears, and tension experienced by the participants.

"Touch is a basic way the nervous system communicates" (Dana, 2021, p. 119). When we touch someone else, we share the state of our nervous systems, allowing for the regulation and activation of protection pathways (Dana, 2021). Participants frequently reported the experience of a more regulated nervous system, such as "I haven't felt as overwhelmed by my emotions, [or] a sense of being overwhelmed with my life." Using skilled touch to alleviate anxiety can be referred to as "touch preventative medicine" (Keltner (n.d.) as cited in Dana, (2021). Touch has multidimensional effects, such as regulating the autonomic nervous system and reducing depression, anxiety, and stress. Additionally, safe touch calms the cardiovascular system, increases immune function, and reduces pain (Dana, 2021). Helping with neural integration, skilled touch like ZB may promote self-regulation because it addresses the brain's need to be seen, soothed, and safe, which is necessary to develop the integrated neural state of security (Siegel, 2018).

Another key theme that emerged was relational ease. A dysregulated nervous system cannot play well with others, making co-regulation and connection problematic. Relational ease is the

ability to interact and communicate with others appropriately. According to Porges' (2011) polyvagal theory, relational ease is triggered by activating the vagus nerve, specifically the ventral vagal branch. Porges coined the term the social engagement system, meaning the system humans use for connection, which is available when the ventral vagal branch is engaged. As shared by a participant, "When I am more comfortable, I listen, I am less anxious, less in danger of cross-talking, interrupting, and more authentic." This study indicates that receiving ZB helps the nervous system rebalance, supporting co-regulation and enhancing the social engagement system's capacity for relational ease. We are wired for connection, where we feel seen, understood, welcomed, and safe (Dana, 2021). One participant in this study explained this feeling of connection with others: "I think it makes me less self-focused and more aware of my surroundings and able to tune into the people around me." We find nourishment at an embodied level in such moments of connection (Fisher, 2014). On a neurophysiological level, connecting well with others is mediated by interoception, which allows us to recognize our feelings (Siegel 2012). The more we know how we feel, the more we can understand the feelings of others (Caldwell, 2018). Consequently, we use our own internal state as a blueprint for understanding others (Raimo et al., 2023).

Resiliency is coping with what "is" and meeting challenges with flexibility, adaptability, coherence, and stability (Siegel, 2023). As one participant noted, "I leave the session with more capacity, more grounded like I can face what I need to face, and I can move with whatever is coming up." Even when participants reported a difficult situation, they mentioned feeling more empowered to handle what arose with more energy, strength, and ease. Therefore, the situation did not dysregulate the nervous system for an extended time. "Every time I leave here, I am so calm, and so I know that is an option, I can return to that even if in the situation it is really stress[full]." Resiliency does not mean always having a regulated nervous system but rather one that is flexible and can move from dysregulation back into a regulated state (Dana, 2021). Both physical and energetic tension in the bodymind can cause dysregulation or hyperregulation of the nervous system. The effects of ZB appear to allow a more nuanced, open response-ability to everyday stress. ZB works on multiple levels to engender experiences of profound calmness, safety, and stability (Rhoads et al., 2021). We hypothesize that in those experiences, regulation of the nervous system promotes the activation of the ventral vagalsocial engagement system. In this calmer state, one has a more resourced ability to supersede habituated responses to stress and remain regulated.

Anxiety often brings with it a feeling of disconnection, isolation, and loneliness. While there are many ways to treat anxiety, not all of them bring the felt sense of connection and wholeness, as reported from ZB sessions. In the powerful words of one participant, "It feels like a sense of grounding with myself and the universe as a whole." Through research, ZB has been described and shown to enhance the physical, emotional, mental, and spiritual dimensions of wellness. Specifically, ZB supports the physical dimension by providing more grounding, the emotional dimension by engendering stability, bringing forth clarity in the mental dimension, and spiritually evokes the experience of interconnectedness (Oruch, 2018; Rhoads et al., 2021). A feeling of wholeness is an integrating experience that supports the felt sense of the personal bodymind connection and one's interrelationship with the universal whole (Siegel, 2023). A

sense of universal connection extends beyond personal well-being to the relational capacity to connect with others and the collective experiences within our society and the world. Interconnection with the community and beyond fosters a sense of belonging, of being part of a community, fulfilling a natural human need for social engagement.

Conclusions

- 1). Zero Balancing is a therapy that can help initiate a biological response to the caring touch of the practitioner. It does so by regulating the nervous system, which generates the self-healing capacity of the client.
- 2). Zero Balancing decreases generalized anxiety's overall severity and symptoms.
- 3). Zero Balancing supports increased self and co-regulation, relational ease, resiliency, and a sense of wholeness. People can interact and respond from a more resourced state when the nervous system is more regulated.
- 4). Using a skilled touch protocol, such as Zero Balancing, can positively benefit anxiety treatment.

This small feasibility study suggests that when participants experience palpable, integrative, neurophysiological reductions in anxiety and symptoms, a need to examine what is happening is apparent. More quantitative and qualitative research into the effects of touch is indicated across various disciplines. We hope this work encourages further exploration of how skilled touch benefits the nervous system and the human potential for growth and development.

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Appendix A

Table 1Demographic Information of the Participants

Number	Age Range	Race	Gender	Education	Diagnosed	Years Experiencing Anxiety	Types of Anxiety
1	35-44	White/European	Male	Bachelor's Degree	Yes	>6 years	Constant low level, Situational/Intermittent
2	35-44	White/European	Female	Bachelor's Degree	No	4-5 years	Intermittent Anxiety
3	25-34	White/European	Female	Bachelor's Degree	Yes	4-5 years	Intermittent Anxiety
4	35-44	White/European	Male	Associate degree	No	>6 years	Constant low level, Situational, Seasonal
5	18-24	White/European	Male	Some College	No	<6 months	Intermitting Anxiety
6	45-54	White/European	Female	Associate degree	Yes	>6 years	Constant High level and situational
7	45-54	White/European	Nonbinary/Transgender	Master's Degree	Yes	>6 years	Constant low level, Situational, Intermitting, Seasonal
8	55-64	White/European	Female	Bachelor's Degree	Yes	>6 years	Intermitting Anxiety
9	25-34	White/European	Female	Master's Degree	Yes	>6 years	Constant low level
10	55-64	White/European	Female	Master's Degree	No	<6 months	Situational anxiety
11	55-64	White/European	Female	Bachelor's Degree	Yes	>6 years	Constant low level
12	65-74	White/European	Female	Bachelor's Degree	Yes	>6 years	Constant low level, situational, intermittent, seasonal
13	35-44	White/European	Female	Bachelor's Degree	Yes	>6 years	Constant high level
14	35-44	Black/African American	Female	Master's Degree	Yes	2-3 years	Constant low level
15	75+ (80)	White/European	Female	Associate degree	No	>6 years	Intermittent Anxiety
16	18-24	White/European	Female	Bachelor's Degree	No	2-3 years	Constant low level and situational
17	35-44	White/European	Female	Master's Degree	Yes	>6 years	Constant low level, Situational, Other: sometimes spikes very high=situational
18	35-44	White/European	Female	Bachelor's Degree	Yes	>6 years	Constant high level
19	65-74	White/European	Female	Associate Degree	Yes	>6 years	Intermittent Anxiety
20	45-54	White/European	Female	Master's Degree	Yes	7 months to 1 year	Intermittent Anxiety

>= more than; <= less than

Appendix B

Table 2. *Examples of participant's responses per themes*

Themes	Quotes
Regulation	"I would say they have definitely helped me to be more in tune with when I am experiencing anxiety and how I am feeling in my body; I would say the anxiety is different, it has shifted. It doesn't have such a hold on me.", "I have noticed like more and more each week I am able to pause, take a deep breath, and get through the stress better and hard situations instead of letting them ruin my day", "I haven't felt as overwhelmed by my emotions, [or] a sense of being overwhelmed with my life. I can step back from my emotions and look and give them space and give them curiosity look at them from outside a little bit.", "the sessions have regrounded, refueled, provided a resource.", I remember one session it was like I had no idea that all that space existed within me", "I am very aware of what I am doing. If I feel myself hustling and bustling, I just say, OK, I don't have to do it. It is OK if it doesn't get done, but it is much better, yeah that has been a big one",
Relational Ease	"When I am less in my head, I am much more likely to be open to someone else," "Less irritable, more personable," "getting a regular Zero Balancing keeps me more calm and aware, and affects everything I do," "I think it makes me less self-focused and more aware of my surroundings and able to tune into the people around me," "It is a facilitating treatment that allows me to keep things in perspective," I would say, walking in balance with the world," "When I am more comfortable, I listen, I am less anxious, less in danger of cross-talking, interrupting, um and more authentic," "I have been able to spend time with people outside my family and in my family and tune into them and check in with them and not just be focused on me which is great."
Resiliency	"I am more stable, solid, emotionally more planted, less emotionally furtive," "handling my life a little bit better in my surroundings," "I feel like this has given me a tool to help me process [stress]; I have been able to release some weight off my shoulders," "I leave the session with more capacity, more grounded like I can face what I need to face and I can move with whatever is coming up," "every time I leave here, I am so calm and so I know that is an option, I can return to that even if in the situation it is really stress[full]. I feel like it's reminding me I can be super calm and relaxed, and it doesn't have to stay with me, which allows me to kind of let it go."
Wholeness	"I feel more in my physical body, more gently in my physical body," "More in touch with my higher self, my connection with Source, Source in me," "I definitely have more bodily awareness during the sessions," "I feel a sense of mindbody connection, Like if you are working in one place, sometimes I can feel it go down my whole body," "It feels like a sense of grounding with myself and the universe as a whole. I can feel this wave go over my whole body and I can feel it in my toes, in my head - it is almost, it is light", "It is like that wave is energy moving through my body," "It's like inner peacemaking like it is an exhale," "There's a sense of unwinding like I can literally feel space open, and with the space, my mind relaxes. So I notice this like my mind calms as my body calms", "I feel as if my body has been separated in different pieces and by the end, everything is put back together."

About the Authors

Misty Rhoads, Ph.D., LHC, CZB, is a highly experienced health and education professional with over 20 years of expertise. She is a therapeutic practitioner, bodywork educator, and a full professor at Eastern Illinois University, specializing in public health. Misty is also a faculty member of the Zero Balancing Health Association. She teaches both undergraduate and graduate courses such as research and statistics, integrative medicine, women's health, mindfulness and stress reduction, and health disparities of gender and sexually diverse populations. She is a frequent presenter at both national and state levels. Her practice and research focus on contemplative education, skilled touch, and trauma healing. Misty enjoys merging her research and education experience with her practice, which results in a more comprehensive and holistic academic/practitioner approach.

Mary H. Murphy, MA, LMT, CZB, has practiced therapeutic bodywork since 1981. She is also a bodywork educator and has been a Zero Balancing Faculty member since 2004. Mary has presented nationally for the Zero Balancing Health Association. She graduated from Georgetown University, the Chicago School of Massage Therapy, and Naropa University with an MA in Contemplative Education. Mary has trained in various forms of therapeutic bodywork and has practiced and taught in clinical and educational settings. Her research has focused on skilled touch, somatic awareness, trauma healing, energy medicine, and contemplative education.

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